Complete Machining Solutions
Non-Rotating Tool Lines

Turning • Grooving • Threading • Parting

Metric Version Catalog 2017



START

INSERTS

TOOLS

GRADES

ISO TURNING | GROOVING | PARTING | FACE GROOVING | TOOL BLOCKS | THREADING | TOOL HOLDERS | GRADES

Member IMC Group

www.iscar.com



Quality Standard

ISCAR has been certified by the prestigious Standards Institution, as being in full compliance to ensure delivery of the finest quality goods. Quality control facilities include the metallurgical laboratory, raw metal testing, an online testing procedure and a machining center for tool performance testing and final product inspection. Only the finest products are packaged for entry into ISCAR's inventory.

TABLE OF CONTENTS

ISOTURN TOOLS AND INSERTS 1

GROOVE-TURN 215

FACE GROOVING 423

TOOLS FOR MINIATURE PARTS 305

BROACHING TOOLS 337

PARTING 363

THREADING TOOLS & INSERTS 485

NON-ROTATING TOOL HOLDERS 547

MATERIALS AND GRADES 553

INDEX 598

Member IMC Group

Complete Machining Solutions

Non-Rotating Tool Lines

Turning • Grooving • Threading • Parting

Metric Version Catalog 2017





ISCAR

Complete Machining Solutions
ISOTURN TOOLS AND INSERTS



Member IMC Group

TABLE OF CONTENTS

ISOTURN Tools **3**
Tool Identification System 4
External Tools 6
Tools for Ceramic Inserts 72
Boring Bars 77
Cartridges 101

ISOTURN Inserts **103**
Insert Identification System 104
Selection Guide for Chipformers and Grades 106
Negative Inserts 109
Positive Inserts 153
Inserts for Machining Aluminum 172
Pipe Skiving Inserts 177
CBN, PCD and Ceramic Inserts 178

ISOTURN User Guide **197**
Jet High Pressure Tools 64
ISOTURN Chipformer and Grades 197
Cutting Speed Recommendations 210

ISOTURN TOOLS

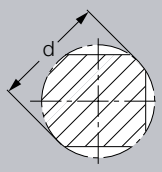


Toolholder Identification System

1. Boring Bar

- **S** Steel Shank
- **A** Coolant through Steel Shank
- **C** Solid Carbide Shank
- **E** Coolant through Carbide Shank

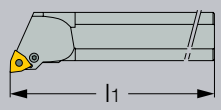
2. Bar Diameter



3. Tool Length

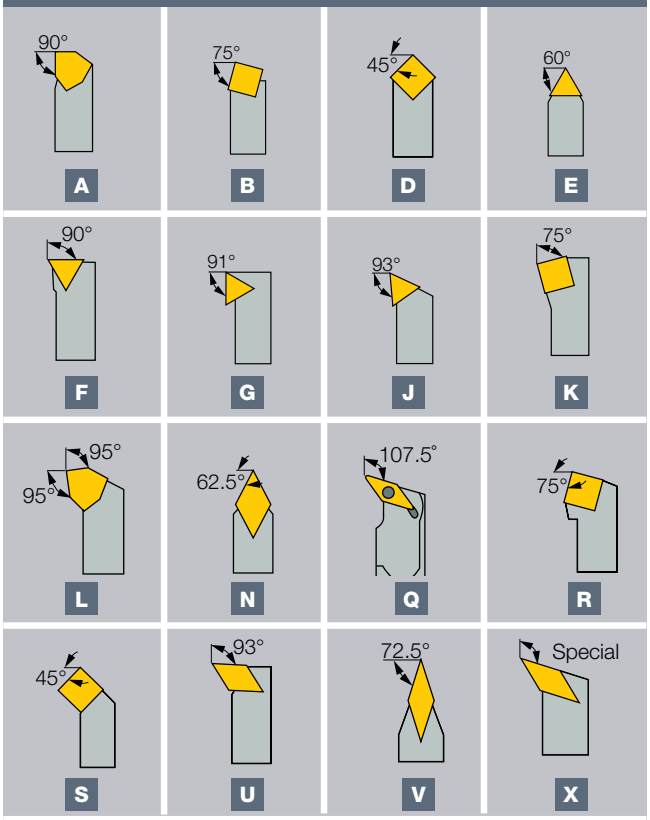


A = 32	H = 100	Q = 180
B = 40	J = 110	R = 200
C = 50	K = 125	S = 250
D = 60	L = 140	T = 300
E = 70	M = 150	U = 350
F = 80	N = 160	V = 400
G = 90	P = 170	W = 450
		Y = 500
		X = Special

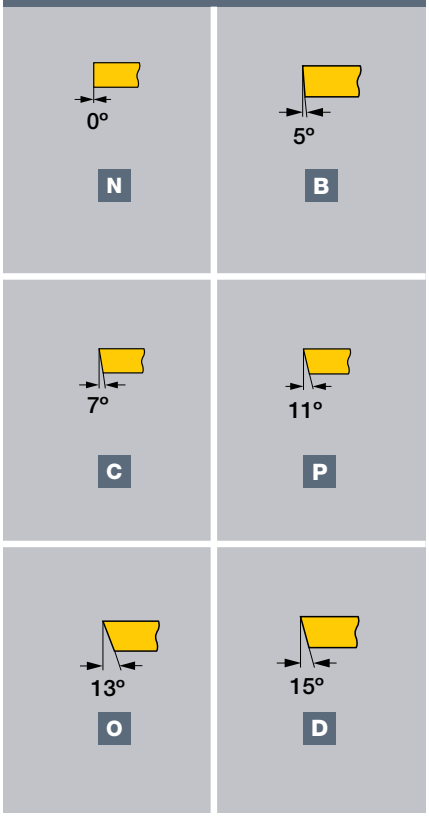


Toolholder			M	W	L	N	R	
			4	5	6	7	8	
Boring Bar	S	25	S	M	W	L	N	R
	1	2	3	4	5	6	7	8

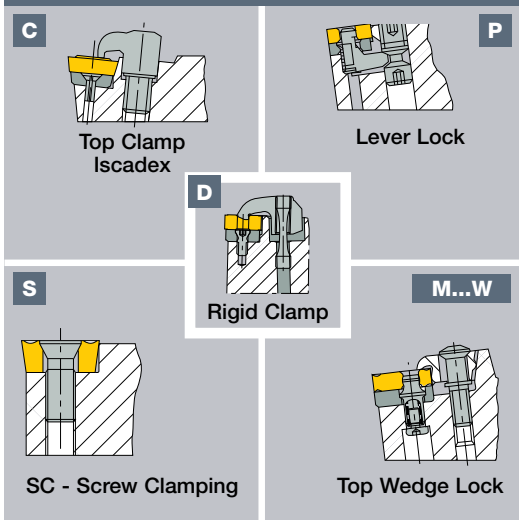
6. Approach Angle



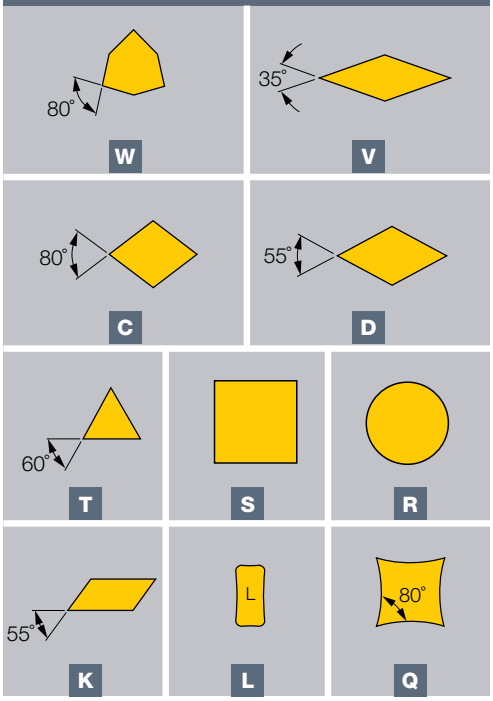
7. Insert Clearance Angle



4. Clamping System



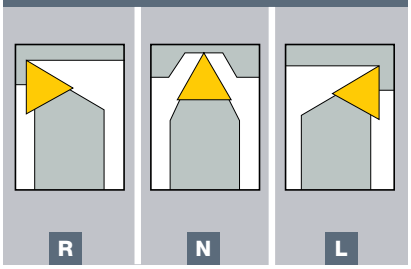
5. Insert Shape



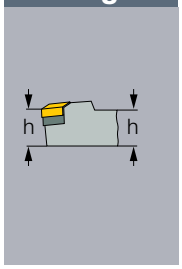
25	25	M	–	08	W
9	10	3		11	12

–	08	W
	11	12

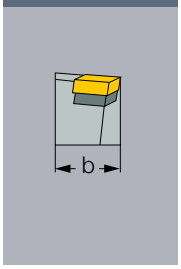
8. Hand of Tool



9. Shank Height

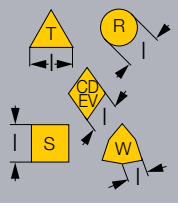


10. Shank Width



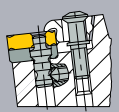
11. Insert Size

Cutting edge length

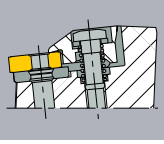


12. Wedge Lock

W-Top wedge

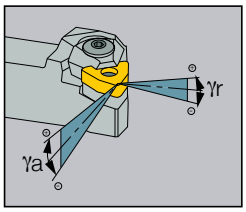


MW-Multi-wedge

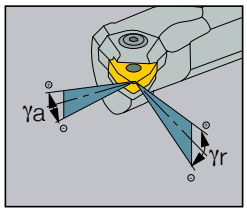


S- for Swiss-type machines

Axial γa and Radial γr Rake angles



Toolholder

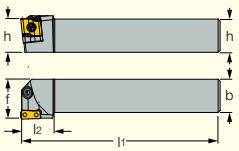


Boring Bar

HELITURN TANGENTIAL LINE

PLANR/L-TANG

Lever Lock Tools Carrying LNMX..
Tangentially Clamped Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PLANR/L 2525M-15 TANG	25.0	25.0	150.00	25.0	30.0	-6	-6	LNMX 1506..R/L
PLANR/L 3232P-15 TANG	32.0	32.0	170.00	32.0	37.0	-6	-6	LNMX 1506..R/L
PLANR/L 3232P-22 TANG	32.0	32.0	170.00	32.0	37.0	-6	-6	LNMX 2210..R/L
PLANR/L 4040R-22 TANG	40.0	40.0	200.00	40.0	47.0	-6	-6	LNMX 2210..R/L

For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)





Spare Parts

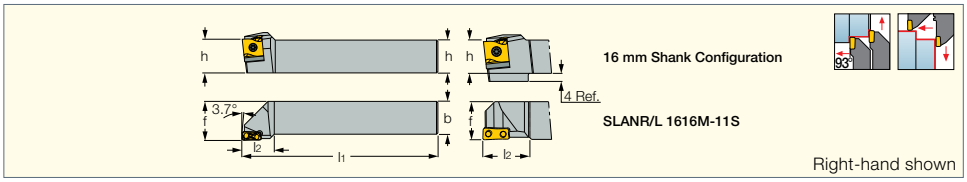
Designation						
PLANL 2525M-15 TANG	TLN 15L-HT	SR RS4	T-6/5	LR T15	SR TL-15	HW 3.5
PLANR 2525M-15 TANG	TLN 15R-HT	SR RS4	T-6/5	LR T15	SR TL-15	HW 3.5
PLANL 3232P-15 TANG	TLN 15L-HT	SR RS4	T-6/5	LR T15	SR TL-15	HW 3.5
PLANR 3232P-15 TANG	TLN 15R-HT	SR RS4	T-6/5	LR T15	SR TL-15	HW 3.5
PLANL 3232P-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	LR T22	SR TL22	HW 5.0
PLANR 3232P-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	LR T22	SR TL22	HW 5.0
PLANL 4040R-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	LR T22	SR TL22	HW 5.0
PLANR 4040R-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	LR T22	SR TL22	HW 5.0



HELITURN TANGENTIAL LINE

SLANR/L-TANG

Screw-Lock Tools Carrying LNMX..
Tangentially Clamped Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SLANR/L 1616H-11 TANG	16.0	16.0	100.00	20.0	20.0	-6	-6	LNMX 1104..
SLANR/L 1616M-11S TANG	16.0	16.0	150.00	20.0	16.2	-6	-6	LNMX 1104..
SLANR/L 2020K-11 TANG	20.0	20.0	125.00	20.0	25.0	-6	-6	LNMX 1104..
SLANR/L 2525M-11 TANG	25.0	25.0	150.00	25.0	30.0	-6	-6	LNMX 1104..
SLANR/L 2020K-15 TANG	20.0	20.0	100.00	25.0	25.0	-6	-6	LNMX 1506..
SLANR/L 2525M-15 TANG	25.0	25.0	150.00	25.0	30.0	-6	-6	LNMX 1506..
SLANR/L 3232P-15 TANG	32.0	32.0	170.00	35.0	37.0	-6	-6	LNMX 1506..
SLANR/L 4040R-15 TANG	40.0	40.0	200.00	35.0	45.0	-6	-6	LNMX 1506..
SLANR/L 3232P-22 TANG	32.0	32.0	170.00	35.0	38.0	-6	-6	LNMX 2210..
SLANR/L 4040R-22 TANG	40.0	40.0	200.00	40.0	47.0	-6	-6	LNMX 2210..
SLANR/L 5050S-22 TANG	50.0	50.0	250.00	35.0	57.0	-6	-6	LNMX 2210..

• **ap max for facing:** LNMX 11-2.8 mm, LNMX 15-3.8 mm, LNMX 22-5.8 mm
For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

The **HELITURN** system features a unique, double-sided insert with 4 cutting edges for **F**ast **M**etal **R**emoval **(FMR)** turning.
HELITURN is a tangentially clamped insert with a unique helical shaped cutting edge, useful for large depths of cut and higher than normal feed rates.
The **LNMX...-HT HELITURN** insert is a screw clamped into the **SLANR** toolholder and supported by the TLN ..-HT carbide seat. This seat has ground surfaces on the top and bottom to ensure perfect contact of the insert with the toolholder.
The upper rake face of this insert is mounted level with the top of the toolholder to enable chips to flow across the insert without being disturbed by clamps or the toolholder body.
The 4 curved helical cutting edges ensure positive radial rake angles and soft penetration into the material being cut.

The lower forces and smaller loads ensure better tool life, higher stability and the ability to use very large depths of cut and higher feeds.
The chipformer (with small bumps), deforms and breaks the chip into rib type curved segments which can easily be removed from the cutting area.
The insert has a frontal clearance angle of 3.7° with a 6° side clearance angle to enable machining at a 90° shoulder.
Depths of cut up to 8 mm and facing depths up to 3.2 mm and up to 1.2 mm/rev are achievable with **HELITURN**.
The high positive rake angle of these tools allows 10-15% less power usage than conventional tools with the same parameters.
By using **HELITURN** tools, huge cost savings and profitability in lathe operations are guaranteed.

Spare Parts

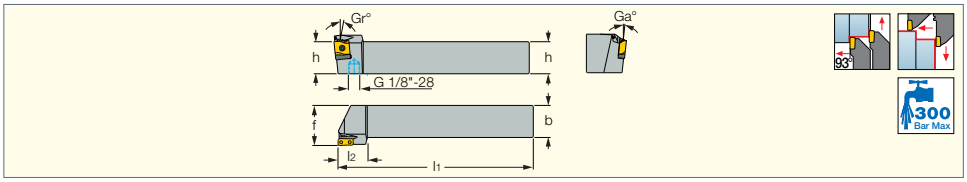
Designation							
SLANL 1616H-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANL 1616M-11S TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANR 1616H-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANR 1616M-11S TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANL 2020K-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANR 2020K-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANL 2525M-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANR 2525M-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
SLANL 2020K-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANR 2020K-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANL 2525M-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANR 2525M-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANL 3232P-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANR 3232P-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANL 4040R-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANR 4040R-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
SLANL 3232P-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	
SLANR 3232P-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	
SLANL 4040R-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	
SLANR 4040R-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	
SLANL 5050S-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	
SLANR 5050S-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH	



HELITURN JETCUT TANGENTIAL LINE

SLANR/L-15-TANG-JHP

Screw-Lock Tools with Channels for High Pressure Coolant Carrying LNMX Tangentially Clamped Inserts

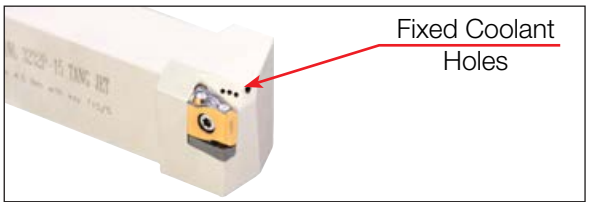


Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SLANR/L 3232P-15 TANG-JHP	32.0	32.0	170.00	30.0	40.0	-6	-6	LNMX 1506

• ap max for facing 3.8 mm • For user guide, see pages 64-71

For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

The tools with LNMX 1506... inserts feature fixed coolant holes





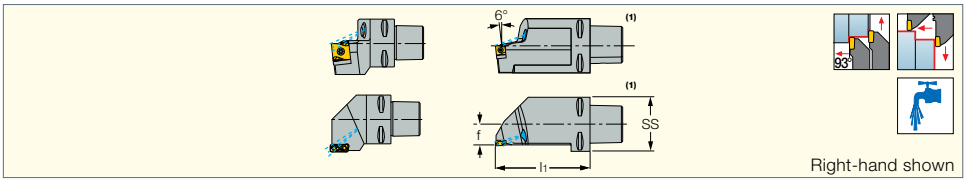
Spare Parts

Designation						
SLANL 3232P-15 TANG-JHP	TLN 15L-HT	SR RS4	SR 34-535-SN	BLD T15/S7	SW6-T-SH	T-6/5
SLANR 3232P-15 TANG-JHP	TLN 15R-HT	SR RS4	SR 34-535-SN	BLD T15/S7	SW6-T-SH	T-6/5

HELITURN CAMFIX TANGENTIAL LINE

C#-SLANR/L-TANG

Tools with CAMFIX Shanks Carrying LNMX-HT Tangentially Screw Clamped Inserts for High Production Cutting



Designation	SS	l_1	f	G_a°	G_r°	Insert
C4 SLANR/L-27050-11 TANG	40	50.00	27.0	-6	-6	LNMX 1104..
C5 SLANR-35060-11 TANG	50	60.00	35.0	-6	-6	LNMX 1104..
C6 SLANR/L 25110-11 TANG (1)	63	110.00	25.0	-6	-6	LNMX 1104..
C4 SLANR/L-27050-15 TANG	40	50.00	27.0	-6	-6	LNMX 1506..
C5 SLANR/L-35060-15 TANG	50	60.00	35.0	-6	-6	LNMX 1506..
C6 SLANR/L 25110-15 TANG (1)	63	110.00	25.0	-6	-6	LNMX 1506..
C6 SLANR/L-45065-15 TANG	63	65.00	45.0	-6	-6	LNMX 1506..
C6 SLANR/L-45065-22 TANG	63	65.00	45.0	-6	-6	LNMX 2210..

• **ap max for facing:** LNMX 11-2.8 mm, LNMX 15-3.8 mm

(1) Designed for mill-turn machines

For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

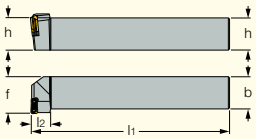
Spare Parts

Designation									
C4 SLANL-27050-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C		BLD T10/S7		SW6-SD	EZ 83
C4 SLANR-27050-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C		BLD T10/S7		SW6-SD	EZ 83
C5 SLANR-35060-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C		BLD T10/S7		SW6-SD	EZ 104
C6 SLANL 25110-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C		BLD T10/S7		SW6-SD	EZ 146
C6 SLANR 25110-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C		BLD T10/S7		SW6-SD	EZ 146
C4 SLANL-27050-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C4 SLANR-27050-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C5 SLANL-35060-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C5 SLANR-35060-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C6 SLANL 25110-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535	T-15/5				EZ 146
C6 SLANR 25110-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535	T-15/5				EZ 146
C6 SLANL-45065-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C6 SLANR-45065-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN		BLD T15/S7	SW6-T-SH		EZ 104
C6 SLANL-45065-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	SR 14-591/L-SN		BLD T20/S7	SW6-T-SH		EZ 104
C6 SLANR-45065-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	SR 14-591/L-SN		BLD T20/S7	SW6-T-SH		EZ 104

HELITURN TANGENTIAL LINE

SLFNR/L-TANG

Tools Carrying LNMX
Tangentially Clamped Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert(1)
SLFNR/L 2525M-15 TANG	25.0	25.0	150.00	20.0	30.0	-6	-6	LNMX 1506..L/R
SLFNR/L 3232P-15 TANG	32.0	32.0	170.00	20.0	37.0	-6	-6	LNMX 1506..L/R

• ap max for longitudinal turning is 5.8 mm
(1) Right-hand insert for left-hand holder, left-hand insert for right-hand holder
For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

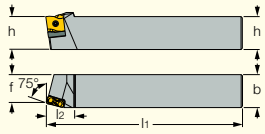
Spare Parts

Designation						
SLFNL 2525M-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH
SLFNR 2525M-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH
SLFNL 3232P-15 TANG	TLN 15R-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH
SLFNR 3232P-15 TANG	TLN 15L-HT	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH

HELITURN TANGENTIAL LINE

SLBNR/L-TANG

External 75° Lead Tools Carrying
Tangentially Screw Clamped Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SLBNR/L 4040R-22 TANG	40.0	40.0	200.00	35.0	35.0	-7	-4	LNMX 2210..R/L

For inserts, see pages: LNMX-HT (152)

Spare Parts

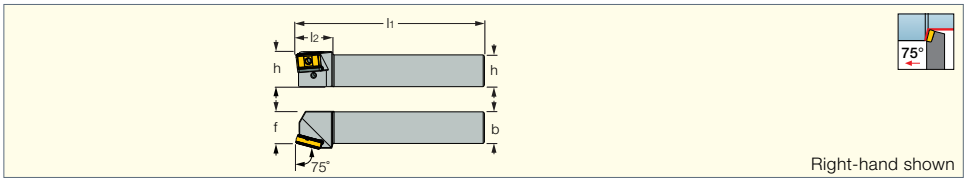
Designation						
SLBNL 4040R-22 TANG	TLN 22L-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH
SLBNR 4040R-22 TANG	TLN 22R-HT	SR 10500401	T-7/5	SR 14-591/L-SN	BLD T20/S7	SW6-T-SH



HEAVY SUPER TURN

PLBOR/L

Lever Lock Tools Carrying
LOMX Tangentially Clamped
Super Heavy Turning Inserts

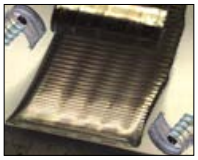


Right-hand shown

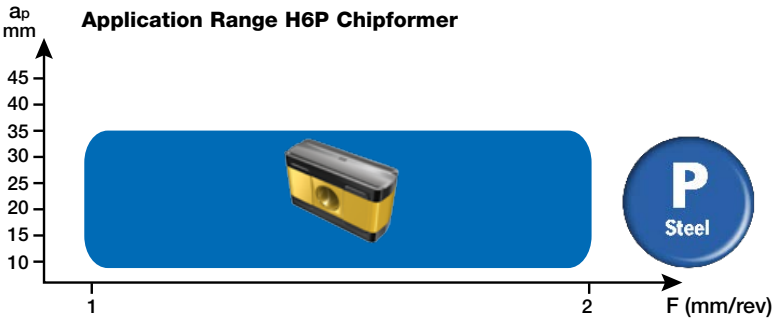
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PLBOR/L 5050T-40	50.0	50.0	300.00	60.0	50.0	-6	-6	LOMX 4022
PLBOR/L 6060V-40	60.0	60.0	400.00	60.0	60.0	-6	-6	LOMX 4022

For inserts, see pages: LOMX-H6P (151)

ISCAR's tangential LOMX 402224-H6P insert for very heavy turning applications.

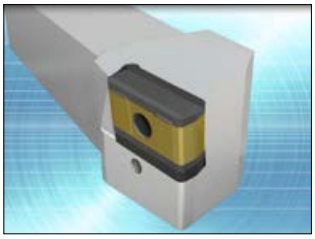


This tangentially clamped insert with 4 cutting edges is made from the tough grade IC8250. It can machine at up to 35 mm depth of cut and up to 2 mm/rev feed. The insert is clamped on a very rigid lever lock pocket equipped with a protective seat.

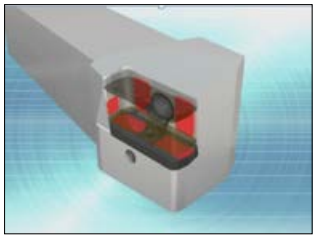




Tangentially Clamped Insert



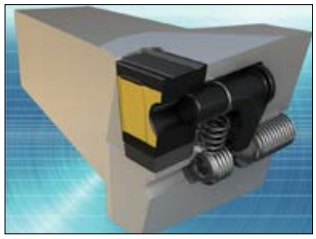
Clamping Surfaces



Protective Seat



Lever Lock Accessible from Both Tool Sides



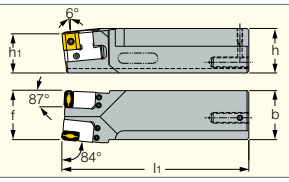
Spare Parts

Designation							
PLBOR/L	TLN 40	SR 10402265	LR 8	SR 10643960	SP D7.5XL23	T-20/5	HW 6.0

ISOTURN

PRWR/L

Toolholders with Cartridges for Under Floor Railroad Wheel Re-turning Lathes (Model 106 Thread Profile Machine)



Right-hand shown

Designation	h	h_1	b	l_1	f		
PRWR/L 50-55	50.0	44.0	55.0	210.00	55.0	SR M6X1X16	HW 3.0

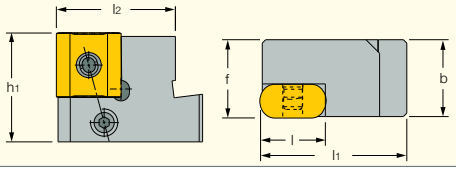
- Cartridges should be ordered separately

For tools, see pages: PRWR/L 175-CA (10) • PRWR/L 177-CA (11)

ISOTURN

PRWR/L 175-CA

Cartridges for PRWR/L 50-55
Railroad Wheel Re-Turning Tools



Right-hand shown

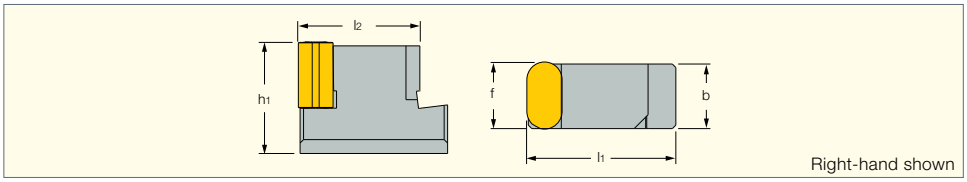
Designation	h_1	b	l_1	l_2	f	Insert			
PRWR/L 175-CA-19	32.0	22.6	43.00	35.0	23.0	LNMX 191940	SR LCS 5	LR 5	HW 3.0
PRWR/L 175-CA-30	32.0	22.6	43.00	35.0	23.0	LNMX 301940	SR LCS 5	LR 5	HW 3.0

For inserts, see pages: LNMX 19/30 (153)
For holders, see pages: PRWR/L (10)

ISOTURN

PRWR/L 177-CA

Cartridges for PRWR/L 50-55
Railroad Wheel Re-Turning Tools



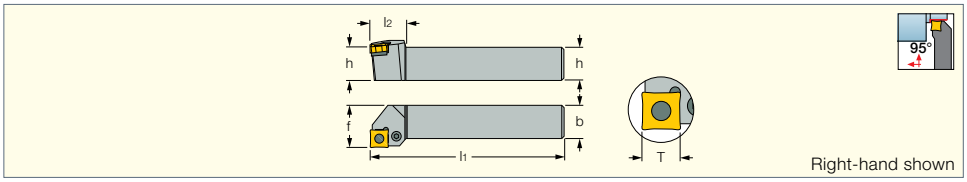
Designation	h_1	b	l_1	l_2	f	Insert			
PRWR/L 177-CA-19	32.0	18.6	43.00	35.0	19.1	LNMX 191940	SR LCS 5	LR 5	HW 3.0

For inserts, see pages: LNMX 19/30 (153)
For holders, see pages: PRWR/L (10)

ISOTURN

PQLNR/L

Lever Lock Tools Carrying Negative Inserts with Four 80° Corners



Designation	h	b	l_1	l_2	f	T(2)	G_a°	G_r°	Insert
PQLNR/L 1616H-09	16.0	16.0	100.00	21.0	20.0	8	-6	-6	QNMG 0904
PQLNR/L 2020K-09	20.0	20.0	125.00	26.6	25.0	8	-6	-6	QNMG 0904
PQLNR/L 2525M-09	25.0	25.0	150.00	26.6	32.0	8	-6	-6	QNMG 0904
PQLNR/L 2020K-12	20.0	20.0	125.00	26.6	25.0	10	-6	-6	QNMG 1204
PQLNR 2020-12-AD (1)	20.0	20.0	67.00	26.6	25.0	10	-6	-6	QNMG 1204
PQLNR/L 2525M-12	25.0	25.0	150.00	26.6	32.0	10	-6	-6	QNMG 1204

(1) AD - short tools for adapter holders
(2) T for r 0.8

For inserts, see pages: QNMG-GN (110) • QNMG-NF (109) • QNMG-PP (109) • QNMG-TF (109)

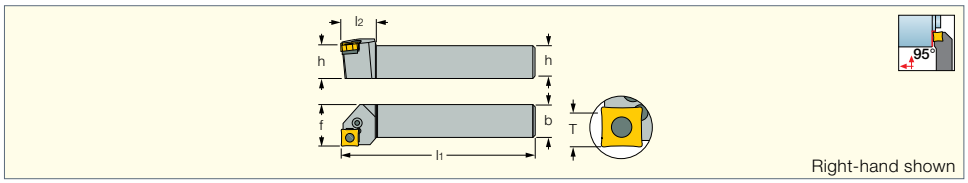
Spare Parts

Designation						
PQLNR/L 1616H-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
PQLNR/L 2020K-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
PQLNR/L 2525M-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
PQLNR/L 2020K-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PQLNR 2020-12-AD	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0/5
PQLNR/L 2525M-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0

ISOTURN

PQFNR/L

Lever Lock Face Turning Tools Carrying Negative Inserts with Four 80° Corners



Designation	h	b	l_1	l_2	f	T(1)	G_a°	G_r°	Insert
PQFNR/L 2020K-09	20.0	20.0	125.00	26.0	25.0	8	-6	-6	QNMG 0904
PQFNR/L 2020K-12	20.0	20.0	125.00	26.0	25.0	10	-6	-6	QNMG 1204
PQFNR/L 2525M-12	25.0	25.0	150.00	26.0	25.0	10	-6	-6	QNMG 1204

(1) T for r 0.8

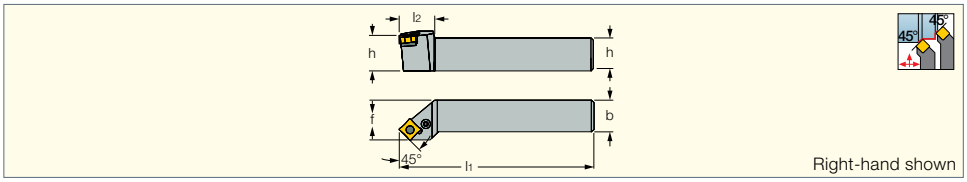
For inserts, see pages: QNMG-GN (110) • QNMG-NF (109) • QNMG-PP (109) • QNMG-TF (109)

Spare Parts

Designation						
PQFNR/L 2020K-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
PQFNR/L 2020K-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PQFNR/L 2525M-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0

ISOTURN

PQSNR/L
External 45° Lead Tools Carrying Negative Inserts with Four 80° Corners



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PQSNR/L 2525M-12	25.0	25.0	150.00	30.0	32.0	-4.5	-5.5	QNMG 1204

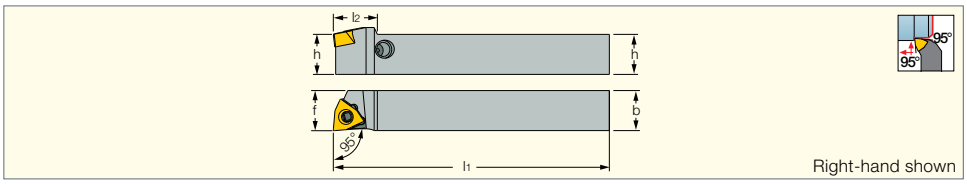
For inserts, see pages: QNMG-GN (110) • QNMG-NF (109) • QNMG-PP (109) • QNMG-TF (109)

Spare Parts

Designation						
PQSNR/L	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0

ISOTURN

PWLNR/L-S
Lever Lock External Turning Tools Carrying WNGP 0403.. Double-Sided Trigon Inserts



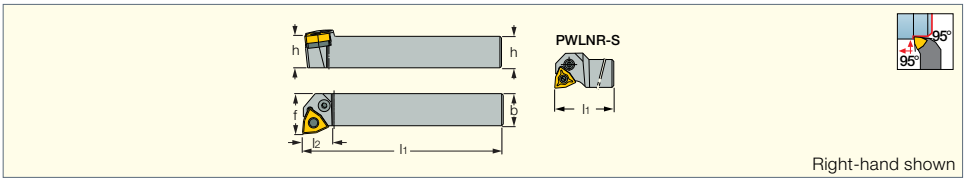
Right-hand shown

Designation	h	b	l_1	l_2	f	Insert				
PWLNR/L 1010X-04S	10.0	10.0	120.00	11.0	10.0	WNGP 04	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PWLNR/L 1212F-04S	12.0	12.0	80.00	11.0	12.0	WNGP 04	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PWLNR/L 1212X-04S	12.0	12.0	120.00	11.0	12.0	WNGP 04	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PWLNR/L 1616X-04S	16.0	16.0	120.00	13.0	16.0	WNGP 04	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN

• Use a left-hand insert on a right-hand tool and vice versa.
For inserts, see pages: WNGP-F2M (112) • WNGP-F2P (110)

ISOTURN

PWLNR/L
Lever Lock External Turning Tools Carrying 80° Negative Trigon Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLNR/L 1616H-06	16.0	16.0	100.00	16.0	20.0	-6	-6	WN..06T3
PWLNR/L 1616H-06S (1)	16.0	16.0	100.00	20.3	20.0	-6	-6	WN..06T3
PWLNR/L 2020K-06	20.0	20.0	125.00	20.0	25.0	-6	-6	WN..06T3
PWLNR/L 2525M-06	25.0	25.0	150.00	20.0	32.0	-6	-6	WN..06T3
PWLNR/L 2020K-08	20.0	20.0	125.00	19.0	25.0	-6	-6	WN..0804
PWLNR/L 2525M-08	25.0	25.0	150.00	20.5	32.0	-6	-6	WN..0804
PWLNR/L 3232P-08	32.0	32.0	170.00	19.0	40.0	-6	-6	WN..0804

(1) Can be used on automatics
For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

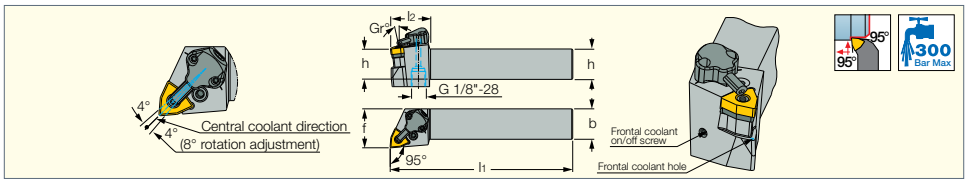
Spare Parts

Designation						
PWLNR/L 1616H-06	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3
PWLNR/L 1616H-06S	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3
PWLNR/L 2020K-06	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3
PWLNR/L 2525M-06	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3
PWLNR/L 2020K-08	TWN 423	SP 4	PN 3-4	HW 3.0	SR 117-2010	LR 4
PWLNR/L 2525M-08	TWN 423	SP 4	PN 3-4	HW 3.0	SR 117-2010	LR 4
PWLNR/L 3232P-08	TWN 423	SP 4	PN 3-4	HW 3.0	SR 117-2010	LR 4

ISOTURN JETCUT

PWLNR/L-08-JHP

Lever Lock Tools with Channels for High Pressure Coolant Carrying Trigon Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLNR/L 2525M-08-JHP	25.0	25.0	150.00	33.0	32.0	-6	-6	WNMG 0804..
PWLNR/L 3232P-08-JHP	32.0	32.0	170.00	33.0	40.0	-6	-6	WNMG 0804..

• For user guide, see pages 64-71

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

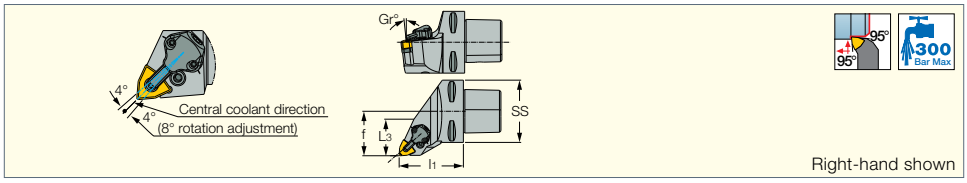
Spare Parts

Designation											
PWLNR/L 2525M-08-JHP	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010	SR M4X4 DIN913 TL360		CU-CW-JHP	HW 2.0	HW 3.0	T-8/5
PWLNL 3232P-08-JHP	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010	SR M4X4 DIN913 TL360	OR 6.4X0.9N	CU-CW-JHP	HW 2.0	HW 3.0	T-8/5
PWLNR 3232P-08-JHP	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010	SR M4X4 DIN913 TL360		CU-CW-JHP	HW 2.0	HW 3.0	T-8/5

ISOTURN JETCUT

C#-PWLNR/L-08-JHP

Lever Lock Tools with CAMFIX Exchangeable Shanks and Channels for High Pressure Coolant Carrying Trigon Inserts



Designation	SS	f	l_1	L_3	G_a°	G_r°	Insert
C6 PWLNR/L-45065-08-JHP	63	45.0	65.00	37.00	-6	-6	WNMG 08..

• For user guide, see pages 64-71

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

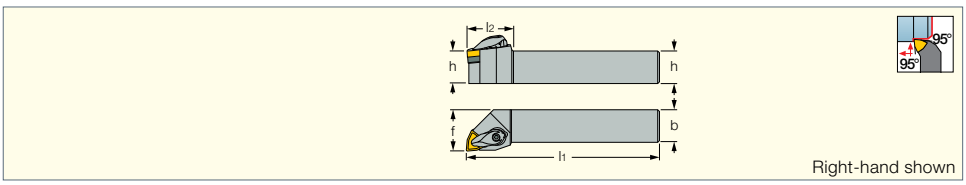
Spare Parts

Designation										
C6 PWLNL-45065-08-JHP	TWN 423	SP 4	LR 4	SR 117-2010	T-8/5	PN 3-4	CU-CW-JHP		HW 3.0	
C6 PWLNR-45065-08-JHP	TWN 423	SP 4	LR 4	SR 117-2010	T-8/5	PN 3-4	CU-CW-JHP	OR 6.4X0.9N	HW 3.0	HW 1.5

ISOTURN

DWLNR/L

External 95° Lead Tools Carrying Negative WNMG Trigon Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DWLNR/L 1616H-06	16.0	16.0	100.00	26.0	16.0	-6	-6	WNMG 0604
DWLNR/L 2020K-06	20.0	20.0	125.00	26.0	25.0	-6	-6	WNMG 0604
DWLNR/L 2525M-06	25.0	25.0	150.00	24.0	32.0	-6	-6	WNMG 0604
DWLNR/L 2020K-08	20.0	20.0	125.00	35.0	25.0	-6	-6	WNMG 0804
DWLNR/L 2525M-08	25.0	25.0	150.00	35.0	32.0	-6	-6	WNMG 0804
DWLNR/L 3232P-08	32.0	32.0	170.00	35.0	40.0	-6	-6	WNMG 0804

For inserts, see pages: WNMX-M3/4MW (119) • WNMX-M3/4PW (119) • WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

Spare Parts

Designation									
DWLNR/L 1616H-06	RWT 322	RWT 3-2(b)*		SR 40090I	LCGR-3	SR RC3	KSP 3		HW 2.5
DWLNR/L 2020K-06	RWT 322	RWT 3-2(b)*		SR 40090I	LCGR-3	SR RC3	KSP 3		HW 2.5
DWLNR/L 2525M-06	RWT 322	RWT 3-2(b)*		SR 40090I	LCGR-3	SR RC3	KSP 3		HW 2.5
DWLNR/L 2020K-08	RWT 443	RWT 443-TNM(b)*	TWH 4(c)*	SR 14-506	LCGR-4	SR 10400270-25.5		T-15/5	
DWLNR/L 2525M-08	RWT 443	RWT 443-TNM(b)*	TWH 4(c)*	SR 14-506	LCGR-4	SR 10400270-25.5		T-15/5	
DWLNR/L 3232P-08	RWT 443	RWT 443-TNM(b)*	TWH 4(c)*	SR 14-506	LCGR-4	SR 10400270-25.5		T-15/5	

* Optional, should be ordered separately

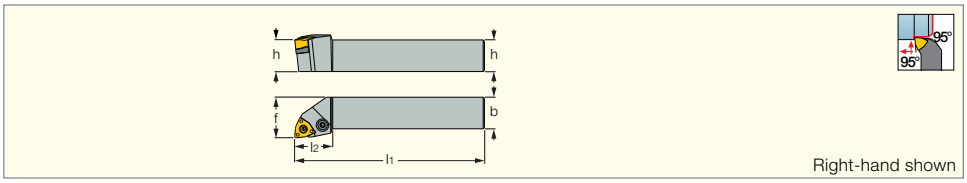
(b) RWT 3-2 seat, for WNMG 06T3 insert

(b) RWT 3-2 seat, for WNMG 06T3 insert

(c) TWH 4 seat, for WNMX 0807... insert

HELITURN LD

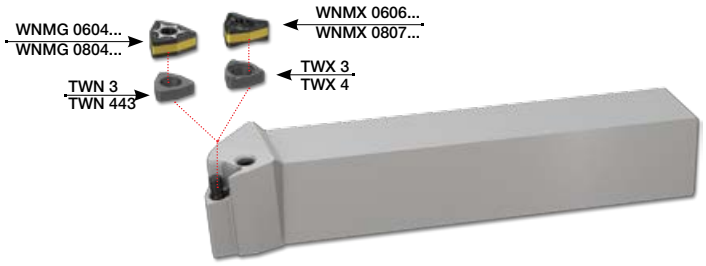
PWLNR/L-X
Lever Lock External Turning Tools
Carrying HELITURN LD WNMX
or WNMG Trigon Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLNR/L 2020K-06X (1)	20.0	20.0	125.00	25.0	25.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2525M-06X (1)	25.0	25.0	150.00	25.0	32.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2020K-08X (2)	20.0	20.0	125.00	30.0	25.0	-6	-6	WNMX 0807, WNMG 0804
PWLNR/L 2525M-08X (2)	25.0	25.0	150.00	30.0	32.0	-6	-6	WNMX 0807, WNMG 0804
PWLNR 3232P-08X (2)	32.0	32.0	170.00	30.0	40.0	-6	-6	WNMX 0807, WNMG 0804

(1) Supplied with TWX 3 seat for WNMX 0606.. inserts and TWN 3 seat for WNMG 0604.. inserts.
(2) Supplied with TWX 4 seat for WNMX 0807.. inserts and TWN 443 seat for WNMG 0804.. inserts.

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMX-M3/4PW (119) • WNMG-F3M (112) • WNMG-M3M (113) • WNMX-M3/4MW (119) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)



Spare Parts

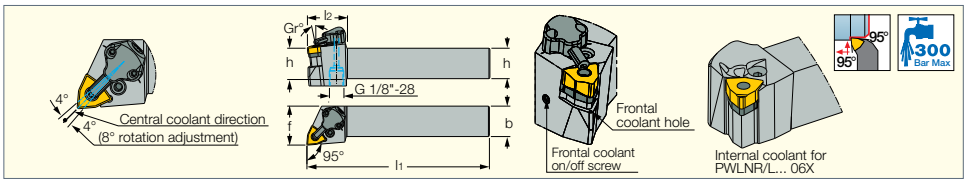
Designation							
PWLNR/L 2020K-06X	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
PWLNR/L 2525M-06X	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4
PWLNR/L 2020K-08X	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PWLNR/L 2525M-08X	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PWLNR 3232P-08X	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L



HELITURN LD

PWLNR/L-X-JHP

Lever Lock Tools with Channels for High Pressure Coolant Carrying HELITURN LD WNMX or WNMG Trigon Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLNR/L 2020K-06X-JHP (1)	20.0	20.0	125.00	25.0	25.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2525M-06X-JHP (1)	25.0	25.0	150.00	25.0	32.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2525M-08X-JHP (2)	25.0	25.0	150.00	33.0	32.0	-6	-6	WNMX 0807, WNMG 0804
PWLNR/L 3232P-08X-JHP (2)	32.0	32.0	170.00	33.0	40.0	-6	-6	WNMX 0807, WNMG 0804

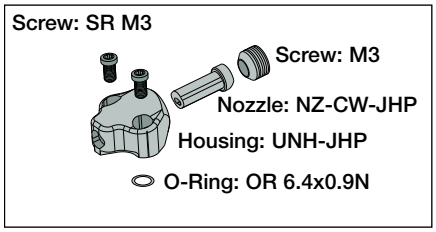
• For user guide, see pages 64-71

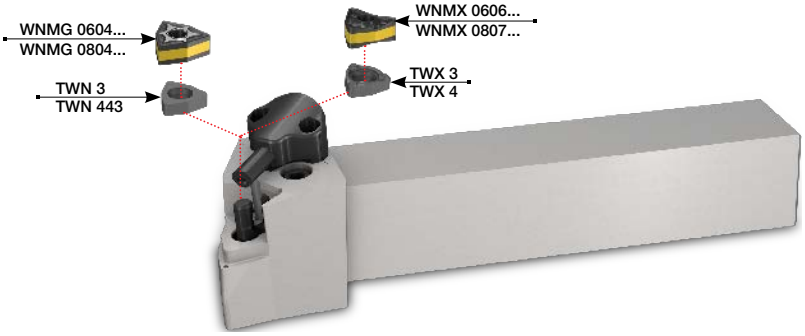
(1) Supplied with TWX 3 seat for WNMX 0606.. inserts and TWN 3 seat for WNMG 0604.. inserts.

(2) Supplied with TWX 4 seat for WNMX 0807.. inserts and TWN 443 seat for WNMG 0804.. inserts.

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMX-M3/4PW (119) • WNMG-F3M (112) • WNMG-M3M (113) • WNMX-M3/4MW (119) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

CU-CW-JHP





Spare Parts

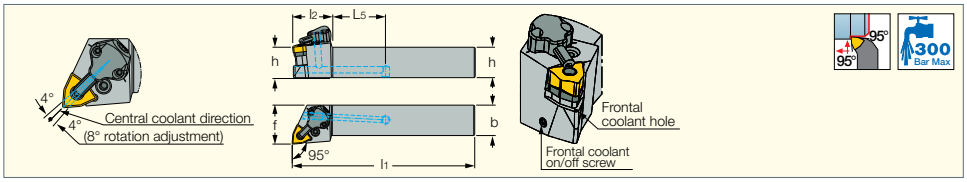
Designation											
PWLNR/L 2020K-06X-JHP	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4			HW 2.5/5		
PWLNR/L 2525M-06X-JHP	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4			HW 2.5/5		
PWLNR/L 2525M-08X-JHP	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 2.0	HW 3.0	SR M4X4 DIN913 TL360
PWLNR/L 3232P-08X-JHP	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 2.0	HW 3.0	SR M4X4 DIN913 TL360



HELITURN LD

PWLNR/L-X-JHP-MC

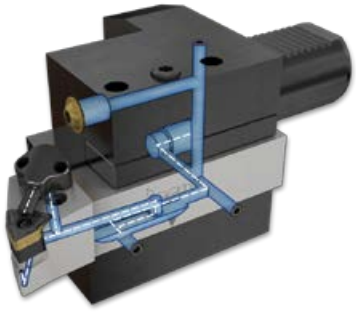
Lever Lock Tools with Bottom Inlets for High Pressure Coolant Channels Carrying HELITURN LD WNMX and WNMG Trigon Inserts



Designation	h	b	l_1	l_2	L_5	f	G_a°	G_r°	Insert
PWLNR/L 2020X-06X-JHP-MC	20.0	20.0	97.00	27.0	29.00	25.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2525X-06X-JHP-MC	25.0	25.0	118.00	33.0	35.00	32.0	-6	-6	WNMX 0606, WNMG 0604
PWLNR/L 2020X-08X-JHP-MC	20.0	20.0	97.00	27.0	29.00	25.0	-6	-6	WNMX 0807, WNMG 0804
PWLNR/L 2525X-08X-JHP-MC	25.0	25.0	118.00	33.0	35.00	32.0	-6	-6	WNMX 0807, WNMG 0804

• For user guide, see pages 64-71

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMX-M3/4PW (119) • WNMG-F3M (112) • WNMG-M3M (113) • WNMX-M3/4MW (119) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)



Spare Parts

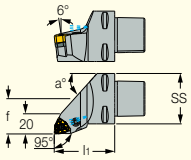
Designation												
PWLNR/L 2020X-06X-JHP-MC	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4	HW 2.5	CU-CW-JHP	T-8/5	SR M5X5 DIN913 TL360		
PWLNR/L 2525X-06X-JHP-MC	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4	HW 2.5	CU-CW-JHP	T-8/5	SR M5X5 DIN913 TL360		
PWLNR/L 2020X-08X-JHP-MC	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	HW 2.5	CU-CW-JHP	T-8/5	SR M5X5 DIN913 TL360	HW 3.0	
PWLNR/L 2525X-08X-JHP-MC	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	HW 2.5	CU-CW-JHP	T-8/5	SR M5X5 DIN913 TL360	HW 3.0	

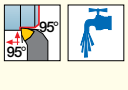
HELITURN LD

CAMFIX

C#-PWLNR/L-X

Lever Lock Tools with CAMFIX Shanks Carrying HELITURN LD WNMX or WNMG Inserts





Right-hand shown

Designation	SS	f	l_1	a°	Insert
C4 PWLNR/L-27050-06X (1)	40	27.0	50.00	45	WNMX 0606, WNMG 0604
C5 PWLNL-25060-06X (1)	50	25.0	60.00	48	WNMX 0606, WNMG 0604
C4 PWLNR/L-27050-08X (2)	40	27.0	50.00	45	WNMX 0807, WNMG 0804
C5 PWLNR/L-35060-08X (2)	50	35.0	60.00	48	WNMX 0807, WNMG 0804

(1) Supplied with TWX 3 seat for WNMX 0606.. inserts and TWN 3 seat for WNMG 0604.. inserts.

(2) Supplied with TWX 4 seat for WNMX 0807.. inserts and TWN 443 seat for WNMG 0804.. inserts.

For inserts, see pages: WNMX-M3/4MW (119) • WNMX-M3/4PW (119) • WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113)

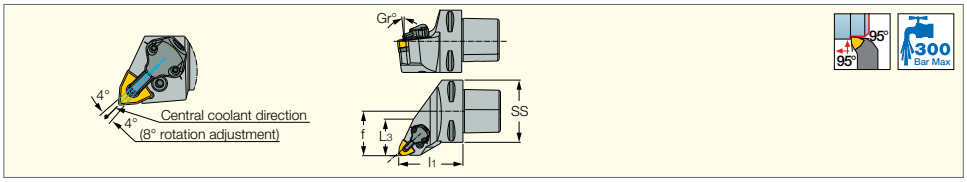
Spare Parts

Designation								
C4 PWLNR/L-27050-06X	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4	EZ 62	HW 2.5/5
C5 PWLNL-25060-06X	TWX 3	TWN 3	SP 3	LR 3	SR 117-2014	PN 3-4	EZ 83	HW 2.5/5
C4 PWLNR/L-27050-08X	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	EZ 62	HW 3.0
C5 PWLNR/L-35060-08X	TWX 4	TWN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	EZ 83	HW 3.0

JETCUT CAMFIX

C#-PWLNR/L-X-JHP

Lever Lock Tools with CAMFIX Shanks and Channels for High Pressure Coolant Carrying WNMX or WNMG Inserts



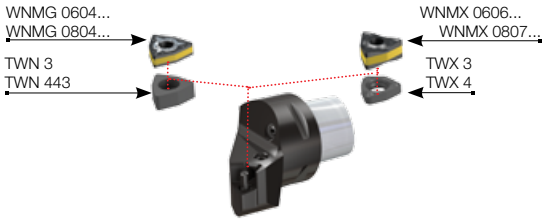
Designation	SS	l_1	f	L_3	G_a°	G_r°	Insert
C3 PWLNR-22045-06X-JHP (1)	32	40.00	27.0	22.00	-6	-6	WNMX 0606, WNMG 0604
C3 PWLNR-22045-08X-JHP (2)	32	40.00	27.0	22.00	-6	-6	WNMX 0807, WNMG 0804
C4 PWLNR/L-27050-08X-JHP (2)	40	50.00	27.0	22.00	-6	-6	WNMX 0807, WNMG 0804
C5 PWLNR/L-35060-08X-JHP (2)	50	60.00	35.0	25.00	-6	-6	WNMX 0807, WNMG 0804
C6 PWLNR/L-45065-08X-JHP (2)	63	65.00	45.0	37.00	-6	-6	WNMX 0807, WNMG 0804

• For user guide, see pages 64-71

(1) Supplied with TWX 3 seat for WNMX 0606.. inserts and TWN 3 seat for WNMG 0604.. inserts.

(2) Supplied with TWX 4 seat for WNMX 0807.. inserts and TWN 443 seat for WNMG 0804.. inserts.

For inserts, see pages: WNMX-M3/4MW (119) • WNMX-M3/4PW (119) • WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113)



Spare Parts

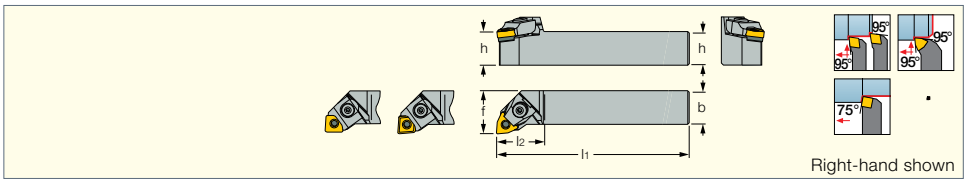
Designation									
C3 PWLNR-22045-06X-JHP	TWX 3	TWN 3	SP 3	PN 3-4	LR 3	SR 117-2014	CU-CW-JHP	T-8/5	HW 2.5
C3 PWLNR-22045-08X-JHP	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	CU-CW-JHP	T-8/5	HW 3.0
C4 PWLNR/L-27050-08X-JHP	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	CU-CW-JHP	T-8/5	HW 3.0
C5 PWLNR/L-35060-08X-JHP	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	CU-CW-JHP	T-8/5	HW 3.0
C6 PWLNR/L-45065-08X-JHP	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	CU-CW-JHP	T-8/5	HW 3.0



MULTI-WEDGE

MULNR/L-12MW

MULTI-WEDGE Lock External Tools
Carrying 80° Negative Rhombic
or Trigon or Square Inserts

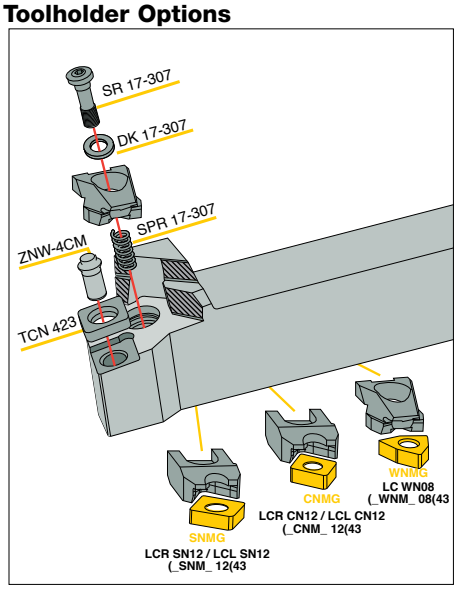


Designation	h	b	l_1	l_2	f	G_a°	G_r°
MULNR/L 2525M-12MW	25.0	25.0	150.00	35.0	32.0	6	6

• The wedge for the WNMG insert is supplied with the holder, order the others separately

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Toolholder Options



Spare Parts

Designation										
MULNL 2525M-12MW	TCN 423	ZNW 4CM	LC WN08	LCL CN12*	LCL SN12*	SR 17-307	SR M4X8	HW 3.0	DK 17-307	SPR 17-307
MULNR 2525M-12MW	TCN 423	ZNW 4CM	LC WN08	LCR CN12*	LCR SN12*	SR 17-307	SR M4X8	HW 3.0	DK 17-307	SPR 17-307

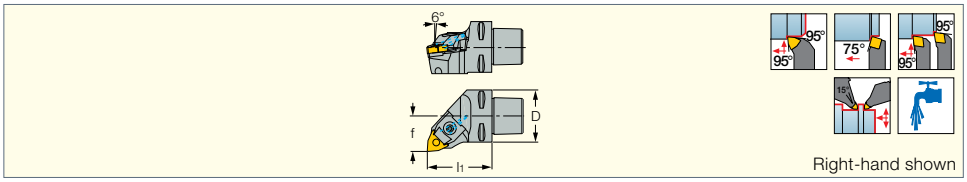
* Optional, should be ordered separately



MULTI-WEDGE

C#-MULNR/L-MW

MULTI-WEDGE Tools with CAMFIX Exchangeable Shanks Carrying 80° Negative Rhombic or Trigon or Square Inserts



Right-hand shown

Designation	SS	f	l_1	Insert
C4 MULNR/L 27050-12MW	40	27.0	50.00	W/C/SNMG 1204..
C5 MULNR/L 35060-12MW	50	35.0	60.00	W/C/SNMG 1204..
C6 MULNR/L-45065-12MW	63	45.0	65.00	W/C/SNMG 1204..

• R.H. wedge for R.H. tool, L.H. wedge for L.H. tool

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

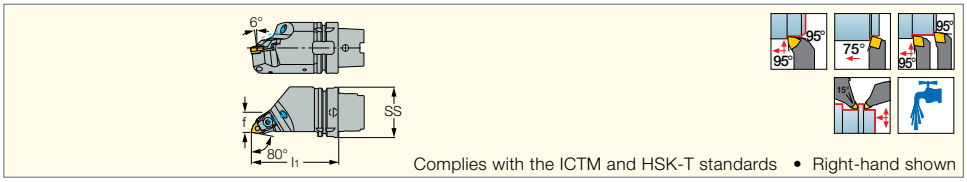
Spare Parts

Designation								
C4 MULNL 27050-12MW	TCN 423	ZNW 4CMI	LC WN08	HW 3.0	SR 17-307	DK 17-307	SPR 17-307	EZ 62
C4 MULNR 27050-12MW	TCN 423	ZNW 4CMI	LC WN08	HW 3.0	SR 17-307	DK 17-307	SPR 17-307	EZ 62
C5 MULNR/L 35060-12MW	TCN 423	ZNW 4CMI	LC WN08	HW 3.0	SR 17-307	DK 17-307	SPR 17-307	EZ 83
C6 MULNL-45065-12MW	TCN 423	ZNW 4CMI	LC WN08	HW 3.0	SR 17-307	DK 17-307	SPR 17-307	EZ 104
C6 MULNR-45065-12MW	TCN 423	ZNW 4CMI	LC WN08	HW 3.0	SR 17-307	DK 17-307	SPR 17-307	EZ 104

HSK MULTI-WEDGE

HSK A63WH-MULNR/L-MW

MULTI-WEDGE Toolholders with HSK Taper Shanks for 80° Rhombic, Trigon and Square Inserts



Complies with the ICTM and HSK-T standards • Right-hand shown

Designation	SS	l_1	f	G_a°	G_r°	Insert
HSK A63WH-MULNR/L-J12MW	63	110.00	25.0	-6	-6	W/C/SNMG 1204

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGA-Ceramic (179) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

Designation												
HSK A63WH-MULNL-J12MW	TCN 423	LCL CN12*	LCL SN12*	LC WN08	ZNW 4CM	SR 17-307	HW 3.0	DK 17-307	SPR 17-307	SR M4X8	EZ 104
HSK A63WH-MULNR-J12MW	TCN 423	LCR CN12*	LCR SN12*	LC WN08	ZNW 4CM	SR 17-307	HW 3.0	DK 17-307	SPR 17-307	SR M4X8	EZ 104

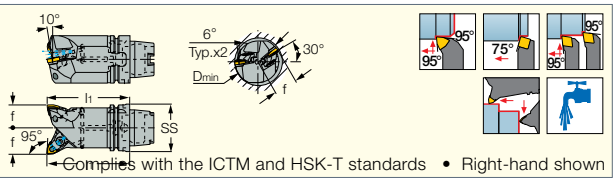
* Optional, should be ordered separately



MULTI-WEDGE HSK

HSK A63WH-MULNR-J12MWX2

MULTI-WEDGE Twin Toolholders with HSK Taper Shanks for 80° Rhombic, Trigon and Square Inserts



Complies with the ICTM and HSK-T standards • Right-hand shown

Designation	SS	l_1	f	D min	Insert
HSK A63WH-MULNR-J12MWX2	63	110.00	35.0	72.00	W/C/SNMG 1204

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

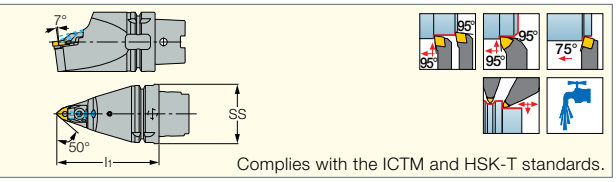
Designation									
HSK A63WH-MULNR-J12MWX2	TCN 423	LC WN08	LCR CN12*	LCR SN12*	ZNW 4CMI	DK 17-307	SPR 17-307	SR 17-307	HW 3.0

* Optional, should be ordered separately

HSK MULTI-WEDGE

HSK A63WH-MUMNN-MW

MULTI-WEDGE Tools with HSK Exchangeable Shanks Carrying 80° Negative Rhombic, Trigon or Square Inserts



Complies with the ICTM and HSK-T standards.

Designation	SS	l_1	Insert
HSK A63WH-MUMNN-J12MW	63	110.00	W/C/SNMG 1204

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

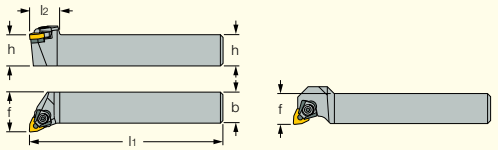
Designation											
HSK A63WH-MUMNN-J12MW	LC WN08	LCR CN12*	LCR SN12*	TCN 423	ZNW 4CM	SR 17-307	HW 3.0	DK 17-307	SPR 17-307	EZ 83	SR M4X8

* Optional, should be ordered separately

ISOTURN

MWLNR/L-W

Top Wedge Lock External Tools
Carrying Trigon Inserts



MWLNR..-W MWLNR..-06SW Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MWLNR/L 1616H-06SW	16.0	16.0	100.00	23.0	16.0	-6	-6	WNMG 06T3
MWLNR/L 2020K-06W	20.0	20.0	125.00	25.0	25.0	-6	-6	WNMG 06T3
MWLNR/L 2525M-06W	25.0	25.0	150.00	25.0	32.0	-6	-6	WNMG 06T3
MWLNR/L 2020K-08W	20.0	20.0	125.00	30.0	25.0	-6	-6	WNMG 0804
MWLNR/L 2525M-08W	25.0	25.0	150.00	30.0	32.0	-6	-6	WNMG 0804
MWLNR/L 3232P-08W	32.0	32.0	170.00	35.0	40.0	-6	-6	WNMG 0804

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

Spare Parts

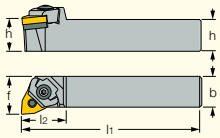
Designation						
MWLNL 1616H-06SW	IWSN 322W		ZNW 3W	SR 14-564	LC 250 SET 1	HW 2.5
MWLNR 1616H-06SW	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	SR 14-564	LC 250 SET 1	HW 2.5
MWLNL 2020K-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	SR 14-564	LC 250 SET 1	HW 2.5
MWLNR 2020K-06W	IWSN 322W		ZNW 3W	SR 14-564	LC 250 SET 1	HW 2.5
MWLNR/L 2525M-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	SR 14-564	LC 250 SET 1	HW 2.5
MWLNR/L 2020K-08W	IWSN 433	IWSN 433M(b)*	ZNW 4W	SR M4X8	LC 252 SET 1	HW 3.0
MWLNR/L 2525M-08W	IWSN 433	IWSN 433M(b)*	ZNW 4W	SR M4X8	LC 252 SET 1	HW 3.0
MWLNR/L 3232P-08W	IWSN 433	IWSN 433M(b)*	ZNW 4W	SR M4X8	LC 252 SET 1	HW 3.0

* Optional, should be ordered separately
[b] Use IWSN 3-2W optional seat for WNMG 0604.. inserts
[b] Use IWSN 3-2W optional seat for WNMG 0604.. inserts

ISOTURN

MWLNR/L-13W

Top Wedge Lock External
Toolholders for Large Trigon Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MWLNR/L 3232P-13W	32.0	32.0	170.00	45.0	40.0	-6	-6	WNMG 1306
MWLNR/L 4040R-13W	40.0	40.0	200.00	45.0	50.0	-6	-6	WNMG 1306

For inserts, see pages: WNMG-TNM (118)

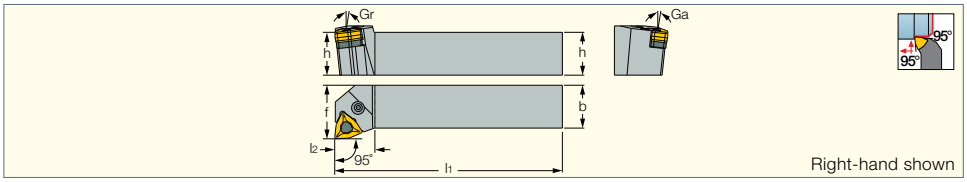
Spare Parts

Designation								
MWLNR/L-13W	IWSN 635	ZNW 6W	SR 14-570	LC 253 (MIM)	HW 4P	SPR 17-362	SR 17-362	WA M8

DOVE IQ TURN HEAVY DUTY LINE

PWLOR/L-IQ

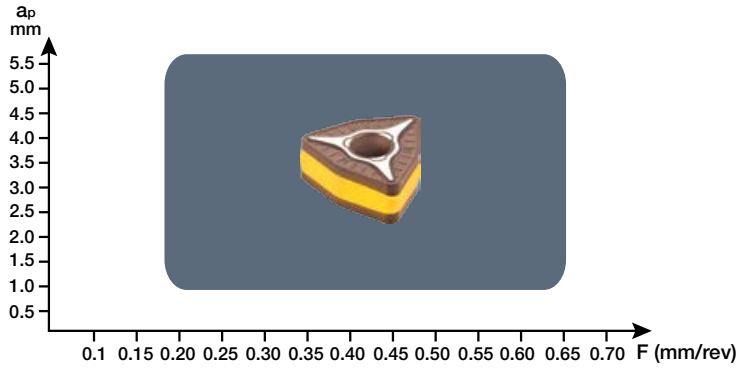
Lever Lock and Dovetail Pocket Rigid Clamping Tools Carrying Unique Double-Sided Trigon Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLOR/L 2525M-10-IQ	25.0	25.0	150.00	25.0	32.0	-6	-6	WOMG 1007-IQ
PWLOR/L 3232P-10-IQ	32.0	32.0	170.00	30.0	40.0	-6	-6	WOMG 1007-IQ
PWLOR/L 3232P-13-IQ	32.0	32.0	170.00	30.0	40.0	-6.5	-6.5	WOMG 1306-IQ
PWLOR/L 4040S-13-IQ	40.0	40.0	250.00	30.0	48.0	-6.5	-6.5	WOMG 1306-IQ

For inserts, see pages: WOMG-10-T3P-IQ (111) • WOMG-13-R3P-IQ (112)

Application Range on PWLOR/L-IQ Tools



Spare Parts

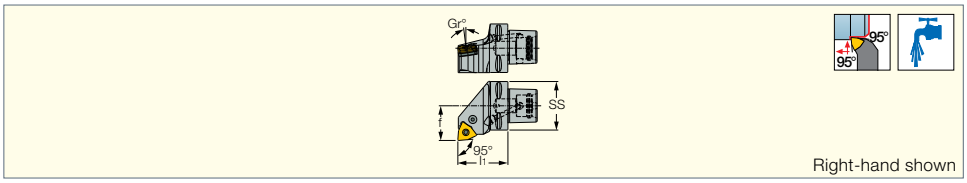
Designation					
PWLOR/L 2525M-10-IQ	TWN 5-4-IQ	SP D1.5-L10(a)	SR LCS 5	LR 5	HW 3.0
PWLOR/L 3232P-10-IQ	TWN 5-4-IQ	SP D1.5-L10(a)	SR LCS 5	LR 5	HW 3.0
PWLOR/L 3232P-13-IQ	TWX 6-IQ	SP 5(a)	SR 10402352	LCL 20C-NX	HW 4.0
PWLOR/L 4040S-13-IQ	TWX 6-IQ	SP 5(a)	SR 10402352	LCL 20C-NX	HW 4.0

(a) Seat Pin

DOVE IQ TURN HEAVY DUTY LINE

C#-PWLOR/L-IQ

Lever Lock and Dovetail Rigid Clamping Pocket with CAMFIX Shank Tools Carrying Unique Double-Sided Trigon Inserts



Designation	SS	f	l_1	G_a°	G_r°	Insert
C6 PWLOR/L-45065-13-IQ	63	45.0	65.00	-6.5	-6.5	WOMG 1306-IQ

For inserts, see pages: WOMG-13-R3P-IQ (112)

Spare Parts

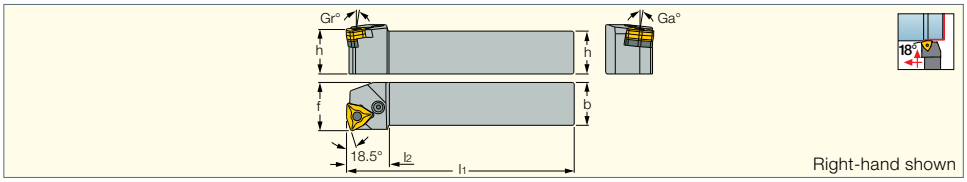
Designation						
C#-PWLOR/L-IQ	TWX 6-IQ	LCL 20C-NX	SR 10402352	HW 4.0	SP 5	SATZ-M10X1-M5

FEEDTURN

DOVE IQ TURN HEAVY DUTY LINE

PWXOR/L-TF-IQ

Lever Lock Tools for Fast Feed Longitudinal Turning

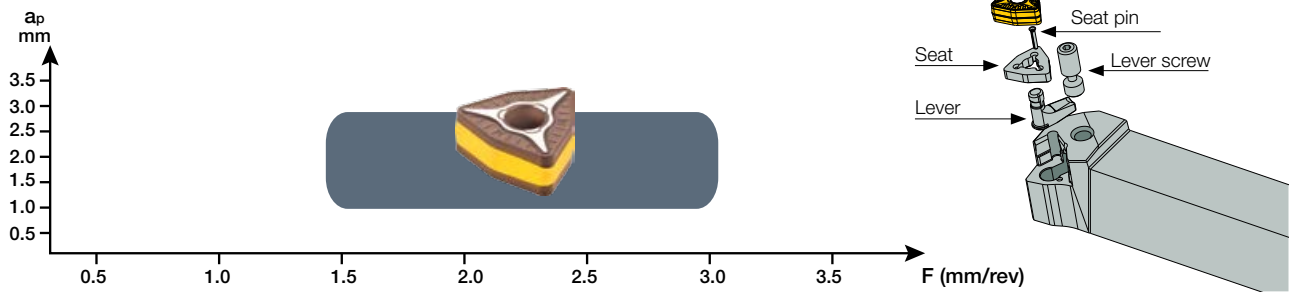


Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
PWXOR/L 2525M-10-TF-IQ	25.0	25.0	150.00	31.0	29.0	-6	-6	WOMG 1007-IQ	TWN 5-4-IQ	SP D1.5-L10(a)	SR LCS 5	LR 5	HW 3.0
PWXOR/L 3232P-10-TF-IQ	32.0	32.0	170.00	31.0	36.0	-6	-6	WOMG 1007-IQ	TWN 5-4-IQ	SP D1.5-L10(a)	SR LCS 5	LR 5	HW 3.0
PWXOR/L 4040S-10-TF-IQ	40.0	40.0	250.00	31.0	44.0	-6	-6	WOMG 1007-IQ	TWN 5-4-IQ	SP D1.5-L10(a)	SR LCS 5	LR 5	HW 3.0

[a] Seat Pin

For inserts, see pages: WOMG-10-T3P-IQ (111)

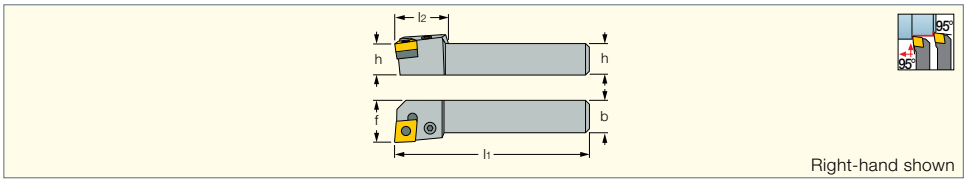
Application Range on PWXOR/L-TF-IQ Tools



ISOTURN

PCLNR/L

Lever Lock Tools Carrying 80° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PCLNR/L 2020K-12	20.0	20.0	125.00	27.5	25.0	-6	-6	CNMG 1204..
PCLNR/L 2525M-12	25.0	25.0	150.00	27.8	32.0	-6	-6	CNMG 1204..
PCLNR/L 3232P-12	32.0	32.0	170.00	27.6	40.0	-6	-6	CNMG 1204..
PCLNR/L 3232P-19	32.0	32.0	170.00	38.0	40.0	-6	-6	CNMG 1906..
PCLNR/L 4040S-25	40.0	40.0	250.00	47.0	50.0	-6	-6	CNMG 2509..
PCLNR/L 5050T-25	50.0	50.0	300.00	47.0	60.0	-6	-6	CNMG 2509..

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMM-NR (129) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

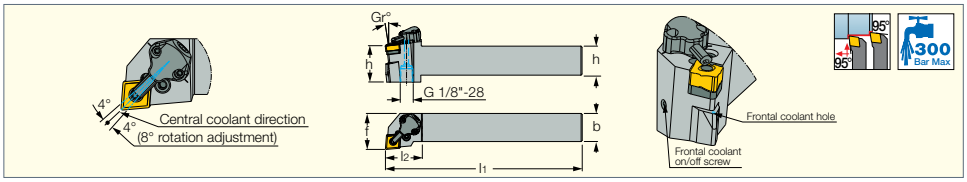
Spare Parts

Designation							
PCLNR/L 2020K-12	TCN 423		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PCLNR/L 2525M-12	TCN 423		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PCLNR/L 3232P-12	TCN 423		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PCLNR/L 3232P-19	TCN 63		SP 66	LR 6	SR 10402352	HW 4.0	
PCLNR/L 4040S-25	TCN 84N	TCN 85N*	SP 8	LR 8	SR 10402264		
PCLNR/L 5050T-25	TCN 84N	TCN 85N*	SP 8	LR 8	SR 10402264		

* Optional, should be ordered separately

ISOTURN JETCUT

PCLNR/L-12-JHP
Lever Lock Tools with Channels for High Pressure Coolant Carrying 80° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PCLNR/L 2525M-12-JHP	25.0	25.0	150.00	33.0	32.0	-6	-6	CNMG 1204
PCLNR/L 3232P-12-JHP	32.0	32.0	170.00	33.0	40.0	-6	-6	CNMG 1204

• For user guide, see pages 64-71

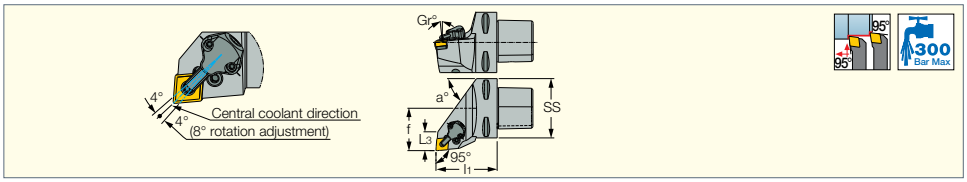
For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

Spare Parts

Designation											
PCLNR/L-12-JHP	TCN 423	SP 4	LR 4	SR 117-2010	PN 3-4	CU-CW-JHP	SR M4X4 DIN913 TL360		HW 2.0	HW 3.0	T-8/5

JETCUT CAMFIX

C#-PCLNR/L-12-JHP
Lever Lock Tools with Channels for High Pressure Coolant and CAMFIX Shanks Carrying 80° Negative Rhombic Inserts



Designation	SS	f	l_1	L_3	a°	G_a°	G_r°	Insert
C6 PCLNR/L-45065-12-JHP	63	45.0	65.00	20.00	54	-6	-6	CNMG 1204

• For user guide, see pages 64-71

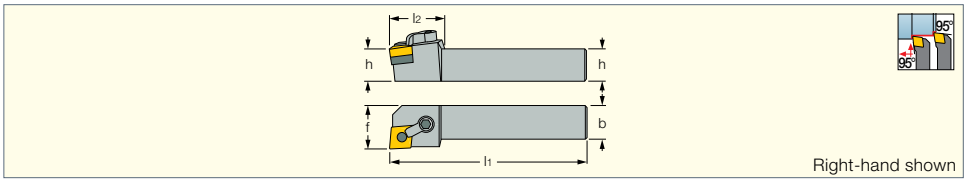
For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

Spare Parts

Designation									
C6 PCLNR/L-45065-12-JHP	TCN 423	SP 4	LR 4	SR 117-2010	PN 3-4	CU-CW-JHP	HW 3.0	T-8/5	SR M5X5 DIN913 TL360

ISOTURN

MCLNR/L
Pin and Clamp Tools Carrying 80° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MCLNR 2525M-16	25.0	25.0	150.00	30.0	32.0	-6	-6	CNMG 1606..
MCLNR 3232P-16	32.0	32.0	170.00	30.0	40.0	-6	-6	CNMG 1606..
MCLNL 3232P-19	32.0	32.0	170.00	35.0	40.0	-6	-6	CNMG 1906..

For inserts, see pages: CNMG-M3P (120) • CNMM-R3P (120) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMM-NR (129) • CNMG/CNGG-PP (125) • CNMG-MR (127) • CNMA (125)

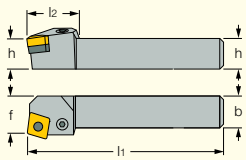
Spare Parts

Designation				
MCLNR 2525M-16	TCT 533	LC 30 SET 1	ZN 54M	HW 3.0
MCLNR 3232P-16	TCT 533	LC 30 SET 1	ZN 54M	HW 3.0
MCLNL 3232P-19	TCT 634	LC80 SET-1	ZN 64	HW 4.0

ISOTURN

PCBNR/L

Lever Lock Tools using the 100° Corner of CNMG Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PCBNR/L 2525M-12	25.0	25.0	150.00	27.7	22.0	-6	-6	CNMG 1204..
PCBNR/L 3232P-19	32.0	32.0	170.00	37.0	27.0	-6	-6	CNMG 1906..
PCBNR/L 4040S-19	40.0	40.0	250.00	37.0	37.0	-6	-6	CNMG 1906..

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMM-NR (129) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178)

Spare Parts

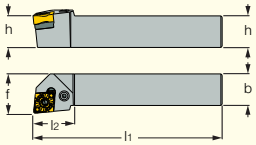
Designation						
PCBNR/L 2525M-12	TCN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PCBNR/L 3232P-19	TCN 63	SP 66		LR 6	SR 10402352	HW 4.0
PCBNR/L 4040S-19	TCN 63	SP 66		LR 6	SR 10402352	HW 4.0

HELiTURN LD

FLASHTURN ECO LINE

PCLNR/L-X

Lever Lock Tools Carrying CNMX/CNMG 80° Rhombic Inserts



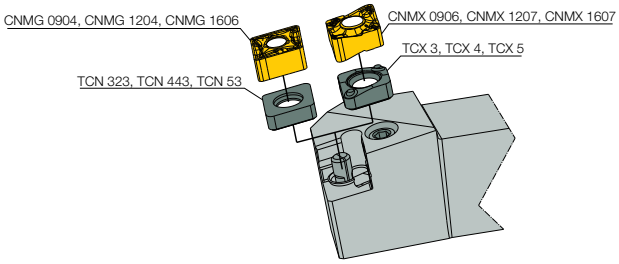


Right-hand shown

Designation	b	h	l_1	l_2	f	G_a°	G_r°	Insert
PCLNR/L 1616H-09X	16.0	16.0	150.00	25.0	25.0	-6	-6	CNMX 0906 CNMG 0904
PCLNR/L 2020K-09X	20.0	20.0	125.00	25.0	25.0	-6	-6	CNMX 0906 CNMG 0904
PCLNR/L 2525M-09X	25.0	25.0	150.00	25.0	32.0	-6	-6	CNMX 0906 CNMG 0904
PCLNR/L 2020K-12X	20.0	20.0	125.00	31.0	25.0	-6	-6	CNMX 1207 CNMG 1204
PCLNR/L 2525M-12X	25.0	25.0	150.00	31.0	32.0	-6	-6	CNMX 1207 CNMG 1204
PCLNR/L 3232P-12X	32.0	32.0	170.00	32.0	40.0	-6	-6	CNMX 1207 CNMG 1204
PCLNR/L 3232P-16X	32.0	32.0	170.00	32.0	40.0	-6	-6	CNMX 1607 CNMG 1606

• Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts, TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts, TCX 5 seat for CNMX 1607.. inserts and TCN 53 seat for CNMG 1606.. inserts.

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMX-M3/4PW (128) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMX-M3/4MW (128) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)



Spare Parts

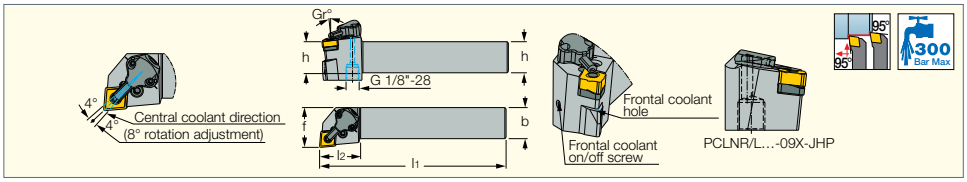
Designation							
PCLNR/L 2020K-09X	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4
PCLNR/L 2525M-09X	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4
PCLNR/L 2020K-12X	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PCLNR/L 2525M-12X	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PCLNR/L 3232P-12X	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PCLNR/L 3232P-16X	TCX 5	TCN 53	SP 5	LR 5	SR LCS 5	HW 3.0	SPP 5-6

HELITURN LD

JETCUT

PCLNR/L-X-JHP

Lever Lock Tools with Channels for High Pressure Coolant Carrying CNMX/CNMG 80° Rhombic Inserts



Designation	b	h	l_1	l_2	f	G_a°	G_r°	Insert
PCLNR/L 1616H-09X-JHP	16.0	16.0	150.00	33.0	32.0	-6	-6	CNMX 0906, CNMG 0904
PCLNR/L 2020K-09X-JHP	20.0	20.0	125.00	33.0	32.0	-6	-6	CNMX 0906, CNMG 0904
PCLNR/L 2525M-09X-JHP	25.0	25.0	150.00	33.0	32.0	-6	-6	CNMX 0906, CNMG 0904
PCLNR/L 2525M-12X-JHP	25.0	25.0	150.00	33.0	32.0	-6	-6	CNMX 1207, CNMG 1204
PCLNR/L 3232P-12X-JHP	32.0	32.0	170.00	33.0	40.0	-6	-6	CNMX 1207, CNMG 1204

• Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts. TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts. • For user guide, see pages 64-71

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMX-M3/4PW (128) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMX-M3/4MW (128) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

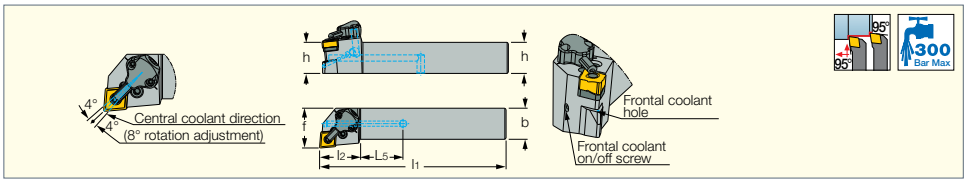
Spare Parts

Designation											
PCLNR/L 1616H-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4			HW 2.5/5		
PCLNR/L 2020K-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4			HW 2.5		
PCLNR/L 2525M-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4			HW 2.5/5		
PCLNR/L 2525M-12X-JHP	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 2.0	HW 3.0	SR M4X4 DIN913 TL360
PCLNR/L 3232P-12X-JHP	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 2.0	HW 3.0	SR M4X4 DIN913 TL360

HELITURN LD

PCLNR/L-X-JHP-MC

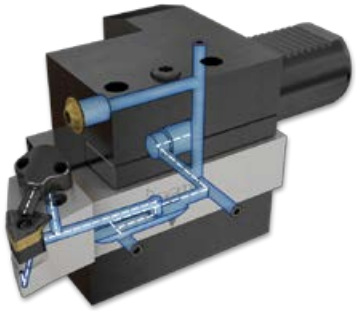
Lever Lock Tools with Bottom Inlets for High Pressure Coolant Channels Carrying CNMX/CNMG 80° Rhombic Inserts



Designation	b	h	l_1	l_2	L_5	f	G_a°	G_r°	Insert
PCLNR/L 2020X-09X-JHP-MC	20.0	20.0	97.00	27.0	29.00	25.0	-6	-6	CNMX 0906, CNMG 0904
PCLNR/L 2525X-09X-JHP-MC	25.0	25.0	118.00	33.0	35.00	32.0	-6	-6	CNMX 0906, CNMG 0904
PCLNR/L 2020X-12X-JHP-MC	20.0	20.0	97.00	27.0	29.00	25.0	-6	-6	CNMX 1207, CNMG 1204
PCLNR/L 2525X-12X-JHP-MC	25.0	25.0	118.00	33.0	35.00	32.0	-6	-6	CNMX 1207, CNMG 1204

• Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts. TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts. • For user guide, see pages 64-71

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMX-M3/4PW (128) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMX-M3/4MW (128) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)



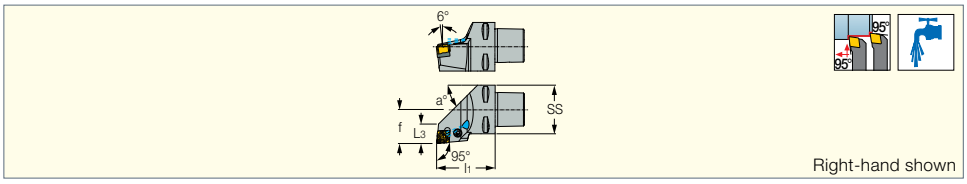
Spare Parts

Designation												
PCLNR/L 2020X-09X-JHP-MC	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4	HW 2.5	CU-CW-JHP	SR M5X5 DIN913 TL360			T-8/5
PCLNR/L 2525X-09X-JHP-MC	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4	HW 2.5	CU-CW-JHP	SR M5X5 DIN913 TL360			T-8/5
PCLNR/L 2020X-12X-JHP-MC	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	HW 2.5	CU-CW-JHP	SR M5X5 DIN913 TL360	HW 3.0	T-8/5	
PCLNR/L 2525X-12X-JHP-MC	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	HW 2.5	CU-CW-JHP	SR M5X5 DIN913 TL360	HW 3.0	T-8/5	

HELITURN LD

CAMFIX

C#-PCLNR/L-X
Lever Lock Tools with CAMFIX Exchangeable Shanks Carrying CNMX and CNMG Rhombic Inserts



Right-hand shown

Designation	SS	f	l_1	L_3	a°	Insert
C4 PCLNR/L-27050-12X (1)	40	27.0	50.00	20.00	40	CNMX 1207, CNMG 1204
C5 PCLNR/L-35060-12X (1)	50	35.0	60.00	20.00	45	CNMX 1207, CNMG 1204
C6 PCLNR/L-45065-12X (1)	63	45.0	65.00	20.00	54	CNMX 1207, CNMG 1204
C4 PCLNR/L-27050-16X	40	27.0	50.00	21.00	40	CNMX 1607, CNMG 1606
C5 PCLNR/L-35060-16X	50	35.0	60.00	21.00	45	CNMX 1607, CNMG 1606
C6 PCLNR/L-45065-16X	63	45.0	65.00	21.00	54	CNMX 1607, CNMG 1606

(1) Supplied with TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts.

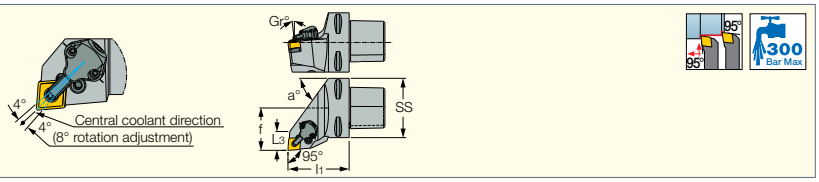
For inserts, see pages: CNMX-M3/4PW (128) • CNMX-M3/4MW (128) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

Spare Parts

Designation								
C4 PCLNR/L-27050-12X	TCX 4	TCN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	HW 3.0	EZ 62
C5 PCLNR/L-35060-12X	TCX 4	TCN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	HW 3.0	EZ 83
C6 PCLNR/L-45065-12X	TCX 4	TCN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	HW 3.0	EZ 83
C4 PCLNR/L-27050-16X	TCX 5	TCN 53	SP 5		LR 5	SR LCS 5	HW 3.0	EZ 104
C5 PCLNR/L-35060-16X	TCX 5	TCN 53	SP 5		LR 5	SR LCS 5	HW 3.0	EZ 125
C6 PCLNL-45065-16X	TCX 5	TCN 53	SP 5		LR 5	SR LCS 5	HW 3.0	EZ 125
C6 PCLNR-45065-16X	TCX 5	TCN 53	SP 5	SPP 5-6	LR 5	SR LCS 5	HW 3.0	EZ 125

JETCUT CAMFIX

C#-PCLNR/L-X-JHP
Lever Lock Tools with CAMFIX Shanks and Channels for High Pressure Coolant Carrying CNMX or CNMG Inserts



Designation	SS	f	l_1	L_3	a°	G_a°	G_r°	Insert
C3 PCLNR-22045-09X-JHP (1)	32	22.0	40.00	24.00	45	-6	-6	CNMX 0906, CNMG 0904
C4 PCLNR/L-27050-09X-JHP (1)	40	27.0	50.00	24.00	45	-6	-6	CNMX 0906, CNMG 0904
C5 PCLNR/L-35060-09X-JHP (1)	50	35.0	60.00	26.00	45	-6	-6	CNMX 0906, CNMG 0904
C4 PCLNR/L-27050-12X-JHP (2)	40	27.0	50.00	18.00	54	-6	-6	CNMX 1207, CNMG 1204
C5 PCLNR/L-35060-12X-JHP (2)	50	35.0	60.00	20.00	50	-6	-6	CNMX 1207, CNMG 1204
C6 PCLNR/L-45065-12X-JHP (2)	63	45.0	65.00	20.00	54	-6	-6	CNMX 1207, CNMG 1204

• For user guide, see pages 64-71

(1) Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts.

(2) Supplied with TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts.

For inserts, see pages: CNMX-M3/4MW (128) • CNMX-M3/4PW (128) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

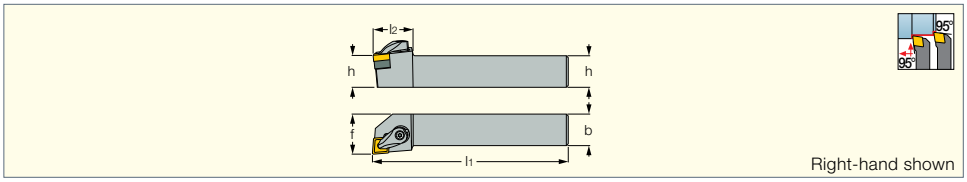
Spare Parts

Designation									
C3 PCLNR-22045-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4	CU-CW-JHP	T-8/5	HW 2.5
C4 PCLNR/L-27050-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4	CU-CW-JHP	T-8/5	HW 2.5
C5 PCLNR/L-35060-09X-JHP	TCX 3	TCN 323	SP 3	LR 3	SR 117-2014	PN 3-4	CU-CW-JHP	T-8/5	HW 2.5
C4 PCLNR/L-27050-12X-JHP	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 3.0
C5 PCLNR/L-35060-12X-JHP	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 3.0
C6 PCLNR/L-45065-12X-JHP	TCX 4	TCN 443	SP 4	LR 4DH	SR 117-2010	PN 3-4L	CU-CW-JHP	T-8/5	HW 3.0

ISOTURN

DCLNR/L

R-Clamp Tools with 95° Lead Angle
Carrying 80° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DCLNR/L-2020K-09X (1)	20.0	20.0	125.00	25.0	25.0	-6	-6	CNMG 0904 CNMX 0906
DCLNR/L-2525M-09X (1)	25.0	25.0	150.00	25.0	32.0	-6	-6	CNMG 0904 CNMX 0906
DCLNR/L 2020K-12 (2)	20.0	20.0	125.00	35.0	25.0	-6	-6	CNMG 1204 CNMX 1207
DCLNR/L 2525M-12 (2)	25.0	25.0	150.00	35.0	32.0	-6	-6	CNMG 1204 CNMX 1207
DCLNR/L 3232P-12 (2)	32.0	32.0	170.00	35.0	40.0	-6	-6	CNMG 1204 CNMX 1207
DCLNR/L 2525M-16	25.0	25.0	150.00	36.0	32.0	-6	-6	CNMG 1606..
DCLNR/L 3232P-16	32.0	32.0	170.00	36.0	40.0	-6	-6	CNMG 1606..
DCLNR/L 3232P-19	32.0	32.0	170.00	50.8	40.0	-6	-6	CNMG 1906..
DCLNR/L 4040S-19	40.0	40.0	250.00	42.0	50.0	-6	-6	CNMG 1906..

(1) Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts.
(2) Use TCH 4 seat (optional) for CNMX 1207... insert.

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMX-M3/4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMX-M3/4MW (128) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMM-NR (129) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

Spare Parts

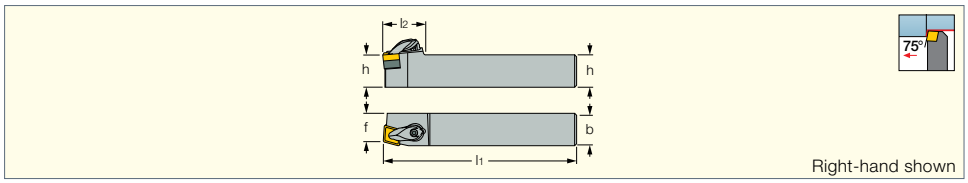
Designation										
DCLNL-2525M-09X	TCN 323	TCX 3	HW 2.5	SR RC3	LCGR-3	KSP 3			SP 3	PN 3-4
DCLNR/L 2020K-12	RCT 443	TCH 4(a)*		SR 14-506	LCGR-4		SR 10400270-25.5	T-15/5		
DCLNR/L 2525M-12	RCT 443	TCH 4(a)*		SR 14-506	LCGR-4		SR 10400270-25.5	T-15/5		
DCLNR/L 3232P-12	RCT 443	TCH 4(a)*		SR 14-506	LCGR-4		SR 10400270-25.5	T-15/5		
DCLNR/L 2525M-16			HW 4.0	SR 10402265	LCGR-5	KSP 5	SR 10402267			
DCLNR/L 3232P-16			HW 4.0	SR 10402265	LCGR-5	KSP 5	SR 10402267			
DCLNR/L 3232P-19	TCN 63		HW 4.0	SR 10402266	LCGR-6	KSP 5	SR 10402267			
DCLNR/L 4040S-19	TCN 63		HW 4.0	SR 10402266	LCGR-6	KSP 5	SR 10402267			

* Optional, should be ordered separately
(a) TCH 4 seat for CNMX 1207.. insert.

ISOTURN

DCBNR/L

R-Clamp Tools with 75°
Lead Angle Using the 100°
Corner of CNMG Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DCBNR/L 2525M-12	25.0	25.0	150.00	36.0	22.0	-6	-8	CNMG 1204
DCBNR/L 3232P-19	32.0	32.0	170.00	42.0	27.0	-6	-6	CNMG 1906

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMM-NR (129) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG-MR (127) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178)

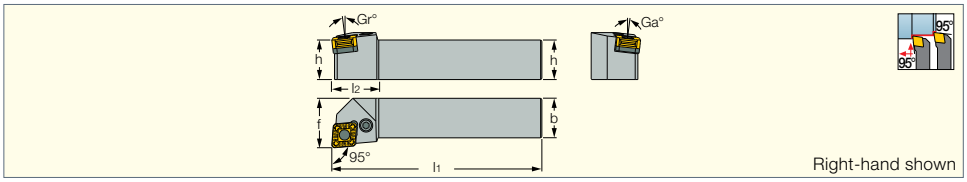
Spare Parts

Designation								
DCBNR/L 2525M-12	RCT 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DCBNR/L 3232P-19	TCN 63	SR 10402266	LCGR-6		KSP 5	SR 10402267	HW 4.0	

DOVEIQTURN HEAVY DUTY LINE

PCLOR/L-IQ

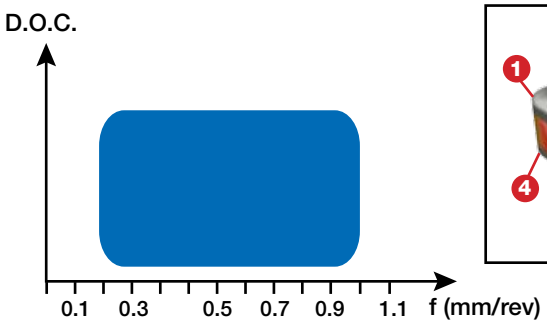
Lever Lock and Dovetail Pocket Rigid Clamping Toolholders for Unique Double-Sided 80° Rhombic Inserts



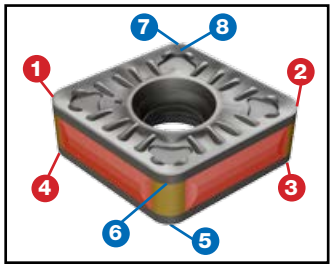
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PCLOR/L 3232P-16-IQ	32.0	32.0	170.00	33.0	40.0	-6	-6	COMG 1606
PCLOR/L 3232P-19-IQ	32.0	32.0	170.00	38.0	40.0	-6	-6	COMG 1906
PCLOR/L 4040S-19-IQ	40.0	40.0	250.00	38.0	50.0	-6	-6	COMG 1906
PCLOL 4040S-25-IQ	40.0	40.0	250.00	50.0	50.0	-6	-6	COMG 2509
PCLOR/L 5050T-25-IQ	50.0	50.0	300.00	50.0	60.0	-6	-6	COMG 2509

For inserts, see pages: COMG-R3P-IQ (121) • COMM-R3P-IQ (121)

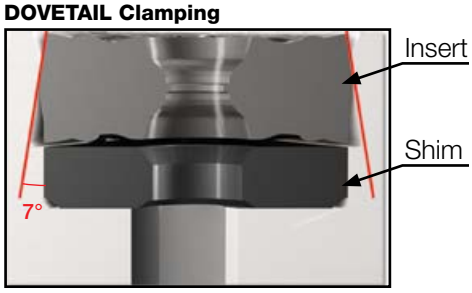
New Dovetail ☐
OMG-R3P-IQ Inserts



4 Cutting Edges for 80° and 4 Cutting Edges for 100°



DOVETAIL Clamping



Spare Parts

Designation					
PCLOR/L 3232P-16-IQ	TCX 5-IQ	SP 5	SR LCS 5-L25.5	LCL 16-NX	HW 3.0
PCLOR/L 3232P-19-IQ	TCX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PCLOR/L 4040S-19-IQ	TCX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PCLOL 4040S-25-IQ	TCX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0
PCLOR/L 5050T-25-IQ	TCX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0



DOVEIQTURN HEAVY DUTY LINE

C#-PCLOR/L-IQ

Lever Lock and Dovetail Pocket Tools with CAMFIX Shanks Carrying the Unique Double-Sided 80° Rhombic Inserts



Right-hand shown

Designation	SS	f	l_1	G_a°	G_r°	Insert
C6 PCLOR/L-45065-16-IQ	63	45.0	65.00	-6	-6	COMG 1606
C6 PCLOR/L-45065-19-IQ	63	45.0	65.00	-6	-6	COMG 1906
C8 PCLOR/L-55080-19-IQ	80	55.0	80.00	-6	-6	COMG 1906
C8 PCLOR/L-55080-25-IQ	80	55.0	80.00	-6	-6	COMG 2509

For inserts, see pages: COMG-R3P-IQ (121) • COMM-R3P-IQ (121)

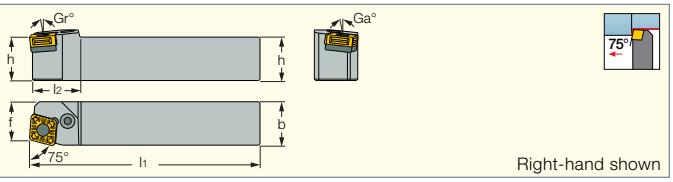
Spare Parts

Designation							
C6 PCLOR/L-45065-16-IQ	TCX 5-IQ	LCL 16-NX	SP 5	SATZ-M10X1-M5	HW 3.0	SR LCS 5-L25.5	SPP 5-6
C6 PCLOR/L-45065-19-IQ	TCX 6-IQ	LCL 20C-NX	SP 5	SATZ-M10X1-M5	HW 4.0	SR 10402352	
C8 PCLOR/L-55080-19-IQ	TCX 6-IQ	LCL 20C-NX	SP 5	SATZ-M10X1-M5	HW 4.0	SR 10402352	SPP 5-6
C8 PCLOR/L-55080-25-IQ	TCX 8-IQ	LCL 32-NX	SP 8	SATZ-M12X1-M6	HW 5.0	SR LCS 8-L39	

DOVEIQTURN HEAVY DUTY LINE

PCBOR/L-IQ

Lever Lock and Dovetail Pocket Rigid Clamping Tools Carrying Unique Double-Sided 80° Rhombic Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PCBOR/L 3232P-16-IQ	32.0	32.0	170.00	32.0	27.0	-6	-6	COMG 1606
PCBOR/L 3232P-19-IQ	32.0	32.0	170.00	38.0	28.0	-6	-6	COMG 1906
PCBOR/L 4040S-19-IQ	40.0	40.0	250.00	38.0	37.0	-6	-6	COMG 1906
PCBOR/L 4040S-25-IQ	40.0	40.0	250.00	50.0	35.0	-6	-6	COMG 2509
PCBOR/L 5050T-25-IQ	50.0	50.0	300.00	50.0	45.0	-6	-6	COMG 2509

For inserts, see pages: COMG-R3P-IQ (121) • COMM-R3P-IQ (121)

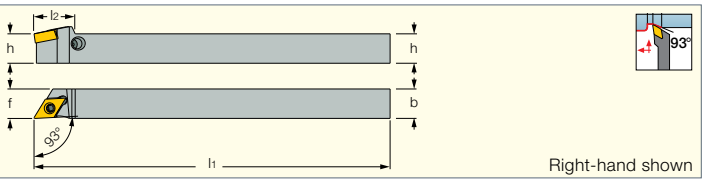
Spare Parts

Designation					
PCBOR/L 3232P-16-IQ	TCX 5-IQ	SP 5	SR LCS 5-L25.5	LCL 16-NX	HW 3.0
PCBOR/L 3232P-19-IQ	TCX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PCBOR/L 4040S-19-IQ	TCX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PCBOR/L 4040S-25-IQ	TCX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0
PCBOR/L 5050T-25-IQ	TCX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0

ISOTURN

PDJNR/L-S

Lever-Lock Tools Carrying DNGP 0703.. Double-Sided 55° Rhombic Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	Insert				
PDJNR/L 1010X-07S	10.0	10.0	120.00	14.0	10.0	DNGP 07	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PDJNR/L 1212F-07S	12.0	12.0	80.00	14.0	12.0	DNGP 07	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PDJNR/L 1212X-07S	12.0	12.0	120.00	14.0	12.0	DNGP 07	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN
PDJNR/L 1616X-07S	16.0	16.0	120.00	18.0	16.0	DNGP 07	SR 10400611	HW 2.0/5	SL LV-2	SL PI-2 PIN

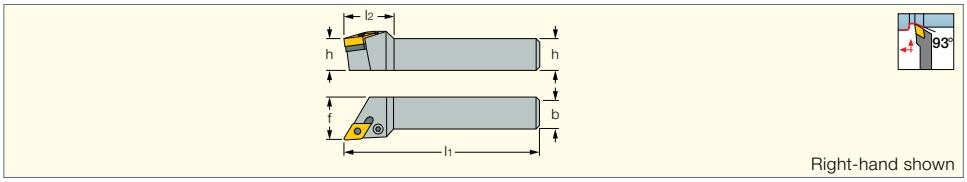
• Use a left-hand insert on a right-hand tool and vice versa.

For inserts, see pages: DNGP-F2M (130) • DNGP-F2P (129)

ISOTURN

PDJNR/L

Lever Lock Tools Carrying
55° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PDJNR/L 1616H-11	16.0	16.0	100.00	30.0	20.0	-6	-7	DNMG 1104
PDJNR/L 2020K-11	20.0	20.0	125.00	30.0	25.0	-6	-7	DNMG 1104
PDJNR/L 2525M-11	25.0	25.0	150.00	30.0	32.0	-6	-7	DNMG 1104
PDJNR/L 2020K-15	20.0	20.0	125.00	34.0	25.0	-6	-6	DNMG 1506
PDJNR/L 2525M-15	25.0	25.0	150.00	34.0	32.0	-6	-6	DNMG 1506
PDJNR/L 3232P-15	32.0	32.0	170.00	34.0	40.0	-6	-6	DNMG 1506

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMS-12 (176) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

Spare Parts

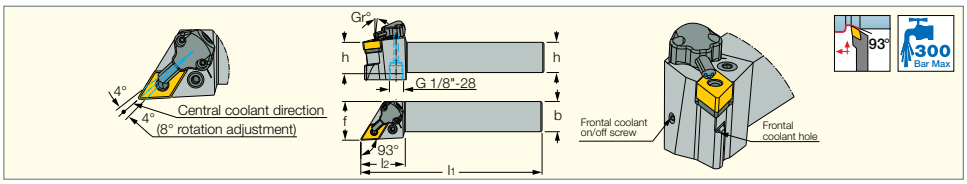
Designation							
PDJNR/L 1616H-11	TDN 322		SP 3	PN 3-4	LR 3D	SR 117-2014	HW 2.5/5
PDJNR/L 2020K-11	TDN 322		SP 3	PN 3-4	LR 3D	SR 117-2014	HW 2.5/5
PDJNR/L 2525M-11	TDN 322		SP 3	PN 3-4	LR 3D	SR 117-2014	HW 2.5/5
PDJNR/L 2020K-15	TDN 422	TDN 432(a)*	SP 4	PN 3-4	LR 4D	SR 117-2010	HW 3.0
PDJNR/L 2525M-15	TDN 422	TDN 432(a)*	SP 4	PN 3-4	LR 4D	SR 117-2010	HW 3.0
PDJNR/L 3232P-15	TDN 422	TDN 432(a)*	SP 4	PN 3-4	LR 4D	SR 117-2010	HW 3.0

* Optional, should be ordered separately
(a) Use for DNMG 1504.. inserts.

ISOTURN JETCUT

PDJNR/L-JHP

Lever Lock Tools with Channels
for High Pressure Coolant Carrying
55° Negative Rhombic Inserts



Designation	b	h	l_1	l_2	f	G_a°	G_r°	Insert
PDJNR/L 2525M-11-JHP	25.0	25.0	150.00	36.0	32.0	-6	-7	DNMG 1104
PDJNR/L 2525M-15-JHP	25.0	25.0	150.00	36.0	32.0	-6	-6	DNMG 1506

• For user guide, see pages 64-71

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMS-12 (176) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

Spare Parts

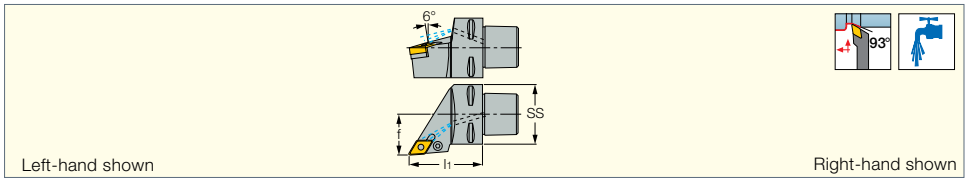
Designation											
PDJNL 2525M-11-JHP	TDN 322		PN 3-4	LR 3D	SR 117-2014	SP 3	CU-D-JHP	SR M4X4	DIN913 TL360		HW 2.0	HW 2.5
PDJNR 2525M-11-JHP	TDN 322		PN 3-4	LR 3D	SR 117-2014	SP 3	CU-D-JHP	SR M4X4	DIN913 TL360		HW 2.0	HW 2.5/5
PDJNR/L 2525M-15-JHP	TDN 422	TDN 432*	PN 3-4	LR 4D	SR 117-2010	SP 4	CU-D-JHP	SR M4X4	DIN913 TL360	T-8/5	HW 2.0	HW 3.0

* Optional, should be ordered separately

ISOTURN CAMFIX

C#-PDJNR

93° Lead Angle Lever Lock Tools
with CAMFIX Exchangeable Shanks
Carrying 55° Negative Inserts



Designation	SS	f	l_1	Insert
C5 PDJNR-35060-11	50	35.0	60.00	DNMG 1104

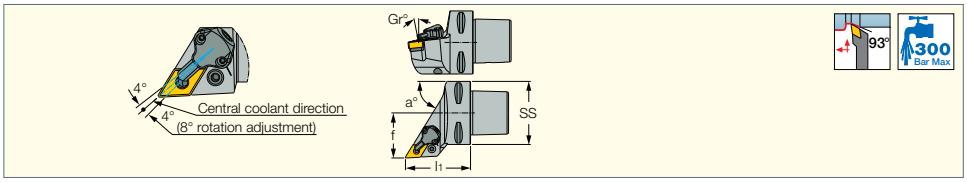
For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131)

Spare Parts

Designation							
C#-PDJNR	TDN 322	SP 3	PN 3-4	LR 3D	SR 117-2014	EZ 104	HW 2.5/5

JETCUT CAMFIX

C#-PDJNR/L-JHP
Lever Lock Tools with CAMFIX Exchangeable Shanks and Channels for High Pressure Coolant Carrying Negative 55° Insert



Designation	SS	f	l_1	G_a°	G_r°	a°	Insert
C3 PDJNR-22045-11-JHP	32	22.0	45.00	-6	-6	58	DN.. 11..
C4 PDJNR/L 27050-11-JHP	40	27.0	55.00	-6	-6	58	DN.. 11..
C5 PDJNR/L 35060-11-JHP	50	35.0	60.00	-6	-6	58	DN.. 11..
C4 PDJNR/L 27055-15-JHP	40	27.0	55.00	-6	-6	58	DN.. 15..
C5 PDJNR/L 35060-15-JHP	50	35.0	60.00	-6	-6	58	DN.. 15..
C6 PDJNR/L 45065-15-JHP	63	45.0	65.00	-6	-6	58	DN.. 15..

• For user guide, see pages 64-71

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMS-12 (176) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

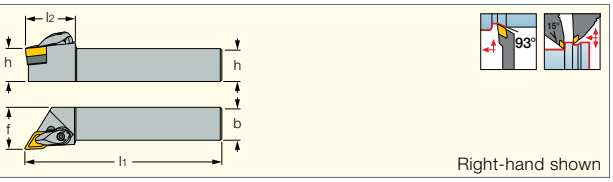
Spare Parts

Designation										
C3 PDJNR-22045-11-JHP	TDN 322		LR 3D	SR 117-2014	SP 3	PN 3-4	CU-D-JHP		T-8/5	HW 2.5/5
C4 PDJNR/L 27050-11-JHP	TDN 322		LR 3D	SR 117-2014	SP 3	PN 3-4	CU-D-JHP		T-8/5	HW 2.5/5
C5 PDJNR/L 35060-11-JHP	TDN 322		LR 3D	SR 117-2014	SP 3	PN 3-4	CU-D-JHP		T-8/5	HW 2.5/5
C4 PDJNR/L 27055-15-JHP	TDN 422	TDN 432*	LR 4D	SR 117-2010	SP 4	PN 3-4	CU-D-JHP		T-8/5	HW 3.0
C5 PDJNL 35060-15-JHP	TDN 422	TDN 432*	LR 4D	SR 117-2010	SP 4	PN 3-4	CU-D-JHP		T-8/5	HW 3.0
C5 PDJNR 35060-15-JHP	TDN 422	TDN 432*	LR 4D	SR 117-2010	SP 4	PN 3-4	CU-D-JHP	OR 6.4X0.9N	T-8/5	HW 3.0
C6 PDJNR/L 45065-15-JHP	TDN 422	TDN 432*	LR 4D	SR 117-2010	SP 4	PN 3-4	CU-D-JHP		T-8/5	HW 3.0

* Optional, should be ordered separately

ISOTURN

DDJNR/L
R-Clamp Tools with 93° Lead Angle Carrying 55° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DDJNR/L 1616H-11	16.0	16.0	100.00	30.0	20.0	-7	-6	DNMG 1104
DDJNR/L 2020K-11	20.0	20.0	125.00	30.0	25.0	-6	-6	DNMG 1104
DDJNR/L 2525M-11	25.0	25.0	150.00	30.0	32.0	-6	-6	DNMG 1104
DDJNR/L 2020K-15	20.0	20.0	125.00	39.0	25.0	-6	-6	DNMG 1506
DDJNR/L 2525M-15	25.0	25.0	150.00	40.0	32.0	-6	-6	DNMG 1506
DDJNR/L 3232P-15	32.0	32.0	170.00	41.0	40.0	-6	-6	DNMG 1506

• For DNMG 1504... inserts use RDT 443 seat (ordered separately)

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMA (134) • DNGA-Ceramic (180) • DNGA-4 (CBN) (190) • DNMA (CBN) (190)

Spare Parts

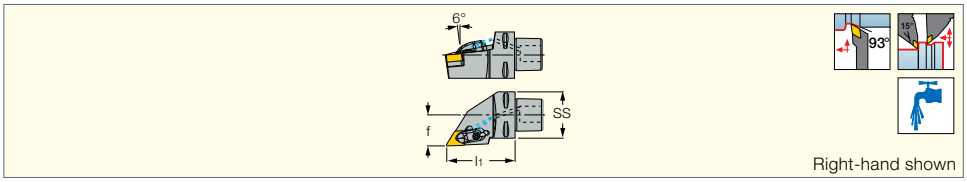
Designation								
DDJNR/L 1616H-11	RDT 3-2		SR 40085I	LCGR-3	SR RC3	HW 2.5	KSP 3	
DDJNR/L 2020K-11	RDT 3-2		SR 40085I	LCGR-3	SR RC3	HW 2.5	KSP 3	
DDJNR/L 2525M-11	RDT 3-2		SR 40085I	LCGR-3	SR RC3	HW 2.5	KSP 3	
DDJNR/L 2020K-15	RDT 433		SR 14-506	LCGR-4	SR 10400270-25.5			T-15/5
DDJNR/L 2525M-15	RDT 433		SR 14-506	LCGR-4	SR 10400270-25.5			T-15/5
DDJNL 3232P-15	RDT 433	RDT 443*	SR 14-506	LCGR-4	SR 10400270-25.5			T-15/5
DDJNR 3232P-15	RDT 433		SR 14-506	LCGR-4	SR 10400270-25.5			T-15/5

* Optional, should be ordered separately

ISOTURN CAMFIX

C#-DDJNR/L

Tools with CAMFIX Exchangeable Tapered Shanks Carrying Negative 55° Rhombic Inserts



Designation	SS	f	l1	Insert							
C4 DDJNR/L-27060-15	40	27.0	60.00	DN..15	RDT 433	RDT 443*	T-15/5	LCGR-4	SR 10400270-25.5	SR 14-506	EZ 62
C5 DDJNR/L-35060-15	50	35.0	60.00	DN..15	RDT 433		T-15/5	LCGR-4	SR 10400270-25.5	SR 14-506	EZ 83
C6 DDJNR/L-45065-15	63	45.0	65.00	DN..15	RDT 433	RDT 443*	T-15/5	LCGR-4	SR 10400270-25.5	SR 14-506	EZ 104

• Use RDT 443 seat for DN.. 1504.. inserts

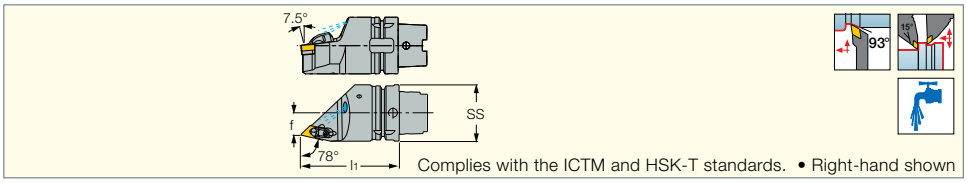
* Optional, should be ordered separately

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

R-CLAMP HSK

HSK A63WH-DDJNR/L

R-Clamp Turning Tools with HSK Taper Shank Carrying Negative DNMG Inserts for 15° Mounting on Turn-Mill Machines



Designation	SS	l1	f	Insert							
HSK A63WH-DDJNR/L-J15 (1)	63	110.00	25.0	DN.. 15	RDT 433	RDT 443*	SR 14-506	LCGR-4	SR 10400270-25.5	T-15/5	EZ 104

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

(1) RDT 443 for DN__ 1504.. insert.

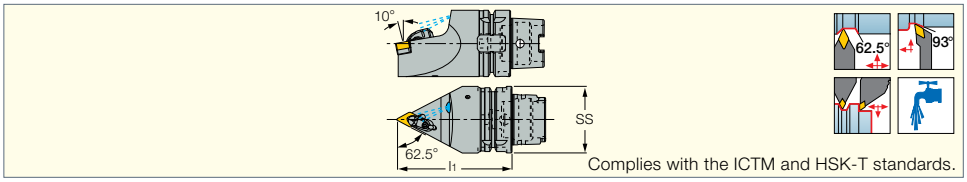
* Optional, should be ordered separately

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

R-CLAMP HSK

HSK A63WH-DDNNN

R-Clamp Turning Tools with HSK Taper Shank Carrying Negative DNMG Inserts



Designation	SS	l1	Insert								
HSK A63WH-DDNNN-J15 (1)	63	110.00	DN.. 15	RDT 433	RDT 443*	SR 14-506	LCGR-4	SR 10400270-25.5	T-15/5	EZ 104	

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

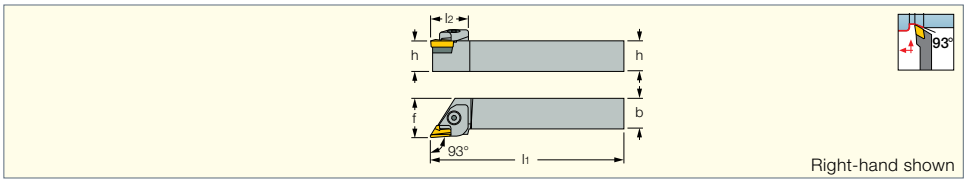
(1) RDT 443 for DN__ 1504.. insert.

* Optional, should be ordered separately

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

ISOTURN

CKJNR/L
Top Clamp Tools with 93° Lead Angle Carrying 55° Negative Parallelogram Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
CKJNR/L 2020K-16	20.0	20.0	125.00	32.0	25.0	-6	0	KNMX/KNUX 1604
CKJNR/L 2525M-16	25.0	25.0	150.00	32.0	32.0	-6	0	KNMX/KNUX 1604
CKJNR/L 3232P-16	32.0	32.0	170.00	32.0	40.0	-6	0	KNMX/KNUX 1604

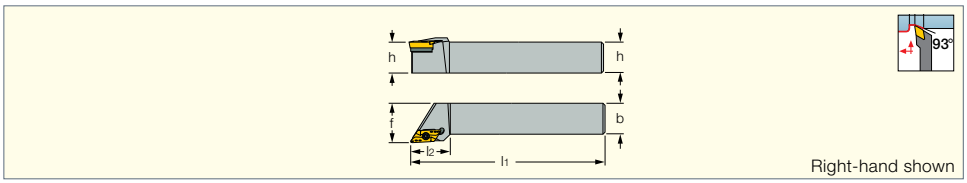
For inserts, see pages: KNMX (135) • KNUX (136)

Spare Parts

Designation								
CKJNL 2020K-16	CSK 1604 L	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KL	CLS 16K	HW 4.0
CKJNR 2020K-16	CSK 1604 R	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KR	CLS 16K	HW 4.0
CKJNL 2525M-16	CSK 1604 L	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KL	CLS 16K	HW 4.0
CKJNR 2525M-16	CSK 1604 R	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KR	CLS 16K	HW 4.0
CKJNL 3232P-16	CSK 1604 L	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KL	CLS 16K	HW 4.0
CKJNR 3232P-16	CSK 1604 R	SR M3X0.5X10DIN7991 10.9	KSP 90	KSP 48	KSP 48S	CL 16KR	CLS 16K	HW 4.0

ISOTURN

SKJNR/L
Screw Clamp Tools with 93° Lead Angle Carrying 55° Negative Parallelogram Inserts



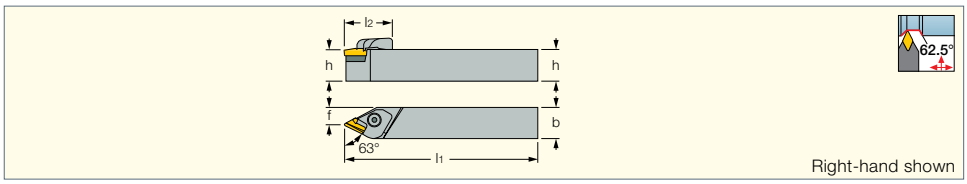
Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert				
SKJNR/L 2525M-16	25.0	25.0	150.00	32.0	32.0	-6	0	KNMX 1604	TKX 160310L	SR TC-3	HW 2.5	SR 16-236 P	T-15/5
SKJNL 3232P-16	32.0	32.0	170.00	32.0	40.0	-6	0	KNMX 1604	TKX 160310L	SR TC-3	HW 2.5	SR 16-236 P	T-15/5

For inserts, see pages: KNMX (135)

ISOTURN

CKNNR/L
Top Clamp Tools with 63° Lead Angle Carrying 55° Negative Parallelogram Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
CKNNR/L 2525M-16	25.0	25.0	150.00	33.0	14.4	2.5	5.2	KNUX/KNMX 1604

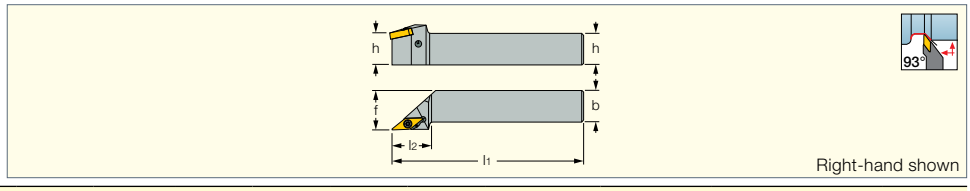
For inserts, see pages: KNMX (135) • KNUX (136)

Spare Parts

Designation								
CKNNR/L 2525M-16	CSK 1604 R	CL 16KR	CLS 16K	KSP 90	KSP 48	KSP 48S	SR M3X0.5X10DIN7991 10.9	HW 4.0

ISOTURN

SVJNR/L-F
Screw Lock Tools with a Wedge for High Rigidity Carrying 35° Negative Inserts for Profiling Applications



Right-hand shown

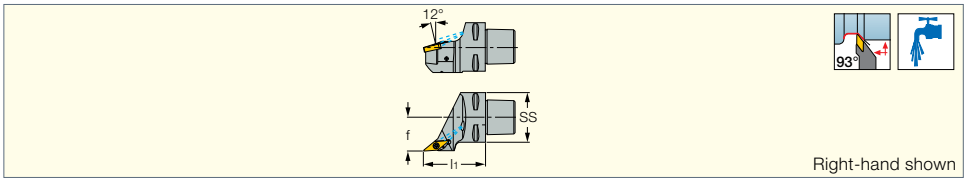
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert				
SVJNR/L 1616H-12F	16.0	16.0	100.00	25.0	20.0	-6	-12	VNMG 12T3	SR 14-551	T-9/5	AV 12	PA 12
SVJNR/L 2020K-12F	20.0	20.0	125.00	25.0	25.0	-6	-12	VNMG 12T3	SR 14-551	T-9/5	AV 12	PA 12
SVJNR/L 2525M-12F	25.0	25.0	150.00	25.0	32.0	-6	-12	VNMG 12T3	SR 14-551	T-9/5	AV 12	PA 12

• **Repeatability:** for VNMG is ±0.06 mm, for VNGG is ±0.02 mm

For inserts, see pages: VNMG-SF (137) • VNMG/VNGG-NF (137) • VNMM-PP (138)

ISOTURN CAMFIX

C#-SVJNR/L-F
Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying 35° Negative Rhombic Inserts

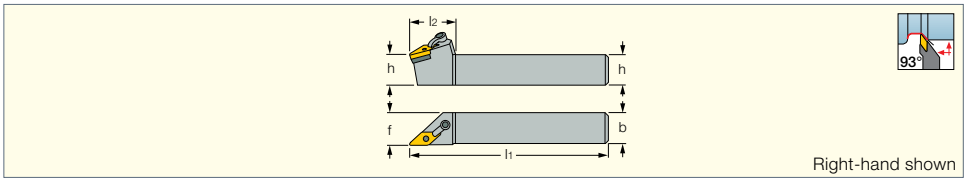


Designation	SS	f	l_1	Insert					
C4 SVJNR/L-27050-12F	40	27.0	50.00	VN.. 12T3	AV 12	PA 12	SR 14-551	T-9/5	EZ 83

For inserts, see pages: VNMG-SF (137) • VNMG/VNGG-NF (137) • VNMM-PP (138)

ISOTURN

MVJNR/L
Pin and Clamp Tools Carrying 35° Negative Rhombic Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MVJNR/L 2020K-16	20.0	20.0	125.00	41.0	25.0	-6	-10	VNMG 1604
MVJNR/L 2525M-16	25.0	25.0	150.00	41.0	32.0	-6	-10	VNMG 1604

For inserts, see pages: VNMG-F3P (136) • YNMG-F3P (138) • VNMG-F3M (136) • VNMG-M3M (137) • VNMG-TF (138) • VNMG/VNGG-NF (137) • VNMS-12 (176) • VNGA-Ceramic (181) • VNGA-2 (CBN) (192) • VNGA-4 (CBN) (192) • VNGG-M4HM (CBN) (192)

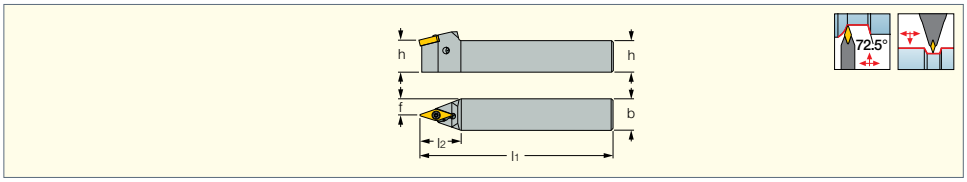
Spare Parts

Designation								
MVJNR/L	IVSN 322	IVSN 323(a)*	IYSN 322(b)*	NL 34-L	HW 2.0	CL 30	XNS 510	HW 4.0

* Optional, should be ordered separately
(a) Use for VNMG 160412 inserts
(b) Use for YNMG inserts

ISOTURN

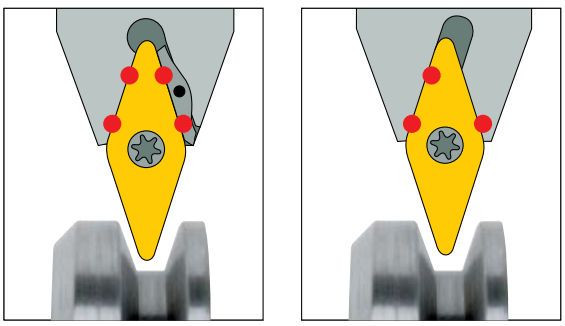
SVVNN-F
Screw Lock Tools with a Wedge for High Rigidity in Profiling Applications Carrying 35° Negative Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert				
SVVNN 1616H-12F	16.0	16.0	100.00	26.0	8.0	0	-14	VNMG 12T3	SR 14-551	T-9/5	PA 12	AV 12
SVVNN 2020K-12F	20.0	20.0	125.00	26.0	10.0	0	-14	VNMG 12T3	SR 14-551	T-9/5	PA 12	AV 12
SVVNN 2525M-12F	25.0	25.0	150.00	26.0	12.5	0	-14	VNMG 12T3	SR 14-551	T-9/5	PA 12	AV 12

• **Repeatability:** for VNMG is ±0.06 mm, for VNGG is ± 0.02 mm
For inserts, see pages: VNMG-SF (137) • VNMG/VNGG-NF (137) • VNMM-PP (138)

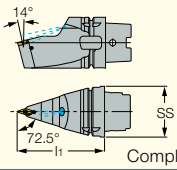
4 contact points ensure secure and precise clamping

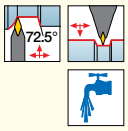


Conventional Clamping

ISOTURN HSK

HSK A63WH-SVVNN-F
72.5° Lead Angle Tools with HSK Exchangeable Tapered Shanks Carrying 35° Negative Inserts





Complies with the ICTM and HSK-T standards.

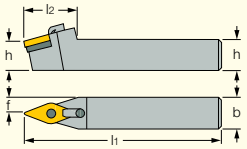
Designation	SS	l_1	Insert					
HSK A63WH-SVVNN-J12F	63	110.00	VNM. 12T3	SR 14-551	T-9/5	AV 12	PA 12	EZ 104

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

For inserts, see pages: VNMG-SF (137) • VNMG/VNGG-NF (137) • VNMM-PP (138)

ISOTURN

MVVNN
Pin and Clamp Tools Carrying 35° Negative Rhombic Inserts





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MVVNN 2020K-16	20.0	20.0	125.00	48.0	10.0	-4.5	-14	VNMG 1604..
MVVNN 2525M-16	25.0	25.0	150.00	48.0	12.5	-4.5	-14	VNMG 1604..

For inserts, see pages: VNMG-F3P (136) • YNMG-F3P (138) • VNMG-F3M (136) • VNMG-M3M (137) • VNMG-TF (138) • VNMG/VNGG-NF (137) • VNMS-12 (176) • VNGA-Ceramic (181) • VNGA-2 (CBN) (192) • VNGA-4 (CBN) (192) • VNGG-M4HM (CBN) (192)

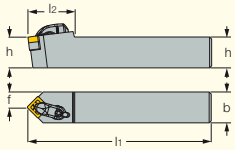
Spare Parts

Designation								
MVVNN	IVSN 322	IVSN 323(a)*	IYSN 322(b)*	NL 34-L	HW 2.0	CL 30	XNS 510	HW 4.0

* Optional, should be ordered separately
(a) Use for VNMG 160412 inserts
(b) Use for YNMG inserts

ISOTURN

DSDNN
45° Lead Angle R-Clamp External Turning Tools Carrying ISO Negative SNMG Inserts





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DSDNN 2525M-12	25.0	25.0	150.00	38.0	12.8	0	-7	SNMG 1204
DSDNN 2525M-15	25.0	25.0	150.00	42.0	12.5	0	-8.5	SNMG 1506
DSDNN 3232P-19	32.0	32.0	170.00	44.0	16.0	0	-8.5	SNMG 1906

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMG-EM-M (148) • SNMG-EM-R (150) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

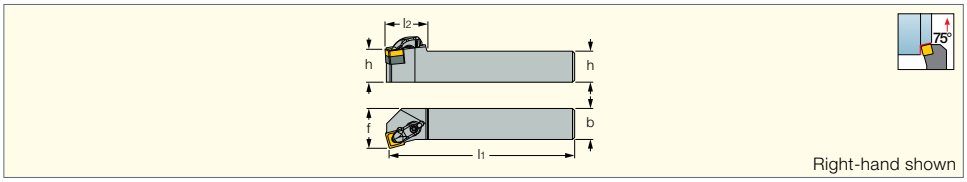
Designation										
DSDNN 2525M-12	RST 443	RST 443L SET(a)*	RST 443R SET(a)*	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DSDNN 2525M-15	RST 54			SR 10402265	LCGR-5		SR 10402267	KSP 5	HW 4.0	
DSDNN 3232P-19	RST 634			SR 10402266	LCGR-6		SR 10402267	KSP 5	HW 4.0	

* Optional, should be ordered separately
(a) Optional, required for SNMG ...-EM-R/M inserts

ISOTURN

DSKNR/L

75° Lead Angle R-Clamp Face Turning Tools Carrying ISO Negative SNMG Inserts



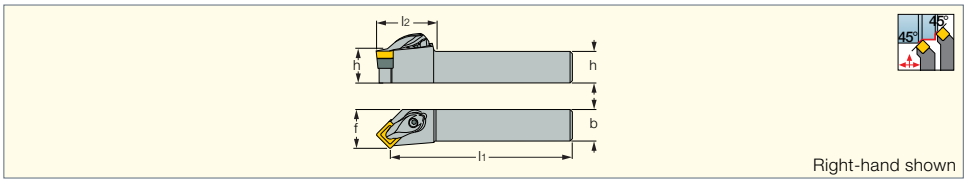
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
DSKNR/L 2525M-12	25.0	25.0	150.00	31.0	32.0	-4	-8	SNMG 1204	RST 443	T-15/5	SR 10400270-25.5	LCGR-4	SR 14-506

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

ISOTURN

DSSNR/L

45° Lead Angle R-Clamp Tools Carrying Negative Square Inserts for Longitudinal and Facing Applications



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DSSNR/L 2020K-12 (1)	20.0	20.0	125.00	38.0	25.0	-5.5	-5.5	SNMG 1204
DSSNR/L 2525M-12 (1)	25.0	25.0	150.00	39.0	32.0	-5.5	-5.5	SNMG 1204
DSSNR/L 3232P-15	32.0	32.0	170.00	34.0	40.0	-5.5	-5.5	SNMG 1506
DSSNR/L 3232P-19	32.0	32.0	170.00	38.0	40.0	-5.5	-5.5	SNMG 1906

(1) Using SNMG.....-EM-M/R inserts requires the use of RST 443R/L SET.

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMG-EM-M (148) • SNMG-EM-R (150) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

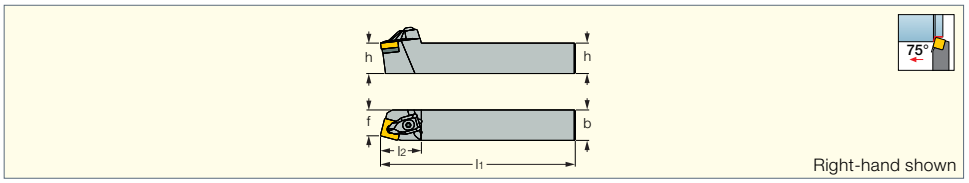
Spare Parts

Designation								
DSSNR/L 2020K-12	RST 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DSSNR/L 2525M-12	RST 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DSSNR/L 3232P-15	RST 54	SR 10402265	LCGR-5		SR 10402267	KSP 5	HW 4.0	
DSSNR/L 3232P-19	RST 634	SR 10402266	LCGR-6		SR 10402267	KSP 5	HW 4.0	

ISOTURN

DSBNR/L

75° Lead Angle R-Clamp Tools Carrying Negative Square Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DSBNR/L 2525M-12	25.0	25.0	150.00	38.0	22.0	-4	-7	SNMG 1204
DSBNL 3232P-12	32.0	32.0	170.00	38.0	27.0	-4	-7	SNMG 1204
DSBNR/L 2525M-15	25.0	25.0	150.00	40.0	22.0	-7.4	-4.3	SNMG 1506
DSBNL 3232P-15	32.0	32.0	170.00	40.0	27.0	-7.4	-4.3	SNMG 1506
DSBNR/L 3232P-19	32.0	32.0	170.00	43.0	27.0	-7.4	-4.3	SNMG 1906
DSBNR/L 4040S-19	40.0	40.0	250.00	43.0	37.0	-7.4	-4.3	SNMG 1906

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

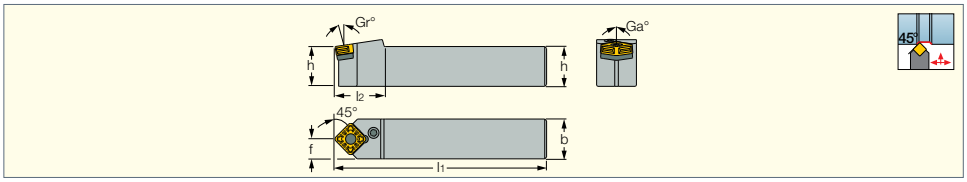
Spare Parts

Designation								
DSBNR/L 2525M-12	RST 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DSBNL 3232P-12	RST 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5
DSBNR/L 2525M-15	RST 54	SR 10402265	LCGR-5		SR 10402267	KSP 5	HW 4.0	
DSBNL 3232P-15	RST 54	SR 10402265	LCGR-5		SR 10402267	KSP 5	HW 4.0	
DSBNR/L 3232P-19	RST 634	SR 10402266	LCGR-6		SR 10402267	KSP 5	HW 4.0	
DSBNR/L 4040S-19	RST 634	SR 10402266	LCGR-6		SR 10402267	KSP 5	HW 4.0	

DOVE IQ TURN HEAVY DUTY LINE

PSDON-IQ

Lever Lock and Dovetail Pocket Rigid Clamping Tools Carrying Unique Double-Sided Square Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSDON 3232P-15-IQ	32.0	32.0	170.00	35.0	17.0	0	-8.5	SOMG 1506
PSDON 3232P-19-IQ	32.0	32.0	170.00	39.5	17.0	0	-8.5	SOMG 1906
PSDON 4040S-19-IQ	40.0	40.0	250.00	39.5	21.0	0	-8.5	SOMG 1906
PSDON 4040S-25-IQ	40.0	40.0	250.00	51.5	21.0	0	-8.5	SOMG 2509
PSDON 5050T-25-IQ	50.0	50.0	300.00	51.5	26.0	0	-8.5	SOMG 2509

For inserts, see pages: SOMG-R3P-IQ (145)

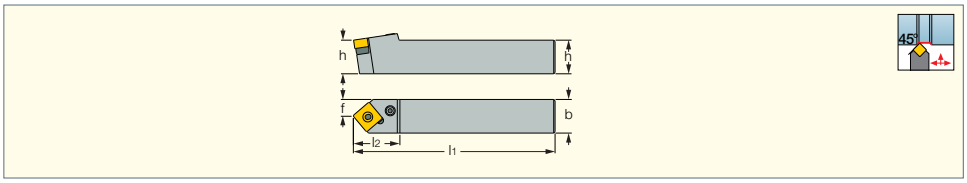
Spare Parts

Designation					
PSDON 3232P-15-IQ	TSX 5-IQ	SP 5	SR LCS 5-L25.5	LCL 16-NX	HW 3.0
PSDON 3232P-19-IQ	TSX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PSDON 4040S-19-IQ	TSX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PSDON 4040S-25-IQ	TSX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0
PSDON 5050T-25-IQ	TSX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0

ISOTURN

PSDNN

45° Lead Angle Lever Lock External Turning Tools Carrying ISO Negative SNMG Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSDNN 2020K-12	20.0	20.0	125.00	27.0	10.0	0	-7	SNMG 1204/SNGA 1204
PSDNN 2525M-12	25.0	25.0	150.00	27.0	12.5	0	-7	SNMG 1204/SNGA 1204
PSDNN 3225P-19	32.0	25.0	170.00	41.0	13.0	0	-8.5	SNMG 1906
PSDNN 3232P-19	32.0	32.0	170.00	41.0	16.0	0	-8.5	SNMG 1906
PSDNN 4040S-25 (1)	40.0	40.0	250.00	49.0	20.0	0	-8.5	SNMG 2507

(1) For SN.. 2509... inserts, use TSN 84 seat

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

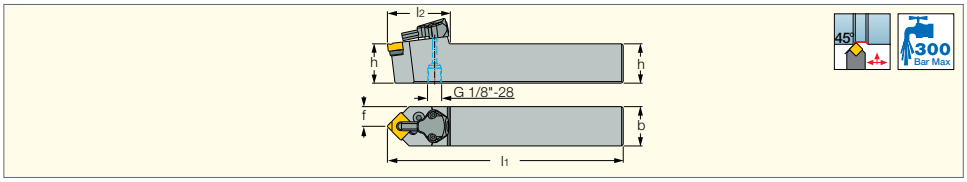
Designation							
PSDNN 2020K-12	TSN 423		SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PSDNN 2525M-12	TSN 423		SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PSDNN 3225P-19	RST 634		SP 66		LR 6	SR 10402352	HW 4.0
PSDNN 3232P-19	RST 634		SP 66		LR 6	SR 10402352	HW 4.0
PSDNN 4040S-25	TSN 84N	TSN 85N*	SP 8		LR 8	SR 10402264	

* Optional, should be ordered separately

ISOTURN JETCUT

PSDNN-JHP

45° Lead Angle Lever Lock Tools with Channels for High Pressure Coolant Carrying ISO Negative SNMG Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSDNN 2525M-12-JHP	25.0	25.0	150.00	40.0	12.5	-7	0	SNMG 1204

• For user guide, see pages 64-71

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

Designation										
PSDNN 2525M-12-JHP	TSN 423	TSN 423-PIN SET(a)*	SP 4	PN 3-4	LR 4	SR 117-2010	OR 6.4X0.9N	CU-CW-JHP	HW 3.0	T-8/5

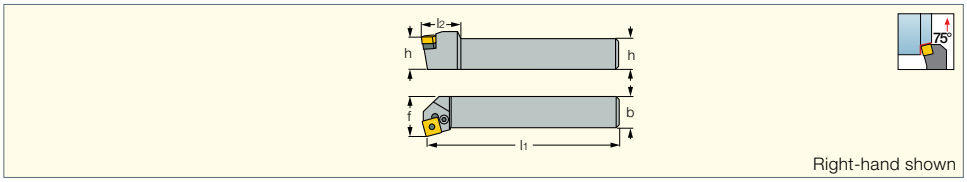
* Optional, should be ordered separately

(a) When SNMG-EM-M/-R inserts are used, replace the standard seat.

ISOTURN

PSKNR/L

75° Lead Angle Lever Lock Tools Carrying ISO Negative Square Inserts for Face Turning



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSKNR/L 2525M-12	25.0	25.0	150.00	23.5	32.0	-6	-6	SNMG 1204/SNGA 1204

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

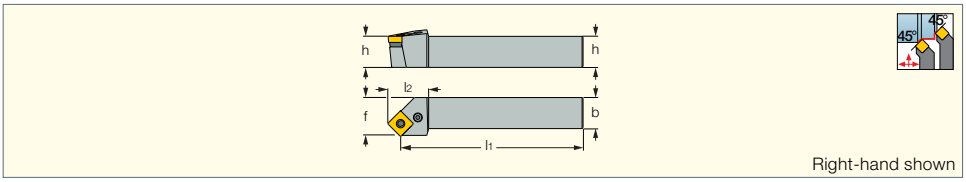
Spare Parts

Designation						
PSKNR/L	TSN 423	LR 4	SR 117-2010	HW 3.0	SP 4	PN 3-4

ISOTURN

PSSNR/L

45° Lead Angle Lever Lock Tools Carrying Negative Square Inserts for Longitudinal and Facing Applications



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSSNR/L 2020K-09	20.0	20.0	125.00	25.0	25.0	-5.5	-5.5	SNMG 0904
PSSNR/L 2525M-09	25.0	25.0	150.00	25.0	25.0	-5.5	-5.5	SNMG 0904
PSSNR/L 2020K-12	20.0	20.0	125.00	29.0	25.0	-5.5	-5.5	SNMG 1204
PSSNR/L 2525M-12	25.0	25.0	150.00	29.0	32.0	-5.5	-5.5	SNMG 1204
PSSNR/L 3232P-19	32.0	32.0	170.00	42.0	40.0	0	-8	SNMG 1906
PSSNR/L 4040S-19	40.0	40.0	250.00	42.0	50.0	0	-8	SNMG 1906
PSSNR/L 4040S-2507 (1)	40.0	40.0	250.00	53.0	50.0	0	-8	SNMG 2507

(1) For SN.. 2509... inserts, use TSN 84 seat

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMG-NF (146) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

Spare Parts

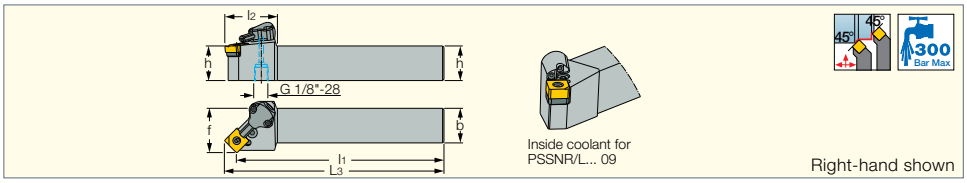
Designation							
PSSNR/L 2020K-09	TSN 323	TSN 333	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-3L
PSSNR/L 2525M-09	TSN 323	TSN 333	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-3L
PSSNR/L 2020K-12	TSN 423		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PSSNR/L 2525M-12	TSN 423		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PSSNR/L 3232P-19	RST 634		SP 66	LR 6	SR 10402352	HW 4.0	
PSSNR/L 4040S-19	RST 634		SP 66	LR 6	SR 10402352	HW 4.0	
PSSNR/L 4040S-2507	TSN 85	TSN 84*	SP 8	LR 8	SR 10402264	HW 5.0	

* Optional, should be ordered separately

ISOTURN JETCUT

PSSNR/L-JHP

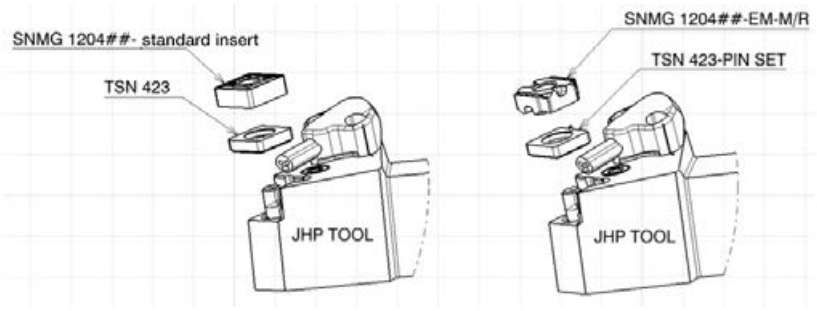
45° Tools with Channels for High Pressure Coolant Carrying Negative Square Inserts for Longitudinal and Facing Turning



Designation	h	b	l_1	l_2	f	G_a°	G_r°	L_3	Insert
PSSNR/L 2020K-09-JHP	20.0	20.0	125.00	35.0	25.0	-5.5	-5.5	131.40	SNMG 09..
PSSNR/L 2525M-12-JHP	25.0	25.0	150.00	38.0	32.0	-5.5	-5.5	158.40	SNMG 1204

• For user guide, see pages 64-71

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMG-NF (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)



Spare Parts

Designation											
PSSNR/L 2020K-09-JHP	TSN 323	TSN 333	SP 3	PN 3-3L	LR 3	SR 117-2014			HW 2.5	
PSSNR/L 2525M-12-JHP	TSN 423	TSN 423-PIN SET(a)*	SP 4	PN 3-4	LR 4	SR 117-2010	OR 6.4X0.9N	CU-S-JHP	HW 3.0	T-8/5

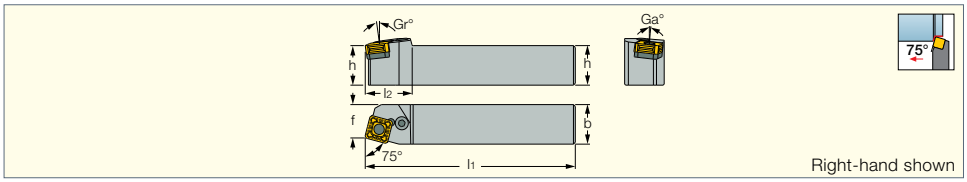
* Optional, should be ordered separately

(a) When SNMG-EM-M/-R inserts are used, replace the standard seat.

DOVEIQTURN HEAVY DUTY LINE

PSBOR/L-IQ

Lever Lock and Dovetail Pocket Rigid Clamping Tools Carrying Unique SOMG Double-Sided Square Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSBOR/L 3232P-15-IQ	32.0	32.0	170.00	35.0	27.0	-4.7	-7.5	SOMG 1506
PSBOR/L 3232P-19-IQ	32.0	32.0	170.00	38.0	27.0	4.7	7.5	SOMG 1906
PSBOR/L 4040S-19-IQ	40.0	40.0	250.00	38.0	35.0	4.7	7.5	SOMG 1906
PSBOR/L 4040S-25-IQ	40.0	40.0	250.00	50.0	35.0	4.7	7.5	SOMG 2509
PSBOR/L 5050T-25-IQ	50.0	50.0	300.00	50.0	45.0	4.7	7.5	SOMG 2509

For inserts, see pages: SOMG-R3P-IQ (145)

Spare Parts

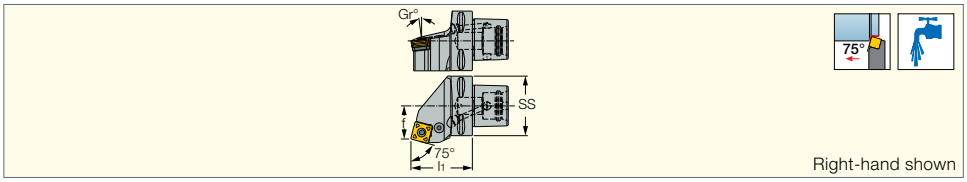
Designation					
PSBOR/L 3232P-15-IQ	TSX 5-IQ	SP 5	SR LCS 5-L25.5	LCL 16-NX	HW 3.0
PSBOR/L 3232P-19-IQ	TSX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PSBOR/L 4040S-19-IQ	TSX 6-IQ	SP 5	SR 10402352	LCL 20C-NX	HW 4.0
PSBOR/L 4040S-25-IQ	TSX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0
PSBOR/L 5050T-25-IQ	TSX 8-IQ	SP 8	SR LCS 8-L39	LCL 32-NX	HW 5.0



DOVE IQ TURN HEAVY DUTY LINE

C#-PSROR/L-IQ

Lever Lock and Dovetail Pocket Tools with CAMFIX Shanks Carrying Unique SOMG Double-Sided Square Inserts



Designation	SS	f	l_1	G_a°	G_r°	Insert
C6 PSROR/L-35065-15-IQ	63	35.0	65.00	-4.74	-7.46	SOMG 1506
C6 PSROR/L-35065-19-IQ	63	35.0	65.00	-4.74	-7.46	SOMG 1906
C8 PSROR/L-45080-19-IQ	80	55.0	80.00	-4.74	-7.46	SOMG 1906
C8 PSROR/L-45085-25-IQ	80	55.0	80.00	-4.74	-7.46	SOMG 2509

For inserts, see pages: SOMG-R3P-IQ (145)

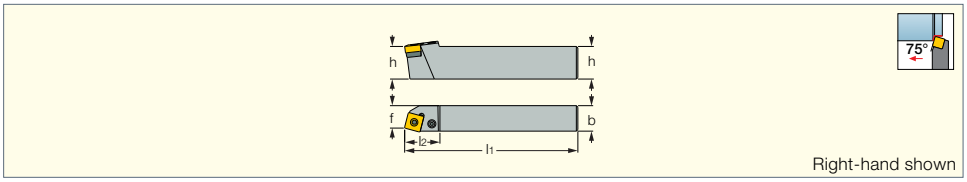
Spare Parts

Designation							
C6 PSROR/L-35065-15-IQ	TSX 5-IQ	LCL 16-NX	SP 5	SATZ-M10X1-M5	HW 3.0	SR LCS 5-L25.5	
C6 PSROR/L-35065-19-IQ	TSX 6-IQ	LCL 20C-NX	SP 5	SATZ-M10X1-M5	HW 4.0	SR 10402352	
C8 PSROR/L-45080-19-IQ	TSX 6-IQ	LCL 20C-NX	SP 5	SATZ-M10X1-M5	HW 4.0	SR 10402352	SPP 5-6
C8 PSROR/L-45085-25-IQ	TSX 8-IQ	LCL 32-NX	SP 8	SATZ-M12X1-M6	HW 5.0	SR LCS 8-L39	

ISOTURN

PSBNR/L

Lever Lock 75° Lead Angle Turning Tools Carrying ISO Negative Square Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PSBNR/L 2020K-09	20.0	20.0	0.00	0.0	0.0	-6	-6	SNMG 0904
PSBNR/L 2525M-09	25.0	25.0	0.00	0.0	0.0	-6	-6	SNMG 0904
PSBNR 2525M-12	25.0	25.0	150.00	26.8	22.0	-6	-6	SNMG 1204
PSBNL 2525M-15	25.0	25.0	170.00	39.0	27.0	-6	-6	SNMG 15..
PSBNR/L 3232P-19	32.0	32.0	170.00	39.0	27.0	-6	-6	SNMG 1906
PSBNR/L 4040S-25 (1)	40.0	40.0	250.00	48.0	35.0	-6	-6	SNMG 2507
PSBNR/L 5050T-25 (1)	50.0	50.0	300.00	48.0	60.0	-6	-6	SNMG 2507

(1) For SN.. 2509... inserts, use TSN 84 seat

For inserts, see pages: SNMG-R3M (146) • SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMM-NR (151) • SNMG-PP (147) • SNMG-VL (146) • SNMG-NF (146) • SNMM-NM (151) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

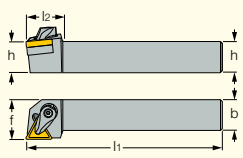
Spare Parts

Designation							
PSBNR/L 2020K-09	TSN 323	TSN 333	SP 3	PN 3-3L	LR 3	SR 117-2014	HW 2.5
PSBNR/L 2525M-09	TSN 323	TSN 333	SP 3	PN 3-3L	LR 3	SR 117-2014	HW 2.5
PSBNR 2525M-12	TSN 423		SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
PSBNR/L 3232P-19	RST 634		SP 66		LR 6	SR 10402352	HW 4.0
PSBNR/L 4040S-25	TSN 84N	TSN 85N*	SP 8		LR 8	SR 10402264	HW 5.0
PSBNR/L 5050T-25	TSN 84N	TSN 85N*	SP 8		LR 8	SR 10402264	HW 5.0

* Optional, should be ordered separately

ISOTURN

DTGNR/L
91° Lead Angle R-Clamp
External Turning Tools Carrying
Negative Triangular Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DTGNR/L 2020K-16	20.0	20.0	125.00	25.0	25.0	-6	-6	TNMG 1604
DTGNR/L 2525M-16	25.0	25.0	150.00	25.0	32.0	-6	-6	TNMG 1604
DTGNR 2525M-22	25.0	25.0	150.00	32.0	32.0	-6	-6	TNMG 2204

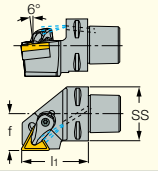
For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation								
DTGNR/L 2020K-16	RTT 322	SR 35080I	LCGR-3		SR RC3	KSP 3	HW 2.5	
DTGNR/L 2525M-16	RTT 322	SR 35080I	LCGR-3		SR RC3	KSP 3	HW 2.5	
DTGNR 2525M-22	RTT 443	SR 14-506	LCGR-4	SR 10400270-25.5				T-15/5

ISOTURN CAMFIX

C#-DTGNR/L
91° Lead R-Clamp External
Turning Tools with CAMFIX
Exchangeable Shanks Carrying
Negative Triangular Inserts



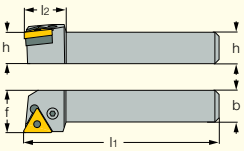
Right-hand shown

Designation	SS	f	l_1	Insert						
C6 DTGNR/L-45065-22	63	45.0	65.00	TN.. 22	RTT 443	SR 14-506	LCGR-4	SR 10400270-25.5	T-15/5	EZ 104

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMA (143) • TNGA-Ceramic (182)

ISOTURN

PTGNR/L
91° Lead Angle Lever Lock
External Turning Tools Carrying
Negative Triangular Inserts



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PTGNR/L 2020K-16	20.0	20.0	125.00	22.0	25.0	-6	-6	TNMG 16..
PTGNR/L 2525M-16	25.0	25.0	150.00	22.0	32.0	-6	-6	TNMG 16..
PTGNR/L 2525M-22	25.0	25.0	150.00	32.0	32.0	-6	-6	TNMG 2204
PTGNR 3232P-22	32.0	32.0	170.00	32.0	40.0	-6	-6	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

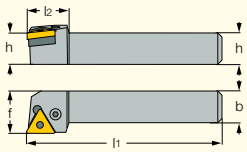
Designation							
PTGNR/L 2020K-16	TTN 322	TTN 332(a)*	SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
PTGNR/L 2525M-16	TTN 322	TTN 332(a)*	SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
PTGNR/L 2525M-22	TTN 422		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4
PTGNR 3232P-22	TTN 422		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4

* Optional, should be ordered separately
(a) TTN 332 for inserts 3.18 mm thick

HELITURN LD

PTGNR/L-X

91° Lead Angle Lever Lock
External Turning Tools Carrying
Negative Triangular Inserts



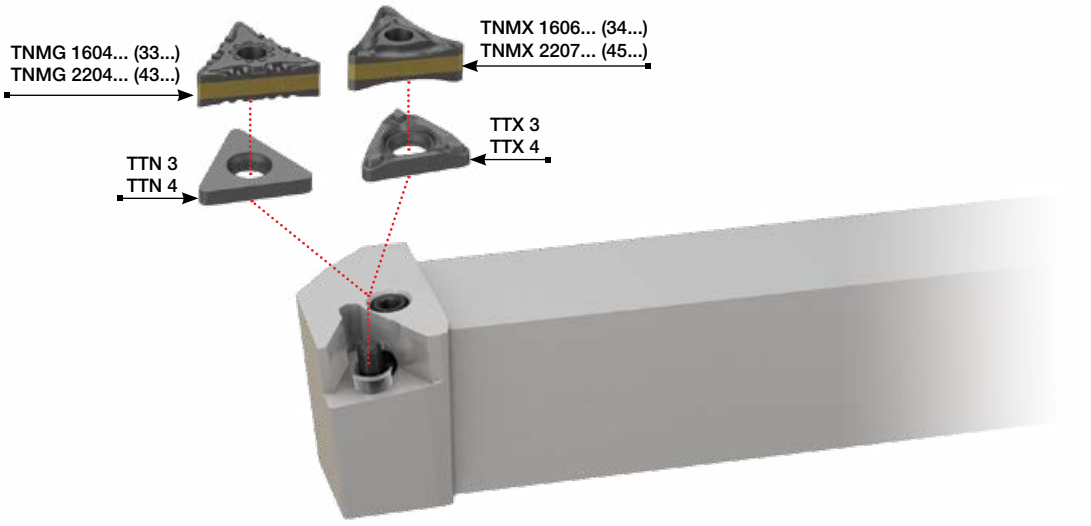


Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PTGNR/L 2020K-16X	20.0	20.0	125.00	20.0	25.0	-6	-6	TNMX 1606, TNMG 1604
PTGNR/L 2525M-16X	25.0	25.0	150.00	20.0	32.0	-6	-6	TNMX 1606, TNMG 1604
PTGNR/L 2525M-22X	25.0	25.0	150.00	32.0	32.0	-6	-6	TNMX 2207, TNMG 2204
PTGNR/L 3232P-22X	32.0	32.0	170.00	32.0	40.0	-6	-6	TNMX 2207, TNMG 2204

• Use TTX 3 seat for TNMX 1606.. inserts and TTN 3 seat for TNMG 1604.. inserts.

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMX-M3/4PW (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMX-M3/4MW (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)



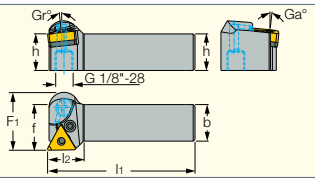
Spare Parts

Designation							
PTGNR/L 2020K-16X	TTX 3	TTN 3	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4
PTGNR/L 2525M-16X	TTX 3	TTN 3	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4
PTGNR/L 2525M-22X	TTX 4	TTN 4	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L
PTGNR/L 3232P-22X	TTX 4	TTN 4	SP 4	LR 4DH	SR 117-2010	HW 3.0	PN 3-4L

HELITURN LD

PTGNR/L-X-JHP

91° Lead Lever Lock Tools with
Channels for High Pressure Coolant
Carrying Negative Triangular Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert
PTGNR/L 2020K-16X-JHP	20.0	20.0	125.00	20.0	25.0	31.7	-6	6	TNMX 1606, TNMG 1604
PTGNR/L 2525M-16X-JHP	25.0	25.0	150.00	20.0	32.0	-	-6	6	TNMX 1606, TNMG 1604

• Supplied with TTX 3 seat for TNMX 1606.. inserts and TTN 3 seat for TNMG 1604.. inserts. • For user guide, see pages 64-71

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMX-M3/4PW (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMX-M3/4MW (140) • TNMG-TF (141) • TNMG-GN (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

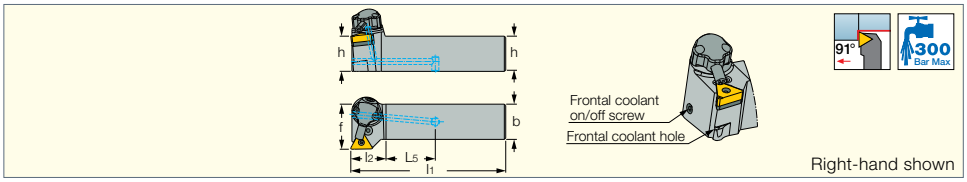
Designation							
PTGNR/L-X-JHP	TTX 3	TTN 3	SP 3	LR 3	SR 117-2014	HW 2.5	PN 3-4

HELITURN LD

JETCUT

PTGNR/L-X-JHP-MC

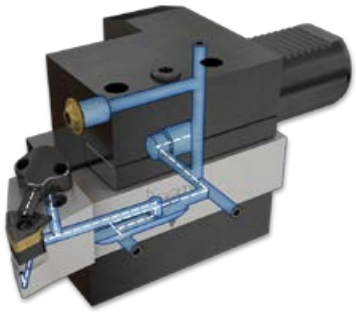
Tools with Bottom Inlets for High Pressure Coolant Carrying TNMX and TNMG Triangular Inserts



Designation	h	b	l_1	l_2	L_5	f	G_a°	G_r°	Insert
PTGNR/L 2020X-16X-JHP-MC	20.0	20.0	95.00	25.0	29.00	25.0	-6	-6	TNMX 1606, TNMG 1604
PTGNR/L 2525X-16X-JHP-MC	25.0	25.0	110.00	25.0	35.00	32.0	-6	-6	TNMX 1606, TNMG 1604

• Supplied with TTX 3 seat for TNMX 1606.. inserts and TTN 3 seat for TNMG 1604.. inserts. • For user guide, see pages 64-71

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMX-M3/4PW (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMX-M3/4MW (140) • TNMG-TF (141) • TNMG-GN (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)



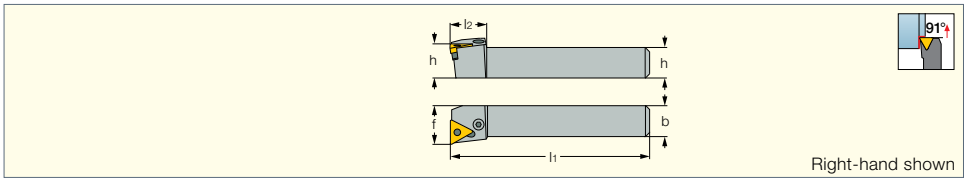
Spare Parts

Designation											
PTGNR/L-X-JHP-MC	TTX 3	TTN 3	SP 3	LR 3	SR 117-2014	T-8/5	SR M5X5 DIN913 TL360		PN 3-4	HW 2.5	CU-S-JHP

ISOTURN

PTFNR/L

91° Lead Angle Lever Lock Face Turning Tools Carrying Negative Triangular Inserts



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PTFNR/L 2020K-16	20.0	20.0	125.00	20.0	25.0	-6	-6	TNMG 16..
PTFNR/L 2525M-16	25.0	25.0	150.00	20.0	32.0	-6	-6	TNMG 16..
PTFNR/L 2525M-22	25.0	25.0	150.00	26.0	32.0	-6	-6	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation							
PTFNR/L 2020K-16	TTN 322	TTN 332(a)*	LR 3	SR 117-2014	HW 2.5/5	SP 3	PN 3-4
PTFNR/L 2525M-16	TTN 322	TTN 332(a)*	LR 3	SR 117-2014	HW 2.5/5	SP 3	PN 3-4
PTFNR/L 2525M-22	TTN 422		LR 4	SR 117-2010	HW 3.0	SP 4	PN 3-4

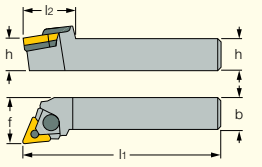
* Optional, should be ordered separately

(a) TTN 332 for inserts 3.18 mm thick.

ISOTURN

MTJNR/L-W

93° Lead Angle Wedge Lock Turning Tools Carrying Negative Triangular Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MTJNR/L 1616H-16W-M	16.0	16.0	100.00	32.0	20.0	-6	-6	TNMG 1604
MTJNR/L 2020K-16W-M	20.0	20.0	125.00	32.0	25.0	-6	-6	TNMG 1604
MTJNR/L 2525M-16W-M	25.0	25.0	150.00	32.0	32.0	-6	-6	TNMG 1604
MTJNR/L 2525M-22W	25.0	25.0	150.00	38.0	32.0	-6	-6	TNMG 2204
MTJNR/L 3225P-22W	32.0	25.0	170.00	38.0	32.0	-6	-6	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation										
MTJNR/L 1616H-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WNS			LC 291N CLAMP		E RING N	SR 17-317NS	HW 3.0
MTJNL 2020K-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN			LC 291N CLAMP		E RING N	SR 17-317N	HW 3.0
MTJNR 2020K-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN	HW 2.5		LC 291N CLAMP		E RING N	SR 17-317N	HW 3.0
MTJNR/L 2525M-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN			LC 291N CLAMP		E RING N	SR 17-317N	HW 3.0
MTJNR/L 2525M-22W	TTT 434		ZNW 4	HW 2.5	LC 281 SET 1		SR 17-295			HW 3.0
MTJNR/L 3225P-22W	TTT 434		ZNW 4	HW 2.5	LC 281 SET 1		SR 17-295			HW 3.0

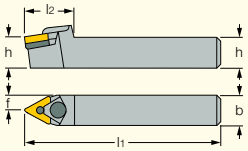
* Optional, should be ordered separately

(a) Use for inserts TNMG 1603.. 3.18 mm thick

ISOTURN

MTENN-W

Neutral Wedge Lock Turning Tools Carrying Negative Triangular Inserts





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MTENN 1618H-16W-M	16.0	18.0	100.00	32.0	9.0	0	-8	TNMG 1604
MTENN 2020K-16W-M	20.0	20.0	125.00	35.0	10.0	0	-8	TNMG 1604
MTENN 2525M-16W-M	25.0	25.0	150.00	32.0	12.5	0	-8	TNMG 1604
MTENN 2525M-22W	25.0	25.0	150.00	40.0	12.5	0	-8	TNMG 2204
MTENN 3232P-22W	32.0	32.0	170.00	40.0	16.0	0	-8	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation										
MTENN 1618H-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WNS			LC 291N CLAMP		E RING N	SR 17-317NS	H-W 3
MTENN 2020K-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN			LC 291N CLAMP		E RING N	SR 17-317N	H-W 3
MTENN 2525M-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN			LC 291N CLAMP		E RING N	SR 17-317N	H-W 3
MTENN 2525M-22W	TTT 434	TTT 432*	ZNW 4	HW 2.5	LC 281 SET 1		SR 17-295			HW 3.0
MTENN 3232P-22W	TTT 434		ZNW 4	HW 2.5	LC 281 SET 1		SR 17-295			HW 3.0

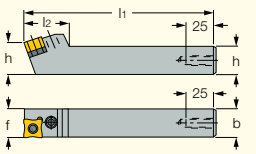
* Optional, should be ordered separately

(a) Use for inserts TNMG 1603.. 3.18 mm thick

ISOTURN

PSANR/L

Lever Lock Tools Carrying Negative Square Pipe Skiving Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
PSANR/L 2525M-15 (1)	25.0	25.0	150.00	38.0	25.0	0	20	SNMX 1507	TXN 532	TXN 5-2*	SR 117-2020	LR 5S	HW 3.0

(1) TXN 5-2 for SNMX 150608R-.. inserts without chipbreaker for hard materials.

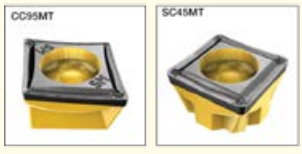
* Optional, should be ordered separately

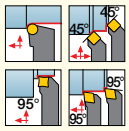
For inserts, see pages: SNMX 150608R-.. (177) • SNMX 150708R-.. (177)

CHAMTURN

SUXCR/L-CM

Screw Lock Tools Carrying Four Different 7° Clearance Geometries



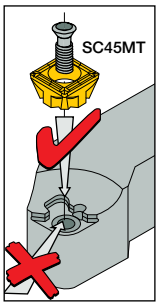


Right-hand shown

Designation	h	b	l_1	l_2	G_a°	G_r°	f
SUXCR/L 1616H-10 CM	16.0	16.0	100.00	24.0	0	0	20.0
SUXCR/L 2020K-10 CM	20.0	20.0	125.00	25.0	0	0	25.0
SUXCR/L 2525M-10 CM	25.0	25.0	150.00	25.0	0	0	32.0

For inserts, see pages: CC95MT-SM (153) • SC45MT-SM (154)

Designation	h	b	l_1	l_2	G_a°	G_r°	f	Inserts
SUXCR/L 1616H-10 CM	16.0	16.0	100.00	24.0	0	0	20 21.2	CC95MT... SC45MT...
SUXCR/L 2020K-10 CM	20.0	20.0	125.00	25.0	0	0	25 26.2	CC95MT... SC45MT...
SUXCR/L 2525M-10 CM	25.0	25.0	150.00	25.0	0	0	32 33.2	CC95MT... SC45MT...



Clamping direction for SC45MT...

Multifunction Tool Can Carry Two Different Inserts

- Unique, versatile ISCAR pocket
- For external applications
- Covers most common operations
- Simplifies tool selection
- Simple screw clamping
- Minimum spare parts

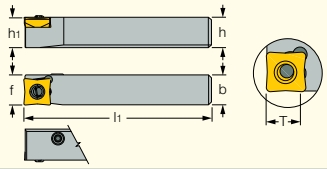
Spare Parts

Designation		
SUXCR/L-CM	SR 14-544/S	T-15/5

ISOTURN

PQLCR/L-S

Side Lever Lock Tools Carrying 80° Positive 4-Cornered Inserts for Swiss Automatic Machines





Right-hand shown

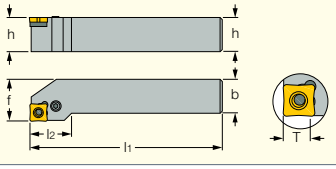
Designation	h	b	h_1	l_1	f	T	G_a°	G_r°	Insert				
PQLCR/L 1212M-09S	12.0	12.0	12.0	150.00	12.0	8.5	0	0	QCMT 09T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

For inserts, see pages: QCMT-PF (162) • QCMT-SM (162)

ISOTURN

PQLCR/L

Lever-Lock Tools Carrying 80° Positive 4-Cornered Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	T	G_a°	G_r°	Insert
PQLCR/L 1616H-09	16.0	16.0	100.00	22.0	20.0	8.5	0	0	QCMT 09T3
PQLCR/L 2020K-09	20.0	20.0	125.00	25.0	25.0	8.5	0	0	QCMT 09T3
PQLCR/L 2525M-09	25.0	25.0	150.00	26.0	32.0	8.5	0	0	QCMT 09T3

For inserts, see pages: QCMT-PF (162) • QCMT-SM (162)

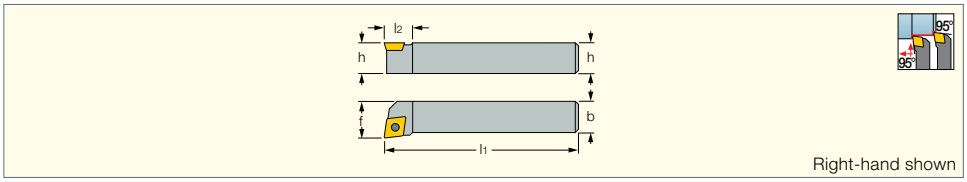
Spare Parts

Designation						
PQLCR/L	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5/5

ISOTURN

SCLCR/L

Screw Lock Tools Carrying
80° Diamond Inserts with
7° Clearance Angle



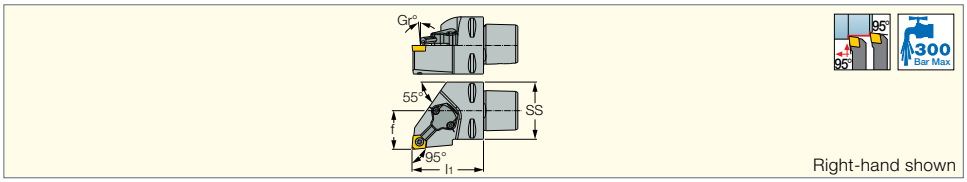
Designation	h	b	l1	l2	f	Ga°	Gr°	Insert					
SCLCR/L 0808F-06	8.0	8.0	80.00	10.0	10.0	0	0	CC.. 0602	SR 14-548	T-7/5			
SCLCR/L 1010F-06	10.0	10.0	80.00	10.0	12.0	0	0	CC.. 0602	SR 14-548	T-7/5			
SCLCR/L 1212F-09	12.0	12.0	80.00	14.0	16.0	0	0	CC.. 09T3	SR 16-236	T-15/5			
SCLCR/L 1616H-09	16.0	16.0	100.00	14.0	20.0	0	0	CC.. 09T3	SR 16-236	T-15/5			
SCLCR/L 2020K-12	20.0	20.0	125.00	18.0	25.0	0	0	CC.. 1204	SR 16-212	T-20/5			
SCLCR/L 2525M-12	25.0	25.0	150.00	20.0	32.0	0	0	CC.. 1204	SR 16-212	T-20/5	TCC 4-2	SR TC-4	HW 3.0

For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

JETCUTCAMFIX

C#-SCLCR/L-JHP

Screw Clamp Tools with CAMFIX
Shanks and Channels for High
Pressure Coolant Carrying
Positive 80° Rhombic Inserts



Designation	SS	f	l1	Ga°	Gr°	Insert					
C3 SCLCR-22045-09-JHP	32	22.0	45.00	0	0	CC.. 09T3	SR 16-236	T-15/5	CU-CW-JHP		T-8/5
C4 SCLCR/L 27050-09-JHP	40	27.0	50.00	0	0	CC.. 09T3	SR 16-236	T-15/5	CU-CW-JHP	SR M5X5 DIN913 TL360	T-8/5
C5 SCLCR/L 35060-09-JHP	50	35.0	60.00	0	0	CC.. 09T3	SR 16-236	T-15/5	CU-CW-JHP	SR M5X5 DIN913 TL360	T-8/5

• For user guide, see pages 64-71

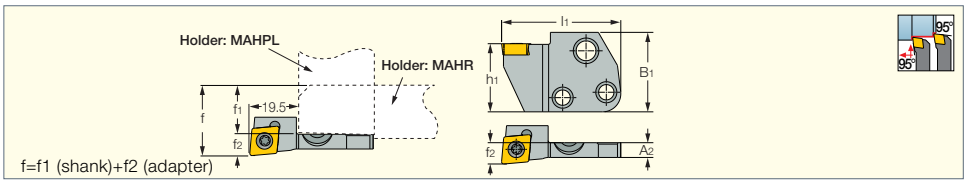
For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

ISOTURN

MODULARGRIP

SCLCR-PAD

Screw Lock Adapter Carrying
80° Diamond Inserts with
7° Clearance Angle



Designation	l1	f2	A2	Ga°	Gr°	Insert		
SCLCR-09-PAD	42.00	7.50	5.2	0	0	CCGT/CCMT 09T3	SR 16-236	T-15/5

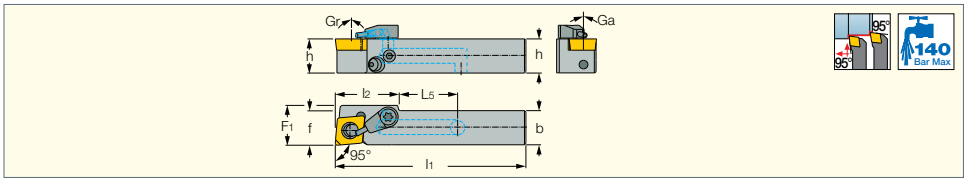
For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

For holders, see pages: C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • C#-MAHD-JHP (479) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

ISOTURN JETCUT

PCLCR/L-JHP-MC

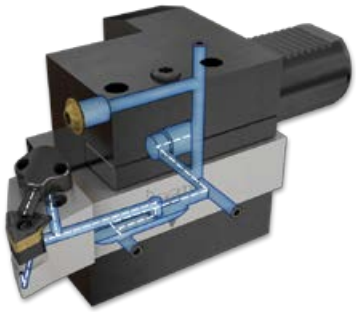
Tools with Channels for High Pressure Coolant Carrying 80° Positive Rhombic Inserts for Swiss Automatic Machines



Designation	h	b	l_1	l_2	L_5	f	F_1	G_a°	G_r°	Insert
PCLCR/L 1212X-09S-JHP-MC	12.0	12.0	67.00	23.0	20.00	12.2	14.0	0	0	CC.. 09T3
PCLCR/L 1616X-09S-JHP-MC	16.0	16.0	71.00	23.0	17.00	16.2	-	0	0	CC.. 09T3

• For user guide, see pages 64-71

For inserts, see pages: CCET-WF (156) • CCGT-AF (174) • CCGT-AS (174) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184) • CCMT-14 (155) • CCMT-PF (155) • CCMT-WG (156) • CCMT/CCGT (156) • CCMT/CCGT-SM (155)



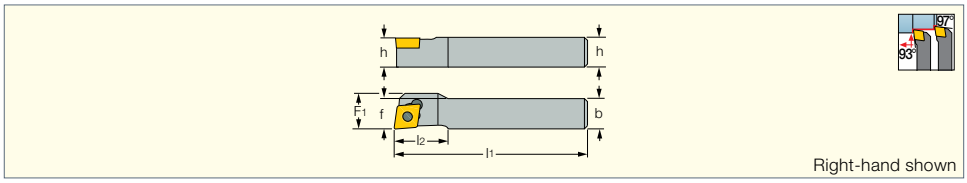
Spare Parts

Designation						
PCLCR/L-JHP-MC	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN

SCACR/L-S

Screw Lock Tools for Swiss-Type Machines Carrying 7° Clearance 80° Diamond Inserts



Right-hand shown

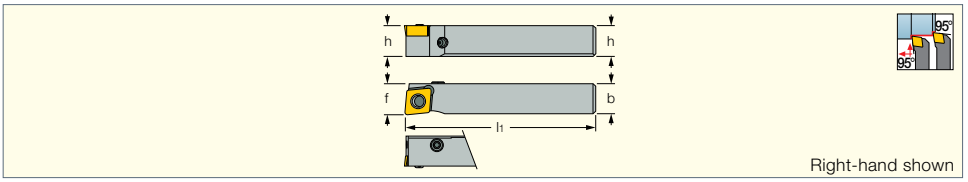
Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert		
SCACR/L 0808K-06S	8.0	8.0	125.00	8.0	8.2	-	0	0	CC.. 0602	SR 14-548	T-7/5
SCACR 1010K-06S	10.0	10.0	150.00	-	10.0	-	0	0	CC.. 0602	SR 14-548	T-7/5
SCACR/L 1616K-06S	16.0	16.0	125.00	-	16.2	-	0	0	CC.. 0602	SR 14-548	T-7/5
SCACR/L 1010K-09S	10.0	10.0	125.00	15.2	10.2	-	0	0	CC.. 09T3	SR 16-236	T-15/5
SCACR 1212K-09S	12.0	12.0	150.00	15.0	12.0	14.0	0	0	CC.. 09T3	SR 16-236	T-15/5
SCACR/L 1616K-09S	16.0	16.0	125.00	-	16.2	-	0	0	CC.. 09T3	SR 16-236	T-15/5

For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

ISOTURN

PCLCR/L-S

Side Lever Lock Tools Carrying 80° Positive Rhombic Inserts for Swiss Automatic Machines



Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert				
PCLCR 0808M-06S	8.0	8.0	150.00	8.0	0	0	CC.. 0602	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1010M-06S	10.0	10.0	150.00	10.2	0	0	CC.. 0602	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1212M-06S	12.0	12.0	150.00	12.2	0	0	CC.. 0602	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCL 1616M-06S	16.0	16.0	150.00	16.2	0	0	CC.. 0602	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1012M-09S	10.0	12.0	150.00	12.2	0	0	CC.. 09T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PCLCR/L 1212M-09S	12.0	12.0	150.00	12.2	0	0	CC.. 09T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PCLCR/L 1616M-09S	16.0	16.0	150.00	16.2	0	0	CC.. 09T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PCLCR/L 2020K-09S	20.0	20.0	125.00	20.2	0	0	CC.. 09T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

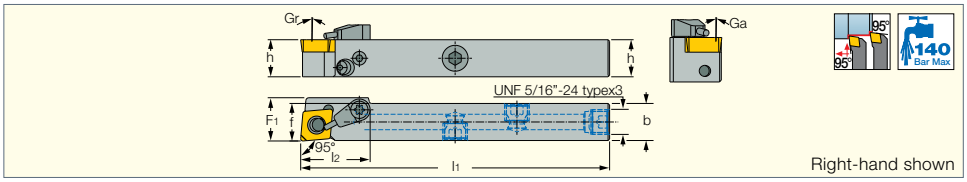
• The clamping screw may by transferred to the opposite side if needed

For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

ISOTURN JETCUT

PCLCR/L-S-JHP

Tools with Channels for High Pressure Coolant Carrying 80° Positive Rhombic Inserts for Swiss Automatic Machines



Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert
PCLCR/L 1010H-06S-JHP	10.0	10.0	100.00	22.3	10.2	-	0	0	CC.. 0602
PCLCR/L 1212H-09S-JHP	12.0	12.0	100.00	22.3	12.2	14.0	0	0	CC.. 09T3
PCLCR/L 1616K-09S-JHP	16.0	16.0	125.00	22.3	16.2	-	0	0	CC.. 09T3
PCLCR/L 2020K-09S-JHP	20.0	20.0	125.00	22.3	20.2	-	0	0	CC.. 09T3

• For user guide, see pages 64-71

For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)

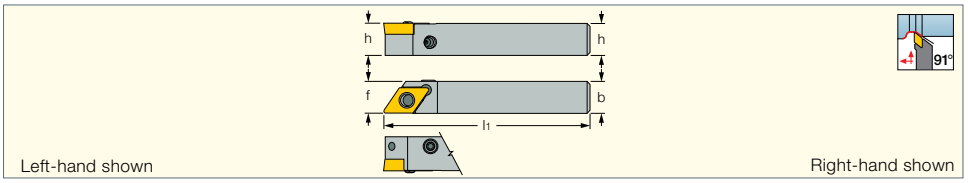
Spare Parts

Designation						
PCLCR/L-S-JHP	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN

PDACR/L-S

Side Lever Lock Tools Carrying 55° Positive Rhombic Inserts for Swiss Automatic Machines



Left-hand shown

Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert				
PDACR/L 0808M-07S	8.0	8.0	150.00	8.0	0	0	DC..0702	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1010M-07S	10.0	10.0	150.00	10.0	0	0	DC..0702	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1212M-07S	12.0	12.0	150.00	12.0	0	0	DC..0702	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1616M-07S	16.0	16.0	150.00	16.0	0	0	DC..0702	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1012M-11S	10.0	12.0	150.00	12.0	0	0	DC..11T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PDACR/L 1212M-11S	12.0	12.0	150.00	12.0	0	0	DC..11T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PDACR/L 1616M-11S	16.0	16.0	150.00	16.0	0	0	DC..11T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PDACR/L 2020K-11S	20.0	20.0	125.00	20.0	0	0	DC..11T3	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

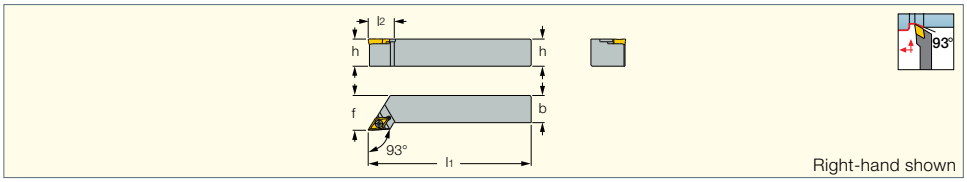
• The clamping screw may by transferred to the opposite side if needed

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

T-LOCK

SDJCR/L-13-SL

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle for High Rigidity in Profiling Applications



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert		
SDJCR/L 1616H-13-SL	16.0	16.0	100.00	24.0	21.0	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45
SDJCR/L 2020K-13-SL	20.0	20.0	125.00	24.0	27.0	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45
SDJCR/L 2525M-13-SL	25.0	25.0	150.00	24.0	32.0	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45

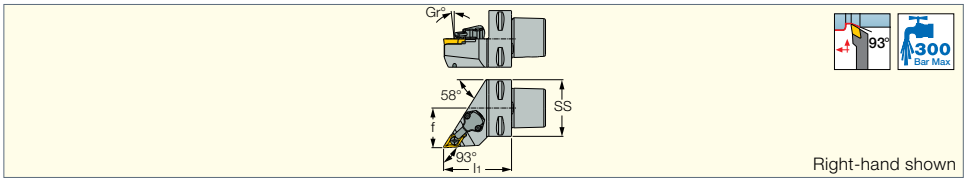
• Insert clamping torque 3 Nxm

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)

T-LOCK

C#-SDJCR/L-13-SL-JHP

Screw Clamp Tools with CAMFIX Shanks and Channels for High Pressure Coolant Carrying Positive 55° Rhombic Inserts



Right-hand shown

Designation	SS	f	l_1	G_a°	G_r°	Insert
C3 SDJCR-22040-13-SL-JHP	32	22.0	45.00	0	0	DCMT 13T5-SL
C4 SDJCL-27055-13-SL-JHP	40	27.0	55.00	0	0	DCMT 13T5-SL
C4 SDJCR 27055-13-SL-JHP	40	27.0	55.00	0	0	DCMT 13T5-SL
C5 SDJCR/L-35060-13-SL-JHP	50	35.0	60.00	0	0	DCMT 13T5-SL

• For user guide, see pages 64-71

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)

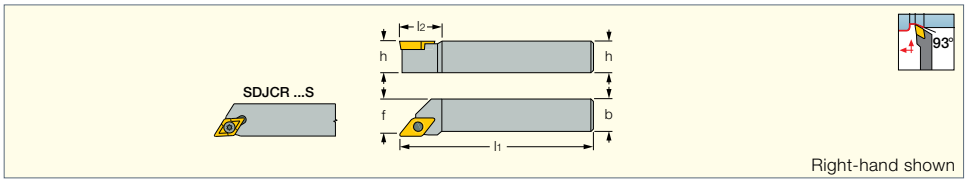
Spare Parts

Designation					
C3 SDJCR-22040-13-SL-JHP	CH-1.9D-JHP	SR M4X4 DIN913 TL360		SR M4X0.7-L9.5 IP15	
C4 SDJCL-27055-13-SL-JHP	CU-D-JHP	SR M5X5 DIN913 TL360	TORX PLUS IP15X45	SR M4X0.7-L9.6 IP15	T-8/5
C4 SDJCR 27055-13-SL-JHP	CU-D-JHP	SR M5X5 DIN913 TL360	TORX PLUS IP15X45	SR M4X0.7-L9.6 IP15	T-8/5
C5 SDJCL-35060-13-SL-JHP	CU-D-JHP	SR M5X5 DIN913 TL360	TORX PLUS IP15X45	SR M4X0.7-L9.6 IP15	T-8/5
C5 SDJCR-35060-13-SL-JHP	CU-D-JHP	SR M5X5 DIN913 TL360	TORX PLUS IP15X45	SR M4X0.7-L9.6 IP15	

ISOTURN

SDJCR/L

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle



Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
SDJCR/L 0808F-07	8.0	8.0	80.00	11.5	10.0	0	0	DC..0702	SR 14-548	T-7/5			
SDJCR/L 1010F-07	10.0	10.0	80.00	11.5	12.0	0	0	DC..0702	SR 14-548	T-7/5			
SDJCR/L 1212K-07S (1)	12.0	12.0	125.00	-	12.2	0	0	DC..0702	SR 14-548	T-7/5			
SDJCR/L 1616K-07S (1)	16.0	16.0	125.00	-	16.2	0	0	DC..0702	SR 14-548	T-7/5			
SDJCR/L 1010K-11S (1)	10.0	10.0	125.00	21.4	10.2	0	0	DC..11T3	SR 16-236	T-15/5			
SDJCR/L 1212F-11	12.0	12.0	80.00	20.0	16.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDJCR/L 1616H-11	16.0	16.0	100.00	20.0	20.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDJCR/L 2020K-11	20.0	20.0	125.00	20.0	25.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDJCR/L 2525M-11	25.0	25.0	150.00	20.0	32.0	0	0	DC..11T3	SR 16-236 P	T-15/5	TDC 3-1P	SR TC-3P	HW 4.0

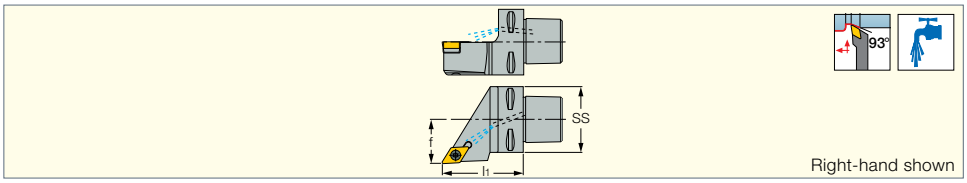
(1) For Swiss-type machines

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISOTURN CAMFIX

C#-SDJCR/L

Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying 55° Rhombic Inserts with 7° Clearance Angle



Right-hand shown

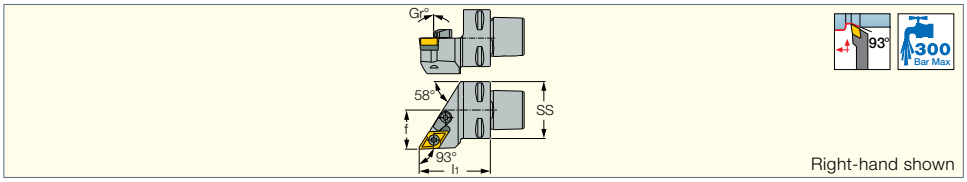
Designation	SS	f	l_1	Insert						
C4 SDJCR-27050-11	40	27.0	50.00	DC.. 11T3	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	EZ 83
C5 SDJCR/L-35060-11	50	35.0	60.00	DC.. 11T3	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	EZ 104

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISOTURN JETCUT

C#-SDJCR-JHP

Screw Clamp Tools with CAMFIX Shanks and Channels for High Pressure Coolant Carrying Positive 55° Rhombic Inserts



Designation	SS	f	l1	Insert
C3 SDJCR-22040-11-JHP	32	22.0	40.00	DC.. 11T3

• For user guide, see pages 64-71

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

Spare Parts

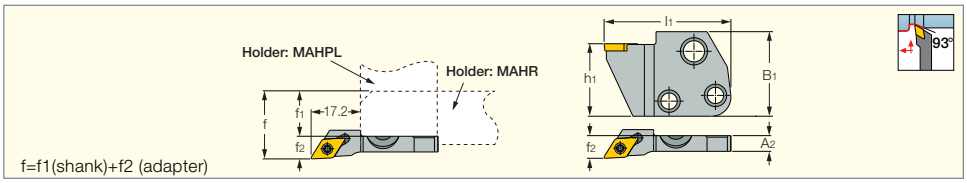
Designation								
C3 SDJCR-22040-11-JHP	TDC 3-1P	SR TC-3P	SR 16-236 P	T-15/5	CH-1.9D-JHP	WASHER 4.2X5.6X0.5	SR M4X4 DIN913 TL360	HW 4.0

ISOTURN

MODULAR-GRIP

SDJCR-PAD

Screw Lock Adapter Carrying 55° Diamond Inserts with 7° Clearance Angle



Designation	h1	B1	l1	f2	A2	Ga°	Gr°	Insert		
SDJCR-07-PAD	24.0	28.0	42.00	7.50	5.2	0	0	DCMT/DCGT 0702	SR 14-548	T-7/5

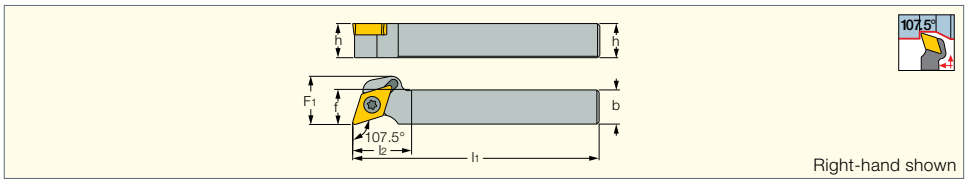
For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191)

For holders, see pages: C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • C#-MAHD-JHP (479) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

ISOTURN

SDHCR/L

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle for Swiss-Type Machines



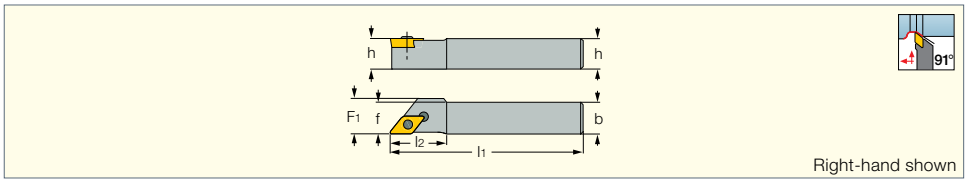
Designation	h	b	l1	l2	f	F1	Ga°	Gr°	Insert		
SDHCR/L 1010K-07S	10.0	10.0	125.00	12.5	10.2	-	0	0	DC..0702	SR 14-548	T-7/5
SDHCR/L 1212K-07S	12.0	12.0	125.00	12.0	12.2	-	0	0	DC..0702	SR 14-548	T-7/5
SDHCR/L 1616K-07S	16.0	16.0	125.00	12.0	16.2	-	0	0	DC..0702	SR 14-548	T-7/5
SDHCR/L 1212K-11S	12.0	12.0	125.00	19.0	12.2	17.0	0	0	DC..11T3	SR 16-236	T-15/5
SDHCR/L 1616K-11S	16.0	16.0	125.00	20.0	16.2	-	0	0	DC..11T3	SR 16-236	T-15/5

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISOTURN

SDACR/L

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle



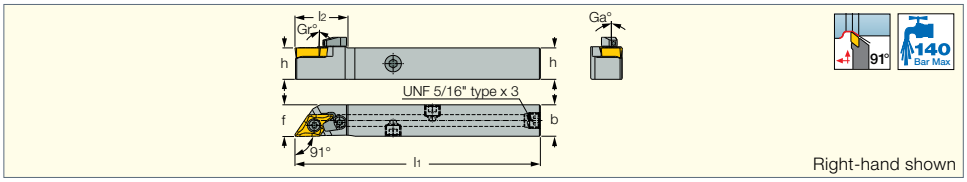
Designation	h	b	l1	l2	f	F1	Ga°	Gr°	Insert		
SDACR/L 1010K-07S	10.0	10.0	125.00	-	10.0	-	0	0	DC..0702	SR 14-548	T-7/5
SDACR/L 1212K-07S	12.0	12.0	125.00	-	12.0	-	0	0	DC..0702	SR 14-548	T-7/5
SDACR/L 1212K-11S	12.0	12.0	125.00	20.0	12.0	14.0	0	0	DC..11T3	SR 16-236 P	T-15/5
SDACR/L 1616K-11S	16.0	16.0	125.00	-	16.0	-	0	0	DC..11T3	SR 16-236 P	T-15/5

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

T-LOCK

SDACR/L-13S-SL-JHP

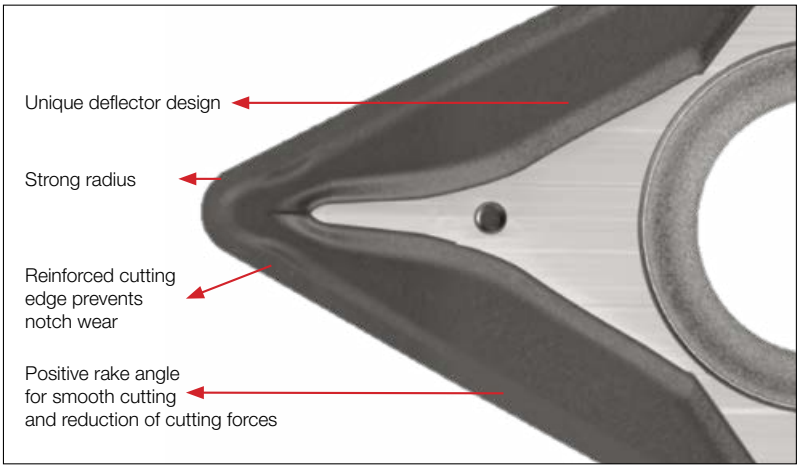
Tools with Channels for High Pressure Coolant Carrying 55° Positive Rhombic Inserts for Swiss Automatic Machines



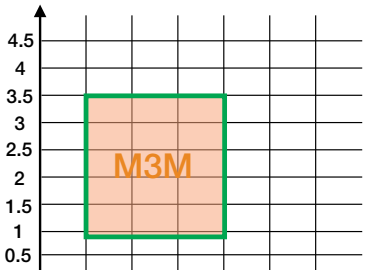
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SDACR/L 1212H-13S-SL-JHP	12.0	12.0	100.00	27.0	12.2	0	0	DCMT 13T5-SL
SDACR/L 1616K-13S-SL-JHP	16.0	16.0	125.00	27.0	16.2	0	0	DCMT 13T5-SL

• For user guide, see pages 64-71

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)



DCMT 13T508-M3M-SL
Application Range



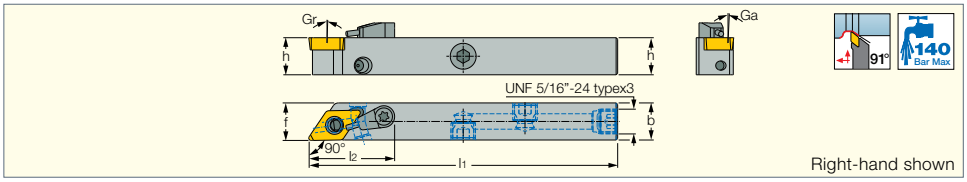
Spare Parts

Designation					
SDACR/L-13S-SL-JHP	CH-1.9D-JHP	SR 5/16UNF TL360	TORX PLUS IP15X45	WASHER 4.2X5.6X0.5	SR M4X0.7-L9.6 IP15

ISOTURN JETCUT

PDACR/L-JHP

Tools with Channels for High Pressure Coolant Carrying 55° Positive Rhombic Inserts for Swiss Automatic Machines



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PDACR/L 1010H-07S-JHP	10.0	10.0	100.00	20.4	10.2	0	0	DC..0702
PDACR/L 1212H-11S-JHP	12.0	12.0	100.00	28.0	12.2	0	0	DC..11T3
PDACR/L 1616K-11S-JHP	16.0	16.0	125.00	28.0	16.2	0	0	DC..11T3
PDACR/L 2020K-11S-JHP	20.0	20.0	125.00	28.0	20.2	0	0	DC..11T3

• For user guide, see pages 64-71

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

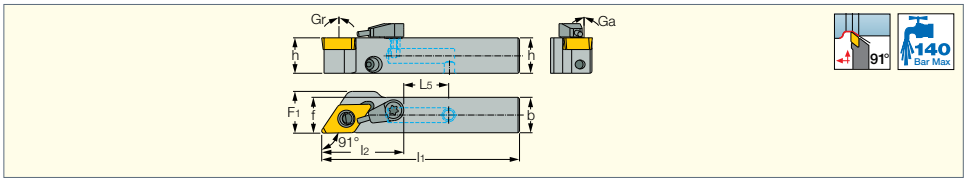
Spare Parts

Designation						
PDACR/L-JHP	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN JETCUT

PDACR/L-JHP-MC

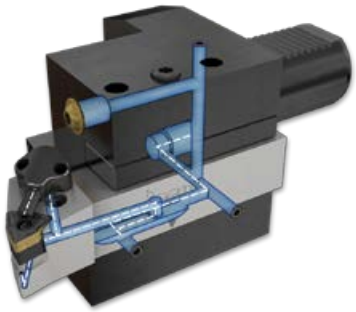
Tools with Channels for High Pressure Coolant Carrying 55° Positive Rhombic Inserts for Swiss Automatic Machines



Designation	h	b	l_1	l_2	L_5	f	F_1	G_a°	G_r°	Insert
PDACR/L 1212X-11S-JHP-MC	12.0	12.0	67.00	28.0	15.00	12.2	14.2	0	0	DC..11T3
PDACR/L 1616X-11S-JHP-MC	16.0	16.0	76.00	28.0	17.00	16.2	-	0	0	DC..11T3

• For user guide, see pages 64-71

For inserts, see pages: DCET-WF (162) • DCGT-AF (175) • DCGT-AS (174) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184) • DCMT-14 (162) • DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT (161) • DCMT/DCGT-SM (161)



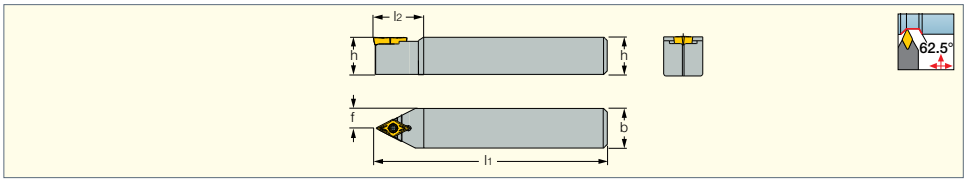
Spare Parts

Designation						
PDACR/L-JHP-MC	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

T-LOCK

SDNCN-13-SL

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle for High Rigidity in Profiling Applications



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert		
SDNCN 1616H-13-SL	16.0	16.0	100.00	25.0	8.0	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45
SDNCN 2020K-13-SL	20.0	20.0	125.00	25.0	10.0	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45
SDNCN 2525M-13-SL	25.0	25.0	150.00	25.0	12.5	0	0	DCMT 13T5-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45

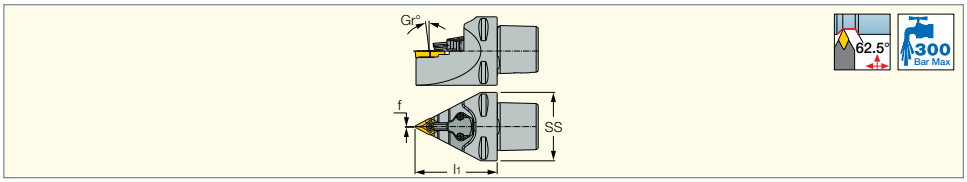
• Insert clamping torque 3 Nxm

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)

T-LOCK

C#-SDNCN-13-SL-JHP

Screw Clamp Tools with CAMFIX Shanks and Channels for High Pressure Coolant Carrying Positive 55° Rhombic Inserts



Designation	SS	f	l_1	G_a°	G_r°	Insert
C3 SDNCN-00045-13-SL-JHP	32	0.5	45.00	0	0	DCMT 13T5-SL
C4 SDNCN-00060-13-SL-JHP	40	0.5	60.00	0	0	DCMT 13T5-SL
C5 SDNCN-00060-13-SL-JHP	50	0.5	60.00	0	0	DCMT 13T5-SL

• For user guide, see pages 64-71

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)

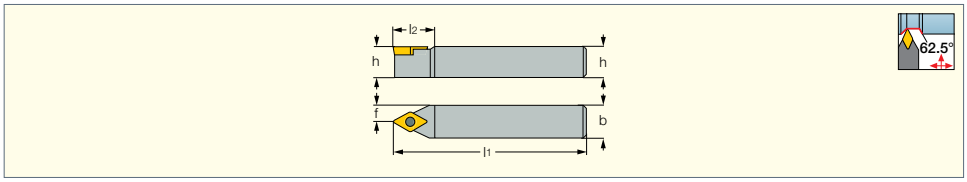
Spare Parts

Designation						
C3 SDNCN-00045-13-SL-JHP	CH-1.9D-JHP	WASHER 4.2X5.6X0.5		SR M4X4 DIN913 TL360	SR M4X0.7-L9.5 IP15	
C4 SDNCN-00060-13-SL-JHP	CU-D-JHP		TORX PLUS IP15X45		SR M4X0.7-L9.6 IP15	T-8/5
C5 SDNCN-00060-13-SL-JHP	CU-D-JHP		TORX PLUS IP15X45		SR M4X0.7-L9.6 IP15	T-8/5

ISOTURN

SDNCN

Screw Lock Tools Carrying 55° Diamond Inserts with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
SDNCN 0808F-07	8.0	8.0	80.00	14.0	4.0	0	0	DC..0702	SR 14-548	T-7/5			
SDNCN 1010F-07	10.0	10.0	80.00	14.5	5.0	0	0	DC..0702	SR 14-548	T-7/5			
SDNCN 1010K-11S (1)	10.0	10.0	120.00	20.0	5.0	0	0	DC..11T3	SR 16-236	T-15/5			
SDNCN 1212F-11	12.0	12.0	80.00	21.3	6.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDNCN 1616H-11	16.0	16.0	100.00	21.0	8.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDNCN 2020K-11	20.0	20.0	125.00	21.0	10.0	0	0	DC..11T3	SR 16-236 P	T-15/5			
SDNCN 2525M-11	25.0	25.0	150.00	30.0	12.5	0	0	DC..11T3	SR 16-236 P	T-15/5	TDC 3-1P	SR TC-3P	HW 4.0

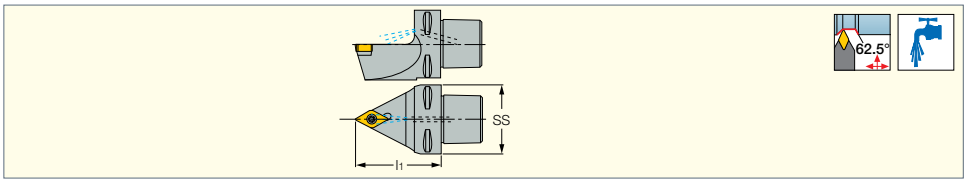
(1) For Swiss-type machines

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISOTURN CAMFIX

C#-SDNCN

Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying 55° Rhombic Inserts with 7° Clearance Angle



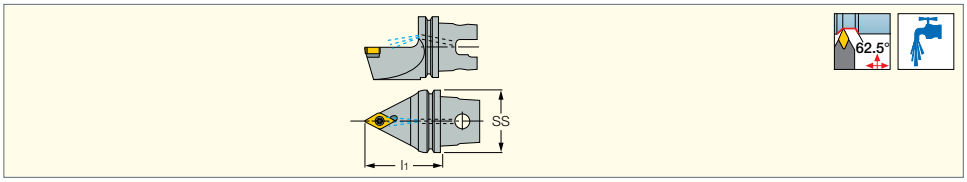
Designation	SS	l_1	Insert						
C4 SDNCN-00050-11	40	50.00	DC.. 11T3	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	EZ 104
C5 SDNCN-00060-11	50	60.00	DC.. 11T3	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	EZ 104

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISO 26622-1 XMZ

IM-SDNCN

Screw Lock Tools with ISO 26622-1 Tapered Shanks Carrying 55° Rhombic Inserts with 7° Clearance Angle



Designation	SS	l_1	Insert						
IM40 SDNCN-11	40	40.00	DC.. 11T3	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	EZ 104

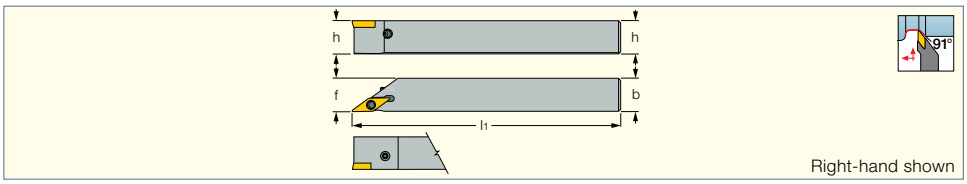
• Tools with orientation holes in the flange groove can be supplied on request

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

ISOTURN

PVACR/L-S

Side Lever Lock Tools Carrying 35° Positive Rhombic Inserts for Swiss Automatic Machines



Designation	h	b	l_1	f	G_a°	G_r°	Insert					
PVACR/L 0808M-11S	8.0	8.0	150.00	8.0	0	0	VC..1103	SL LV-2	SL PI-2	PIN	SR 10400611	HW 2.0/5
PVACR/L 1010M-11S	10.0	10.0	150.00	10.2	0	0	VC..1103	SL LV-2	SL PI-2	PIN	SR 10400611	HW 2.0/5
PVACR/L 1212M-11S	12.0	12.0	150.00	12.2	0	0	VC..1103	SL LV-2	SL PI-2	PIN	SR 10400611	HW 2.0/5
PVACR/L 1616M-11S	16.0	16.0	150.00	16.2	0	0	VC..1103	SL LV-2	SL PI-2	PIN	SR 10400611	HW 2.0/5
PVACR/L 2020K-11S	20.0	20.0	125.00	20.2	0	0	VC..1103	SL LV-2	SL PI-2	PIN	SR 10400611	HW 2.0/5

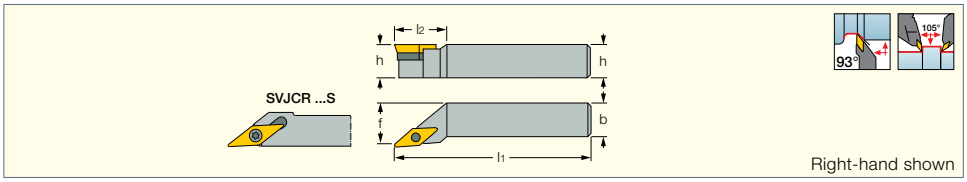
• The clamping screw may by transferred to the opposite side if needed

For inserts, see pages: VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173)

ISOTURN

SVJCR/L

93° Lead Angle Screw Lock Tools
Carrying 35° Diamond Inserts
with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
SVJCR/L 0808K-11S (1)	8.0	8.0	125.00	11.5	8.2	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1010K-11S (1)	10.0	10.0	125.00	22.0	10.2	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1212K-11S (1)	12.0	12.0	125.00	-	12.2	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1616K-11	16.0	16.0	125.00	25.0	20.0	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2020K-11	20.0	20.0	125.00	30.0	25.0	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2525M-11	25.0	25.0	150.00	30.0	32.0	0	0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2020K-16	20.0	20.0	125.00	30.0	25.0	0	0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5
SVJCR/L 2525M-16	25.0	25.0	150.00	30.0	32.0	0	0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5

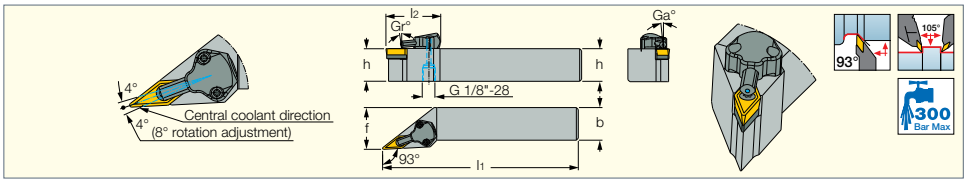
(1) For Swiss-type machines

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

ISOTURN JETCUT

SVJCR/L-16-JHP

Screw Lock Tools with Channels
for High Pressure Coolant
Carrying 35° Rhombic Inserts
with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SVJCR/L 2525M-16-JHP	25.0	25.0	150.00	42.0	32.0	0	0	VCMT 1604

• For user guide, see pages 64-71

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

Spare Parts

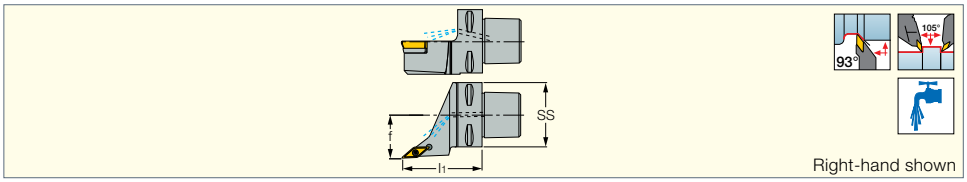
Designation							
SVJCR/L 2525M-16-JHP	TVC 3-1	SR TC-3	SR 16-236 P	CU-V-JHP	T-15/5	HW 2.5	T-8/5



ISOTURN CAMFIX

C#-SVJCR/L

Screw Lock Tools with
CAMFIX Exchangeable Shanks
Carrying 35° Rhombic Inserts
with 7° Clearance Angle

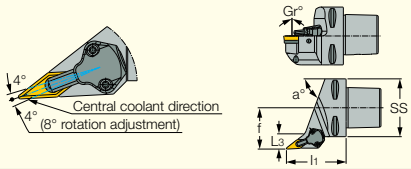


Designation	SS	f	l_1	Insert						
C4 SVJCR/L-27050-11	40	27.0	50.00	VC.. 1103				SR 14-560/S	T-8/5	EZ 83
C4 SVJCR/L-27050-16	40	27.0	50.00	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 83
C5 SVJCR-35060-11	50	35.0	60.00	VC.. 1103				SR 14-560/S	T-8/5	EZ 104
C5 SVJCR/L-35060-16	50	35.0	60.00	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 104
C6 SVJCR/L-45065-16	63	45.0	65.00	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 125

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

JETCUT CAMFIX

C#-SVJCR/L-JHP
Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying 35° Rhombic Inserts with 7° Clearance Angle



Designation	SS	f	l_1	G_a°	G_r°	a°	L_3	Insert
C3 SVJCR-22040-11-JHP	32	22.0	40.00	0	0	55	-	VCMT 1103
C4 SVJCR/L-27055-16-JHP	40	27.0	55.00	0	0	55	-	VCMT 1604
C5 SVJCR/L-35060-16-JHP	50	35.0	60.00	0	0	55	-	VCMT 1604
C6 SVJCR-45065-16-JHP	63	45.0	65.00	0	0	70	16.80	VCMT 1604

• For user guide, see pages 64-71

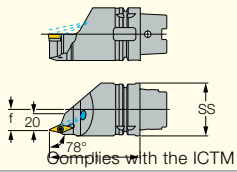
For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

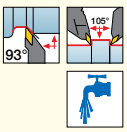
Spare Parts

Designation								
C3 SVJCR-22040-11-JHP				SR 14-560	CH-1.9D-JHP		T-8/5	
C4 SVJCL-27055-16-JHP	TVC 3-1	SR TC-3	T-15/5	SR 16-236 P	CU-V-JHP	OR 6.4X0.9N	T-8/5	HW 2.5
C4 SVJCR-27055-16-JHP	TVC 3-1	SR TC-3	T-15/5	SR 16-236 P	CU-V-JHP		T-8/5	HW 2.5
C5 SVJCR/L-35060-16-JHP	TVC 3-1	SR TC-3	T-15/5	SR 16-236 P	CU-V-JHP	OR 6.4X0.9N	T-8/5	HW 2.5
C6 SVJCR-45065-16-JHP	TVC 3-1	SR TC-3	T-15/5	SR 16-236 P	CU-V-JHP		T-8/5	HW 2.5

ISOTURN HSK

HSK A63WH-SVJCR/L
Tools with HSK Exchangeable Tapered Shanks Carrying Positive 35° Inserts for 15° Mounting on Turn-Mill Machines





Complies with the ICTM and HSK-T standards. • Right-hand shown

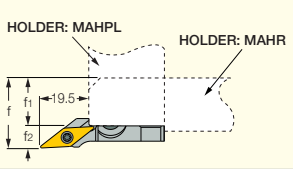
Designation	SS	l_1	f	Insert						
HSK A63WH-SVJCR/L-J16	63	110.00	25.0	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 104

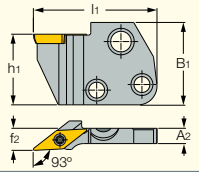
• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately). • For shank dimensions, see page 551

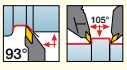
For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

ISOTURN MODULAR-GRIP

SVJCR-PAD
93° Lead Angle Screw Lock Adapters Carrying 35° Diamond Inserts with 7° Clearance Angle







Designation	h_1	B_1	l_1	f_2	A_2	G_a°	G_r°	Insert		
SVJCR-11-PAD	24.0	28.0	42.00	7.50	5.2	0	0	VC.. 1103	SR 14-560/S	T-8/5

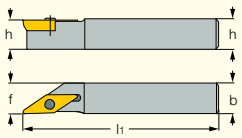
For inserts, see pages: VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173)

For holders, see pages: C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • C#-MAHD-JHP (479) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

ISOTURN

SVACR/L

91° Lead Angle Screw Lock Tools
Carrying 35° Diamond Inserts
with 7° Clearance Angle





Right-hand shown

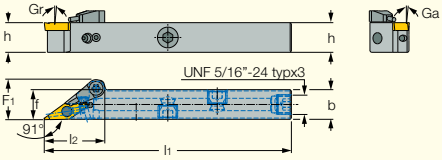
Designation	h	b	l_1	f	G_a°	G_r°	Insert		
SVACR/L 1212K-11S	12.0	12.0	125.00	12.0	0	0	VC..11..	SR 14-560	T-8/5
SVACR 1616K-11S	16.0	16.0	125.00	16.0	0	0	VC..11..	SR 14-560	T-8/5
SVACR/L 1212K-13S	12.0	12.0	125.00	12.0	0	0	VC..13..	SR 14-513	T-8/5
SVACR/L 1616K-13S	16.0	16.0	125.00	16.0	0	0	VC..13..	SR 14-513	T-8/5
SVACR/L 2020K-13S	20.0	20.0	125.00	20.0	0	0	VC..13..	SR 14-513	T-8/5

For inserts, see pages: VCGT 1303..-PF (163) • VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173)

ISOTURN JETCUT

PVACR/L-JHP

Tools with Channels for High Pressure
Coolant Carrying 35° Positive Rhombic
Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert
PVACR/L 1010H-11S-JHP	10.0	10.0	100.00	20.0	10.2	-	0	0	VC..1103
PVACR/L 1212H-11S-JHP	12.0	12.0	100.00	20.0	12.2	16.0	0	0	VC..1103
PVACR/L 1616K-11S-JHP	16.0	16.0	125.00	20.0	16.2	-	0	0	VC..1103
PVACR/L 2020K-11S-JHP	20.0	20.0	125.00	25.0	20.2	-	0	0	VC..1103

• For user guide, see pages 64-71

For inserts, see pages: VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173)

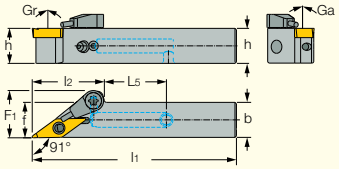
Spare Parts

Designation						
PVACR/L 1212H-11S-JHP	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5	SR 5/16UNF TL360	S-CU-JHP
PVACR/L 1616K-11S-JHP	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5	SR 5/16UNF TL360	S-CU-JHP
PVACR 2020K-11S-JHP	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN JETCUT

PVACR/L-JHP-MC

Tools with Channels for High Pressure
Coolant Carrying 35° Positive Rhombic
Inserts for Swiss Automatic Machines

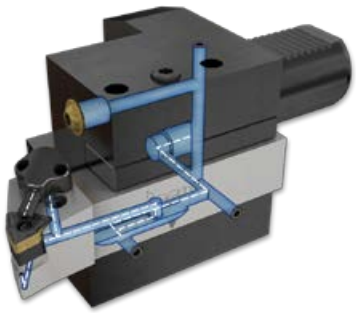




Designation	h	b	l_1	l_2	L_5	f	F_1	G_a°	G_r°	Insert
PVACR/L 1212X-11S-JHP-MC	12.0	12.0	70.00	25.0	21.00	12.2	16.0	0	0	VC..1103
PVACR/L 1616X-11S-JHP-MC	16.0	16.0	73.00	26.0	16.00	16.2	-	0	0	VC..1103

• For user guide, see pages 64-71

For inserts, see pages: VCET-WF (163) • VCGT-AS (173) • VCMT-SM (163)



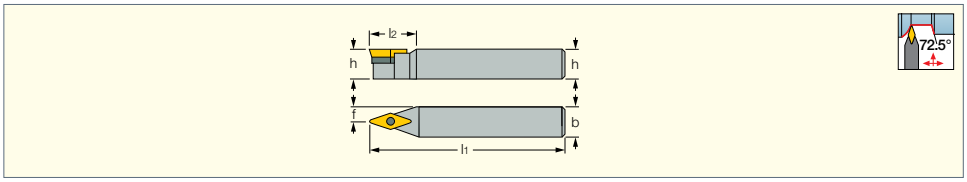
Spare Parts

Designation						
PVACR/L-JHP-MC	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN

SVVCN

72.5° Lead Angle Screw Lock Tools Carrying 35° Diamond Inserts with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
SVVCN 0808K-11S (1)	8.0	8.0	125.00	-	4.3	0	0	VC..1103	SR 14-560	T-8/5			
SVVCN 1010K-11S (1)	10.0	10.0	125.00	-	5.3	0	0	VC..1103	SR 14-560	T-8/5			
SVVCN 1212K-11S (1)	12.0	12.0	125.00	-	6.3	0	0	VC..1103	SR 14-560	T-8/5			
SVVCN 1616K-11S (1)	16.0	16.0	125.00	-	8.3	0	0	VC..1103	SR 14-560	T-8/5			
SVVCN 2020K-16	20.0	20.0	125.00	34.0	10.0	0	0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5
SVVCN 2525M-16	25.0	25.0	150.00	38.1	12.5	0	0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5

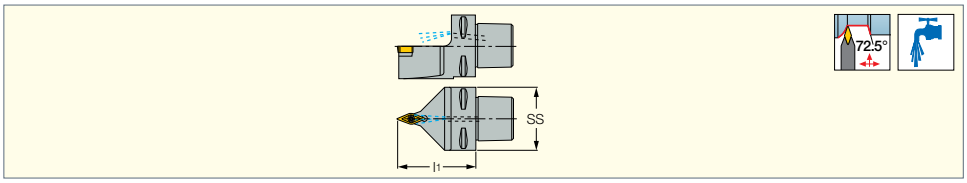
(1) For Swiss-type machines

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

ISOTURN CAMFIX

C#-SVVCN

Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying 35° Rhombic Inserts with 7° Clearance Angle



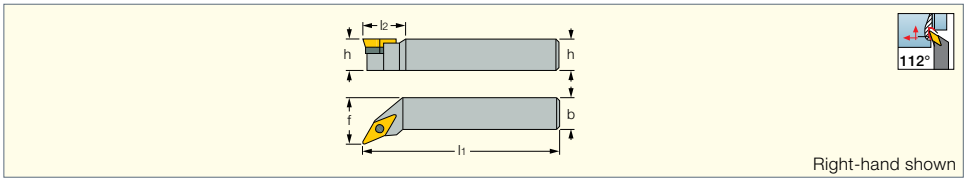
Designation	SS	l_1	Insert						
C4 SVVCN-00050-11	40	40.00	VC.. 1103				SR 14-560/S	T-8/5	EZ 83
C4 SVVCN-00050-16	40	40.00	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 83
C5 SVVCN-00060-16	50	50.00	VC.. 1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5	EZ 125

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

ISOTURN

SVXCR/L

112° Lead Angle Screw Lock Tools Carrying 35° Diamond Inserts with 7° Clearance Angle



Right-hand shown

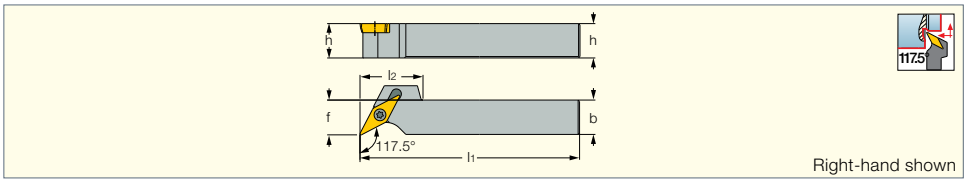
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
SVXCR/L 2020K-16	20.0	20.0	125.00	25.0	25.0	0	0	VC..1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5
SVXCR/L 2525M-16	25.0	25.0	150.00	30.0	32.0	0	0	VC..1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

ISOTURN

SVPCR/L

117° Lead Angle Screw Lock Tools Carrying 35° Diamond Inserts with 7° Clearance Angle



Right-hand shown

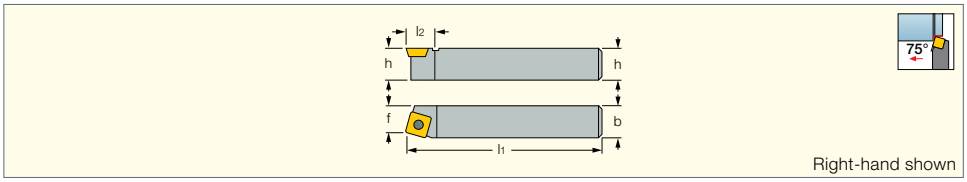
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert		
SVPCR/L 1212K-11S	12.0	12.0	125.00	19.0	12.2	0	0	VC..1103	SR 14-560	T-8/5
SVPCR/L 1616K-11S	16.0	16.0	125.00	-	16.2	0	0	VC..1103	SR 14-560	T-8/5

For inserts, see pages: VCMT-SM (163) • VCGT-AS (173)

ISOTURN

SSBCR/L

75° Lead Angle Screw Lock Tools Carrying the Square Inserts with 7° Clearance Angle



Right-hand shown

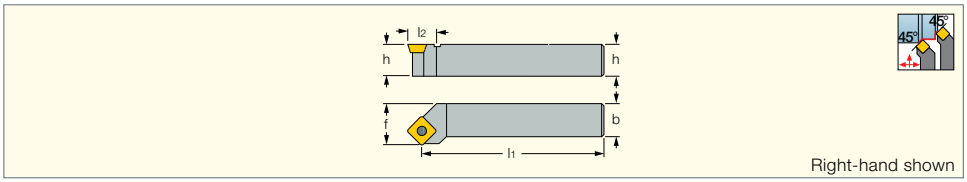
Designation	h	b	l1	l2	f	Ga°	Gr°	Insert					
SSBCR/L 1616H-09	16.0	16.0	100.00	15.0	13.0	0	0	SC.. 09T3	SR 16-236	T-15/5			
SSBCR/L 2020K-12	20.0	20.0	125.00	19.0	17.0	0	0	SC..1204	SR 16-212	T-20/5			
SSBCR/L 2525M-12	25.0	25.0	150.00	19.0	22.0	0	0	SC..1204	SR 16-212	T-20/5	TSC 4-2	SR TC-4	HW 3.0

For inserts, see pages: SCMT-SM (164) • SCGT-AS (172) • SCMT-14 (165) • SCMT-19 (165)

ISOTURN

SSSCR/L

45° Lead Angle Screw Lock Tools Carrying Square Inserts with 7° Clearance Angle



Right-hand shown

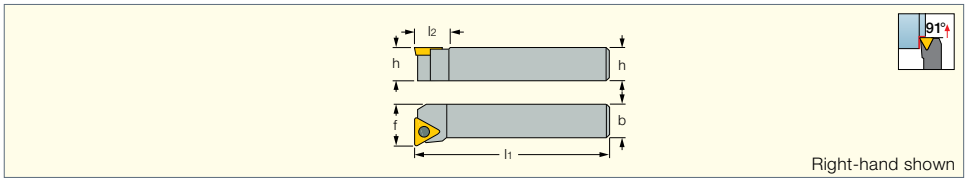
Designation	h	b	l1	l2	f	Ga°	Gr°	Insert					
SSSCR/L 1212F-09	12.0	12.0	80.00	18.0	16.0	0	0	SC.. 09T3	SR 16-236	T-15/5			
SSSCR/L 1616H-09	16.0	16.0	100.00	18.0	20.0	0	0	SC.. 09T3	SR 16-236	T-15/5			
SSSCR/L 2020K-12	20.0	20.0	125.00	22.0	25.0	0	0	SC.. 1204	SR 16-212	T-20/5			
SSSCR/L 2525M-12	25.0	25.0	150.00	25.0	32.0	0	0	SC.. 1204	SR 16-212	T-20/5	TSC 4-2	SR TC-4	HW 3.0

For inserts, see pages: SCMT-SM (164) • SCGT-AS (172) • SCMT-14 (165) • SCMT-19 (165)

ISOTURN

STFCR/L

Screw Lock Tools Carrying Triangular Inserts with 7° Clearance Angle for Face Turning



Right-hand shown

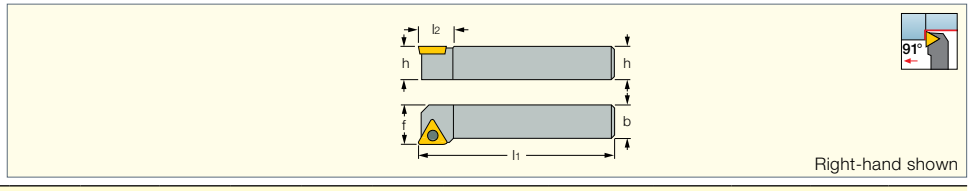
Designation	h	b	l1	l2	f	Ga°	Gr°	Insert					
STFCR/L 1212F-11	12.0	12.0	80.00	13.0	16.0	0	0	TC.. 1102	SR 14-548	T-7/5			
STFCR/L 2020K-16	20.0	20.0	125.00	18.0	25.0	0	0	TC.. 16T3	SR 16-236	T-15/5			
STFCR/L 2525M-16	25.0	25.0	150.00	20.0	32.0	0	0	TC.. 16T3	SR 16-236	T-15/5	TTC 3-2	SR TC-3	HW 2.5

For inserts, see pages: TCMT-F3P (165) • TCMT-PF (166) • TCMT-SM (166) • TCGT-AS (173) • TCMT (CBN) (195) • TCMT (PCD) (186)

ISOTURN

STGCR/L

91° Lead Angle Screw Lock Tools Carrying Triangular Inserts with 7° Clearance Angle



Right-hand shown

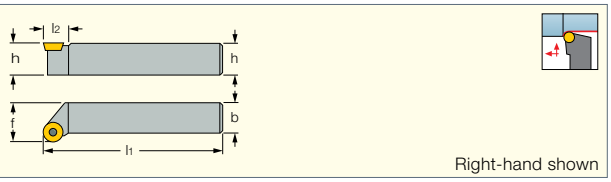
Designation	h	b	l1	l2	f	Ga°	Gr°	Insert					
STGCR/L 1212F-11	12.0	12.0	80.00	13.0	16.0	0	0	TC.. 1102	SR 14-548	T-7/5			
STGCR/L 1616H-11	16.0	16.0	100.00	13.0	20.0	0	0	TC.. 1102	SR 14-548	T-7/5			
STGCR/L 2020K-16	20.0	20.0	125.00	18.0	25.0	0	0	TC.. 16T3	SR 16-236	T-15/5			
STGCR/L 2525M-16	25.0	25.0	150.00	18.0	32.0	0	0	TC.. 16T3	SR 16-236	T-15/5	TTC 3-2	SR TC-3	HW 2.5

For inserts, see pages: TCMT-F3P (165) • TCMT-PF (166) • TCMT-SM (166) • TCGT-AS (173) • TCMT (CBN) (195) • TCMT (PCD) (186)

ISOTURN

SRGCR/L

Screw Lock Tools Carrying Round Inserts with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SRGCR/L 1616H-08	16.0	16.0	100.00	11.0	20.0	0	0	RCMT 0803MO
SRGCR/L 2020K-10	20.0	20.0	125.00	14.0	25.0	0	0	RCMT 10T3MO
SRGCR 2525M-10	25.0	25.0	150.00	18.0	32.0	0	0	RCMT 10T3MO
SRGCR/L 2525M-12	25.0	25.0	150.00	18.0	32.0	0	0	RCMT 1204MO
SRGCR/L 2525M-16	25.0	25.0	150.00	20.0	32.0	0	0	RCMT 1606MO
SRGCR/L 3232P-20	32.0	32.0	170.00	25.0	40.0	0	0	RCMT 2006MO

For inserts, see pages: RCGT-AS (175) • RCMT-14 (167) • RCMT-SR (166)

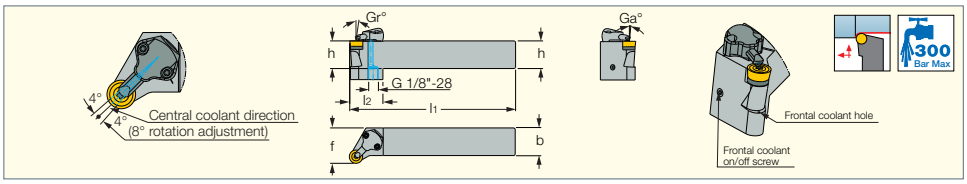
Spare Parts

Designation							
SRGCR/L 1616H-08	SR 14-513			T-8/5			
SRGCR/L 2020K-10				T-15/5			
SRGCR 2525M-10		TRC 3-0	SR TC-3	T-15/5			
SRGCR/L 2525M-12	SR 16-212	TRC 4-0	SR TC-4	T-20/5	HW 3.0		
SRGCR/L 2525M-16	SR 16-212	TRC 5-0	SR TC-4	T-20/5	HW 3.0		
SRGCR/L 3232P-20	SR 14-519	TRC 6-0	SR TC-6		HW 4.0	BLD T20/S7	SW6-T-SH

ISOTURN JETCUT

SRGCR-12-JHP

Screw Lock Tools with Channels for High Pressure Coolant Carrying Round Inserts with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SRGCR 2525M-12-JHP	25.0	25.0	150.00	30.0	32.0	0	0	RCMT 1204

• For user guide, see pages 64-71

For inserts, see pages: RCMT-14 (167)

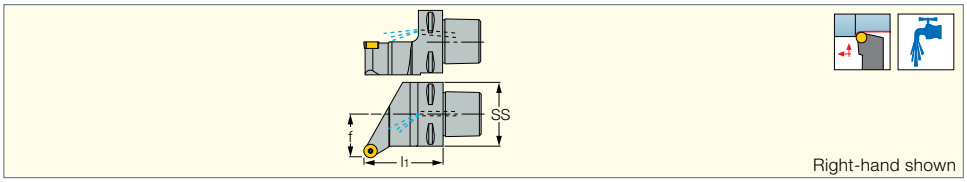
Spare Parts

Designation									
SRGCR 2525M-12-JHP	TRC 4-0	SR TC-4	T-8/5	SR 16-212	T-20/5	CU-R-JHP	SR M4X4 DIN913 TL360	HW 2.0	HW 3.0

ISOTURN CAMFIX

C#-SRGCR/L

Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying Round Inserts with 7° Clearance Angle



Designation	SS	f	l_1	Insert						
C5 SRGCR/L-35060-10	50	35.0	60.00	RCMT 10T3MO	TRC 3-0	SR TC-3	HW 2.5	SR 16-236	T-15/5	EZ 83
C5 SRGCR-35060-12	50	35.0	60.00	RCMT 1204MO	TRC 4-0	SR TC-4	HW 3.0	SR 16-212	T-20/5	EZ 104

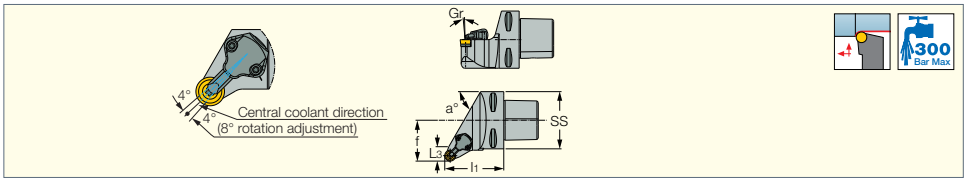
For inserts, see pages: RCGT-AS (175) • RCMT-14 (167)

ISOTURN JETCUT

CAMFIX

C#-SRGCR-12-JHP

Screw Lock Tools with CAMFIX Exchangeable Shanks Carrying Round Inserts with 7° Clearance Angle



Designation	SS	f	l_1	a°	L_3	Insert							
C6 SRGCR-45065-12-JHP	63	45.0	65.00	60	16.00	RCMT 1204MO	TRC 4-0	SR TC-4	T-20/5	SR 16-212	HW 3.0	CU-R-JHP	T-8/5

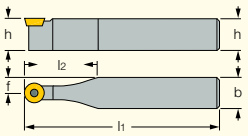
• For user guide, see pages 64-71

For inserts, see pages: RCMT-14 (167)

ISOTURN

SRDCN

Screw Lock Neutral Tools Carrying Round Inserts with 7° Clearance Angle



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SRDCN 1616H-08	16.0	16.0	100.00	33.0	8.0	0	0	RCMT 0803MO
SRDCN 2020K-10	20.0	20.0	125.00	38.0	10.0	0	0	RCMT 10T3MO
SRDCN 2525M-12	25.0	25.0	150.00	50.0	12.5	0	0	RCMT 1204MO
SRDCN 3225P-12	32.0	25.0	170.00	50.0	12.5	0	0	RCMT 1204MO
SRDCN 3225P-16	32.0	25.0	170.00	50.0	12.5	0	0	RCMT 1606MO
SRDCN 3232P-20	32.0	32.0	170.00	50.0	16.0	0	0	RCMT 2006MO

For inserts, see pages: RCGT-AS (175) • RCMT-14 (167) • RCMT-SR (166)

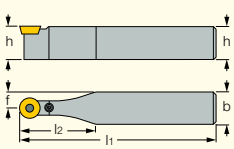
Spare Parts

Designation							
SRDCN 1616H-08	SR 14-513	T-8/5					
SRDCN 2020K-10	SR 16-236	T-15/5					
SRDCN 2525M-12	SR 16-212	T-20/5	TRC 4-0	SR TC-4	HW 3.0		
SRDCN 3225P-12	SR 16-212	T-20/5	TRC 4-0	SR TC-4	HW 3.0		
SRDCN 3225P-16	SR 16-212	T-20/5	TRC 5-0	SR TC-4	HW 3.0		
SRDCN 3232P-20	SR 14-519		TRC 6-0	SR TC-6	HW 4.0	BLD T20/S7	SW6-T-SH

ISOTURN

PRDCN

Lever Lock Tools Carrying RCMX Round Inserts



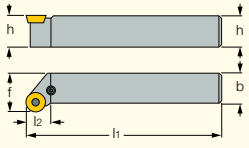
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
PRDCN 4040S-25	40.0	40.0	250.00	80.0	20.0	0	0	RCMX 250700	TRC 25	SP 66	HW 4.0	SR 10402289	LR 25C
PRDCN 5050U-32	50.0	50.0	350.00	90.0	25.0	0	0	RCMX 320900	TRC 32	SP 8	HW 5.0	SR 10402264	LR 32C

For inserts, see pages: RCMX-NR (167)

ISOTURN

PRGCR/L

Lever Lock Tools Carrying RCMX Round Inserts



Right-hand shown

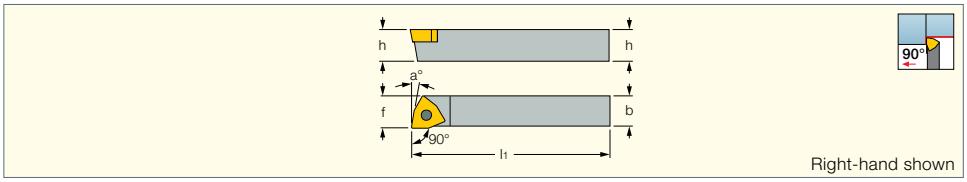
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert						
PRGCR/L 4040S-25	40.0	40.0	250.00	30.0	50.0	0	0	RCMX 250700	TRC 25	SP 66	SR 10402289	LR 25C	HW 4.0
PRGCR/L 5050T-32	50.0	50.0	300.00	33.5	60.0	0	0	RCMX 320900	TRC 32	SP 8	SR 10402264	LR 32C	HW 5.0

For inserts, see pages: RCMX-NR (167)

ISOTURN

SWAPR/L

90° Lead Angle Screw Lock Tools Carrying Trigon Inserts for Swiss Automatic Machines



Designation	h	b	l_1	f	a°	Insert		
SWAPR/L 0808-04	8.0	8.0	140.00	8.1	6	WPEB/X 04..	T-8/5	SR M3.0L
SWAPR 1010-04	10.0	10.0	150.00	10.1	5.5	WPEB/X 04..	T-8/5	SR M3.0R
SWAPR/L 1010-05	10.0	10.0	150.00	10.1	10	WPEB/X 05..	T-8/5	SR M3.5L
SWAPR/L 1212-05	12.0	12.0	150.00	12.1	10	WPEB/X 05..	T-8/5	SR M3.5L
SWAPR/L 1212-06	12.0	12.0	150.00	12.1	10	WPEB/X 06..	T-8/5	SR M3.5L
SWAPR/L 1414-06	14.0	14.0	150.00	14.1	10	WPEB/X 06..	T-8/5	SR M3.5L
SWAPR/L 1616-06	16.0	16.0	150.00	16.1	10	WPEB/X 06..	T-8/5	SR M3.5L

• For R.H. tool use -R screw, for L.H. tool use -L screw.

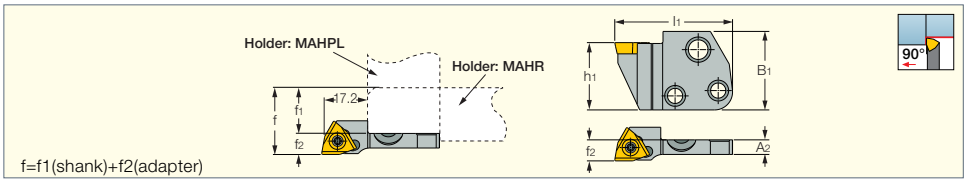
For inserts, see pages: WPEX (172)

ISOTURN

MODULARGRIP

SWAPR-PAD

90° Lead Angle Screw Lock Adapters Carrying Trigon Inserts for Swiss Automatic Machines



Designation	h_1	B_1	l_1	f_2	A_2	G_a°	G_r°	Insert		
SWAPR-06-PAD	24.0	28.0	42.00	7.50	5.2	0	0	WPEX/B 0604	SR M3.5R	T-8/5

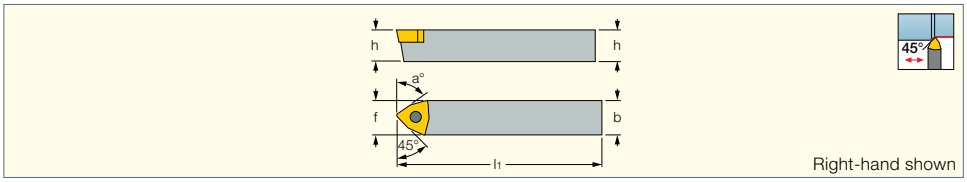
For inserts, see pages: WPEX (172)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

ISOTURN

SWDPR/L

45° Lead Angle Screw Lock Tools Carrying Trigon Inserts for Swiss Automatic Machines



Designation	h	b	l_1	f	a°	Insert		
SWDPR/L 1010-04	10.0	10.0	150.00	10.1	51	WPEB/X 04..	T-8/5	SR M3.0L
SWDPR/L 1212-05	12.0	12.0	150.00	12.1	55	WPEB/X 05..	T-8/5	SR M3.5L
SWDPR 1616-06	16.0	16.0	150.00	16.1	55	WPEB/X 06..	T-8/5	SR M3.5R

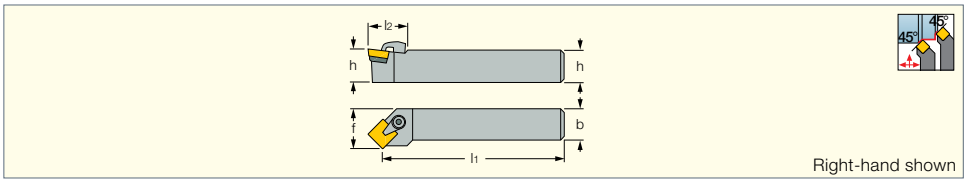
• For R.H. tool use -R screw, for L.H. tool use -L screw.

For inserts, see pages: WPEX (172)

ISOTURN

CSSPR/L

Clamp Lock Tools Carrying 11° Clearance Square Inserts for Longitudinal and Face Turning



Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert				
CSSPR 1212F-09	12.0	12.0	80.00	21.0	16.0	0	6	SPMR 0903			LC 15	SET 1 HW 2.5
CSSPR 1616H-12 (1)	16.0	16.0	100.00	26.0	20.0	0	6	SPMR 1203	ISQP 162	SP 16	LC 30	SET 2 HW 3.0
CSSPR 2020K-12 (1)	20.0	20.0	125.00	26.0	25.0	0	6	SPMR 1203	ISQP 162	SP 16	LC 30	SET 1 HW 3.0
CSSPR/L 2525M-12 (1)	25.0	25.0	150.00	28.0	32.0	0	6	SPMR 1203	ISQP 162	SP 16	LC 30	SET 1 HW 3.0

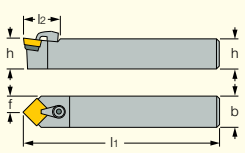
(1) When using a double-ended insert, grooving depth is limited by the insert.

For inserts, see pages: SPMR (168)

ISOTURN

CSDPN

45° Lead Angle Clamp Lock Tools
Carrying 11° Clearance Square Inserts





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert				
CSDPN 2020K-12	20.0	20.0	125.00	30.0	10.0	0	6	SPMR 1203	ISQP 162(a)	SP 16	LC 30 SET 1	HW 3.0
CSDPN 2525M-12	25.0	25.0	150.00	30.0	12.5	0	6	SPMR 1203	ISQP 162(a)	SP 16	LC 30 SET 1	HW 3.0

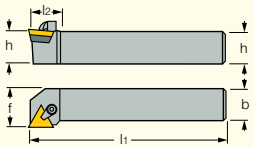
(a) Use ISQP 163 seat for inserts with corner radii 1.6-2.4 mm

For inserts, see pages: SPMR (168)

ISOTURN

CTGPR/L

Clamp Lock Tools Carrying
11° Clearance Triangular Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
CTGPR/L 1212F-11	12.0	12.0	80.00	17.0	16.0	0	6	TPMR/TPGN 1103				LC 15 SET 1	HW 2.5
CTGPR 1616H-11	16.0	16.0	100.00	16.0	20.0	0	6	TPMR/TPGN 1103				LC 15 SET 1	HW 2.5
CTGPR/L 2020K-16	20.0	20.0	125.00	26.0	25.0	0	6	TPMR/TPGN 1603	ITBP 122	ITBP 123*	SP 16(a)	LC 30 SET 1	HW 3.0
CTGPR/L 2525M-16	25.0	25.0	150.00	26.0	32.0	0	6	TPMR/TPGN 1603	ITBP 122	ITBP 123*	SP 16(a)	LC 30 SET 1	HW 3.0

* Optional, should be ordered separately

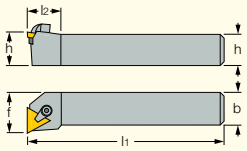
(a) Use ITBP 123 seat for inserts with corner radii 1.6-2.4 mm

For inserts, see pages: TPGN-Ceramic (182) • TPMR (168) • TPMR-PF (168)

ISOTURN

CTFPR/L

Clamp Lock Tools Carrying
11° Clearance Triangular
Inserts for Face Turning





Left-hand shown

Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert					
CTFPR 1212F-11	12.0	12.0	80.00	16.0	16.0	0	-6	TPMR/TPGN 1103		HW 2.5		LC 15 SET 1	
CTFPR/L 1616H-11	16.0	16.0	100.00	16.0	20.0	0	-6	TPMR/TPGN 1103		HW 2.5		LC 15 SET 1	
CTFPR 2020K-16	20.0	20.0	125.00	22.0	25.0	0	-6	TPMR/TPGN 1603	ITBP 122	HW 3.0	SP 16	LC 30 SET 1	ITBP 123*
CTFPR/L 2525M-16	25.0	25.0	150.00	22.0	32.0	0	-6	TPMR/TPGN 1603	ITBP 122	HW 3.0	SP 16	LC 30 SET 1	

* Optional, should be ordered separately

For inserts, see pages: TPGN-Ceramic (182) • TPMR (168) • TPMR-PF (168)



JET HIGH PRESSURE TOOLS



High Pressure Coolant

Important Features

- Up to **200**% increased cutting speed when machining titanium and heat resistant alloys
- Effective chip control on problematic materials
- Up to **100**% increased tool life when machining titanium, heat resistant alloys and alloy steel

JHP tools are essential and important for the aviation, aerospace and medical industries.

The coolant channels of the **JHP** tools feature outlets very close to the cutting edges, thus gaining the following advantages:

- Shorter machining time – cutting speed may be increased by up to **200**% when machining titanium and heat resistant alloys
- Longer tool life – increased tool life by up to **100**% not only on titanium and heat resistant alloys, but also on stainless and alloy steels
- Improved chip control – small chips can be obtained even on the most ductile and problematic materials
- Effective cooling down of the cutting edge, reducing sensitivity to heat fluctuations
- Safer and more stable process

JHP tools provide advantageous performance, also when conventional pressure is applied.

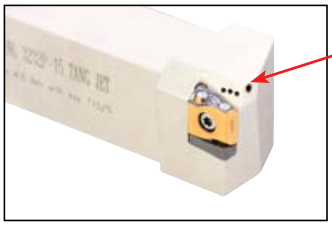
Pressure vs. Flow

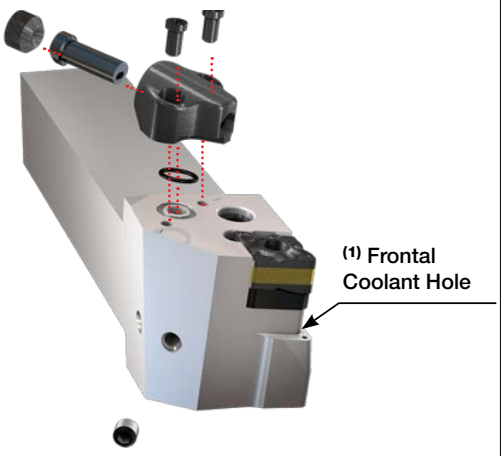
- Each **JHP** tool is designed to work at a certain flow rate, depending on the pressure. The flow rates are listed in the catalog pages for each tool. The user should verify that his pump can supply the required flow in order to achieve the optimal results. The pump data sheet will usually list the maximum flow rate for each pressure range.

Chips & Pressure

- The coolant flow will start to break the chips at a certain pressure, depending on the specific tool and the workpiece material. If the chips are not breaking, the pressure should be increased until chip control is achieved. As the pressure is increased, the chips become smaller and smaller. It is possible to control the size of the chips by modifying the pressure.

There are 4 various telescopic tubes intended for various insert geometries (see attached table).
Each tube possesses a different profile optimized for the specific geometry of the insert.
The flow rate for each tube is listed in the table below.



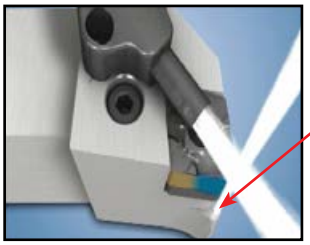


Flow Rate for Various JHP Nozzles

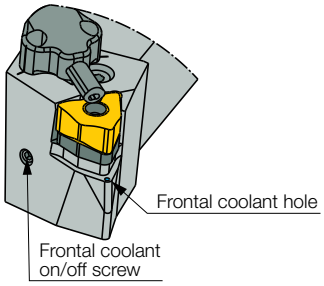
Insert	Channel Shape Inside the Nozzle Tube	Nozzle Tube	Flow Rate liter/min			
			70 Bar	100 Bar	140 Bar	300 Bar
		NZ-CW-JHP	19-23.5	22.5-28	26.5-33	46-52
		NZ-D-JHP	19-23.5	22.5-28	26.5-33	46-52
		NZ-V-JHP	9.5-11.8	11.3-14	13.4-16.7	22-26
		NZ-R-JHP	19-23.5	22.5-28	26.5-33	46-52
		Holes	14-16	18-23	23-26	33-37
Frontal Coolant Hole(1)		Hole	5.4-6.6	6.4-8	7.5-9.5	10-14

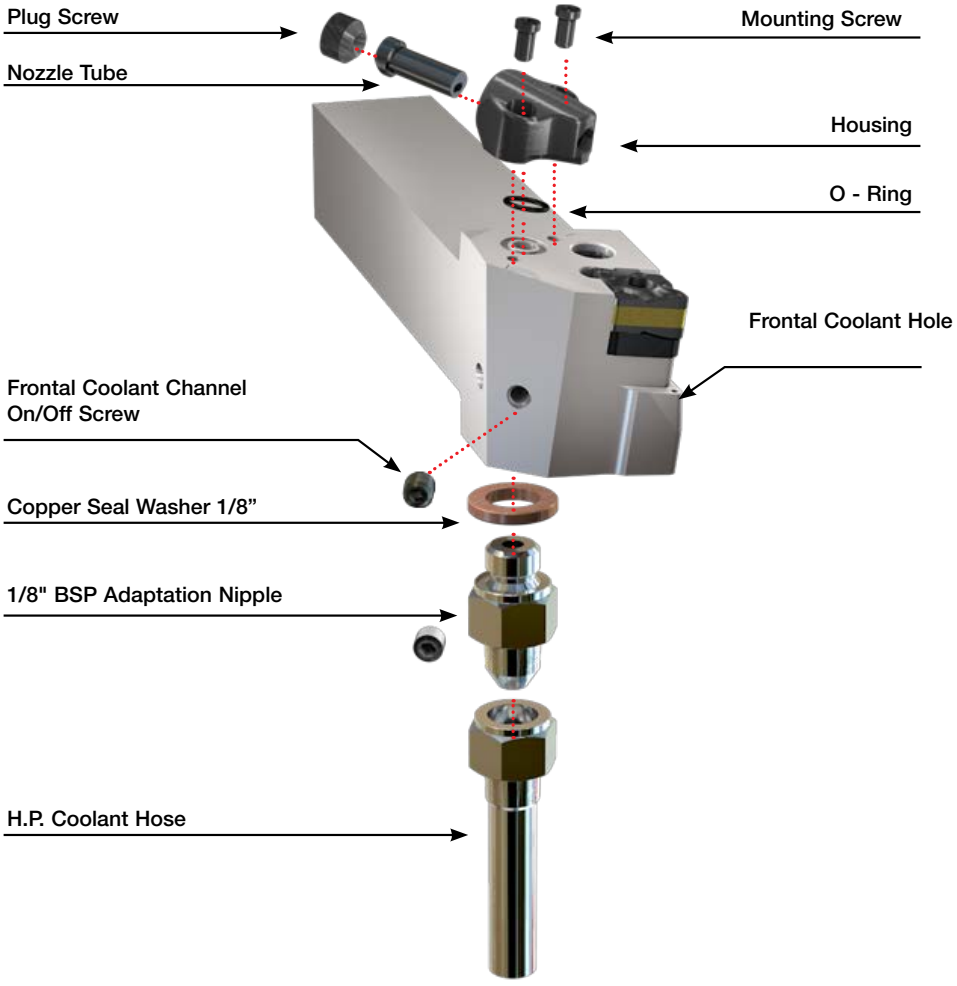
The tools with **LNMX 1506**… inserts feature fixed cooling channels.

For most of the tools that have a square shank, a frontal coolant hole has been added underneath the seat of the insert to enable coolant flow directed to the flank area of the insert.
The frontal coolant jet increases the amount of coolant to the cutting zone. By closing or opening a screw, it acts as a valve that monitors the rate of coolant flow.



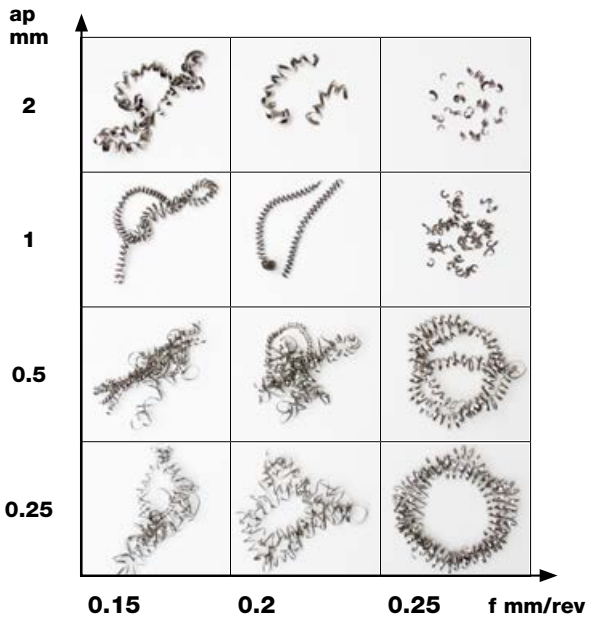
SLAN-15-TANG JHP tools for **LNMX 1506**... inserts, **SVJCR/L-16-JHP** for **VCMT 1604**.. inserts and all high pressure coolant tools with **CAMFIX** shanks do not have the frontal cooling channel option.



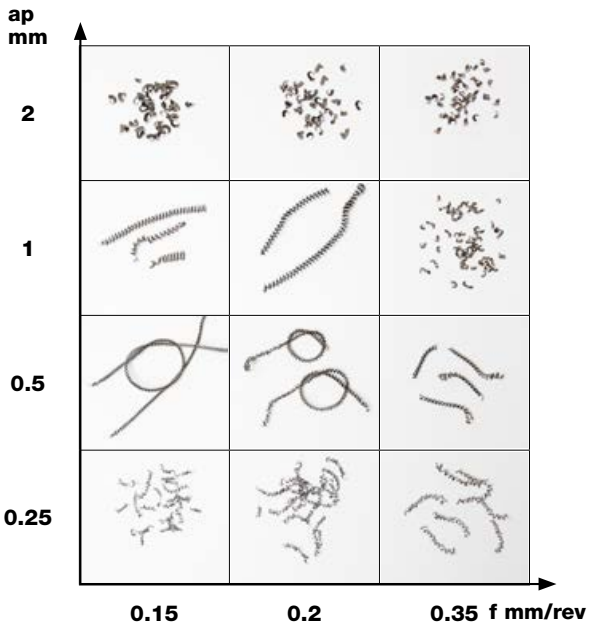


Inconel **718** - Chip Control with
CNMX 120708-M4MW IC807 Vc = **70** m/min

Normal Pressure

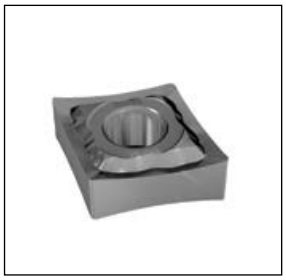


High Pressure 80 bar



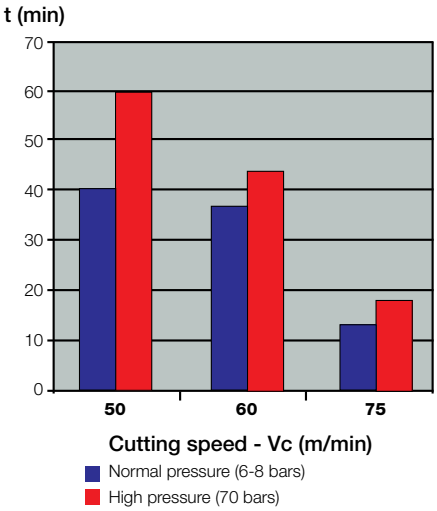
Test Report

Material: Titanium (Ti6Al4V)
Operation: Turning
Tool: **PCLNL 2525M-12-JHP**
Insert: **CNMG 120412-PP IC20**
ap: **2.5** mm
f: **0.3** mm/rev



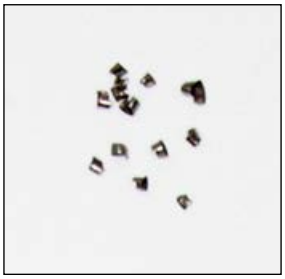


Pressure Influence on Tool Life



Pressure Influence on Chip Control

High Pressure



Normal Pressure



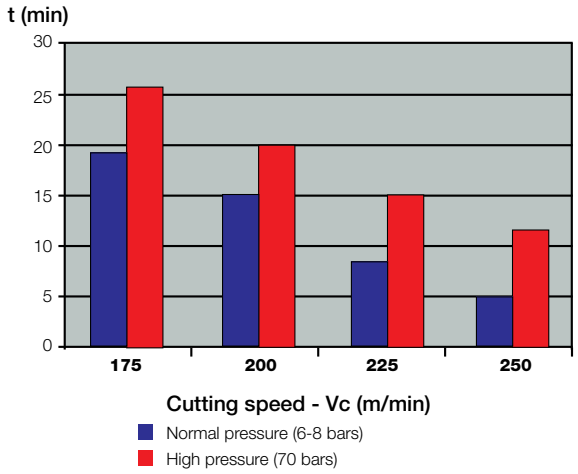
Test Report

Material: Stainless steel **316L**
Operation: Turning
Tool: **PCLNL 2525M-12-JHP**
Insert: **CNMG 120408-TF IC908**
ap: **2.5** mm
f: **0.3** mm/rev





Pressure Influence on Tool Life



Pressure Influence on Chip Control

High Pressure



Normal Pressure

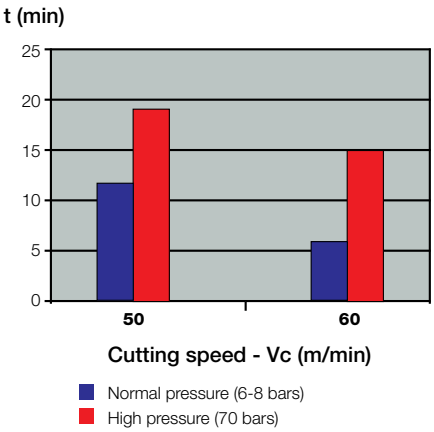


Test Report

Material: Inconel **718 (46 HRC)**
Operation: Turning
Tool: **PCLNL 2525M-12-JHP**
Insert: **CNMG 120408-TF IC808**
ap: **2.5** mm
f: **0.3** mm/rev



Pressure Influence on Tool Life



Pressure Influence on Chip Control

High Pressure



Normal Pressure



Assembly and Safety Guidelines When Using the **JET HP** ISO Turning and Grooving Tools

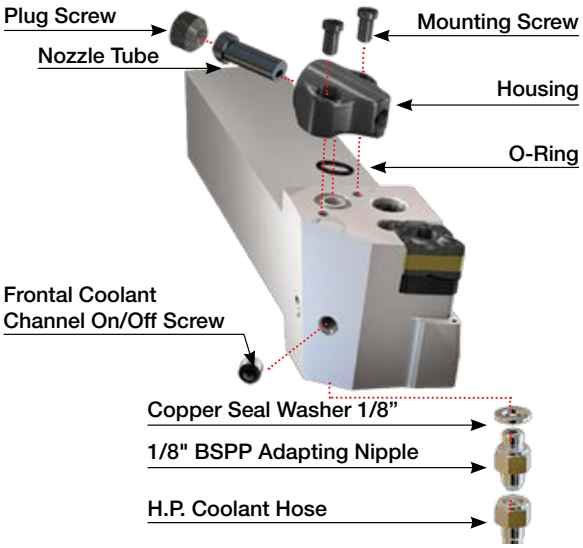
Before use, please ensure that:

- The machine door is in a fully closed position
- The coolant hose is in the correct location and fully tightened with all seals in position
- A blank plug is inserted into the unused coolant hole
- All O-rings and washers are in place
- The coolant hose is tightened securely to the toolholder and tool block to prevent coolant leakage

Important
Always pay attention not to exceed the maximum safe working pressure of **300** bar.

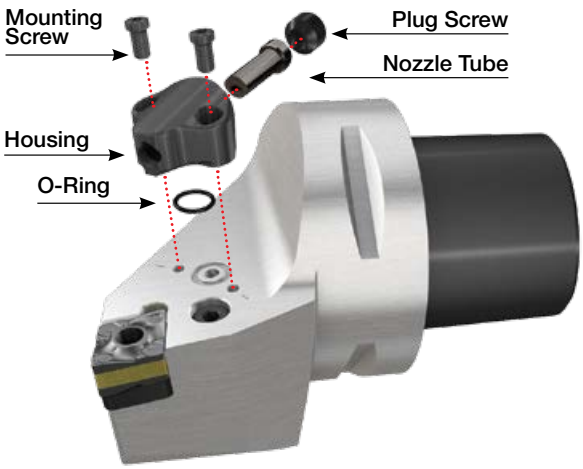


Maximum Pressure 300 Bar



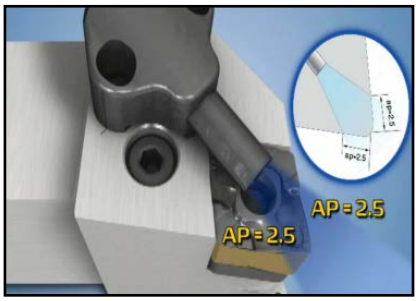


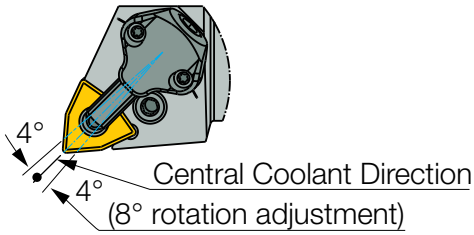
Maximum Pressure 300 Bar



ISOTURN JHP Tools

The unique high pressure coolant system is composed of a static housing and telescopic tube to direct the coolant exactly to the cutting edge of the insert. The telescopic tube embedded in the housing skews right and left, according to the working direction of the tool (see drawing). The advantage of this system is that there is no need to detach the housing of the tool when changing an insert. This reduces setup time.



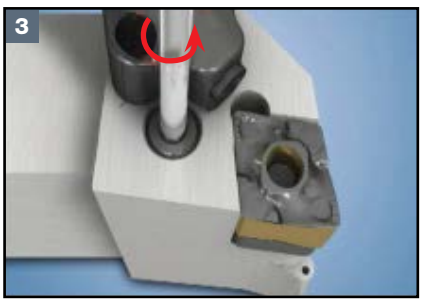


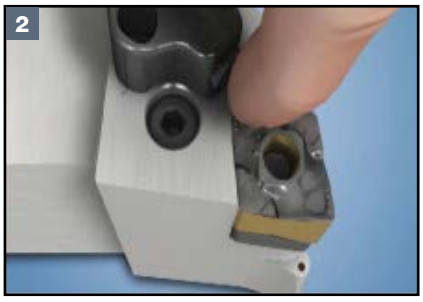
To mount or change an insert, press on the telescopic tube in a backward direction.

After indexing the cutting edge of the insert, starting the coolant will extract the tube automatically to its operating position.

Insert Indexing Procedure



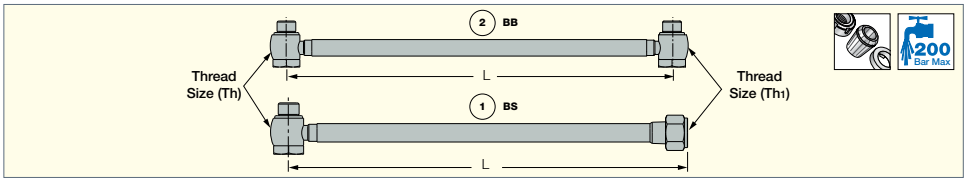






Accessories

JHP HOSE
High Pressure Coolant Hose



Designation	L	Fig.	Th	Th1
JHP HOSE G1/8-7/16-200BS	200.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE 5/16-G1/8-200BS	200.00	1	5/16"-24 UNF	G1/8"-28 BSPP
JHP HOSE 5/16-7/16-200BS	200.00	1	5/16"-24 UNF	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-200BB	200.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP
JHP HOSE G1/8-7/16-250BS	250.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-250BB	250.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP

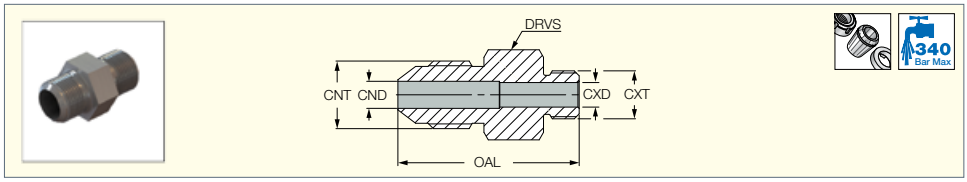
Spare Parts

Designation			
JHP HOSE G1/8-7/16-200BS	JHP HOSE G1/8-7/16-200BS	JHP BANJO BOLT G1/8"	JHP COPPER SEAL 1/8"*
JHP HOSE 5/16-G1/8-200BS		JHP BANJO BOLT 5/16" UNF	JHP COPPER SEAL 5/16"
JHP HOSE 5/16-7/16-200BS	JHP HOSE 5/16-7/16-200BS	JHP BANJO BOLT 5/16" UNF	JHP COPPER SEAL 5/16"
JHP HOSE G1/8-G1/8-200BB	JHP HOSE G1/8-G1/8-200BB	JHP BANJO BOLT G1/8"*	JHP COPPER SEAL 1/8"*
JHP HOSE G1/8-7/16-250BS	JHP HOSE G1/8-7/16-250BS		
JHP HOSE G1/8-G1/8-250BB	JHP HOSE G1/8-G1/8-250BB	JHP BANJO BOLT G1/8"*	JHP COPPER SEAL 1/8"*

* Optional, should be ordered separately

Accessories

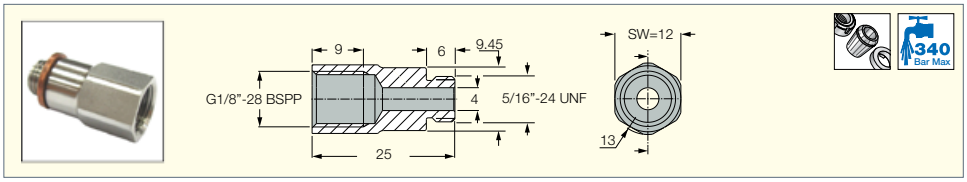
JHP NIPPLE
High Pressure Adaptation Nipple



Designation	OAL	TDZ	CNT	CND	CXD	DRVS	
JHP NIPPLE G1/8"-7/16"UNF	28.80	1/8"-28 BSPP	7/16"-20 UNF	4.00	4.00	14.3	JHP NIPPLE G1/8"-7/16"UNF
JHP NIPPLE 1/8NPT-7/16UNF	31.00	1/8"-27 NPT	7/16"-20 UNF	4.80	4.40	12.7	JHP NIPPLE 1/8NPT-7/16UNF
JHP NIPPLE 1/4NPT-7/16UNF	36.00	1/4"-18 NPT	7/16"-20 UNF	4.40	4.40	14.3	
JHP NIPPL 5/16UNF-7/16UNF	29.50	5/16"-24 UNF	7/16"-20 UNF	4.00	4.40	12.7	JHP COPPER SEAL 5/16"

Accessories

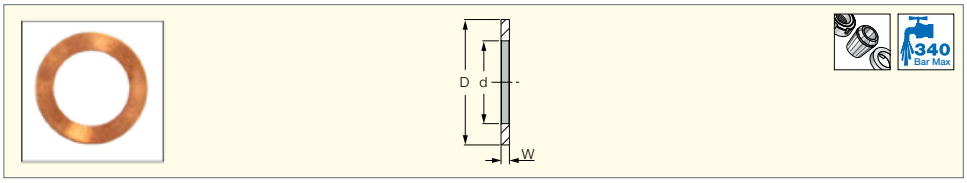
JHP CONNECTOR
High Pressure Connector



Designation	L	
JHP CONECTOR 5/16"-G1/8"	25.00	JHP COPPER SEAL 5/16"-2.5

Accessories

JHP COPPER SEAL
High Pressure Copper Seal



Designation	D	d	W	
JHP COPPER SEAL 5/16"-2.5	9.40	8.00	2.50	JHP COPPER SEAL 1/8"
JHP COPPER SEAL 5/16"	11.00	8.00	1.00	JHP COPPER SEAL 1/8"
JHP COPPER SEAL 1/8"	15.00	10.00	1.00	JHP COPPER SEAL 1/8"

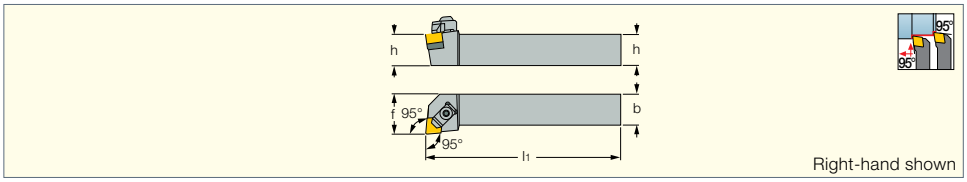
TOOLS FOR CERAMIC INSERTS



ISOTURN

CCLNR/L

Clamp Lock Tools Carrying Ceramic Negative 80° Rhombic Inserts



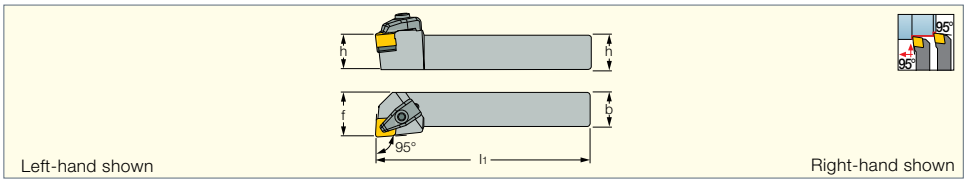
Designation	h	b	l1	f	Ga°	Gr°	Insert	S 48	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10
CCLNR/L 2020K-12CEA	20.0	20.0	125.00	25.0	-4	-6	CNGN 1204	S 48	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10
CCLNR/L 2525M-12CE	25.0	25.0	150.00	32.0	-4	-6	CNGN 1207	S 48	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10
CCLNR/L 2525M-12CEA	25.0	25.0	150.00	32.0	-4	-6	CNGN 1204	S 48	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10

For inserts, see pages: CNGN-Ceramic (178)

ISOTURN

TCLNR/L-CH

95° Lead Angle Tools Carrying Negative CNGX 80° Rhombic Ceramic Dimpled Inserts



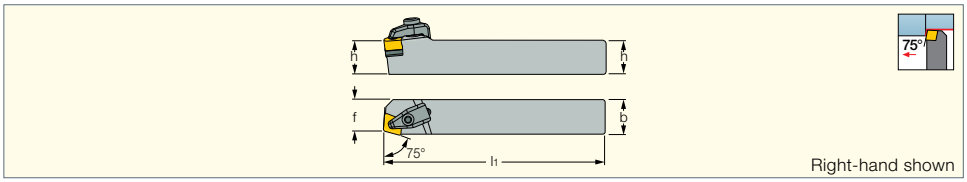
Designation	h	b	l1	f	Insert	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0
TCLNR/L 2525M-12CH	25.0	25.0	150.00	32.0	CNGX 1207...T	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: CNGX-Ceramic (179)

ISOTURN

TCBNR/L-CH

75° Lead Angle Toolholders Using the 100° Corner of CNGX 80° Negative Rhombic Ceramic Dimpled Inserts



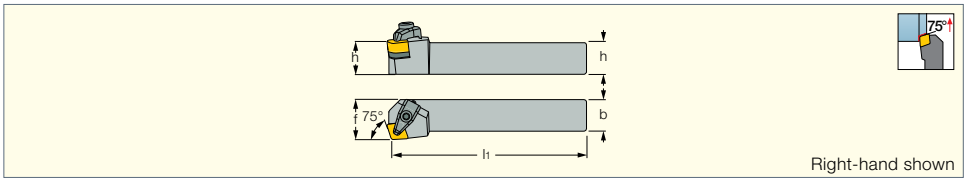
Designation	h	b	l1	f	Insert	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0
TCBNR/L 2525M-12CH	25.0	25.0	150.00	22.0	CNGX 1207...T	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: CNGX-Ceramic (179)

ISOTURN

TCKNR/L-CH

75° Lead Angle Tools Carrying the 100° Corner of CNGX 80° Negative Rhombic Ceramic Dimpled Inserts for Facing



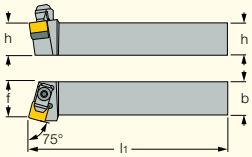
Designation	h	b	l1	f	Insert	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0
TCKNR/L 2525M-12CH	25.0	25.0	150.00	32.0	CNGX 1207...T	S 48	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: CNGX-Ceramic (179)



ISOTURN

CSRNR/L
75° Lead Angle Tools Carrying
Square Ceramic Inserts





Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
CSRNR 2020K-12CE	20.0	20.0	125.00	22.0	-5.2	-4.5	SNGN 1207
CSRNR/L 2525M-12CE	25.0	25.0	150.00	27.0	-5.2	-4.5	SNGN 1207
CSRNR/L 2525M-12CEA	25.0	25.0	150.00	27.0	-5.2	-4.5	SNGN 1204
CSRNR/L 3225P-12CE	32.0	25.0	170.00	27.0	-5.2	-4.5	SNGN 1207

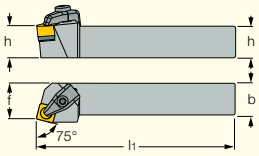
For inserts, see pages: SNGN-Ceramic (179)

Spare Parts

Designation					
CSRNR/L	S 40 (SEAT)	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10

ISOTURN

TSRNR/L-CH
75° Lead Angle Tools Carrying
Square Ceramic Dimpled Inserts





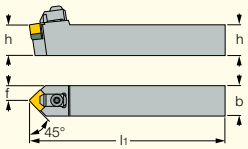
Right-hand shown

Designation	h	b	l_1	f	Insert						
TSRNR/L 2525M-12CH	25.0	25.0	150.00	27.0	SNGX 1207..T	S 40 (SEAT)	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: SNGX-Ceramic (180)

ISOTURN

CSDNN-CE/CEA
45° Lead Angle Tools Carrying
Square Ceramic Inserts





Designation	h	b	l_1	f	G_a°	G_r°	Insert
CSDNN 2020K-12CEA	20.0	20.0	125.00	10.0	-8.5	0	SNGN 1204
CSDNN 2525M-12CEA	25.0	25.0	150.00	12.5	-8.5	0	SNGN 1204
CSDNN 3225P-12CE	32.0	25.0	170.00	12.5	-8.5	0	SNGN 1207

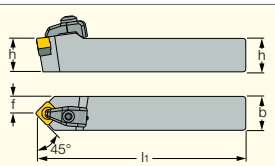
For inserts, see pages: SNGN-Ceramic (179)

Spare Parts

Designation						
CSDNN 2020K-12CEA	S 40 (SEAT)	SR M5X0.8X10	BCL 6 CLAMP	SR M6X1X25ISO7380	HW 4.0	
CSDNN 2525M-12CEA	S 40 (SEAT)	SR M5X0.8X10	BCL 6 CLAMP	SR M6X1X25ISO7380	HW 4.0	HW 3.0

ISOTURN

TSDNN-CH
45° Lead Angle Tools Carrying
Square Ceramic Dimpled Inserts



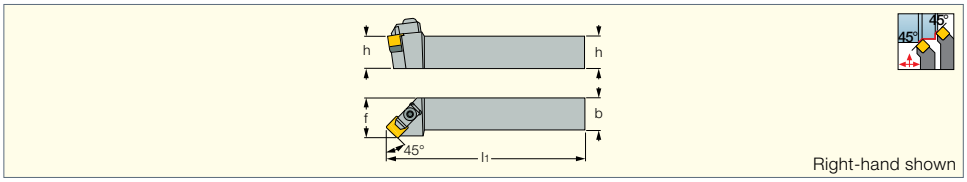


Designation	h	b	l_1	f						
TSDNN 2525M-12CH	25.0	25.0	150.00	12.5	S 40 (SEAT)	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: SNGX-Ceramic (180)

ISOTURN

CSSNR/L-CE
45° Lead Angle Tools Carrying Square Ceramic Inserts for Longitudinal and Face Turning



Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
CSSNR/L 2525M-12CE	25.0	25.0	150.00	26.0	-6	-6	SNGN 1207

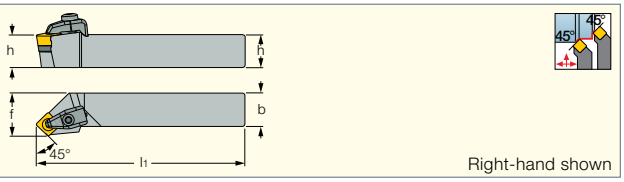
For inserts, see pages: SNGN-Ceramic (179)

Spare Parts

Designation					
CSSNR/L-CE	S 40 (SEAT)	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M5X0.8X10

ISOTURN

TSSNR/L-CH
45° Lead Angle Tools Carrying Square Ceramic Dimpled Inserts for Longitudinal and Face Turning



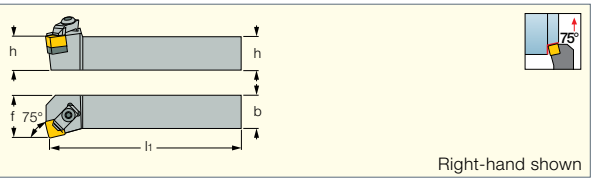
Right-hand shown

Designation	h	b	l_1	f	Insert						
TSSNR/L 2525M-12CH	25.0	25.0	150.00	32.0	SNGX 1207..T	S 40 (SEAT)	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: SNGX-Ceramic (180)

ISOTURN

CSKNR/L
75° Lead Angle Tools Carrying Square Ceramic Inserts for Face Turning



Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
CSKNR/L 2525M-12CEA	25.0	25.0	150.00	32.0	-4	-4	SNGN 1204

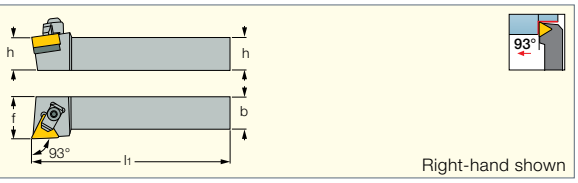
For inserts, see pages: SNGN-Ceramic (179)

Spare Parts

Designation					
CSKNR/L	S 40 (SEAT)	SR M5X0.8X10	BCL 6 CLAMP	SR M6X1X25ISO7380	HW 4.0

ISOTURN

CTJNR/L
93° Lead Angle Tools Carrying Triangular Ceramic Inserts for Longitudinal Turning



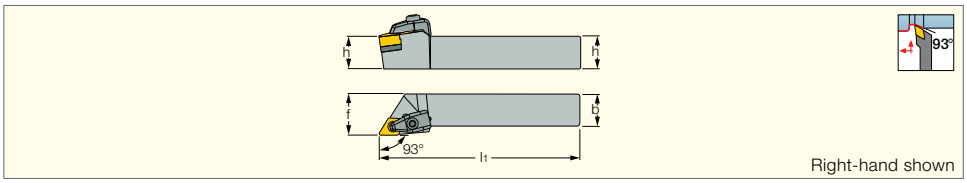
Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert					
CTJNR 2020K-16CEA	20.0	20.0	125.00	25.0	-4	-4	TNGN 1604	S 3	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M4X8 ISO7380 SS
CTJNR/L 2525M-16CEA	25.0	25.0	150.00	32.0	-4	-4	TNGN 1604	S 3	HW 4.0	BCL 6 CLAMP	SR M6X1X25ISO7380	SR M4X8 ISO7380 SS

For inserts, see pages: TNGN-Ceramic (181)

ISOTURN

TDJNR/L-CH
93° Lead Angle Tools Carrying
55° Rhombic Dimpled Ceramic Inserts

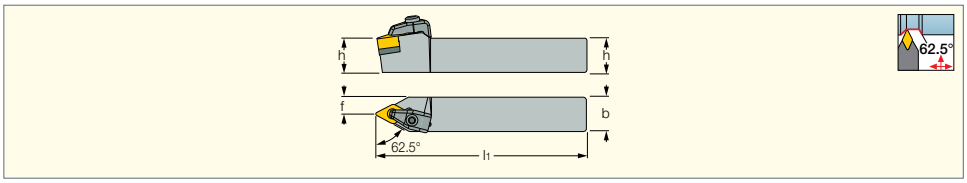


Designation	h	b	l_1	f	Insert					
TDJNR/L 2525M-15CH	25.0	25.0	150.00	32.0	DNGX 1507..T	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: DNGX-Ceramic (181)

ISOTURN

TDNNN-CH
62.5° Lead Angle Tools Carrying
55° Rhombic Dimpled Ceramic Inserts

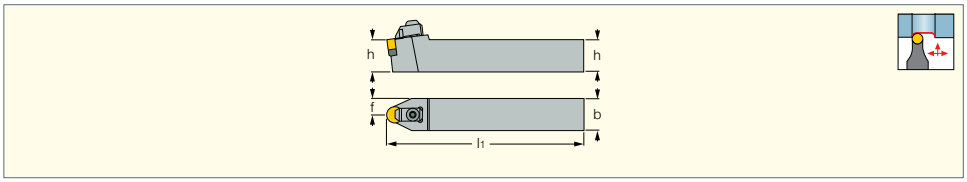


Designation	h	b	l_1	f	Insert					
TDNNN 2525M-15CH	25.0	25.0	150.00	12.5	DNGX 1507..T	SR M5X0.8X10	CCL 4	KSP 5	CSC 4	HW 4.0

For inserts, see pages: DNGX-Ceramic (181)

ISOTURN

CRDNN
Clamp Lock Neutral Tools Carrying
Ceramic Round Negative Inserts



Designation	h	b	l_1	f	G_a°	G_r°	Insert
CRDNN 2525M-12CE	25.0	25.0	150.00	12.5	-8.5	0	RNGN 120700
CRDNN 2525M-12CEA	25.0	25.0	150.00	12.5	-8.5	0	RNGN 120400
CRDNN 3225P-12CE	32.0	25.0	170.00	12.5	-8.5	0	RNGN 120700

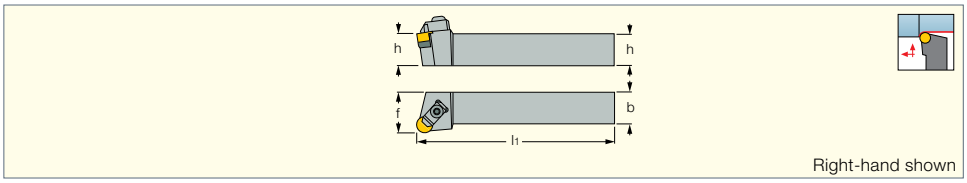
For inserts, see pages: RNGN-Ceramic (183)

Spare Parts

Designation					
CRDNN	S 43	SR M5X0.8X10	BCL 6 CLAMP	SR M6X1X25ISO7380	HW 4.0

ISOTURN

CRGNR/L
Clamp Lock Tools Carrying
Ceramic Round Negative Inserts



Designation	h	b	l_1	f	G_a°	G_r°	Insert
CRGNR 2020K-12CEA	20.0	20.0	125.00	25.0	-6	-6	RNGN 120400
CRGNR/L 2525M-12CE	25.0	25.0	150.00	32.0	-6	-6	RNGN 120700
CRGNR/L 2525M-12CEA	25.0	25.0	150.00	32.0	-6	-6	RNGN 120400
CRGNR/L 3225P-12CE	32.0	25.0	170.00	32.0	-6	-6	RNGN 120700

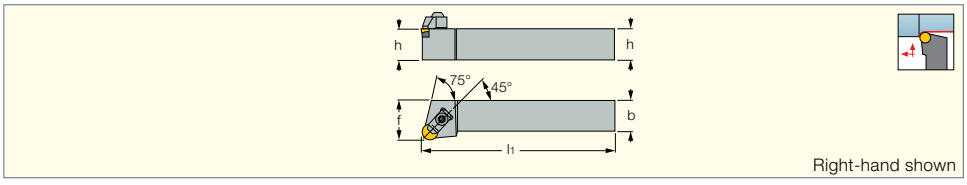
For inserts, see pages: RNGN-Ceramic (183)

Spare Parts

Designation					
CRGNR/L	S 43	SR M5X0.8X10	BCL 6 CLAMP	SR M6X1X25ISO7380	HW 4.0

ISOTURN

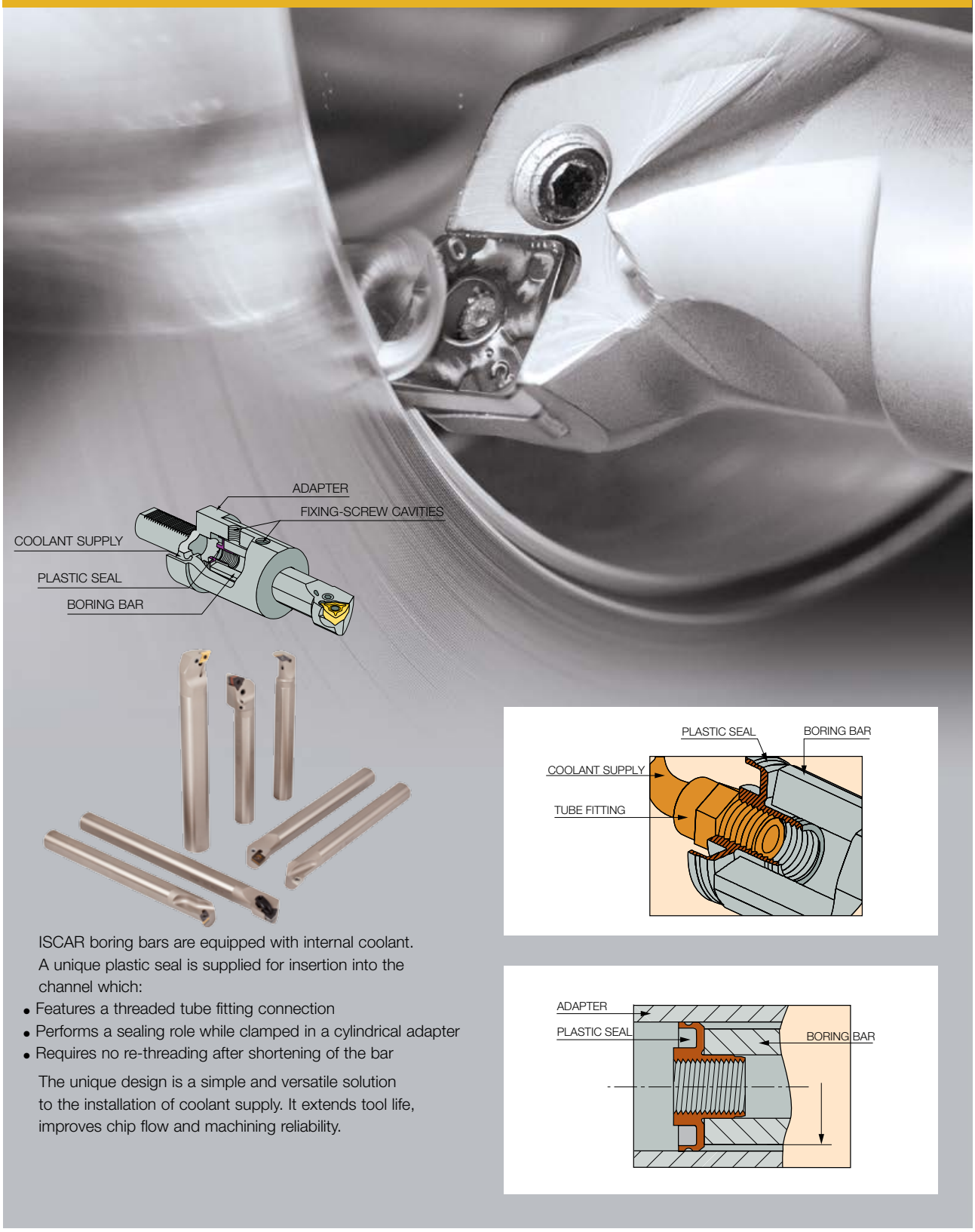
CRGCR/L-CEB
Clamp Lock Tools Carrying
Ceramic Round RCGX Inserts
with a V-Shaped Bottom



Designation	h	b	l_1	f	Insert					
CRGCR/L 2525M-09CEB	25.0	25.0	150.00	32.0	RCGX 090300	CBRS 09	SR M2.5X10 ISO7380	BCL 6-20A	SR M6X1X25ISO7380	HW 4.0

For inserts, see pages: RCGX (CBN) (196)

ISOTURN BORING BARS



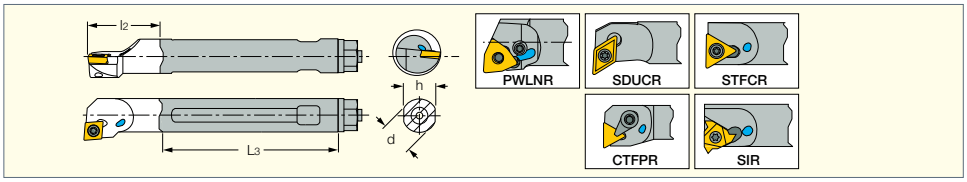
ISCAR boring bars are equipped with internal coolant. A unique plastic seal is supplied for insertion into the channel which:

- Features a threaded tube fitting connection
- Performs a sealing role while clamped in a cylindrical adapter
- Requires no re-threading after shortening of the bar

The unique design is a simple and versatile solution to the installation of coolant supply. It extends tool life, improves chip flow and machining reliability.

E-SHANK

Solid Carbide Shanks for Economical Boring with Various Interchangeable Heads



Designation	d	L_3	l_2	h	Nxcm		
E12 SHANK	12.00	146.00	24.8	11.0	1800	SR 14-19/2 SCREW*	SR 14-19/4*
E16 SHANK	16.00	171.50	37.0	15.0	3000	SR 10400197-2 SCREW*	SR 10400197-3 NUT*

• Screw and nut should be ordered separately.

* Optional, should be ordered separately

For tools, see pages: E-GEHIR / E-GHIR (289) • E-PWLNR/L-HEAD (85) • E-SCLCR/L-HEAD (90) • E-SDUCR/L-HEAD (93) • E-STFCR-HEAD (95) • E-STFPR/L-HEAD (97)

Economical Boring Solutions

This system provides an economical solution for boring in deep holes. One internal coolant carbide shank can be used with 7 different boring heads for internal turning and threading. A damaged pocket can be easily replaced at a cost of about 30% of a new integral carbide boring bar.



Boring Heads

Boring Heads
E16 PWLNR/L-06 HEAD
E12 SCLCR/L-06 HEAD
E16 SCLCR/L-09 HEAD
E12 SDUCR/L-07 HEAD
E16 SDUCR/L-07 HEAD
E12 STFPR/L-11 HEAD
E16 STFPR-11 HEAD
E12 STLPR-11 HEAD
E12 STFCR-11 HEAD
E16 STFCR-11 HEAD
E12 CTFPR-09 HEAD
E12 SIR-11 HEAD
E16 SIR-16 HEAD

Boring Kit E16 Shank

Designation	Pcs.
E16 SHANK	1
E16 SCLCR-09 HEAD	1
E16 SDUCR-07 HEAD	1
E16 STFPR-11 HEAD	1
CCMT 09T304-SM IC907	10
DCMT 070204 IC9025	10
TPMT 110204 IC9025	10
TORX T-7/5 FLAG	1
TORX T-15/5 FLAG	1
SR 10400197-2 SCREW	1
SR 10400197-3 NUT	1

Boring Kit E12 Shank
Boring Kit E12-LH Shank

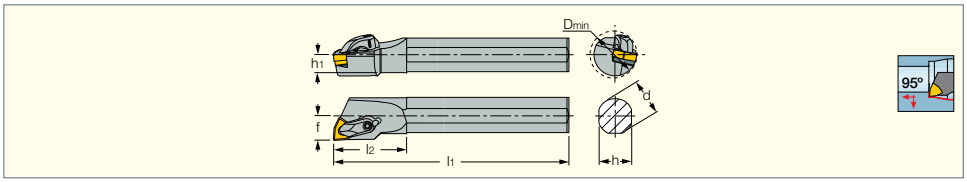
Designation	Pcs.
E12 SHANK	1
E12 SCLCR/L-06 HEAD(1)	1
E12 SDUCR/L-07 HEAD(1)	1
E12 STFPR/L-11 HEAD(1)	1
CCMT 060204-14 IC9025	10
DCMT 070204 IC9025	10
TPMT 110204 IC9025	10
TORX T-7/5 FLAG	1
SR 14-19/2 SCREW	1
SR 14-19/4 NUT	1

(1) Left-hand head for Boring Kit E12-LH shank.

ISOTURN

S-DWLNR/L

R-Clamp Boring Bars Carrying Negative Trigon Inserts



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert
S25T DWLNR/L-08	25.00	300.00	50.0	23.0	12.3	17.0	32.00	-6	-11	WNMG 0804
S32U DWLNR/L-08	32.00	350.00	55.0	29.0	15.8	22.0	40.00	-6	-10	WNMG 0804
S40V DWLNR/L-08	40.00	400.00	55.0	36.0	19.8	27.0	60.00	-6	-10	WNMG 0804

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

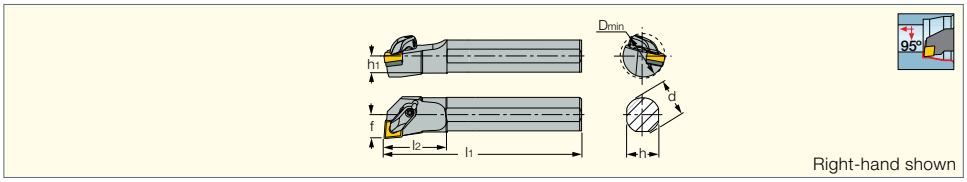
Spare Parts

Designation					
S-DWLNR/L	TWN 423	SP 4	LCGR-4	SR 10400270-25.5	T-15/5

ISOTURN

S-DCLNR/L

R-Clamp Boring Bars Carrying
Negative 80° Negative Diamond Inserts



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Insert
S25R DCLNR-12	25.00	200.00	45.0	23.0	12.3	17.0	32.00	-6	-10.5	CNMG 1204..
S32T DCLNR/L-12	32.00	300.00	45.0	28.0	15.8	22.0	40.00	-6	-10	CNMG 1204..
S40U DCLNR/L-12	40.00	350.00	55.0	36.0	19.8	27.0	48.00	-6	-9	CNMG 1204..

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

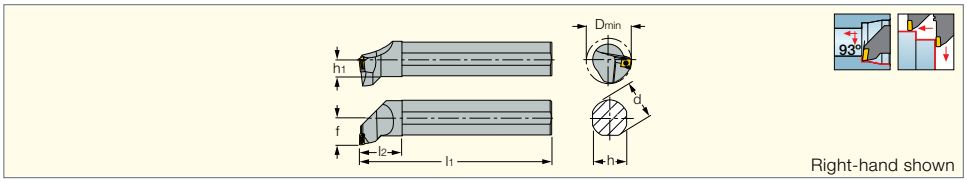
Spare Parts

Designation					
S-DCLNR/L	TCN 423	SP 4	LCGR-4	SR 10400270-25.5	T-15/5

HELITURN TANGENTIAL LINE

S-SLANR/L-TANG

Boring Bars Carrying LNMX
Tangentially Screw Clamped
Inserts with 4 Cutting Edges for
High Metal Removal Rates



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Insert
S25T SLANR/L-11 TANG	25.00	300.00	40.0	23.0	12.5	17.0	53.00	-6	-15	LNMX 1104..
S32U SLANR/L-11 TANG	32.00	350.00	50.0	30.0	16.0	22.0	53.00	-6	-15	LNMX 1104..
S40V SLANR/L-11 TANG	40.00	400.00	60.0	37.0	20.0	27.0	53.00	-6	-15	LNMX 1104..
S50U SLANR/L-15 TANG	50.00	350.00	60.0	47.0	25.0	37.0	85.00	-8	-10	LNMX 1506..

• **Right-hand inserts for left-hand bars. Left-hand inserts for right-hand bars.** • **ap max for facing:** LNMX 11-2.8 mm, LNMX 15-3.8 mm.
For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

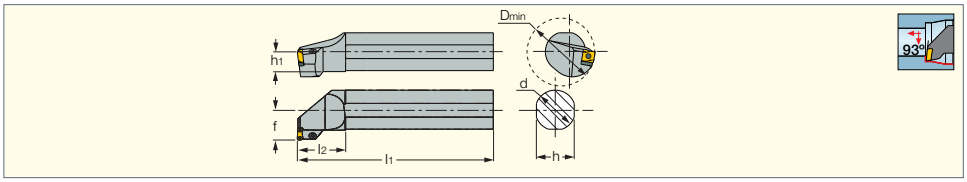
Spare Parts

Designation							
S25T SLANL-11 TANG	TLN 11R-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S25T SLANR-11 TANG	TLN 11L-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S32U SLANL-11 TANG	TLN 11R-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S32U SLANR-11 TANG	TLN 11L-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S40V SLANL-11 TANG	TLN 11R-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S40V SLANR-11 TANG	TLN 11L-HTI	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7		SW6-SD
S50U SLANL-15 TANG	TLN 15R-HTI	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	
S50U SLANR-15 TANG	TLN 15L-HTI	SR RS4	T-6/5	SR 34-535-SN	BLD T15/S7	SW6-T-SH	

HELITURN TANGENTIAL LINE

S-PLANR-TANG

Boring Bars Carrying LNMX ...
Tangentially Clamped Inserts
with 4 Cutting Edges for
High Production Rates



Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Insert
S50U PLANR-15 TANG	50.00	350.00	60.0	47.0	25.0	37.0	85.00	-6	-10	LNMX 1506...

• Right-hand inserts for left-hand bars. Left-hand inserts for right-hand bars. • ap max for facing 3.8 mm.
For inserts, see pages: LNMX-HM (152) • LNMX-HT (152) • LNMX-WG (152)

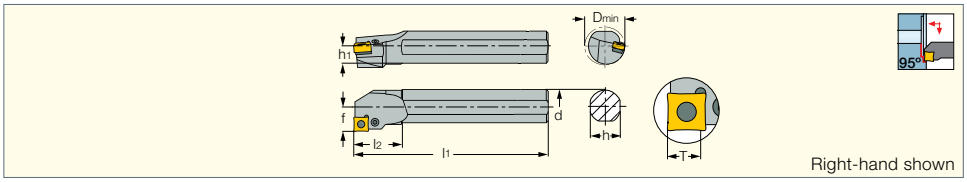
Spare Parts

Designation						
S50U PLANR-15 TANG	TLN 15L-HTI	SR RS4	T-6/5	LR T15	SR TL-15	HW 3.5

ISOTURN

S-PQFNR/L

Lever Lock Boring Bars Carrying Negative Square Inserts with 80° Corners for Internal Facing



Designation	d	l_1	l_2	h	h_1	f	T	D min	G_a°	G_r°	Insert
S20Q PQFNR/L-09	20.00	180.00	40.0	18.0	9.0	13.0	7.5	28.00	-6	-12	QNMG 0904...
S25Q PQFNL-09	25.00	180.00	40.0	23.0	11.5	17.0	7.5	32.00	-6	-10	QNMG 0904...
S32R PQFNR-09	32.00	200.00	45.0	29.0	14.5	22.0	7.5	40.00	-6	-10	QNMG 0904...
S25R PQFNL-12	25.00	200.00	40.0	23.0	11.5	17.0	9.0	32.00	-6	-12	QNMG 1204...
S32R PQFNR-12	32.00	200.00	45.0	29.0	14.5	22.0	9.0	40.00	-6	-12	QNMG 1204...
S40S PQFNL-12	40.00	250.00	50.0	36.0	18.0	27.0	9.0	50.00	-6	-10	QNMG 1204...

For inserts, see pages: QNMG-GN (110) • QNMG-NF (109) • QNMG-PP (109) • QNMG-TF (109)

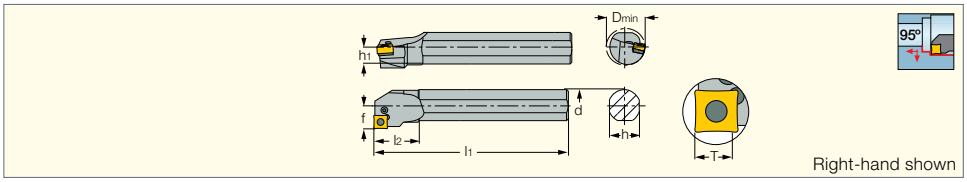
Spare Parts

Designation						
S20Q PQFNR/L-09				LR 3S	SR 117-2016	HW 2.0
S25Q PQFNL-09				LR 3S	SR 117-2016	HW 2.0
S32R PQFNR-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
S25R PQFNL-12				LR 4M	SR 117-2011	HW 2.5/5
S32R PQFNR-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
S40S PQFNL-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0

ISOTURN

S-PQLNR/L

Lever Lock Boring Bars Carrying Negative Square Inserts with 80° Corners



Designation	d	l_1	l_2	h	h_1	f	T	D min	G_a°	G_r°		Insert
S20S PQLNR/L-09	20.00	250.00	40.0	18.0	9.0	13.0	6.5	25.00	-6	-12	N	QNMG 0904
S25T PQLNR-09	25.00	300.00	40.0	23.0	11.5	17.0	6.5	32.00	-6	-10	N	QNMG 0904
S32U PQLNR-09	32.00	350.00	45.0	29.0	14.5	22.0	6.5	40.00	-6	-10	N	QNMG 0904
S25T PQLNR/L-12	25.00	300.00	40.0	23.0	11.5	17.0	8.5	32.00	-6	-12	N	QNMG 1204
S32U PQLNR/L-12	32.00	350.00	45.0	29.0	14.5	22.0	8.5	40.00	-6	-12	N	QNMG 1204
S40V PQLNR/L-12	40.00	400.00	50.0	36.0	18.0	27.0	8.5	50.00	-6	-10	N	QNMG 1204

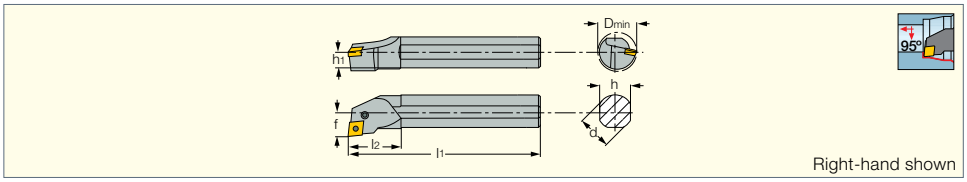
For inserts, see pages: QNMG-GN (110) • QNMG-NF (109) • QNMG-PP (109) • QNMG-TF (109)

Spare Parts

Designation						
S20S PQLNR/L-09				LR 3S	SR 117-2016	HW 2.0
S25T PQLNR-09				LR 3S	SR 117-2016	HW 2.0
S32U PQLNR-09	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5
S25T PQLNR/L-12				LR 4M	SR 117-2011	HW 2.5/5
S32U PQLNR/L-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0
S40V PQLNR/L-12	TSN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0

ISOTURN

A/S-PCLNR/L
Lever Lock Boring Bars Carrying
Negative 80° Rhombic Inserts



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°		D min	Insert
A25R PCLNR/L-12	25.00	200.00	40.0	23.0	11.5	17.0	-6	-12	Y	32.00	CNMG 1204..
S25S PCLNR/L-12	25.00	250.00	48.0	23.0	11.5	17.0	-6	-12	N	32.00	CNMG 1204..
A32T PCLNR/L-12	32.00	300.00	50.0	30.0	14.5	22.0	-6	-12	Y	40.00	CNMG 1204..
S32T PCLNR/L-12	32.00	300.00	51.0	30.0	14.5	22.0	-6	-12	N	40.00	CNMG 1204..
S40U PCLNR/L-12	40.00	350.00	51.0	36.0	18.0	27.0	-6	-12	N	49.00	CNMG 1204..
S50W PCLNR-19	50.00	450.00	70.0	47.0	23.5	35.0	0	-8.5	N	63.00	CNMG 1906..

For inserts, see pages: CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMS-12 (176) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

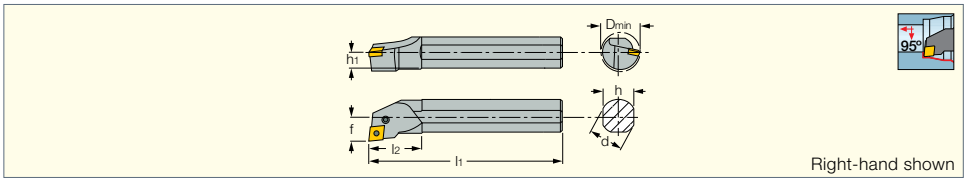
Spare Parts

Designation								
A25R PCLNR/L-12				LR 4M	SR 117-2011	HW 2.5/5	HW 2.0	PL 25
S25S PCLNL-12				LR 4M	SR 117-2011	HW 2.5		
S25S PCLNR-12				LR 4M	SR 117-2011	HW 2.5/5		
A32T PCLNR/L-12	TCN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 2.0	HW 3.0	PL 32
S32T PCLNR/L-12	TCN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0		
S40U PCLNR/L-12	TCN 423	SP 4	PN 3-4	LR 4	SR 117-2010	HW 3.0		
S50W PCLNR-19	TCN 63	SP 66		LR 6	SR 10402352	HW 4.0		



HELITURN LD

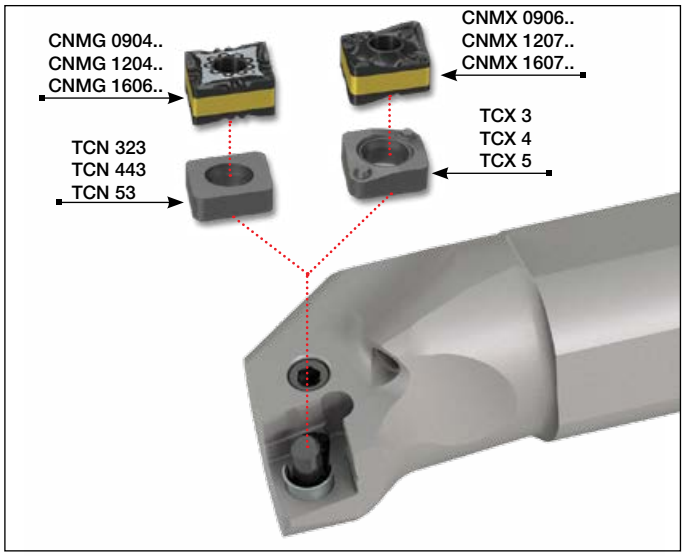
A/S-PCLNR/L-X/G
Lever Lock Boring Bars Carrying
Negative CNMX/CNMG 80°
Rhombic Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min		Insert
A16M PCLNR/L-09G (1)	16.00	150.00	30.0	15.0	7.5	11.0	-12	-16	21.00	Y	CNMG 0904..
A20Q PCLNR/L-09G (1)	20.00	180.00	30.0	18.0	9.0	13.0	-6	-15	25.00	Y	CNMG 0904..
A25R PCLNR/L-09X (2)	25.00	200.00	35.0	23.0	11.5	17.0	-6	-15	32.00	Y	CNMX 0906, CNMG 0904
A32S PCLNR/L-09X (2)	32.00	250.00	40.0	29.0	14.5	22.0	-6	-13	40.00	Y	CNMX 0906, CNMG 0904
A25R PCLNR/L-12X (3)	25.00	200.00	51.0	23.0	11.5	21.0	-7	-14	50.00	Y	CNMX 1207, CNMG 1204
A32S PCLNR/L-12X (3)	32.00	250.00	51.0	29.0	14.5	21.0	-6	-13	54.00	Y	CNMX 1207, CNMG 1204
S50W PCLNR-16X (4)	50.00	450.00	70.0	47.0	23.5	35.0	0	-8.5	63.00	N	CNMX 1607, CNMG 1606

(1) For CNMG 0904.. inserts only
(2) Supplied with TCX 3 seat for CNMX 0906.. inserts and TCN 323 seat for CNMG 0904.. inserts.
(3) Supplied with TCX 4 seat for CNMX 1207.. inserts and TCN 443 seat for CNMG 1204.. inserts.
(4) Supplied with TCN 53 seat for CNMG 1606.. inserts. Use TCX 5 seat (optional) for CNMX 1607.. inserts.

For inserts, see pages: CNMX-M3/4MW (128) • CNMX-M3/4PW (128) • CNMG-F3P (119) • CNMG-M3P (120) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG-R3M (123) • CNMM-R3P (120) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGA-Ceramic (179) • CNGG-M4HF/M4HM (CBN) (188) • CNMA (125) • CNMA (PCD) (184) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMG-Ceramic (178) • CNMG-GN (126) • CNMG-MR (127) • CNMG-NF (124) • CNMG-NR (127) • CNMG-VL (123) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMG/CNGG-PP (125) • CNMG/CNGG-SF (123) • CNMG/CNGG-TF (126) • CNMS-12 (176)



Spare Parts

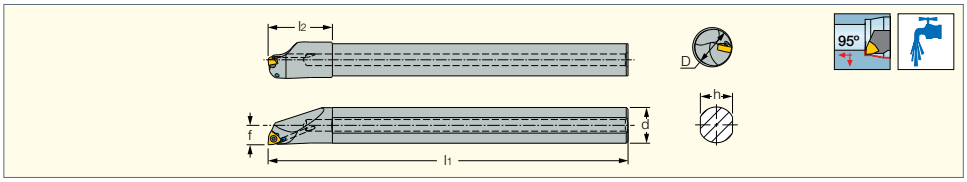
Designation								
A16M PCLNR/L-09G					LR 3S	SR 117-2009	HW 2.0	PL 16
A20Q PCLNR/L-09G					LR 3S	SR 117-2009	HW 2.0	PL 20
A25R PCLNR/L-09X	TCX 3	TCN 323	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5	PL 25
A32S PCLNR/L-09X	TCX 3	TCN 323	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5	PL 32
A25R PCLNR/L-12X	TCX 4	TCN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	HW 3.0	PL 25
A32S PCLNR/L-12X	TCX 4	TCN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	HW 3.0	PL 32
S50W PCLNR-16X	TCX 5*	TCN 53	SP 5		LR 5	SR LCS 5	HW 3.0	

* Optional, should be ordered separately

ISOTURN

A/E-SWLNR/L-04

Boring Bars Carrying WNGP 0403.. Double-Sided Trigon Inserts for Small Diameters



Designation	d	l_1	l_2	h	f	G_a°	G_r°	D min	Insert		
A10K SWLNR/L-04	10.00	125.00	20.0	9.0	6.0	-10	-16	12.00	WNGP 04	SR 34-514	T-7F
A12M SWLNR/L-04	12.00	150.00	24.0	11.0	7.0	-10	-14	14.00	WNGP 04	SR 34-514	T-7F
A16Q SWLNR/L-04	16.00	180.00	32.0	15.0	9.0	-10	-11	18.00	WNGP 04	SR 34-514	T-7F
A20R SWLNR/L-04	20.00	200.00	36.0	18.0	11.0	-10	-10	22.00	WNGP 04	SR 34-514	T-7F
E10M SWLNR/L-04	10.00	125.00	20.0	9.0	6.0	-10	-16	12.00	WNGP 04	SR 34-514	T-7F
E12Q SWLNR/L-04	12.00	150.00	24.0	11.0	7.0	-10	-14	14.00	WNGP 04	SR 34-514	T-7F
E16R SWLNR/L-04	16.00	180.00	32.0	15.0	9.0	-10	-11	18.00	WNGP 04	SR 34-514	T-7F
E20S SWLNR/L-04	20.00	200.00	36.0	18.0	11.0	-10	-10	22.00	WNGP 04	SR 34-514	T-7F

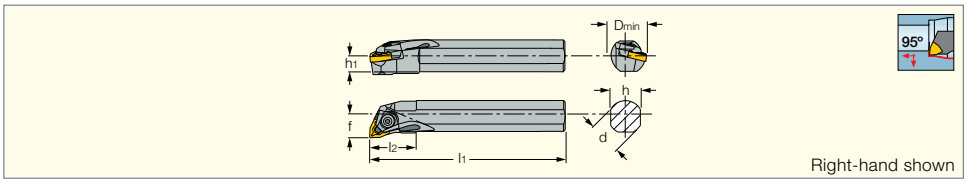
• Use left-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

For inserts, see pages: WNGP-F2M (112) • WNGP-F2P (110)

ISOTURN

A/S-MWLNR/L-W

Top Wedge Lock Boring Bars Carrying Double-Sided Trigon Inserts



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°		Insert
A20Q MWLNR/L-06W	20.00	180.00	28.0	18.0	9.2	13.0	25.00	-6	10	Y	WNMG 06T3
A20 MWLNR/L-06W-AD [1]	20.00	100.00	28.0	18.0	9.0	13.0	25.00	-6	14	Y	WNMG 06T3
A25R MWLNR/L-06W	25.00	200.00	35.0	23.0	11.7	17.0	32.00	-6	14	Y	WNMG 06T3
A32S MWLNR/L-06W	32.00	250.00	40.0	29.0	14.7	19.0	36.00	-6	10	Y	WNMG 06T3
S20S MWLNR/L-06W	20.00	250.00	28.0	18.0	9.2	13.0	25.00	-6	10	N	WNMG 06T3
S25T MWLNR/L-06W	25.00	300.00	35.0	23.0	11.7	17.0	32.00	-6	14	N	WNMG 06T3
S32U MWLNR/L-06W	32.00	350.00	40.0	29.0	14.7	19.0	36.00	-6	10	N	WNMG 06T3
A25R MWLNR/L-08W	25.00	200.00	40.0	23.0	11.7	17.0	32.00	-6	12	Y	WNMG 0804
A25 MWLNR/L-08W-AD [1]	25.00	120.00	35.0	23.0	11.7	17.0	32.00	-6	12	Y	WNMG 0804
A32S MWLNR/L-08W	32.00	250.00	45.0	29.0	14.7	22.0	40.00	-6	12	Y	WNMG 0804
A40T MWLNR/L-08W	40.00	300.00	50.0	36.0	18.2	27.0	50.00	-6	10	Y	WNMG 0804
S25T MWLNR/L-08W	25.00	300.00	35.0	23.0	11.7	17.0	32.00	-6	12	N	WNMG 0804
S32U MWLNR/L-08W	32.00	350.00	45.0	28.0	14.7	22.0	40.00	-6	12	N	WNMG 0804
S40V MWLNR/L-08W	40.00	400.00	50.0	36.0	18.2	27.0	50.00	-6	10	N	WNMG 0804
S50V MWLNR/L-13W	50.00	400.00	63.0	47.0	23.5	35.0	63.00	-6	11	N	WNMG 1306

[1] When using a double-ended insert, grooving depth is limited by the insert.

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMM-NM (117) • WNMG-TF (116) • WNMG-GN (117) • WNMG-NR (117) • WNMG-PP (116) • WNMG-VL (114) • WNMG-TNM (118) • WNMG-SF (113) • WNMG-NF (114) • WNMG-WF (115) • WNMA/WNMA-WG (118) • WNMG-WG (115) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

Spare Parts

Designation										
A20Q MWLNR/L-06W			ZNW 3WI	LC 250 SET 1					HW 2.5	PL 20
A20 MWLNR/L-06W-AD			ZNW 3WI	LC 250 SET 1					HW 2.5	PL 20
A25R MWLNR/L-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	LC 250 SET 1					HW 2.5	PL 25
A32S MWLNR/L-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	LC 250 SET 1					HW 2.5	PL 32
S20S MWLNR/L-06W			ZNW 3WI	LC 250 SET 1					HW 2.5	
S25T MWLNR/L-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	LC 250 SET 1					HW 2.5	
S32U MWLNR/L-06W	IWSN 322W	IWSN 3-2W(b)*	ZNW 3W	LC 250 SET 1					HW 2.5	
A25R MWLNR/L-08W	TWN 423		ZNW-4WI	LC 252 SET 2					HW 3.0	PL 25
A25 MWLNR/L-08W-AD	TWN 423		ZNW-4WI	LC 252 SET 2					HW 3.0	PL 25
A32S MWLNR/L-08W	TWN 423		ZNW-4WI	LC 252 SET 1					HW 3.0	PL 32
A40T MWLNR/L-08W	IWSN 433	IWSN 433M(b)*	ZNW 4W	LC 252 SET 1					HW 3.0	PL 40
S25T MWLNR/L-08W	TWN 423		ZNW-4WI	LC 252 SET 2					HW 3.0	
S32U MWLNR/L-08W	TWN 423		ZNW-4WI	LC 252 SET 1					HW 3.0	
S40V MWLNR/L-08W	IWSN 433	IWSN 433M(b)*	ZNW 4W	LC 252 SET 1					HW 3.0	
S50V MWLNL-13W	IWSN 635		ZNW 6W		LC 253 (MIM)	SPR 17-362	WA M8	SR 17-362	HW 4P	
S50V MWLNR-13W	IWSN 635		ZNW 6W		LC 253 (MIM)	SPR 17-362	WA M8	SR 17-362	HW 4P	

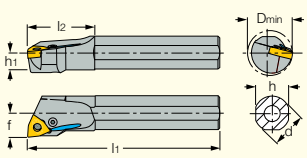
* Optional, should be ordered separately

[b] Use IWSN 3-2W optional seat for WNMG 0604.. inserts

[b] Use IWSN 3-2W optional seat for WNMG 0604.. inserts

ISOTURN

A/S-PWLNR/L
Lever Lock Boring Bars Carrying Double-Sided Trigon Inserts



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°		Insert
A16M PWLNR/L-06	16.00	150.00	27.0	15.0	8.0	11.0	20.00	-6	-14	Y	WNMG 06T3
A20Q PWLNR/L-06	20.00	180.00	36.0	18.0	9.2	13.0	25.00	-6	-14	Y	WNMG 06T3
A25R PWLNR/L-06	25.00	200.00	35.0	23.0	11.7	17.0	32.00	-6	-14	Y	WNMG 06T3
S16Q PWLNR/L-06	16.00	180.00	27.0	15.0	8.0	11.0	20.00	-6	-14	N	WNMG 06T3
S20R PWLNR/L-06	20.00	200.00	36.0	18.0	9.0	13.0	27.00	-6	-14	N	WNMG 06T3
S25S PWLNR/L-06	25.00	250.00	40.4	23.0	11.5	17.0	32.00	-6	-14	N	WNMG 06T3
S32T PWLNR-06	32.00	300.00	50.0	29.0	14.5	19.0	39.00	-6	-12	N	WNMG 06T3
A25R PWLNR/L-08	25.00	200.00	35.0	23.0	11.7	17.0	32.00	-6	-12	Y	WNMG 0804
A32S PWLNR/L-08	32.00	250.00	50.0	28.0	14.7	22.0	39.00	-6	-12	Y	WNMG 0804
S25S PWLNR/L-08	25.00	250.00	47.0	23.0	11.5	17.0	32.00	-5	-12.5	N	WNMG 0804
S32T PWLNR/L-08	32.00	300.00	50.0	29.0	14.5	22.0	39.00	-6	-12	N	WNMG 0804
S40U PWLNR/L-08	40.00	350.00	59.0	36.0	18.0	27.0	49.00	-6	10	N	WNMG 0804

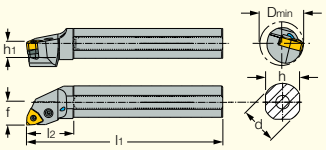
For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187)

Spare Parts

Designation							
A16M PWLNR/L-06				LR 3S	SR 117-2009	PL 16	HW 2.0/5
A20Q PWLNR/L-06	TWN 322	SP 3	PN 3-4	LR 3W	SR 117-2014	PL 20	HW 2.5/5
A25R PWLNR/L-06	TWN 322	SP 3	PN 3-4	LR 3	SR 117-2014	PL 25	HW 2.5/5
S16Q PWLNR/L-06				LR 3S	SR 117-2009		HW 2.0/5
S20R PWLNR/L-06	TWN 322	SP 3	PN 3-4	LR 3W	SR 117-2014		HW 2.5/5
S25S PWLNR/L-06	TWN 322	SP 3	PN 3-4	LR 3	SR 117-2014		HW 2.5/5
S32T PWLNR-06	TWN 322	SP 3	PN 3-4	LR 3	SR 117-2014		HW 2.5/5
A25R PWLNR/L-08				LR 4M	SR 117-2011	PL 25	HW 2.5/5
A32S PWLNR/L-08	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010	PL 32	HW 3.0
S25S PWLNR/L-08				LR 4M	SR 117-2011		HW 2.5/5
S32T PWLNR/L-08	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010		HW 3.0
S40U PWLNR/L-08	TWN 423	SP 4	PN 3-4	LR 4	SR 117-2010		HW 3.0

HELITURN LD

A-PWLNR/L-X/G
Lever Lock Boring Bars with Coolant Holes Carrying HELITURN LD WNMX or WNMG Trigon Inserts



Designation	d	h	h1	l1	l2	f	D min	Ga°	Gr°	Insert
A20Q PWLNL-06G (1)	20.00	18.0	9.2	180.00	35.0	13.0	25.00	-6	-14	WNMG 0604
A25R PWLNR/L-06X (2)	25.00	23.0	11.5	200.00	35.0	17.0	32.00	-6	-14	WNMX 0606, WNMG 0604
A32S PWLNR/L-06X (2)	32.00	29.0	14.5	250.00	48.0	22.0	40.00	-6	-12	WNMX 0606, WNMG 0604
A25R PWLNR-08X (3)	25.00	23.0	11.5	200.00	51.0	21.0	50.00	-7	-14	WNMX 0807, WNMG 0804
A32S PWLNR/L-08X (3)	32.00	29.0	14.5	250.00	51.0	21.0	54.00	-6	-13	WNMX 0807, WNMG 0804

(1) For WNMG 0604.. inserts only
(2) Supplied with TWX 3 seat for WNMX 0606.. inserts and TWN 3 seat for WNMG 0604.. inserts.
(3) Supplied with TWX 4 seat for WNMX 0807.. inserts and TWN 443 seat for WNMG 0804.. inserts.

For inserts, see pages: WNMX-M3/4MW (119) • WNMX-M3/4PW (119) • WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-TF (116) • WNMG-GN (117) • WNMG-PP (116) • WNMG-NF (114) • WNMG-WF (115) • WNMA/WNMA-WG (118) • WNMG-WG (115)

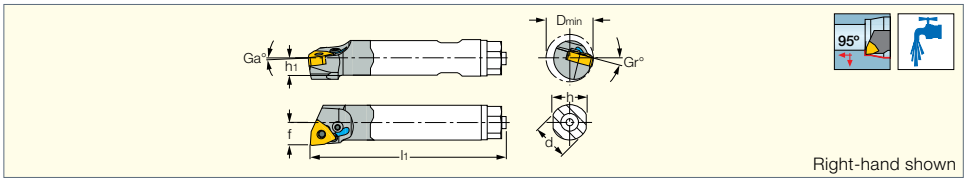
Spare Parts

Designation									
A20Q PWLNL-06G					LR 3S	SR 117-2009	PL 20	HW 2.0	
A25R PWLNL-06X	TWX 3	TWN 3	SP 3	PN 3-4	LR 3W	SR 117-2014	PL 25	HW 2.5	
A25R PWLNR-06X	TWX 3	TWN 3	SP 3	PN 3-4	LR 3W	SR 117-2014	PL 25	HW 2.5/5	HW 2.5
A25R PWLNR-08X	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	PL 25	HW 3.0	
A32S PWLNR/L-08X	TWX 4	TWN 443	SP 4	PN 3-4L	LR 4DH	SR 117-2010	PL 32	HW 3.0	

ISOTURN

E-PWLNR/L-HEAD

Lever Lock Interchangeable Boring Heads Clamped on a Solid Carbide Shank Carrying Negative WNMG Trigon Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
E16 PWLNR-06 HEAD	16.00	200.00	37.0	15.0	8.0	11.0	-14	-6	20.00	WNMG/WNGG 06T3

For inserts, see pages: WNMG-M3P (111)

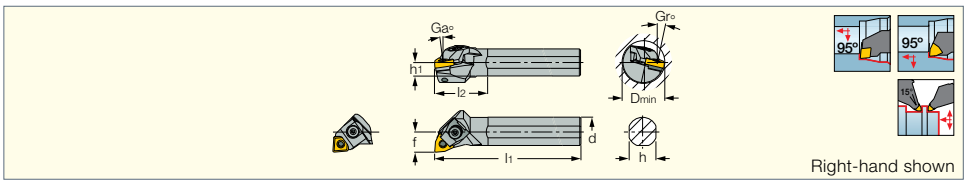
Spare Parts

Designation			
E-PWLNR/L-HEAD	LR 3S	SR 117-2009	HW 2.0/5

ISOTURN

S-MULNR-MW

MULTI-WEDGE Lock Boring Bars Carrying 80° Negative Rhombic or Trigon or Square Inserts

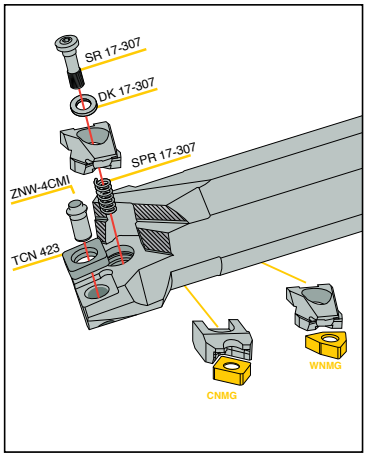


Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
S25T MULNR-12MW	25.00	300.00	45.0	23.0	11.6	17.0	-6	-12	36.00	WM..0804/CN..1204

• Only LC WN08 is supplied with the boring bar. The other wedge should be ordered separately. • R.H. wedge for R.H. tool, L.H. wedge for L.H. tool.

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113) • WNMG-NR (117) • WNMG-TNM (118) • WNMM-NM (117) • WNGA-Ceramic (178) • WNGA-M3 (CBN) (186) • WNGA-MC/M6 (CBN) (187) • CNMG-F3P (119) • CNMG-M3P (120) • CNMM-R3P (120) • CNMM-M4PW (128) • CNMG-F3M (122) • CNMG-M3M (122) • CNMG/CNGG-TF (126) • CNMG-GN (126) • CNMG-NR (127) • CNMG/CNGG-PP (125) • CNMG-VL (123) • CNMG/CNGG-SF (123) • CNMG-NF (124) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMA (125) • CNGA-Ceramic (179) • CNMG-Ceramic (178) • CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGG-M4HF/M4HM (CBN) (188) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMA (PCD) (184)

Toolholder Options



Spare Parts

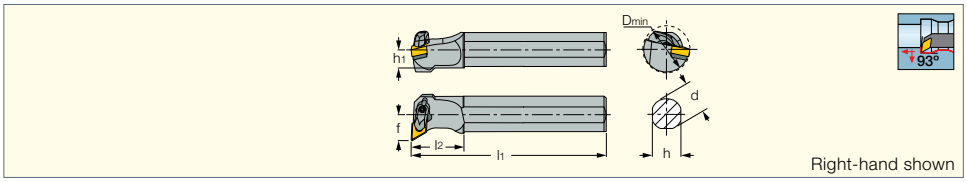
Designation								
S-MULNR-MW	TCN 423	ZNW 4CMI	LC WN08	LCR CN12*	SR 17-307	SPR 17-307	DK 17-307	HW 3.0

* Optional, should be ordered separately

ISOTURN

S-DDUNR/L

R-Clamp Boring Bars Carrying
ISO Negative DNMG Inserts



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert
S32T DDUNR/L-15	32.00	300.00	45.0	29.0	15.8	22.0	42.00	-6	-11	DNMG 1506
S40U DDUNR/L-15	40.00	350.00	50.0	36.0	19.8	27.0	48.00	-6	-10	DNMG 1506

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG-NF (131) • DNMM-NM (134) • DNMA (134) • DNGA-Ceramic (180) • DNGA-2 (CBN) (190) • DNGA-4 (CBN) (190) • DNGG-M4HF/M4HM (CBN) (191) • DNMA (CBN) (190)

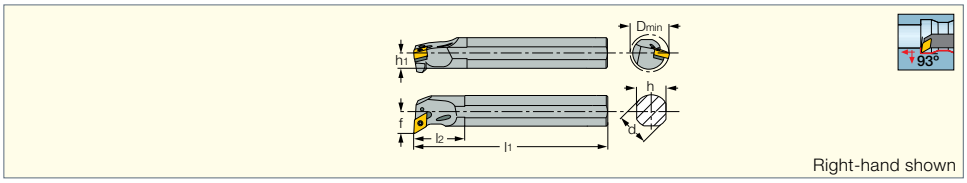
Spare Parts

Designation					
S-DDUNR/L	TDN 422	SP 4	LCGR-4	SR 10400270-25.5	T-15/5

ISOTURN

A/S-PDUNR/L

Lever Lock Boring Bars Carrying
55° Negative Rhombic Inserts



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min		Insert
A20Q PDUNR/L-11	20.00	180.00	35.0	18.0	9.2	16.0	-6	-14	27.00	Y	DNMG 1104
A25R PDUNR/L-11	25.00	200.00	40.0	23.0	11.5	17.0	-6	-13	32.00	Y	DNMG 1104
A32S PDUNR/L-11	32.00	250.00	45.0	29.0	14.5	22.0	-6	-11	40.00	Y	DNMG 1104
S32T PDUNR/L-15	32.00	300.00	51.0	29.0	15.5	22.0	-6	-13	40.00	N	DNMG 1506
S40U PDUNR/L-15	40.00	350.00	50.0	36.0	18.0	27.0	-6	-11.5	50.00	N	DNMG 1506

For inserts, see pages: DNMG-F3P (129) • DNMG-M3P (130) • DNMX-M3P (135) • DNMM-R3P (134) • DNMG-F3M (130) • DNMG-M3M (132) • DNMG/DNGG-TF (133) • DNMG-GN (133) • DNMG-NR (135) • DNMG/DNGG-PP (132) • DNMG-VL (133) • DNMG-PF (132) • DNMG/DNGG-SF (131) • DNMG-NF (131) • DNMM-NM (134) • DNMG-WG (131) • DNMS-12 (176) • DNMA (134) • DNGA-Ceramic (180) • DNGA-4 (CBN) (190) • DNMA (CBN) (190)

Spare Parts

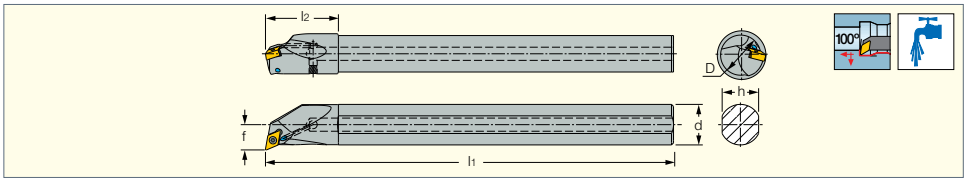
Designation								
A20Q PDUNR/L-11				LR 3DS	SR 117-2011	HW 2.5/5	PL 20	
A25R PDUNR/L-11	TDN 3P2		SP 3	LR 3D	SR 117-2014	HW 2.5/5	PL 25	PN 3-4
A32S PDUNR/L-11	TDN 322		SP 3	LR 3D	SR 117-2014	HW 2.5/5	PL 32	PN 3-4
S32T PDUNR/L-15	TDN 422(a)	TDN 432(b)*	SP 4	LR 4D	SR 117-2010	HW 3.0		PN 3-4
S40U PDUNR/L-15	TDN 422(a)	TDN 432(b)*	SP 4	LR 4D	SR 117-2010	HW 3.0		PN 3-4

* Optional, should be ordered separately
(a) Use for DNMG 1506.. inserts
(b) Use for DNMG 1504.. inserts

ISOTURN

A/E-SDXNR/L-07

Boring Bars Carrying
DNGP 0703.. Double-Sided 55°
Rhombic Inserts for Small Diameters



Designation	d	l1	l2	h	f	D min	Ga°	Gr°	Insert		
A10K SDXNR/L-07	10.00	125.00	20.0	9.0	7.6	13.00	-14	-16	DNGP 07	SR 34-514	T-7F
A12M SDXNR/L-07	12.00	150.00	24.0	11.0	8.6	16.00	-14	-14	DNGP 07	SR 34-514	T-7F
A16Q SDXNR/L-07	16.00	180.00	32.0	15.0	10.6	20.00	-13	-13	DNGP 07	SR 34-514	T-7F
A20R SDXNR/L-07	20.00	200.00	36.0	18.0	12.6	24.00	-13	-12	DNGP 07	SR 34-514	T-7F
E10M SDXNR/L-07	10.00	150.00	20.0	9.0	7.6	13.00	-14	-16	DNGP 07	SR 34-514	T-7F
E12Q SDXNR/L-07	12.00	180.00	24.0	11.0	8.6	16.00	-14	-14	DNGP 07	SR 34-514	T-7F
E16R SDXNR/L-07	16.00	200.00	32.0	15.0	10.6	20.00	-13	-13	DNGP 07	SR 34-514	T-7F
E20S SDXNR/L-07	20.00	250.00	36.0	18.0	12.6	24.00	-13	-12	DNGP 07	SR 34-514	T-7F

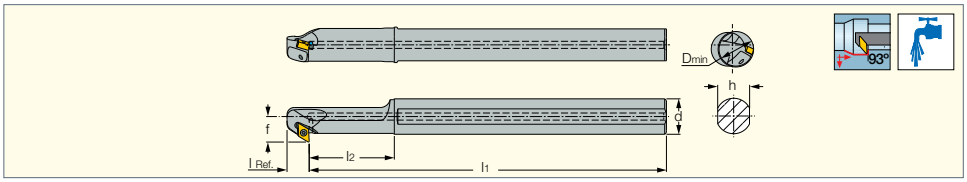
• Use left-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

For inserts, see pages: DNGP-F2M (130) • DNGP-F2P (129)

ISOTURN

A/E-SDZNR/L-07

Back Turning Boring Bars Carrying
DNGP 0703.. Double-Sided 55°
Rhombic Inserts for Small Diameters



Designation	d	l1	l2	l Ref.	h	f	D min	Ga°	Gr°	Insert		
A12M SDZNR/L-07	12.00	150.00	38.0	13.0	11.0	10.5	14.00	-10	-14	DNGP 07	SR 34-514	T-7F
A16Q SDZNR/L-07	16.00	180.00	43.0	13.0	15.0	12.5	16.00	-10	-12.5	DNGP 07	SR 34-514	T-7F
A20R SDZNR/L-07	20.00	200.00	48.0	12.5	18.0	14.5	20.00	-10	-10.5	DNGP 07	SR 34-514	T-7F
E12Q SDZNR/L-07	12.00	180.00	-	13.0	11.0	10.5	18.00	-11	-11	DNGP 07	SR 34-514	T-7F
E16R SDZNR/L-07	16.00	200.00	-	13.0	15.0	12.5	22.00	-11	-9	DNGP 07	SR 34-514	T-7F

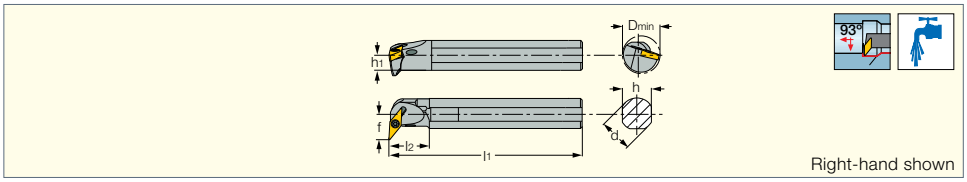
• Use right-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

For inserts, see pages: DNGP-F2M (130) • DNGP-F2P (129)

ISOTURN

A-SVUNR/L

Boring Bars with Internal Coolant Holes
Carrying 35° Negative Rhombic Inserts



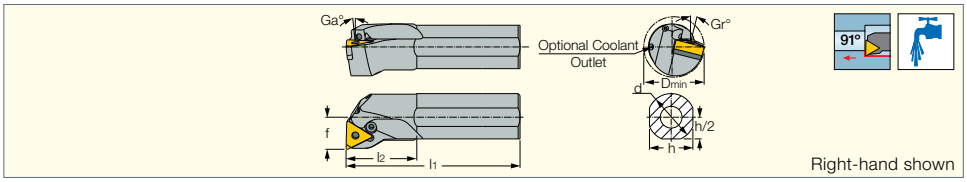
Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°			
A20Q SVUNR/L-12	20.00	180.00	38.0	18.0	9.0	16.0	26.50	-6.5	-14	SR 14-551	T-9/5	PL 20
A25R SVUNR/L-12	25.00	200.00	35.0	23.0	11.5	18.5	31.50	-6.5	-14	SR 14-551	T-9/5	PL 25
A32S SVUNR/L-12	32.00	250.00	50.0	29.0	14.5	23.0	37.00	-6.5	-14	SR 14-551	T-9/5	PL 32

• For inserts with corner radius of 0.8 mm and larger, seat needs to be modified to ensure clearance.

For inserts, see pages: VNMG-SF (137) • VNMG/VNGG-NF (137) • VNMM-PP (138)

HELITURN LD

A-PTFNR/L-X/G
91° Lead Angle Lever Lock Boring Bars Carrying Negative TNMX or TNMG Triangular Inserts



Designation	d	l_1	l_2	h	f	G_a°	G_r°	D min	Insert
A16M PTFNR/L-16G	16.00	150.00	31.0	15.0	11.0	-12	-16	20.00	TNMG 1604
A20Q PTFNR/L-16G	20.00	180.00	31.0	18.0	13.0	-6	-14	25.00	TNMG 1604
A25S PTFNR/L-16X	25.00	250.00	37.5	23.0	17.0	-6	-14	32.00	TNMX 1606, TNMG 1604
A32T PTFNR/L-16X	32.00	300.00	48.0	29.0	22.0	-6	-12	40.00	TNMX 1606, TNMG 1604
A40U PTFNR/L-16X	40.00	350.00	50.0	36.0	27.0	-6	-12	50.00	TNMX 1606, TNMG 1604

• Use TTX 3 seat for TNMX 1606.. inserts and TTN 3 seat for TNMG 1604.. inserts.

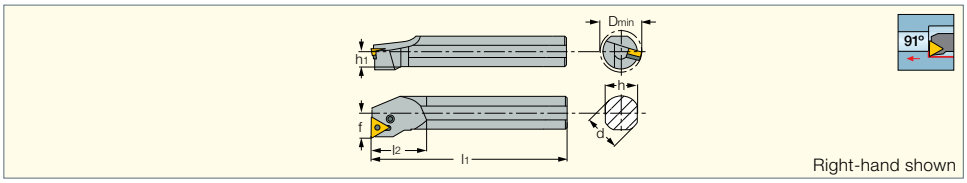
For inserts, see pages: TNMX-M3/4PW (139) • TNMX-M3/4MW (140) • TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation									
A16M PTFNR/L-16G					LR 3S	SR 117-2009		HW 2.0	PL 16
A20Q PTFNR/L-16G					LR 3S	SR 117-2009	SR M4X4 DIN913 TL360	HW 2.0	PL 20
A25S PTFNR/L-16X	TTX 3	TTN 3	SP 3	PN 3-4	LR 3	SR 117-2014	SR M4X4 DIN913 TL360	HW 2.5	PL 25
A32T PTFNR/L-16X	TTX 3	TTN 3	SP 3	PN 3-4	LR 3	SR 117-2014	SR M4X4 DIN913 TL360	HW 2.5	PL 32
A40U PTFNR/L-16X	TTX 3	TTN 3	SP 3	PN 3-4	LR 3	SR 117-2014	SR M4X4 DIN913 TL360	HW 2.5	PL 40

ISOTURN

S-PTFNR/L
91° Lead Angle Lever Lock Boring Bars Carrying Negative Triangular Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
S20R PTFNR/L-11	20.00	200.00	32.0	18.0	9.0	13.0	-6	-14	24.00	TNMG 1103
S25S PTFNR/L-16	25.00	250.00	48.0	23.0	11.5	17.0	-6	-13	32.50	TNMG 1604
S32T PTFNR/L-16	32.00	300.00	63.0	30.0	15.0	22.0	-6	-13	40.00	TNMG 1604
S40U PTFNR-16	40.00	350.00	30.0	36.0	18.0	27.0	-6	-10	49.00	TNMG 1604
S40U PTFNR-22	40.00	350.00	62.0	36.0	18.0	27.0	-6	-10	49.00	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

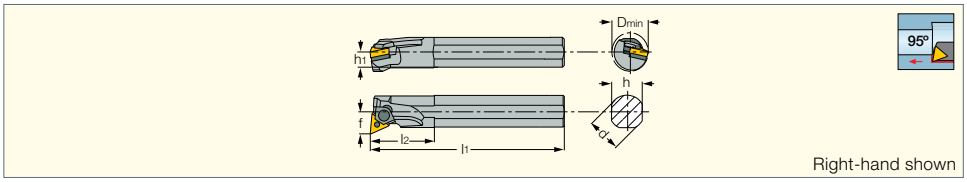
Designation							
S20R PTFNR/L-11				LR 2	SR 117-2015	HW 2.0/5	
S25S PTFNL-16	TTN 322		SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
S25S PTFNR-16	TTN 322	TTN 332(a)*	SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
S32T PTFNL-16	TTN 322		SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
S32T PTFNR-16	TTN 322	TTN 332(a)*	SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
S40U PTFNR-16	TTN 322		SP 3	LR 3	SR 117-2014	HW 2.5/5	PN 3-4
S40U PTFNR-22	TTN 422		SP 4	LR 4	SR 117-2010	HW 3.0	PN 3-4

* Optional, should be ordered separately
(a) Use for TNMG 1603.. inserts

ISOTURN

S-MTLNR/L-W

95° Lead Angle Wedge
Lock Boring Bars Carrying
Negative Triangular Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
S25S MTLNR/L-16W-M	25.00	250.00	40.0	23.0	11.5	17.0	-6	-12	32.00	TNMG 1604
S32T MTLNR/L-16W-M	32.00	300.00	50.0	30.0	15.0	22.0	-6	-12	40.00	TNMG 1604
S40U MTLNR/L-22W	40.00	350.00	50.0	36.0	18.0	27.0	-6	-10	49.00	TNMG 2204

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMM-NR (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

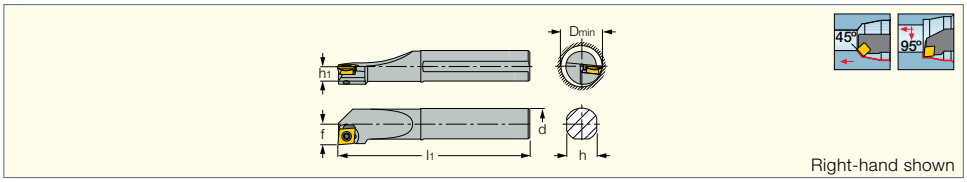
Designation								
S25S MTLNR/L-16W-M			ZNW 3WNS	SR 17-317NS		LC 291N CLAMP	H-W 3	E RING N
S32T MTLNR/L-16W-M	TTT 322N	TTT 332N(a)*	ZNW 3WN	SR 17-317N		LC 291N CLAMP	H-W 3	E RING N
S40U MTLNL-22W	TTT 432	TTT 434	ZNW 4	SR 17-295	HW 2.5	LC 281 SET 1	HW 3.0	
S40U MTLNR-22W		TTT 434	ZNW 4	SR 17-295	HW 2.5	LC 281 SET 1	HW 3.0	

* Optional, should be ordered separately
(a) Use for TNMG 1603.. inserts

CHAMTURN

S-SUXCR/L-CM

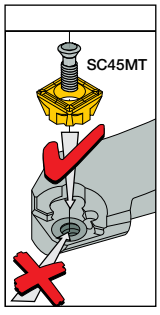
Screw Lock Boring Bars Carrying Four
Different 7° Clearance Geometries



Designation	d	l_1	l_2	h	h_1	D min	G_a°	G_r°	f(1)
S16Q SUXCR/L-10 CM	16.00	180.00	45.0	15.0	7.5	20.00	0	-12	11.0
S20R SUXCR/L-10 CM	20.00	200.00	52.0	18.0	9.0	25.00	0	-6	13.0
S25S SUXCR/L-10 CM	25.00	250.00	55.0	23.0	11.5	32.00	0	-4	17.0

(1) Valid only for CC95MT inserts
For inserts, see pages: CC95MT-SM (153) • SC45MT-SM (154)

Designation	d	l_1	l_2	h	h_1	D min	G_a°	G_r°	f	Inserts
S16Q SUXCR/L-10 CM	16.00	180.00	45.0	15.0	7.5	20.00	0	-12	11 12.14	CC95MT... SC45MT...
S20R SUXCR/L-10 CM	20.00	200.00	52.0	18.0	9.0	25.00	0	-6	13 14.14	CC95MT... SC45MT...
S25S SUXCR/L-10 CM	25.00	250.00	55.0	23.0	11.5	32.00	0	-4	17 18.14	CC95MT... SC45MT...



Multifunction Tool Can Carry Two Different Inserts

- Unique, versatile ISCAR pocket
- For external applications
- Covers most common operations
- Simplifies tool selection
- Simple screw clamping
- Minimum spare parts

Clamping direction for SC45MT...

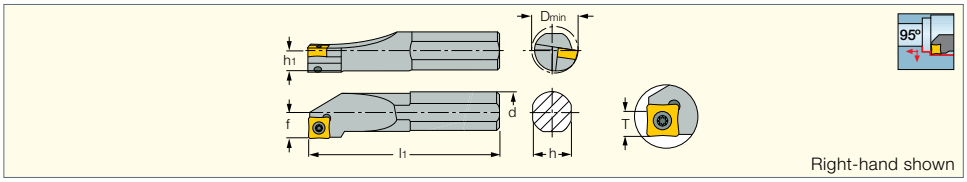
Spare Parts

Designation		
S-SUXCR/L-CM	SR 14-544/S	T-15/5

ISOTURN

S/A-SQLCR/L

Screw Lock Boring Bars Carrying 80° Square Inserts with 7° Clearance



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	T	G_a°	G_r°	D min		Insert
S16Q SQLCR/L-09	16.00	180.00	45.0	15.0	7.5	11.0	8.5	0	-12	20.00	N	QCMT 09T304
S20R SQLCR-09	20.00	200.00	45.0	15.0	7.5	13.0	8.5	0	-6	25.00	N	QCMT 09T304
S25S SQLCR/L-09	25.00	250.00	55.0	15.0	7.5	17.0	8.5	0	-6	32.00	N	QCMT 09T304
A25 SQLCR-09-AD	25.00	120.00	45.0	15.0	7.5	17.0	8.5	0	-6	32.00	Y	QCMT 09T304

For inserts, see pages: QCMT-PF (162) • QCMT-SM (162)

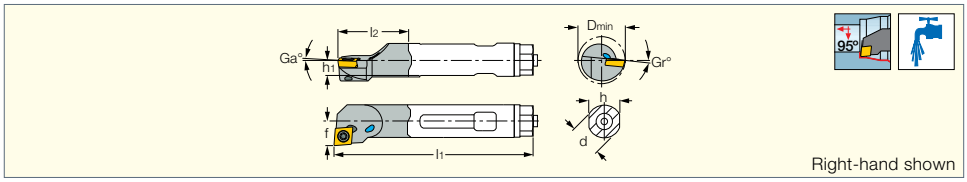
Spare Parts

Designation			
S16Q SQLCR/L-09	SR 16-236	T-15/5	
S20R SQLCR-09	SR 16-236	T-15/5	
S25S SQLCR/L-09	SR 16-236	T-15/5	
A25 SQLCR-09-AD	SR 16-236	T-15/5	PL 25

ISOTURN

E-SCLCR/L-HEAD

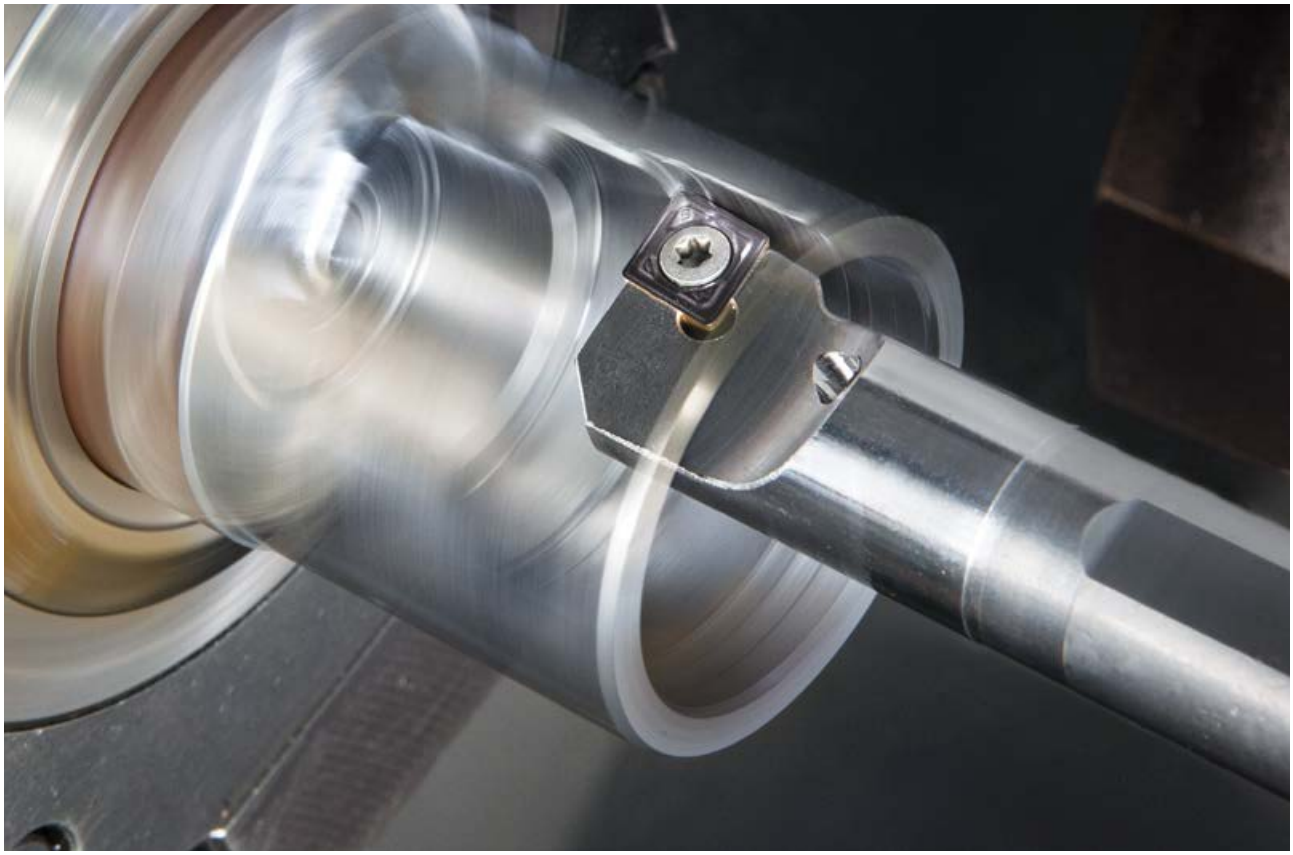
Screw Clamped Boring Heads Carrying 80° Rhombic Inserts with Positive 7° Clearance Mounted on Carbide Bars



Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert		
E12 SCLCR/L-06 HEAD	12.00	179.00	24.8	11.0	5.5	9.0	0	-7	15.80	CCMT/CCGT 0602	SR 14-548	T-7/5
E16 SCLCR/L-09 HEAD	16.00	200.00	37.0	15.0	8.0	11.0	0	-9	20.00	CCMT/CCGT 09T3	SR 16-236	T-15/5

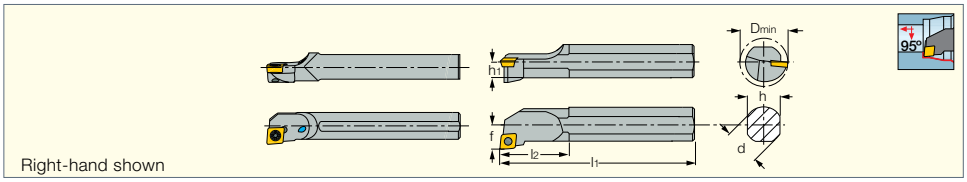
For inserts, see pages: CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)



ISOTURN

A/E/S-SCLCR/L

Screw Lock Boring Bars Carrying 80° Rhombic Inserts with 7° Clearance for 5 mm Minimum Bore Diameter



Right-hand shown

Designation	d	l_1	l_2	f	h	h_1	D min		G_a°	G_r°	Insert
A04F SCLCR/L-03	4.00	80.00	8.0	2.5	3.8	1.9	5.00	Y	0	-15	CCGT 03X1
A05F SCLCR/L-03	5.00	80.00	9.0	3.0	4.8	2.4	6.00	Y	0	-13	CCGT 03X1
A06G SCLCR/L-04	6.00	90.00	10.0	3.5	5.8	2.9	7.00	Y	0	-13	CCGT 04T1
A07G SCLCR/L-04	7.00	90.00	11.0	4.0	6.8	3.4	8.00	Y	0	-11	CCGT 04T1
A20R SCLCR/L-09	20.00	200.00	35.0	13.0	18.0	9.0	25.00	Y	0	-4	CC.. 09T3
A25S SCLCR/L-09	25.00	250.00	35.0	17.0	23.0	11.5	32.00	Y	0	-4	CC.. 09T3
E04G SCLCR/L-03	4.00	90.00	9.0	2.5	3.8	1.9	5.00	Y	0	-15	CCGT 03X1
E05G SCLCR/L-03	5.00	90.00	10.0	3.0	4.8	2.4	6.00	Y	0	-13	CCGT 03X1
E06H SCLCR/L-04	6.00	100.00	12.0	3.5	5.8	2.9	7.00	Y	0	-13	CCGT 04T1
E07H SCLCR/L-04	7.00	100.00	14.0	4.0	6.8	3.4	8.00	Y	0	-11	CCGT 04T1
E08K SCLCR/L-06	8.00	125.00	-	5.0	7.6	3.8	10.00	Y	3	-11	CC.. 0602
E10M SCLCR/L-06	10.00	150.00	-	7.0	9.2	4.6	14.00	Y	3	-7	CC.. 0602
E12P SCLCR/L-06	12.00	170.00	-	9.0	11.0	5.5	16.00	Y	0	-7	CC.. 0602
E16R SCLCR/L-06	16.00	200.00	-	11.0	14.0	7.0	20.00	Y	0	-12	CC.. 0602
E16R SCLCR/L-09	16.00	200.00	-	11.0	15.0	7.5	20.00	Y	0	-6	CC.. 09T3
S08K SCLCR/L-06	8.00	125.00	12.0	5.0	8.0	3.8	10.50	N	0	-11	CC.. 0602
S10L SCLCR/L-06	10.00	140.00	20.0	7.0	9.0	4.5	13.00	N	0	-7	CC.. 0602
S12M SCLCR/L-06	12.00	150.00	12.0	9.0	12.0	5.5	16.00	N	0	-7	CC.. 0602
S16Q SCLCR/L-09	16.00	180.00	45.0	11.0	15.0	7.5	20.00	N	0	-6	CC.. 09T3
S20R SCLCR/L-09	20.00	200.00	50.0	13.0	18.0	9.0	25.00	N	0	-4	CC.. 09T3
S25S SCLCR/L-09	25.00	250.00	55.0	17.0	23.0	11.5	35.00	N	0	-4	CC.. 09T3

• S - steel shank, A - steel shank with coolant hole, E - carbide shank with coolant hole

For inserts, see pages: CCGT-F1P (154) • CCMT-PF (155) • CCMT/CCGT-SM (155) • CCET-WF (156) • CCMT-WG (156) • CCGT-AS (174) • CCGT-AF (174) • CCMT-14 (155) • CCMT/CCGT (156) • CCGW/CCMW-2 (CBN) (189) • CCMT (CBN) (189) • CCMT (PCD) (184)





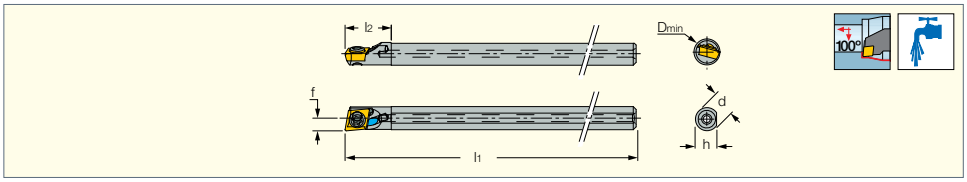
Spare Parts

Designation				
A04F SCLCR/L-03	CSTA-1.6			
A05F SCLCR/L-03	CSTA-1.6			
A06G SCLCR/L-04	CSTB-2			
A07G SCLCR/L-04	CSTB-2			
A20R SCLCR/L-09	SR 16-236	T-15/5	HW 2.0	PL 20
A25S SCLCR/L-09	SR 16-236	T-15/5	HW 2.0	PL 25
E04G SCLCR/L-03	CSTA-1.6			
E05G SCLCR/L-03	CSTA-1.6			
E06H SCLCR/L-04	CSTB-2			
E07H SCLCR/L-04	CSTB-2			
E08K SCLCR/L-06	SR 14-548	T-7/5		
E10M SCLCR/L-06	SR 14-548			
E12P SCLCR/L-06	SR 14-548	T-7/5		
E16R SCLCR/L-06	SR 14-548	T-7/5		
E16R SCLCR/L-09	SR 16-236	T-15/5		
S08K SCLCR/L-06	SR 14-548	T-7/5		
S10L SCLCR/L-06	SR 14-548	T-7/5		
S12M SCLCR/L-06	SR 14-548	T-7/5		
S16Q SCLCR/L-09	SR 16-236/L8.6	T-15/5		
S20R SCLCR/L-09	SR 16-236	T-15/5		
S25S SCLCR/L-09	SR 16-236	T-15/5		

ISOTURN

A/E-SEXPR/L-03

Screw Lock Boring Bars Carrying 75° Rhombic Inserts with 11° Clearance for 4.5 mm Minimum Bore Diameter



Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Insert		
A04F SEXPR/L-03	4.00	80.00	8.0	3.8	1.9	2.3	4.50	0	-15	EPGT03	CSTA-1.6	T-6F
E04G SEXPR/L-03	4.00	90.00	9.0	3.8	1.9	2.3	4.50	0	-15	EPGT03	CSTA-1.6	T-6F

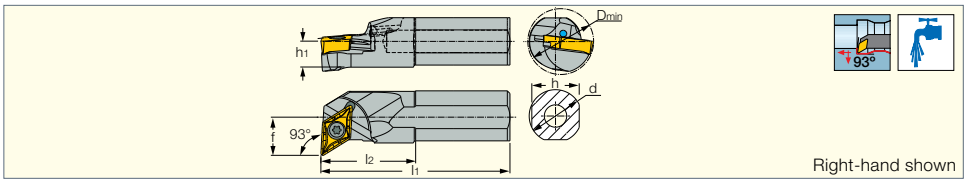
• A - steel shank with coolant hole, E - carbide shank with coolant hole

For inserts, see pages: EPGT-F1P (157)

ISOTURN

A-SDUCR/L-13-SL

Boring Bars Carrying 55° Rhombic Inserts with 7° Clearance Angle for High Rigidity in Profiling Applications



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Shank m.(1)	Insert
A20R SDUCR/L-13-SL	20.00	200.00	36.0	18.0	9.1	14.5	25.00	0	-7	S	DCMT 13T5-SL
A25S SDUCR/L-13-SL	25.00	250.00	45.0	23.0	11.5	17.0	32.00	0	-6	S	DCMT 13T5-SL

(1) S-Steel

For inserts, see pages: DCMT-F3P-SL (158) • DCMT-M3M-SL (159) • DCMT-PF-SL (159) • DCMT-SM-SL (160)

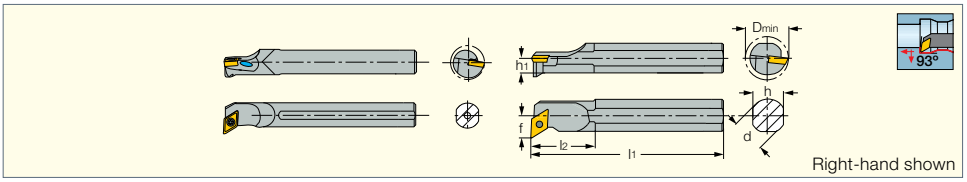
Spare Parts

Designation			
A20R SDUCR/L-13-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45	PL 20
A25S SDUCR/L-13-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45	PL 25

ISOTURN

A/E/S-SDUCR/L

Screw Lock Boring Bars Carrying 55° Rhombic Inserts with 7° Clearance



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min	Ga°	Gr°	Shank m.(1)		Insert
A20R SDUCR/L-11	20.00	200.00	50.0	18.0	8.5	14.5	25.00	0	-6	S	Y	DC.. 11T3
A25S SDUCR/L-11	25.00	250.00	45.0	23.0	12.0	17.0	32.00	0	-5	S	Y	DC.. 11T3
E10M SDUCR/L-07	10.00	150.00	-	9.2	5.1	8.0	14.00	3	-7	C	Y	DC.. 0702
E12P SDUCR/L-07	12.00	170.00	-	11.0	5.5	9.0	16.00	0	-7	C	Y	DC.. 0702
E16R SDUCR/L-07	16.00	200.00	-	15.0	8.1	11.0	20.00	0	-8	C	Y	DC.. 0702
S10L SDUCR/L-07	10.00	140.00	18.0	9.2	5.0	8.0	14.00	-3	-9	S	N	DC.. 0702
S12M SDUCR/L-07	12.00	150.00	20.0	12.0	5.5	9.0	16.00	-7	-9	S	N	DC.. 0702
S16Q SDUCR/L-07	16.00	180.00	25.0	15.0	8.0	11.0	20.00	0	-8	S	N	DC.. 0702
S20R SDUCR/L-11	20.00	200.00	50.0	18.0	8.5	13.0	25.00	0	-6	S	N	DC.. 11T3
S25S SDUCR/L-11	25.00	250.00	55.0	23.0	12.0	17.0	32.00	0	-5	S	N	DC.. 11T3

• S - steel shank, A - steel shank with coolant hole, E - carbide shank with coolant hole

(1) S-Steel, C-carbide

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCGT-AF (175) • DCMT-14 (162) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191) • DCMT (CBN) (191) • DCMT (PCD) (184)

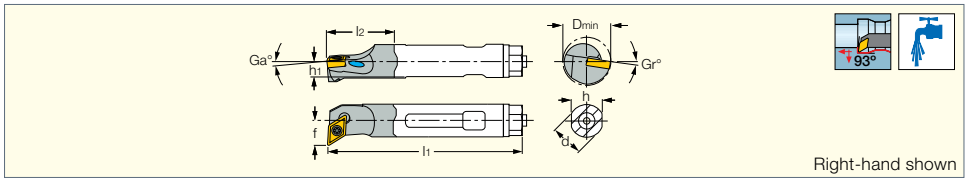
Spare Parts

Designation						
A20R SDUCR/L-11			HW 2.0	SR 16-236 P	T-15/5	PL 20
A25S SDUCR/L-11			HW 2.0	SR 16-236 P	T-15/5	PL 25
E10M SDUCR/L-07				SR 14-548	T-7/5	
E12P SDUCR/L-07				SR 14-548	T-7/5	
E16R SDUCR/L-07				SR 14-548	T-7/5	
S10L SDUCR/L-07				SR 14-548	T-7/5	
S12M SDUCR/L-07				SR 14-548	T-7/5	
S16Q SDUCR/L-07				SR 14-548	T-7/5	
S20R SDUCR/L-11				SR 16-236 P	T-15/5	
S25S SDUCR/L-11	TDC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5	

ISOTURN

E-SDUCR/L-HEAD

Interchangeable Screw Clamped Boring Heads Carrying Positive 7° Clearance 55° Rhombic Inserts Mounted on Carbide Bars



Right-hand shown

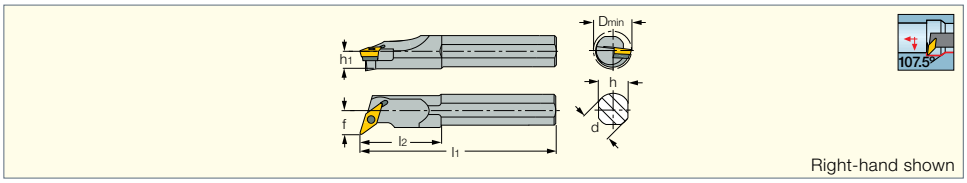
Designation	d	l1	l2	h	h1	f	Ga°	Gr°	D min	Insert		
E12 SDUCR/L-07 HEAD	12.00	179.00	24.8	11.0	5.5	9.0	0	-9	15.80	DCMT/DCGT 0702	SR 14-548	T-7/5
E16 SDUCR/L-07 HEAD	16.00	200.00	29.7	15.0	8.0	11.0	0	-9	20.00	DCMT/DCGT 0702	SR 14-548	T-7/5

For inserts, see pages: DCMT-F3P (158) • DCMT-PF (160) • DCMT/DCGT-SM (161) • DCET-WF (162) • DCGT-AS (174) • DCMT/DCGT (161) • DCGW/DCMW-2 (CBN) (191)

ISOTURN

A/S-SVQCR/L

Screw Lock Boring Bars Carrying 35° Rhombic Inserts with 7° Clearance



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min		Ga°	Gr°	Insert
S25S SVQCR/L-16	25.00	250.00	61.0	23.0	12.0	17.0	32.00	N	0	-5	VC.. 1604
S32T SVQCR/L-16	32.00	300.00	70.0	30.0	15.0	22.0	40.00	N	0	-5	VC.. 1604
A40U SVQCR/L-22	40.00	350.00	64.0	36.0	18.0	27.0	47.50	Y	0	-8	VCGT 2205

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCGT-AF (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

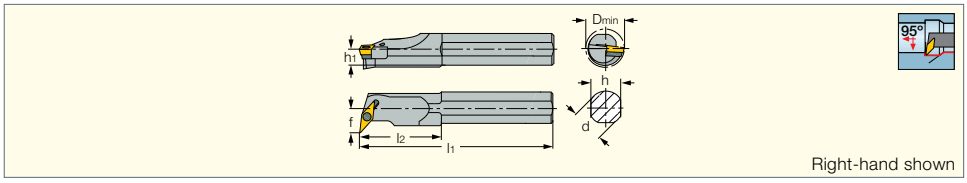
Spare Parts

Designation						
S25S SVQCR/L-16	SR 16-236 P	T-15/5				
S32T SVQCR/L-16	SR 16-236 P	T-15/5	TVC 3-1P	SR TC-3P	HW 4.0	
A40U SVQCR/L-22	SR 14-536	T-20/5	TVC 22T330	SR TC-3	HW 2.5	PL 40

ISOTURN

A/S-SVLFCR/L; A-SVUCR/L

Screw Lock Boring Bars Carrying 35° Rhombic Inserts with 7° Clearance



Right-hand shown

Designation	d	l1	l2	h	h1	f	D min		Ga°	Gr°	Insert
A32T SVUCR/L-16 (1)	32.00	300.00	50.0	29.0	14.5	22.0	40.00	Y	0	-8	VC.. 1604
S32T SVLFCR/L-16	32.00	300.00	56.0	29.0	14.5	22.0	39.50	N	0	-8	VC.. 1604
S40U SVLFCR/L-16	40.00	350.00	-	36.0	18.0	27.0	49.00	N	0	-5	VC.. 1604
A40U SVLFCR/L-22	40.00	350.00	70.0	36.0	18.0	27.0	48.00	Y	0	-8	VC.. 2205

(1) 93° approach angle

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCGT-AF (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

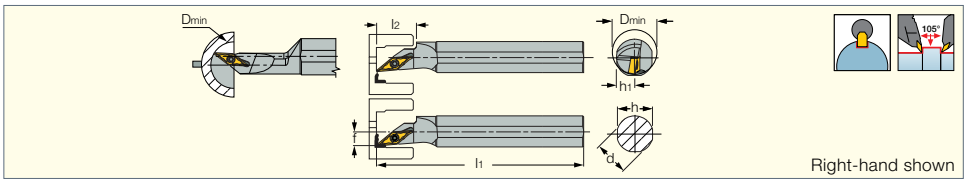
Spare Parts

Designation							
A32T SVUCR/L-16	TVC 3-1P	SR TC-3P	HW 1.5	HW 4.0	SR 16-236 P	PL 32	T-15/5
S32T SVLFCR/L-16	TVC 3-1P	SR TC-3P	HW 4.0		SR 16-236 P		T-15/5
S40U SVLFCR/L-16	TVC 3-1P	SR TC-3P	HW 4.0		SR 16-236 P		T-15/5
A40U SVLFCR/L-22	TVC 22T330	SR TC-3	HW 2.5		SR 14-536	PL 40	T-20/5

ISOTURN

S/A-SVJCR/L

Screw Lock Boring Bars Carrying
35° Rhombic Inserts with 7° Clearance



Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°		Insert
A16R SVJCR/L-11	16.00	200.00	47.5	15.0	8.0	8.5	20.00	-5	-5	Y	VC.. 1103
S16R SVJCR/L-11 (1)	16.00	200.00	20.0	15.0	8.0	7.0	19.00	-5	-4	N	VC.. 1103
A20R SVJCR/L-11	20.00	200.00	43.0	18.0	9.5	11.0	25.00	-7	-3	Y	VC.. 1103
S20R SVJCR/L-11	20.00	200.00	37.0	19.0	9.5	2.0	25.00	-7	-3	N	VC.. 1103

(1) Cannot be used for internal sphere turning

For inserts, see pages: VCMT-SM (163) • VCET-WF (163) • VCGT-AS (173)

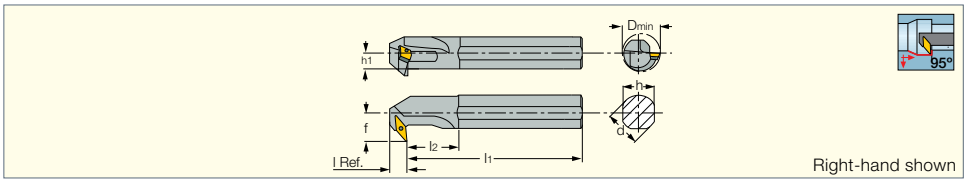
Spare Parts

Designation			
A16R SVJCR/L-11	SR 14-560/S	T-8/5	PL 16
S16R SVJCR/L-11	SR 14-560/S	T-8/5	
A20R SVJCR/L-11	SR 14-560	T-8/5	PL 20
S20R SVJCR/L-11	SR 14-560	T-8/5	

ISOTURN

A/S-SVLBCR/L

Screw Lock Back Boring Bars Carrying
35° Rhombic Inserts with 7° Clearance



Designation	d	l_1	l_2	l Ref.	h	h_1	f	D min	G_a°	G_r°		Insert
A32T SVLBCR/L-16	32.00	300.00	76.5	18.5	29.0	14.5	27.5	40.00	0	-8	Y	VC.. 1604
S32T SVLBCR/L-16	32.00	300.00	63.2	18.5	29.0	14.5	22.0	40.00	0	-8	N	VC.. 1604
S40U SVLBCR/L-16	40.00	350.00	60.0	20.0	36.0	18.0	27.0	49.50	0	-5	N	VC.. 1604

For inserts, see pages: VCGW-2 (CBN) (193) • VCMT-SM (163) • VCGT-AS (173) • VCMT-14 (164) • VCMW (164) • VCMT (CBN) (185) • VCGT (PCD) (185) • VCGT-DW (PCD) (185)

Spare Parts

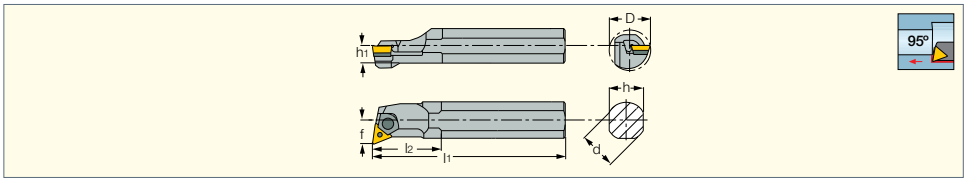
Designation					
A/S-SVLBCR/L	TVC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5



ISOTURN

S-MTLCR/L-W

Wedge Lock Boring Bars Carrying
7° Clearance Triangular Inserts



Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert
S25S MTLCR/L-16W	25.00	250.00	43.0	23.0	13.1	17.0	34.00	0	0	TC.. 16T3
S32T MTLCR/L-16W	32.00	300.00	45.0	29.0	14.5	22.0	39.00	0	0	TC.. 16T3

For inserts, see pages: TCMT-F3P (165) • TCMT-SM (166) • TCGT-AS (173)

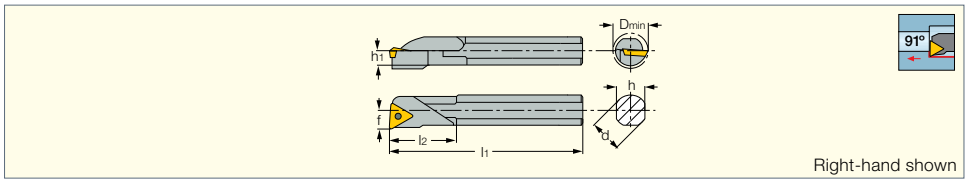
Spare Parts

Designation					
S-MTLCR/L-W	TTC 331	HW 2.0	ZNW 3C	SR 17-319	HW 2.5

ISOTURN

S-STFCR/L

Screw Lock Boring Bars Carrying
7° Clearance Triangular Inserts



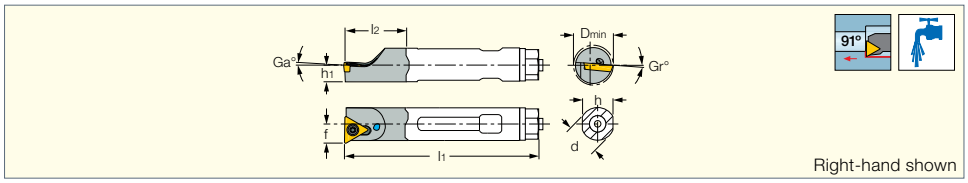
Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert		
S10K STFCR/L-11	10.00	125.00	29.0	9.0	4.5	7.0	13.00	0	-6	TC.. 1102	SR 14-548	T-7/5
S12M STFCR/L-11	12.00	150.00	30.0	11.0	5.5	9.0	15.80	0	-3	TC.. 1102	SR 14-548	T-7/5

For inserts, see pages: TCMT-F3P (165) • TCMT-PF (166) • TCMT-SM (166) • TCGT-AS (173) • TCMT (CBN) (195) • TCMT (PCD) (186)

ISOTURN

E-STFCR-HEAD

Interchangeable Screw Clamped
Boring Heads Carrying Positive
7° Clearance Triangular Inserts
Mounted on Carbide Bars



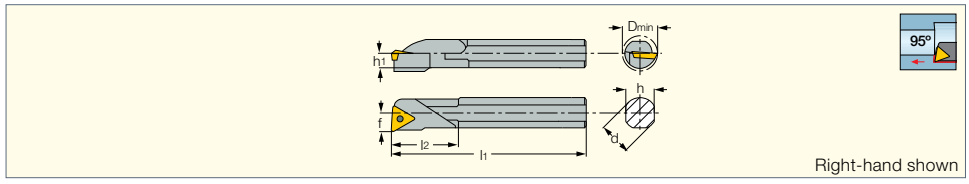
Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert		
E12 STFCR-11 HEAD	12.00	179.00	24.8	11.0	5.5	6.8	0	-6	13.80	TCMT 1102	SR 14-548	T-7/5
E16 STFCR-11 HEAD	16.00	200.00	37.0	15.0	8.0	9.0	0	-6	20.00	TCMT 1102	SR 14-548	T-7/5

For inserts, see pages: TCMT-F3P (165) • TCMT-PF (166) • TCMT-SM (166) • TCGT-AS (173) • TCMT (CBN) (195) • TCMT (PCD) (186)

ISOTURN

S-STLCR/L

Screw Clamp Boring Bars Carrying
7° Clearance Triangular Inserts

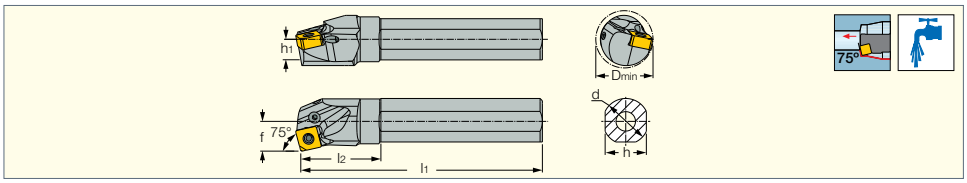


Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert		
S16Q STLCR/L-11	16.00	180.00	45.0	15.0	7.5	11.0	20.00	0	-1	TC.. 1102	SR 14-548	T-7/5
S20R STLCR/L-16	20.00	200.00	50.0	18.0	9.0	13.0	25.00	0	-3	TC.. 16T3	SR 16-236	T-15/5

For inserts, see pages: TCMT-F3P (165) • TCMT-PF (166) • TCMT-SM (166) • TCGT-AS (173)• TCMT (CBN) (195) • TCMT (PCD) (186)

ISOTURN

A-PSKNR/L-09
Lever Lock Boring Bars Carrying
90° Negative Square Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
A25R PSKNR/L-09	25.00	200.00	35.0	23.0	11.5	17.0	-6	-15	32.00	SNMG 0903 SNMG 0904
A32S PSKNR/L-09	32.00	250.00	40.0	29.0	14.5	22.0	-6	-13	40.00	SNMG 0903 SNMG 0904

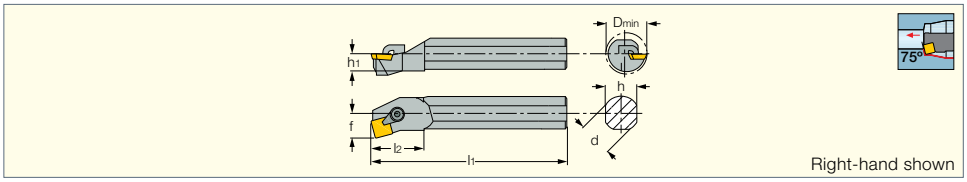
For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-NF (146)

Spare Parts

Designation									
A25R PSKNR/L-09	TSN 323	TSN 333	SP 3	PN 3-3L	LR 3	SR 117-2014	SR M4X5 DIN913	HW 2.5	PL 25
A32S PSKNR/L-09	TSN 323	TSN 333	SP 3	PN 3-3L	LR 3	SR 117-2014	SR M4X5 DIN913	HW 2.5	PL 32

ISOTURN

S-CSKPR
Clamp Lock Boring Bars Carrying
11° Clearance Square Inserts

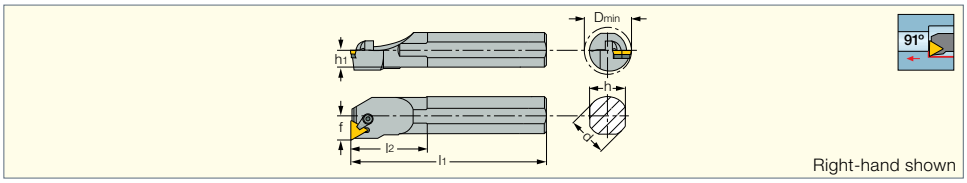


Designation	d	l_1	l_2	h	h_1	f	D min	G_a°	G_r°	Insert		
S16Q CSKPR-09	16.00	180.00	34.0	15.0	8.0	11.0	20.00	4	0	SPMR 0903	LC 15 SET 1	HW 2.5
S25S CSKPR-12	25.00	250.00	48.0	23.0	11.5	17.0	30.00	5	0	SPMR 1203	LC 30 SET 2	HW 3.0

For inserts, see pages: SPMR (168)

ISOTURN

S-CTFPR/L
Clamp Lock Boring Bars Carrying
11° Clearance Triangular Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert
S12L CTFPR/L-09	12.00	140.00	34.0	11.0	6.0	9.0	3	0	15.60	TPMR 0902
S16Q CTFPR/L-11	16.00	180.00	38.0	15.0	8.0	11.0	4	0	20.00	TPMR 1103
S20Q CTFPR-16	20.00	180.00	38.0	18.0	9.5	13.0	4	0	24.00	TPMR 1603
S20R CTFPR/L-16	20.00	200.00	46.0	18.0	9.5	13.0	4	0	24.00	TPMR 1603
S25R CTFPR-16	25.00	200.00	48.0	23.0	11.5	17.0	5	0	31.00	TPMR 1603
S25S CTFPR-16	25.00	250.00	48.0	23.0	11.5	17.0	5	0	31.00	TPMR 1603
S32T CTFPR/L-16	32.00	300.00	62.0	29.0	14.5	22.0	5	0	40.00	TPMR 1603
S40T CTFPR-16	40.00	300.00	62.0	36.0	18.0	27.0	5	0	48.00	TPMR 1603

For inserts, see pages: TPGN-Ceramic (182) • TPMR (168) • TPMR-PF (168)

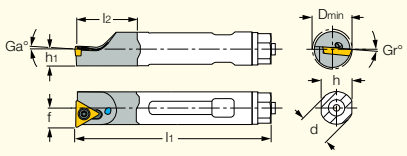
Spare Parts

Designation				
S12L CTFPR/L-09	LC12 SET1	HW 2.5		
S16Q CTFPR/L-11	LC 15 SET 1	HW 2.5		
S20Q CTFPR-16	LC 30 SET 2	HW 3.0		
S20R CTFPR/L-16	LC 30 SET 2	HW 3.0		
S25R CTFPR-16	LC 30 SET 2	HW 3.0		
S25S CTFPR-16	LC 30 SET 2	HW 3.0		
S32T CTFPR/L-16	LC 30 SET 1	HW 3.0	ITBP 122	SP 16
S40T CTFPR-16	LC 30 SET 1	HW 3.0	ITBP 122	SP 16

ISOTURN

E-STFPR/L-HEAD

Interchangeable Boring Heads
Carrying Positive 11° Clearance
Triangular Inserts on a Carbide Bar





Right-hand shown

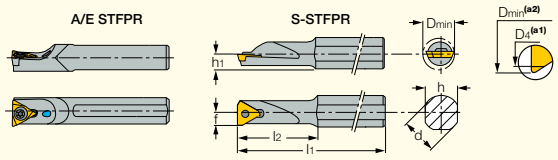
Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	Insert		
E12 STFPR/L-11 HEAD	12.00	179.00	24.8	11.0	5.5	6.8	4	-6	13.00	TPMT/TPGH 1102	SR 14-505	T-7/5
E16 STFPR-11 HEAD	16.00	200.00	37.0	15.0	8.0	8.8	4	-6	20.00	TPGB 1102	SR 14-505	T-7/5

For inserts, see pages: TPMT-PF (169) • TPGT-SP (169) • TPGB-XL (170) • TPGH-R/L (170) • TPGH-XL (170) • TPGB (170) • TPMT (169)

ISOTURN

A/E/S-STFPR/L

Screw Lock Boring Bars Carrying
Triangular Inserts with 11° Clearance





Right-hand shown

Designation	d	l_1	l_2	h	h_1	f	D min	D_4	G_a°	G_r°		Shank m.(1)		
A10K STFPR-11	10.00	125.00	-	9.0	5.3	6.0	11.00	12.00	3	0	Y	S	SR 14-505	
A12Q STFPR-11	12.00	180.00	-	11.0	6.3	7.0	13.00	14.00	4	0	Y	S	SR 14-505	
E10M STFPR-11	10.00	150.00	-	9.0	5.3	6.0	12.00	12.00	3	0	Y	C	SR 14-505	T-7/5
E12P STFPR/L-11	12.00	170.00	-	11.0	6.3	7.0	14.00	14.00	4	0	Y	C	SR 14-505	T-7/5
S12K STFPR/L-11	12.00	125.00	35.0	11.0	6.3	5.6	11.00	11.00	3	0	N	S	SR 14-505	
S12M STFPR/L-11	12.00	150.00	27.0	11.0	6.3	7.0	15.00	15.00	4	0	N	S	SR 14-505	
S16Q STFPR/L-11	16.00	180.00	27.0	15.0	8.0	9.2	18.00	18.00	5	0	N	S	SR 14-505	
S20R STFPR/L-16	20.00	200.00	63.0	18.0	10.0	10.2	21.50	21.50	5	0	N	S	SR 14-541	T-15/5

• (a1) When used with insert TPG. 110204-XL (a2) When used with insert TP.. 110204-..

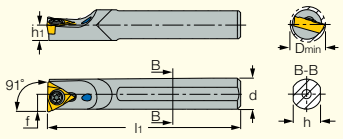
(1) S-Steel, C-Carbide

For inserts, see pages: TPMT-PF (169) • TPGB-XL (170) • TPGH-R/L (170) • TPGH-XL (170) • TPGB (170) • TPMT (169)

ISOTURN

A/E-STFPR-X

Boring Bars Carrying Triangular
TPGX 11° Clearance Inserts
for Small Diameters





Right-hand shown

Designation	d	l_1	f	h	h_1	D min	G_a°	G_r°	Shank m.(1)	Insert		
A08J STFPR-09X	8.00	110.00	5.0	7.2	3.6	9.50	5	-15	S	TPGX 0902	SR 14-298	T-8/5
A10K STFPR-09X	10.00	125.00	5.7	9.0	4.5	10.90	5	-8	S	TPGX 0902	SR 14-298	T-8/5
A12M STFPR-09X	12.00	150.00	6.7	11.0	5.5	13.00	5	-8	S	TPGX 0902	SR 14-298	T-8/5
A10K STFPR-11X	10.00	125.00	6.0	9.0	4.5	11.40	3	-15	S	TPGX 1103	SR 10400052	T-8/5
A12M STFPR-11X	12.00	150.00	6.8	11.0	5.5	13.50	3	-10	S	TPGX 1103	SR 10400052	T-8/5
A16Q STFPR-11X	16.00	180.00	8.8	14.0	7.0	17.30	3	-5	S	TPGX 1103	SR 10400052	T-8/5
E08K STFPR-09X	8.00	125.00	5.0	7.2	3.6	9.50	5	-15	C	TPGX 0902	SR 14-298	T-8/5
E10M STFPR-09X	10.00	150.00	5.7	9.0	4.5	10.90	5	-8	C	TPGX 0902	SR 14-298	T-8/5
E12P STFPR-09X	12.00	170.00	6.7	11.0	5.5	13.00	5	-8	C	TPGX 0902	SR 14-298	T-8/5
E10M STFPR-11X	10.00	150.00	6.0	9.0	4.5	11.40	3	-15	C	TPGX 1103	SR 10400052	T-8/5
E12P STFPR-11X	12.00	170.00	6.8	11.0	5.5	13.50	3	-10	C	TPGX 1103	SR 10400052	T-8/5
E16R STFPR-11X	16.00	200.00	8.8	14.0	7.0	17.30	3	-5	C	TPGX 1103	SR 10400052	T-8/5

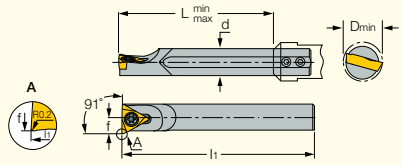
(1) S-Steel, C-Carbide

For inserts, see pages: TPGW-M3 (CBN) (195) • TPGX (171) • TPGX (CBN) (195) • TPGX (PCD) (186)

ISOTURN

MG STFPR-X

Solid Carbide Boring Bar Carrying
TPGX Inserts for Small Diameters





Right-hand shown

Designation	d	l_1	L min(1)	L max(1)	f	G_a°	G_r°	D min		
MG 08-STFPR-09X	8.00	79.00	20.0	56.0	4.9	5	-15	9.50	SR 14-298	T-8/5

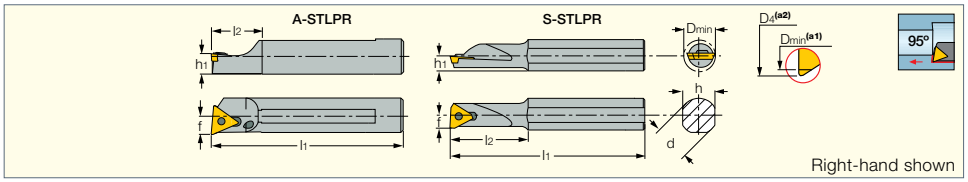
(1) Adjustment range

For inserts, see pages: TPGX (171) • TPGX (CBN) (195) • TPGX (PCD) (186)

ISOTURN

A/S-STLPR/L

Screw Lock Boring Bars Carrying Triangular Inserts with 11° Clearance



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min	D_4			
A10K STLPR-11	10.00	125.00	18.0	9.5	5.8	6.0	3	0	11.00	12.00	Y	SR 14-505	T-7/5
A12Q STLPR-11	12.00	180.00	18.0	11.5	6.0	7.0	4	0	13.00	14.00	Y	SR 14-505	T-7/5
S12K STLPR/L-11	12.00	125.00	35.0	11.0	6.3	5.6	3	0	9.70	11.00	N	SR 14-505	T-7/5
S12M STLPR/L-11	12.00	150.00	27.0	11.0	6.3	7.0	4	0	14.00	15.00	N	SR 14-505	T-7/5
S16Q STLPR-11	16.00	180.00	27.0	15.0	8.0	9.0	5	0	17.00	18.00	N	SR 14-505	T-7/5
S20R STLPR-16	20.00	200.00	63.0	18.0	10.0	10.2	5	0	21.50	21.50	N	SR 14-541	T-15/5

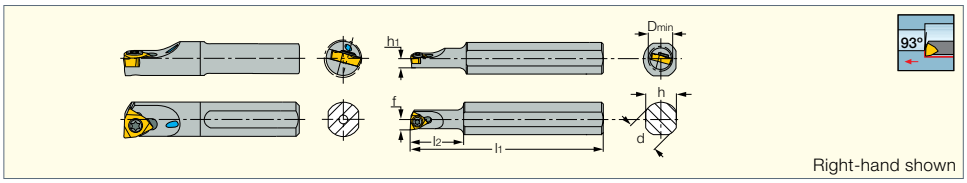
• (a1) When used with insert TPG. 110204-XL (a2) When used with insert TP.. 110204-..

For inserts, see pages: TPMT-PF (169) • TPGB-XL (170) • TPGH-R/L (170) • TPGH-XL (170) • TPGB (170) • TPMT (169)

ISOTURN

E/S-SWUBR/L

Screw Clamp Miniature Boring Bars Carrying Small WBMT Trigon Inserts



Designation	d	l_1	l_2	h	h_1	f	G_a°	G_r°	D min		Shank m.(1)	Insert		
E06H SWUBR/L-06	6.00	100.00	-	5.2	2.6	3.3	0	-15	6.50	Y	C	WBMT 020102L	SR 14-552	T-6/5
E08K SWUBR-06	8.00	125.00	-	7.6	3.8	4.3	0	-8	8.70	Y	C	WBMT 020102L	SR 14-552	T-6/5
E10M SWUBR-06	10.00	150.00	-	9.0	4.5	5.2	0	-12	10.90	Y	C	WBMT 020102L	SR 14-552	T-6/5
S0606H SWUBR-06	6.00	100.00	-	5.2	2.6	3.3	0	-15	6.50	N	S	WBMT 020102L	SR 14-552	T-6/5
S0610H SWUBR/L-06	10.00	100.00	20.0	9.0	4.5	3.0	0	-15	6.00	N	S	WBMT 020102L/R	SR 14-552	T-6/5
S0710H SWUBR/L-06	10.00	100.00	24.0	9.0	4.5	3.5	0	-13	7.00	N	S	WBMT 020102L/R	SR 14-552	T-6/5
S0808J SWUBR-06	8.00	100.00	-	7.4	3.7	4.3	0	-12	8.50	N	S	WBMT 020102L	SR 14-552	T-6/5
S0812J SWUBR/L-06	12.00	110.00	32.0	11.0	5.5	4.0	0	-12	8.00	N	S	WBMT 020102L/R	SR 14-552	T-6/5
S1010K SWUBR/L-06	10.00	125.00	-	9.0	4.5	5.2	0	-12	11.00	N	S	WBMT 020102L	SR 14-552	T-6/5

• Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools.

(1) S-Steel, C-Carbide

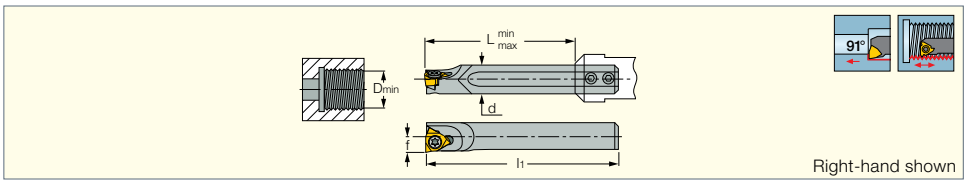
For inserts, see pages: WBGT (171) • WBMT (171)

ISOTURN

ISCARTHREAD

MGSIR/L

Solid Carbide Bars for Internal Turning and Threading



Designation	d	l_1	L_{min}(3)	L_{max}(3)	f	D min		
MGSIR/L 06-06W (1)	6.00	59.00	16.0	42.0	3.9	7.00	SR 14-552	T-6/5
MGSIR/L 08-06W (2)	8.00	72.00	20.0	56.0	5.0	9.20	SR 14-552	T-6/5

• 91° for shoulder depth up to 2 mm • Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools. • In order to maintain high machining reliability we strongly recommend replacing the clamping screw every 10 insert indexes.

(1) For WBMT 060102 Dmin=6.6 mm f=4.13 mm

(2) For WBMT 060102 Dmin=8.8 mm f=5.20 mm

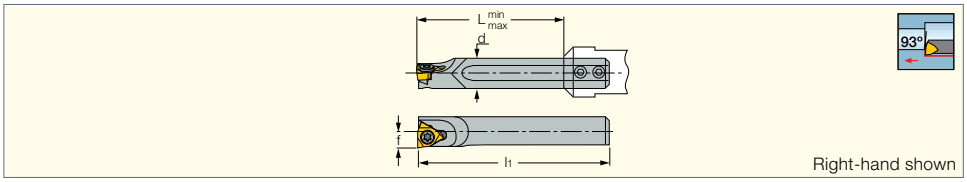
(3) Adjustment range

For inserts, see pages: IR/L-55° (491) • IR/L-60° (494) • IR/L-BSPT (513) • IR/L-ISO (499) • IR/L-NPT (510) • IR/L-NPTF (512) • IR/L-UN (504) • IR/L-W (508) • WBGT (171) • WBMT (171)

ISOTURN

MG-SWUBR/L

Solid Carbide Bars for Internal Turning



Designation	d	l1	L min(1)	L max(1)	f	D min		
MG 06-SWUBR/L-06	6.00	59.00	16.0	42.0	3.3	6.60	SR 14-552	T-6/5
MG 08-SWUBR/L-06	8.00	72.00	20.0	56.0	4.3	8.70	SR 14-552	T-6/5

• Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools

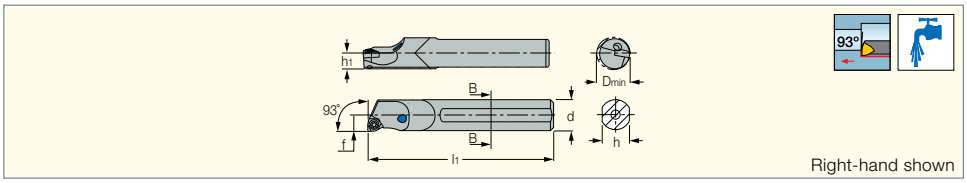
(1) Adjustment range

For inserts, see pages: WBGT (171) • WBMT (171)

ISOTURN

A/E-SWUCR

Boring Bars Carrying WCGT Trigon Inserts for Small Diameters



Designation	d	l1	h	h1	f	Ga°	Gr°	D min	Shank m.(1)	Insert		
A06H SWUCR-02	6.00	100.00	5.4	2.7	3.3	0	-15	6.60	S	WCGT 0201	SR 14-299	T-6/5
A08J SWUCR-02	8.00	110.00	7.2	3.6	4.3	0	-12	8.70	S	WCGT 0201	SR 14-299	T-6/5
A10K SWUCR-02	10.00	125.00	9.0	4.5	5.2	0	-12	10.90	S	WCGT 0201	SR 14-299	T-6/5
E06H SWUCR-02	6.00	100.00	5.4	2.7	3.3	0	-15	6.60	C	WCGT 0201	SR 14-299	T-6/5
E08K SWUCR-02	8.00	125.00	7.2	3.6	4.3	0	-12	8.70	C	WCGT 0201	SR 14-299	T-6/5
E10M SWUCR-02	10.00	150.00	9.0	4.5	5.2	0	-12	10.90	C	WCGT 0201	SR 14-299	T-6/5

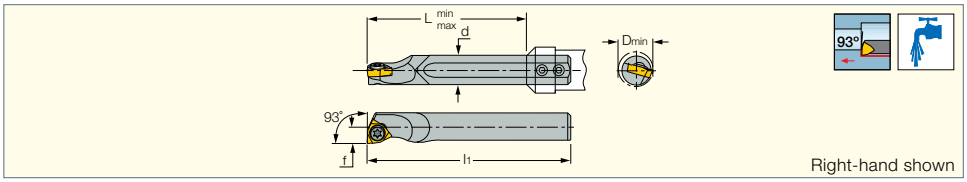
(1) S-Steel, C-Carbide

For inserts, see pages: WCGT (172)

ISOTURN

MG-SWUCR

Solid Carbide Boring Bars Carrying WCGT Trigon Inserts for Small Diameters



Designation	d	l1	L min(1)	L max(1)	f	Ga°	Gr°	D min	Insert		
MG 06-SWUCR-02	6.00	60.00	16.0	42.0	3.3	0	15	6.60	WCGT 0201	SR 14-299	T-6/5
MG 08-SWUCR-02	8.00	75.70	20.0	56.0	4.3	0	12	8.80	WCGT 0201	SR 14-299	T-6/5

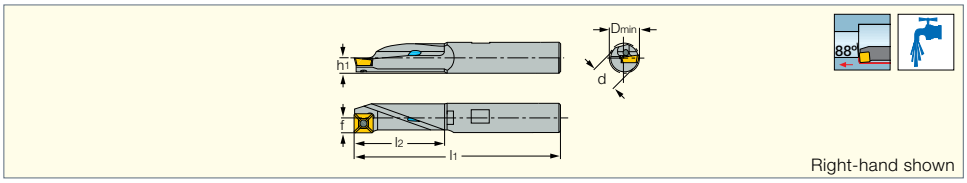
(1) Adjustment range

For inserts, see pages: WCGT (172)

ISOTURN

A-SXFOR/L

Boring Bars with Coolant Holes Carrying XOMT Inserts

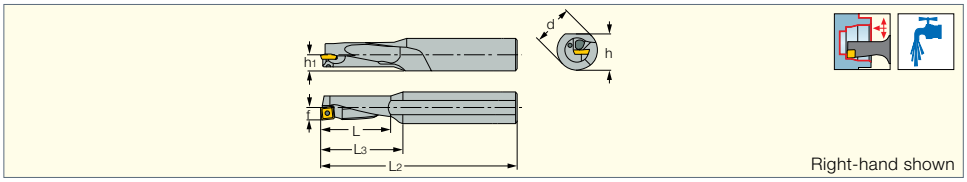


Designation	d	l1	l2	h1	f	Ga°	Gr°	D min	Insert		
A10J SXFOR/L-06	10.00	110.00	28.5	5.0	4.9	6	1.75	10.00	XOMT 0602	SR 34-508	T-7/5
A12K SXFOR/L-06	10.00	125.00	28.5	5.0	4.9	6	1.75	10.00	XOMT 0602	SR 34-508	T-7/5

For inserts, see pages: XOMT-DT (165)

MULTIFUNCTION TOOLS

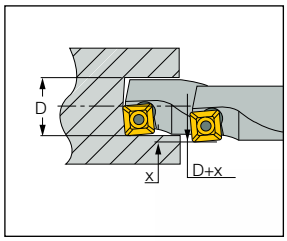
A-SXFOR-DR
Boring and Drilling Bars with Coolant Holes Carrying XOMT Inserts



Right-hand shown

Designation	d	L_2	L_3	L	f	h_1	G_a°	G_r°	h	D min	Insert
A1612M SXFOR-06DR	16.00	180.00	31.0	21.0	6.0	8.5	0	0	15.0	12.50	XOMT 0602

For inserts, see pages: XOMT-DT (165)



Drilling Solid Material
Range:
Dmin=12.5 mm
Dmax=14 mm

To achieve required diameter øD, position tool as shown at D + x (x=0.10) to compensate for tool deflection. Use pecking cycle, pulling back 0.1 mm after each 1 mm of DOC.
Maximum feed for steel: 0.05 mm/rev;
For stainless steel: 0.03 mm/rev

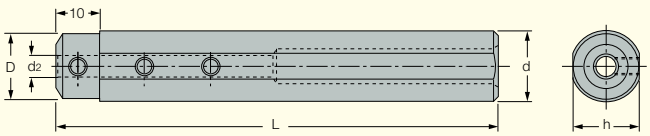
Spare Parts

Designation			
A-SXFOR-DR	SR 34-508	T-7/51	PL 16



ISOTURN

SBB
Holders for Small Diameter Boring Bars



Designation	d	d_2	D	h	L			
SBB D16-4	16.00	4.00	15.00	15.0	100.00	HW 2.0	PL 16*	
SBB D16-5	16.00	5.00	15.00	15.0	100.00	HW 2.0	PL 16*	
SBB D16-6	16.00	6.00	15.00	15.0	100.00	HW 2.0	PL 16*	
SBB D16-7	16.00	7.00	15.00	15.0	100.00	HW 2.0	PL 16*	
SBB D20-4	20.00	4.00	13.00	19.0	100.00	HW 2.0	PL 16*	SR M4X6 DIN913
SBB D20-5	20.00	5.00	14.00	19.0	100.00	HW 2.0	PL 16*	SR M4X6 DIN913
SBB D20-6	20.00	6.00	15.00	19.0	100.00	HW 2.0	PL 16*	
SBB D20-7	20.00	7.00	16.00	19.0	100.00	HW 2.0	PL 16*	
SBB D22-4	22.00	4.00	13.00	21.0	125.00	HW 2.0	PL 16*	SR M4X6 DIN913
SBB D22-5	22.00	5.00	14.00	21.0	125.00	HW 2.0	PL 16*	SR M4X6 DIN913
SBB D22-6	22.00	6.00	15.00	21.0	125.00	HW 2.0	PL 16*	SR M4X6 DIN913
SBB D22-7	22.00	7.00	16.00	21.0	125.00	HW 2.0	PL 16*	SR M4X6 DIN913

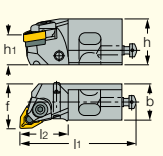
• Holders are suitable for right- and left-hand inserts, and boring bars.
* Optional, should be ordered separately

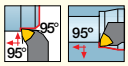
For tools, see pages: A/E-SEXPR/L-03 (92) • A/E-SWUCR (99) • A/E/S-SCLCR/L (91) • E/S-SWUBR/L (98) • MG-SWUBR/L (99) • MG-SWUCR (99) • MGCH (330) • MGSIR/L (534) • MGUHR (327)

ISOTURN

MWLNR/L-CA-W

Top Wedge Lock Cartridges
Carrying Negative Trigon Inserts





Right-hand shown

Designation	l_1	l_2	b	h	h_1	f	G_a°	G_r°
MWLNR/L 16CA-06W	63.00	26.4	20.0	25.0	16.0	25.0	-8	-8

For inserts, see pages: WNMG-F3P (110) • WNMG-M3P (111) • WNMG-F3M (112) • WNMG-M3M (113)

Spare Parts

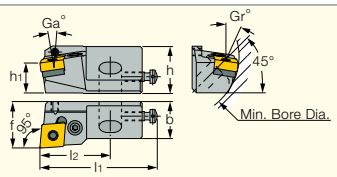
Designation								
MWLNL 16CA-06W	IWSN 322W	IWSN 3-2W(a)*	ZNW 3W	LC 250 SET 1	HW 2.0	SR 76-1401	SR M4X10 DIN913	HW 2.5
MWLNR 16CA-06W	IWSN 322W	IWSN 3-2W(a)*	ZNW 3W	LC 250 SET 1		SR 76-1401	SR M4X10 DIN916	HW 2.5

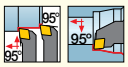
* Optional, should be ordered separately
(a) Use WNMG 33..(0604..) inserts

ISOTURN

PCLNR/L-CA

95° Lead Angle Exchangeable
Cartridges Carrying Negative
80° Diamond Inserts





Right-hand shown

Designation	h	h_1	b	l_1	l_2	f	D min(1)	G_a°	G_r°
PCLNR/L 16CA-12	25.0	16.0	20.0	63.00	38.0	25.0	55.00	-8	-8

(1) For axial mounting

For inserts, see pages: CNGA-2 (CBN) (188) • CNGA-4 (CBN) (188) • CNGA-Ceramic (179) • CNGG-M4HF/M4HM (CBN) (188) • CNMA (125) • CNMA (PCD) (184) • CNMA-MW4 (CBN) (187) • CNMA-T/M1/WG (CBN) (187) • CNMG-Ceramic (178) • CNMG-F3M (122) • CNMG-F3P (119) • CNMG-GN (126) • CNMG-M3M (122) • CNMG-M3P (120) • CNMG-NF (124) • CNMG-NR (127) • CNMG-VL (123) • CNMG-WF (124) • CNMG-WG/NRW (124) • CNMG/CNGG-PP (125) • CNMG/CNGG-SF (123) • CNMG/CNGG-TF (126) • CNMM-M4PW (128) • CNMM-R3P (120) • CNMS-12 (176)

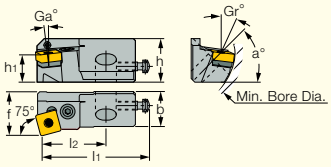
Spare Parts

Designation									
PCLNL 16CA-12	TCN 423	SP 4	LR 4	LCS 4S	HW 3.0	SR 76-1401	SR M4X5 DIN916	HW 2.0	PN 3-4
PCLNR 16CA-12	TCN 423	SP 4	LR 4	LCS 4S	HW 3.0	SR 76-1401	SR M4X5 DIN913	HW 2.0	PN 3-4

ISOTURN

PSKNR/L-CA

75° Lead Angle Cartridges Carrying
Negative Square Inserts





Right-hand shown

Designation	h	h_1	b	l_1	l_2	f	D min(1)	G_a°	G_r°	a°
PSKNR 12CA-12	20.0	12.0	15.0	55.00	35.0	20.0	50.00	-6	-8	20
PSKNR/L 16CA-12	25.0	16.0	20.0	63.00	38.0	25.0	60.00	-4	-8	45

(1) For axial mounting

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

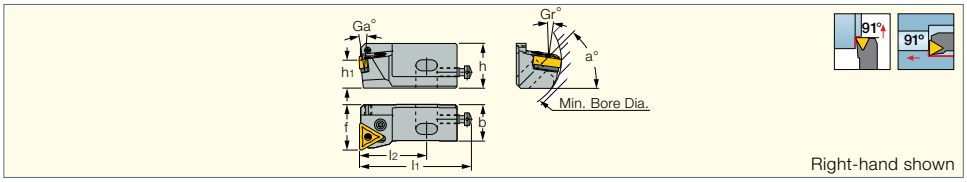
Spare Parts

Designation									
PSKNR 12CA-12				LR 4M	SR 117-2011	HW 2.5/5	SR 76-1401	SR M4X5 DIN913	HW 2.0
PSKNR/L 16CA-12	TSN 423	SP 4	PN 3-4	LR 4	LCS 4S	HW 3.0	SR 76-1401	SR M4X5 DIN913	HW 2.0

ISOTURN

PTFNR-CA

91° Lead Angle Lever Lock Face Turning Cartridges Carrying Negative Triangular Inserts



Designation	h	h1	b	l1	l2	f	D min(1)	Ga°	Gr°	a°
PTFNR 12CA-16	20.0	12.0	15.0	55.00	35.0	20.0	50.00	-6	-9	20
PTFNR 16CA-16	25.0	16.0	20.0	63.00	38.0	25.0	55.00	-6	-8	45

(1) For axial mounting

For inserts, see pages: TNMG-F3P (139) • TNMG-M3P (139) • TNMG-F3M (140) • TNMG-M3M (140) • TNMG-TF (141) • TNMG-GN (143) • TNMG/TNGG-PP (142) • TNMG-VL (142) • TNMG-PF (141) • TNMG-SF (141) • TNMG-NF (142) • TNMS-12 (175) • TNMA (143) • TNGA-Ceramic (182) • TNGA-M3 (CBN) (194) • TNGA-MC/M6 (CBN) (194) • TNGG-M6HF/M6HM (CBN) (194) • TNMA (CBN) (193)

Spare Parts

Designation										
PTFNR 12CA-16		TTN 332(a)*			LR 3S	SR 117-2009		SR 76-1401	SR M4X5 DIN913	HW 2.0
PTFNR 16CA-16	TTN 322	TTN 332(a)*	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5	SR 76-1401	SR M4X8 DIN913	HW 2.0

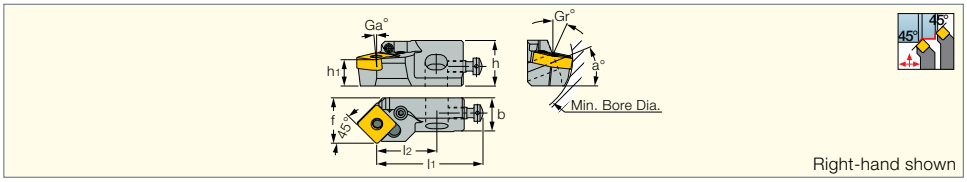
* Optional, should be ordered separately

(a) Use for TNMG 32..(1603..) inserts

ISOTURN

PSSNR/L-CA

45° Lead Angle Cartridges Carrying Negative Square Inserts for Face and Longitudinal Turning



Designation	l1	l2	b	h	h1	f	Ga°	Gr°	a°	D min(1)
PSSNR 12CA-12	47.00	27.0	15.0	20.0	12.0	20.0	-3	-10	20	50.00
PSSNR 16CA-12	53.00	29.0	20.0	25.0	16.0	25.0	0	-11	45	55.00

(1) For axial mounting

For inserts, see pages: SNMG-F3P (144) • SNMG-M3P (144) • SNMM-R3P (150) • SNMG-F3M (145) • SNMG-M3M (145) • SNMG-TF (147) • SNMG-GN (149) • SNMG-NR (149) • SNMG-PP (147) • SNMG-VL (146) • SNMA (149) • SNGA-Ceramic (180) • SNMA (CBN) (196)

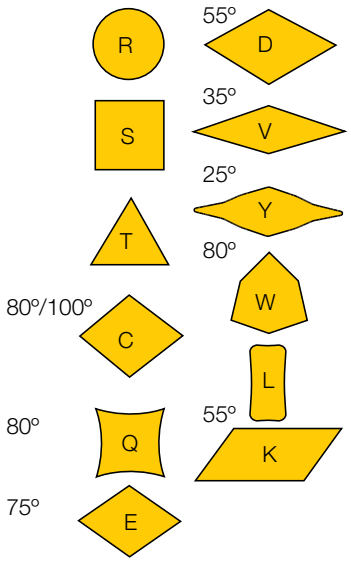
Spare Parts

Designation									
PSSNR 12CA-12				LR 4M	SR 117-2011	HW 2.5	SR 76-1401	SR M4X5 DIN913	HW 2.0
PSSNR 16CA-12	TSN 423	SP 4	PN 3-4	LR 4	LCS 4S	HW 3.0	SR 76-1401	SR M4X5 DIN913	HW 2.0

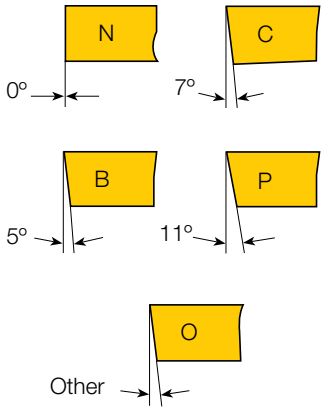
ISOTURN INSERTS



1. Shape

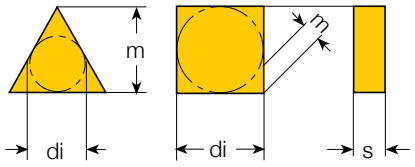


2. Clearance Angle



W	N	M	G
1	2	3	4

3. Tolerance



	m		s	di	
E		±0.025	±0.025		±0.025
G		±0.025	±0.13		±0.025
M	fr.	±0.08	±0.13	fr.	±0.05
	to	±0.18(1)		to	±0.13(1)
U	fr.	±0.13	±0.13	fr.	±0.08
	to	±0.38(1)		to	±0.25(1)

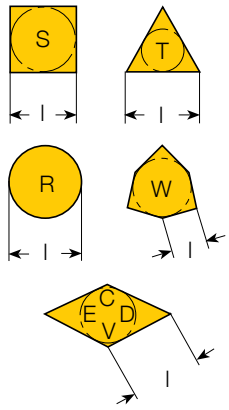
(1) Exact tolerance depends on insert size

di	Tolerance in mm			
	On m		On di	
	Class M	Class U	Class M	Class U
6.35	±0.08	±0.13	±0.05	±0.08
9.52	±0.08	±0.13	±0.05	±0.08
12.70	±0.13	±0.20	±0.08	±0.13
15.87	±0.15	±0.27	±0.10	±0.18
19.05	±0.15	±0.27	±0.10	±0.18
25.40	±0.18	±0.38	±0.13	±0.25

4. Type

A	Without chipbreaker, with hole
G	Chipbreaker on both sides, with hole
M,S	Chipbreaker on one side, with hole
R	Chipbreaker on one side, without hole
B,W	Countersink on one side, with hole
T,H	C/breaker on one side, with hole and C/sink
P	Neg/pos on one or both sides, with hole
Z, X	Special

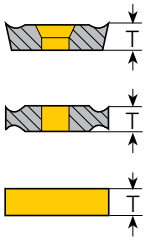
5. Cutting Edge Length



di		Symbol (l)							
inch	mm	C	D	R	S	T	V	W	Q
5/32	3.97		04		03	06	06	02(1)	
7/32	5.56	05				09			
1/4	6.35	06	07			11	11		
9/32	7.15						12		
	8.00			08					
3/8	9.52	09	11		09	16	16	06	09
	10.00			10					
	12.00			12					
1/2	12.70	12	15		12	22	22	08	12
5/8	15.88	16			15	27			
	16.00			16					
3/4	19.05	19			19	33		13	
	20.00			20					
	25.00			25					
1	25.40				25				

(1) WBMT 06...

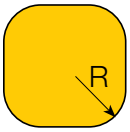
6. Thickness



01 = 1.59 mm
T1 = 1.98 mm
02 = 2.38 mm
03 = 3.18 mm
T3 = 3.97 mm
04 = 4.76 mm
06 = 6.35 mm
07 = 7.94 mm

08	04	08	E	GN
5	6	7	8	9

7. Corner Radius



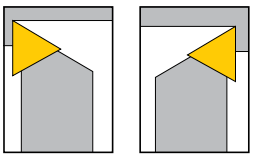
02 = 0.2 mm
04 = 0.4 mm
08 = 0.8 mm
12 = 1.2 mm
16 = 1.6 mm
20 = 2.0 mm
24 = 2.4 mm

8. Cutting Edge (Optional)

	Symbol
Sharp	F
Honed (Rounded)	E
Chamfered (Negative Land)	T
Chamfered + Honed	S

9. Chipformer Designation

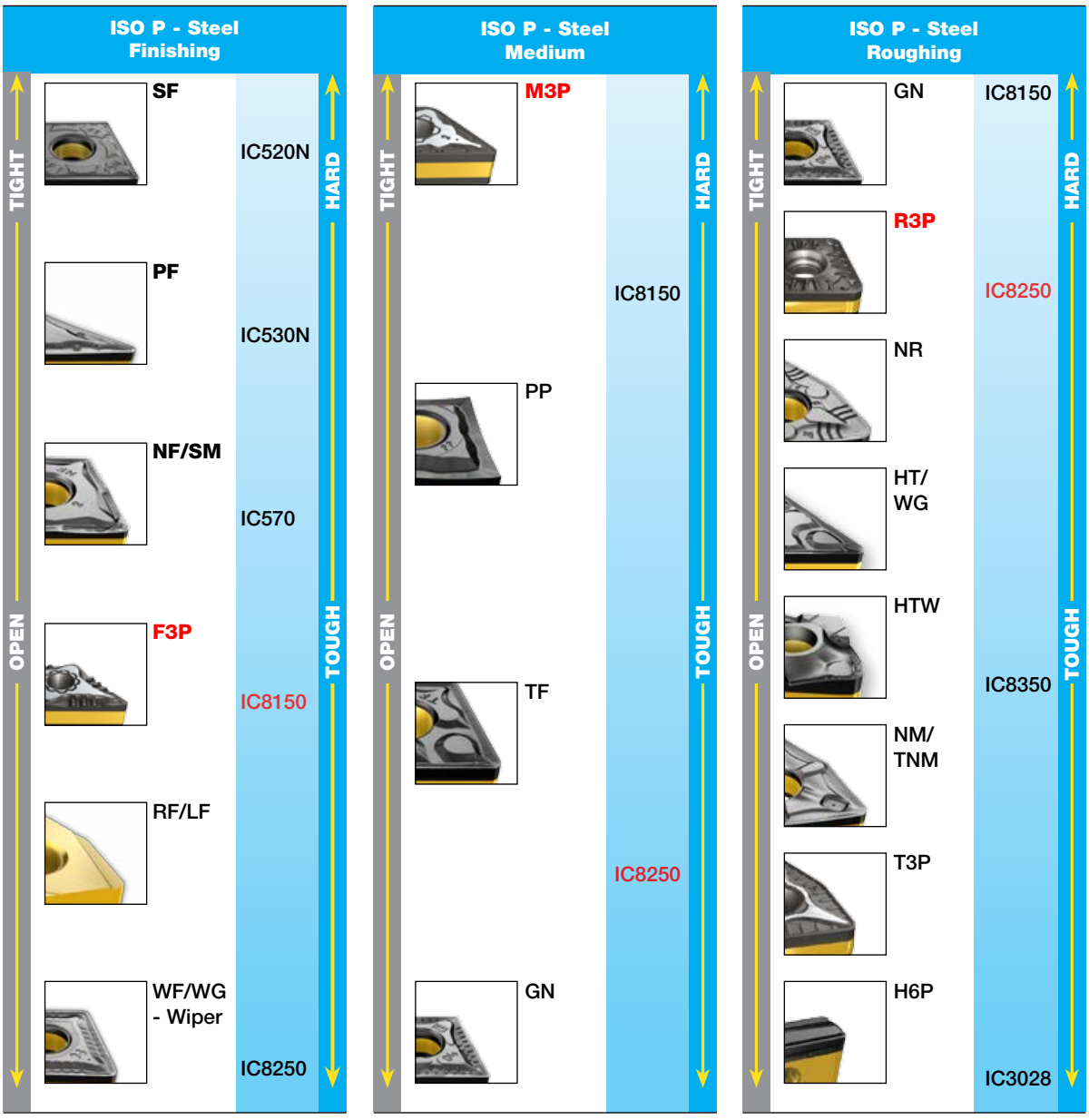
SF		TF	NM
PF	../Z-RF/LF(1)	PP	TNM
NF	WF	GN	NR
SM	WG		RP
14	VL		.NMS
	AS/AF		

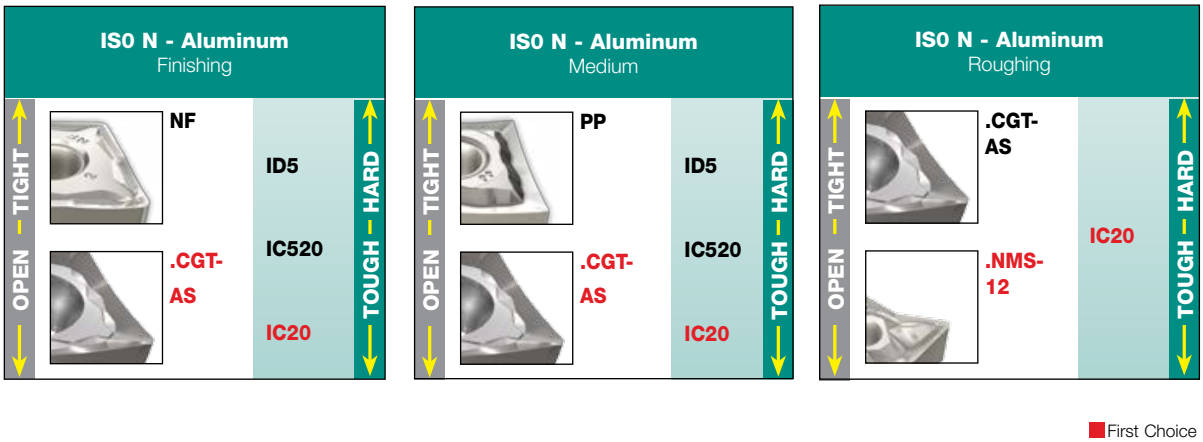


R Right-hand **L** Left-hand

R □
L □

Selection Guide for Chipformers and Grades





ISO K - Cast Iron
Finishing

TIGHT / OPEN — HARD / TOUGH


GN

IN11
IS6
IS80
IS8

IC9007

IC5005


...A

ISO K - Cast Iron
Medium

TIGHT / OPEN — HARD / TOUGH


GN

IS6

IS80

IS8


NR

IN23

IC9007

IC5005
IC428

IC 5010


...A

IC8150

ISO K - Cast Iron
Roughing

TIGHT / OPEN — HARD / TOUGH


GN

IS6

IS80

IS8


NR

IN23
IC5005
IC428

IC5010


...A

IC8150

First Choice

ISO M - Stainless Steel
Finishing

TIGHT / OPEN — HARD / TOUGH


SF

IC6015
IC807
IC907


PF


NF/SM

IC6025


F3M

IC570


VL

IC808
IC908


RF/LF

ISO M - Stainless Steel
Medium

TIGHT / OPEN — HARD / TOUGH

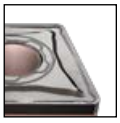

PP

IC6015
IC807
IC907

IC6025


TF

IC808
IC908


M3M

IC3028

ISO M - Stainless Steel
Roughing

TIGHT / OPEN — HARD / TOUGH


M4MW

IC807
IC907


MR

IC6025
IC808
IC908


R3M

IC3028


HM

First Choice

IS0 S - High Temp. Alloys
Finishing

TIGHT / OPEN — HARD / TOUGH


SF/PF


PF


TF


PP

IW7
IC804
IC806
IC07
IC807
IC907
IC20

IS0 S - High Temp. Alloys
Medium

TIGHT / OPEN — HARD / TOUGH


PP


TF


EM-M

IW7
IC804
IC806
IC07
IC807
IC907
IC908

IS0 S - High Temp. Alloys
Roughing

TIGHT / OPEN — HARD / TOUGH


HM


M4MW


EM-R


MR

IW7
IC804
IC806
IC807
IC907
IC808
IC908
IC3028

First Choice

IS0 H - Hardened Steel
Finishing

TIGHT / OPEN — HARD / TOUGH


GN


.NMA


.NGA

IB10HC
IB50
IB10H
IB55
IB20H
IN22
IC807
IC907

IS0 H - Hardened Steel
Medium

TIGHT / OPEN — HARD / TOUGH


.NMA


.NGA


GN

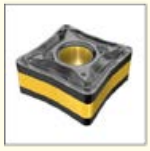
IB55
IB20H
IN22
IC807
IC907
IC808
IC908

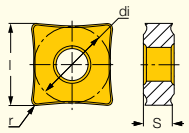
First Choice

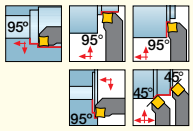
ISOTURN

QNMG-NF

Double-Sided Inserts with Four 80° Corners for Finishing Applications







Designation	Dimensions l	di	S	r	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
QNMG 120408-NF	13.33	12.70	4.76	0.80	●	0.80-3.00	0.08-0.25

• For user guide and cutting speed recommendations, see pages 197-212

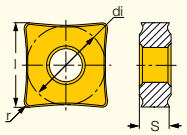
For tools, see pages: PQFNR/L (11) • PQLNR/L (11) • PQSNR/L (12) • S-PQFNR/L (80) • S-PQLNR/L (80)

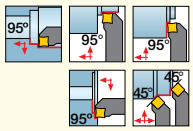
ISOTURN

QNMG-TF

Double-Sided Inserts with Four 80° Corners for General Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
QNMG 090404-TF	10.32	9.52	4.76	0.40	●	●	●	1.00-4.00	0.12-0.35
QNMG 090408-TF	10.32	9.52	4.76	0.80	●	●	●	1.00-4.00	0.12-0.35
QNMG 120404-TF	13.41	12.70	4.76	0.40		●		1.00-4.00	0.12-0.35
QNMG 120408-TF	13.33	12.70	4.76	0.80		●	●	1.00-4.00	0.12-0.35
QNMG 120412-TF	13.25	12.70	4.76	1.20			●	1.50-4.50	0.15-0.40

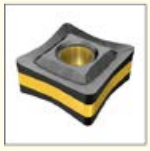
• For user guide and cutting speed recommendations, see pages 197-212

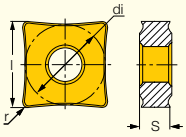
For tools, see pages: PQFNR/L (11) • PQLNR/L (11) • PQSNR/L (12) • S-PQFNR/L (80) • S-PQLNR/L (80)

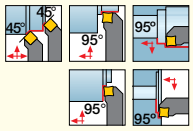
ISOTURN

QNMG-PP

Double-Sided Inserts with Four 80° Corners for General Applications



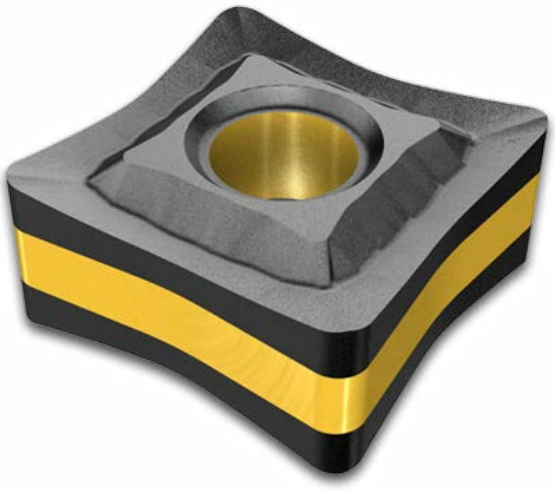




Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	Recommended Machining Data ap (mm)	f (mm/rev)
QNMG 090408-PP	10.32	9.52	4.76	0.80	●		1.00-4.00	0.14-0.30
QNMG 120408-PP	13.33	12.70	4.76	0.80	●	●	1.00-4.00	0.14-0.30

• For user guide and cutting speed recommendations, see pages 197-212

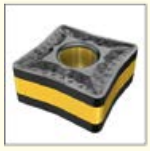
For tools, see pages: PQFNR/L (11) • PQLNR/L (11) • PQSNR/L (12) • S-PQFNR/L (80) • S-PQLNR/L (80)

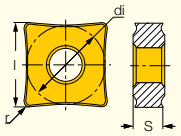


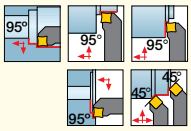
ISOTURN

QNMG-GN

Double-Sided Inserts with Four 80° Corners for General Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	IC8150	IC428	Recommended Machining Data ap (mm)	f (mm/rev)
QNMG 090408-GN	10.32	9.52	4.76	0.80	●		●		1.00-4.50	0.16-0.45
QNMG 120408-GN	13.33	12.70	4.76	0.80	●	●	●	●	1.00-4.50	0.16-0.45
QNMG 120412-GN	13.25	12.70	4.76	1.20	●	●	●	●	1.50-5.00	0.22-0.50

• For user guide and cutting speed recommendations, see pages 197-212

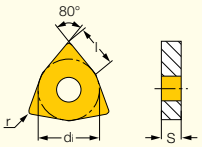
For tools, see pages: PQFNR/L (11) • PQLNR/L (11) • PQSNR/L (12) • S-PQFNR/L (80) • S-PQLNR/L (80)

ISOTURN

WNGP-F2P

Double-Sided Trigon Inserts for Super Finish Machining Conditions on Alloyed Steel







Designation	Dimensions l	di	S	r	IC530N	Recommended Machining Data ap (mm)	f (mm/rev)
WNGP 040302R/L-F2P	4.35	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
WNGP 040304R/L-F2P	4.35	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
WNGP 040308R/L-F2P	4.35	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

• For user guide and cutting speed recommendations, see pages 197-212

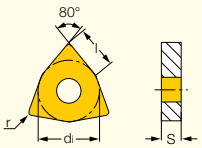
For tools, see pages: A/E-SWLNR/L-04 (83) • PWLNR/L-S (12)

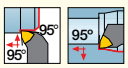
ISOTURN

WNMG-F3P

Double-Sided Trigon Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
WNMG 060404-F3P	6.52	9.52	4.76	0.40	●	●	●	●	●	0.50-2.50	0.07-0.25
WNMG 060408-F3P	6.52	9.52	4.76	0.80	●	●	●	●	●	0.90-3.00	0.08-0.25
WNMG 060412-F3P	6.52	9.52	4.76	1.20	●	●			●	1.30-3.00	0.10-0.25
WNMG 080404-F3P	8.70	12.70	4.76	0.40	●	●	●	●	●	0.50-3.50	0.07-0.25
WNMG 080408-F3P	8.70	12.70	4.76	0.80	●	●		●	●	0.90-3.50	0.08-0.25
WNMG 080412-F3P	8.70	12.70	4.76	1.20	●	●			●	1.30-3.50	0.10-0.25

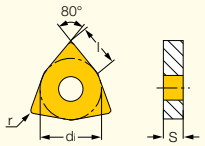
• For user guide and cutting speed recommendations, see pages 197-212

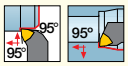
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMG-M3P
Double-Sided Trigon Inserts for
Medium Machining Conditions on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	IC5010	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T304-M3P	6.52	9.52	3.97	0.40		•	•			0.45-2.50	0.10-0.45
WNMG 06T308-M3P	6.52	9.52	3.97	0.80	•	•	•			0.50-3.00	0.15-0.50
WNMG 06T312-M3P	6.52	9.52	3.97	1.20		•				0.80-3.00	0.18-0.60
WNMG 060404-M3P	6.52	9.52	4.76	0.40		•	•		•	0.45-2.50	0.10-0.45
WNMG 060408-M3P	6.52	9.52	4.76	0.80		•	•		•	0.50-3.00	0.15-0.50
WNMG 060412-M3P	6.52	9.52	4.76	1.20			•		•	0.80-3.00	0.18-0.60
WNMG 080404-M3P	8.70	12.70	4.76	0.40		•	•		•	0.40-3.50	0.10-0.45
WNMG 080408-M3P	8.70	12.70	4.76	0.80		•	•	•	•	0.50-4.00	0.15-0.50
WNMG 080412-M3P	8.70	12.70	4.76	1.20		•	•	•	•	0.80-4.00	0.18-0.60
WNMG 080416-M3P	8.70	12.70	4.76	1.60		•			•	1.00-4.00	0.23-0.65

• For user guide and cutting speed recommendations, see pages 197-212

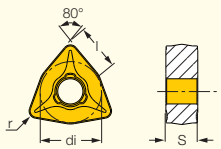
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

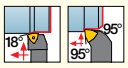
DOVEIQTURN HEAVY DUTY LINE

FEEDTURN

WOMG-10-T3P-IQ
Double-Sided 6° Negative
Side Flank Trigon Inserts for
High Feed Turning of Steel





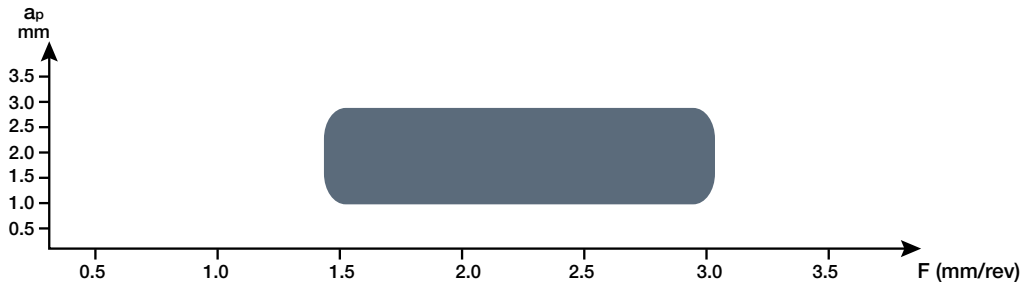


Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
WOMG 100716-T3P-IQ	10.86	15.88	7.94	1.60	•	•	•	1.00-2.80	1.50-3.00

• The specified machining recommendations in the above table are valid only for PWXOR/L-TF-IQ tools. For PWLOR/L-IQ tools: ap= 3-7 mm, ft= 0.3-0.8 mm/rev.
• For user guide, see pages 197-212

For tools, see pages: PWLOR/L-IQ (22) • PWXOR/L-TF-IQ (23)

Application Range on PWXOR/L-TF-IQ Tools

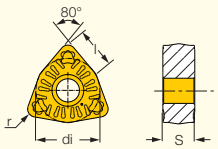


DOVEIQTURN HEAVY DUTY LINE

WOMG-13-R3P-IQ

Double-Sided 7° Negative Side Flank Trigon Inserts for Heavy Turning of Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
WOMG 130612-R3P-IQ	13.03	19.05	6.35	1.20	•	•	3.50-8.00	0.30-0.80
WOMG 130616-R3P-IQ	13.03	19.05	6.35	1.60	•	•	4.00-8.00	0.40-0.85
WOMG 130624-R3P-IQ	13.03	19.05	6.35	2.40	•	•	4.00-8.00	0.40-1.00

• For user guide and cutting speed recommendations, see pages 197-212

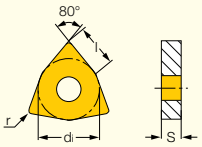
For tools, see pages: C#-PWLOR/L-IQ (22) • PWLOR/L-IQ (22)

ISOTURN

WNGP-F2M

Double-Sided Trigon Inserts for Super Finish Machining Conditions on Stainless Steel







Designation	Dimensions l	di	S	r	IC908	Recommended Machining Data a_p (mm)	f (mm/rev)
WNGP 040302R/L-F2M	4.35	6.35	3.18	0.20	•	0.30-2.00	0.08-0.30
WNGP 040304R/L-F2M	4.35	6.35	3.18	0.40	•	0.30-2.00	0.08-0.30
WNGP 040308R/L-F2M	4.35	6.35	3.18	0.80	•	0.30-2.00	0.08-0.30

• For user guide and cutting speed recommendations, see pages 197-212

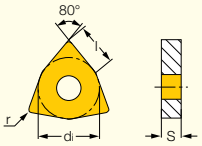
For tools, see pages: A/E-SWLNR/L-04 (83) • PWLNR/L-S (12)

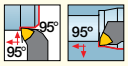
ISOTURN

WNMG-F3M

Double-Sided Trigon Inserts for Stainless Steel Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 060404-F3M	6.52	9.52	4.76	0.40	•	•	•	•	•	0.10-1.50	0.05-0.30
WNMG 060408-F3M	6.52	9.52	4.76	0.80	•	•	•	•	•	0.10-1.50	0.10-0.40
WNMG 060412-F3M	6.52	9.52	4.76	1.20		•	•	•	•	0.20-2.50	0.15-0.50
WNMG 080404-F3M	8.70	12.70	4.76	0.40		•	•	•	•	0.10-1.50	0.05-0.30
WNMG 080408-F3M	8.70	12.70	4.76	0.80		•	•	•	•	0.10-1.50	0.10-0.40
WNMG 080412-F3M	8.70	12.70	4.76	1.20		•	•	•	•	0.20-2.50	0.15-0.50

• For user guide and cutting speed recommendations, see pages 197-212

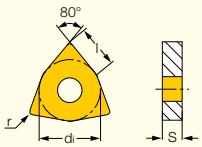
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMG-M3M

Double-Sided Trigon Inserts
for Machining Stainless and
Low Carbon Steel





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	IC804	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 060404-M3M	6.52	9.52	4.76	0.40		●	●	●	●		0.50-3.50	0.12-0.40
WNMG 060408-M3M	6.52	9.52	4.76	0.80	●	●	●	●	●		0.50-3.50	0.15-0.50
WNMG 060412-M3M	6.52	9.52	4.76	1.20	●	●	●	●	●		0.50-3.50	0.20-0.60
WNMG 080404-M3M	8.70	12.70	4.76	0.40					●		0.50-5.00	0.12-0.40
WNMG 080408-M3M	8.70	12.70	4.76	0.80		●	●	●	●	●	0.50-5.00	0.15-0.50
WNMG 080412-M3M	8.70	12.70	4.76	1.20	●	●	●	●	●		0.50-5.00	0.20-0.60
WNMG 080416-M3M	8.70	12.70	4.76	1.60					●		0.50-5.00	0.25-0.70

• For user guide and cutting speed recommendations, see pages 197-212

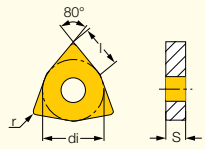
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMG-SF

Double-Sided Trigon Inserts
for Super Finishing





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC530N	IC520N	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T302-SF	6.52	9.52	3.97	0.20	●				0.30-1.50	0.02-0.15
WNMG 06T304-SF	6.52	9.52	3.97	0.40	●	●	●	●	0.30-1.50	0.05-0.15

• For user guide and cutting speed recommendations, see pages 197-212

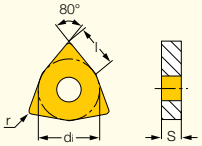
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12)

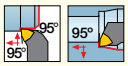


ISOTURN

WNMG-NF
Double-Sided Trigon Inserts for Semi-Finishing and Finishing Applications







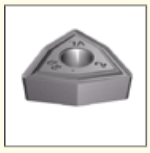
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC908	IC30N	IC530N	IC10	IC8150	IC20	IC20N	IC520N	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T301-NF	6.52	9.52	3.97	0.10			●										0.20-1.00	0.05-0.15
WNMG 06T302-NF	6.52	9.52	3.97	0.20	●	●		●	●	●	●		●		●	●	0.30-1.50	0.08-0.17
WNMG 06T304-NF	6.52	9.52	3.97	0.40	●	●		●	●	●	●	●	●	●	●	●	0.40-2.50	0.07-0.25
WNMG 06T308-NF	6.52	9.52	3.97	0.80	●	●				●	●	●	●				0.60-3.00	0.08-0.25
WNMG 060402-NF	6.52	9.52	4.76	0.20											●	●	0.30-3.00	0.05-0.20
WNMG 060404-NF	6.52	9.52	4.76	0.40		●									●	●	0.60-3.00	0.08-0.25
WNMG 060408-NF	6.52	9.52	4.76	0.80							●						0.80-3.00	0.08-0.25
WNMG 080404-NF	8.70	12.70	4.76	0.40		●			●				●				0.40-3.50	0.07-0.25
WNMG 080408-NF	8.70	12.70	4.76	0.80		●			●		●		●				0.80-3.50	0.08-0.25
WNMG 080412-NF	8.70	12.70	4.76	1.20							●						1.20-3.50	0.08-0.25

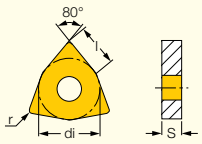
• For user guide and cutting speed recommendations, see pages 197-212

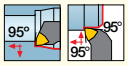
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMG-VL
Double-Sided Trigon Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC908	IC806	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T308-VL	6.52	9.52	3.97	0.80	●			0.50-3.00	0.07-0.25
WNMG 080404-VL	8.70	12.70	4.76	0.40		●	●	0.30-3.00	0.05-0.15
WNMG 080408-VL	8.70	12.70	4.76	0.80	●	●		0.50-4.00	0.10-0.25
WNMG 080412-VL	8.70	12.70	4.76	1.20	●			1.00-4.50	0.12-0.25

• For user guide and cutting speed recommendations, see pages 197-212

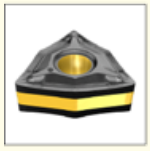
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • S-DWLNR/L (78) • S-MULNR-MW (85)

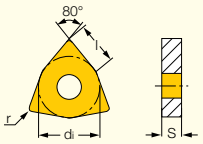


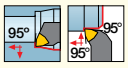
ISOTURN

WNMG-WG

Double-Sided Trigon Wiper Inserts for High Surface Finish at High Feed Turning







Designation	Dimensions di	l	S	r	Tough ↔ Hard IC8250	IC530N	IC8150	IC20N	IC520N	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T304-WG	9.52	6.52	3.97	0.40	•	•	•	•	•					0.40-3.00	0.10-0.35
WNMG 06T308-WG	9.52	6.52	3.97	0.80	•		•		•			•	•	0.60-3.50	0.10-0.50
WNMG 060404-WG	9.52	6.52	4.76	0.40	•	•	•					•		0.40-3.00	0.10-0.35
WNMG 060408-WG	9.52	6.52	4.76	0.80	•		•					•		0.60-3.50	0.10-0.50
WNMG 080408-WG	12.70	8.70	4.76	0.80	•	•	•	•	•	•	•	•	•	1.00-3.50	0.10-0.50
WNMG 080412-WG	12.70	8.70	4.76	1.20	•		•		•	•	•			1.20-4.00	0.30-0.80

• For user guide and cutting speed recommendations, see pages 197-212

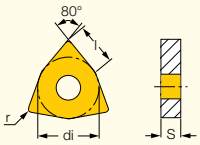
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

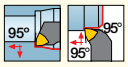
ISOTURN

WNMG-WF

Double-Sided Trigon Wiper Inserts for Finishing Operations at High Feeds



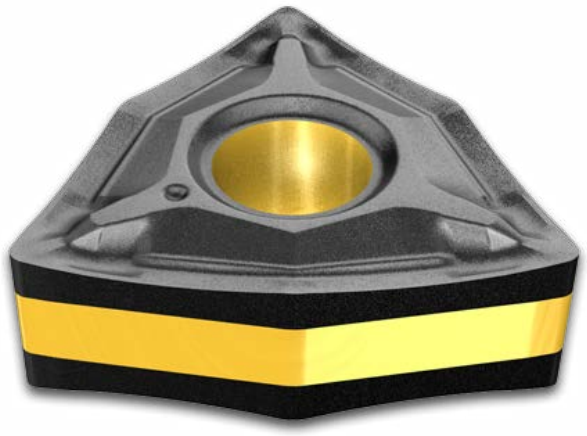




Designation	Dimensions l	di	S	r	Tough ↔ Hard IC530N	IC8150	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 060402-WF	6.52	9.52	4.76	0.20				•	0.20-3.00	0.05-0.25
WNMG 060404-WF	6.52	9.52	4.76	0.40			•	•	0.50-3.00	0.05-0.30
WNMG 060408-WF	6.52	9.52	4.76	0.80				•	0.80-3.50	0.07-0.30
WNMG 080408-WF	8.70	12.70	4.76	0.80	•	•			0.80-3.50	0.07-0.35
WNMG 080412-WF	8.70	12.70	4.76	1.20		•			0.80-3.50	0.07-0.35

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

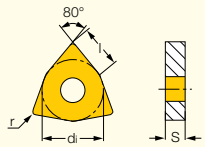


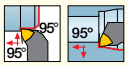
ISOTURN

WNMG-PP

Double-Sided Trigon Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC28	IC830	IC8350	IC6025	IC8250	IC30N	IC530N	IC10	IC6015	IC8150	IC520M	IC20	IC20N	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T304-PP	6.52	9.52	3.97	0.40			●		●		●	●		●					●	●	1.00-3.00	0.14-0.30
WNMG 06T308-PP	6.52	9.52	3.97	0.80			●		●					●					●	●	1.00-3.00	0.14-0.30
WNMG 060404-PP	6.52	9.52	4.76	0.40			●		●										●	●	1.00-3.00	0.14-0.30
WNMG 060408-PP	6.52	9.52	4.76	0.80			●												●	●	1.00-3.00	0.14-0.30
WNMG 080404-PP	8.70	12.70	4.76	0.40		●	●	●	●			●	●	●					●	●	1.00-3.50	0.14-0.30
WNMG 080408-PP	8.70	12.70	4.76	0.80	●	●	●	●	●			●	●	●	●		●	●	●	●	1.00-4.00	0.14-0.30
WNMG 080412-PP	8.70	12.70	4.76	1.20					●	●						●					1.50-5.00	0.18-0.40

• For user guide and cutting speed recommendations, see pages 197-212

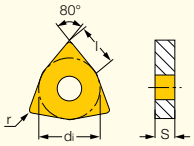
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

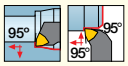
ISOTURN

WNMG-TF

Double-Sided Trigon Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC6025	IC8250	IC908	IC6015	IC8150	IC520M	IC20	IC20N	IC5010	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 06T304-TF	6.52	9.52	3.97	0.40				●					●				●	●	1.00-3.00	0.12-0.35
WNMG 06T308-TF	6.52	9.52	3.97	0.80				●			●		●	●		●	●	●	1.00-3.00	0.12-0.35
WNMG 06T312-TF	6.52	9.52	3.97	1.20													●	●	1.00-4.00	0.15-0.40
WNMG 060404-TF	6.52	9.52	4.76	0.40				●									●	●	1.00-3.00	0.12-0.35
WNMG 060408-TF	6.52	9.52	4.76	0.80				●			●						●	●	1.00-3.00	0.12-0.35
WNMG 060412-TF	6.52	9.52	4.76	1.20													●	●	1.00-4.00	0.15-0.35
WNMG 080404-TF	8.70	12.70	4.76	0.40			●	●		●	●		●			●	●	●	1.00-4.00	0.12-0.35
WNMG 080408-TF	8.70	12.70	4.76	0.80	●	●	●	●	●	●	●	●	●		●	●	●	●	1.00-4.00	0.12-0.35
WNMG 080412-TF	8.70	12.70	4.76	1.20			●	●	●	●			●				●	●	1.50-4.50	0.15-0.40

• For user guide and cutting speed recommendations, see pages 197-212

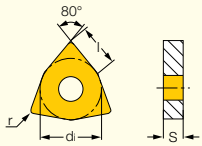
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

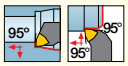
ISOTURN

WNMG-GN

Double-Sided Trigon Inserts
for General Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC928	IC8350	IC6025	IC8250	IC6015	IC8150	IC20	IC5010	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
WNMG 06T304-GN	6.52	9.52	3.97	0.40					●		●	●					1.00-3.50	0.14-0.40
WNMG 06T308-GN	6.52	9.52	3.97	0.80			●		●		●						1.00-3.50	0.16-0.45
WNMG 06T312-GN	6.52	9.52	3.97	1.20					●								1.50-4.00	0.18-0.45
WNMG 060404-GN	6.52	9.52	4.76	0.40					●								1.00-3.50	0.14-0.40
WNMG 060408-GN	6.52	9.52	4.76	0.80					●								1.00-3.50	0.16-0.45
WNMG 060412-GN	6.52	9.52	4.76	1.20							●						1.50-4.00	0.18-0.45
WNMG 080404-GN	8.70	12.70	4.76	0.40					●		●		●	●			1.00-4.50	0.14-0.40
WNMG 080408-GN	8.70	12.70	4.76	0.80	●	●	●	●	●	●	●	●	●	●	●	●	1.00-4.50	0.16-0.45
WNMG 080412-GN	8.70	12.70	4.76	1.20			●		●		●		●	●			1.50-4.50	0.22-0.50
WNMG 130612-GN	13.03	19.05	6.35	1.20			●		●								2.50-5.50	0.30-0.50
WNMG 130616-GN	13.03	19.05	6.35	1.60					●								2.50-6.00	0.30-0.50

• For user guide and cutting speed recommendations, see pages 197-212

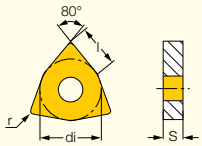
For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

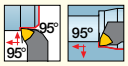
ISOTURN

WNMM-NM

Single-Sided Trigon Inserts
for Roughing Applications







Designation	Dimensions l	di	S	r	IC8250	Recommended Machining Data ap (mm)	f (mm/rev)
WNMM 080408-NM	8.70	12.70	4.76	0.80	●	1.50-5.00	0.20-0.50

• For user guide and cutting speed recommendations, see pages 197-212

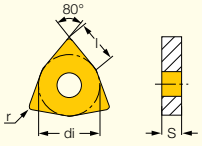
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

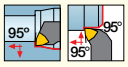
ISOTURN

WNMG-NR

Double-Sided Trigon Inserts
with a Special Chipformer
for Heavy Machining







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC520M	IC5010	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
WNMG 080408-NR	8.70	12.70	4.76	0.80	●				●	●	1.00-5.00	0.18-0.50
WNMG 080412-NR	8.70	12.70	4.76	1.20	●	●	●	●	●	●	2.00-5.00	0.23-0.55
WNMG 080416-NR	8.70	12.70	4.76	1.60	●	●					2.00-5.00	0.30-0.60

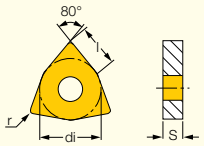
• For user guide and cutting speed recommendations, see pages 197-212

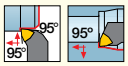
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMG-TNM
Double-Sided Trigon Inserts
for Semi-Roughing and
Roughing Applications







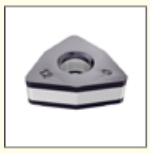
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMG 080408-TNM	8.70	12.70	4.76	0.80		●			2.00-4.50	0.25-0.45
WNMG 080412-TNM	8.70	12.70	4.76	1.20		●			2.00-4.50	0.25-0.45
WNMG 130612-TNM	13.03	19.05	6.35	1.20	●	●	●	●	2.50-7.00	0.25-0.65
WNMG 130616-TNM	13.03	19.05	6.35	1.60	●	●			2.50-7.00	0.25-0.65
WNMG 130624-TNM	13.03	19.05	6.35	2.40		●			3.00-7.00	0.30-0.65

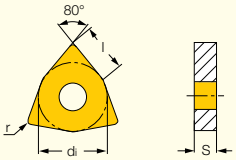
• For user guide and cutting speed recommendations, see pages 197-212

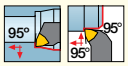
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-13W (21) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

WNMA/WNMA-WG
Double-Sided Trigon Inserts for Short
Chipping Materials such as Cast Iron







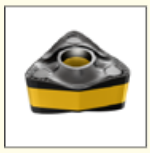
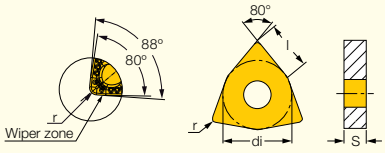
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8150	IC5010	IC428	IC5005	Recommended Machining Data a_p (mm)	f (mm/rev)
WNMA 06T304	6.52	9.52	3.97	0.40		●		●	0.50-2.00	0.03-0.29
WNMA 06T304 *	6.52	9.52	3.97	0.40			●		0.50-2.00	0.03-0.29
WNMA 06T308	6.52	9.52	3.97	0.80		●	●	●	1.00-3.00	0.03-0.38
WNMA 06T312	6.52	9.52	3.97	1.20			●	●	1.50-3.50	0.03-0.43
WNMA 060404	6.52	9.52	4.76	0.40		●		●	1.00-3.00	0.03-0.48
WNMA 060408	6.52	9.52	4.76	0.80		●		●	1.00-3.00	0.03-0.48
WNMA 060408 *	6.52	9.52	4.76	0.80			●		1.00-3.00	0.03-0.48
WNMA 080408	8.70	12.70	4.76	0.80	●	●	●	●	1.00-4.00	0.03-0.48
WNMA 080408-WG	8.70	12.70	4.76	0.80			●		1.00-3.50	0.10-0.60
WNMA 080412	8.70	12.70	4.76	1.20		●	●	●	1.50-4.00	0.03-0.55
WNMA 080416	8.70	12.70	4.76	1.60		●	●	●	2.00-5.00	0.03-0.60
WNMA 130616	13.03	19.05	6.35	1.60			●	●	3.00-8.00	0.03-0.80

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A-PWLNR/L-X/G (84) • A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • E-PWLNR/L-HEAD (85) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-13W (21) • MWLNR/L-CA-W (101) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

HELITURN LD

WNMX-M3/4PW
Double-Sided Trigon Inserts with High Helical Cutting Edge for High Metal Removal Rates

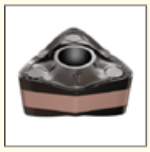
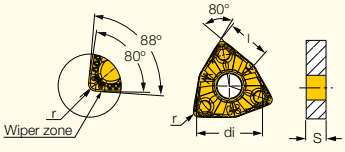



Designation	Dimensions di	r	S	l	Tough ↔ Hard IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
WNMX 060604-M3PW	9.52	0.40	4.41	6.50	●	●				1.00-4.00	0.20-0.50
WNMX 060608-M3PW	9.52	0.80	4.41	6.50	●	●	●	●	●	1.50-4.00	0.25-0.60
WNMX 080708-M4PW	12.70	0.80	6.78	8.70	●	●			●	1.50-5.00	0.25-0.60
WNMX 080712-M4PW	12.70	1.20	6.78	8.70	●	●				2.00-5.00	0.30-0.80
WNMX 080716-M4PW	12.70	1.60	6.78	8.70	●	●				2.00-5.00	0.30-1.00

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PWLNR/L-X/G (84) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16)

HELITURN LD

WNMX-M3/4MW
Double-Sided Trigon Inserts for Machining Stainless Steel, High Temperature Alloys and Soft, Low Carbon Steel

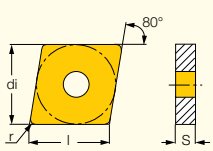



Designation	Dimensions di	r	S	l	Tough ↔ Hard IC6025	IC8250	IC6015	IC8150	IC806	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
WNMX 060604-M3MW	9.52	0.40	4.41	6.50	●		●				0.80-4.00	0.15-0.50
WNMX 060608-M3MW	9.52	0.80	4.41	6.50	●		●				1.00-5.00	0.20-0.60
WNMX 080704-M4MW	12.70	0.40	6.78	8.70	●	●	●	●	●	●	0.80-5.00	0.15-0.50
WNMX 080708-M4MW	12.70	0.80	6.78	8.70	●	●	●	●	●	●	1.00-5.00	0.20-0.60
WNMX 080712-M4MW	12.70	1.20	6.78	8.70	●		●		●	●	1.20-5.00	0.25-0.70

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PWLNR/L-X/G (84) • C#-PWLNR/L-X (16) • C#-PWLNR/L-X-JHP (17) • DWLNR/L (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16)

ISOTURN

CNMG-F3P
Double-Sided 80° Rhombic Inserts for Semi-Finishing and Finishing Applications

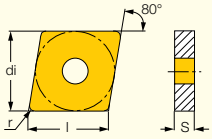
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC6025	IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 090404-F3P	9.67	9.52	4.76	0.40		●	●	●	●	●	0.50-3.50	0.07-0.25
CNMG 090408-F3P	9.67	9.52	4.76	0.80		●	●	●	●	●	0.90-3.50	0.08-0.25
CNMG 120404-F3P	12.90	12.70	4.76	0.40	●	●	●	●	●	●	0.50-3.50	0.07-0.25
CNMG 120408-F3P	12.90	12.70	4.76	0.80		●	●	●	●	●	0.90-3.50	0.08-0.25
CNMG 120412-F3P	12.90	12.70	4.76	1.20		●	●			●	1.30-3.50	0.10-0.25

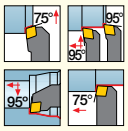
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/S-PCLNR/L (81) • A/S-PCLNR/L-X/G (82) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85)

ISOTURN

CNMG-M3P
Double-Sided 80° Rhombic Inserts for Medium Machining Conditions on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	IC5010	IC5005	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 090404-M3P	9.67	9.52	4.76	0.40		●	●			●	0.40-4.00	0.10-0.30
CNMG 090408-M3P	9.67	9.52	4.76	0.80		●	●			●	0.50-4.50	0.15-0.50
CNMG 120404-M3P	12.90	12.70	4.76	0.40		●	●			●	0.40-5.50	0.10-0.30
CNMG 120408-M3P	12.90	12.70	4.76	0.80		●	●	●	●	●	0.50-5.50	0.15-0.50
CNMG 120412-M3P	12.90	12.70	4.76	1.20		●	●			●	0.80-5.50	0.18-0.60
CNMG 160612-M3P	16.12	15.88	6.35	1.20	●	●	●			●	0.80-7.20	0.18-0.60
CNMG 160616-M3P	16.12	15.88	6.35	1.60		●				●	0.80-7.20	0.18-0.60
CNMG 190608-M3P	19.30	19.05	6.35	0.80		●				●	0.50-8.60	0.15-0.50
CNMG 190612-M3P	19.30	19.05	6.35	1.20		●				●	0.80-8.60	0.18-0.60

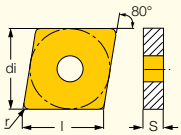
• For user guide and cutting speed recommendations, see pages 197-212

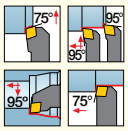
For tools, see pages: A/S-PCLNR/L (81) • A/S-PCLNR/L-X/G (82) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85)

ISOTURN

CNMM-R3P
Single-Sided 80° Rhombic Inserts for Rough Turning Applications on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMM 120408-R3P	12.90	12.70	4.76	0.80	●	●	0.70-7.50	0.20-0.55
CNMM 120412-R3P	12.90	12.70	4.76	1.20	●	●	1.00-7.50	0.25-0.70
CNMM 120416-R3P	12.90	12.70	4.76	1.60	●	●	1.50-7.50	0.30-0.90
CNMM 160608-R3P	16.12	15.88	6.35	0.80	●	●	2.00-9.50	0.20-0.55
CNMM 160612-R3P	16.12	15.88	6.35	1.20	●	●	2.00-9.50	0.30-0.70
CNMM 160616-R3P	16.12	15.88	6.35	1.60	●	●	2.00-9.50	0.30-0.90
CNMM 190612-R3P	19.34	19.05	6.35	1.20	●	●	3.00-12.00	0.25-0.80
CNMM 190616-R3P	19.34	19.05	6.35	1.60	●	●	3.50-12.00	0.30-0.90
CNMM 190624-R3P	19.34	19.05	6.35	2.40	●	●	3.50-12.00	0.30-1.20
CNMM 250924-R3P	25.79	25.40	9.52	2.40	●	●	4.00-15.00	0.40-1.20

• For user guide and cutting speed recommendations, see pages 197-212

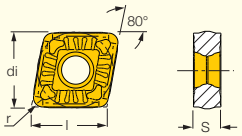
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

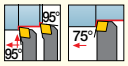
DOVEIQTURN HEAVY DUTY LINE

COMG-R3P-IQ

Double-Sided 7° Negative Side Flank 80° Rhombic Inserts for Heavy Turning of Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
COMG 160608-R3P-IQ	16.12	15.88	6.35	0.80	•	•	2.00-9.00	0.25-0.50
COMG 160612-R3P-IQ	16.12	15.88	6.35	1.20	•	•	2.00-9.00	0.30-0.60
COMG 160616-R3P-IQ	16.12	15.88	6.35	1.60	•	•	2.00-9.00	0.30-0.70
COMG 190612-R3P-IQ	19.34	19.05	6.35	1.20	•	•	3.00-12.00	0.30-0.80
COMG 190616-R3P-IQ	19.34	19.05	6.35	1.60	•	•	3.50-12.00	0.35-0.90
COMG 190624-R3P-IQ	19.34	19.05	6.35	2.40	•	•	3.50-12.00	0.35-0.90
COMG 250924-R3P-IQ	25.79	25.40	9.52	2.40	•	•	4.00-15.00	0.40-1.00

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: C#-PCLOR/L-IQ (30) • PCBOR/L-IQ (30) • PCLOR/L-IQ (29)





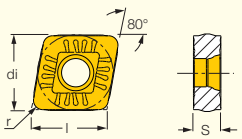
DOVETAIL GEOMETRY

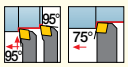
DOVEIQTURN HEAVY DUTY LINE

COMM-R3P-IQ

Single-Sided 7° Negative Side Flank 80° Rhombic Inserts for Heavy Turning of Steel



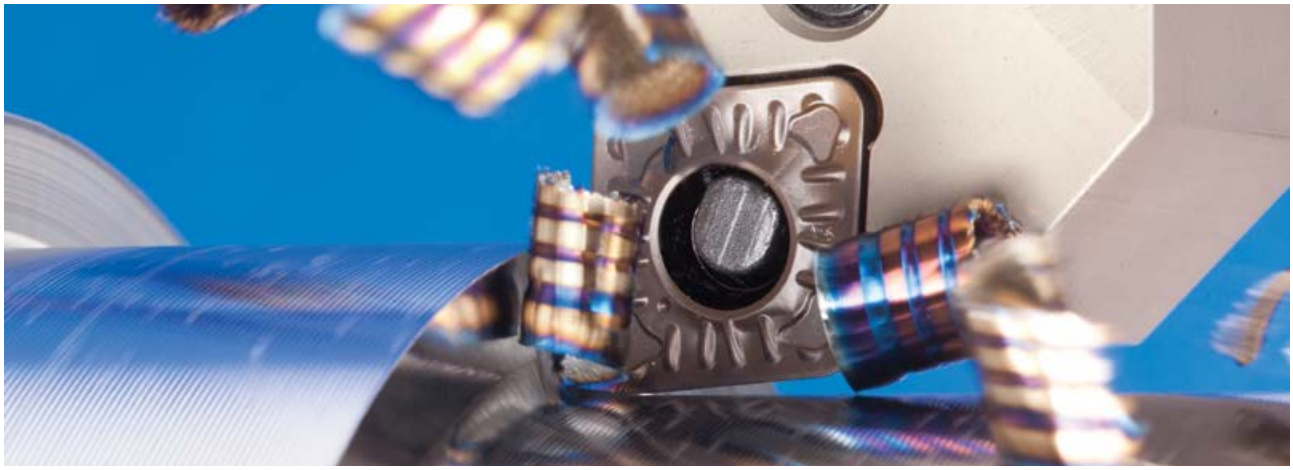




Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
COMM 190624-R3P-IQ	19.34	19.05	6.35	2.40	•	•	3.50-12.00	0.35-1.20

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: C#-PCLOR/L-IQ (30) • PCBOR/L-IQ (30) • PCLOR/L-IQ (29)

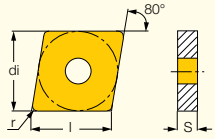


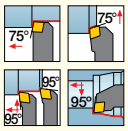
ISOTURN

CNMG-F3M

Double-sided 80° Rhombic Inserts for Stainless Steel Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	IC4	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 090404-F3M	9.67	9.52	4.76	0.40	●	●	●	●	●			0.10-1.50	0.05-0.30
CNMG 090408-F3M	9.67	9.52	4.76	0.80	●	●	●	●	●			0.10-1.50	0.10-0.40
CNMG 120404-F3M	12.90	12.70	4.76	0.40		●	●	●	●			0.10-1.50	0.05-0.30
CNMG 120408-F3M	12.90	12.70	4.76	0.80		●	●	●	●		●	0.10-1.50	0.10-0.40
CNMG 120412-F3M	12.90	12.70	4.76	0.80		●	●	●	●	●	●	0.10-1.50	0.10-0.40

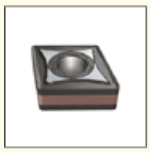
• For user guide and cutting speed recommendations, see pages 197-212

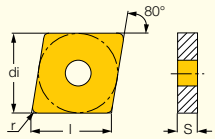
For tools, see pages: A/S-PCLNR/L (81) • A/S-PCLNR/L-X/G (82) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85)

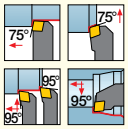
ISOTURN

CNMG-M3M

Double-Sided 80° Rhombic Inserts for Machining Stainless and Low Carbon Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 090404-M3M	9.67	9.52	4.76	0.40		●	●	●	●		0.40-4.00	0.12-0.40
CNMG 090408-M3M	9.67	9.52	4.76	0.80	●	●	●	●	●		0.50-4.50	0.15-0.50
CNMG 120404-M3M	12.90	12.70	4.76	0.40					●		0.50-5.00	0.15-0.50
CNMG 120408-M3M	12.90	12.70	4.76	0.80		●	●	●	●	●	0.50-5.00	0.15-0.50
CNMG 120412-M3M	12.90	12.70	4.76	1.20		●	●		●	●	0.50-5.00	0.20-0.60
CNMG 120416-M3M	12.90	12.70	4.76	1.60		●	●				0.50-5.00	0.25-0.70
CNMG 160608-M3M	16.12	15.88	6.35	0.80		●	●	●			0.50-7.00	0.15-0.50
CNMG 160612-M3M	16.12	15.88	6.35	1.20		●	●	●	●		0.50-7.00	0.20-0.60
CNMG 160616-M3M	16.12	15.88	6.35	1.60		●	●		●		0.50-7.00	0.25-0.70
CNMG 190608-M3M	19.34	19.05	6.35	0.80		●	●		●		3.00-10.00	0.30-0.70
CNMG 190612-M3M	19.34	19.05	6.35	1.20					●		3.00-10.00	0.35-0.80

• For user guide and cutting speed recommendations, see pages 197-212

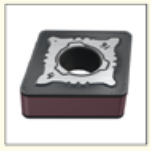
For tools, see pages: A/S-PCLNR/L (81) • A/S-PCLNR/L-X/G (82) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85)

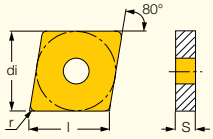


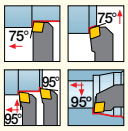
ISOTURN

CNMG-R3M

Double-Sided 80° Rhombic Inserts for Rough Machining of Stainless and Low Carbon Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC6025	IC806	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 160612-R3M	16.12	15.88	6.35	1.20	•		2.00-9.00	0.30-0.90
CNMG 160616-R3M	16.12	15.88	6.35	1.60	•		2.00-10.00	0.40-1.00
CNMG 160624-R3M	16.12	15.88	6.35	2.40	•		2.00-11.00	0.50-1.20
CNMG 190612-R3M	19.34	19.05	6.35	1.20	•	•	2.00-9.00	0.30-0.90
CNMG 190616-R3M	19.34	19.05	6.35	1.60	•	•	2.00-10.00	0.40-1.00
CNMG 190624-R3M	19.34	19.05	6.35	2.40	•		2.00-11.00	0.50-1.20

• For user guide and cutting speed recommendations, see pages 197-212

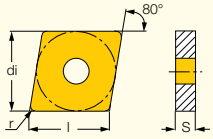
For tools, see pages: A/S-PCLNR/L (81) • C#-PCLNR/L-X (27) • DCBNR/L (28) • DCLNR/L (28) • MCLNR/L (24) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-X (25) • A/S-PCLNR/L-X/G (82)

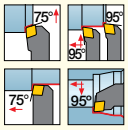
ISOTURN

CNMG-VL

Double-Sided 80° Rhombic Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC806	IC804	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120404-VL	12.90	12.70	4.76	0.40	•		0.30-3.00	0.05-0.15
CNMG 120408-VL	12.90	12.70	4.76	0.80	•	•	0.50-4.00	0.10-0.25

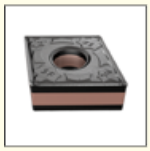
• For user guide and cutting speed recommendations, see pages 197-212

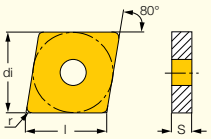
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

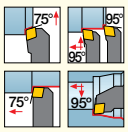
ISOTURN

CNMG/CNGG-SF

Double-Sided 80° Rhombic Inserts for Super-Finishing; Controls Chip Flow at Very Low Feeds and Depths of Cut







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC6015	IC520N	IC428	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120402-SF	12.90	12.70	4.76	0.20		•	•		0.30-2.00	0.03-0.25
CNMG 120404-SF	12.90	12.70	4.76	0.40	•				0.30-2.00	0.05-0.25
CNGG 120401-SF	12.90	12.70	4.76	0.10				•	0.20-1.50	0.03-0.15
CNGG 120402-SF	12.90	12.70	4.76	0.20				•	0.30-2.00	0.03-0.20
CNGG 120404-SF	12.90	12.70	4.76	0.40				•	0.30-2.00	0.03-0.20

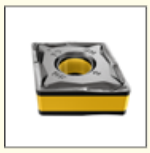
• For user guide and cutting speed recommendations, see pages 197-212

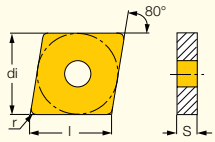
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

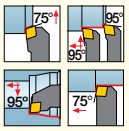
ISOTURN

CNMG-NF

Double-Sided 80° Rhombic Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC530N	IC8150	IC20N	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120404-NF	12.90	12.70	4.76	0.40	●	●	●	●	●	●	0.40-3.50	0.07-0.25
CNMG 120408-NF	12.90	12.70	4.76	0.80	●		●	●	●	●	0.80-3.50	0.08-0.25

• For user guide, see pages 197-212

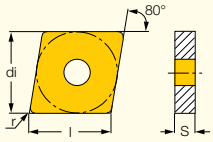
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

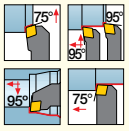
ISOTURN

CNMG-WF

Double-Sided 80° Rhombic Wiper Inserts for Finishing Operations at High Feeds







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120408-WF	12.90	12.70	4.76	0.80	●	●	0.80-3.50	0.10-0.35

• For user guide and cutting speed recommendations, see pages 197-212

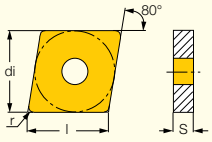
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

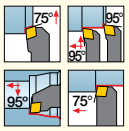
ISOTURN

CNMG-WG/NRW

Double-Sided 80° Rhombic Wiper Inserts for High Feed Turning and High Surface Finish







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC520N	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120408-WG	12.90	12.70	4.76	0.80	●	●	●	●	●	●	●	0.80-3.50	0.10-0.50
CNMG 120412-WG	12.90	12.70	4.76	1.20	●	●						1.50-4.00	0.30-0.80
CNMG 120416-NRW	12.90	12.70	4.76	1.60	●	●						2.00-4.50	0.30-0.80

• For user guide, see pages 197-212

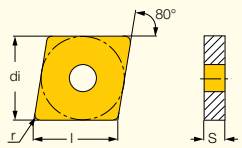
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

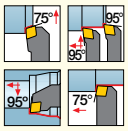
ISOTURN

CNMA

Double-Sided 80° Rhombic Inserts for Short Chipping Materials such as Cast Iron







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8150	IC20	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CNMA 120404	12.90	12.70	4.76	0.40			●	●	●			1.00-4.00	0.03-0.34
CNMA 120408	12.90	12.70	4.76	0.80	●	●	●	●	●			1.00-4.00	0.05-0.43
CNMA 120408F (1)	12.90	12.70	4.76	0.80						●	●	1.00-4.00	0.05-0.50
CNMA 120412	12.90	12.70	4.76	1.20	●	●	●	●	●			1.50-4.50	0.08-0.60
CNMA 120416	12.90	12.70	4.76	1.60			●	●	●			2.00-6.00	0.30-0.60
CNMA 160612	16.12	15.88	6.35	1.20					●			2.00-10.00	0.10-0.80
CNMA 160616	16.12	15.88	6.35	1.60			●		●			2.00-10.00	0.30-0.60
CNMA 190612	19.30	19.05	6.35	1.20		●		●	●			2.00-10.00	0.10-0.80
CNMA 190616	19.30	19.05	6.35	1.60				●				2.50-10.00	0.30-1.00

• For user guide, see pages 197-212

(1) When using a double-ended insert, grooving depth is limited by the insert.

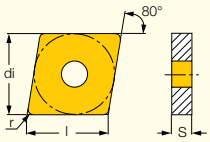
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

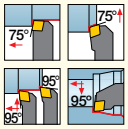
ISOTURN

CNMG/CNGG-PP

Double-Sided 80° Rhombic Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC28	IC830	IC8350	IC6025	IC8250	IC10	IC6015	IC8150	IC20N	IC428	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 120404-PP	12.90	12.70	4.76	0.40		●	●	●	●	●	●					●	●	1.00-4.00	0.14-0.30
CNMG 120408-PP	12.90	12.70	4.76	0.80	●	●	●	●	●	●	●	●		●	●	●	●	1.00-4.00	0.14-0.30
CNMG 120412-PP	12.90	12.70	4.76	1.20					●				●			●	●	1.50-4.00	0.18-0.40
CNMG 190612-PP	19.30	19.05	6.35	1.20												●	●	2.00-8.00	0.30-0.60
CNGG 120401-PP	12.90	12.70	4.76	0.10													●	0.40-2.00	0.05-0.20
CNGG 120402-PP	12.90	12.70	4.76	0.20													●	0.40-2.50	0.08-0.25
CNGG 120404-PP	12.90	12.70	4.76	0.40													●	0.80-3.00	0.10-0.30
CNGG 120408-PP	12.90	12.70	4.76	0.80											●		●	1.00-4.00	0.10-0.30
CNGG 120412-PP	12.90	12.70	4.76	1.20											●			1.00-4.00	0.10-0.30
CNGG 190612-PP	19.30	19.05	6.35	1.20													●	2.00-9.00	0.30-0.60

• For user guide, see pages 197-212

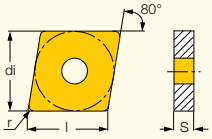
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

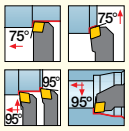
ISOTURN

CNMG/CNGG-TF

Double-Sided 80° Rhombic Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC6025	IC8250	IC908	IC6015	IC8150	IC20	IC20N	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 090304-TF	9.70	9.52	3.18	0.40				●			●						1.00-3.00	0.12-0.35
CNMG 090308-TF	9.70	9.52	3.18	0.80	●			●			●						1.00-4.00	0.12-0.35
CNMG 120404-TF	12.90	12.70	4.76	0.40	●		●	●		●		●		●	●	●	1.00-4.00	0.12-0.35
CNMG 120408-TF	12.90	12.70	4.76	0.80	●	●	●	●	●	●	●	●	●	●	●	●	1.00-4.00	0.12-0.35
CNMG 120412-TF	12.90	12.70	4.76	1.20			●	●	●	●	●	●		●	●	●	1.50-4.50	0.15-0.40
CNMG 160608-TF	16.12	15.88	6.35	0.80											●	●	1.00-6.00	0.12-0.35
CNMG 160612-TF	16.12	15.88	6.35	1.20				●									1.50-6.00	0.15-0.45
CNMG 190612-TF	19.30	19.05	6.35	1.20				●									1.50-6.50	0.20-0.55
CNGG 120408-TF	12.96	12.70	4.76	0.80												●	1.00-4.00	0.12-0.35
CNGG 190612-TF	19.30	19.05	6.35	1.20												●	2.00-9.00	0.30-0.70

• For user guide, see pages 197-212

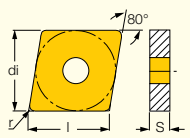
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

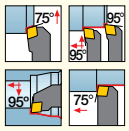
ISOTURN

CNMG-GN

Double-Sided 80° Rhombic Inserts for General Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC28	IC830	IC8350	IC6025	IC8250	IC530N	IC6015	IC8150	IC20	IC20N	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 120404-GN	12.90	12.70	4.76	0.40			●		●			●	●	●		●				1.00-4.00	0.14-0.40
CNMG 120408-GN	12.90	12.70	4.76	0.80	●	●	●	●	●	●	●	●	●	●	●		●	●	●	1.00-4.50	0.16-0.45
CNMG 120412-GN	12.90	12.70	4.76	1.20		●	●		●			●				●	●	●	●	1.50-5.00	0.22-0.50
CNMG 160612-GN	16.12	15.88	6.35	1.20		●			●			●			●					2.00-7.00	0.22-0.60
CNMG 160616-GN	16.12	15.88	6.35	1.60					●											2.00-7.00	0.22-0.75
CNMG 190608-GN	19.30	19.05	6.35	0.80					●											1.50-8.00	0.20-0.70
CNMG 190612-GN	19.30	19.05	6.35	1.20		●	●		●			●								2.00-7.98	0.25-0.70

• For user guide, see pages 197-212

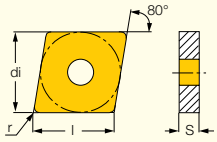
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

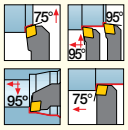
ISOTURN

CNMG-NR

Double-Sided 80° Rhombic Inserts with a Special Chipformer for Heavy Machining







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC6025	IC8250	IC6015	IC8150	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 120408-NR	12.90	12.70	4.76	0.80	●	●	●	●		●	●	●	●	●	1.00-4.50	0.15-0.45
CNMG 120412-NR	12.90	12.70	4.76	1.20	●		●		●	●		●			1.00-5.00	0.23-0.55
CNMG 120416-NR	12.90	12.70	4.76	1.60					●						1.00-5.00	0.30-0.60
CNMG 160608-NR	16.12	15.88	6.35	0.80	●		●								1.50-6.00	0.25-0.50
CNMG 160612-NR	16.12	15.88	6.35	1.20	●		●						●	●	2.00-7.00	0.30-0.60
CNMG 160616-NR	16.12	15.88	6.35	1.60	●		●		●		●	●	●	●	2.50-7.00	0.30-0.70
CNMG 190608-NR	19.30	19.05	6.35	0.80	●		●								3.50-8.00	0.30-0.72
CNMG 190612-NR	19.30	19.05	6.35	1.20	●		●						●	●	3.50-8.00	0.30-0.80
CNMG 190616-NR	19.30	19.05	6.35	1.60	●		●		●				●	●	4.00-10.00	0.40-0.85
CNMG 190624-NR	19.30	19.05	6.35	2.40			●								4.00-10.00	0.40-1.20
CNMG 250924-NR	25.79	25.40	9.52	2.40			●								6.00-12.00	0.40-1.20

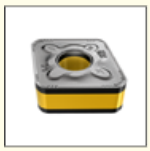
• For user guide and cutting speed recommendations, see pages 197-212

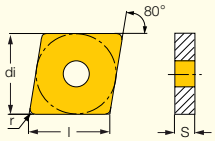
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MCLNR/L (24) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

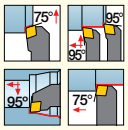
ISOTURN

CNMG-MR

Double-Sided 80° Rhombic Inserts for Rough Turning on Stainless Steel and Soft Materials







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC6015	IC8150	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMG 160612-MR	16.12	15.88	6.35	1.20	●	●		●	●	2.00-10.00	0.30-0.90
CNMG 160624-MR	16.12	15.88	6.35	2.40		●				2.00-8.00	0.50-1.20
CNMG 190612-MR	19.03	19.05	6.35	1.20	●	●	●	●	●	2.00-10.00	0.30-0.90

• For user guide and cutting speed recommendations, see pages 197-212

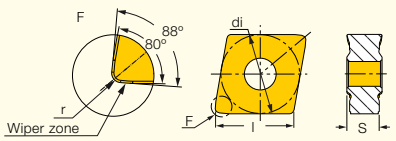
For tools, see pages: C#-PCLNR/L-X (27) • DCBNR/L (28) • DCLNR/L (28) • MCLNR/L (24) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-X (25) • A/S-PCLNR/L-X/G (82)



HELITURN LD

CNMX-M3/4PW
Double-Sided 80° Rhombic Inserts with High Helical Cutting Edge for High Metal Removal Rates







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	IC20N	IC520N	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMX 090604-M3PW	9.67	9.52	4.40	0.40		●	●					1.00-4.50	0.20-0.50
CNMX 090608-M3PW	9.67	9.52	4.40	0.80		●	●	●	●			1.50-5.00	0.25-0.60
CNMX 120708-M4PW	12.90	12.70	6.78	0.80	●	●	●			●	●	1.50-6.00	0.25-0.60
CNMX 120712-M4PW	12.90	12.70	6.78	1.20	●	●	●			●	●	2.00-6.00	0.30-0.80
CNMX 120716-M4PW	12.90	12.70	6.78	1.60	●	●	●			●	●	2.00-6.00	0.30-1.00
CNMX 160712-M4PW	16.12	15.88	6.40	1.20		●	●			●		2.00-8.00	0.30-0.80
CNMX 160716-M4PW	16.12	15.88	6.40	1.60		●	●			●		2.00-8.00	0.30-1.00

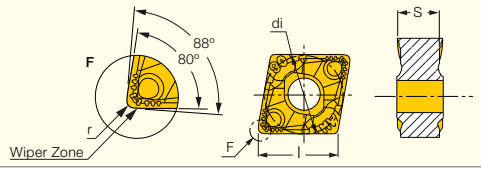
• PCLNR/L...X and A..-PCLNR/L-X are most recommended as they were designed especially for this insert
• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A/S-PCLNR/L-X/G (82) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26)

HELITURN LD

CNMX-M3/4MW
Double-Sided 80° Rhombic Inserts with High Helical Cutting Edge for High Metal Removal Rates of Stainless Steel







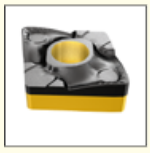
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC8150	IC806	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMX 090604-M3MW	9.67	9.52	4.40	0.40		●	●				0.80-4.00	0.15-0.45
CNMX 090608-M3MW	9.67	9.52	4.40	0.80		●	●				1.00-5.00	0.20-0.60
CNMX 120704-M4MW	12.90	12.70	6.78	0.40			●		●	●	0.80-5.00	0.15-0.45
CNMX 120708-M4MW	12.90	12.70	6.78	0.80	●	●	●	●	●	●	1.00-6.00	0.20-0.60
CNMX 120712-M4MW	12.90	12.70	6.78	1.20		●	●	●	●	●	2.00-6.00	0.30-0.80

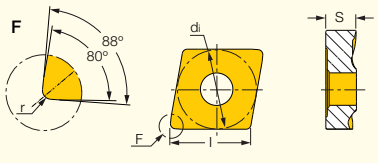
• PCLNR/L...X and A..-PCLNR/L-X are most recommended as they were designed especially for this insert
• For user guide and cutting speed recommendations, see pages 197-212

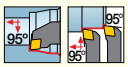
For tools, see pages: A/S-PCLNR/L-X/G (82) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26)

HELITURN LD

CNMM-M4PW
Very Positive Radial Insert with Helical Cutting Edge and Positive Rake for Heavy Machining Applications







Designation	Dimensions di	S	r	l	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMM 120408-M4PW	12.70	4.76	0.80	12.90	●	●	1.50-5.00	0.24-0.59

• For user guide and cutting speed recommendations, see pages 197-212

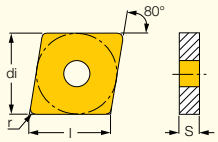
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85)

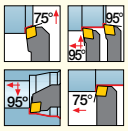
ISOTURN

CNMM-NR

Single-Sided 80° Rhombic Inserts for Rough Turning Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8150	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CNMM 190616-NR	19.03	19.05	6.35	1.60	●	●	2.00-10.00	0.40-1.00

• For user guide and cutting speed recommendations, see pages 197-212

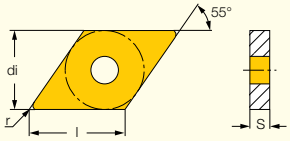
For tools, see pages: DCBNR/L (28) • DCLNR/L (28) • MCLNR/L (24) • PCBNR/L (25) • PCLNR/L (23)

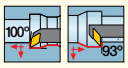
ISOTURN

DNGP-F2P

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications on Alloyed Steel







Designation	Dimensions l	di	S	r	IC530N	Recommended Machining Data a_p (mm)	f (mm/rev)
DNGP 070302R/L-F2P	7.70	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
DNGP 070304R/L-F2P	7.70	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
DNGP 070308R/L-F2P	7.70	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

• For user guide and cutting speed recommendations, see pages 197-212

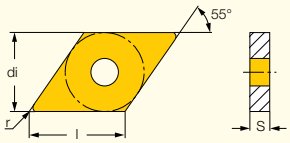
For tools, see pages: A/E-SDXNR/L-07 (87) • A/E-SDZNR/L-07 (87) • PDJNR/L-S (30)

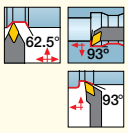
ISOTURN

DNMG-F3P

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMG 110404-F3P	11.63	9.52	4.76	0.40	●	●	●	●	●	0.80-3.00	0.07-0.25
DNMG 110408-F3P	11.63	9.52	4.76	0.80	●	●	●	●	●	1.00-3.50	0.08-0.25
DNMG 110412-F3P	11.63	9.52	4.76	1.20	●	●			●	1.40-4.00	0.10-0.25
DNMG 150404-F3P	15.50	12.70	4.76	0.40	●	●		●	●	0.80-3.00	0.07-0.25
DNMG 150408-F3P	15.50	12.70	4.76	0.80	●	●			●	1.00-3.50	0.08-0.25
DNMG 150412-F3P	15.50	12.70	4.76	1.20	●	●			●	1.40-4.00	0.10-0.25
DNMG 150604-F3P	15.50	12.70	4.76	0.40	●	●	●	●	●	0.80-3.00	0.07-0.25
DNMG 150608-F3P	15.50	12.70	6.35	0.80	●	●			●	1.00-3.50	0.08-0.25
DNMG 150612-F3P	15.50	12.70	6.35	1.20	●	●			●	1.40-4.00	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

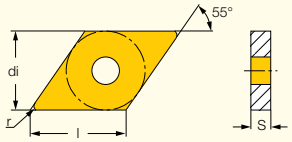
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

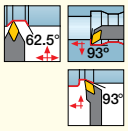
ISOTURN

DNMG-M3P

Double-Sided 55° Rhombic Inserts for Medium Machining Conditions on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC5010	IC5005	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110408-M3P	11.63	9.52	4.76	0.80	●	●			●	0.50-5.00	0.15-0.50
DNMG 110412-M3P	11.63	9.52	4.76	1.20		●			●	0.80-5.00	0.18-0.60
DNMG 150408-M3P	15.50	12.70	4.76	0.80	●	●	●	●	●	0.50-6.00	0.15-0.50
DNMG 150412-M3P	15.50	12.70	4.76	1.20					●	0.80-6.00	0.18-0.60
DNMG 150608-M3P	15.50	12.70	6.35	0.80	●	●			●	0.50-6.00	0.15-0.50
DNMG 150612-M3P	15.50	12.70	6.35	1.20	●	●			●	0.80-6.00	0.18-0.60

• For user guide and cutting speed recommendations, see pages 197-212

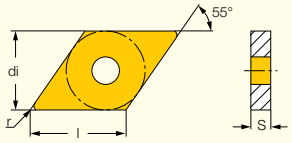
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

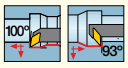
ISOTURN

DNGP-F2M

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing on Stainless Steel







Designation	Dimensions l	di	S	r	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
DNGP 070302R/L-F2M	7.70	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
DNGP 070304R/L-F2M	7.70	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
DNGP 070308R/L-F2M	7.70	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

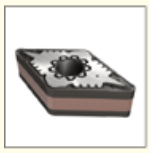
• For user guide and cutting speed recommendations, see pages 197-212

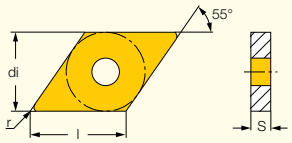
For tools, see pages: A/E-SDXNR/L-07 (87) • A/E-SDZNR/L-07 (87) • PDJNR/L-S (30)

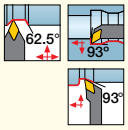
ISOTURN

DNMG-F3M

Double-Sided 55° Rhombic Inserts for Finish Turning of Stainless and Low Carbon Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-F3M	11.63	9.52	4.76	0.40	●	●	●	●	●	0.10-1.50	0.05-0.32
DNMG 110408-F3M	11.63	9.52	4.76	0.80	●	●	●	●	●	0.10-1.50	0.10-0.42
DNMG 110412-F3M	11.63	9.52	4.76	1.20		●	●	●	●	0.15-2.00	0.15-0.52
DNMG 150404-F3M	15.50	12.70	4.76	0.40		●	●	●	●	0.10-1.50	0.05-0.30
DNMG 150408-F3M	15.50	12.70	4.76	0.80		●	●	●	●	0.10-1.50	0.10-0.40
DNMG 150412-F3M	15.50	12.70	4.76	1.20		●	●	●	●	0.20-2.50	0.15-0.50
DNMG 150604-F3M	15.50	12.70	6.35	0.40		●	●	●	●	0.10-1.50	0.05-0.30
DNMG 150608-F3M	15.50	12.70	6.35	0.80		●	●	●	●	0.10-1.50	0.10-0.40
DNMG 150612-F3M	15.50	12.70	6.35	1.20		●	●	●	●	0.20-2.50	0.15-0.50

• For user guide and cutting speed recommendations, see pages 197-212

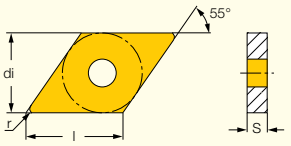
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

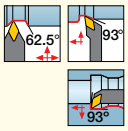
ISOTURN

DNMG/DNGG-SF

Double-Sided 55° Rhombic Inserts for Super-Finishing; Controls Chip Flow at Very Low Feeds and Depths of Cut







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC530N	IC520N	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-SF	11.63	9.52	4.76	0.40	●	●		0.50-3.00	0.05-0.25
DNGG 150401-SF	15.50	12.70	4.76	0.10			●	0.25-2.00	0.03-0.15
DNGG 150402-SF	15.50	12.70	4.76	0.20			●	0.40-2.50	0.05-0.20

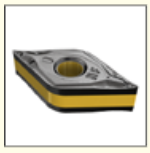
• For user guide and cutting speed recommendations, see pages 197-212

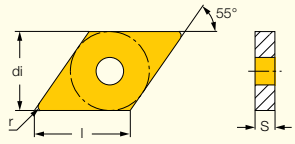
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31)

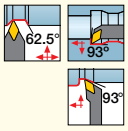
ISOTURN

DNMG-NF

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC530N	IC8150	IC20N	IC520N	IC5010	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110402-NF	11.63	9.52	4.76	0.20		●	●		●	●			●	●	0.40-2.50	0.07-0.18
DNMG 110404-NF	11.63	9.52	4.76	0.40	●		●		●	●	●	●	●	●	0.80-3.00	0.07-0.25
DNMG 110408-NF	11.63	9.52	4.76	0.80	●		●	●	●	●			●	●	1.00-3.50	0.08-0.25
DNMG 150404-NF	15.50	12.70	4.76	0.40			●	●						●	0.80-3.50	0.07-0.25
DNMG 150408-NF	15.50	12.70	4.76	0.80			●		●						1.00-3.51	0.08-0.25
DNMG 150604-NF	15.50	12.70	6.35	0.40			●	●					●	●	0.80-3.50	0.07-0.25

• For user guide, see pages 197-212

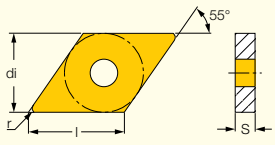
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

ISOTURN

DNMG-WG

Double-Sided 55° Rhombic Wiper Inserts for High Surface Finish at High Feed Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC5010	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 150408-WG	15.50	12.70	4.76	0.80	●			1.00-2.50	0.20-0.50
DNMG 150608-WG	15.50	12.70	6.35	0.80	●		●	1.00-2.50	0.18-0.40
DNMG 150612-WG	15.50	12.70	6.35	1.20	●	●		1.00-3.00	0.20-0.80

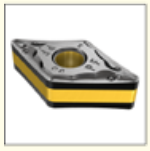
• For user guide and cutting speed recommendations, see pages 197-212

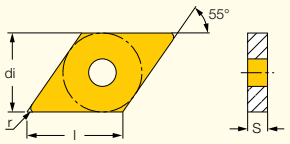
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31)

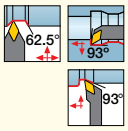
ISOTURN

DNMG-PF

Double-Sided 55° Rhombic Inserts for Finishing Applications on Alloyed and Stainless Steel







Designation	Dimensions l	di	S	r	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110408-PF	11.63	9.52	4.76	0.80	●	0.30-3.00	0.07-0.30
DNMG 150612-PF	15.50	12.70	6.35	1.20	●	1.00-4.00	0.10-0.30

• For user guide and cutting speed recommendations, see pages 197-212

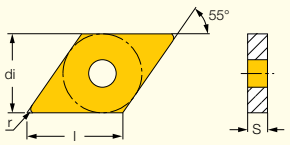
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

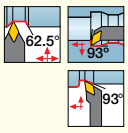
ISOTURN

DNMG-M3M

Double-Sided 55° Rhombic Inserts for Machining Stainless and Low Carbon Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-M3M	11.63	9.52	4.76	0.40		●	●	●	●	0.50-3.50	0.12-0.40
DNMG 110408-M3M	11.63	9.52	4.76	0.80	●	●	●	●		0.50-4.00	0.15-0.50
DNMG 110412-M3M	11.63	9.52	4.76	1.20	●	●	●	●	●	0.50-4.00	0.20-0.60
DNMG 150408-M3M	15.50	12.70	4.76	0.80		●	●	●	●	0.50-5.00	0.15-0.50
DNMG 150412-M3M	15.50	12.70	4.76	1.20		●	●	●	●	0.50-5.00	0.20-0.60
DNMG 150608-M3M	15.50	12.70	6.35	0.80		●	●	●	●	0.50-5.00	0.15-0.50
DNMG 150612-M3M	15.50	12.70	6.35	1.20		●	●	●	●	0.50-5.00	0.20-0.60

• For user guide and cutting speed recommendations, see pages 197-212

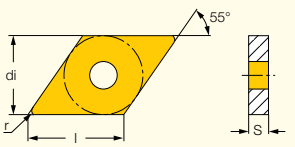
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

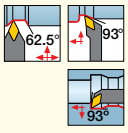
ISOTURN

DNMG/DNGG-PP

55° Double-Sided Rhombic Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC6025	IC8250	IC10	IC6015	IC8150	IC20	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-PP	11.63	9.52	4.76	0.40		●		●				●				0.40-3.00	0.12-0.30
DNMG 110408-PP	11.63	9.52	4.76	0.80				●	●		●					1.00-3.50	0.12-0.30
DNMG 150408-PP	15.50	12.70	4.76	0.80				●				●				1.00-4.00	0.12-0.30
DNMG 150604-PP	15.50	12.70	6.35	0.40										●	●	0.50-4.00	0.12-0.30
DNMG 150608-PP	15.50	12.70	6.35	0.80	●	●	●	●		●		●		●	●	1.00-3.50	0.12-0.30
DNGG 150604-PP	15.50	12.70	6.35	0.40											●	0.50-4.00	0.12-0.30
DNGG 150608-PP	15.50	12.70	6.35	0.80									●		●	1.00-4.00	0.12-0.30

• For user guide, see pages 197-212

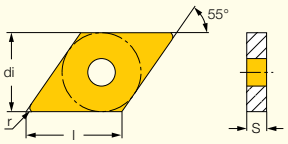
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

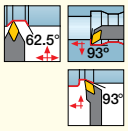
ISOTURN

DNMG-VL

Double-Sided 55° Rhombic Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC908	IC806	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-VL	11.63	9.52	4.76	0.40	•	•	0.50-3.50	0.10-0.25
DNMG 110408-VL	11.63	9.52	4.76	0.80	•	•	0.50-3.50	0.10-0.25
DNMG 150404-VL	15.50	12.70	4.76	0.40		•	0.50-3.50	0.10-0.25
DNMG 150408-VL	15.50	12.70	4.76	0.80	•	•	0.50-3.50	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

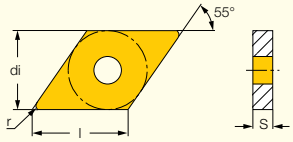
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

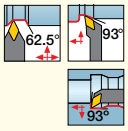
ISOTURN

DNMG/DNGG-TF

Double-Sided 55° Rhombic Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC8250	IC530N	IC6015	IC8150	IC20	IC20N	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110404-TF	11.63	9.52	4.76	0.40			•	•			•					1.00-3.00	0.12-0.30
DNMG 110412-TF	11.63	9.52	4.76	1.20			•									1.50-4.00	0.15-0.35
DNMG 150404-TF	15.50	12.70	4.76	0.40			•				•			•	•	1.00-3.00	0.15-0.30
DNMG 150408-TF	15.50	12.70	4.76	0.80		•	•		•	•	•		•	•	•	1.00-3.50	0.15-0.30
DNMG 150412-TF	15.50	12.70	4.76	1.20			•									1.50-4.00	0.12-0.40
DNMG 150604-TF	15.50	12.70	6.35	0.40		•	•		•	•	•	•		•	•	1.00-3.00	0.14-0.30
DNMG 150608-TF	15.50	12.70	6.35	0.80	•	•	•		•	•	•	•	•	•	•	1.00-3.50	0.15-0.30
DNMG 150612-TF	15.50	12.70	6.35	1.20		•	•		•	•	•		•	•	•	1.50-4.00	0.11-0.35
DNGG 150404-TF	15.50	12.70	4.76	0.40											•	1.00-3.00	0.15-0.30
DNGG 150408-TF	15.50	12.70	4.76	0.80											•	1.00-3.50	0.15-0.30

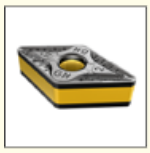
• For user guide, see pages 197-212

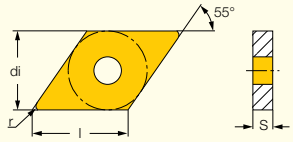
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

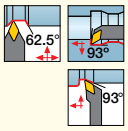
ISOTURN

DNMG-GN

Double-Sided 55° Rhombic Inserts for General Applications







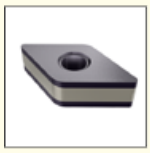
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC8150	IC20N	IC5010	IC428	IC5005	Recommended Machining Data ap (mm)	f (mm/rev)
DNMG 110408-GN	11.63	9.52	4.76	0.80			•	•					1.00-4.00	0.18-0.38
DNMG 110412-GN	11.63	9.52	4.76	1.20			•	•					1.50-4.50	0.18-0.38
DNMG 150408-GN	15.50	12.70	4.76	0.80	•		•	•					1.00-4.00	0.18-0.18
DNMG 150412-GN	15.50	12.70	4.76	1.20		•	•	•		•			1.50-5.00	0.18-0.43
DNMG 150608-GN	15.50	12.70	6.35	0.80		•	•	•	•		•	•	1.00-4.00	0.18-0.38
DNMG 150612-GN	15.50	12.70	6.35	1.20			•	•			•	•	1.50-5.00	0.18-0.43

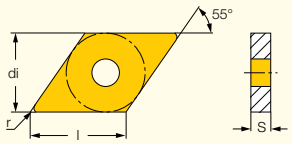
• For user guide, see pages 197-212

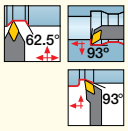
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR (31) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

ISOTURN

DNMA
Double-Sided 55° Rhombic Inserts for Short Chipping Materials such as Cast Iron







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC5010	IC428	IC5005	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMA 150412	15.50	12.70	4.76	1.20		●	●	1.50-4.00	0.05-0.40
DNMA 150608	15.50	12.70	6.35	0.80	●	●	●	1.50-4.00	0.03-0.40
DNMA 150612	15.50	12.70	6.35	1.20	●	●	●	1.50-4.00	0.05-0.40

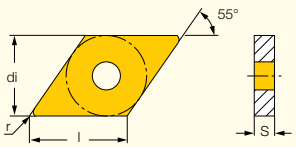
• For user guide, see pages 197-212

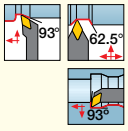
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

ISOTURN

DNMM-R3P
Single-Sided 55° Rhombic Inserts for Rough Turning Applications on Steel







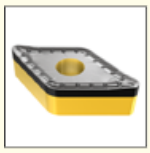
Designation	Dimensions l	di	S	r	IC8250	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMM 150608-R3P	15.50	12.70	6.35	0.80	●	0.70-6.00	0.20-0.55
DNMM 150612-R3P	15.50	12.70	6.35	1.20	●	1.00-6.00	0.25-0.70
DNMM 150616-R3P	15.50	12.70	6.35	1.60	●	1.50-6.00	0.32-0.90

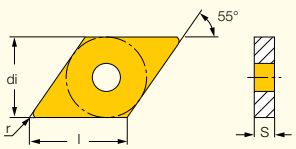
• For user guide and cutting speed recommendations, see pages 197-212

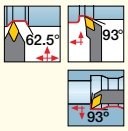
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

ISOTURN

DNMM-NM
Single-Sided 55° Rhombic Inserts for Roughing Applications







Designation	Dimensions l	di	S	r	IC8250	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMM 150612-NM	15.50	12.70	6.35	1.20	●	1.50-4.50	0.25-0.40

• For user guide, see pages 197-212

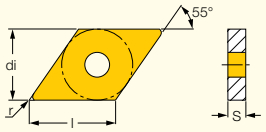
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

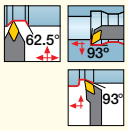
ISOTURN

DNMG-NR

Double-Sided 55° Rhombic Inserts with a Special Chipformer for Heavy Machining







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMG 150612-NR	15.50	12.70	6.35	1.20	•	•	2.00-6.00	0.23-0.50
DNMG 150616-NR	15.50	12.70	6.35	1.60	•	•	2.00-6.00	0.25-0.50

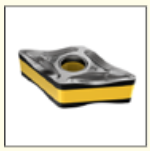
• For user guide and cutting speed recommendations, see pages 197-212

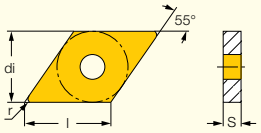
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

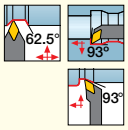
HELITURN LD

DNMX-M3P

Double-Sided 55° Rhombic Inserts with High Helical Cutting Edge for High Metal Removal Rates







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8350	IC6025	IC8250	IC6015	IC8150	IC806	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
DNMX 150608-M3P	15.50	12.70	6.35	0.80		•	•	•	•	•	•	2.00-7.00	0.25-0.50
DNMX 150612-M3P	15.50	12.70	6.35	1.20	•	•	•	•	•	•	•	2.50-7.00	0.30-0.60
DNMX 150616-M3P	15.50	12.70	6.35	1.60			•		•			2.50-5.50	0.30-0.60

• For user guide and cutting speed recommendations, see pages 197-212

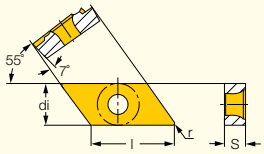
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

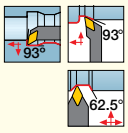
ISOTURN

KNMX

55° Parallelogram Profiling Inserts







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC5010	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
KNMX 160405-R/LP	19.72	9.52	4.76	0.50	•	•		•	•	1.00-4.00	0.10-0.40
KNMX 160410-R/LP	19.72	9.52	4.76	1.00	•	•	•		•	1.50-4.00	0.15-0.45

• For user guide and cutting speed recommendations, see pages 197-212

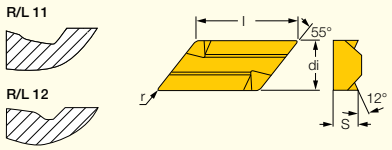
For tools, see pages: CKJNR/L (34) • CKNNR/L (34) • SKJNR/L (34)

ISOTURN

KNUX

55° Parallelogram Profiling Inserts





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC9025	IC9015	IC20	Recommended Machining Data a_p (mm)	f (mm/rev)
KNUX 160405 R/L11	19.72	9.52	4.76	0.50	•	•	•	1.00-4.00	0.10-0.40
KNUX 160405 R/L12	19.72	9.52	4.76	0.50	•	•		1.50-4.00	0.10-0.40
KNUX 160410 R/L11	19.72	9.52	4.76	1.00	•	•		1.50-4.00	0.15-0.45
KNUX 160410 R/L12	19.72	9.52	4.76	1.00		•		1.50-4.00	0.15-0.45

• For user guide and cutting speed recommendations, see pages 197-212

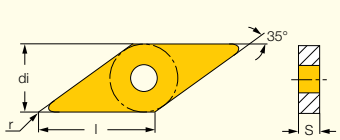
For tools, see pages: CKJNR/L (34) • CKNNR/L (34)

ISOTURN

VNMG-F3P

Double-Sided 35° Rhombic Inserts for Semi-Finishing and Finishing Applications on Steel





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
VNMG 160404-F3P	16.60	9.52	4.76	0.40	•	•	•	0.70-2.00	0.07-0.24
VNMG 160408-F3P	16.60	9.52	4.76	0.80	•	•	•	1.00-3.00	0.08-0.24

• For user guide and cutting speed recommendations, see pages 197-212

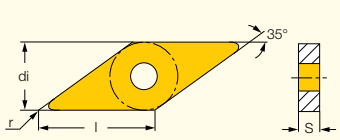
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

VNMG-F3M

Double-Sided 35° Rhombic Inserts for Finishing on Stainless Steel





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
VNMG 12T302-F3M	12.40	7.15	3.97	0.20				•		0.10-1.50	0.03-0.20
VNMG 12T304-F3M	12.40	7.15	3.97	0.40				•		0.10-1.50	0.05-0.30
VNMG 12T308-F3M	12.40	7.15	3.97	0.80				•		0.10-1.50	0.05-0.30
VNMG 160404-F3M	16.60	9.52	4.76	0.40		•	•		•	0.10-1.50	0.05-0.30
VNMG 160408-F3M	16.60	9.52	4.76	0.80	•	•	•		•	0.10-1.50	0.05-0.30

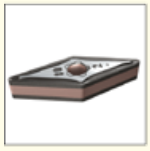
• For user guide and cutting speed recommendations, see pages 197-212

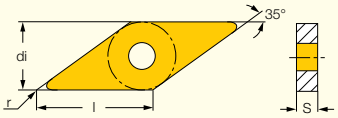
For tools, see pages: MVJNR/L (35) • MVVNN (36)

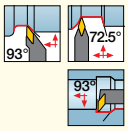
ISOTURN

VNMG-M3M

Double-Sided 35° Rhombic Inserts for Machining Stainless and Low Carbon Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC4	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
VNMG 160404-M3M	16.60	9.52	4.76	0.40		●	●	●			0.70-3.00	0.07-0.20
VNMG 160408-M3M	16.60	9.52	4.76	0.80	●	●	●	●	●	●	0.10-1.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

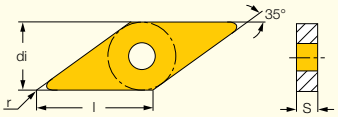
For tools, see pages: MVJNR/L (35) • MVVNN (36)

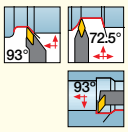
ISOTURN

VNMG-SF

Double-Sided 35° Rhombic Inserts for Super-Finishing







Designation	Dimensions l	di	S	r	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
VNMG 12T302-SF	12.40	7.15	3.97	0.20	●	0.30-2.00	0.03-0.20
VNMG 12T304-SF	12.40	7.15	3.97	0.40	●	0.50-3.00	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212

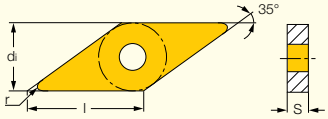
For tools, see pages: A-SVUNR/L (87) • C#-SVJNR/L-F (35) • HSK A63WH-SVVNN-F (36) • SVJNR/L-F (34) • SVVNN-F (35)

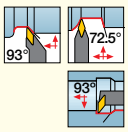
ISOTURN

VNMG/VNGG-NF

Double-Sided 35° Rhombic Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC6025	IC8250	IC30N	IC10	IC6015	IC8150	IC20	IC20N	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
VNMG 12T302-NF	12.40	7.15	3.97	0.20	●		●	●		●	●			●				●	●	0.40-2.50	0.07-0.18
VNMG 12T304-NF	12.40	7.15	3.97	0.40	●	●	●	●		●	●	●		●		●		●	●	0.70-2.00	0.07-0.24
VNMG 12T308-NF	12.40	7.15	3.97	0.80	●	●	●	●	●	●	●	●		●	●	●	●	●	●	1.00-3.00	0.08-0.24
VNMG 160404-NF	16.60	9.52	4.76	0.40	●		●	●			●	●						●	●	0.70-2.50	0.07-0.24
VNMG 160408-NF	16.60	9.52	4.76	0.80				●					●							1.00-3.00	0.08-0.25
VNGG 12T302-NF	12.40	7.15	3.90	0.20															●	0.40-2.50	0.05-0.17
VNGG 12T304-NF	12.40	7.15	3.90	0.40															●	0.50-3.00	0.05-0.25

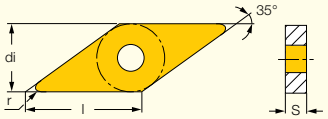
• For user guide and cutting speed recommendations, see pages 197-212

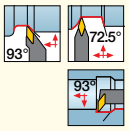
For tools, see pages: A-SVUNR/L (87) • C#-SVJNR/L-F (35) • HSK A63WH-SVVNN-F (36) • MVJNR/L (35) • MVVNN (36) • SVJNR/L-F (34) • SVVNN-F (35)

ISOTURN

VNMM-PP
Single-Sided 35° Rhombic Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







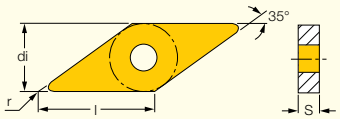
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
VNMM 12T304-PP	12.40	7.15	3.97	0.40	●	●	0.80-2.50	0.12-0.20
VNMM 12T308-PP	12.40	7.15	3.97	0.80	●	●	1.00-2.50	0.12-0.25

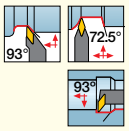
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-SVUNR/L (87) • C#-SVJNR/L-F (35) • HSK A63WH-SVVNN-F (36) • SVJNR/L-F (34) • SVVNN-F (35)

ISOTURN

VNMG-TF
Double-Sided 35° Rhombic Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







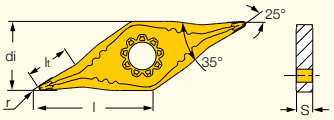
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC6025	IC8250	IC6015	IC8150	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
VNMG 160408-TF	16.60	9.52	4.76	0.80	●	●	●	●	●	●	●	●	1.00-3.50	0.10-0.30
VNMG 160412-TF	16.60	9.52	4.76	1.20							●	●	1.00-4.00	0.12-0.38
VNMG 220408-TF	22.00	12.70	4.76	0.80			●						1.00-3.50	0.14-0.36

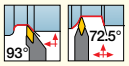
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

YNMG-F3P
Double-Sided 25° Corner Inserts for Internal and External Deep and Narrow Profiling and Undercutting





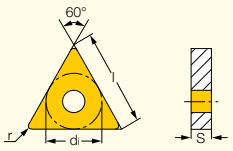


Designation	Dimensions l	di	lt	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
YNMG 160404-F3P	16.60	9.52	5.7	4.76	0.40	●	●	0.40-3.00	0.03-0.12
YNMG 160408-F3P	16.60	9.52	5.3	4.76	0.80	●	●	0.90-4.00	0.05-0.15

• Use IYSN 322 seat for these inserts • For user guide, see pages 197-212
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

TNMG-F3P
Double-Sided Triangular Inserts for Semi-Finishing and Finishing Applications

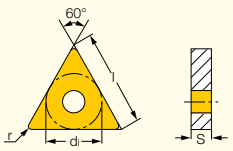



Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-F3P	16.50	9.52	4.76	0.40	●	●		●	●	0.50-2.00	0.07-0.25
TNMG 160408-F3P	16.50	9.52	4.76	0.80	●	●	●	●	●	0.90-3.00	0.08-0.25
TNMG 160412-F3P	16.50	9.52	4.76	1.20	●	●			●	1.30-4.00	0.10-0.25
TNMG 220408-F3P	22.00	12.70	4.76	0.80	●	●			●	0.90-3.00	0.08-0.25
TNMG 220412-F3P	22.00	12.70	4.76	1.20	●	●			●	1.30-4.00	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNMG-M3P
Double-Sided Triangular Inserts for Medium Machining Conditions on Steel

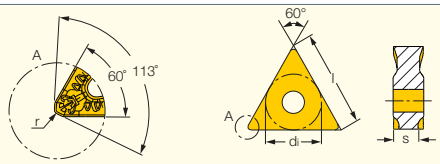



Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	IC8150	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-M3P	16.50	9.52	4.76	0.40		●	●	●	0.40-5.00	0.10-0.30
TNMG 160408-M3P	16.50	9.52	4.76	0.80		●	●	●	0.50-5.00	0.15-0.50
TNMG 160412-M3P	16.50	9.52	4.76	1.20		●	●	●	0.80-5.00	0.18-0.60
TNMG 220408-M3P	22.00	12.70	4.76	0.80		●	●	●	0.50-6.60	0.15-0.50
TNMG 220412-M3P	22.00	12.70	4.76	1.20	●		●	●	0.80-6.60	0.18-0.60
TNMG 220416-M3P	22.00	12.70	4.76	1.60		●	●	●	1.00-6.60	0.23-0.65

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

HELITURN LD

TNMX-M3/4PW
Double-Sided Triangular Inserts with High Helical Cutting Edge for High Metal Removal Rates on Steel

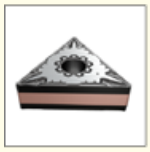



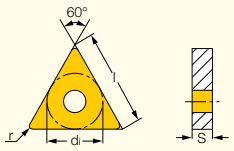
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMX 160604-M3PW	16.50	9.52	4.40	0.40	●	●	2.00-5.00	0.25-0.40
TNMX 160608-M3PW	16.50	9.52	4.40	0.80	●	●	2.50-5.50	0.30-0.50
TNMX 220708-M4PW	22.00	12.70	7.94	0.80	●	●	2.50-5.50	0.30-0.50
TNMX 220712-M4PW	22.00	12.70	7.94	1.20	●	●	3.00-6.00	0.35-0.60
TNMX 220716-M4PW	22.00	12.70	7.94	1.60	●	●	3.50-6.50	0.40-0.70

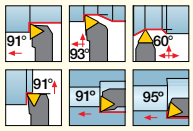
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44)

ISOTURN

TNMG-F3M
Double-Sided Triangular Inserts for Finish Turning on Stainless and Low Carbon Steel





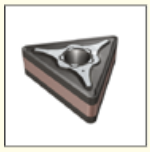


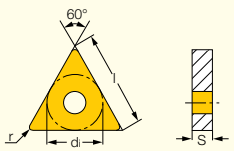
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC6025	IC6015	IC20N	IC520N	IC806	IC807	IC804	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-F3M	16.50	9.52	4.76	0.40	●	●	●	●	●	●		0.10-1.50	0.05-0.32
TNMG 160408-F3M	16.50	9.52	4.76	0.80	●	●	●	●	●	●	●	0.10-1.50	0.10-0.42
TNMG 160412-F3M	16.50	9.52	4.76	1.20	●	●			●	●		0.15-2.00	0.15-0.52
TNMG 220404-F3M	22.00	12.70	4.76	0.40	●	●			●	●		0.10-1.50	0.05-0.32
TNMG 220408-F3M	22.00	12.70	4.76	0.80	●	●			●	●		0.10-1.50	0.10-0.42
TNMG 220412-F3M	22.00	12.70	4.76	1.20	●	●			●	●		0.15-2.00	0.15-0.52

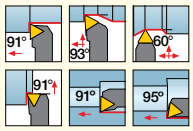
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNMG-M3M
Double-Sided Triangular Inserts for Machining Stainless and Low Carbon Steel







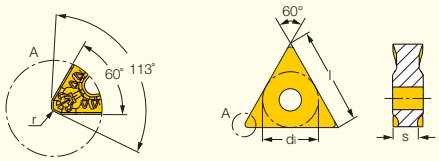
Designation	Dimensions l	di	S	r	Tough ↔ Hard IC5500	IC6025	IC6015	IC807	IC804	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-M3M	16.50	9.52	4.76	0.40				●		0.50-4.00	0.15-0.50
TNMG 160408-M3M	16.50	9.52	4.76	0.80	●	●	●	●	●	0.50-4.00	0.15-0.50
TNMG 160412-M3M	16.50	9.52	4.76	1.20		●	●	●		0.50-4.00	0.20-0.60
TNMG 220408-M3M	22.00	12.70	4.76	0.80		●	●	●		0.50-5.00	0.15-0.50
TNMG 220412-M3M	22.00	12.70	4.76	1.20		●	●	●		0.50-5.00	0.20-0.60
TNMG 220416-M3M	22.00	12.70	4.76	1.60		●	●	●		0.50-5.00	0.30-0.65

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

HELITURN LD

TNMX-M3/4MW
Double-Sided Triangular Inserts with High Helical Cutting Edge for High Metal Removal Rates on Stainless Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC6025	IC6015	IC806	IC807	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMX 160604-M3MW	16.50	9.52	4.40	0.40	●	●			2.00-5.00	0.12-0.40
TNMX 160608-M3MW-V1	16.50	9.52	4.40	0.80	●	●			2.50-5.50	0.15-0.50
TNMX 220704-M4MW	22.00	12.70	7.94	0.40	●	●	●	●	2.00-5.00	0.12-0.40
TNMX 220708-M4MW	22.00	12.70	7.94	0.80	●	●	●	●	2.50-5.50	0.15-0.50
TNMX 220712-M4MW	22.00	12.70	7.94	1.20	●	●	●	●	3.00-6.00	0.18-0.50

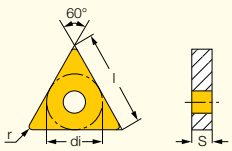
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44)

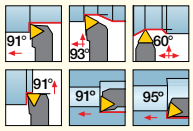
ISOTURN

TNMG-SF

Triangular Double-Sided Inserts for Super-Finishing; Controls Chip Flow at Very Low Feeds and Depths of Cut







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC530N	IC520N	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-SF	16.50	9.52	4.76	0.40		●	●	0.40-2.00	0.04-0.25
TNMG 160408-SF	16.50	9.52	4.76	0.80	●	●		1.00-3.00	0.06-0.30

• For user guide and cutting speed recommendations, see pages 197-212

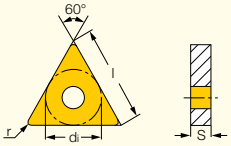
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

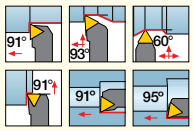
ISOTURN

TNMG-PF

Triangular Double-Sided Inserts for Finishing on Alloyed and Stainless Steel







Designation	Dimensions l	di	S	r	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160408-PF	16.50	9.52	4.76	0.80	●	0.80-3.00	0.08-0.30

• For user guide and cutting speed recommendations, see pages 197-212

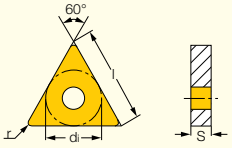
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

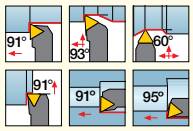
ISOTURN

TNMG-TF

Double-Sided Triangular Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	IC908	IC6015	IC8150	IC20	IC20N	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160304-TF	16.50	9.52	3.18	0.40		●									1.00-3.00	0.12-0.30
TNMG 160308-TF	16.50	9.52	3.18	0.80										●	1.00-3.00	0.12-0.30
TNMG 160404-TF	16.50	9.52	4.76	0.40	●	●		●	●	●		●	●	●	1.00-3.00	0.12-0.30
TNMG 160408-TF	16.50	9.52	4.76	0.80		●	●	●	●		●	●	●	●	1.00-3.00	0.12-0.30
TNMG 160412-TF	16.50	9.52	4.76	1.20		●			●				●	●	1.00-5.00	0.12-0.40
TNMG 220404-TF	22.00	12.70	4.76	0.40		●			●				●	●	1.00-3.50	0.14-0.35
TNMG 220408-TF	22.00	12.70	4.76	0.80		●			●			●	●	●	1.00-4.00	0.15-0.40
TNMG 220412-TF	22.00	12.70	4.76	1.20		●			●				●	●	1.00-4.50	0.18-0.40

• For user guide and cutting speed recommendations, see pages 197-212

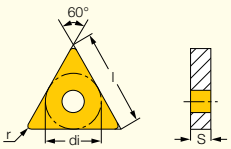
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

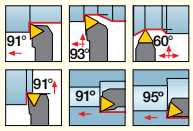
ISOTURN

TNMG-VL

Double-Sided Triangular Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC908	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TNMG 160404-VL	16.50	9.52	4.76	0.40		●			0.80-3.50	0.10-0.25
TNMG 160408-VL	16.50	9.52	4.76	0.80	●	●	●	●	0.80-3.50	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

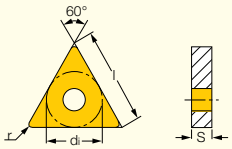
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

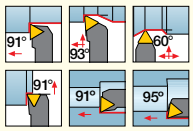
ISOTURN

TNMG/TNGG-PP

Double-Sided Triangular Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC8150	IC20	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TNGG 160402-PP	16.50	9.52	4.76	0.20						●	0.50-1.50	0.05-0.25
TNMG 160404-PP	16.50	9.52	4.76	0.40		●	●		●		0.50-3.00	0.13-0.30
TNMG 160408-PP	16.50	9.52	4.76	0.80	●		●	●	●		1.00-3.00	0.12-0.30
TNMG 220404-PP	22.00	12.70	4.76	0.40			●				0.50-3.50	0.14-0.32
TNMG 220408-PP	22.00	12.70	4.76	0.80			●	●	●		1.00-3.50	0.14-0.32

• For user guide and cutting speed recommendations, see pages 197-212

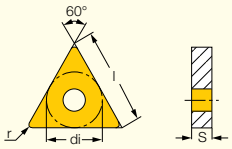
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

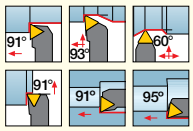
ISOTURN

TNMG-NF

Double-Sided Triangular Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
TNMG 110304-NF	11.00	6.35	3.18	0.40	●		0.40-2.00	0.07-0.25
TNMG 160408-NF	16.50	9.52	4.76	0.80	●	●	1.00-3.00	0.08-0.25

• For user guide and cutting speed recommendations, see pages 197-212

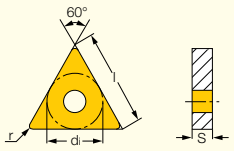
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNMG-GN

Double-Sided Triangular Inserts
for General Applications





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC8150	IC20	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMG 160404-GN	16.50	9.52	4.76	0.40							●	●			1.00-3.00	0.12-0.30
TNMG 160408-GN	16.50	9.52	4.76	0.80	●	●	●	●	●	●	●	●	●	●	1.00-3.50	0.18-0.39
TNMG 160412-GN	16.50	9.52	4.76	1.20			●	●							1.50-4.00	0.18-0.43
TNMG 220408-GN	22.00	12.70	4.76	0.80	●	●	●	●							1.00-4.00	0.18-0.40
TNMG 220412-GN	22.00	12.70	4.76	1.20		●	●								1.50-4.50	0.18-0.45
TNMG 220416-GN	22.00	12.70	4.76	1.60			●								2.00-5.00	0.25-0.45

• For user guide and cutting speed recommendations, see pages 197-212

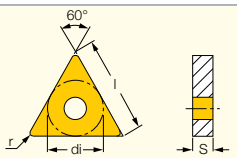
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNMM-NR

Single-Sided Triangular Inserts
with a Special Chipformer
for Heavy Machining





Designation	Dimensions l	di	S	r	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMM 220416-NR	22.00	12.70	4.76	1.60	●	2.50-6.00	0.30-0.50

• For user guide and cutting speed recommendations, see pages 197-212

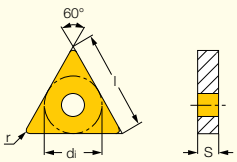
For tools, see pages: C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNMA

Double-Sided Triangular Inserts with
No Chipformer for Short Chipping
Materials Such as Cast Iron





Designation	Dimensions l	di	S	r	Tough ↔ Hard IC20	IC5010	IC428	IC5005	Recommended Machining Data a_p (mm)	f (mm/rev)
TNMA 160404	16.50	9.52	4.76	0.40		●	●	●	0.50-3.00	0.05-0.21
TNMA 160408	16.50	9.52	4.76	0.80	●	●	●	●	1.00-4.00	0.05-0.25
TNMA 160412	16.50	9.52	4.76	1.20		●	●	●	1.50-4.50	0.10-0.29
TNMA 160416	16.50	9.52	4.76	1.60		●			1.50-4.50	0.10-0.40
TNMA 220408	22.00	12.70	4.76	0.80	●		●	●	1.50-5.00	0.05-0.33
TNMA 220412	22.00	12.70	4.76	1.20		●	●	●	1.50-5.00	0.10-0.33
TNMA 220416	22.00	12.70	4.76	1.60			●	●	1.50-5.00	0.10-0.37

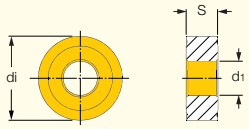
• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

RNMG
Double-Sided Round Negative Insert
for Medium and Rough Profiling







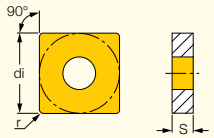
Designation	Dimensions di	S	d1	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
RNMG 120400	12.70	4.76	5.15	•	•	2.00-5.00	0.30-0.60

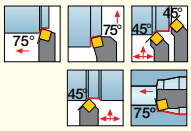
• For user guide and cutting speed recommendations, see pages 197-212

ISOTURN

SNMG-F3P
Double-Sided Square Inserts for
Semi-Finishing and Finishing on Steel







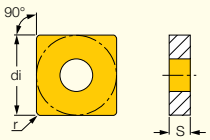
Designation	Dimensions di	S	r	Tough ↔ Hard IC8250	IC8150	IC20N	IC520N	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 090404-F3P	9.52	4.76	0.40	•	•	•	•	•	0.50-3.50	0.07-0.25
SNMG 090408-F3P	9.52	4.76	0.80			•	•	•	0.90-3.50	0.08-0.25
SNMG 120408-F3P	12.70	4.76	0.80	•	•			•	0.90-3.50	0.08-0.25
SNMG 120412-F3P	12.70	4.76	1.20	•	•			•	0.90-3.50	0.10-0.25

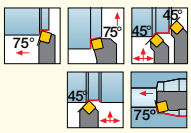
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PSKNR/L-09 (96) • C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

ISOTURN

SNMG-M3P
Double-Sided Square Inserts for
Medium Machining Conditions on Steel







Designation	Dimensions di	S	r	Tough ↔ Hard IC8250	IC8150	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 090404-M3P	9.52	4.76	0.40	•	•	•	0.50-3.50	0.15-0.50
SNMG 090408-M3P	9.52	4.76	0.80	•	•	•	0.50-3.50	0.15-0.55
SNMG 120408-M3P	12.70	4.76	0.80	•	•	•	0.50-6.00	0.15-0.50
SNMG 120412-M3P	12.70	4.76	1.20		•	•	0.80-6.00	0.18-0.60
SNMG 150612-M3P	15.88	6.35	1.20	•		•	0.80-7.50	0.18-0.60
SNMG 150616-M3P	15.88	6.35	1.60			•	1.20-7.50	0.20-0.70

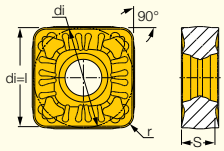
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PSKNR/L-09 (96) • C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

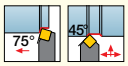
DOVE IQ TURN
HEAVY DUTY LINE

SOMG-R3P-IQ

Double-Sided 7° Negative Side Flank Square Inserts for Heavy Turning on Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
SOMG 150612-R3P-IQ	15.88	15.88	6.35	1.20	•	•	2.00-9.00	0.30-0.60
SOMG 150616-R3P-IQ	15.88	15.88	6.35	1.60	•	•	2.00-9.00	0.30-0.70
SOMG 190612-R3P-IQ	19.05	19.05	6.35	1.20	•	•	3.00-12.00	0.30-0.80
SOMG 190616-R3P-IQ	19.05	19.05	6.35	1.60	•	•	3.50-12.00	0.35-0.85
SOMG 190624-R3P-IQ	19.05	19.05	6.35	2.40	•	•	3.50-12.00	0.40-1.00
SOMG 250924-R3P-IQ	25.40	25.40	9.52	2.40	•	•	4.00-15.00	0.40-1.00

• For user guide and cutting speed recommendations, see pages 197-212

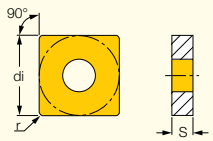
For tools, see pages: C#-PSROR/L-IQ (41) • PSBOR/L-IQ (40) • PSDON-IQ (38)

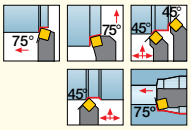
ISOTURN

SNMG-F3M

Double-Sided Square Inserts for Stainless Steel Finishing Applications







Designation	Dimensions di	S	r	Tough ↔ Hard IC6025	IC6015	IC806	IC807	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 090404-F3M	9.52	4.76	0.40	•	•	•	•		0.50-3.50	0.05-0.30
SNMG 090408-F3M	9.52	4.76	0.80			•	•		0.50-3.50	0.05-0.30
SNMG 120404-F3M	12.70	4.76	0.40			•	•		0.90-3.50	0.10-0.40
SNMG 120408-F3M	12.70	4.76	0.80	•	•	•	•	•	0.90-3.50	0.10-0.40
SNMG 120412-F3M	12.70	4.76	1.20	•	•	•	•		0.90-3.50	0.10-0.40

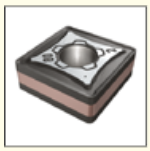
• For user guide and cutting speed recommendations, see pages 197-212

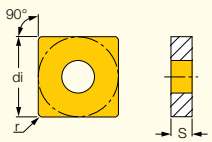
For tools, see pages: A-PSKNR/L-09 (96) • C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

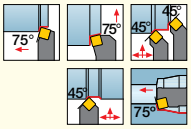
ISOTURN

SNMG-M3M

Double-Sided Square Inserts with a Special Chipformer for Heavy Machining







Designation	Dimensions di	S	r	Tough ↔ Hard IC6025	IC6015	IC806	IC807	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 090404-M3M	9.52	4.76	0.40				•		0.50-4.50	0.15-0.50
SNMG 090408-M3M	9.52	4.76	0.80	•	•		•		0.50-4.50	0.15-0.50
SNMG 120408-M3M	12.70	4.76	0.80	•	•		•	•	0.50-5.00	0.15-0.50
SNMG 120412-M3M	12.70	4.76	1.20	•	•	•	•		0.50-5.00	0.20-0.60
SNMG 120416-M3M	12.70	4.76	1.60	•	•				0.50-5.00	0.25-0.70
SNMG 150612-M3M	15.88	6.35	1.20	•	•		•		0.50-8.00	0.10-0.60
SNMG 150616-M3M	15.88	6.35	1.60	•	•		•		0.50-8.00	0.10-0.65
SNMG 190612-M3M	19.05	6.35	1.20	•	•				0.10-9.50	0.10-0.60
SNMG 190616-M3M	19.05	6.35	1.60	•	•				0.10-9.50	0.10-0.65

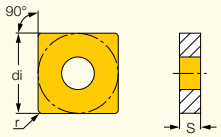
• For user guide and cutting speed recommendations, see pages 197-212

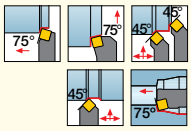
For tools, see pages: A-PSKNR/L-09 (96) • C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

ISOTURN

SNMG-R3M
Double-Sided 90° Square Inserts for Rough Machining on Stainless and Low Carbon Steel







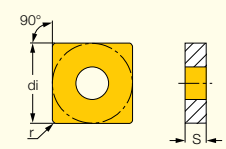
Designation	Dimensions l	di	S	r	IC806	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 190612 R3M	19.05	19.05	6.35	1.20	●	2.00-11.00	0.30-0.90
SNMG 190616 R3M	19.05	19.05	6.35	1.60	●	2.00-11.00	0.30-0.90

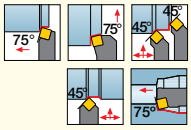
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: DSBNR/L (37) • DSDNN (36) • DSSNR/L (37) • PSBNR/L (41) • PSDNN (38) • PSSNR/L (39)

ISOTURN

SNMG-NF
Double-Sided Square Inserts for Super-Finishing; Controls Chip Flow at Very Low Feeds and Depths of Cut







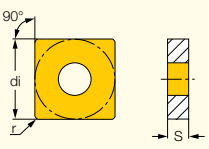
Designation	Dimensions di	S	r	IC8250	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 090304-NF	9.52	3.18	0.40	●	0.60-3.00	0.08-0.25

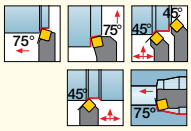
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PSKNR/L-09 (96) • PSBNR/L (41) • PSSNR/L (39) • PSSNR/L-JHP (40)

ISOTURN

SNMG-VL
Double-Sided Square Insert with a Chipformer for High Temperature Alloys and Stainless Steel Valves







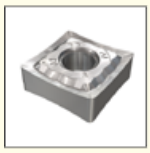
Designation	Dimensions di	S	r	Tough ↔ Hard IC806	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 120404-VL	12.70	4.76	0.40	●		1.00-5.00	0.10-0.25
SNMG 120408-VL	12.70	4.76	0.80	●	●	1.00-5.00	0.10-0.25

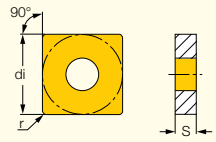
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

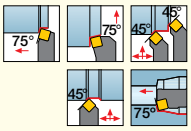
ISOTURN

SNMG-PP

Double-Sided Square Inserts for Machining Very Ductile Materials at Medium Cutting Conditions







Designation	Dimensions di	S	r	IC830	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 120408-PP	12.70	4.76	0.80	•	1.00-4.00	0.14-0.30

• For user guide and cutting speed recommendations, see pages 197-212

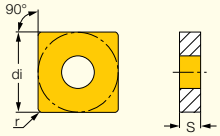
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

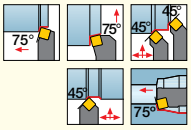
ISOTURN

SNMG-TF

Double-Sided Square Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions







Designation	Dimensions di	S	r	Tough ↔ Hard IC830	IC8250	IC6015	IC8150	IC20	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 090304-TF	9.52	3.17	0.40		•							0.80-3.00	0.10-0.30
SNMG 120404-TF	12.70	4.76	0.40		•						•	1.00-4.00	0.12-0.35
SNMG 120408-TF	12.70	4.76	0.80	•	•	•			•	•	•	1.00-4.00	0.13-0.35
SNMG 120412-TF	12.70	4.76	1.20		•		•	•		•	•	1.50-4.00	0.15-0.40

• For user guide and cutting speed recommendations, see pages 197-212

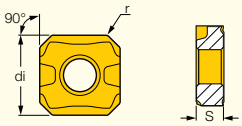
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)



ISOTURN

SNMG-EM-M
Double-Sided Square Inserts
for Medium Machining on
High Temperature Alloys







Designation	Dimensions di	S	r	Tough ↔ Hard IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 120408-EM-M	12.70	4.76	0.80	●	●	●	1.00-3.00	0.20-0.40

• Requires the use of RST 443R/L SET - seat when used on DSSNR/L tools and TSN 423-PIN SET seat when used on PSSNR/L-JHP and PSDNN-JHP tools • For user guide and cutting speed recommendations, see pages 197-212

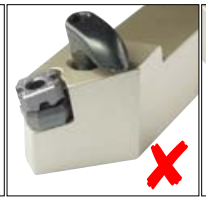
For tools, see pages: DSDNN (36) • DSSNR/L (37)

The inserts have 4 cutting edges (2 on each side) with truncated radii – a configuration which facilitates heat transfer from the cutting area.
The two edges without chipbreakers (flat) are not used.

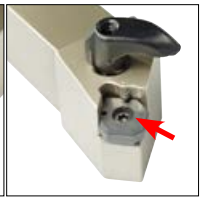
Toolholders
These inserts require the use of **RST 443R/L SET** - special seat when used on DSSNR/L tools and **TSN 423-PIN SET** seat when used on PSSNR/L-JHP and PSDNN–JHP tools. The standard seats should be replaced with the special ones which have a pin whose purpose is to prevent using the non-working flat cutting corners.



Correct insert position



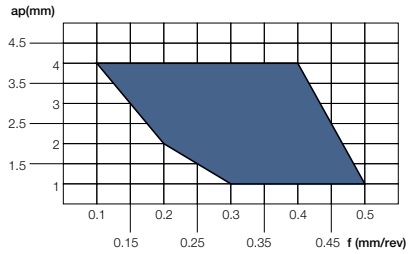
Wrong positioning



Orientation pin

Advantages
- Increased cutting speed (due to better heat transfer)
- Reduced notch wear (due to 45º approach angle)
- Increased feed (the 45° approach angle produces a thin chip)
- Increased productivity of up to 50%
- Ability to machine in two directions with the same tool, longitudinal and face turning
- Up to 3 mm depth of cut

Chipbreaking Range SNMG 120408-EM-M



Material: Inconel 718 Vc: 50 m/min With coolant

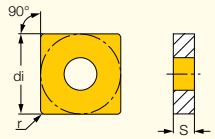


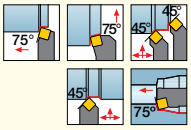
ISOTURN

SNMG-GN

Double-Sided Square Inserts
for General Applications







Designation	Dimensions di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC8150	IC20	IC5010	IC428	IC5005	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 120408-GN	12.70	4.76	0.80		●	●	●	●	●	●	●	1.00-5.00	0.20-0.45
SNMG 120412-GN	12.70	4.76	1.20				●					1.40-5.00	0.25-0.50
SNMG 150612-GN	15.88	6.35	1.20	●		●		●				2.00-7.00	0.30-0.60
SNMG 190612-GN	19.05	6.35	1.20	●	●	●						2.00-7.00	0.30-0.60
SNMG 190616-GN	19.05	6.35	1.60	●				●				2.00-9.00	0.30-0.65

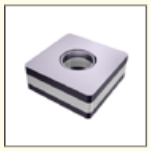
• For user guide and cutting speed recommendations, see pages 197-212

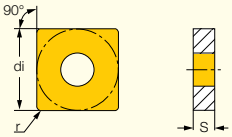
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

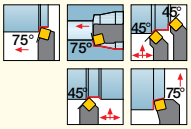
ISOTURN

SNMA

Double-Sided Square Inserts
Without a Chipformer for
Short Chipping Materials







Designation	Dimensions di	S	r	Tough ↔ Hard IC20	IC5010	IC428	IC5005	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMA 120408	12.70	4.76	0.80	●	●	●	●	1.50-5.00	0.05-0.50
SNMA 120412	12.70	4.76	1.20	●	●	●	●	1.50-5.00	0.10-0.50
SNMA 120416	12.70	4.76	1.60		●	●	●	2.00-6.00	0.10-0.60
SNMA 190612	19.05	6.35	1.20	●	●		●	2.00-7.00	0.10-0.60
SNMA 190616	19.05	6.35	1.60		●	●		2.50-10.00	0.10-0.60

• For user guide and cutting speed recommendations, see pages 197-212

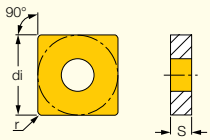
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

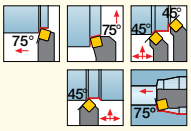
ISOTURN

SNMG-NR

Double-Sided Square Inserts
with a Special Chipformer
for Heavy Machining







Designation	Dimensions di	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC8150	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMG 120412-NR	12.70	4.76	1.20			●			●	●			2.00-5.00	0.30-0.70
SNMG 120416-NR	12.70	4.76	1.60		●	●	●						2.50-6.00	0.30-0.70
SNMG 150608-NR	15.88	6.35	0.80			●							2.50-8.00	0.30-0.70
SNMG 150612-NR	15.88	6.35	1.20		●	●							2.50-8.00	0.30-0.70
SNMG 150616-NR	15.88	6.35	1.60			●	●	●		●			2.50-8.00	0.30-0.70
SNMG 190612-NR	19.05	6.35	1.20			●					●	●	3.00-8.00	0.40-0.00
SNMG 190616-NR	19.05	6.35	1.60	●	●	●	●						3.50-10.00	0.40-0.70
SNMG 250724-NR	25.40	7.94	2.40		●	●							5.00-15.00	0.40-1.00
SNMG 250924-NR	25.40	9.52	2.40	●	●	●							5.00-15.00	0.40-1.00

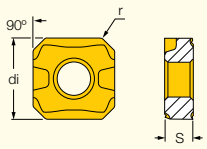
• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

ISOTURN

SNMG-EM-R
Double-Sided Square Inserts for Rough Machining on High Temperature Alloys







Designation	Dimensions di	S	r	Tough ↔ Hard IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
SNMG 120408-EM-R	12.70	4.76	0.80	•	•	•	3.00-6.00	0.25-0.50

• Requires the use of RST 443R/L SET - seat when used on DSSNR/L tools and TSN 423-PIN SET seat when used on PSSNR/L-JHP and PSDNN-JHP tools
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: DSDNN (36) • DSSNR/L (37)

The inserts have 4 cutting edges (2 on each side) with truncated radii – a configuration which facilitates heat transfer from the cutting area. The two edges without chipbreakers (flat) are not used.

Toolholders
These inserts require the use of **RST 443R/L SET** - special seat when used on DSSNR/L tools and **TSN 423-PIN SET** seat when used on PSSNR/L-JHP and PSDNN–JHP tools. The standard seats should be replaced with the special ones which have a pin whose purpose is to prevent using the non-working flat cutting corners.

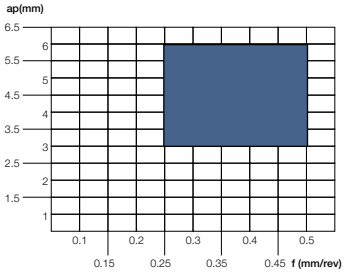
Advantages
- Increased cutting speed (due to better heat transfer)
- Reduced notch wear (due to 45º approach angle)
- Increased feed (the 45° approach angle produces a thin chip)
- Increased productivity of up to 50%
- Ability to machine in two directions with the same tool, longitudinal and face turning
- Up to 6 mm depth of cut


Correct insert position


Wrong positioning


Orientation pin

Chipbreaking Range SNMG 120408-EM-R

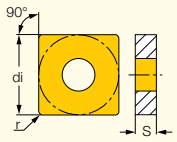


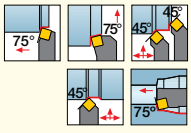
Material: Inconel 718 Vc: 50 m/min With coolant

ISOTURN

SNMM-R3P
Single-Sided Square Inserts for Rough Turning Applications on Steel







Designation	Dimensions di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
SNMM 120408-R3P	12.70	4.76	0.80		•	•	0.70-7.50	0.20-0.55
SNMM 120412-R3P	12.70	4.76	1.20		•	•	1.00-7.50	0.25-0.70
SNMM 120416-R3P	12.70	4.76	1.60		•		2.00-7.50	0.30-0.90
SNMM 150612-R3P	15.88	6.35	1.20		•	•	2.00-9.50	0.30-0.70
SNMM 150616-R3P	15.88	6.35	1.60		•	•	2.50-9.50	0.30-0.90
SNMM 190612-R3P	19.05	6.35	1.20		•	•	3.00-12.00	0.25-0.80
SNMM 190616-R3P	19.05	6.35	1.60	•	•	•	3.50-12.00	0.30-0.90
SNMM 190624-R3P	19.05	6.35	2.40		•	•	3.50-12.00	0.30-1.20
SNMM 250924-R3P	25.40	9.52	2.40		•	•	4.00-15.00	0.40-1.20

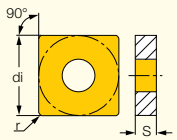
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

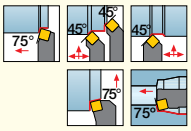
ISOTURN

SNMM-NM

Single-Sided Square Inserts
for Roughing Applications







Designation	Dimensions di	S	r	IC8250	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMM 190616-NM	19.05	6.35	1.60	•	2.50-10.00	0.30-0.70

• For user guide and cutting speed recommendations, see pages 197-212

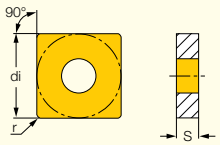
For tools, see pages: DSBNR/L (37) • DSDNN (36) • DSSNR/L (37) • PSBNR/L (41) • PSDNN (38) • PSSNR/L (39)

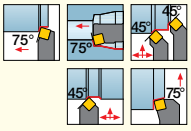
ISOTURN

SNMM-NR

Single-Sided Square Inserts
with a Special Chipformer
for Heavy Machining







Designation	Dimensions di	S	r	Tough ↔ Hard IC8350	IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
SNMM 190616-NR	19.05	6.35	1.60		•		2.50-8.00	0.35-1.00
SNMM 250724-NR	25.40	7.94	2.40	•	•	•	5.00-15.00	0.35-1.00

• For user guide and cutting speed recommendations, see pages 197-212

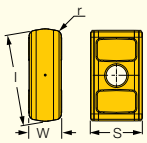
For tools, see pages: DSBNR/L (37) • DSDNN (36) • DSSNR/L (37) • PSBNR/L (41) • PSDNN (38) • PSSNR/L (39)

HEAVY SUPER TURN

LOMX-H6P

Tangential Inserts with 4 Cutting
Edges for High Metal Removal of
up to 35 mm D.O.C. on Steel





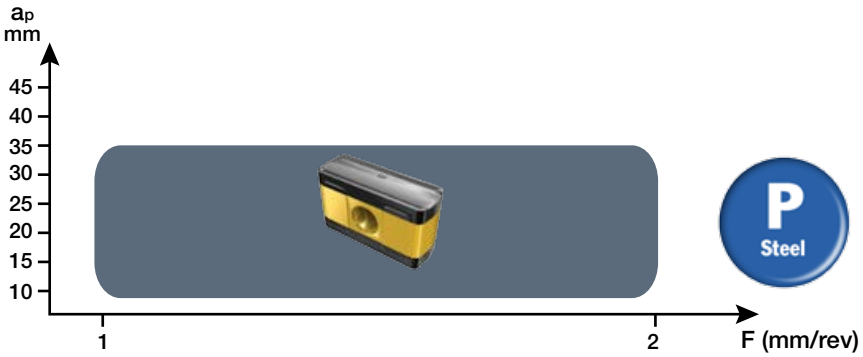


Designation	Dimensions W	l	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
LOMX 402224-H6P	14.40	40.30	22.60	2.40	•	•	7.00-35.00	1.00-2.00

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: PLBOR/L (10)

Application Range H6P Chipformer

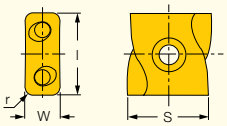


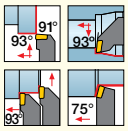
HELITURN TANGENTIAL LINE

LNMX-HT

Tangential Inserts with 4 Cutting Edges and a Positive Rake Angle for High Metal Removal Rates







Designation	Dimensions W	l	S	r	Tough ↔ Hard IC830	IC8350	IC8250	IC908	IC8150	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
LNMX 110408R/L-HT	4.75	11.00	11.40	0.80	•	•	•	•	•	•	•	•	•	0.50-5.00	0.15-0.60
LNMX 110412R/L-HT	4.75	11.00	11.40	1.20		•	•	•	•	•			•	0.80-5.00	0.20-0.80
LNMX 150608R/L-HT	6.40	15.00	13.40	0.80		•	•	•	•	•	•	•	•	1.00-6.00	0.25-0.60
LNMX 150612R/L-HT	6.40	15.00	13.40	1.20		•	•	•	•	•	•	•	•	1.50-7.00	0.30-0.80
LNMX 150616R/L-HT	6.40	15.00	13.40	1.60		•	•	•	•	•	•	•	•	2.00-8.00	0.30-1.00
LNMX 221016R/L-HT	9.40	22.00	20.00	1.60		•	•		•					4.00-15.00	0.30-1.00
LNMX 221024R/L-HT	9.40	22.00	20.00	2.40		•	•		•					5.00-15.00	0.30-1.10

• For user guide and cutting speed recommendations, see pages 197-212

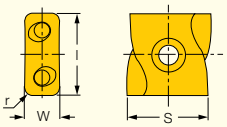
For tools, see pages: C#-SLANR/L-TANG [8] • PLANR/L-TANG [6] • S-PLANR-TANG (79) • S-SLANR/L-TANG (79) • SLANR/L-15-TANG-JHP [8] • SLANR/L-TANG [7] • SLBNR/L-TANG [9] • SLFNR/L-TANG [9]

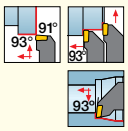
HELITURN TANGENTIAL LINE

LNMX-HM

Tangential Inserts with a Positive Rake Angle for High Metal Removal on Soft and Ductile Materials







Designation	Dimensions l	W	S	r	Tough ↔ Hard IC6025	IC8250	IC6015	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
LNMX 110408R/L-HM	11.00	4.75	11.40	0.80	•	•	•		•		1.00-5.00	0.10-0.40
LNMX 110412R/L-HM	11.00	4.75	11.40	1.20		•	•				1.00-5.00	0.10-0.40
LNMX 150608R/L-HM	15.00	6.40	13.40	0.80		•		•	•	•	1.00-6.00	0.10-0.50
LNMX 150612R/L-HM	15.00	6.40	13.40	1.20		•		•		•	1.50-7.00	0.15-0.70

• For user guide and cutting speed recommendations, see pages 197-212

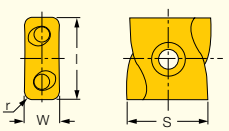
For tools, see pages: C#-SLANR/L-TANG [8] • PLANR/L-TANG [6] • S-PLANR-TANG (79) • S-SLANR/L-TANG (79) • SLANR/L-15-TANG-JHP [8] • SLANR/L-TANG [7] • SLFNR/L-TANG [9]

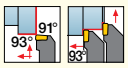
HELITURN TANGENTIAL LINE

LNMX-WG

Tangentially Clamped Inserts with a Wiper Corner Design for High Production Cutting and Excellent Surface Finish







Designation	Dimensions l	W	S	r	IC8250	Recommended Machining Data a_p (mm)	f (mm/rev)
LNMX 150608L-WG	15.00	6.40	13.40	0.80	•	1.00-6.00	0.30-0.75
LNMX 150612R/L-WG	15.00	6.40	13.40	1.20	•	1.50-7.00	0.30-0.80

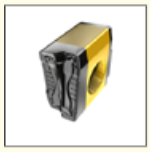
• For user guide and cutting speed recommendations, see pages 197-212

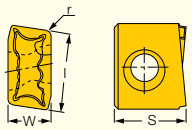
For tools, see pages: C#-SLANR/L-TANG [8] • PLANR/L-TANG [6] • S-PLANR-TANG (79) • S-SLANR/L-TANG (79) • SLANR/L-15-TANG-JHP [8] • SLANR/L-TANG [7] • SLFNR/L-TANG [9]

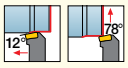
FEEDTURN

LNMX-HF

High Feed (up to 2.4 mm/Rev)
Tangentially Clamped Rough
Turning Inserts







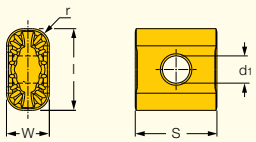
Designation	Dimensions W	l	S	r	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
LNMX 1608R/L-HF	8.50	16.00	14.00	1.20	•	•	0.50-2.40	1.50-2.40

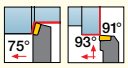
• For user guide and cutting speed recommendations, see pages 197-212

ISOTURN

LNMX 19/30

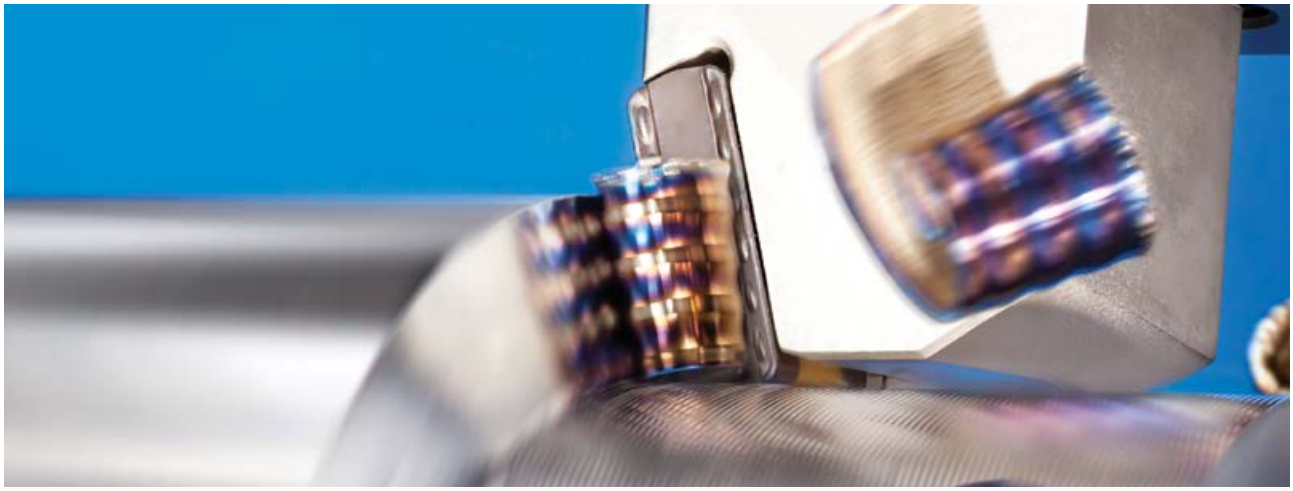
Tangentially Clamped Inserts for
Railroad Wheel Re-Turning





Designation	Dimensions W	l	S	r	d_1	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
LNMX 191940-WF	10.00	19.05	19.05	4.00	6.35	•	•	0.30-5.00	0.25-1.30
LNMX 191940-WM	10.00	19.05	19.05	4.00	6.35	•	•	0.30-5.00	0.40-1.50
LNMX 301940-WM	12.00	30.00	30.00	4.00	6.35	•	•	0.50-12.00	0.70-1.90
LNMX 301940-WR	12.00	30.00	30.00	4.00	6.35	•	•	0.50-12.00	0.80-1.90

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: PRWR/L 175-CA (10) • PRWR/L 177-CA (11)

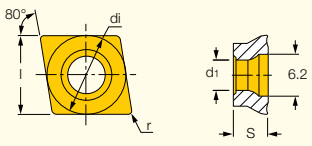


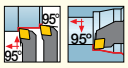
CHAMTURN

CC95MT-SM

Single-Sided 80° Rhombic Inserts
for Finishing (CHAMELEON
Multifunction Pocket System)







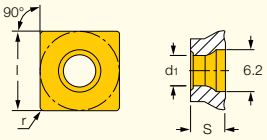
Designation	Dimensions l	di	S	r	d_1	Tough ↔ Hard IC830	IC8250	IC8150	Recommended Machining Data a_p (mm)	f (mm/rev)
CC95MT 100504-SM	9.50	9.52	5.00	0.40	4.50	•	•	•	0.50-3.00	0.07-0.24

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: S-SUXCR/L-CM (89) • SUXCR/L-CM (46)

CHAMTURN

SC45MT-SM
Single-Sided Square Inserts for Finishing Applications (CHAMELEON Multifunction Pocket System)





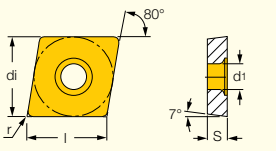
Designation	Dimensions l	S	r	d1	Tough ↔ Hard IC830	IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
SC45MT 100508-SM	9.53	5.00	0.80	4.50	•	•	•	0.50-3.00	0.10-0.30

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: S-SUXCR/L-CM (89) • SUXCR/L-CM (46)

ISOTURN

CCGT-F1P
80° Rhombic Inserts with a Positive Flank for Very Low Finish Turning Conditions on Steel

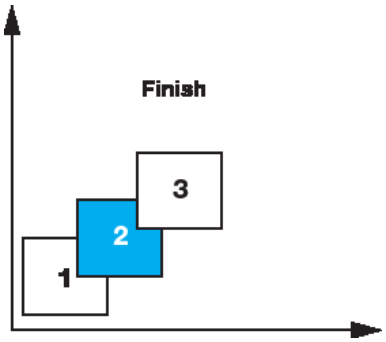




Designation	Dimensions l	di	S	r	d1	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
CCGT 03X101-F1P	3.60	3.57	1.39	0.10	1.90	•	0.10-0.50	0.01-0.05
CCGT 03X102-F1P	3.60	3.57	1.39	0.20	1.90	•	0.10-0.50	0.02-0.10
CCGT 03X104-F1P	3.60	3.57	1.39	0.40	1.90	•	0.10-0.50	0.05-0.15
CCGT 04T101-F1P	4.40	4.37	1.79	0.10	2.30	•	0.10-0.50	0.01-0.05
CCGT 04T102-F1P	4.40	4.37	1.79	0.20	2.30	•	0.10-0.50	0.02-0.10
CCGT 04T104-F1P	4.40	4.37	1.79	0.40	2.30	•	0.10-0.50	0.05-0.15

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-SCLCR/L (91)

ISO Standard Designation				-	1	2	3
WNGP	04	03	04	-	F	2	P



1. Application	
F	Finishing

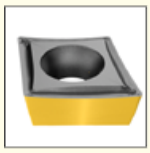
2. Chip Load	
1	For super finish
2	For low range
3	For general range

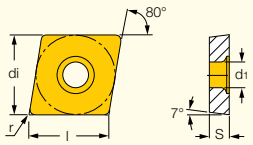
3. Workpiece Material Group	
P	Steel
M	Stainless Steel
K	Cast Iron
N	Nonferrous & Aluminum
S	High Temperature Alloys

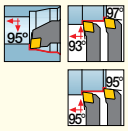
ISOTURN

CCMT/CCGT-SM

Single-Sided Turning Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d_1	Tough ↔ Hard IC830	IC6025	IC8250	IC6015	IC8150	IC20	IC5010	IC428	IC5005	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CCGT 060201-SM	6.45	6.35	2.38	0.10	2.80												●	0.25-2.00	0.05-0.20
CCGT 060202-SM	6.45	6.35	2.38	0.20	2.80												●	0.25-2.00	0.05-0.25
CCMT 060202-SM	6.45	6.35	2.38	0.20	2.80			●		●								0.25-2.00	0.05-0.25
CCMT 060204-SM	6.45	6.35	2.38	0.40	2.80		●	●	●	●					●	●	●	0.50-2.50	0.07-0.25
CCMT 060208-SM	6.45	6.35	2.38	0.80	2.80		●		●							●	●	0.50-2.50	0.07-0.25
CCMT 09T302-SM	9.70	9.52	3.97	0.20	4.40		●	●	●						●	●	●	0.50-2.50	0.06-0.25
CCMT 09T304-SM	9.70	9.52	3.97	0.40	4.40	●	●	●		●	●	●	●	●	●	●	●	0.50-2.50	0.06-0.25
CCMT 09T308-SM	9.70	9.52	3.97	0.80	4.40		●	●	●	●		●		●	●	●	●	0.50-3.00	0.07-0.25
CCMT 120404-SM	12.90	12.70	4.76	0.40	5.50			●		●						●	●	0.70-3.50	0.07-0.25
CCMT 120408-SM	12.90	12.70	4.76	0.80	5.50		●	●	●	●						●	●	0.70-3.50	0.07-0.30

• For user guide and cutting speed recommendations, see pages 197-212

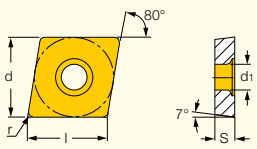
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

ISOTURN

CCMT-PF

80° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d_1	Tough ↔ Hard IC830	IC6025	IC6015	IC806	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CCMT 060202-PF	6.30	6.35	2.38	0.20	2.80	●	●	●		●	●	0.20-2.50	0.04-0.25
CCMT 060204-PF	6.30	6.35	2.38	0.40	2.80	●	●	●	●	●	●	0.40-2.50	0.04-0.30
CCMT 09T302-PF	9.70	9.52	3.97	0.20	4.40	●				●	●	0.50-3.00	0.05-0.30
CCMT 09T304-PF	9.70	9.52	3.97	0.40	4.40	●	●	●		●	●	0.50-3.50	0.05-0.35

• For user guide and cutting speed recommendations, see pages 197-212

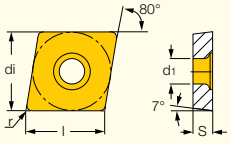
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

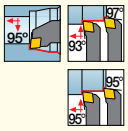
ISOTURN

CCMT-14

80° Rhombic Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning







Designation	Dimensions l	di	S	r	d_1	Tough ↔ Hard IC830	IC8250	IC20	IC428	IC5005	IC807	IC907	Recommended Machining Data a_p (mm)	f (mm/rev)
CCMT 060204-14	6.30	6.35	2.38	0.40	2.80	●		●	●	●	●	●	0.50-2.50	0.14-0.25
CCMT 09T304-14	9.70	9.52	3.97	0.40	4.40		●				●	●	0.50-3.00	0.14-0.25
CCMT 09T308-14	9.70	9.52	3.97	0.80	4.40	●	●	●	●	●			0.80-3.00	0.14-0.30
CCMT 120408-14	12.90	12.70	4.76	0.80	5.50	●		●					0.80-3.00	0.14-0.30

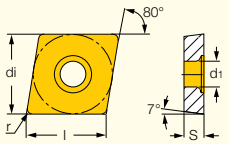
• For user guide, see pages 197-212

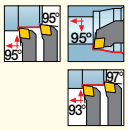
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

ISOTURN

CCMT/CCGT
80° Rhombic Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning







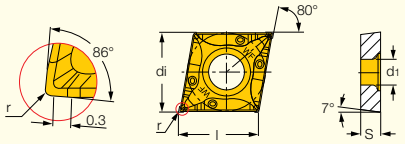
Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC8250	IC30N	IC20	IC20N	IC520N	Recommended Machining Data ap (mm)	f (mm/rev)
CCGT 060202	6.30	6.35	2.38	0.20	2.80		•				0.50-2.00	0.10-0.20
CCGT 060202L (1)	6.30	6.35	2.38	0.20	2.80		•	•			0.50-2.00	0.10-0.20
CCGT 060204	6.30	6.35	2.38	0.40	2.80		•				0.50-2.00	0.10-0.20
CCGT 060204L (1)	6.30	6.35	2.38	0.40	2.80		•				0.50-2.00	0.10-0.20
CCMT 060202	6.30	6.35	2.38	0.20	2.80	•			•		0.50-2.00	0.10-0.20
CCMT 060204	6.30	6.35	2.38	0.40	2.80		•		•	•	0.50-2.00	0.12-0.22
CCMT 09T302	9.70	9.52	3.97	0.20	4.40				•	•	0.50-2.50	0.12-0.25
CCMT 09T304	9.70	9.52	3.97	0.40	4.40				•	•	0.50-2.50	0.12-0.25
CCMT 09T308	9.70	9.52	3.97	0.80	4.40				•	•	0.80-3.00	0.14-0.25

• Use left-hand inserts for left-hand external tools and for right-hand internal tools • For user guide and cutting speed recommendations, see pages 197-212
(1) Left-hand insert
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

ISOTURN

CCET-WF
80° Rhombic Inserts with a 7° Positive Flank and a Wiper Near the Corner for High Feed Finishing







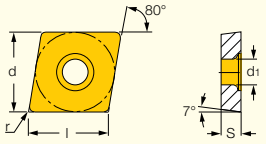
Designation	Dimensions l	di	S	r	d1	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CCET 0602005-WF	6.30	6.35	2.38	0.05	2.80	•	0.05-2.00	0.01-0.20
CCET 09T3005-WF	9.50	9.52	3.97	0.05	4.40	•	0.05-2.00	0.01-0.20

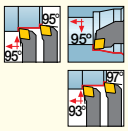
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

ISOTURN

CCMT-WG
80° Rhombic Insert with a 7° Positive Flank and a Wiper Near the Corner for High Feed Finishing







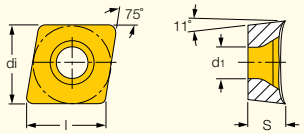
Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC8250	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CCMT 060204-WG	6.30	6.35	2.38	0.40	2.80		•	•	0.40-2.00	0.10-0.35
CCMT 09T304-WG	9.70	9.52	3.97	0.40	4.40	•			0.40-2.00	0.14-0.30
CCMT 09T308-WG	9.70	9.52	3.97	0.80	4.40	•			0.50-2.50	0.20-0.38
CCMT 120408-WG	12.90	12.70	4.76	0.80	5.50	•			0.50-3.00	0.20-0.36

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

ISOTURN

EPGT-F1P
75° Rhombic Inserts with a Positive Flank for Very Low Finish Turning Conditions on Steel







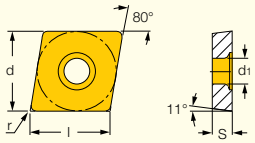
Designation	Dimensions l	di	S	r	d1	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
EPGT 03X101-F1P	3.70	3.57	1.39	0.10	1.90	●	0.10-0.50	0.01-0.05
EPGT 03X102-F1P	3.70	3.57	1.39	0.20	1.90	●	0.10-0.50	0.02-0.10
EPGT 03X104-F1P	3.70	3.57	1.39	0.40	1.90	●	0.10-0.50	0.05-0.15

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E-SEXPR/L-03 (92)

ISOTURN

CPGT-SM
80° Rhombic Inserts with an 11° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







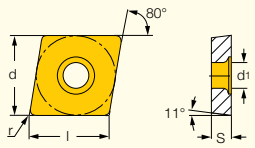
Designation	Dimensions l	di	S	r	d1	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CPGT 060201-SM	6.45	6.35	2.38	0.10	2.80	●	0.25-2.00	0.05-0.20
CPGT 060202-SM	6.45	6.35	2.38	0.20	2.80	●	0.25-2.00	0.05-0.30
CPGT 060204-SM	6.45	6.35	2.38	0.40	2.80	●	0.50-3.00	0.10-0.35
CPGT 09T301-SM	9.67	9.52	3.97	0.10	4.40	●	0.25-2.00	0.05-0.25
CPGT 09T302-SM	9.67	9.52	3.97	0.20	4.40	●	0.50-2.50	0.10-0.30
CPGT 09T304-SM	9.67	9.52	3.97	0.40	4.40	●	0.60-3.50	0.10-0.35

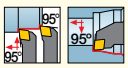
• For user guide and cutting speed recommendations, see pages 197-212

ISOTURN

CPMT-PF
80° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC6025	IC6015	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
CPMT 060204-PF	6.30	6.35	2.38	0.40	2.80	●	●	●	●	●	0.50-2.50	0.04-0.30
CPMT 060208-PF	6.30	6.35	2.38	0.80	2.80	●			●	●	0.50-2.50	0.08-0.30
CPMT 09T304-PF	9.50	9.52	3.97	0.40	4.40	●			●	●	0.50-3.00	0.05-0.35
CPMT 09T308-PF	9.50	9.52	3.97	0.80	4.40	●	●	●	●	●	0.50-3.50	0.10-0.35
CPMT 090308-PF	9.50	9.52	3.18	0.80	4.40				●		0.50-3.50	0.10-0.35

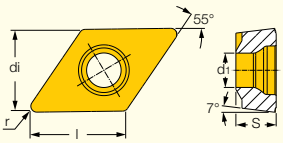
• For user guide and cutting speed recommendations, see pages 197-212

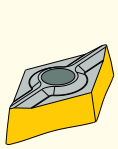
T-LOCK

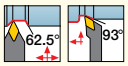
DCMT-F3P-SL

55° Rhombic Inserts with a Positive Flank with a Locating Bottom Ridge for Semi-Finishing and Finishing on Steel







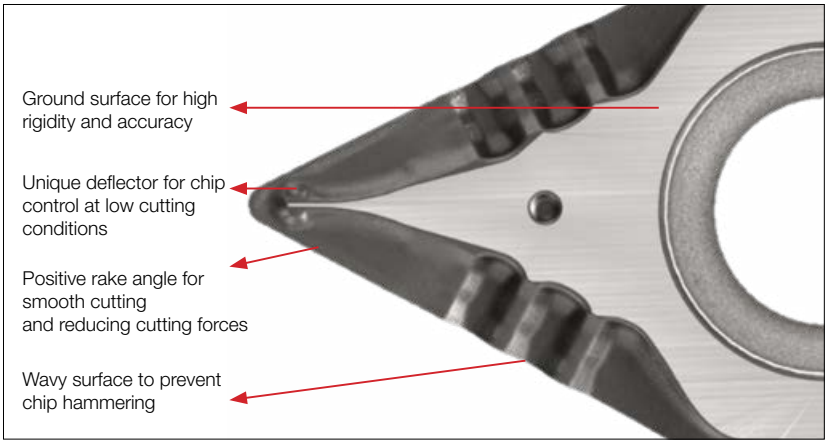


Bottom view

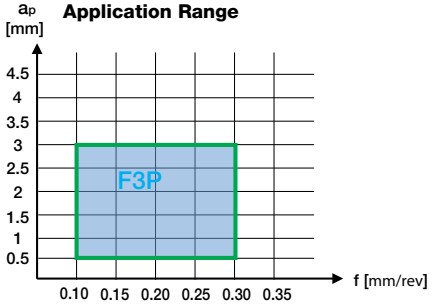
Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 13T504-F3P-SL	13.40	11.00	5.11	0.40	4.50	●	●	0.50-3.00	0.05-0.25
DCMT 13T508-F3P-SL	13.40	11.00	5.11	0.80	4.50	●	●	0.90-3.50	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A-SDUCR/L-13-SL (92) • C#-SDJCR/L-13-SL-JHP (50) • C#-SDNCN-13-SL-JHP (53) • SDACR/L-13S-SL-JHP (52) • SDJCR/L-13-SL (49) • SDNCN-13-SL (53)



DCMT 13T504-F3P-SL Application Range

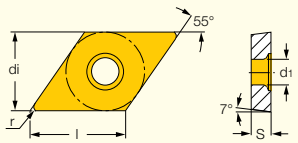


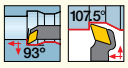
ISOTURN

DCMT-F3P

55° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finish Turning on Steel







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC8250	IC8150	IC520N	IC807	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 070202-F3P	7.70	6.35	2.38	0.20	2.80	●	●		●	0.06-1.50	0.03-0.12
DCMT 070204-F3P	7.70	6.35	2.38	0.40	2.80	●	●		●	0.08-1.50	0.05-0.18
DCMT 11T302-F3P	11.60	9.52	3.97	0.20	4.40	●	●		●	0.08-2.00	0.04-0.16
DCMT 11T304-F3P	11.60	9.52	3.97	0.40	4.40	●	●	●	●	0.11-2.00	0.06-0.25
DCMT 11T308-F3P	11.60	9.52	3.97	0.80	4.40	●	●		●	0.15-2.00	0.08-0.32

• For user guide and cutting speed recommendations, see pages 197-212

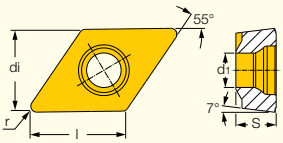
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

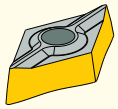
T-LOCK

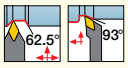
DCMT-M3M-SL

55° Rhombic Inserts with a Positive Flank and Locating Bottom Ridge for Machining Stainless and Low Carbon Steel









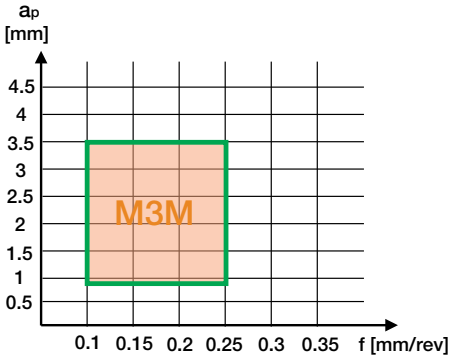
Bottom view

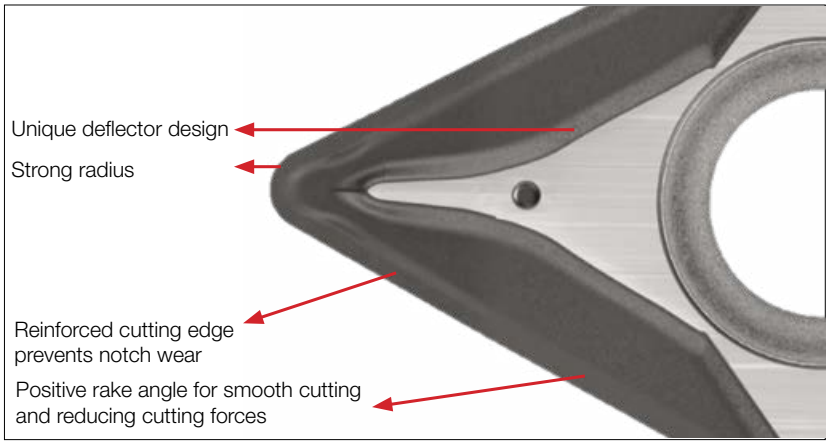
Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC6025	IC6015	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 13T508-M3M-SL	13.40	11.00	5.11	0.80	4.50	●	●	0.90-3.50	0.10-0.25
DCMT 13T512-M3M-SL	13.40	11.00	5.11	1.20	4.50	●	●	0.90-3.50	0.15-0.30

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A-SDUCR/L-13-SL (92) • C#-SDJCR/L-13-SL-JHP (50) • C#-SDNCN-13-SL-JHP (53) • SDACR/L-13S-SL-JHP (52) • SDJCR/L-13-SL (49) • SDNCN-13-SL (53)

DCMT 13T508-M3M-SL Application Range



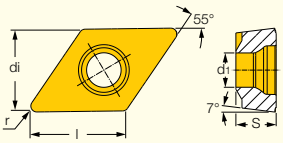


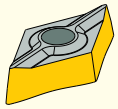
T-LOCK

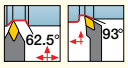
DCMT-PF-SL

55° Rhombic Inserts with a Positive Flank and Locating Bottom Ridge for Finish Turning on Soft Materials & Exotic Alloys









Designation	Dimensions l	di	S	r	d1	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 13T504-PF-SL	13.40	11.00	5.11	0.40	4.50	●	0.50-3.00	0.05-0.25
DCMT 13T508-PF-SL	13.40	11.00	5.11	0.80	4.50	●	0.70-3.00	0.05-0.25

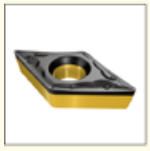
• For user guide and cutting speed recommendations, see pages 197-212

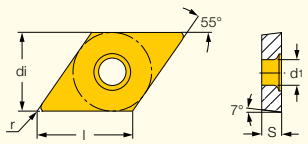
For tools, see pages: A-SDUCR/L-13-SL (92) • C#-SDJCR/L-13-SL-JHP (50) • C#-SDNCN-13-SL-JHP (53) • SDACR/L-13S-SL-JHP (52) • SDJCR/L-13-SL (49) • SDNCN-13-SL (53)

ISOTURN

DCMT-PF

55° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys





Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC6025	IC8250	IC6015	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 070201-PF	7.70	6.35	2.38	0.10	2.80						●	●	0.30-3.00	0.02-0.25
DCMT 070202-PF	7.70	6.35	2.38	0.20	2.80	●							0.40-3.00	0.03-0.25
DCMT 070204-PF	7.70	6.35	2.38	0.40	2.80	●							0.50-3.50	0.05-0.30
DCMT 070208-PF	7.70	6.35	2.38	0.80	2.80						●	●	0.70-3.00	0.08-0.30
DCMT 11T302-PF	11.60	9.52	3.97	0.20	4.40	●				●	●	●	0.30-2.50	0.04-0.25
DCMT 11T304-PF	11.60	9.52	3.97	0.40	4.40	●	●	●	●	●	●	●	0.50-3.00	0.05-0.25
DCMT 11T308-PF	11.60	9.52	3.97	0.80	4.40	●	●	●	●	●	●	●	0.70-3.00	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

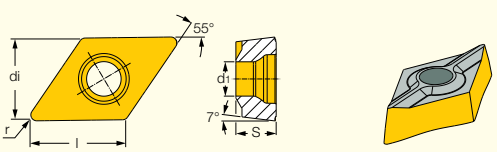
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

T-LOCK

DCMT-SM-SL

55° Rhombic Inserts with a Positive Flank and Locating Bottom Ridge for Finish Turning on Soft Materials & Exotic Alloys





Designation	Dimensions l	di	S	r	d1	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 13T504-SM-SL	13.40	11.00	5.11	0.40	4.50	●	0.50-2.50	0.07-0.27
DCMT 13T508-SM-SL	13.40	11.00	5.11	0.80	4.50	●	1.00-3.00	0.07-0.27

• For user guide and cutting speed recommendations, see pages 197-212

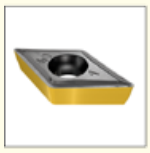
For tools, see pages: A-SDUCR/L-13-SL (92) • C#-SDJCR/L-13-SL-JHP (50) • C#-SDNCN-13-SL-JHP (53) • SDACR/L-13S-SL-JHP (52) • SDJCR/L-13-SL (49) • SDNCN-13-SL (53)

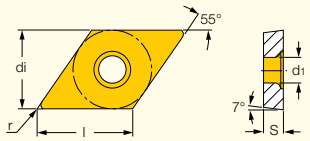


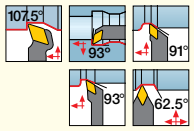
ISOTURN

DCMT/DCGT-SM

55° Rhombic Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC8350	IC6025	IC8250	IC530N	IC6015	IC8150	IC520N	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 070202-SM	7.70	6.35	2.38	0.20	2.80		●			●				●	●	0.50-2.00	0.04-0.20
DCMT 070204-SM	7.70	6.35	2.38	0.40	2.80		●	●		●	●		●	●	●	0.50-2.50	0.05-0.25
DCMT 070208-SM	7.70	6.35	2.38	0.80	2.80			●								0.50-3.00	0.07-0.25
DCGT 11T302-SM	11.60	9.52	3.97	0.20	4.40										●	0.30-2.00	0.05-0.25
DCGT 11T304-SM	11.60	9.52	3.97	0.40	4.40										●	0.50-2.50	0.05-0.25
DCMT 11T302-SM	11.60	9.52	3.97	0.20	4.40		●	●	●	●				●	●	0.50-2.50	0.05-0.25
DCMT 11T304-SM	11.60	9.52	3.97	0.40	4.40	●	●	●	●		●		●	●	●	0.50-2.50	0.07-0.25
DCMT 11T308-SM	11.60	9.52	3.97	0.80	4.40	●	●	●		●	●			●	●	1.00-3.00	0.07-0.25
DCMT 11T312-SM	11.60	9.52	3.97	1.20	4.40							●				1.00-3.50	0.10-0.28

• For user guide and cutting speed recommendations, see pages 197-212

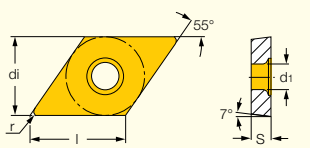
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

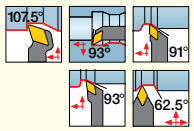
ISOTURN

DCMT/DCGT

55° Rhombic Inserts with a 7° Positive Clearance for Finishing Applications





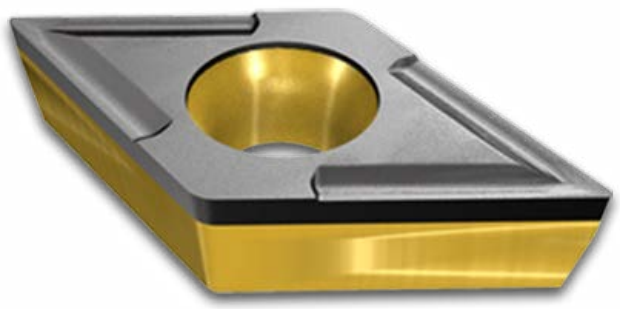


Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC8250	IC908	IC30N	IC530N	IC8150	IC20N	IC520N	Recommended Machining Data ap (mm)	f (mm/rev)
DCGT 070201R [1]	7.70	6.35	2.38	0.10	2.80			●						0.25-1.50	0.05-0.15
DCGT 070202	7.70	6.35	2.38	0.20	2.80				●					0.50-2.00	0.08-0.20
DCGT 070204	7.70	6.35	2.38	0.40	2.80				●					0.80-2.50	0.10-0.25
DCMT 070202	7.70	6.35	2.38	0.20	2.80	●	●				●	●	●	0.50-2.00	0.08-0.20
DCMT 070204	7.70	6.35	2.38	0.40	2.80	●	●		●		●	●	●	0.50-2.00	0.08-0.22
DCGT 11T302	11.60	9.52	3.97	0.20	4.40				●					0.50-2.00	0.08-0.20
DCGT 11T304	11.60	9.52	3.97	0.40	4.40				●			●		1.00-2.50	0.12-0.25
DCMT 11T302	11.60	9.52	3.97	0.20	4.40				●	●		●	●	0.50-2.00	0.08-0.20
DCMT 11T304	11.60	9.52	3.97	0.40	4.40				●			●	●	0.50-2.00	0.12-0.25
DCMT 11T308	11.60	9.52	3.97	0.80	4.40	●						●	●	1.50-3.00	0.14-0.29

• Right-hand inserts for right-hand external tools and for left-hand internal tools • For user guide and cutting speed recommendations, see pages 197-212

[1] Right-hand insert

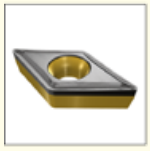
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

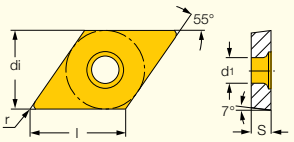


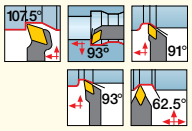
ISOTURN

DCMT-14

55° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC8150	IC20	IC428	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 11T304-14	11.60	9.52	3.97	0.40	4.40	●	●	●		1.00-2.50	0.14-0.25
DCMT 11T308-14	11.60	9.52	3.97	0.80	4.40		●	●	●	1.50-3.00	0.14-0.29

• For user guide, see pages 197-212

For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

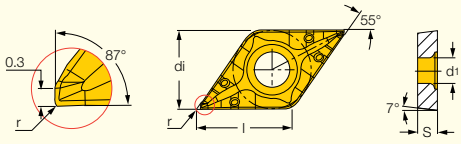
ISOTURN

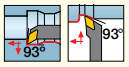
DCET-WF

55° Rhombic Wiper Inserts for Finishing Operations at High Feeds



Left-hand shown





Right-hand shown

Designation	Dimensions l	di	S	r	d1	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DCET 0702005R/L-WF	7.70	6.35	2.38	0.05	2.80	●	0.05-3.00	0.01-0.20
DCET 11T3005R/L-WF	11.60	9.52	3.97	0.05	4.40	●	0.05-3.00	0.01-0.20

• For user guide and cutting speed recommendations, see pages 197-212

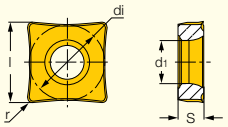
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • E-SDUCR/L-HEAD (93) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • PDACR/L-JHP-MC (53)

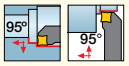
ISOTURN

QCMT-PF

Four 80° Cornered Insert with a Positive 7° Clearance and Chipformer for Finishing Applications







Designation	Dimensions di	S	r	d1	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
QCMT 09T302-PF	9.65	3.97	0.20	4.40	●	0.50-2.50	0.05-0.30

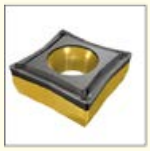
• For user guide and cutting speed recommendations, see pages 197-212

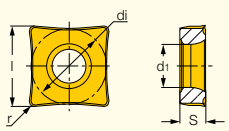
For tools, see pages: PQLCR/L (46) • PQLCR/L-S (46) • S/A-SQLCR/L (90)

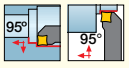
ISOTURN

QCMT-SM

Inserts with a Positive 7° Clearance and Chipformer for Finishing Applications







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
QCMT 09T304-SM	10.40	9.65	3.97	0.40	4.40	●	●	●	0.50-2.50	0.06-0.25

• For user guide and cutting speed recommendations, see pages 197-212

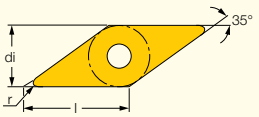
For tools, see pages: PQLCR/L (46) • PQLCR/L-S (46) • S/A-SQLCR/L (90)

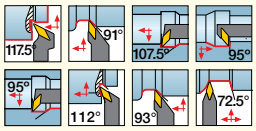
ISOTURN

VCGT 1303..-PF

35° Rhombic Inserts with a Positive Flank for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	IC830	Recommended Machining Data ap (mm)	f (mm/rev)
VCGT 130302-PF	13.00	7.94	3.18	0.20	3.40	•	0.30-2.50	0.03-0.25
VCGT 130304-PF	13.00	7.94	3.18	0.40	3.40	•	0.50-3.00	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: SVACR/L (57)

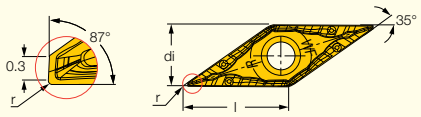
ISOTURN

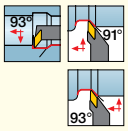
VCET-WF

35° Rhombic Wiper Inserts for Finishing Operations at High Feeds



Left-hand shown





Right-hand shown

Designation	Dimensions l	di	S	r	d1	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
VCET 1103005R/L-WF	11.10	6.35	3.18	0.05	2.90	•	0.05-4.00	0.01-0.20

• For user guide and cutting speed recommendations, see pages 197-212

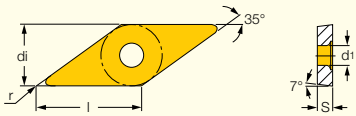
For tools, see pages: C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • PVACR/L-JHP (57) • PVACR/L-S (54) • S/A-SVJCR/L (94) • SVACR/L (57) • SVJCR-PAD (56) • SVJCR/L (55) • PVACR/L-JHP-MC (57)

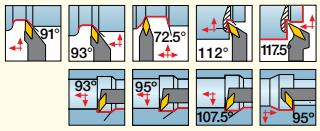
ISOTURN

VCMT-SM

35° Rhombic Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC6025	IC8250	IC908	IC6015	IC8150	IC806	IC807	IC907	IC4	IC804	Recommended Machining Data ap (mm)	f (mm/rev)
VCMT 110302-SM	11.10	6.35	3.18	0.20	2.90				•				•	•			0.20-2.50	0.04-0.20
VCMT 110304-SM	11.10	6.35	3.18	0.40	2.90		•		•	•			•	•			0.50-3.00	0.07-0.24
VCMT 110308-SM	11.10	6.35	3.18	0.80	2.90				•								0.50-2.00	0.07-0.25
VCMT 160402-SM	16.60	9.52	4.76	0.20	4.40		•			•			•	•			0.50-2.50	0.05-0.20
VCMT 160404-SM	16.60	9.52	4.76	0.40	4.40		•	•			•	•	•	•			0.50-2.50	0.05-0.25
VCMT 160408-SM	16.60	9.52	4.76	0.80	4.40	•	•	•		•	•	•	•	•	•	•	0.13-1.80	0.07-0.25
VCMT 160412-SM	16.60	9.52	4.76	1.20	4.40								•	•			0.50-3.00	0.10-0.25

• For user guide and cutting speed recommendations, see pages 197-212

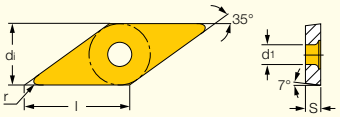
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • PVACR/L-JHP (57) • PVACR/L-S (54) • S/A-SVJCR/L (94) • SVACR/L (57) • SVJCR-PAD (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVPCR/L (58) • SVVCN (58) • SVXCR/L (58) • PVACR/L-JHP-MC (57)

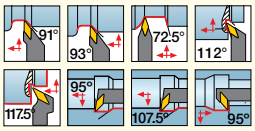
ISOTURN

VCMT-14

35° Rhombic Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC20	IC20N	IC520N	Recommended Machining Data ap (mm)	f (mm/rev)
VCMT 160404-14	16.60	9.52	4.76	0.40	4.40	●	●	●	●	1.00-5.00	0.12-0.25
VCMT 160408-14	16.60	9.52	4.76	0.80	4.40	●	●		●	1.00-5.00	0.12-0.30

• For user guide and cutting speed recommendations, see pages 197-212

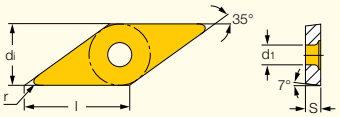
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

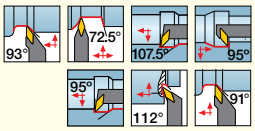
ISOTURN

VCMW

35° Rhombic Inserts with a 7° Positive Flank for Short Chipping Materials such as Cast Iron







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
VCMW 160404	16.60	9.52	4.76	0.40	4.40	●	0.70-4.00	0.05-0.25
VCMW 160408	16.60	9.52	4.76	0.80	4.40	●	1.00-5.00	0.05-0.25

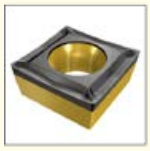
• For user guide and cutting speed recommendations, see pages 197-212

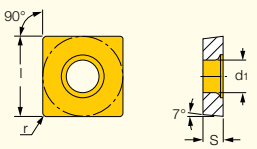
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

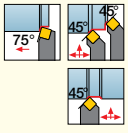
ISOTURN

SCMT-SM

Square Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	S	r	d1	Tough ↔ Hard IC830	IC6025	IC8250	IC8150	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
SCMT 09T304-SM	9.52	3.97	0.40	4.40			●	●	●	●	0.50-3.00	0.07-0.25
SCMT 09T308-SM	9.52	3.97	0.80	4.40	●	●	●	●	●	●	0.50-3.00	0.10-0.30
SCMT 120404-SM	12.70	4.76	0.40	5.50				●			0.50-3.50	0.10-0.25
SCMT 120408-SM	12.70	4.76	0.80	5.50			●	●	●	●	1.00-4.00	0.10-0.30

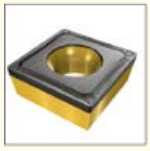
• For user guide and cutting speed recommendations, see pages 197-212

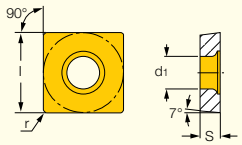
For tools, see pages: SSBCR/L (59) • SSSCR/L (59)

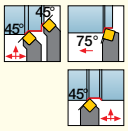
ISOTURN

SCMT-14

Square Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	S	r	d1	Tough ↔ Hard IC8250	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
SCMT 09T304-14	9.52	3.97	0.40	4.40		•	•	1.00-3.50	0.12-0.30
SCMT 120404-14	12.70	4.76	0.40	5.50	•			1.00-4.00	0.12-0.30

• For user guide and cutting speed recommendations, see pages 197-212

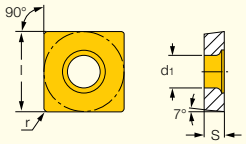
For tools, see pages: SSBCR/L (59) • SSSCR/L (59)

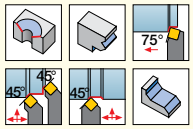
ISOTURN

SCMT-19

Square Inserts with a 7° Positive Flank for Semi-Roughing at Medium to High Feeds







Designation	Dimensions l	S	r	d1	Tough ↔ Hard IC830	IC20	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	fz (mm/t)
SCMT 120408-19	12.70	4.76	0.80	5.50	•	•	•	•	•	3.00-8.00	0.08-0.15
SCMT 120412-19	12.70	4.76	1.20	5.50		•				3.00-8.00	0.08-0.15

• For cutting speed recommendations, see pages 197-212

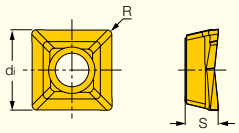
For tools, see pages: SSBCR/L (59) • SSSCR/L (59)

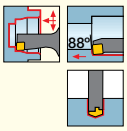
DRDRILLS

XOMT-DT

Inserts for DR Drills and Boring Bars







Designation	Dimensions di	S	R	Tough ↔ Hard IC28	IC328	IC250	IC350	IC908	IC520M	IC428
XOMT 060204-DT	6.16	2.56	0.40	•	•	•	•	•	•	•

• Two cutting edges • For hard materials and interrupted cut

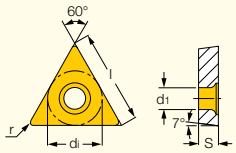
For tools, see pages: A-SXFOR-DR (100) • A-SXFOR/L (99)

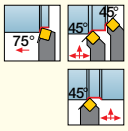
ISOTURN

TCMT-F3P

Triangular Inserts with a Positive Flank for Semi-Finishing and Finish Turning on Steel







Designation	Dimensions l	S	r	d1	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
TCMT 090202-F3P	7.60	2.38	0.20	2.50	•	•	0.06-1.70	0.03-0.14
TCMT 090204-F3P	7.60	2.38	0.40	2.50	•	•	0.10-1.70	0.05-0.20
TCMT 110202-F3P	11.00	2.38	0.20	2.80	•	•	0.06-1.70	0.03-0.14
TCMT 110204-F3P	11.00	2.38	0.40	2.80	•	•	0.10-1.70	0.05-0.20
TCMT 110208-F3P	11.00	2.38	0.80	2.80	•	•	0.13-1.70	0.07-0.28
TCMT 16T304-F3P	16.50	3.97	0.40	4.40	•	•	0.10-1.70	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

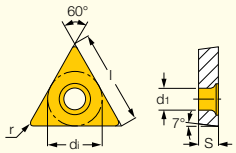
For tools, see pages: E-STFCR-HEAD (95) • S-MTLCR/L-W (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

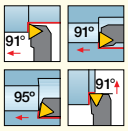
ISOTURN

TCMT-PF

Triangular Inserts with a Positive Flank for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TCMT 110202-PF	11.00	6.35	2.38	0.20	2.85	●	●	0.20-3.00	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212

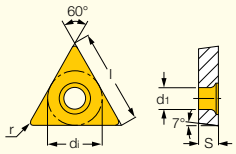
For tools, see pages: E-STFCR-HEAD (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

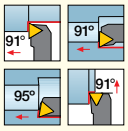
ISOTURN

TCMT-SM

Triangular Inserts with a 7° Positive Flank for Semi-Finishing and Finish Turning on Soft Materials and Exotic Alloys







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC8350	IC8250	IC908	IC8150	IC5010	IC428	IC5005	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TCMT 110204-SM	11.00	6.35	2.38	0.40	2.80		●	●	●	●	●		●	●	●	0.20-3.00	0.05-0.25
TCMT 110208-SM	11.00	6.35	2.38	0.80	2.80			●						●	●	0.50-2.50	0.07-0.25
TCMT 16T304-SM	16.50	9.52	3.97	0.40	4.40	●		●		●		●	●	●	●	0.50-3.00	0.06-0.25
TCMT 16T308-SM	16.50	9.52	3.97	0.80	4.40	●	●	●		●			●	●	●	0.50-3.00	0.08-0.28

• For user guide and cutting speed recommendations, see pages 197-212

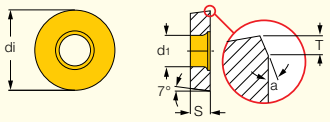
For tools, see pages: E-STFCR-HEAD (95) • S-MTLCR/L-W (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

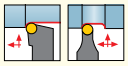
ISOTURN

RCMT-SR

Round Inserts with a 7° Positive Flank for Medium Profiling on a Wide Range of Materials







Designation	Dimensions di	S	d1	Txa°	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
RCMT 0803M0-SR	8.00	3.18	3.40	0.15x15	●	1.00-4.50	0.30-0.45
RCMT 1606M0-SR	16.00	6.45	5.50	0.18x15	●	2.00-8.00	0.40-0.60

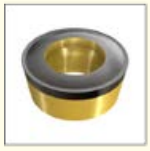
• For user guide and cutting speed recommendations, see pages 197-212

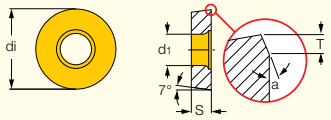
For tools, see pages: SRDCN (61) • SRGCR/L (60)

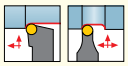
ISOTURN

RCMT-14

Round Inserts with a 7° Positive Flank for Medium and Finish Profiling on a Wide Range of Materials







Designation	Dimensions di	S	d1	Txa°	Tough ↔ Hard IC354	IC8250	IC8150	IC20	IC5010	IC806	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
RCMT 0803M0-14	8.00	3.18	3.40	0.15X15		●		●					1.00-4.00	0.30-0.45
RCMT 10T3M0-14	10.00	3.97	4.40	0.15X15	●	●	●	●					1.50-5.00	0.30-0.50
RCMT 1204M0-14	12.00	4.76	5.50	0.15X15		●	●	●		●	●	●	1.50-6.00	0.30-0.50
RCMT 1606M0-14	16.00	6.35	5.50	0.25X15		●	●	●					2.00-8.00	0.40-0.60
RCMT 2006M0-14	20.00	6.35	6.50	0.25X15			●	●	●				2.50-10.00	0.50-0.70
RCMT 2006M0E-14	20.00	6.35	6.50	0.25X15			●						2.50-10.00	0.50-0.70

• For user guide and cutting speed recommendations, see pages 197-212

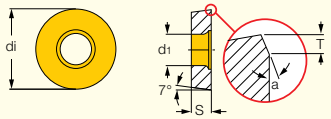
For tools, see pages: C#-SRGCR-12-JHP (61) • C#-SRGCR/L (60) • SRDCN (61) • SRGCR-12-JHP (60) • SRGCR/L (60)

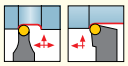
ISOTURN

RCMX

Round Inserts with a 7° Positive Flank and Reinforced Cutting Edge for Semi-Roughing and Rough Profiling







Designation	Dimensions di	S	d1	Txa°	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
RCMX 100300	10.00	3.18	3.60	.006X15	●		1.50-5.00	0.30-0.50
RCMX 120400	12.00	4.76	4.20	0.15X15		●	1.50-6.00	0.30-0.50
RCMX 200600	20.00	6.35	6.50	.010X15	●		2.50-10.00	0.50-0.50

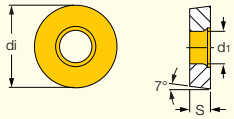
• For user guide and cutting speed recommendations, see pages 197-212

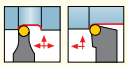
ISOTURN

RCMX-NR

Round 7° Inserts with a Positive Flank and Strong Cutting Edge for Rough Turning







Designation	Dimensions di	S	d1	IC8250	Recommended Machining Data ap (mm)	f (mm/rev)
RCMX 250700-NR	25.00	7.94	7.20	●	4.00-10.00	0.50-1.50
RCMX 3209M0-NR	32.00	9.52	10.00	●	7.00-13.00	0.70-2.00
RCMX 320900-NR	32.00	9.52	9.50	●	7.00-13.00	0.70-2.00

• For user guide and cutting speed recommendations, see pages 197-212

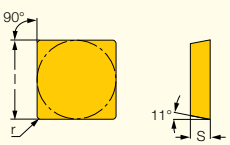
For tools, see pages: PRDCN (61) • PRGCR/L (61)

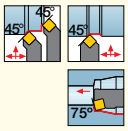
ISOTURN

SPMR

Square Inserts with a Positive Chipformer Exerting Low Cutting Forces for Semi-Finishing and Finishing Applications







Designation	Dimensions l	S	r	Tough ↔ Hard IC8250	IC8150	IC20N	Recommended Machining Data ap (mm)	f (mm/rev)
SPMR 090304	9.52	3.18	0.40	•	•	•	1.50-5.00	0.15-0.30
SPMR 090308	9.52	3.18	0.80	•			1.50-6.00	0.16-0.35
SPMR 120304	12.70	3.18	0.40	•			1.50-5.00	0.15-0.35
SPMR 120308	12.70	3.18	0.80	•			1.50-6.00	0.16-0.40
SPMR 120312	12.70	3.18	1.20		•		1.50-6.00	0.20-0.45

• For user guide and cutting speed recommendations, see pages 197-212

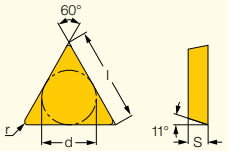
For tools, see pages: CSDPN (63) • CSSPR/L (62) • S-CSKPR (96)

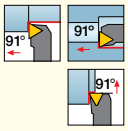
ISOTURN

TPMR

Triangular 11° Positive Inserts with a Positive Chipformer Exerting Low Cutting Forces for Internal Finish Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC8250	IC20N	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TPMR 090202	9.60	5.56	2.38	0.20					•	1.00-3.00	0.10-0.20
TPMR 090204	9.60	5.56	2.38	0.40		•				1.00-3.50	0.15-0.20
TPMR 110304	11.00	6.35	3.18	0.40	•		•			1.00-3.50	0.15-0.25
TPMR 110308	11.00	6.35	3.18	0.80			•			1.00-3.50	0.15-0.30
TPMR 160304	16.50	9.52	3.18	0.40	•		•	•	•	1.00-4.00	0.15-0.33
TPMR 160308	16.50	9.52	3.18	0.80	•		•	•	•	1.00-4.00	0.15-0.35

• For user guide and cutting speed recommendations, see pages 197-212

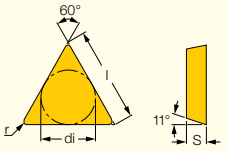
For tools, see pages: CTFPR/L (63) • CTGPR/L (63) • S-CTFPR/L (96)

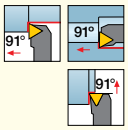
ISOTURN

TPMR-PF

Triangular 11° Positive Inserts with a Positive Chipformer Exerting Low Cutting Forces for Internal Finish Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC8250	IC8150	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TPMR 110304-PF	11.00	6.35	3.18	0.40	•	•	•	•	0.40-3.00	0.08-0.25
TPMR 110308-PF	11.00	6.35	3.18	0.80	•			•	0.50-3.50	0.07-0.28
TPMR 160304-PF	16.50	9.52	3.18	0.40	•	•	•	•	0.50-3.50	0.06-0.25
TPMR 160308-PF	16.50	9.52	3.18	0.80	•	•		•	0.80-3.00	0.08-0.28

• For user guide and cutting speed recommendations, see pages 197-212

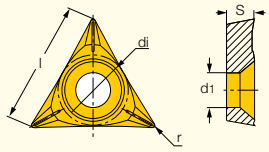
For tools, see pages: CTFPR/L (63) • CTGPR/L (63) • S-CTFPR/L (96)

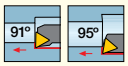
ISOTURN

TPGT-SP

Super Positive Triangular Inserts with 11° Clearance for Fine Boring and Finish Turning







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC908	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
TPGT 110202-SP	11.00	6.35	2.38	0.20	3.00	•	•	0.40-1.00	0.05-0.15

• For user guide and cutting speed recommendations, see pages 197-212

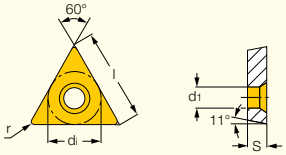
For tools, see pages: E-STFPR/L-HEAD (97)

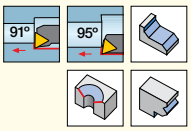
ISOTURN

TPMT

Triangular 11° Positive Inserts with a Positive Chipformer Exerting Low Cutting Forces for Internal Finish Turning







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC830	IC635	IC50M	IC8350	IC8250	IC8150	IC520M	IC20	IC806	IC807	IC907	Recommended Machining Data ap (mm)(1)	f (mm/rev)(1)
TPMT 110202	11.00	6.35	2.38	0.20	3.00	•									•	•	0.20-2.00	0.05-0.25
TPMT 110204	11.00	6.35	2.38	0.40	3.00	•				•	•		•		•	•	1.00-3.00	0.12-0.30
TPMT 110208	11.00	6.35	2.38	0.80	3.00	•				•	•		•				1.00-4.00	0.15-0.30
TPMT 160304	16.50	9.52	3.18	0.40	4.30	•			•	•			•		•	•	1.00-4.00	0.12-0.30
TPMT 160308	16.50	9.52	3.18	0.80	4.30	•	•	•		•		•	•	•	•	•	5.00-12.00	0.15-0.35

• For cutting speed recommendations, see pages 197-212

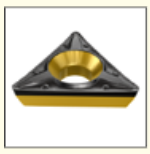
(1) For turning

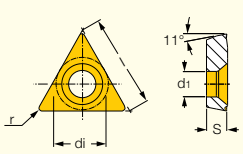
For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

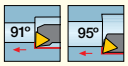
ISOTURN

TPMT-PF

Triangular 11° Positive Inserts for Semi-Finishing and Finishing Applications







Designation	Dimensions l	di(1)	S	r	d1	Tough ↔ Hard IC8250	IC8150	Recommended Machining Data ap (mm)	f (mm/rev)
TPMT 110204-PF	11.00	6.35	2.38	0.40	3.00	•	•	0.50-3.00	0.10-0.30

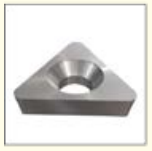
• For user guide and cutting speed recommendations, see pages 197-212

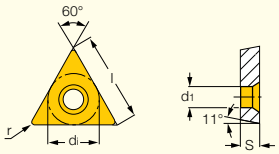
(1) Actual di=6.28, to be used in 6.35mm pocket size

For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

ISOTURN

TPGB
Triangular Inserts with an 11° Positive Flank for Short Chipping Materials



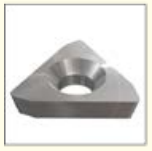


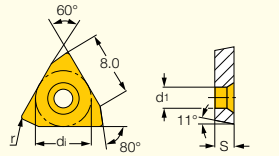
Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TPGB 110204	11.00	6.35	2.38	0.40	3.00	•	1.00-3.00	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

ISOTURN

TPGB-XL
Triangular Inserts with an 11° Positive Flank for Short Chipping Materials



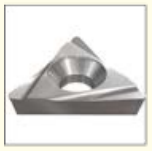


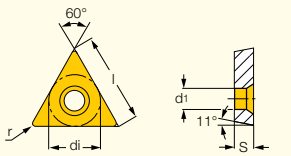
Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TPGB 110204-XL	11.00	6.35	2.38	0.40	3.00	•	1.00-3.00	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

ISOTURN

TPGH-R/L
Triangular Inserts with an 11° Positive and Ground Chipformer for Finish Turning



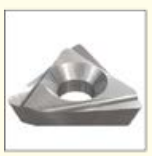


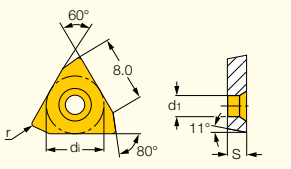
Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC908	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TPGH 110204-L	11.00	6.35	2.38	0.40	3.00		•	1.00-3.00	0.05-0.25
TPGH 110208-L	11.00	6.35	2.38	0.80	3.00	•		1.00-3.00	0.05-0.25
TPGH 160304-R/L	16.50	9.52	3.18	0.40	4.30		•	1.00-4.00	0.05-0.30
TPGH 160308-L	16.50	9.52	3.18	0.80	4.30		•	1.00-4.00	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

ISOTURN

TPGH-XL
Triangular Inserts with an 11° Positive and Ground Chipformer for Finish Turning





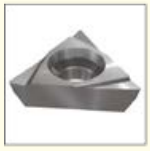
Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TPGH 110204-XL	11.00	6.35	2.38	0.40	3.00	•	1.00-3.00	0.05-0.25

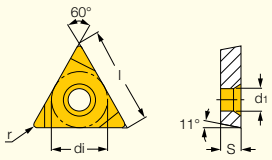
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A/E/S-STFPR/L (97) • A/S-STLPR/L (98) • E-STFPR/L-HEAD (97)

ISOTURN

TPGX

Triangular Inserts with an 11° Positive Flank and Ground Chipformer for Finish Turning







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC908	IC20	IC20N	IC520N	Recommended Machining Data ap (mm)	f (mm/rev)
TPGX 090202-L	9.52	5.56	2.38	0.20	3.00	●	●	●	●	1.00-2.00	0.10-0.20
TPGX 090204-L	9.52	5.56	2.38	0.40	3.00	●	●	●	●	1.00-2.50	0.15-0.20
TPGX 110302-L	11.00	6.35	3.18	0.20	3.50	●	●	●	●	1.00-2.50	0.10-0.20
TPGX 110304-L	11.00	6.35	3.18	0.40	3.50	●	●	●	●	1.00-3.00	0.15-0.20
TPGX 110308-L	11.00	6.35	3.18	0.80	3.50		●			1.00-3.50	0.15-0.25

• For user guide and cutting speed recommendations, see pages 197-212

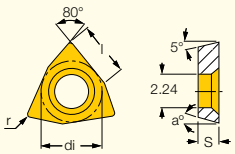
For tools, see pages: A/E-STFPR-X (97) • MG STFPR-X (97)

ISOTURN

WBGT

Trigon Inserts with a 5° Positive Flank Ground Chipformer for Finish Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC908	IC807	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
WBGT 060102L	2.18	3.97	1.59	0.20	●	●	●	●	0.10-1.00	0.05-0.10

• For user guide and cutting speed recommendations, see pages 197-212

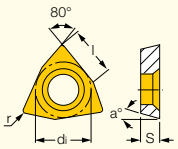
For tools, see pages: E/S-SWUBR/L (98) • MG-SWUBR/L (99) • MGSIR/L (534) • SIR/L (531)

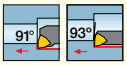
ISOTURN

WBMT

Trigon Inserts with a 5° Positive Flank Ground Chipformer for Finish Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC830	IC354	IC350	IC908	IC30N	IC530N	Recommended Machining Data ap (mm)	f (mm/rev)
WBMT 060101R/L	2.18	3.97	1.59	0.10				●			0.40-2.00	0.10-0.15
WBMT 060102R/L	2.18	3.97	1.59	0.20	●	●	●		●	●	0.40-2.00	0.10-0.15

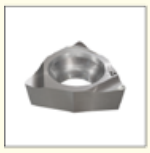
• WBMT 06...R right-hand inserts used on left-hand tools and WBMT 06...L left-hand inserts used on right-hand tools • For user guide and cutting speed recommendations, see pages 197-212

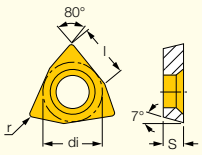
For tools, see pages: E/S-SWUBR/L (98) • MG-SWUBR/L (99) • MGSIR/L (534) • SIR/L (531)

ISOTURN

WCGT

Trigon Inserts with a 7° Positive Flank and Chipformer for Finish Turning







Designation	Dimensions l	di	S	r	Tough ↔ Hard IC908	IC30N	Recommended Machining Data ap (mm)	f (mm/rev)
WCGT 020102L	2.18	3.97	1.59	0.20	•	•	0.40-2.00	0.05-0.10
WCGT 020104L	2.18	3.97	1.59	0.40	•	•	0.40-2.00	0.10-0.15

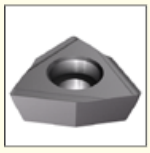
• For user guide and cutting speed recommendations, see pages 197-212

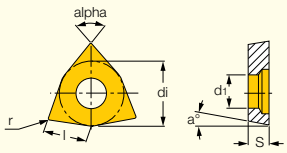
For tools, see pages: A/E-SWUCR (99) • MG-SWUCR (99)

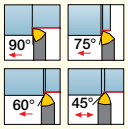
ISOTURN

WPEX

80° and 84° Precision Trigon Inserts with Positive 8° and 12° Clearance for Finishing Applications







Designation	Dimensions l	S	r	di	d1	alpha	a°	Tough ↔ Hard IC08	IC908	Recommended Machining Data ap (mm)	f (mm/rev)
WPEX 040200R/L08	4.00	2.50	0.00	6.60	3.20	84.0	8.00	•		0.20-2.00	0.05-0.20
WPEX 040200R/L12	4.00	2.50	0.00	6.60	3.20	84.0	12.00	•		0.20-2.00	0.05-0.20
WPEX 040202R/L08	4.00	2.50	0.20	6.60	3.20	84.0	8.00	•		0.20-2.00	0.05-0.20
WPEX 050300R/L08	5.00	3.18	0.00	7.94	3.70	80.0	8.00	•	•	0.20-2.50	0.05-0.20
WPEX 050300R12	5.00	3.18	0.00	7.94	3.70	80.0	12.00	•	•	0.20-2.50	0.05-0.20
WPEX 050302R/L08	5.00	3.18	0.20	7.94	3.70	80.0	8.00	•	•	0.20-2.50	0.05-0.20
WPEX 050302R/L12	5.00	3.18	0.20	7.94	3.70	80.0	12.00	•	•	0.20-2.50	0.05-0.20
WPEX 050304R/L08	5.00	3.18	0.40	7.94	3.70	80.0	8.00	•	•	0.20-2.50	0.05-0.20
WPEX 050304R/L12	5.00	3.18	0.40	7.94	3.70	80.0	12.00	•	•	0.20-2.50	0.05-0.20
WPEX 060400R/L08	6.00	4.00	0.00	9.52	3.70	80.0	8.00	•	•	0.20-3.00	0.05-0.20
WPEX 060400R/L12	6.00	4.00	0.00	9.52	3.70	80.0	12.00	•	•	0.20-3.00	0.05-0.20
WPEX 060402R/L08	6.00	4.00	0.20	9.52	3.70	80.0	8.00	•	•	0.20-3.00	0.05-0.20
WPEX 060402R/L12	6.00	4.00	0.20	9.52	3.70	80.0	12.00	•	•	0.20-3.00	0.05-0.20
WPEX 060404R/L08	6.00	4.00	0.40	9.52	3.70	80.0	8.00	•	•	0.20-3.00	0.05-0.20
WPEX 060404R12	6.00	4.00	0.40	9.52	3.70	80.0	12.00	•	•	0.20-3.00	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

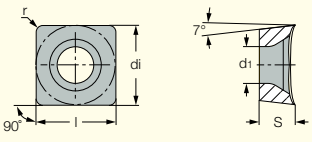
For tools, see pages: SWAPR-PAD (62) • SWAPR/L (62) • SWDPR/L (62)

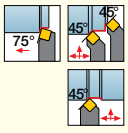
ISOTURN

SCGT-AS

Square Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
SCGT 09T308-AS	9.52	9.52	3.97	0.80	4.40	•	0.50-3.00	0.10-0.30
SCGT 120408-AS	12.70	12.70	4.76	0.80	5.50	•	1.00-4.00	0.10-0.30

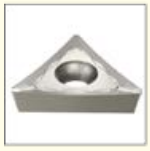
• For user guide and cutting speed recommendations, see pages 197-212

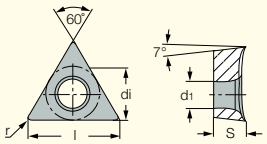
For tools, see pages: SSBCR/L (59) • SSSCR/L (59)

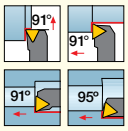
ISOTURN

TCGT-AS

Triangular Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TCGT 110204-AS	11.00	6.35	2.38	0.40	2.80	•	0.20-3.00	0.05-0.30
TCGT 16T304-AS	16.50	9.52	3.97	0.40	4.40	•	0.50-3.00	0.05-0.30
TCGT 16T308-AS	16.50	9.52	3.97	0.80	4.40	•	0.50-3.00	0.10-0.30

• For user guide and cutting speed recommendations, see pages 197-212

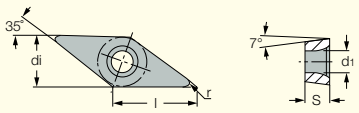
For tools, see pages: E-STFCR-HEAD (95) • S-MTLCR/L-W (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

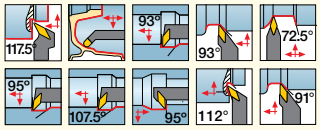
ISOTURN

VCGT-AS

35° Rhombic Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC920	IC908	IC20	IC07	Recommended Machining Data ap (mm)	f (mm/rev)
VCGT 110301-AS	11.10	6.35	3.18	0.10	2.90		•			0.20-2.50	0.05-0.20
VCGT 110302-AS	11.10	6.35	3.18	0.20	2.90	•		•		0.20-2.50	0.05-0.20
VCGT 110304-AS	11.10	6.35	3.18	0.40	2.90			•		0.50-3.00	0.05-0.25
VCGT 160401-AS	16.60	9.52	4.76	0.10	4.40			•		0.20-2.50	0.05-0.20
VCGT 160402-AS	16.60	9.52	4.76	0.20	4.40			•		0.50-2.50	0.05-0.25
VCGT 160404-AS	16.60	9.52	4.76	0.40	4.40			•		0.50-3.00	0.05-0.25
VCGT 160408-AS	16.60	9.52	4.76	0.80	4.40			•		0.50-3.00	0.10-0.25
VCGT 160412-AS	16.60	9.52	4.76	1.20	4.40			•		0.50-3.00	0.10-0.25
VCGT 220530-AS	22.10	12.70	5.56	3.00	5.50			•	•	1.50-4.50	0.15-0.30

• For user guide and cutting speed recommendations, see pages 197-212

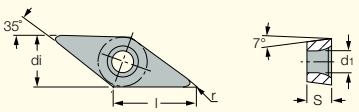
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • PVACR/L-JHP (57) • PVACR/L-S (54) • S/A-SVJCR/L (94) • SVACR/L (57) • SVJCR-PAD (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVPCR/L (58) • SVVCN (58) • SVXCR/L (58) • PVACR/L-JHP-MC (57)

ISOTURN

VCGT-AF

Inserts with a Very Positive Rake Angle and Sharp Cutting Edge for Semi-Finishing and Finishing on Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
VCGT 220508-AF	22.10	12.70	5.56	0.80	5.50	•	1.00-4.50	0.10-0.25
VCGT 220512-AF	22.10	12.70	5.56	1.20	5.50	•	1.00-4.50	0.10-0.30
VCGT 220516-AF	22.10	12.70	5.56	1.60	5.50	•	1.50-4.50	0.10-0.35

• For user guide and cutting speed recommendations, see pages 197-212

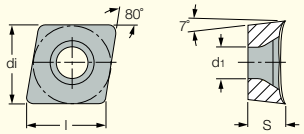
For tools, see pages: A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93)

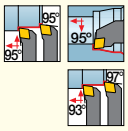
ISOTURN

CCGT-AS

80° Rhombic Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
CCGT 060201-AS	6.40	6.35	2.38	0.10	2.80	●	0.50-2.00	0.10-0.20
CCGT 060202-AS	6.40	6.35	2.38	0.20	2.80	●	0.50-2.00	0.10-0.20
CCGT 060204-AS	6.40	6.35	2.38	0.40	2.80	●	0.50-2.00	0.10-0.25
CCGT 09T301-AS	9.70	9.52	3.97	0.10	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T302-AS	9.70	9.52	3.97	0.20	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T304-AS	9.70	9.52	3.97	0.40	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T308-AS	9.70	9.52	3.97	0.80	4.40	●	0.80-3.00	0.10-0.30
CCGT 120402-AS	12.90	12.70	4.76	0.20	5.50	●	0.50-2.50	0.10-0.25
CCGT 120404-AS	12.90	12.70	4.76	0.40	5.50	●	0.50-2.50	0.10-0.25
CCGT 120408-AS	12.90	12.70	4.76	0.80	5.50	●	1.00-3.50	0.10-0.30

• For user guide and cutting speed recommendations, see pages 197-212

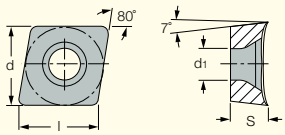
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

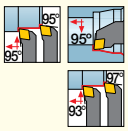
ISOTURN

CCGT-AF

80° Rhombic Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
CCGT 09T308-AF	9.70	9.52	3.97	0.80	4.40	●	0.80-3.00	0.15-0.25
CCGT 120408-AF	12.90	12.70	4.76	0.80	5.50	●	1.00-3.50	0.15-0.30

• For user guide and cutting speed recommendations, see pages 197-212

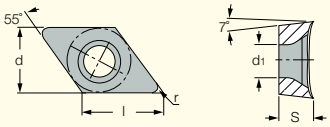
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

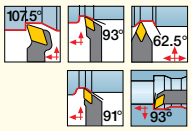
ISOTURN

DCGT-AS

55° Rhombic Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	Tough ↔ Hard IC920	IC20	IC907	Recommended Machining Data ap (mm)	f (mm/rev)
DCGT 070201-AS	7.75	6.35	2.38	0.10	2.80		●		0.50-2.00	0.03-0.20
DCGT 070202-AS	7.75	6.35	2.38	0.20	2.80	●	●		0.50-2.00	0.05-0.20
DCGT 070204-AS	7.75	6.35	2.38	0.40	2.80		●		0.50-2.50	0.05-0.25
DCGT 11T301-AS	11.60	9.52	3.97	0.10	4.40		●		0.50-2.50	0.05-0.25
DCGT 11T302-AS	11.60	9.52	3.97	0.20	4.40		●	●	0.50-2.50	0.05-0.26
DCGT 11T304-AS	11.60	9.52	3.97	0.40	4.40		●	●	0.50-2.50	0.05-0.25
DCGT 11T308-AS	11.60	9.52	3.97	0.80	4.40		●		0.80-3.00	0.08-0.30

• For user guide and cutting speed recommendations, see pages 197-212

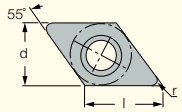
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

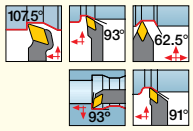
ISOTURN

DCGT-AF

Inserts with a Very Positive Rake Angle and Sharp Cutting Edge for Semi-Finishing and Finishing on Aluminum







Designation	Dimensions l	di	S	r	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
DCGT 11T304-AF	11.60	9.52	3.97	0.40	4.40	●	0.50-2.50	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212

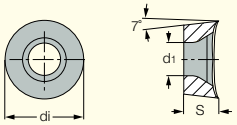
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

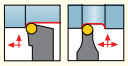
ISOTURN

RCGT-AS

Round Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum







Designation	Dimensions di	S	d1	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
RCGT 0803M0-AS	8.00	3.18	3.40	●	1.00-4.00	0.20-0.40
RCGT 1003M0-AS	10.00	3.18	4.00	●	1.00-5.00	0.20-0.40
RCGT 10T3M0-AS	10.00	3.97	4.40	●	1.00-5.00	0.20-0.40

• For user guide and cutting speed recommendations, see pages 197-212

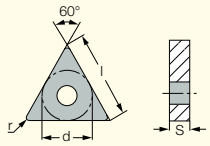
For tools, see pages: C#-SRGCR/L (60) • SRDCN (61) • SRGCR/L (60)

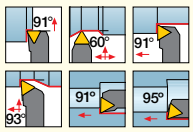
ISOTURN

TNMS-12

Triangular Single-Sided Inserts for Soft and Nonferrous Materials







Designation	Dimensions l	di	S	r	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
TNMS 160404-12	16.50	9.52	4.76	0.40	●	0.50-3.00	0.07-0.32
TNMS 160408-12	16.50	9.52	4.76	0.80	●	0.50-3.00	0.10-0.35
TNMS 220404-12	22.00	12.70	4.76	0.40	●	1.00-4.00	0.07-0.32
TNMS 220408-12	22.00	12.70	4.76	0.80	●	1.00-4.00	0.10-0.35

• For user guide and cutting speed recommendations, see pages 197-212

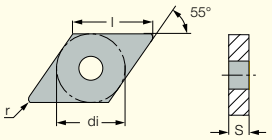
For tools, see pages: A-PTFNR/L-X/G (88) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-PTFNR/L (88)

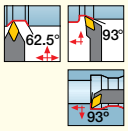
ISOTURN

DNMS-12

55° Rhombic Single-Sided Inserts
for Soft and Nonferrous Materials







Designation	Dimensions l	di	S	r	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
DNMS 150408-12	15.50	12.70	4.76	0.80	●	1.00-4.00	0.07-0.35

• For user guide, see pages 197-212

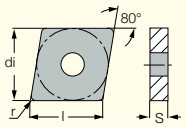
For tools, see pages: A/S-PDUNR/L (86) • C#-PDJNR/L-JHP (32) • PDJNR/L (31) • PDJNR/L-JHP (31)

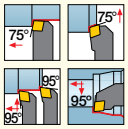
ISOTURN

CNMS-12

80° Rhombic Single-Sided Inserts
for Soft and Nonferrous Materials







Designation	Dimensions l	di	S	r	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
CNMS 120408-12	12.90	12.70	4.76	0.80	●	1.00-4.00	0.10-0.35

• For user guide, see pages 197-212

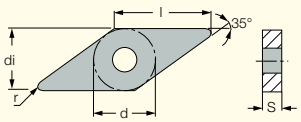
For tools, see pages: A/S-PCLNR/L (81) • A/S-PCLNR/L-X/G (82) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26)

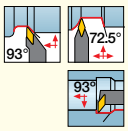
ISOTURN

VNMS-12

35° Rhombic Single-Sided Inserts
for Soft and Nonferrous Materials







Designation	Dimensions l	di	S	r	IC20	Recommended Machining Data ap (mm)	f (mm/rev)
VNMS 160404-12	16.60	9.52	4.76	0.40	●	1.00-3.00	0.07-0.30
VNMS 160408-12	16.60	9.52	4.76	0.80	●	1.00-3.50	0.07-0.33

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: MVJNR/L (35) • MVVNN (36)

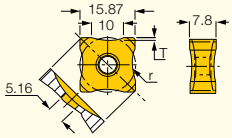


ISOTURN

SNMX 150708R-..

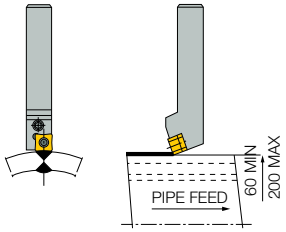
Pipe Skiving Inserts with a Positive Rake Used to Remove the Burr of Welded Tubes





Designation	Dimensions r	Dimensions T	Tough ↔ Hard IC8150	IC418
SNMX 150708R-11	11.00	1.20	●	
SNMX 150708R-13	13.00	1.00	●	●
SNMX 150708R-15	15.00	0.86	●	
SNMX 150708R-18	18.00	0.71	●	
SNMX 150708R-20	20.00	0.64	●	
SNMX 150708R-22	22.00	0.58	●	
SNMX 150708R-25	25.00	0.50	●	
SNMX 150708R-27	27.00	0.47	●	
SNMX 150708R-30	30.00	0.42	●	
SNMX 150708R-35	35.00	0.36	●	
SNMX 150708R-40	40.00	0.31	●	
SNMX 150708R-45	45.00	0.28	●	
SNMX 150708R-50	50.00	0.25	●	●
SNMX 150708R-60	60.00	0.21	●	
SNMX 150708R-65	65.00	0.19	●	
SNMX 150708R-70	70.00	0.18	●	
SNMX 150708R-75	75.00	0.17	●	
SNMX 150708R-90	90.00	0.14	●	

For tools, see pages: PSANR/L (45)



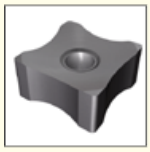
These inserts remove the burr immediately after the welding process (material temperature is usually 300-400°C).
Cutting speed varies from 40 to 150 m/min, depending on the diameter of the tube.

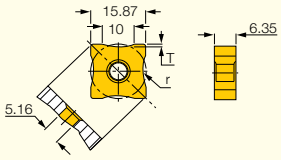
Recommended: $R=\frac{D\ (pipe)}{2}+(1\text{-}2\ mm)$

ISOTURN

SNMX 150608R-..

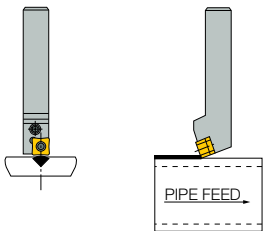
Pipe Skiving Inserts Used to Remove the Burr of Welded Tubes





Designation	Dimensions r	Dimensions T	IC418
SNMX 150608R-15	15.00	0.86	●
SNMX 150608R-20	20.00	0.64	●
SNMX 150608R-90	90.00	0.14	●

For tools, see pages: PSANR/L (45)



These inserts remove the burr immediately after the welding process (material temperature is usually 300-400° C).
Cutting speed varies from 40 to 150 m/min, depending on the diameter of the tube.

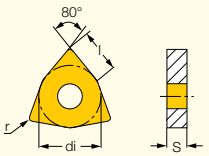
Recommended: $R=\frac{D\ (pipe)}{2}+(1\text{-}2\ mm)$

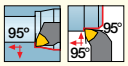
ISOTURN

WNGA-Ceramic

Double-Sided Flat Rake Ceramic Inserts for Machining Cast Iron







Designation	Dimensions l	di	S	r	Tough ↔ Hard IS8	IS80	IS6	Recommended Machining Data ap (mm)	f (mm/rev)
WNGA 080408T	8.70	12.70	4.76	0.80	•			2.00-4.00	0.20-0.60
WNGA 080412T	8.70	12.70	4.76	1.20	•	•	•	2.00-5.00	0.03-0.95

• For user guide and cutting speed recommendations, see pages 197-212

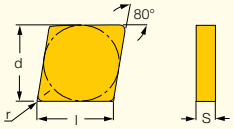
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

ISOTURN

CNGN-Ceramic

80° Rhombic Double-Sided Ceramic Inserts with a T-Land for Machining Cast Iron, Hardened Steel and Nickel Based Alloys







Designation	Dimensions l	di	S	r	Tough ↔ Hard IW7	IS9	IS8	IS80	IN23	IN22	IN420	Recommended Machining Data ap (mm)	f (mm/rev)
CNGN 120404T	12.90	12.70	4.76	0.40	•				•			1.00-3.00	0.10-0.43
CNGN 120408E	12.90	12.70	4.76	0.80		•						1.00-3.00	0.10-0.50
CNGN 120408T	12.90	12.70	4.76	0.80	•		•		•	•	•	1.00-3.00	0.10-0.50
CNGN 120408T0225-WG [1]	12.90	12.70	4.76	0.80	•							1.00-3.00	0.10-0.50
CNGN 120412E	12.90	12.70	4.76	1.20		•						1.00-5.00	0.10-0.50
CNGN 120412T	12.90	12.70	4.76	1.20	•		•	•	•			1.00-4.00	0.10-0.50
CNGN 120416T	12.90	12.70	4.76	1.60	•		•	•				1.00-5.00	0.10-0.50
CNGN 120708E	12.90	12.70	7.94	0.80		•						1.00-4.00	0.10-0.50
CNGN 120708T	12.90	12.70	7.94	0.80	•				•			1.00-4.00	0.10-0.50
CNGN 120712E	12.90	12.70	7.94	1.20		•						1.00-5.00	0.10-0.50
CNGN 120712T	12.90	12.70	7.94	1.20	•		•					1.00-4.00	0.10-0.50
CNGN 120716T	12.90	12.70	7.94	1.60	•		•	•				1.00-5.00	0.10-0.50
CNGN 160612T	16.12	15.88	6.35	1.20			•					1.00-5.00	0.10-0.50

• For user guide, see pages 197-212

[1] When using a double-ended insert, grooving depth is limited by the insert.

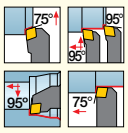
For tools, see pages: CCLNR/L (73)

ISOTURN

CNMG-Ceramic

80° Rhombic Double-Sided Inserts with a T-Land for Machining Cast Iron and Hardened Steel





Designation	Dimensions l	di	S	r	Tough ↔ Hard IN23	IN22	Recommended Machining Data ap (mm)	f (mm/rev)
CNMG 120404T	12.90	12.70	4.76	0.40	•		0.00-0.00	0.00-0.00
CNMG 120408T	12.90	12.70	4.76	0.80	•	•	0.00-0.00	0.00-0.00

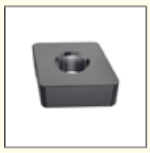
• For user guide and cutting speed recommendations, see pages 197-212

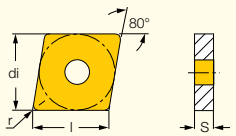
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

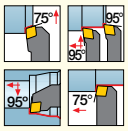
ISOTURN

CNGA-Ceramic

80° Rhombic Double-Sided Inserts with a T-Land for Machining Cast Iron and Hardened Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IS9	IS8	IS80	IS6	IN23	IN22	IN420	Recommended Machining Data a_p (mm)	f (mm/rev)
CNGA 120404T	12.90	12.70	4.76	0.40					●	●	●	1.00-3.00	0.05-0.20
CNGA 120408E	12.90	12.70	4.76	0.80	●							1.00-4.00	0.05-0.20
CNGA 120408T	12.90	12.70	4.76	0.80		●	●	●	●	●	●	1.00-4.00	0.05-0.20
CNGA 120412T	12.90	12.70	4.76	1.20		●		●	●	●	●	1.00-4.00	0.05-0.20
CNGA 120416T	12.90	12.70	4.76	1.60		●	●		●			1.00-5.00	0.05-0.20

• For user guide, see pages 197-212

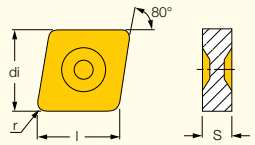
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCBNR/L (28) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCBNR/L (25) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

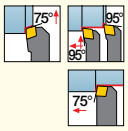
ISOTURN

CNGX-Ceramic

80° Rhombic Double-Sided Dimpled Ceramic Inserts with a T-Land for Machining Cast Iron







Designation	Dimensions l	di	S	r	Tough ↔ Hard IS8	IS80	IS6	Recommended Machining Data a_p (mm)	f (mm/rev)
CNGX 120712T	12.90	12.70	7.94	1.20	●	●	●	1.00-3.00	0.07-0.43
CNGX 120716T	12.90	12.70	7.94	1.60	●	●	●	1.00-3.00	0.07-0.43

• For user guide and cutting speed recommendations, see pages 197-212

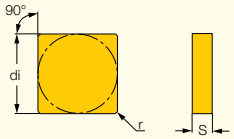
For tools, see pages: TCBNR/L-CH (73) • TCKNR/L-CH (73) • TCLNR/L-CH (73)

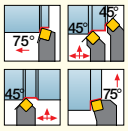
ISOTURN

SNGN-Ceramic

Square Double-Sided Ceramic Inserts with a Flat Rake for Machining Cast Iron, Hardened Steel and Super Alloys







Designation	Dimensions di	S	r	Tough ↔ Hard IW7	IS9	IS8	IS80	IS6	IN23	IN22	IN420	IN110	Recommended Machining Data a_p (mm)	f (mm/rev)
SNGN 120404T	12.70	4.76	0.40							●			0.10-3.50	0.10-0.50
SNGN 120408T	12.70	4.76	0.80	●		●			●	●	●		0.10-3.50	0.10-0.50
SNGN 120412T	12.70	4.76	1.20	●		●	●	●	●	●	●	●	0.10-5.00	0.10-0.50
SNGN 120416E	12.70	4.76	1.60		●								0.10-5.00	0.10-0.50
SNGN 120416T	12.70	4.76	1.60	●		●	●			●	●		0.10-5.00	0.10-0.50
SNGN 120708T	12.70	7.94	0.80	●						●	●		0.10-5.00	0.10-0.50
SNGN 120712T	12.70	7.94	1.20	●		●	●		●			●	0.10-5.00	0.10-0.50
SNGN 120716T	12.70	7.94	1.60	●		●	●		●	●		●	0.10-5.00	0.10-0.50
SNGN 150712T	15.88	6.35	1.20	●									0.10-5.00	0.10-0.50
SNGN 150716T	15.88	6.35	1.60	●		●							0.10-5.00	0.10-0.50

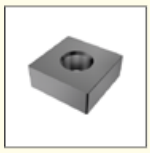
• For user guide and cutting speed recommendations, see pages 197-212

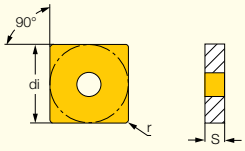
For tools, see pages: CSDNN-CE/CEA (74) • CSKNR/L (75) • CSRNR/L (74) • CSSNR/L-CE (75)

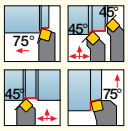
ISOTURN

SNGA-Ceramic

Square Double-Sided Ceramic Inserts with a Flat Rake for Machining Cast Iron and Hardened Steel







Designation	Dimensions di	S	r	Tough ↔ Hard IS8	IN23	IN22	IN420	Recommended Machining Data ap (mm)	f (mm/rev)
SNGA 120404T	12.70	4.76	0.40			●		0.10-3.00	0.05-0.30
SNGA 120408T	12.70	4.76	0.80	●	●	●	●	0.10-3.50	0.05-0.30
SNGA 120412T	12.70	4.76	1.20	●	●			0.10-4.00	0.05-0.30
SNGA 120416T	12.70	4.76	1.60	●				0.10-4.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

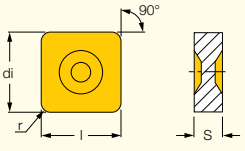
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

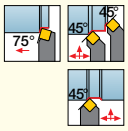
ISOTURN

SNGX-Ceramic

Square Double-Sided Dimpled Ceramic Inserts with a Flat Rake for Machining Cast Iron







Designation	Dimensions di	S	r	l	Tough ↔ Hard IS8	IS80	IS6	Recommended Machining Data ap (mm)	f (mm/rev)
SNGX 120712T	12.70	7.94	1.20	12.70	●	●	●	0.10-5.00	0.10-0.50
SNGX 120716T	12.70	7.94	1.60	12.70	●	●	●	0.10-5.00	0.10-0.50

• For user guide and cutting speed recommendations, see pages 197-212

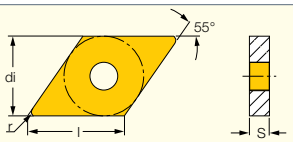
For tools, see pages: TSDNN-CH (74) • TSRNR/L-CH (74) • TSSNR/L-CH (75)

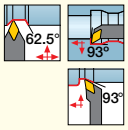
ISOTURN

DNGA-Ceramic

55° Rhombic Double-Sided Ceramic Inserts for Machining Cast Iron and Hardened Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IS8	IN23	IN22	IN420	Recommended Machining Data ap (mm)	f (mm/rev)
DNGA 150404T	15.50	12.70	4.76	0.40		●	●		0.10-3.00	0.07-0.50
DNGA 150408T	15.50	12.70	4.76	0.80	●	●	●	●	0.10-3.50	0.07-0.50
DNGA 150412T	15.50	12.70	4.76	1.20		●			0.10-4.00	0.07-0.50
DNGA 150604T	15.50	12.70	6.35	0.40		●		●	0.10-3.50	0.07-0.50
DNGA 150608T	15.50	12.70	6.35	0.80		●	●	●	0.10-4.00	0.07-0.50
DNGA 150612T	15.50	12.70	6.35	1.20			●	●	0.10-5.00	0.07-0.50

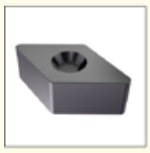
• For user guide and cutting speed recommendations, see pages 197-212

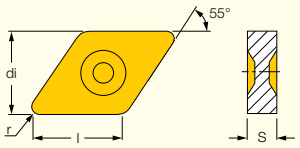
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

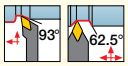
ISOTURN

DNGX-Ceramic

55° Rhombic Double-Sided Dimpled Ceramic Inserts for Machining Cast Iron







Designation	Dimensions l	di	S	r	Tough ↔ Hard IS8	IS80	IS6	Recommended Machining Data a_p (mm)	f (mm/rev)
DNGX 150712T	15.50	12.70	7.94	1.20	•	•	•	0.10-4.00	0.10-0.50
DNGX 150716T	15.50	12.70	7.94	1.60	•	•		0.10-5.00	0.10-0.50

• For user guide and cutting speed recommendations, see pages 197-212

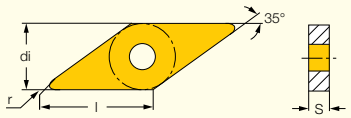
For tools, see pages: TDJNR/L-CH (76) • TDNNN-CH (76)

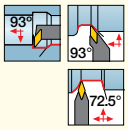
ISOTURN

VNGA-Ceramic

35° Rhombic Double-Sided Ceramic Inserts with a T-Land for Machining Cast Iron and Hardened Steel







Designation	Dimensions l	di	S	r	Tough ↔ Hard IN22	IN420	Recommended Machining Data a_p (mm)	f (mm/rev)
VNGA 160404T	16.60	9.52	4.76	0.40	•	•	0.70-2.50	0.06-0.30
VNGA 160408T	16.60	9.52	4.76	0.80		•	0.80-3.00	0.08-0.35

• For user guide and cutting speed recommendations, see pages 197-212

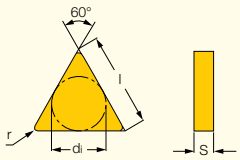
For tools, see pages: MVJNR/L (35) • MVVNN (36)

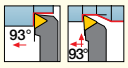
ISOTURN

TNGN-Ceramic

Triangular Double-Sided Ceramic Inserts for Machining Cast Iron, Hardened Steel and Nickel Based Alloys







Designation	Dimensions l	di	S	r	Tough ↔ Hard IW7	IS9	IS8	IS80	IN23	IN22	IN420	Recommended Machining Data a_p (mm)	f (mm/rev)
TNGN 160408E	16.50	9.52	4.76	0.80		•						1.00-3.50	0.10-0.35
TNGN 160408T	16.50	9.52	4.76	0.80			•		•	•	•	1.00-3.50	0.10-0.35
TNGN 160412T	16.50	9.52	4.76	1.20	•		•	•				0.10-4.00	0.10-0.40
TNGN 220408T	22.00	12.70	4.76	0.80			•					0.10-5.00	0.10-0.50
TNGN 220712T	22.00	12.70	7.94	1.20	•							0.10-5.00	0.10-0.50

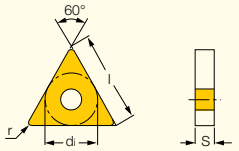
• For user guide and cutting speed recommendations, see pages 197-212

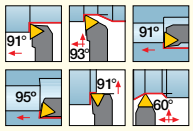
For tools, see pages: CTJNR/L (75)

ISOTURN

TNGA-Ceramic
Triangular Double-Sided Ceramic Inserts for Machining Super Alloys and Hardened Steel







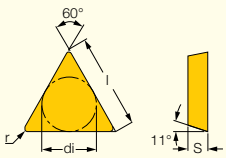
Designation	Dimensions l	di	S	r	Tough ↔ Hard IS9	IN23	IN22	IN420	Recommended Machining Data ap (mm)	f (mm/rev)
TNGA 160404T	16.50	9.52	4.76	0.40		•	•	•	0.10-3.00	0.07-0.50
TNGA 160408E	16.50	9.52	4.76	0.80	•				0.10-3.50	0.07-0.50
TNGA 160408T	16.50	9.52	4.76	0.80		•	•	•	0.10-3.50	0.07-0.50
TNGA 160412T	16.50	9.52	4.76	1.20		•			0.10-4.00	0.07-0.50
TNGA 220408T	22.00	12.70	4.76	0.80		•	•	•	0.10-5.00	0.07-0.50
TNGA 220416T	22.00	12.70	4.76	1.60		•			0.10-5.00	0.07-0.50

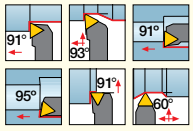
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: A-PTFNR/L-X/G (88) • C#-DTGNR/L (42) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TPGN-Ceramic
Triangular Ceramic Inserts with an 11° Positive Flank for Machining Hardened Steel







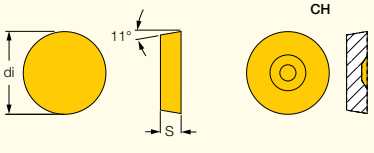
Designation	Dimensions l	di	S	r	Tough ↔ Hard IN23	IN22	IN420	Recommended Machining Data ap (mm)	f (mm/rev)
TPGN 090204T	9.60	5.56	2.38	0.40		•		0.10-1.50	0.07-0.30
TPGN 110304T	11.00	6.35	3.18	0.40	•	•	•	0.10-1.50	0.07-0.30
TPGN 110308T	11.00	6.35	3.18	0.80	•	•	•	0.10-3.00	0.07-0.40
TPGN 160304T	16.50	9.52	3.18	0.40	•	•	•	0.10-4.00	0.07-0.50
TPGN 160308T	16.50	9.52	3.18	0.80	•	•	•	0.10-4.00	0.07-0.50

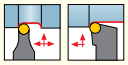
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: CTFPR/L (63) • CTGPR/L (63) • S-CTFPR/L (96)

ISOTURN

RPGN-Ceramic
Round Ceramic Inserts for Machining Nickel Based Alloys and Hardened Steel







Designation	Dimensions di	S	IW7	Recommended Machining Data ap (mm)	f (mm/rev)
RPGN 090300E	9.52	3.17	•	0.10-2.00	0.07-0.20
RPGN 120400E	12.70	4.76	•	0.10-3.00	0.07-0.20
RPGN 120400T	12.70	4.76	•	0.10-3.00	0.07-0.20

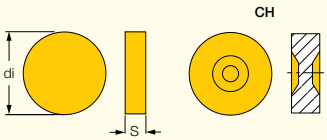
• For user guide and cutting speed recommendations, see pages 197-212

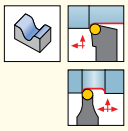
ISOTURN

RNGN-Ceramic

Round Double-Sided Ceramic Inserts for Machining Cast Iron, Nickel Based Alloys and Hardened Steel







Designation	Dimensions di	Dimensions S	Tough ↔ Hard IW7	IS9	IS8	IN23	IN22	IN420	IN11	Recommended Machining Data a_p (mm)	f (mm/rev)
RNGN 090300T	9.52	3.18	•				•			0.10-2.00	0.07-0.20
RNGN 090400T	9.52	4.76	•							0.10-2.00	0.07-0.20
RNGN 120400E	12.70	4.76		•						0.10-3.50	0.07-0.50
RNGN 120400T	12.70	4.76	•		•		•	•		0.10-3.50	0.07-0.50
RNGN 120700 S6 (1)	12.70	7.94	•							1.00-2.00	-
RNGN 120700E	12.70	7.94	•	•						0.10-2.00	0.07-0.20
RNGN 120700E04 (1)	12.70	7.94	•							1.00-2.00	-
RNGN 120700T	12.70	7.94	•	•		•	•	•		0.10-4.50	0.07-0.50
RNGN 120700T01020	12.70	7.94		•						0.10-4.50	0.07-0.50
RNGN 120700T0220	12.70	7.94	•							0.10-2.00	0.07-0.20
RNGN 150700T	15.76	7.94	•							0.10-3.00	0.07-0.20
RNGN 190700T	19.05	7.94	•							0.10-3.00	0.07-0.20
RNGN 250700T	25.00	7.94							•	0.10-5.00	0.07-0.50

• For user guide and cutting speed recommendations, see pages 197-212

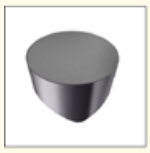
(1) **For milling nickel based superalloys; reference recommendations for milling Inconel 718:** 0.12 mm/t 900-1000 m/min.

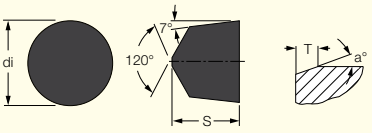
For tools, see pages: CRDNN (76) • CRGNR/L (76)

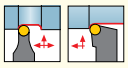
ISOTURN

RCGX-Ceramic

Round Ceramic Inserts for Machining Nickel Based Alloys and Hardened Steel







Designation	Dimensions di	Dimensions S	Tough ↔ Hard IW7	IN23	Recommended Machining Data a_p (mm)	f (mm/rev)
RCGX 090700E	9.52	7.94	•		0.10-3.00	0.07-0.50
RCGX 090700T	9.52	7.94	•	•	0.10-3.00	0.07-0.50
RCGX 120700E	12.70	7.94	•		0.10-4.00	0.07-0.50
RCGX 120700T	12.70	7.94	•	•	0.10-4.00	0.07-0.50

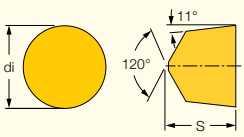
• For user guide and cutting speed recommendations, see pages 197-212

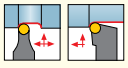
ISOTURN

RPGX-Ceramic

Round Ceramic Inserts for Machining Nickel Based Alloys and Hardened Steel







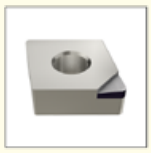
Designation	Dimensions di	Dimensions S	IW7	Recommended Machining Data a_p (mm)	f (mm/rev)
RPGX 090700T	9.52	7.94	•	0.10-2.00	0.07-0.20
RPGX 120700T	12.70	7.94	•	0.10-3.00	0.07-0.20

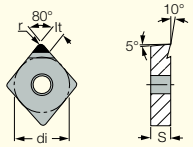
• For user guide and cutting speed recommendations, see pages 197-212

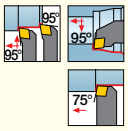
ISOTURN

CNMA (PCD)

80° Rhombic Inserts with a Single PCD Top Corner Tip and Positive Rake for Finishing Applications







PCD-Sharp cutting edge

Designation	Dimensions l	di	S	r	lt	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
CNMA 120404D	12.90	12.70	4.76	0.40	3.9	●	0.10-3.00	0.05-0.26
CNMA 120408D	12.90	12.70	4.76	0.80	3.6	●	0.10-3.00	0.05-0.26

• For user guide and cutting speed recommendations, see pages 197-212

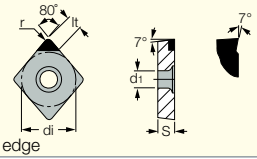
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

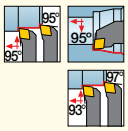
ISOTURN

CCMT (PCD)

Inserts with a Single PCD Top Corner Tip, 7° Clearance and Positive Rake Angle for Finishing Aluminum







PCD Sharp cutting edge

Designation	Dimensions l	di	S	r	lt	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
CCMT 060202D	6.30	6.35	2.38	0.20	3.1	2.80	●	0.08-3.00	0.05-0.30
CCMT 060204D	6.30	6.35	2.38	0.40	3.0	2.80	●	0.10-3.00	0.05-0.30
CCMT 09T304D	9.70	9.52	3.97	0.40	3.9	4.40	●	0.10-3.00	0.05-0.30

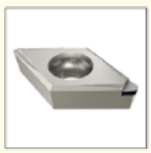
• For user guide and cutting speed recommendations, see pages 197-212

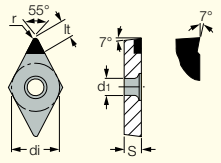
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

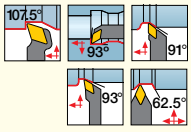
ISOTURN

DCMT (PCD)

55° Rhombic Inserts with a Single PCD Top Corner Tip, 7° Clearance and Positive Rake Angle for Finishing Applications







Designation	Dimensions l	di	S	r	lt	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 11T302D	11.60	9.52	3.97	0.20	3.7	4.40	●	0.10-3.00	0.05-0.30
DCMT 11T304D	11.60	9.52	3.97	0.40	3.6	4.40	●	0.10-3.00	0.05-0.30
DCMT 11T308D	11.60	9.52	3.97	0.80	3.3	4.40	●	0.10-3.00	0.05-0.29

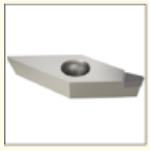
• For user guide and cutting speed recommendations, see pages 197-212

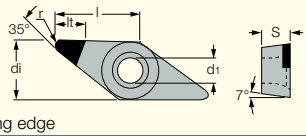
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

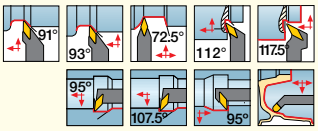
ISOTURN

VCMT (CBN)

35° Rhombic Single Brazed Tip Corner Inserts for Finishing Aluminum (PCD) and Cast Iron (CBN)







PCD sharp cutting edge

Designation	Dimensions di	S	r	l	d1	IB55	Recommended Machining Data ap (mm)	f (mm/rev)
VCMT 160404T	9.52	4.76	0.40	16.60	4.40	●	0.10-3.00	0.05-0.30
VCMT 160408T	9.52	4.76	0.80	16.60	4.40	●	0.10-3.00	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

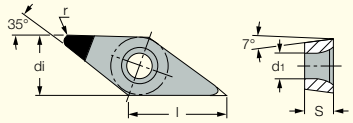
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

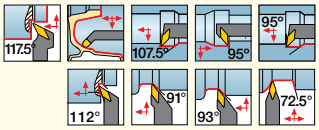
ISOTURN

VCGT-DW (PCD)

Inserts with 7° Clearance and a Single PCD Top Corner Tip Chipformer for Machining Aluminum







Designation	Dimensions l	di	S	r	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
VCGT 160404-DW	16.60	9.52	4.76	0.40	4.40	●	0.10-3.00	0.05-0.30
VCGT 160408-DW	16.60	9.52	4.76	0.80	4.40	●	0.10-3.00	0.05-0.30
VCGT 160412-DW	16.60	9.52	4.76	1.20	4.40	●	0.10-3.00	0.05-0.30
VCGT 220516-DW	22.10	12.70	5.56	1.60	5.50	●	0.10-3.00	0.05-0.30
VCGT 220520-DW	22.10	12.70	5.56	2.00	5.50	●	0.10-3.00	0.05-0.30
VCGT 220530-DW	22.10	12.70	5.56	3.00	5.50	●	0.10-3.00	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

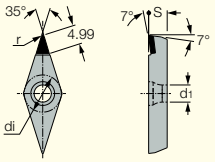
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

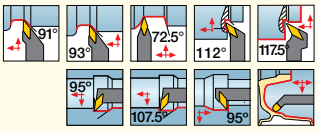
ISOTURN

VCGT (PCD)

35° Rhombic Single Brazed Tip Corner Inserts for Finishing Aluminum (PCD)







PCD sharp cutting edge

Designation	Dimensions di	S	r	l	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
VCGT 160404D	9.52	4.76	0.40	16.60	4.40	●	0.10-3.00	0.05-0.30
VCGT 160408D	9.52	4.76	0.80	16.60	4.40	●	0.10-3.00	0.05-0.30

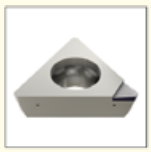
• For user guide and cutting speed recommendations, see pages 197-212

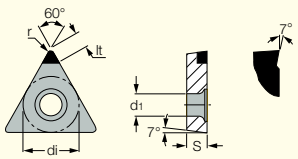
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

ISOTURN

TCMT (PCD)

Inserts with a Single PCD Top Corner Tip, 7° Clearance and Positive Rake Angle for Finishing Aluminum





PCD-Sharp cutting edge.

Designation	Dimensions l	di	S	r	lt	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
TCMT 110204D	11.00	6.35	2.38	0.40	3.8	2.80	●	0.10-3.00	0.05-0.30

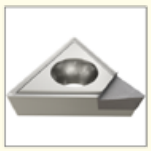
• For user guide and cutting speed recommendations, see pages 197-212

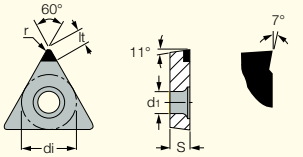
For tools, see pages: E-STFCR-HEAD (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

ISOTURN

TPGX (PCD)

Triangular Inserts with a Single PCD Top Corner Tip, 11° Clearance and Positive Rake Angle for Finishing Aluminum





PCD-Sharp cutting edge

Designation	Dimensions l	di	S	r	lt	d1	ID5	Recommended Machining Data ap (mm)	f (mm/rev)
TPGX 090202	9.52	5.56	2.38	0.20	3.0	2.50	●	0.10-3.00	0.05-0.30
TPGX 090204	9.52	5.56	2.38	0.40	3.0	2.50	●	0.10-3.00	0.05-0.30
TPGX 110302	11.00	6.35	3.18	0.20	3.4	3.50	●	0.10-3.00	0.05-0.30
TPGX 110304	11.00	6.35	3.18	0.40	3.8	3.50	●	0.10-3.00	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

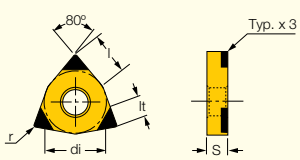
For tools, see pages: A/E-STFPR-X (97) • MG STFPR-X (97)

ISOTURN

WNGA-M3 (CBN)

Multi-Cornered CBN Inserts for Machining Hardened Steel





Designation	Dimensions l	di	S	r	lt	IB20H	Recommended Machining Data ap (mm)	f (mm/rev)
WNGA 080408-M3	8.70	12.70	4.76	0.80	2.2	●	0.05-0.50	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

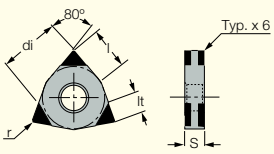


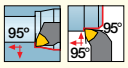
ISOTURN

WNGA-MC/M6 (CBN)

Multi-Cornered CBN Inserts for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB55	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
WNGA 080404T-MC	8.70	12.70	4.76	0.40	3.1	●		0.05-0.50	0.05-0.20
WNGA 080408-M6	8.70	12.70	4.76	0.80	2.2		●	0.05-0.50	0.05-0.20
WNGA 080408T-MC	8.70	12.70	4.76	0.80	3.1	●		0.05-0.50	0.05-0.20
WNGA 080412T-MC	8.70	12.70	4.76	1.20	3.1	●		0.05-0.50	0.05-0.20

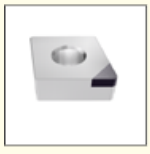
• For user guide and cutting speed recommendations, see pages 197-212

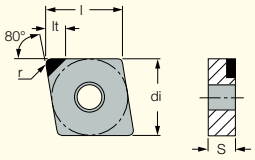
For tools, see pages: A/S-MWLNR/L-W (83) • A/S-PWLNR/L (84) • C#-MULNR/L-MW (19) • C#-PWLNR/L-08-JHP (13) • DWLNR/L (13) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • MWLNR/L-W (21) • PWLNR/L (12) • PWLNR/L-08-JHP (13) • PWLNR/L-X (14) • PWLNR/L-X-JHP (15) • PWLNR/L-X-JHP-MC (16) • S-DWLNR/L (78) • S-MULNR-MW (85)

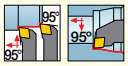
ISOTURN

CNMA-T/M1/WG (CBN)

80° Rhombic Inserts with a Single CBN Top Corner Tip for Machining Cast Iron, Hardened Steel and Super Alloys







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB90	IB85	IB20H	IB55	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
CNMA 120404T	12.90	12.70	4.76	0.40	3.2	●			●	●	0.05-0.50	0.05-0.26
CNMA 120408-M1	12.90	12.70	4.76	0.80	3.5			●			0.05-0.50	0.05-0.30
CNMA 120408T	12.90	12.70	4.76	0.80	3.4	●	●		●		0.05-0.50	0.05-0.30
CNMA 120408T-WG (1)	12.90	12.70	4.76	0.80	3.5	●	●		●	●	0.05-0.50	0.05-0.30
CNMA 120412-M1	12.90	12.70	4.76	1.20	3.5			●			0.05-0.50	0.05-0.30
CNMA 120412T	12.90	12.70	4.76	1.20	4.0				●		0.05-0.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

(1) Wiper insert for high feed finishing, eliminates grinding.

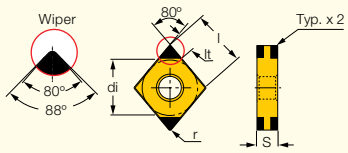
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

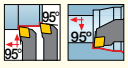
ISOTURN

CNMA-MW4 (CBN)

80° Rhombic Inserts with 4 CBN Wiper Edge Tips for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	IB25HC	Recommended Machining Data ap (mm)	f (mm/rev)
CNMA 120408-MW4	12.90	12.70	4.76	0.80	2.2	●	0.05-0.50	0.05-0.40
CNMA 120412-MW4	12.90	12.70	4.76	1.20	2.4	●	0.05-0.50	0.05-0.40

• For user guide and cutting speed recommendations, see pages 197-212

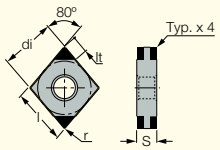
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

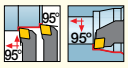
ISOTURN

CNGA-4 (CBN)

4-Cornered CBN Inserts for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB25HC	IB55	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
CNGA 120404T-MC	12.90	12.70	4.76	0.40	3.1		●		0.05-0.50	0.05-0.20
CNGA 120408-M4	12.90	12.70	4.76	0.80	2.2	●		●	0.05-0.50	0.05-0.20
CNGA 120408T-MC	12.90	12.70	4.76	0.80	3.1		●		0.05-0.50	0.05-0.20
CNGA 120408T-WG-MC (1)	12.90	12.70	4.76	0.80	3.1		●		0.05-0.50	0.05-0.20
CNGA 120412-M4	12.90	12.70	4.76	1.20	2.4	●		●	0.05-0.50	0.05-0.20
CNGA 120412T-MC	12.90	12.70	4.76	1.20	3.1		●		0.05-0.50	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

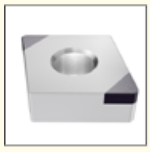
(1) Wiper corner configuration

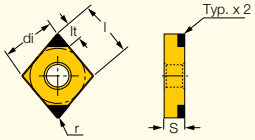
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

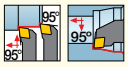
ISOTURN

CNGA-2 (CBN)

80° Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB05S	IB10S	IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
CNGA 120404-F2	12.90	12.70	4.76	0.40	2.3				●		●	0.05-0.50	0.05-0.20
CNGA 120404-M2	12.90	12.70	4.76	0.40	2.3	●	●		●		●	0.05-0.30	0.05-0.20
CNGA 120404-R2	12.90	12.70	4.76	0.40	2.2			●				0.05-0.50	0.05-0.20
CNGA 120408-F2	12.90	12.70	4.76	0.80	2.2	●			●	●		0.05-0.30	0.05-0.18
CNGA 120408-M2	12.90	12.70	4.76	0.80	2.2		●	●		●		0.05-0.30	0.05-0.18
CNGA 120408-R2	12.90	12.70	4.76	0.80	2.2			●				0.05-0.50	0.05-0.20
CNGA 120408-S2	12.90	12.70	4.76	0.80	2.2	●						0.05-0.50	0.05-0.20
CNGA 120412-F2	12.90	12.70	4.76	1.20	2.4				●		●	0.05-0.50	0.05-0.20
CNGA 120412-M2	12.90	12.70	4.76	1.20	2.4		●	●		●		0.05-0.30	0.05-0.20
CNGA 120412-R2	12.90	12.70	4.76	1.20	2.4				●			0.05-0.50	0.05-0.20

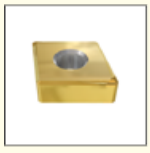
• For user guide and cutting speed recommendations, see pages 197-212

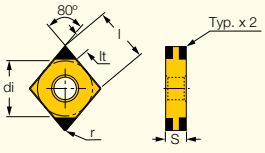
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

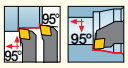
ISOTURN

CNGG-M4HF/M4HM (CBN)

80° Rhombic Inserts with 4 Chipbreaking CBN Tips for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	IB25HA	Recommended Machining Data ap (mm)	f (mm/rev)
CNGG 120408-M4HF	12.90	12.70	4.76	0.80	2.2	●	0.20-0.75	0.05-0.20
CNGG 120412-M4HM	12.90	12.70	4.76	1.20	2.4	●	0.50-1.00	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

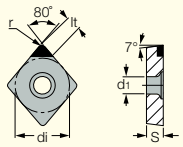
For tools, see pages: A/S-PCLNR/L (81) • C#-MULNR/L-MW (19) • C#-PCLNR/L-12-JHP (24) • C#-PCLNR/L-X (27) • C#-PCLNR/L-X-JHP (27) • DCLNR/L (28) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PCLNR/L (23) • PCLNR/L-12-JHP (24) • PCLNR/L-CA (101) • PCLNR/L-X (25) • PCLNR/L-X-JHP (26) • PCLNR/L-X-JHP-MC (26) • S-DCLNR/L (79) • S-MULNR-MW (85) • A/S-PCLNR/L-X/G (82)

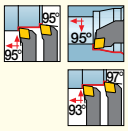
ISOTURN

CCMT (CBN)

80° Rhombic Inserts with a Single CBN Top Corner Tip and 7° Clearance for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	IB55	Recommended Machining Data ap (mm)	f (mm/rev)
CCMT 060202T	6.30	6.35	2.38	0.20	2.6	2.80	●	0.05-0.50	0.05-0.20
CCMT 060204T	6.30	6.35	2.38	0.40	2.7	2.80	●	0.05-0.50	0.05-0.20
CCMT 09T304T	9.70	9.52	3.97	0.40	2.9	4.40	●	0.05-0.50	0.05-0.20
CCMT 09T308T	9.70	9.52	3.97	0.80	3.6	4.40	●	0.05-0.50	0.05-0.20

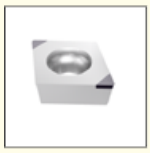
• For user guide and cutting speed recommendations, see pages 197-212

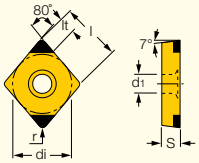
For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

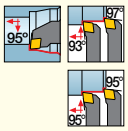
ISOTURN

CCGW/CCMW-2 (CBN)

80° Positive Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys







Designation	Dimensions di	l	S	r	lt	d1	Tough ↔ Hard IB05S	IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
CCGW 03X102T01015-1	3.57	3.63	1.39	0.20	2.0	1.90				●		0.05-0.50	0.05-0.20
CCGW 03X104T01015-1	3.57	3.63	1.39	0.40	2.3	1.90				●		0.05-0.50	0.05-0.20
CCGW 04T102T01015-1	4.37	4.44	1.79	0.20	2.0	2.30				●		0.05-0.50	0.05-0.20
CCGW 04T104T01015-1	4.37	4.44	1.79	0.40	2.3	2.30				●		0.05-0.50	0.05-0.20
CCGW 060202-F2	6.35	6.30	2.38	0.20	2.3	2.80			●		●	0.05-0.50	0.05-0.20
CCGW 060204-F2	6.35	6.30	2.38	0.40	2.3	2.80			●		●	0.05-0.50	0.05-0.20
CCGW 060204-R2	6.35	6.30	2.38	0.40	2.3	2.80			●			0.05-0.50	0.05-0.20
CCGW 060202-M2	6.35	6.30	2.38	0.20	2.3	2.80					●	0.05-0.50	0.05-0.20
CCGW 060204-M2	6.35	6.30	2.38	0.40	2.3	2.80	●				●	0.05-0.50	0.05-0.20
CCMW 060202-M2	6.35	6.30	2.38	0.20	2.3	2.80		●		●		0.05-0.50	0.05-0.20
CCMW 060204-M2	6.35	6.30	2.38	0.40	2.3	2.80		●		●		0.05-0.50	0.05-0.20
CCGW 09T304-F2	9.52	9.70	3.97	0.40	2.3	4.40			●		●	0.05-0.50	0.05-0.20
CCGW 09T304-R2	9.52	9.70	3.97	0.40	2.3	4.40			●			0.05-0.50	0.05-0.20
CCGW 09T308-F2	9.52	9.70	3.97	0.80	2.2	4.40			●		●	0.05-0.50	0.05-0.20
CCGW 09T308-R2	9.52	9.70	3.97	0.80	2.2	4.40			●			0.05-0.50	0.05-0.20
CCGW 09T304-M2	9.52	9.70	3.97	0.40	2.3	4.40	●				●	0.05-0.50	0.05-0.30
CCGW 09T308-M2	9.52	9.70	3.97	0.80	2.2	4.40	●		●		●	0.05-0.50	0.05-0.30
CCMW 09T304-M2	9.52	9.70	3.97	0.40	2.3	4.40		●		●		0.05-0.50	0.05-0.15
CCMW 09T308-M2	9.52	9.70	3.97	0.80	2.2	4.40		●		●		0.05-0.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

For tools, see pages: A/E/S-SCLCR/L (91) • C#-SCLCR/L-JHP (47) • E-SCLCR/L-HEAD (90) • PCLCR/L-S (48) • PCLCR/L-S-JHP (49) • SCACR/L-S (48) • SCLCR-PAD (47) • SCLCR/L (47) • PCLCR/L-JHP-MC (48)

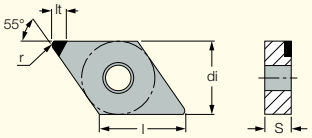


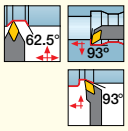
ISOTURN

DNMA (CBN)

CBN Inserts with a Flat Rake for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB55	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
DNMA 150404T	15.50	12.70	4.76	0.40	2.8	•		0.05-0.50	0.05-0.20
DNMA 150408T	15.50	12.70	4.76	0.80	3.2	•	•	0.05-0.50	0.05-0.20
DNMA 150412T	15.50	12.70	4.76	1.20	3.0	•		0.05-0.50	0.05-0.20
DNMA 150604T	15.50	12.70	6.35	0.40	2.8	•		0.05-0.50	0.05-0.20
DNMA 150608T	15.50	12.70	6.35	0.80	3.2	•		0.05-0.50	0.05-0.20
DNMA 150612T	15.50	12.70	6.35	1.20	3.0	•	•	0.05-0.50	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

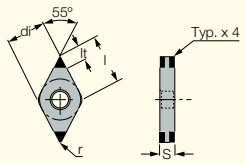
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

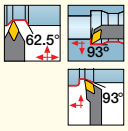
ISOTURN

DNGA-4 (CBN)

55° Rhombic 4-Cornered CBN Inserts for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB25HC	IB55	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
DNGA 150404T-MC	15.50	12.70	4.76	0.40	2.9		•		0.05-0.50	0.05-0.18
DNGA 150408-M4	15.50	12.70	4.76	0.80	2.1	•		•	0.05-0.50	0.05-0.18
DNGA 150408T-MC	15.50	12.70	4.76	0.80	3.0		•		0.05-0.50	0.05-0.18
DNGA 150412-M4	15.50	12.70	4.76	1.20	2.0	•		•	0.05-0.50	0.05-0.18
DNGA 150412T-MC	15.50	12.70	4.76	1.20	3.0		•		0.05-0.50	0.05-0.18
DNGA 150604T-MC	15.50	12.70	6.35	0.40	2.9		•		0.05-0.50	0.05-0.18
DNGA 150608T-MC	15.50	12.70	6.35	0.80	3.0		•		0.05-0.50	0.05-0.18
DNGA 150612T-MC	15.50	12.70	6.35	1.20	3.0		•		0.05-0.50	0.05-0.18

• For user guide and cutting speed recommendations, see pages 197-212

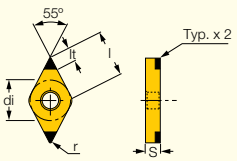
For tools, see pages: A/S-PDUNR/L (86) • C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • DDJNR/L (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

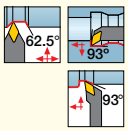
ISOTURN

DNGA-2 (CBN)

55° Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB10S	IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
DNGA 150404-F2	15.50	12.70	4.76	0.40	2.5			•		•	0.10-0.50	0.05-0.30
DNGA 150404-M2	15.50	12.70	4.76	0.40	2.5	•		•		•	0.10-0.50	0.05-0.30
DNGA 150408-F2	15.50	12.70	4.76	0.80	2.1			•		•	0.10-0.50	0.05-0.30
DNGA 150408-M2	15.50	12.70	4.76	0.80	2.1	•		•		•	0.10-0.50	0.05-0.30
DNGA 150408-R2	15.50	12.70	4.76	0.80	2.1		•				0.05-0.50	0.05-0.20
DNGA 150412-F2	15.50	12.70	4.76	1.20	2.0			•	•		0.10-0.50	0.05-0.30
DNGA 150412-M2	15.50	12.70	4.76	1.20	2.0	•		•		•	0.10-0.50	0.05-0.30
DNGA 150412-R2	15.50	12.70	4.76	1.20	2.0		•				0.05-0.50	0.05-0.20

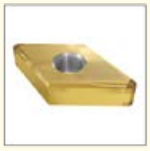
• For user guide and cutting speed recommendations, see pages 197-212

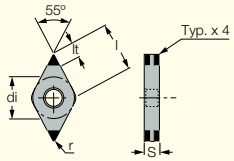
For tools, see pages: C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

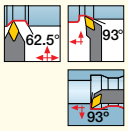
ISOTURN

DNGG-M4HF/M4HM (CBN)

55° Rhombic Inserts with 4 Chipbreaking CBN Tips for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	IB25HA	Recommended Machining Data ap (mm)	f (mm/rev)
DNGG 150408-M4HF	15.50	12.70	4.76	0.80	2.1	●	0.20-0.75	0.05-0.20
DNGG 150412-M4HM	15.50	12.70	4.76	1.20	2.0	●	0.50-1.00	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

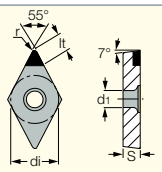
For tools, see pages: C#-DDJNR/L (33) • C#-PDJNR/L-JHP (32) • HSK A63WH-DDJNR/L (33) • HSK A63WH-DDNNN (33) • PDJNR/L (31) • PDJNR/L-JHP (31) • S-DDUNR/L (86)

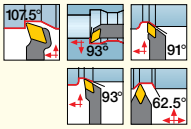
ISOTURN

DCMT (CBN)

55° Rhombic Inserts with a Single CBN Top Corner Tip and 7° Clearance for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	IB55	Recommended Machining Data ap (mm)	f (mm/rev)
DCMT 11T304T	11.60	9.52	3.97	0.40	3.4	4.40	●	0.05-0.50	0.05-0.20
DCMT 11T308T	11.60	9.52	3.97	0.80	3.1	4.40	●	0.05-0.50	0.05-0.20

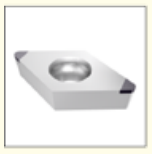
• For user guide and cutting speed recommendations, see pages 197-212

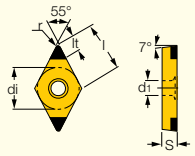
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

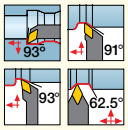
ISOTURN

DCGW/DCMW-2 (CBN)

55° Positive Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys







Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB05S	IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
DCGW 070202-F2	7.70	6.35	2.38	0.20	2.5	2.80			●		●	0.05-0.50	0.05-0.30
DCGW 070202-M2	7.70	6.35	2.38	0.20	2.5	2.80			●		●	0.05-0.50	0.05-0.30
DCGW 070204-F2	7.70	6.35	2.38	0.40	2.5	2.80			●		●	0.05-0.50	0.05-0.30
DCGW 070204-M2	7.70	6.35	2.38	0.40	2.5	2.80	●		●		●	0.05-0.50	0.05-0.30
DCGW 070208-M2	7.70	6.35	2.38	0.80	2.5	2.80	●					0.05-0.50	0.05-0.30
DCGW 11T302-F2	11.60	9.52	3.97	0.20	2.5	4.40			●		●	0.05-0.50	0.05-0.30
DCGW 11T302-M2	11.60	9.52	3.97	0.20	2.5	4.40			●			0.05-0.50	0.05-0.30
DCGW 11T304-F2	11.60	9.52	3.97	0.40	2.5	4.40			●		●	0.05-0.50	0.05-0.30
DCGW 11T304-S2	11.60	9.52	3.97	0.40	2.5	4.40	●					0.05-0.50	0.05-0.30
DCGW 11T304T01315	11.60	9.52	3.97	0.40	2.5	4.40	●					0.05-0.50	0.05-0.30
DCGW 11T308-F2	11.60	9.52	3.97	0.80	2.1	4.40			●		●	0.05-0.50	0.05-0.30
DCGW 11T308-M2	11.60	9.52	3.97	0.80	2.1	4.40	●					0.05-0.50	0.05-0.30
DCMW 11T304-M2	11.60	9.52	3.97	0.40	2.5	4.40		●		●	●	0.05-0.50	0.05-0.12
DCMW 11T308-M2	11.60	9.52	3.97	0.80	2.1	4.40		●		●	●	0.05-0.50	0.05-0.15

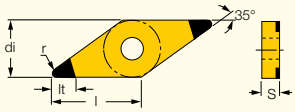
• For user guide and cutting speed recommendations, see pages 197-212

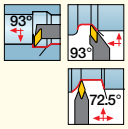
For tools, see pages: A/E/S-SDUCR/L (92) • C#-SDJCR-JHP (51) • C#-SDJCR/L (50) • C#-SDNCN (54) • E-SDUCR/L-HEAD (93) • IM-SDNCN (54) • PDACR/L-JHP (52) • PDACR/L-S (49) • SDACR/L (51) • SDHCR/L (51) • SDJCR-PAD (51) • SDJCR/L (50) • SDNCN (54) • PDACR/L-JHP-MC (53)

ISOTURN

VNGA-2 (CBN)
35° Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys







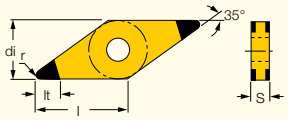
Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB10S	IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
VNGA 160404-F2	16.60	9.52	4.76	0.40	3.1			●		●	0.05-0.50	0.05-0.30
VNGA 160404-M2	16.60	9.52	4.76	0.40	3.1	●		●		●	0.05-0.50	0.05-0.30
VNGA 160408-F2	16.60	9.52	4.76	0.80	2.2			●		●	0.05-0.50	0.05-0.30
VNGA 160408-M2	16.60	9.52	4.76	0.80	2.2	●		●	●		0.05-0.50	0.05-0.30
VNGA 160408-R2	16.60	9.52	4.76	0.80	2.2		●				0.05-0.50	0.05-0.30

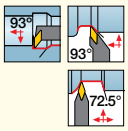
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

VNGA-4 (CBN)
35° Rhombic Inserts with 4 CBN Tips for Machining Hardened Steel





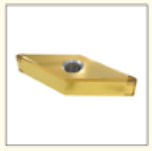


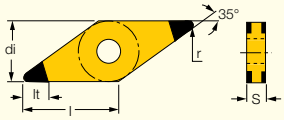
Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB25HC	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
VNGA 160408-M4	16.60	9.52	4.76	0.80	2.2	●	●	0.05-0.30	0.02-0.30

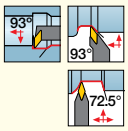
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

VNGG-M4HM (CBN)
35° Rhombic Insert with 4 Chipbreaking CBN Tips for Machining Hardened Steel





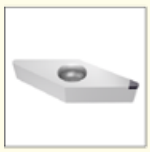


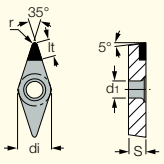
Designation	Dimensions l	di	S	r	lt	IB25HA	Recommended Machining Data ap (mm)	f (mm/rev)
VNGG 160408-M4HM	16.60	9.52	4.76	0.80	2.2	●	0.50-0.80	0.05-0.20

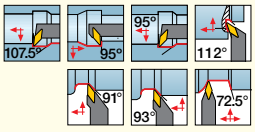
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: MVJNR/L (35) • MVVNN (36)

ISOTURN

VBMT (CBN)
Single Corner CBN Tipped Inserts with a Flat Rake for Machining Hardened Steel







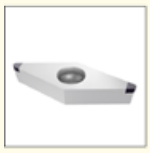
Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB55	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
VBMT 160404T	16.60	9.52	4.76	0.40	4.5	4.40	●	●	0.05-0.39	0.05-0.11

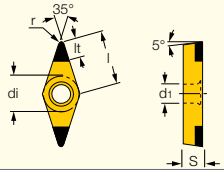
• For user guide and cutting speed recommendations, see pages 197-212

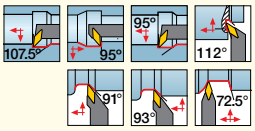
ISOTURN

VBGW/VBMW-2 (CBN)

35° Positive Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB20H	IB20HC	IB10H	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
VBGW 110304-F2	11.10	6.35	3.18	0.40	3.1	2.80		•		•	0.10-0.50	0.05-0.20
VBMW 110304-M2	11.10	6.35	3.18	0.40	3.1	2.80	•		•	•	0.05-0.50	0.05-0.20
VBGW 160404-F2	16.60	9.52	4.76	0.40	3.1	4.40		•		•	0.10-0.50	0.05-0.20
VBGW 160404-M2	16.60	9.52	4.76	0.40	3.1	4.40				•	0.05-0.50	0.05-0.20
VBGW 160408-F2	16.60	9.52	4.76	0.80	2.2	4.40		•		•	0.10-0.50	0.05-0.20
VBGW 160408-M2	16.60	9.52	4.76	0.80	2.2	4.40				•	0.05-0.50	0.05-0.20
VBMW 160404-M2	16.60	9.52	4.76	0.40	3.1	4.40	•		•		0.05-0.50	0.05-0.20
VBMW 160408-M2	16.60	9.52	4.76	0.80	2.2	4.40	•		•		0.05-0.39	0.05-0.11

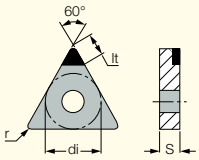
• For user guide and cutting speed recommendations, see pages 197-212

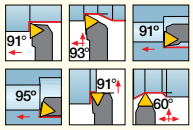
ISOTURN

TNMA (CBN)

Triangular Inserts with a Single Corner CBN Tip for Machining Cast Iron and Hardened Steel







Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB90	IB85	IB55	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
TNMA 160404T	16.50	9.52	4.76	0.40	3.9		•	•	•	0.05-0.50	0.05-0.25
TNMA 160408T	16.50	9.52	4.76	0.80	3.5	•		•		0.05-0.50	0.05-0.25

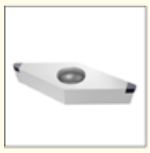
• For user guide and cutting speed recommendations, see pages 197-212

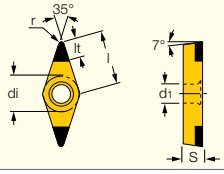
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

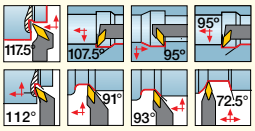
ISOTURN

VCGW-2 (CBN)

35° Positive Rhombic Inserts with 2 CBN Tips for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB20HC	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
VCGW 160404-F2	16.60	9.52	4.76	0.40	3.1	4.40	•	•	0.10-0.50	0.05-0.30
VCGW 160404-M2	16.60	9.52	4.76	0.40	3.1	4.40	•	•	0.10-0.50	0.05-0.30
VCGW 160408-F2	16.60	9.52	4.76	0.80	2.2	4.40	•	•	0.10-0.50	0.05-0.30
VCGW 160408-M2	16.60	9.52	4.76	0.80	2.2	4.40	•	•	0.10-0.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

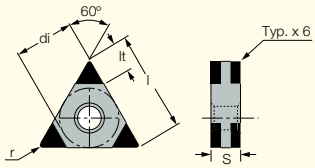
For tools, see pages: A/S-SVLBCR/L (94) • A/S-SVLFCR/L; A-SVUCR/L (93) • A/S-SVQCR/L (93) • C#-SVJCR/L (55) • C#-SVJCR/L-JHP (56) • C#-SVVCN (58) • HSK A63WH-SVJCR/L (56) • SVJCR/L (55) • SVJCR/L-16-JHP (55) • SVVCN (58) • SVXCR/L (58)

ISOTURN

TNGA-MC/M6 (CBN)

Triangular Multi-Cornered CBN Inserts for Machining Hardened Steel





Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB25HC	IB55	IB10HC	Recommended Machining Data ap (mm)	f (mm/rev)
TNGA 160404T-MC	16.50	9.52	4.76	0.40	3.2		●		0.05-0.50	0.05-0.20
TNGA 160408-M6	16.50	9.52	4.76	0.80	1.9	●		●	0.05-0.50	0.05-0.20
TNGA 160408T-MC	16.50	9.52	4.76	0.80	1.9		●		0.05-0.50	0.05-0.20

• For user guide and cutting speed recommendations, see pages 197-212

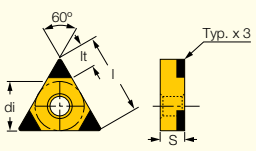
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNGA-M3 (CBN)

Triangular Inserts with 3 CBN Tips for Machining Hardened Steel, Sintered Metals and High Temperature Alloys





Designation	Dimensions l	di	S	r	lt	Tough ↔ Hard IB10S	IB20H	Recommended Machining Data ap (mm)	f (mm/rev)
TNGA 160404-M3	16.50	9.52	4.76	0.40	2.2	●		0.10-0.50	0.05-0.30
TNGA 160408-M3	16.50	9.52	4.76	0.80	1.9	●	●	0.05-0.50	0.05-0.30
TNGA 160412-M3	16.50	9.52	4.76	1.20	2.4	●		0.10-0.50	0.05-0.30

• For user guide and cutting speed recommendations, see pages 197-212

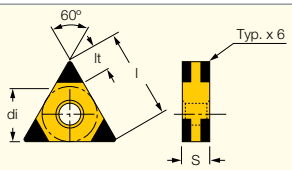
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

ISOTURN

TNGG-M6HF/M6HM (CBN)

Triangular Inserts with 6 CBN Chipbreaking Tips for Machining Hardened Steel





Designation	Dimensions l	di	S	r	lt	IB25HA	Recommended Machining Data ap (mm)	f (mm/rev)
TNGG 160408-M6HF	16.50	9.52	4.76	0.80	1.9	●	0.20-0.75	0.05-0.20
TNGG 160412-M6HM	16.50	9.52	4.76	1.20	2.4	●	0.50-1.00	0.05-0.20

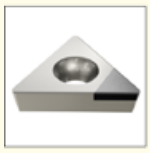
• For user guide and cutting speed recommendations, see pages 197-212

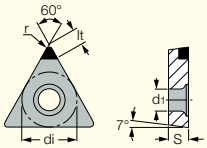
For tools, see pages: A-PTFNR/L-X/G (88) • DTGNR/L (42) • MTENN-W (45) • MTJNR/L-W (45) • PTFNR-CA (102) • PTFNR/L (44) • PTGNR/L (42) • PTGNR/L-X (43) • PTGNR/L-X-JHP (43) • PTGNR/L-X-JHP-MC (44) • S-MTLNR/L-W (89) • S-PTFNR/L (88)

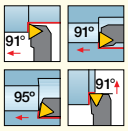
ISOTURN

TCMT (CBN)

Triangular Positive Inserts with a Single CBN Flat Rake Tip for Machining Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB55	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
TCMT 110204T	11.00	6.35	2.38	0.40	3.5	2.85	•	•	0.05-0.50	0.05-0.13

• For user guide and cutting speed recommendations, see pages 197-212

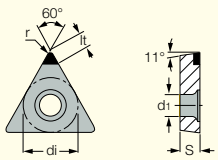
For tools, see pages: E-STFCR-HEAD (95) • S-STFCR/L (95) • S-STLCR/L (95) • STFCR/L (59) • STGCR/L (59)

ISOTURN

TPGX (CBN)

Triangular Inserts with a Single CBN Top Corner Tip, 11° Clearance for Machining Cast Iron and Hardened Steel







Designation	Dimensions l	di	S	r	lt	d1	Tough ↔ Hard IB90	IB50	Recommended Machining Data ap (mm)	f (mm/rev)
TPGX 090202T	9.52	5.56	2.38	0.20	2.5	2.50	•	•	0.05-0.05	0.03-0.20
TPGX 090204T	9.52	5.56	2.38	0.40	2.6	2.50	•	•	0.05-0.05	0.03-0.20
TPGX 110302T	11.00	6.35	3.18	0.20	3.3	3.50	•	•	0.05-0.05	0.03-0.20
TPGX 110304T	11.00	6.35	3.18	0.40	3.0	3.50	•	•	0.05-0.05	0.03-0.20

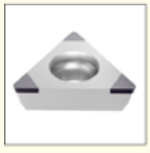
• For user guide and cutting speed recommendations, see pages 197-212

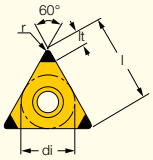
For tools, see pages: A/E-STFPR-X (97) • MG STFPR-X (97)

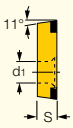
ISOTURN

TPGW-M3 (CBN)

Triangular Positive Inserts with 3 CBN Tips for Machining Sintered Metals and High Temperature Alloys









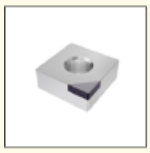
Designation	Dimensions l	di	S	r	lt	d1	IB05S	Recommended Machining Data ap (mm)	f (mm/rev)
TPGW 110204-M3	11.00	6.35	2.38	0.40	2.2	2.80	•	0.05-0.50	0.05-0.30
TPGW 110208-M3	11.00	6.35	2.38	0.80	2.2	2.80	•	0.05-0.50	0.05-0.30
TPGW 110304-M3	11.00	6.35	3.18	0.40	2.2	3.40	•	0.05-0.50	0.05-0.30
TPGW 110308-M3	11.00	6.35	3.18	0.80	2.1	3.40	•	0.05-0.50	0.05-0.30

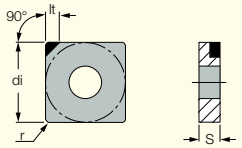
• For user guide and cutting speed recommendations, see pages 197-212

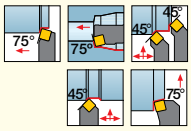
For tools, see pages: A/E-STFPR-X (97)

ISOTURN

SNMA (CBN)
Square Inserts with a Single Flat Rake CBN Tip for Machining Cast Iron and Hardened Steel







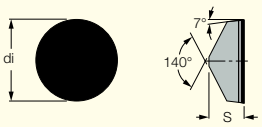
Designation	Dimensions di	S	r	lt	IB55	Recommended Machining Data ap (mm)	f (mm/rev)
SNMA 120408T	12.70	4.76	0.80	4.5	•	0.05-0.50	0.05-0.30

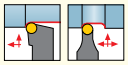
• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: C#-MULNR/L-MW (19) • DSBNR/L (37) • DSDNN (36) • DSKNR/L (37) • DSSNR/L (37) • HSK A63WH-MULNR-J12MWX2 (20) • HSK A63WH-MULNR/L-MW (19) • HSK A63WH-MUMNN-MW (20) • MULNR/L-12MW (18) • PSBNR/L (41) • PSDNN (38) • PSDNN-JHP (39) • PSKNR/L (39) • PSKNR/L-CA (101) • PSSNR/L (39) • PSSNR/L-CA (102) • PSSNR/L-JHP (40)

ISOTURN

RCGX (CBN)
CBN Round Inserts with a Flat Rake for Machining Cast Iron and Hardened Steel







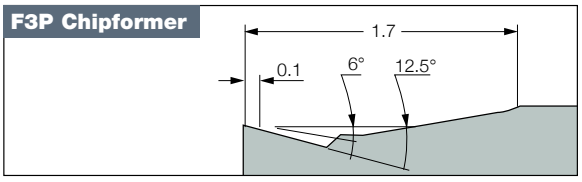
Designation	Dimensions di	S	IB90	Recommended Machining Data ap (mm)	f (mm/rev)
RCGX 060300T	6.35	3.18	•	0.05-0.50	0.05-0.25
RCGX 090300T	9.52	3.18	•	0.05-0.50	0.05-0.25
RCGX 120400T	12.70	4.76	•	0.05-0.50	0.05-0.25

• For user guide and cutting speed recommendations, see pages 197-212
For tools, see pages: CRGCR/L-CEB (76)



Chipformers for Finishing

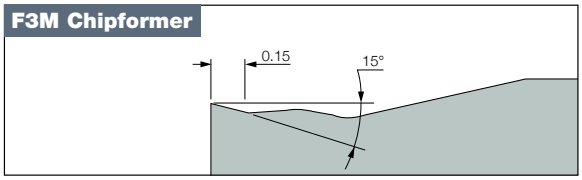
F3P Chipformer

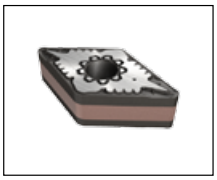




Double-sided insert with a positive rack angle to reduce cutting forces for finish machining on steel.

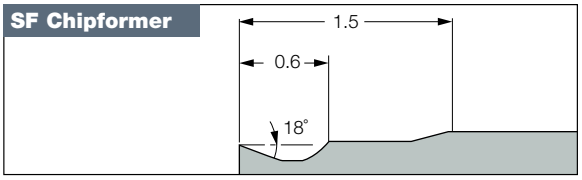
F3M Chipformer

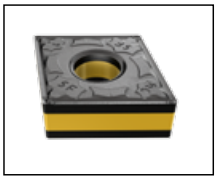




Double-sided insert with a positive rake angle for finish machining on stainless steel. Its unique deflector geometry with a wavy surface prevents chip hammering.

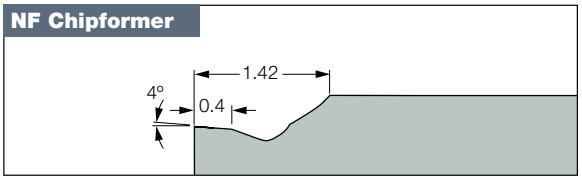
SF Chipformer

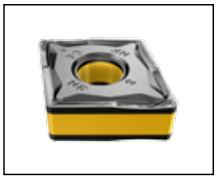




A unique super-finishing chipformer that controls chip flow at very low feeds and cutting depths. Designed to reduce crater wear.

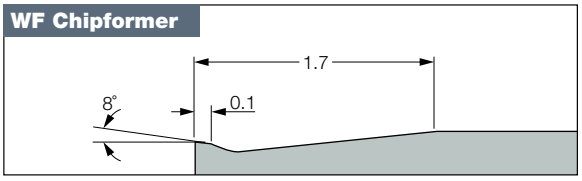
NF Chipformer

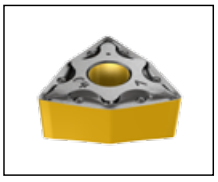




Double-sided for semi-finishing and finishing applications. Low cutting forces are due to a very sharp edge and positive rake.

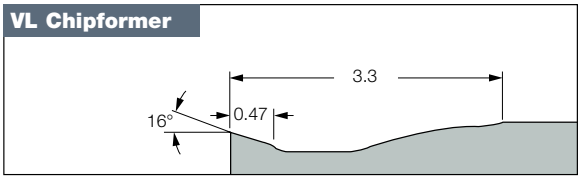
WF Chipformer

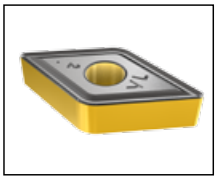




Wiper geometry for high feed finishing on soft and gummy materials. Small depths of cut.

VL Chipformer

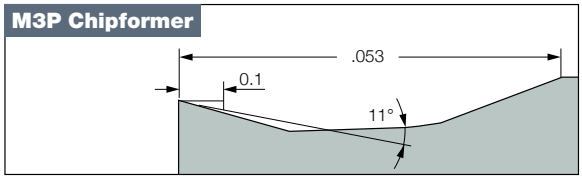




High positive rake and a special edge preparation used for rough and finish turning on high temperature alloys. Excellent performance on parts such as automotive valves.

Chipformers for Medium Machining

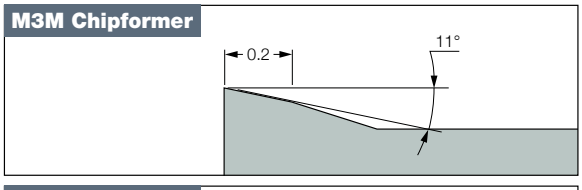
M3P Chipformer





Double-sided insert for medium machining on steel with a reinforced cutting edge to increase tool life.

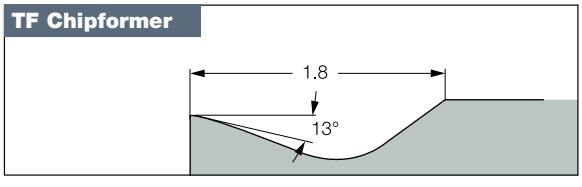
M3M Chipformer





Double-sided insert for medium machining on stainless steel with a reinforced cutting edge that prevents notch wear at tight radii to increase tool life.

TF Chipformer

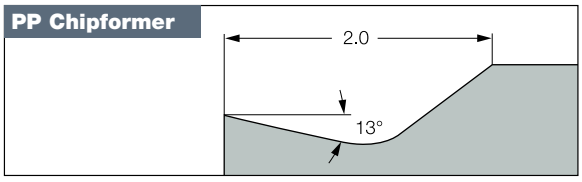


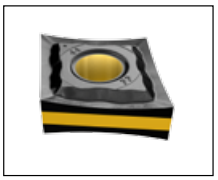


Double-sided positive rake angles to prevent strain hardening. The rake angle varies along the edge to a negative angle which prevents chipping. Special design reduces cratering. Used for carbon and alloy steel, stainless steel and high-temp alloys.

Chipformers for Medium Machining

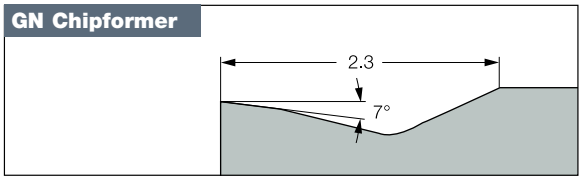
PP Chipformer





Double-sided, very positive rake, sharp- and positive radial edge for heat-resistant alloys, stainless steel, aluminum alloys and soft, low carbon steel.

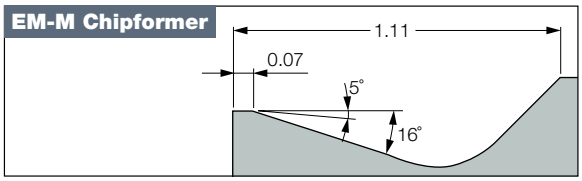
GN Chipformer

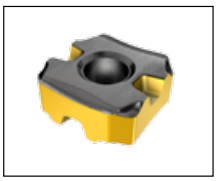




Double-sided for general applications. Secure cutting edge for medium- and semi-roughing on steel and cast iron.

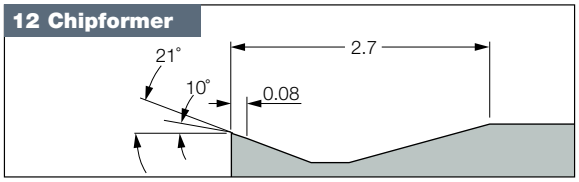
EM-M Chipformer

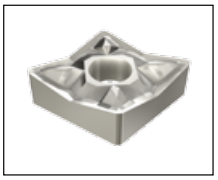




Double-sided sharp cutting edge with a 16° positive rake angle for machining high temperature alloys at ap<3 mm.

12 Chipformer

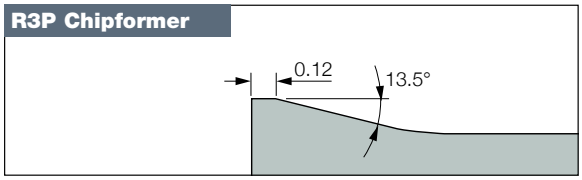




Single-sided for medium to rough machining on aluminum and soft materials.

Chipformers for Roughing

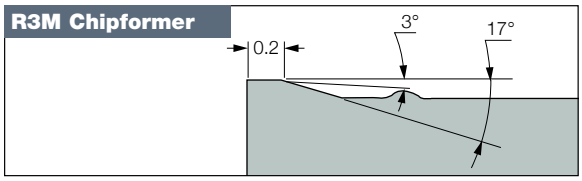
R3P Chipformer

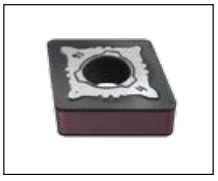




Chip-breaker for rough machining on steel with a positive rake angle and reinforced cutting edge for better performance and longer tool life.

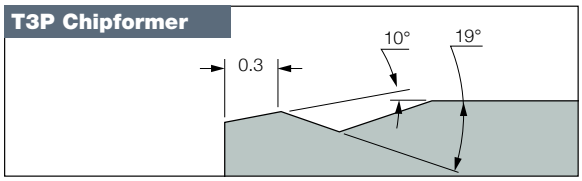
R3M Chipformer





Double-sided insert for rough machining on stainless steel with a unique deflector geometry to improve chip control. Includes a wavy surface to prevent chip hammering.

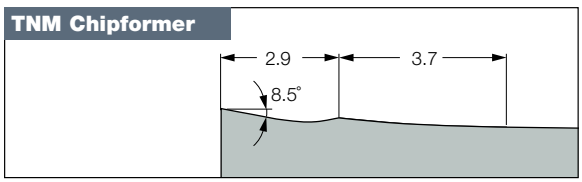
T3P Chipformer





Double-sided 6° negative flank trigone insert for high feed turning on steel.

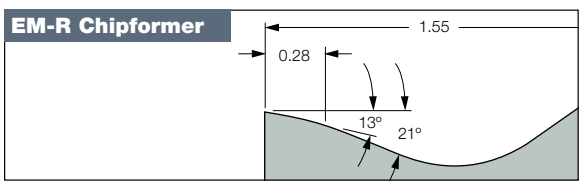
TNM Chipformer

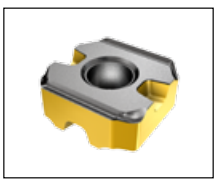




Double-sided trigon for roughing applications.
Feed ranges: from 0.25 to 0.65 mm/rev.
Depth of cut from 2 to 7 mm.

EM-R Chipformer

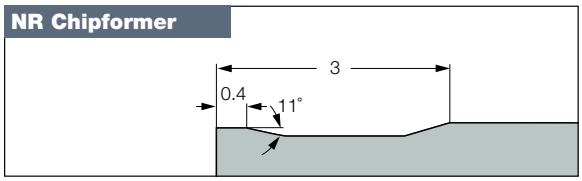




Double-sided sharp cutting edge with a 13° positive rake angle for machining high temperature alloys at ap < 6 mm.

Chipformers for Roughing

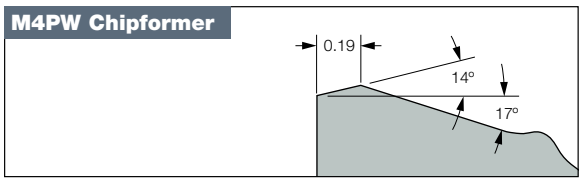
NR Chipformer





Double-sided sharp cutting edge with a 13° positive rake angle for machining high temperature alloys at ap < 6 mm.

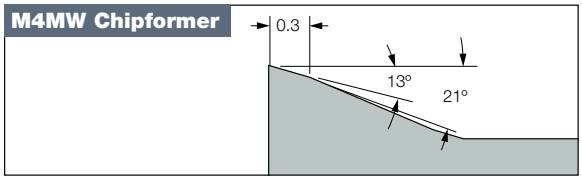
M4PW Chipformer

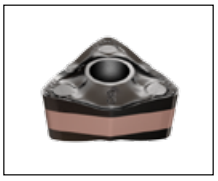




Double-sided for roughing applications. Feed range: 0.25 mm/rev to 0.8 mm/rev. Depth of cut from 2.00 to 10.0 mm.

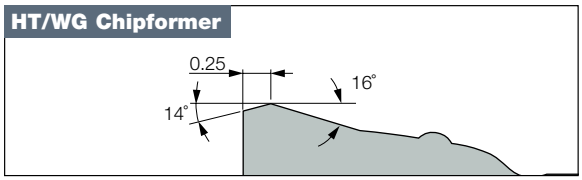
M4MW Chipformer





Chipformer for heavy machining applications on stainless steel. The inserts feature a very positive radial helical cutting edge and a positive rake angle.

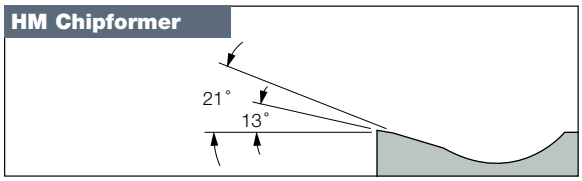
HT/WG Chipformer

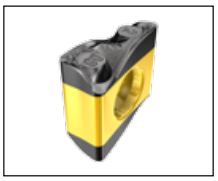




Double-sided for roughing applications. Feed range: 0.25 mm/rev to 0.8 mm/rev. Depth of cut from 2.00 to 10.0 mm.

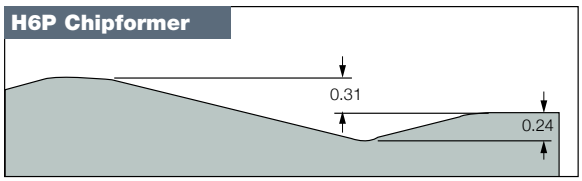
HM Chipformer





Feed range: 0.08 mm/rev to 0.75 mm/rev. Depth of cut from 1.5 mm to 8.0 mm.

H6P Chipformer

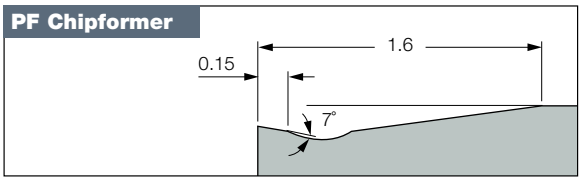


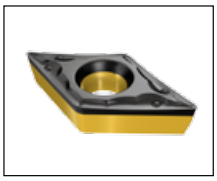


Tangentially insert with 4 cutting edges for high metal removal on steel up to 35mm **DOC**

Main Chipformers for Positive Clearance Inserts

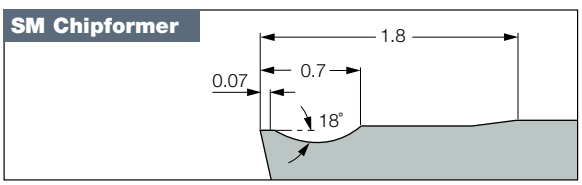
PF Chipformer

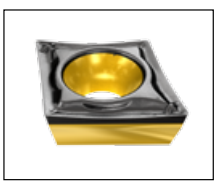




Super finishing and finishing applications, mainly on positive inserts. Feed range: 0.03-0.20 mm/rev. **DOC** 0.25-3.0 mm.

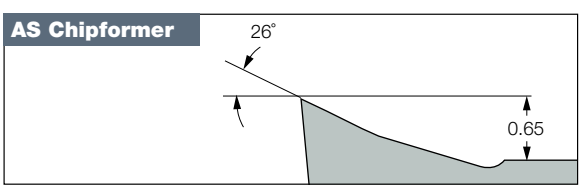
SM Chipformer





Finishing and boring applications. Feed range: 0.06-0.25 mm/rev. **DOC** 0.5-2.5 mm.

AS Chipformer

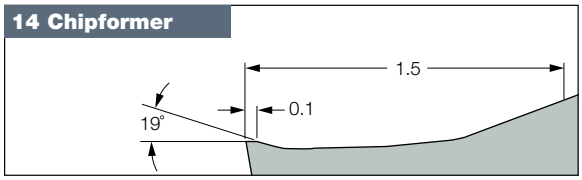


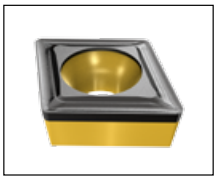


For general use machining on aluminum and soft materials.

Additional Chipformer for Positive Clearance Inserts

14 Chipformer

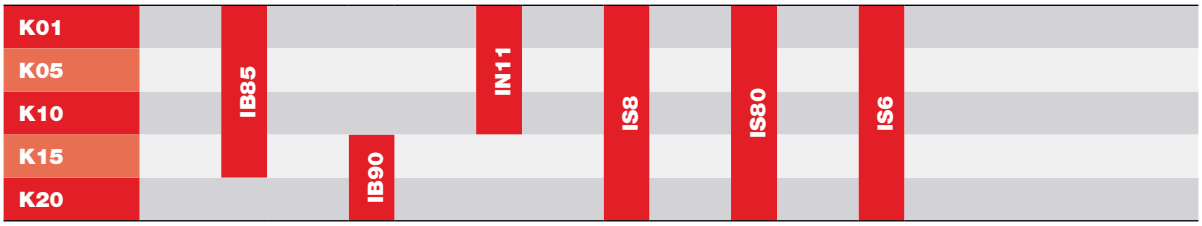




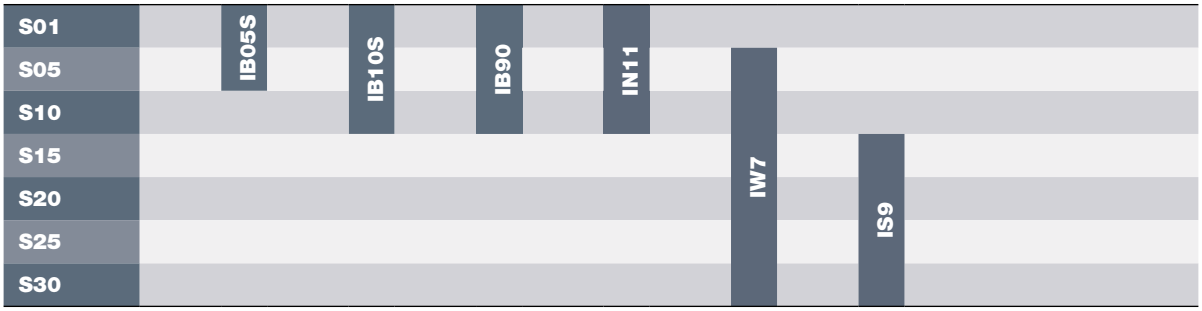
Semi-finishing and finishing.
Medium feeds.

Application Range of Ceramic Inserts According to ISO Standard

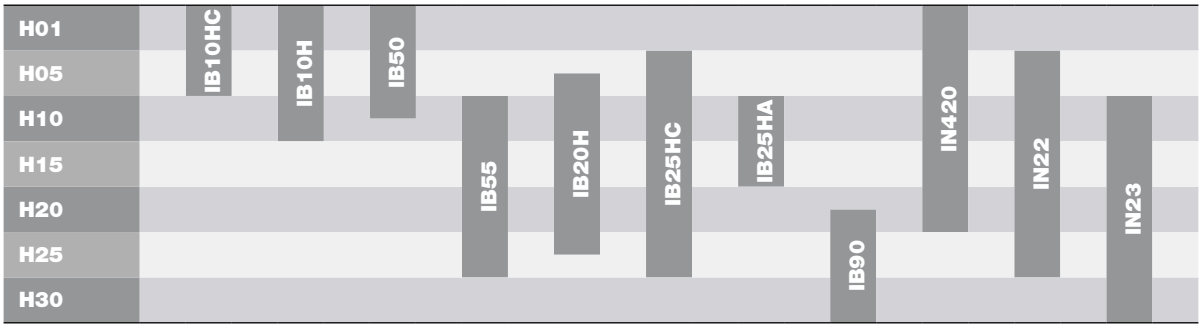
Turning Grey and Nodular Cast Iron



Turning Nickel Based High Temperature Alloys



Turning Hardened Steel 45-65 HRc



Ceramic Cutting Tools

IN11 Al_2O_3

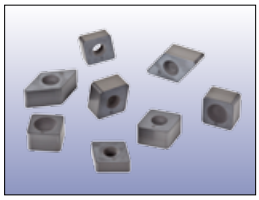
High Speed Finishing on Cast Iron and Steel

- Improves toughness and wear resistance
- ZrO2 additive
- Good for high speed turning on steel and cast iron



IS6 SiAlON

Features

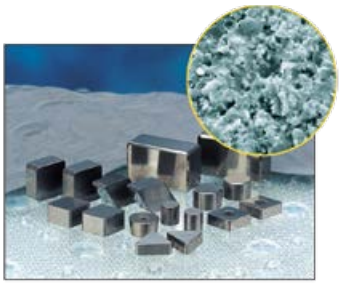


- High speed roughing and finish machining on cast iron
- Higher cutting speeds, when compared to SiN based ceramic grades
- Can be used for both wet and dry machining
- Suitable for turning automotive parts such as brake drums, brake disks, etc.
- High productivity in rough turning on steel mill rolls composed of high-Cr steel, **HSS** (High Speed Steel) and adamite

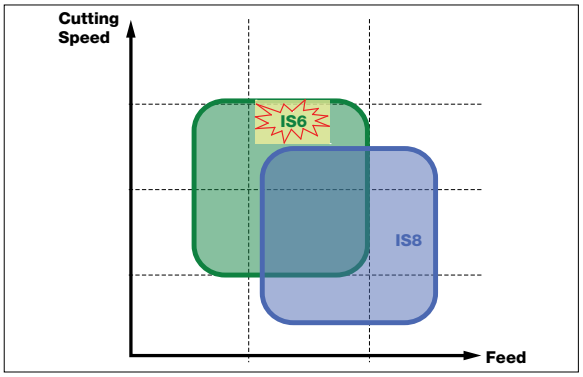
IN22 Al_2O_3-TiCN

Turning of Hardened Steel and Difficult-to-Cut Material

- High speed machining of steel, tool steel, hardened steel, chilled cast iron, high chromium steel, etc.
- Suitable for light roughing-to-finishing of cast iron



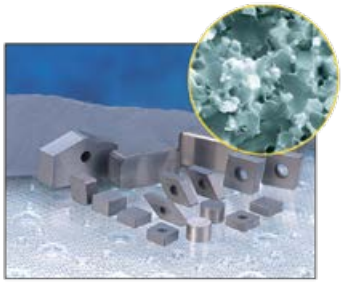
Application Range for Machining Cast Iron



IN23 Al_2O_3-TiC

Medium-to-Finishing Cutting on Cast Iron

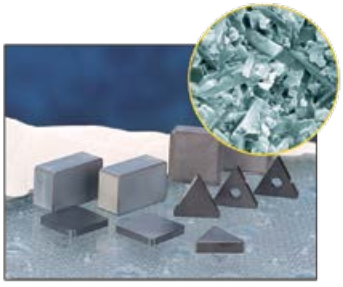
- Light interrupted turning on grey cast iron and nodular cast iron
- Milling with finishing conditions on grey cast iron



IS8 Si_3N_4

Turning and Milling of Grey Cast Iron

- Roughing and interrupted (1) cutting on cast iron
- Machining on nodular cast iron and superalloy



(1) Coolant is not recomended for interrupted cutting.

IS80 CVD Coated Si3N4

High Speed Rough Turning on Grey Cast Iron

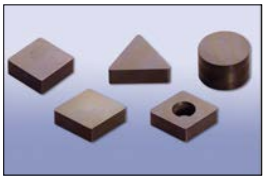
- Multi-layered coating on **IS8** matrix
- Roughing and interrupted (1) cutting on cast iron



IS9 Si3N4

Turning Nickel Based Alloys

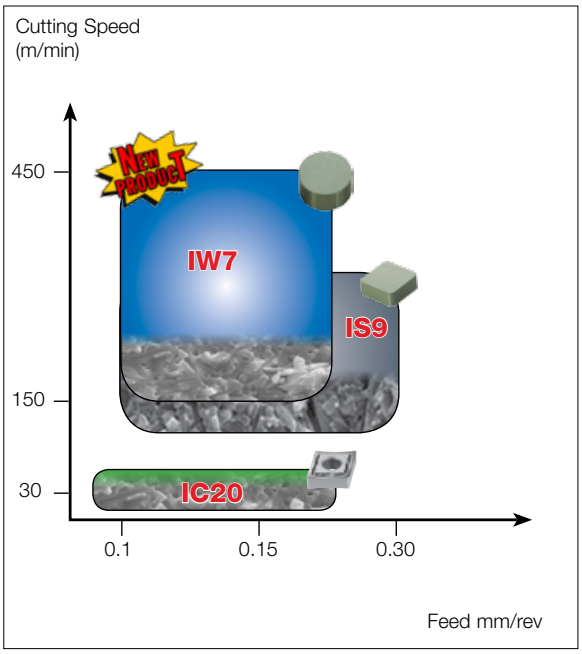
- Very tough Si3N4 ceramic grade with high cutting edge stability
- Machining on nickel based high temprature alloys, in roughing to finishing applications
- Honing is the standard edge preparation

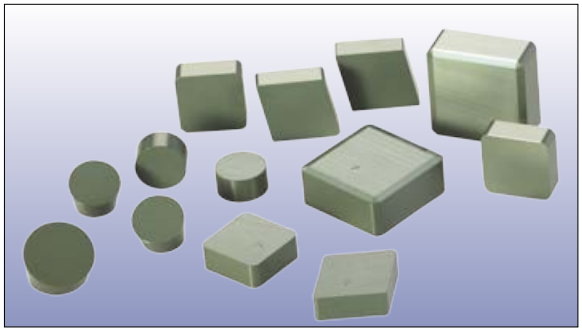


IW7 AL2O3+Sic Whiskers

Main Advantages

- High hardness (Hv 2,100)
- High fracture toughness due to SiC (silicon carbide) whisker reinforced ceramics
- Excellent thermal shock resistance, which enables using coolant and interrupted cut machining
- Excellent for roughing and semi-finishing operations at 8-10 times faster cutting speeds when compared with carbide grades
- Good oxidation resistance due to its alumina substrate





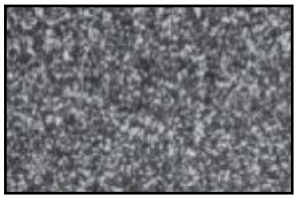
(1) Coolant is not recomended for interrupted cutting.

ISO-H Hard Materials Turning

IB10H (fine grain 0.5µm)
Uncoated, fine grain **PCBN** grade.

Application
Used at medium cutting speed, continuous or light interrupted cut on hardened steels.
Provides excellent surface finish.
Workpiece hardness range: 50-65 HRc.



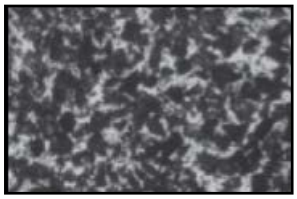


CBN Content	53.5%
Binder	TiN-Al

IB20H
Uncoated, general purpose **PCBN** grade. Good balance between wear and impact resistance. Composed of both fine and medium **CBN** grain sizes.

Application
Continuous to medium interrupted cut on hardened steel.



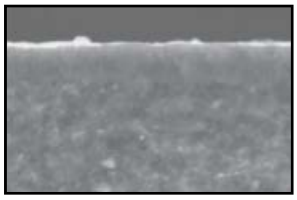


CBN Content	65%
Binder	TiN-Al

IB10HC
TiN coated, **PCBN** grade with excellent wear resistance. Composed of very fine grain **CBN**.

Application
Medium to high speed, continuous machining on hardened steel.



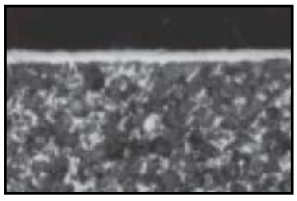


CBN Content	53.5%
Binder	TiN-Al

IB25HC
Ti (**C, N, O**) coated grade, composed of medium **CBN** grain.

Application
High speed, continuous to light interrupted machining.



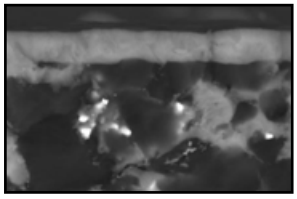


CBN Content	75%
Binder	TiN-Al

IB25HA
Ti (**C,N,O**) coated grade composed of medium **CBN** grain.

Application
General purpose machining on hardened steel.





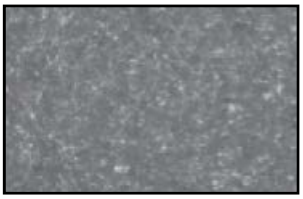
CBN Content	65%
Binder	TiN-Al

ISO-S

IB05S
Super fine, **CBN** grain with a very high **CBN** content.

Application
Turning on ferrous sintered metals.



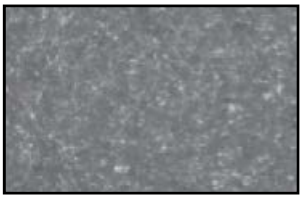


CBN Content	95%
Binder	Co-Al-**WC**

IB10S
A very high **CBN** content grade, featuring high hardness.

Application
Turning on ferrous sintered metals such as valve seats and Ti alloys components.

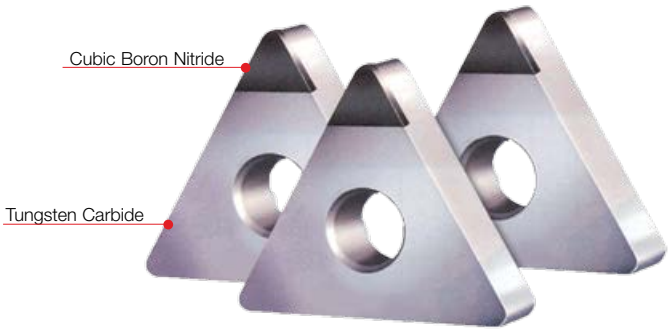




CBN Content	95%
Binder	Co-Al-**WC**

CBN Inserts

Features
- Suitable for difficult-to-cut materials such as sintered metal, hardened steel and super alloys.
- Saves machining costs and shortens the work cycle by enabling machining of hardened steel.
- Provides an excellent surface finish.
- Significant improvement in productivity by high speed machining on hardened steel.
- Capable of high speed cutting of cast iron.



ISCAR's **CBN** upgrade supports the worldwide increase in demand for **CBN** tipped inserts. **ISCAR** features 7 **CBN** (Cubic Boron Nitride) grades for two main workpiece material groups:

For hardened steel:
ISO-H: IB10H, IB20H, IB10HC, IB25HC, IB25HA

For high temperature alloys:
ISO-S: IB05S, IB10S



CBN Grades

Grades & Applications for Hardened Steel

	Material		New Grade	Composition (% CBN)	Features and Applications
ISO-H UNCOATED	Hardened Steels	Wear Resistance ↕ Toughness	**IB10H**	53.5	Excellent surface finish. Super fine grain. Continuous cut.
			IB20H	65	Composed of both fine and medium **CBN** grains. General-purpose grade for continuous to light interrupted machining.
			IB50	50	Finishing on hardened steel (45 - 65 HRc) and nodular cast iron. Continuous cutting.
			IB55	60	Semi-finishing on hardened steel (45 - 65 HRc) and nodular cast iron. Interrupted cutting.
ISO-H COATED		Wear Resistance ↕ Toughness	**IB10HC**	53.5	TiN coated grade very fine **CBN** grain. High speed continuous machining.
			IB25HC	75	Ti (**C, N, O**) coated **CBN** grade. High speed continuous to interrupted machining.
			IB25HA	65	Ti (**C, N**) coated **CBN** grade. High toughness. General purpose coated grade. Available with two types of chipbreakers (**HF, HM**).

Grades & Applications for Cast Iron

	Material		ISCAR New Grade	Composition (% CBN)	Features and Applications
ISO-K	Cast Iron & Hard Metal	Wear Resistance ↕ Toughness	**IB85**	85	Hardened steel and cast iron (>45 HRc). Grey cast iron and nodular cast irons. Powdered metal/sintered iron. Super alloys/ heat resistant alloys. Sintered tungsten carbide >17% Co. High speed cutting of cast iron.
			IB90	90	High speed cutting on cast iron, cutting cemented tungsten carbide, sintered metal and super alloy.

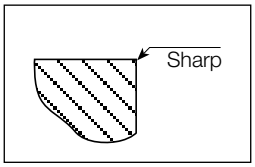
Grades & Applications for High Temperature Alloys

	Material		ISCAR New Grade	Composition (% CBN)	Features and Applications
ISO-S	Exotic Materials	Wear Resistance ↕ Toughness	**IB05S**	95	Super fine grain **CBN** for machining ferrous sintered metals.
			IB10S	95	For machining valve seats, sintered metals and Ti alloys.
			IB90	90	Cutting cemented tungsten carbide, sintered metal and super alloy.

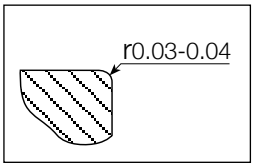
Edge Preparation and Recommended Applications

T-Land Sizes for Standard Items

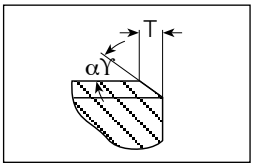
Grade	IN22	IN23	IS80	IS8	IS9	IN11	IB50	IB55	IB85	IB90	IS6	IW7	IN420
T (mm)	0.20	0.20	0.20	0.20	0.10	0.20	0.14	0.14	0.14	0.14	0.20	0.10	0.2
a°	25°	25°	25°	25°	25°	20°	20°	20°	20°	20°	25°	25°	25°



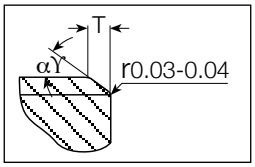
F For finishing and super finishing



E For semi-finishing and finishing
f < 0.2 mm/rev



T For semi-roughing and roughing
f > 0.2 mm/rev



S For heavy roughing and interrupted cutting

Silicon Nitride for Cast Iron and High Temperature Alloys

What is ISCANITE?

ISCANITE is a cutting tool material containing over 90 percent silicon nitride. **ISCANITE** is produced by unique hot pressing methods to achieve full density, and provides superior toughness along with high thermal-shock resistance. These characteristics make **ISCANITE** an ideal cutting tool material with impact resistance near that of coated carbides, and the heat and wear resistance of aluminum-oxide ceramics.

Which material can ISCANITE machine?

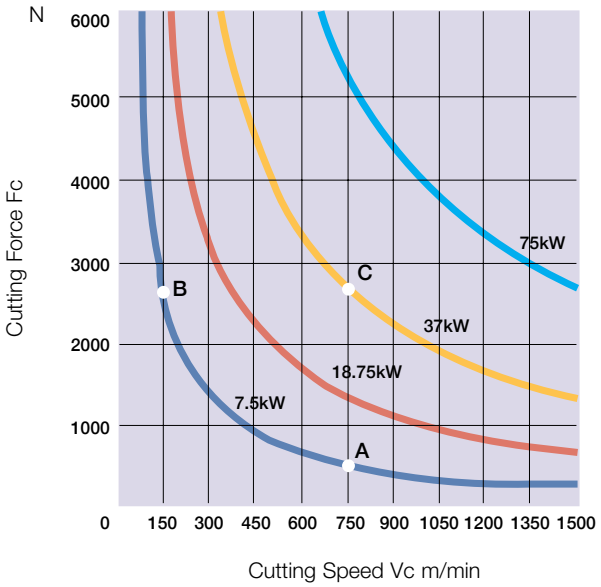
ISCANITE is primarily used on cast iron and high temperature alloys, brass and composites. Steel is the only material usually avoided because of various chemical incompatibilities.

ISCANITE Benefits

ISCANITE will increase your productivity, reduce your machining costs and can drastically reduce tool forces. **ISCANITE** increases productivity through additional metal removal rates and can fully utilize a machine's potential. Machining costs are reduced with increased tool life, along with less downtime for indexing, gauging, and adjustments.

Cutting Speed and Cutting Force

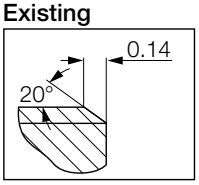
It is preferable to machine at higher cutting speeds and lower cutting forces (Point A is preferred over Point B.) In this case, pressure is reduced on the workpiece and any tendency of the workpiece to move or vibrate. If the available machine power is higher, or the machine can be stepped up. The use of higher cutting speeds of 750 m/min is possible, with the same cutting force as at Point B. (See Point C.) The positive influence of cutting speed and feed on machining conditions: higher cutting speeds are recommended and possible for silicon nitride inserts.



New Edge Preparations

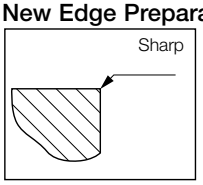
For the following grades: **IB10HC, IB10H, IB20H, IB25HC, IB25HA, IB05S, IB10S**.

Existing

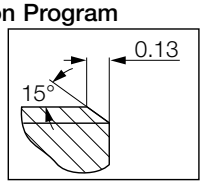


T For continuous and interrupted cut

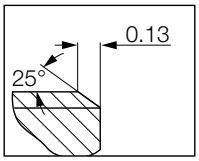
New Edge Preparation Program



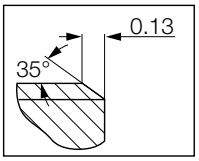
S For high surface finish



F For finishing at continuous cut

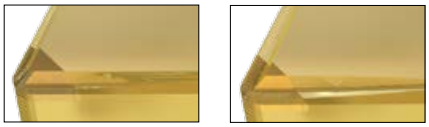


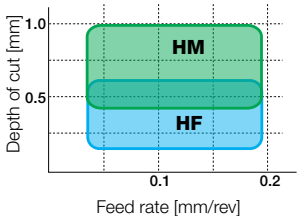
M For medium, continuous up to light interrupted cut



R For light to heavy interrupted cut-rough machining

Chip Breaking Area for Hardened Steel

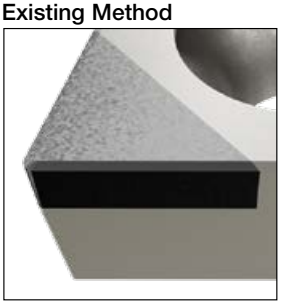




New Innovative Chipbreakers for Hardened Steel

CBN inserts with two types of chipbreakers: **HF** and **HM**

Existing Method



No chip control suitable for long linear cuts

New Chipbreakers

HF Type →



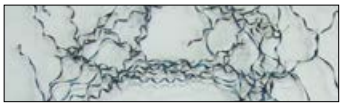
Excellent chip control at small depths of cut

HM Type →



Used for large depth of cut

When turning hard materials, long and tangled chips are produced.
The **HF** or **HM** chipformers provide excellent chip control at various depths of cut.



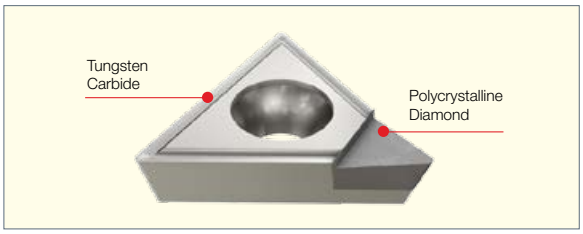


PCD Inserts

Features

- Excellent surface finishing on aluminum, nonferrous metals and non-metal materials.
- Longer tool life in high speed machining, due to high wear resistance and excellent thermal conductivity.

Note: Not for use on steel or cast iron



Grades and Application

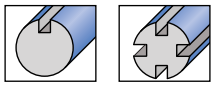
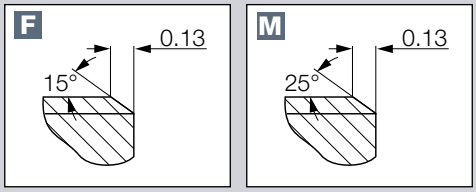
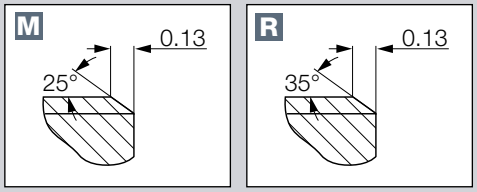
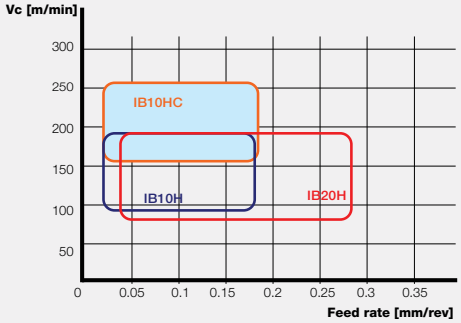
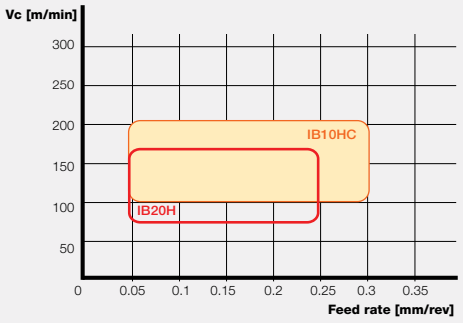
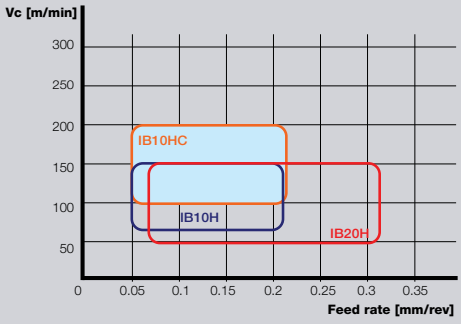
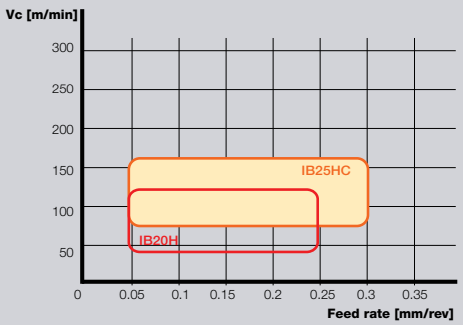
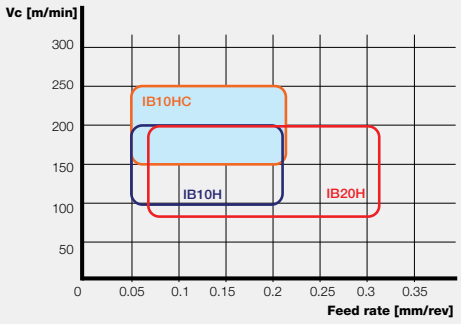
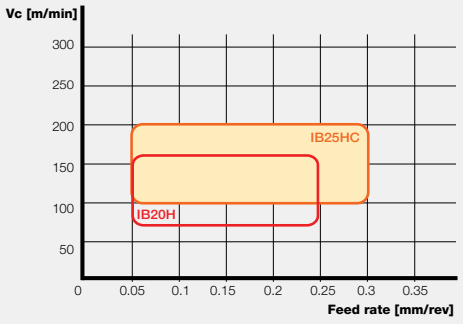
Binder	Diamond Size	Grade	Feature and Application
High Cobalt	8-9 µm	ID5	Suitable for Al alloy (Si < 12%), Cu alloy General purpose cutting of nonferrous metal

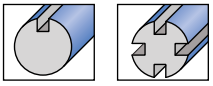
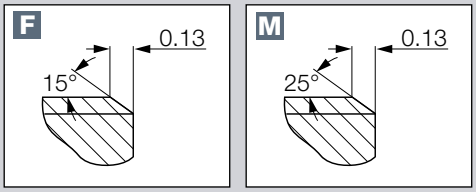
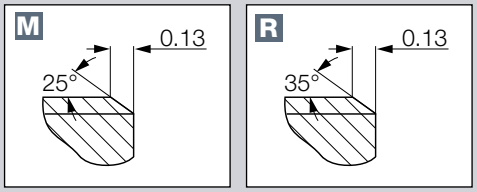
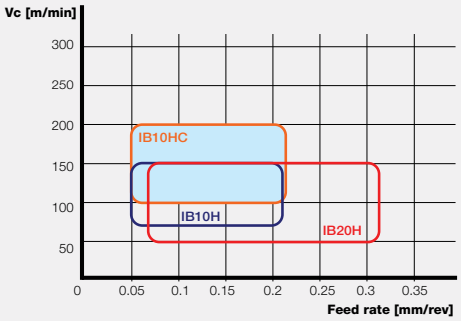
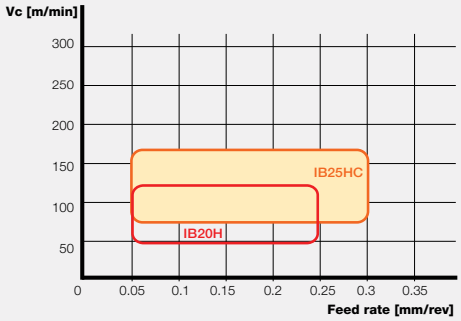
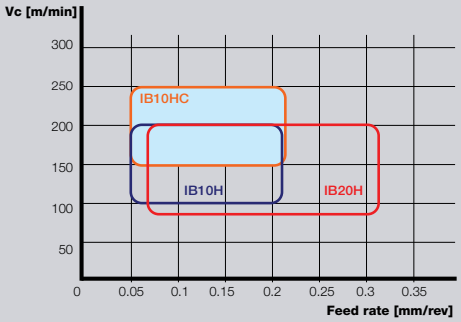
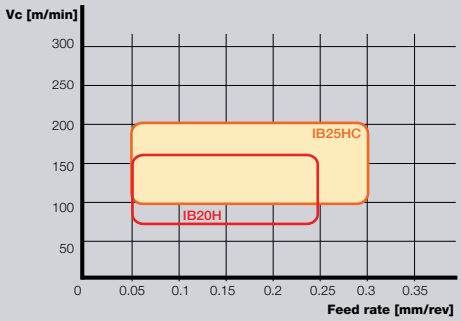
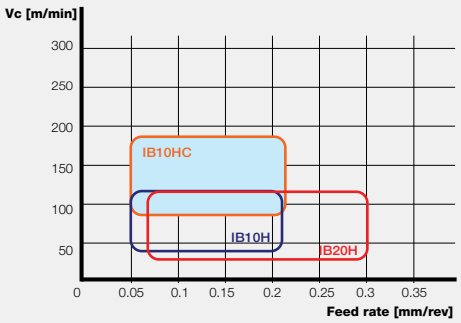
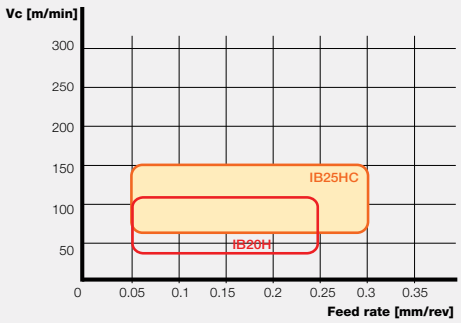
Recommended Cutting Condition Turning

Workpiece	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Grades
Al alloy (4-9% Si)	800-2500	0.1-0.3		ID5
Al alloy (9-14% Si)	600-1280	0.1-0.3	0.05-3.0	ID5
Cu alloy	600-1000	0.05-0.2	0.05-3.0	ID5

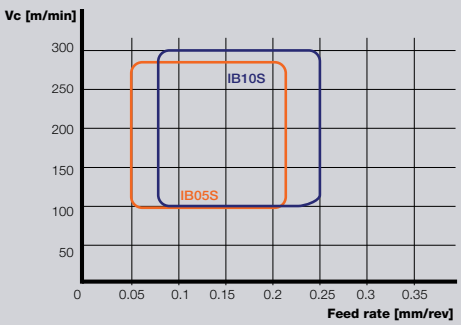
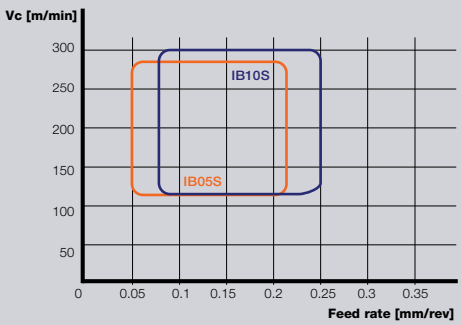
Cutting Parameters and Application Recommendations

Machining Areas of ISO-H Grades

	Continuous Cut 	Interrupted Cut 
Recommended Edge Preparation		
Case Hardenend Steel (55-62 HRc)		
Bearing Steel (58-65 HRc)		
High Tensile Steel (45-56 HRc)		

	Continuous Cut 	Interrupted Cut 
Recommended Edge Preparation		
Cold Work Tool Steel (55-64 HRc)		
Hot Work Tool Steel (45-56 HRc)		
High Speed Steel (58-66 HRc)		

Machining Areas of ISO-S Grades

Sintered Metal (45-68 HRc)		

Machining Data for Turning

ISO	Material		Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quench and temper	850	250	3
		>= 0.55 %C	Annealed	750	220	4
			Quench and temper	1000	300	5
	Low alloy steel and cast steel (less than 5% all element)		Annealed	600	200	6
			Quench and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloyed steel, cast steel and tool steel		Annealed	680	200	10
			Quench and temper	1100	325	11
			Ferritic/martensitic	680	200	12
			Martensitic	820	240	13

ISO	Material	Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material No.
M	Stainless steel	Austenitic	600	180	14

ISO	Material	Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material No.
K	Grey cast iron (GG)	Pearlitic/ferritic		180	15
		Pearlitic/martensitic		260	16
	Ductile Cast iron (nodular) (GGG)	Ferritic		160	17
		Pearlitic		250	18
	Malleable cast iron	Ferritic		130	19
		Pearlitic		230	20

ISO	Material		Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material No.
N	Aluminum - wrought alloy		Not cureable		60	21
			cured		100	22
	Aluminum - cast, alloyed	<=12% Si	Not cureable		75	23
			cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			hard rubber			30

ISO	Material		Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material No.
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
	Super alloys	Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium			Rm 400		36
	Ti alloys		Alpha+beta alloys cured	Rm 1050		37

ISO	Material	Condition	Tensile Strength Rm [N/mm2=MPa]	Hardness HB	Material
H	Hardened steel	Hardened		55 HRC	38
		Hardened		60 HRC	39
	Chilled cast iron	Cast		400	40
	Cast iron	Hardened		55 HRC	41

Cermet		Cermet+PVD		Carbide +PVD	Carbide+CVD		
IC20N	IC30N	IC520N	IC530N	IC3028/830	IC8250	IC8150	IC5005/428
250-400	230-380	250-420	230-400	120-200	230-380	280-420	300-450
220-350	200-330	220-380	200-350	100-170	200-340	240-380	260-400
180-320	160-300	180-350	160-320	80-150	170-300	200-340	220-360
210-340	190-320	210-370	190-340	90-160	190-320	220-360	240-380
160-300	140-280	160-330	140-300	80-130	160-280	180-320	200-340
180-320	160-300	180-350	160-320	80-150	170-300	200-340	220-360
170-300	150-280	170-330	150-300	70-130	160-280	200-320	220-340
160-250	140-230	160-280	140-250	60-120	140-250	190-300	210-320
150-220	130-200	150-250	130-230	50-100	120-220	180-280	200-300
180-300	160-280	180-330	160-300	80-130	170-280	200-320	220-340
150-220	130-200	150-250	130-230	50-100	120-220	180-280	200-300
210-340	190-320	210-370	190-340	90-160	190-320	220-360	240-380
180-320	160-300	180-350	160-320	80-150	170-300	240-380	260-400

Cermet+PVD		Carbide+PVD			Carbide+CVD	
IC520N	IC530N	IC807/907	IC808/908	IC3028	IC6015	IC6025
150-280	140-250	100-200	90-200	50-120	140-250	120-180

Carbide+CVD			Ceramics				Ceramics +CVD	CBN	
IC5005/ 428	IC5010/ 4028	IC8150	IN11	IN23	IS6	IS8	IS80	IB90/85	IB50
160-300	160-300	140-280		150-400	500-900	80-300			200-400
140-280	140-280	120-240		100-350	500-900	50-250			150-350
350-700	300-600	250-350	300-800	300-600	500-1200	300-1000	400-1000	500-12000	
300-600	250-500	200-300	200-600	200-500	500-1200	250-800	300-800	400-1000	
200-350	250-400	180-320							350-500
180-280	200-320	150-250							150-400

Carbide	PCD
IC20	ID5
1000-2500	600-2500
300-1000	600-2500
300-1000	600-2500
200-600	600-2500
250-600	600-1000
180-400	600-800
150-300	600-800

Carbide		Carbide+PVD				Whiskers	CBN			
IC07	IC20	IC804	IC806	IC907	IC3028	IW7	IB05S	IB10S	IB90	IB85
40-55	35-45			50-80	30-40					
30-45	25-35			40-65	20-30					
30-40	25-30	65 - 105	50-80	45-60	20-25	150-450				
20-30	15-25	50 - 90	40-70	35-45	10-20		100-250	100-250	100-200	120-240
25-35	20-30	40 - 85	30-65	30-50	15-25					
100-160	80-160			150-200	130-160					
50-60	50-60			50-100	30-60					

Ceramics				CBN							Carbide +PVD
IN22	IN420	IN23	IS8	IB10HC	IB10H	IB50/55	IB20H	IB25HC	IB25HA	IB85/90	IC907
50-150	60 - 170	40-120		150-350	100-220	100-140	100-220	100-220	90-200	80-140	40-100
50-120	60 - 140	40-100		150-350	100-220	80-120	100-220	100-220	90-200	60-120	30-60
30-200	30 - 230									70-150	
		80-120	60-100							100-140	

Key Points for Turning with CBN

Benefits of using CBN inserts

1 Can replace grinding operations, which reduce machining costs.
2 Dimensional stability, which is especially important in mass production. Minimizes the amount of scrapped parts.
3 "Green" approach, due to minimized usage of coolant.

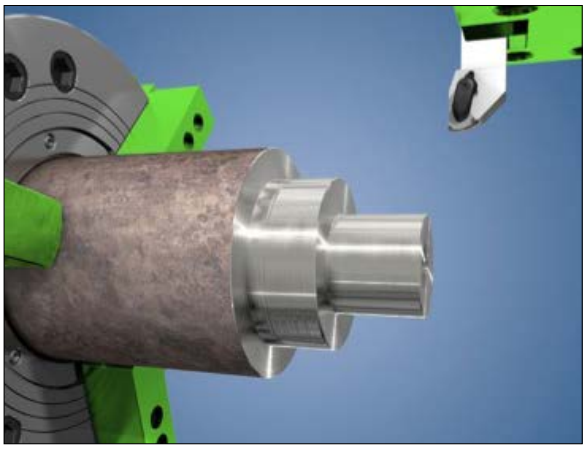
There are a few guidelines to follow to achieve the best results and high productivity when machining hard materials:

- **CBN** is characterized by hardness of 4500 **HV**. The high hardness of **CBN** enables it to machine hard materials at high speeds and feeds.
- Successful **HPT** (Hard Part Turning) demands not only suitable cutting tools, but also the right conditions, preparation and environment.
- **HPT** begins with a correct "soft" state machining design that will create the best possible conditions for **HPT**.

The "soft" state (around 20-40 HRc) is the state in which the workpiece material is yet to be hardened to its final hardness.

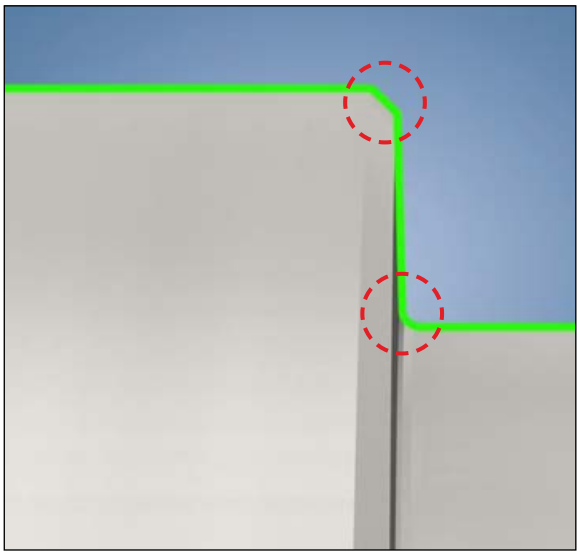
Important points when planning the "soft" machining process:

- Avoid burrs
- Keep close dimensional tolerances
- Do not enter or exit a cut suddenly
- Enter and exit by planning radius movements
- Use wiper inserts to achieve superior surface finish
- Do not leave sharp corners (round or chamfer)
- Machine stability, rigidity and thermal stability are vital conditions for producing a high quality finished part. The better the stability of the overall machine concept, the closer the tolerances will be achieved.
- Clamping the workpiece with sufficient force will prevent its movement and improve surface finish. Make sure that you employ wide clamping jaws which offer better grip on the workpiece, compared to ordinary three point jaws.
- Using tailstock in long parts will add even more stability and rigidity to the machining process.

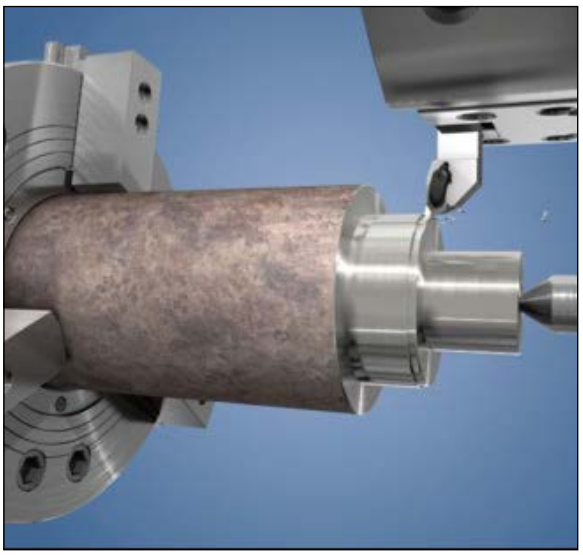


Rigid clamping of the workpiece and toolholder

- Large cross section tools further add to system rigidity.
- Coolant - Generally, do not use coolant when machining hard materials. **CBN** inserts tolerate high cutting temperatures, and therefore have no need for coolant. Avoiding coolant is more economical, environmentally friendly and better because as the material heats up during the turning process, it becomes slightly softer and easier to machine. However, there may be some applications that require using coolant: in cases of continuous turning when high surface finish is required.

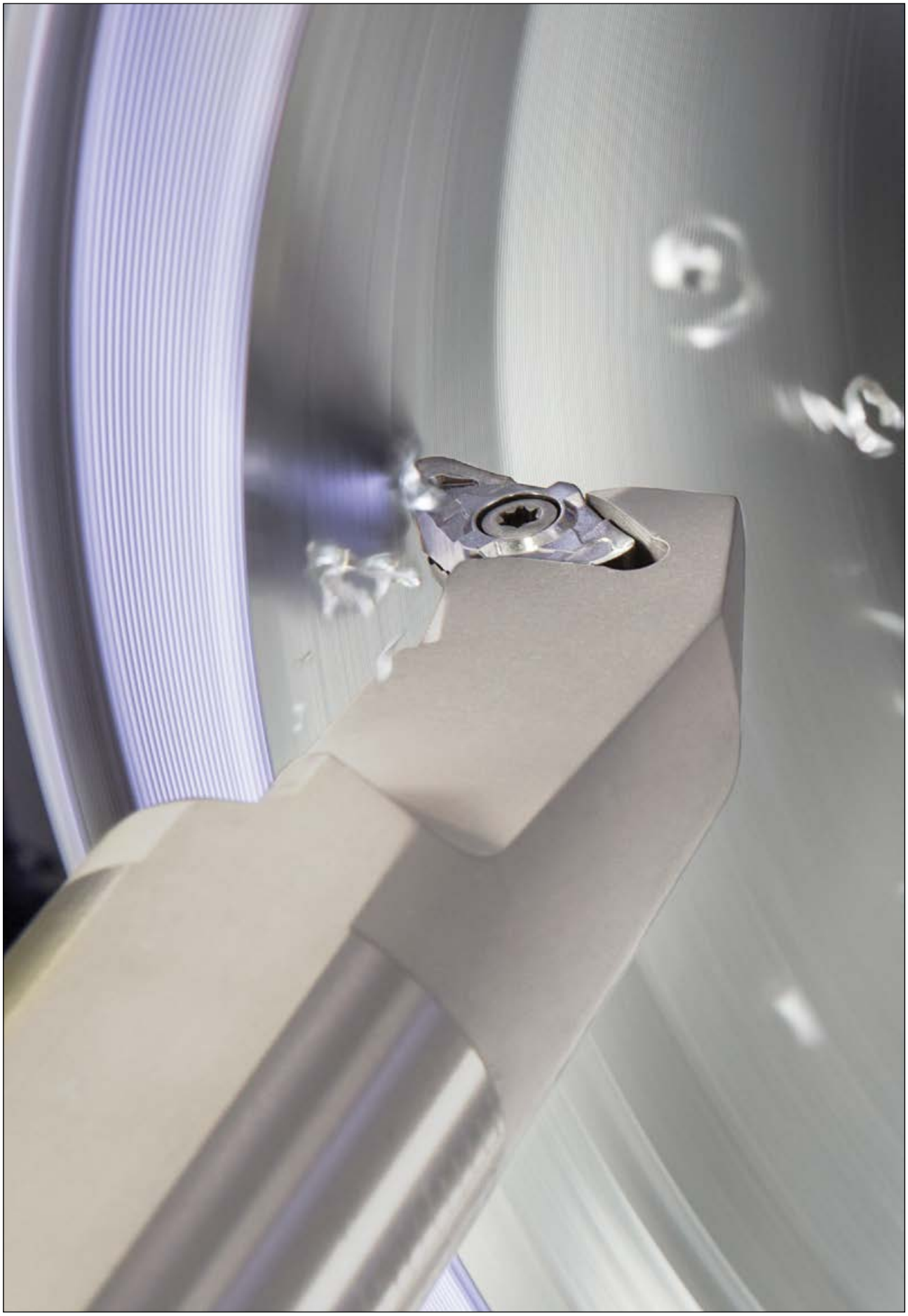


Rounding and chamfering at the "soft" state



Use tailstock in long parts





Complete Machining Solutions
GROOVE-TURN



Member IMC Group
ISCAR

GROOVE-TURN **215**

Selection Guide 218

External Tools and Inserts

HELI-GRIP Tools and Inserts 225
TOP-GRIP Tools and Inserts 230
CUT-GRIP Tools and Inserts 232

Tools, Adapters and Blades (short pocket) 232
Tools, Adapters and Blades (long pocket) 240
Utility Inserts 244
Precision Ground Inserts 248

Inserts for Specific Applications and Materials

Cast Iron 254
Hardened Steel 255
High Temperature Alloys 255
Aluminum 256
Next to Shoulder 258
Undercutting 258
Pulley V Grooves 259
T/L Grooves 260
GDMW Tools and Inserts 264

Multi-Corner Grooving Tools and Inserts

PENTACUT (5 cutting edges) 265
GTGA (3 cutting edges) 278

Tools and Inserts for Heavy Duty Grooving and Turning 279

Internal Tools and Inserts

CUT-GRIP Boring Bars **Dmin 12.5 mm** (GEPI inserts) 287
CUT-GRIP Boring Bars **Dmin 20 mm** (GIPI/GIFI/GINI inserts) 293
TOP-GRIP Boring Bars **Dmin 20.5 mm** 300
HELI-GRIP Boring Bars **Dmin 26 mm** 301
CUT-GRIP Boring Bars **Dmin 64 mm** (GDMY/F/N 8 mm inserts) 301
CUT-GRIP Blades **Dmin 70 mm** 301

Tools for Swiss-Type and Small Lathe Machines 305

External Tools and Inserts
SWISSCUT 306
CUT-GRIP 311

Internal Boring Bars and Inserts 314
PICCO **(Dmin 0.6 mm)** 314
MINICHAM **(Dmin 4 mm)** 327
MINCUT **(Dmin 8 mm)** 329
CHAMGROOVE **(Dmin 8 mm)** 330

Form Tools 335

Broaching Tools 337

Tools for Machining Aluminum Wheels 356

USER GUIDE 340

PARTING 363

FACE GROOVING AND TURNING 423

Information to Select the Correct Insert

ISCAR has an extensive variety of Groove-Turn products. In many cases, you can perform your operation by using several different products. In order to make the optimal selection, these basic parameters need to be defined:

- Insert width [W]
- Necessary tolerance on the insert
- Maximum depth of grooving [T max]
- Application requirement grooving and turning, or only grooving (E-Type or not)

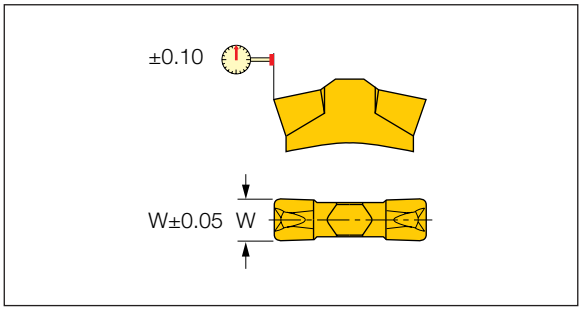
According to these parameters:

- Select the most suitable product according to the tables on pages 219-220
- Select the most suitable chipformer according to the information on pages 221-223

Utility Inserts

Pressed to Size Inserts

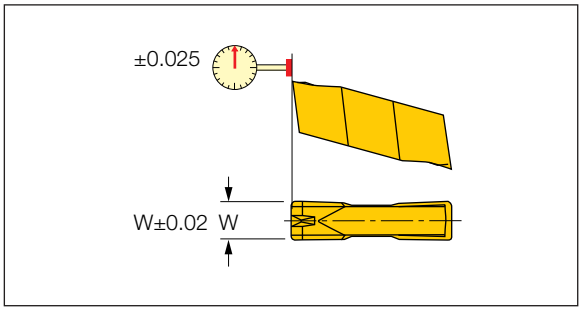
Width	± 0.05
Repeatability	± 0.10



Precision Grooving Inserts

Peripheral Ground Inserts

Width	± 0.02
Repeatability	± 0.025

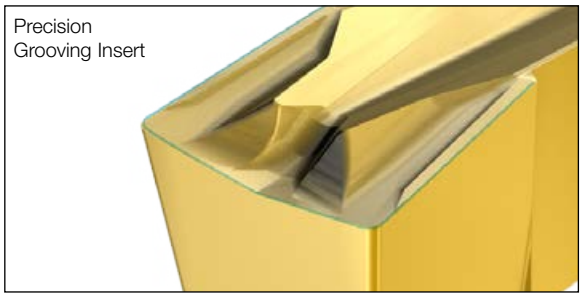


If you don't need the tight tolerance, save money and select a utility insert (less expensive).

What is an E-type Groove-Turn Insert?

E-type inserts are precision ground grooving inserts with **turning** capability.

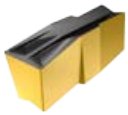
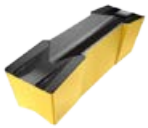
These inserts include the letter **E** in their description. (example: **GIP** 3.**00E**-0.4). This is to distinguish them from precision ground inserts which are not suitable for turning operations and don't include an **E** in their description. (example: **GIP** 3.00-0.2)



- E-type inserts usually have a larger corner radius
- E-type inserts have a larger honing size

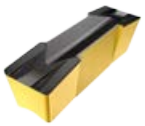


External Groove-Turn Insert Type

		Insert	Properties: Precision Ground	Properties: Utility	Properties: Number of Cutting Edges	Properties: Option for Turning	W range	T_{max}	Page
PENTACUT		PENTACUT Size 24	✔		5		0.5-4.23	1-6.5	270-276
		PENTACUT Size 34	✔		5		1.5-4.0	5-10	276-278
HELI-GRIP		HELI-GRIP		✔	2	✔	3-6.35	No depth limit	229-230
TOP-GRIP		TOP-GRIP		✔	2	✔	3-6.35	10.5-18.6	231-232
CUT-GRIP		Short Pocket		✔	1	✔	3-12	No depth limit	244-248
		Short Pocket	✔		2	✔*	0.5-11.0	13**	249-259
		Long Pocket		✔	2	✔*	8.0	27	244-248
		Long Pocket	✔		2	✔	8.0-11.0	27	248-250, 253-257
HEAVY DUTY		SUMO-GRIP		✔	1	✔	6-14	No depth limit	284
		TIGER		✔	1		10-20	No depth limit	285

* Not on all the products
** On most items

Internal Groove-Turn Insert Type

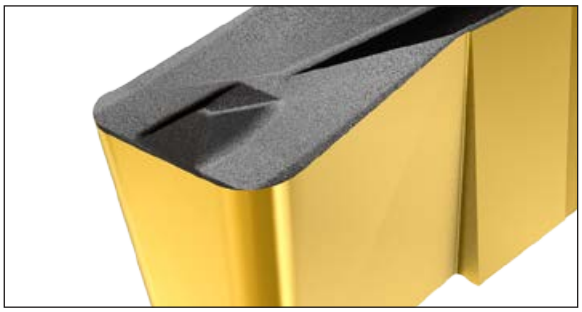
		Tool	Insert	Utility	Precision	Dmin	Tmax	W	Page
PICCOCUT		PICCO/ MG PCO	PICCO		✔	2.0-7.0	0.4-2.5	0.5-2	317-327
CHAMGROOVE		MG/MGCH	GIQR 8		✔	8.0	0.7-1.5	0.5-4	331, 333-334
		MG/MGCH	GIQR 11		✔	11.0	1.5-2.3	0.75-5	332-334
		MGCH	GIQR 11-15		✔	15.0	6.3	1-3	333
CUT-GRIP		GEHIR/L	GEPI/ GEMI	✔	✔	12.5-16	2.4-3.0	1-3.18	290-293
		GHIR/L	GIFI/GIPI/ GINI/GIMIY	✔	✔	20-49	2.5-8.0	1.53-6.35	295-299
TOP-GRIP		TGIR/L	TGMF	✔		20.5-57	5.5-17.5	3-6.35	231-232
HELI-GRIP		HELIIR/L	GRIP	✔		26-53	5-12	3-6.35	229-230
CUT-GRIP		GHIR/L 40-8	GDMF/ GDMY/ GDMN...	✔	✔	65	15-20	8-11	244-249, 256
		GHIC/CGHN	GIP/GIF/ GIMN/GIMF/ GIA...	✔	✔	70-250	10-26	2.8-6.35	244-258

Chipbreaker Selection

General Use

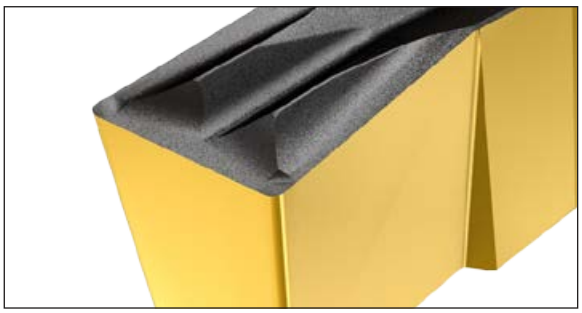
P-Type

- Very “open” geometry
- Medium to high feed in turning and grooving
- Large variety of standard sizes
- Precision ground inserts only
- Width range
  External: 2.39 - 6.35 mm
  Internal: 2.39 - 6.35 mm



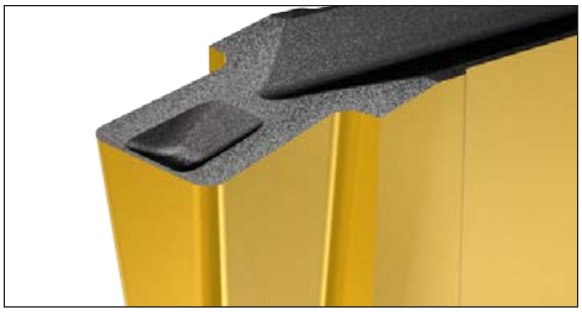
F-Type

- First choice in grooving
- Low to medium feeds in grooving and turning
- Both precision ground and utility inserts
- Width range
  External: 3.0 - 10 mm
  Internal: 3 - 6 mm



G-Type

- Efficient chipbreaker for narrow width grooves
- Width range: 1 - 2.3 mm
- No option for turning



Y-Type

- General use in grooving and turning
- Positive top rake reduces cutting forces
- Excellent for long shafts
- Eliminates vibrations
- Both precision ground and utility inserts
- Width range
  External: 8 - 20 mm



HG-Y-Type

- General use in grooving and turning
- Efficient for a wide range of materials and cutting conditions
- Utility inserts only
- Width range
  External: 3 - 6.35 mm
  Internal: 3 - 6.35 mm



Chipbreaker Selection

Problematic and Specific Materials

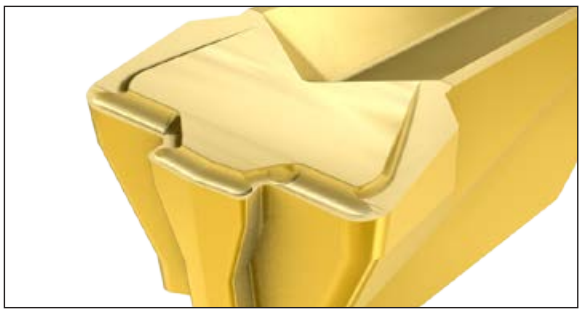
N-Type

- First choice in grooving of problematic, soft & gummy materials
- Very low to medium feeds (from 0.05 mm/rev)
- Both precision ground and utility inserts
- Option for turning
- Width range
  External: 3 - 8 mm
  Internal: 2 - 5 mm



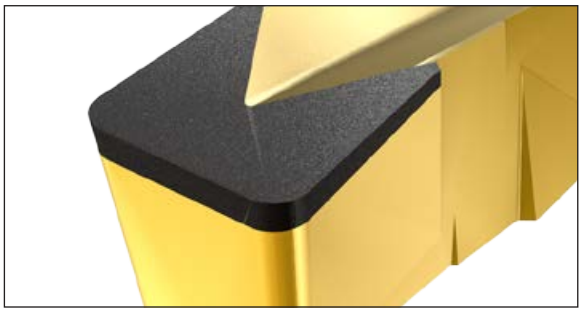
M-Type

- Unique chipbreaker with splitter
  Chips are split into 3 segments
- Efficient for problematic, soft & gummy materials
- Option for light turning
- Width - 8 mm



A-Type

- First choice for machining cast Iron
- Peripheral 15° **T**-land on a flat top
- Exerts high cutting forces, therefore suitable for stable conditions
- Precision ground inserts only
- Width range
  External: 3 - 8 mm



PA-Type

- First choice for machining aluminum
- High positive rake
- Peripheral ground and polished top rake with a very sharp edge
- Suitable also for finish operations on titanium and heat resistant alloys
- Width range
  External: 3 - 8 mm



CW-Type

- Unique chipformer for heavy-duty grooving
- Very wide chipbreaking range on carbon and alloy steel
- Width range 14, 17 and 20 mm



Chipbreaker Selection

Profiling (Full radius)

Y-Type

- First choice in profiling
- Positive top rake reduces cutting forces
- Excellent for long shafts
- Eliminates vibrations
- Both precision ground and utility inserts
- Width range
  External: 3 - 12 mm
  Internal: 2 - 3 mm



YF-Type

- First choice for profiling ductile materials
- Utility inserts only
- Width range
  External: 3 - 8 mm



PA-Type

- First choice for profiling aluminum
- High positive rake
- Peripheral ground and polished top rake with a very sharp edge
- Suitable also for finish operations on titanium and heat resistant alloys
- Width range
  External: 3 - 8 mm



YZ-Type

- First choice for profiling ductile aluminum
- Peripheral ground and polished top rake with a very sharp edge
- Width range
  External: 3 - 8 mm



H-Type

- Unique chipbreaker for heavy-duty profiling
- Negative T-land for extra edge toughness
- Suitable for heavy interrupted cuts and cast iron machining
- Width - 12 mm



Chipbreaker Width Range

External

Insert Width									
12				20					
11									
10									
9									
8									
7									
6		6.35				6.35			
5									
4									
3			3.48						
2	2.3	2.39							
1									
	G	P	F	Y	N	HG-Y	M	A	PA

Internal

Insert Width				
7				
6	6.35			6.35
5				
4				
3				
2	2.39			
1				
	P	F	N	HG-Y

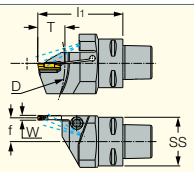
Suitable Chipbreaker and Required Feed Range for Workpiece Material

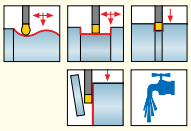
	Alloy Steel		Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
High		P	P	P		
		HG-Y	HG-Y	Y	PA*	A*
Feed		Y	Y	F	P	P
		F	F	PA (finish only)		HG
Low		N				F

* First Choice

HELIGRIP CAMFIX

C#-HELIR/L
External Tools for Turning,
Grooving and Parting with
CAMFIX Exchangeable Shanks





Left-hand shown

Designation	W min	W max	f	l_1	SS	D max(1)	Insert			
C4 HELIR/L 3T20	3.00	3.18	20.0	65.00	40	40.0	GRIP 3, HGN 3	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 3T20	3.00	3.18	25.3	65.00	50	40.0	GRIP 3, HGN 3	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 3T20	3.00	3.18	31.8	65.00	63	40.0	GRIP 3, HGN 3	SR M6X16 DIN912	HW 5.0	EZ 104
C4 HELIR/L 4T25	4.00	4.76	19.6	70.00	40	50.0	GRIP 4, DGN 4	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 4T25	4.00	4.76	24.9	70.00	50	50.0	GRIP 4, DGN 4	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 4T25	4.00	4.76	31.4	70.00	63	50.0	GRIP 4, DGN 4	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 5T25	5.00	5.00	24.4	70.00	50	50.0	GRIP 5, DGN 5	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 5T25	5.00	5.00	30.9	70.00	63	50.0	GRIP 5, DGN 5	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 6T30	6.00	6.35	30.4	85.00	63	60.0	GRIP 6, DGN 6	SR M6X16 DIN912	HW 5.0	EZ 104

• The depth of cut (T) for grooving is limited by the part diameter D, for grooving depth capacity, see table below.
(1) Maximum parting diameter

For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • HGN-C (386) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • HGN-J (386) • DGR/L-J/JS (382) • DGN-UT/UA (384) • DGN-W (381) • HGN-UT (387)

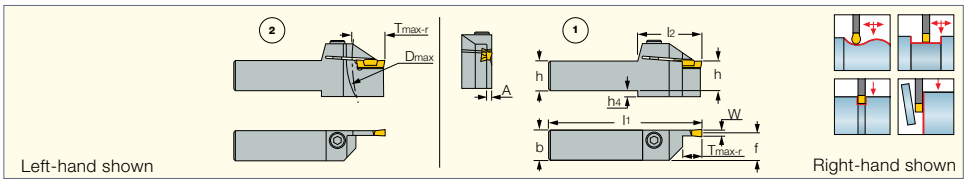
Grooving Depth Capacity

Designation	D																						
C4 HELIR/L 3T20	∞	∞	∞	∞	1151	384	231	167	131	109	94	83	—	—	—	—	—	—	—				
C4 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1127	376	227	163	128	107	—	—				
C5 HELIR/L 3T20	∞	∞	∞	1277	426	257	185	145	120	103	91	82	—	—	—	—	—	—	—				
C5 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1301	434	261	188	148	122	105	—	—				
C5 HELIR/L 5T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1301	434	261	188	148	122	105	—	—				
C6 HELIR/L 3T20	∞	787	394	264	199	161	136	118	105	95	87	81	—	—	—	—	—	—	—				
C6 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	1957	653	393	282	221	182	156	137	122	111	102	—	—				
C6 HELIR/L 5T25	∞	∞	∞	∞	∞	∞	1957	653	393	282	221	182	156	137	122	111	102	—	—				
C6 HELIR/L 6T30	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1879	627	377	271	212	175	150	131	118	107	99	
Depth T	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	



HELIGRIP

HELIR/L
External Holders for Turning, Grooving and Parting



Designation	W min	W max	Tmax-r(2)	Fig.	D max(3)	h	b	f	l1	l2	A	h4	Insert
HELIR/L 1212-3T12	3.00	3.18	12.00	1	-	12.0	12.0	10.8	135.00	30.0	2.40	4.0	GRIP-3..., HG.-3
HELIR/L 1616-3T12	3.00	3.18	12.00	1	-	16.0	16.0	14.8	135.00	30.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 2020-3T12	3.00	3.18	12.00	1	-	20.0	20.0	18.8	135.00	29.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 2525-3T12	3.00	3.18	12.00	1	-	25.0	25.0	23.8	135.00	29.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T12	4.00	4.76	12.00	1	-	16.0	16.0	14.4	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-4T12	4.00	4.76	12.00	1	-	20.0	20.0	18.4	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2525-4T12	4.00	4.76	12.00	1	-	25.0	25.0	23.4	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-5T12	5.00	5.00	12.00	1	-	20.0	20.0	17.9	135.00	29.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-5T12	5.00	5.00	12.00	1	-	25.0	25.0	22.9	135.00	29.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-6T12	6.00	6.35	12.00	1	-	25.0	25.0	22.4	135.00	29.0	5.20	-	GRIP-6..., DG.-6
HELIR/L 1616-3T20 (1)	3.00	3.18	-	2	40.0	16.0	16.0	14.8	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 2020-3T20 (1)	3.00	3.18	-	2	40.0	20.0	20.0	18.8	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 2525-3T20 (1)	3.00	3.18	-	2	40.0	25.0	25.0	23.8	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 3232-3T20 (1)	3.00	3.18	-	2	40.0	32.0	32.0	30.8	150.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T20	4.00	4.76	-	2	40.0	16.0	16.0	14.4	140.00	38.0	3.20	4.0	GRIP-4..., DG.-4
HELIR/L 2020-4T25	4.00	4.76	-	2	50.0	20.0	20.0	18.4	140.00	42.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2525-4T25	4.00	4.76	-	2	50.0	25.0	25.0	23.4	140.00	42.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 3232-4T25	4.00	4.76	-	2	50.0	32.0	32.0	30.4	150.00	43.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-5T25	5.00	5.00	-	2	50.0	20.0	20.0	17.9	140.00	42.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-5T25	5.00	5.00	-	2	50.0	25.0	25.0	22.9	140.00	42.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 3232-5T25	5.00	5.00	-	2	50.0	32.0	32.0	29.9	150.00	43.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-6T30	6.00	6.35	-	2	60.0	25.0	25.0	22.4	140.00	51.4	5.20	-	GRIP-6..., DG.-6
HELIR/L 3232-6T30	6.00	6.35	-	2	60.0	32.0	32.0	29.4	150.00	51.4	5.20	-	GRIP-6..., DG.-6

• For tool type as shown in Fig.2, Tmax for grooving is limited by the part diameter D, for grooving depth capacity, see table below. • For user guide, see pages 340-351

(1) DGN inserts are not suitable for this tool

(2) Does not depend on the workpiece diameter

(3) Maximum parting diameter

For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • HGN-C (386) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • HGN-J (386) • DGR/L-J/JS (382) • DGN-UT/UA (384) • DGN-W (381) • HGN-UT (387)

Depth Capacity

Designation	D											
HELIR/L 1616-3T20	–	–	–	–	–	80	194	∞	∞	∞	∞	∞
HELIR/L 2020-3T20	–	–	–	–	–	80	123	299	∞	∞	∞	∞
HELIR/L 2525-3T20	–	–	–	–	–	79	99	136	229	815	∞	∞
HELIR/L 3232-3T20	–	–	–	–	–	79	89	103	127	169	261	604
HELIR/L 1616-4T20	–	–	–	–	–	78	132	505	∞	∞	∞	∞
HELIR/L 2020-4T20	–	–	98	185	∞	∞	∞	∞	∞	∞	∞	∞
HELIR/L 2525-4T20	–	–	98	136	233	368	∞	∞	∞	∞	∞	∞
HELIR/L 3232-4T20	–	–	98	–	149	175	270	626	∞	∞	∞	∞
HELIR/L 2020-5T20	–	–	98	182	∞	∞	∞	∞	∞	∞	∞	∞
HELIR/L 2525-5T20	–	–	98	136	233	368	∞	∞	∞	∞	∞	∞
HELIR/L 3232-5T20	–	–	98	–	149	175	270	626	∞	∞	∞	∞
HELIR/L 2525-6T20	98	135	354	∞	∞	∞	∞	∞	∞	∞	∞	∞
HELIR/L 3232-6T20	98	121	194	345	1718	∞	∞	∞	∞	∞	∞	∞
Depth T	30.0	28.0	25.0	23.0	21.0	20.0	18.0	16.0	14.0	12.0	10.0	8.0	6.5

Spare Parts

Designation		
HELIR/L 1212-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-5T12	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-5T12	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-6T12	SR M6X16 DIN912	HW 5.0
HELIR/L 1616-3T20	SR M6X20 DIN912	HW 5.0
HELIL 2020-3T20	SR M6X20 DIN912	HW 5.0
HELIR 2020-3T20	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-3T20	SR M6X20 DIN912	HW 5.0

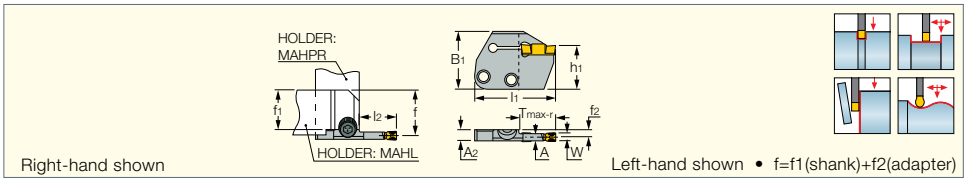
Spare Parts (continued)

Designation		
HELIR/L 3232-3T20	SR M6X20 DIN912	HW 5.0
HELIR/L 1616-4T20	SR M6X20 DIN912	HW 5.0
HELIR/L 2020-4T25	SR M6X20 DIN912	HW 5.0
HELIR/L 2525-4T25	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-4T25	SR M6X20 DIN912	HW 5.0
HELIL 2020-5T25	SR M6X20 DIN912	HW 5.0
HELIR 2020-5T25	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-5T25	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-5T25	SR M6X20 DIN912	HW 5.0
HELIR/L 2525-6T30	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-6T30	SR M6X20 DIN912	HW 5.0

HELI-GRIP
MODULAR-GRIP

HGPAD

Adapters for Turning, Grooving and Parting



Designation	W min	W max	Tmax-r	l2	f2	A	A2	l1	B1	h1	Insert
HGPAD 3R/L-T12	3.00	3.20	12.00	15.2	4.80	2.50	6.0	39.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 3R/L-T20	3.00	3.20	20.00	21.2	4.80	2.50	6.0	45.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 4R/L-T12	4.00	4.76	12.00	18.7	4.40	3.30	6.0	43.20	32.0	24.0	GRIP 4, DGN 4
HGPAD 4R/L-T20	4.00	4.76	20.00	21.2	4.40	3.30	6.0	45.70	32.0	24.0	GRIP 4, DGN 4
HGPAD 5R/L-T12	5.00	5.00	12.00	18.7	3.90	4.20	6.0	43.20	32.0	24.0	GRIP 5, DGN 5
HGPAD 5R/L-T20	5.00	5.00	20.00	21.2	3.90	4.20	6.0	45.70	32.0	24.0	GRIP 5, DGN 5
HGPAD 6R/L-T12	6.00	6.35	12.00	18.7	3.40	5.20	6.0	43.20	32.0	24.0	GRIP 6, DGN 6
HGPAD 6R/L-T22	6.00	6.35	22.00	23.2	3.40	5.20	6.0	47.70	32.0	24.0	GRIP 6, DGN 6

• DO-GRIP DGN, HGN inserts can be used for grooving only • For user guide, see pages 340-351

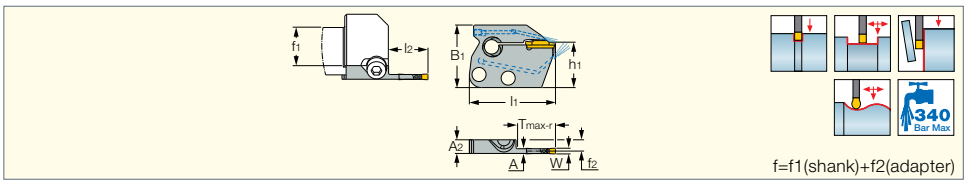
For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • HGN-C (386) • DGN/DGNM-J/JS/JT (381) • HGN-J (386) • DGN-UT/UA (384) • DGN-W (381) • HGN-UT (387)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

HELI-GRIP JETCUT
MODULAR-GRIP

HGPAD-JHP

Adapters with High Pressure Coolant Channels for HELI-GRIP Inserts



Designation	W min	W max	Tmax-r	l2	f2	A	A2	l1	B1	h1
HGPAD 3R/L-T20-JHP	3.00	3.00	20.00	21.0	5.95	2.50	7.2	45.70	33.0	24.0
HGPAD 4R/L-T20-JHP	4.00	4.76	20.00	21.0	5.55	3.30	7.2	45.70	33.0	24.0
HGPAD 5R/L-T20-JHP	5.00	5.00	20.00	21.0	5.10	4.20	7.2	45.70	33.0	24.0
HGPAD 6R/L-T22-JHP	6.00	6.35	22.00	23.0	4.60	5.20	7.2	47.70	33.0	24.0

• For user guide and accessories, see pages 340-355

For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • HGN-C (386) • DGN/DGNM-J/JS/JT (381) • HGN-J (386) • DGN-UT/UA (384) • HGN-UT (387) • DGN-W (381)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236)

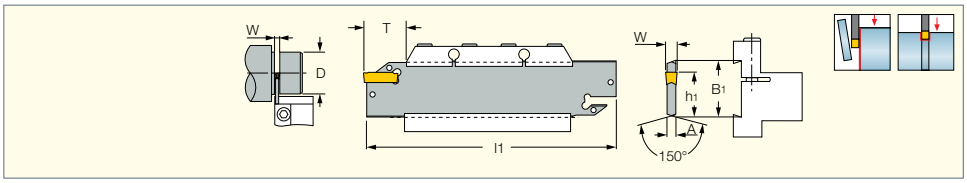
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
HGPAD 3R/L-T20-JHP	5-7	6-8	7-9
HGPAD 4R/L-T20-JHP	9-11	10-12	11-13
HGPAD 5R/L-T20-JHP	11-13	12-14	13-15
HGPAD 6R/L-T22-JHP	16-18	16-18	19-21

DO-GRIP HELI-GRIP TWISTED 2-SIDED

HGFH

Parting and Grooving Blades for 3 mm GRIP Inserts



Designation	B1	W	A	l1	h1	T blade	D max	
HGFH 26-3	26.0	3.00	2.40	110.00	21.4	37.5	75.0	EDG 23B*
HGFH 32-3	32.0	3.00	2.40	150.00	24.8	50.0	100.0	EDG 23B*

* Optional, should be ordered separately

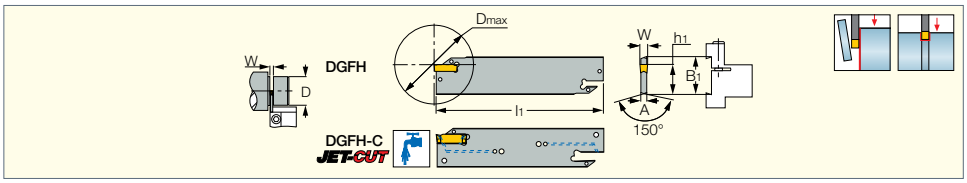
For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • HGN-C (386) • HGR/L-C (386) • HGN-J (386) • HGN-UT (387) • HGR/L-J/JS (387)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

DO-GRIP HELI-GRIP TWISTED 2-SIDED

DGFH

Parting and Grooving Blades with and without Coolant Channels Carrying DO-GRIP and HELI-GRIP Inserts



Designation	B_1	W min	W max	A	l_1	h_1	D max	Insert
DGFH 26-1.4	26.0	1.40	1.40	2.50 (5)	110.00	21.4	26.0	DG. 14..
DGFH 26-2 (1)	26.0	1.90 (4)	2.50	1.60	110.00	21.4	39.0 (6)	DG. 1.../DG. 2...
DGFH 26-3 (1)	26.0	3.00 (4)	3.18	2.40	110.00	21.4	39.0 (6)	DG. 1.../DG. 3...
DGFH 26C-3 (2)	26.0	3.00	3.18	2.40	110.00	21.4	39.0 (6)	DG. 3..C
DGFH 26-4	26.0	4.00	4.00	3.20	110.00	21.4	80.0	DG. 4.../GRIP 4...
DGFH 32-1.4	32.0	1.40	1.40	2.50 (5)	150.00	24.8	26.0	DG. 14
DGFH 32-2 (1)	32.0	1.90 (4)	2.50	1.80	150.00	24.8	39.0 (6)	DG. 1.../DG. 2...
DGFH 32-3 (1)	32.0	3.00 (4)	3.18	2.40	150.00	24.8	39.0 (6)	DG. 1.../DG. 3...
DGFH 32C-3 (2)	32.0	3.00	3.18	2.40	150.00	24.8	39.0 (6)	DG. 3..C
DGFH 32-4	32.0	4.00	4.00	3.20	150.00	24.8	100.0	DG. 4.../GRIP 4...
DGFH 32C-4 (3)	32.0	4.00	4.00	3.20	150.00	24.8	69.0	DG. 4..C
DGFH 32-5	32.0	5.00	5.00	4.00	150.00	24.8	120.0	DG. 5.../GRIP 5...
DGFH 32-6	32.0	6.00	6.35	5.20	150.00	24.8	120.0	DG. 6.../GRIP 6...
DGFH 45-3	45.0	3.00 (4)	3.18	2.40	225.00	38.0	160.0	DG. 1.../DG. 3...
DGFH 45-4	45.0	4.00	4.10	3.20	225.00	38.0	160.0	DG. 4.../GRIP 4...
DGFH 45-5	45.0	4.80	5.00	4.00	225.00	38.0	160.0	DG. 5.../GRIP 5...
DGFH 45-6	45.0	6.00	6.40	5.20	225.00	38.0	160.0	DG. 6.../GRIP 6...

• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

(2) Blades with frontal coolant holes (JET-CUT) • For Dmax 50 mm, use single-ended insert (should be modified by the user).

(3) These blades are suitable for turning, using GRIP 4 inserts • Blades with frontal coolant holes (JET-CUT)

(4) For DG. 1... insert, modify holder

(5) Thickness at the D.O.C. area is 1.0 mm

(6) Maximum diameter with double-sided inserts.

For inserts, see pages: DGN-MF (383) • DGN/DGNC/DGNM-C (380) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • DGR/L-J/JS (382) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • GRIP (229) • GRIP (full radius) (230)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

Spare Parts

Designation						
DGFH 26-1.4	EDG 23B*					
DGFH 26-2	EDG 23A*					
DGFH 26-3	EDG 23A*					
DGFH 26C-3	EDG 23A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*					
DGFH 32-1.4	EDG 23B*					
DGFH 32-2	EDG 33A*					
DGFH 32-3	EDG 33A*					
DGFH 32C-3	EDG 33A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-4	EDG 33A*					
DGFH 32C-4	EDG 33A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-5	EDG 33A*					
DGFH 32-6	EDG 33A*					
DGFH 45-3	EDG 33A*					
DGFH 45-4	EDG 33A*					
DGFH 45-5	EDG 33A*					
DGFH 45-6	EDG 33A*					

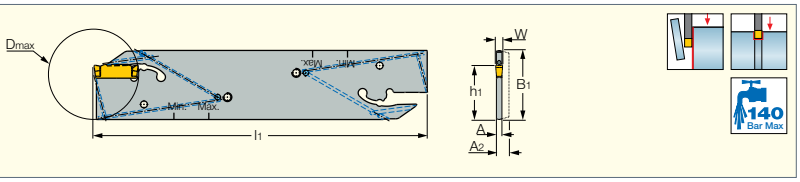
* Optional, should be ordered separately

DO-GRIP JETCUT TWISTED 2-SIDED

DGFH-JHP

Parting and Grooving Blades with Channels for Low and High Pressure Coolant Carrying DO-GRIP Inserts





Designation	W min	W max	A	A2	l1	B1	h1	D max	Insert			
DGFH 32-2-JHP (1)	1.90 (2)	2.50	1.80	2.4	150.00	32.0	24.8	39.0	DG. 1.../DG. 2...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-3-JHP	3.00 (2)	3.18	2.50	-	150.00	32.0	24.8	90.0	DG. 1.../DG. 3...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-4-JHP	4.00	4.00	3.20	-	150.00	32.0	24.9	90.0	DG. 4.../GRIP 4...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-5-JHP	5.00	5.00	4.00	-	150.00	32.0	24.9	90.0	DG. 5.../GRIP 5...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-6-JHP (1)	6.00	6.35	5.20	-	160.00	32.0	24.9	90.0	DG. 6.../GRIP 6...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*

• For user guide and accessories, see pages 340-355

(1) Only an upper channel

* Optional, should be ordered separately

(2) For DG. 1... insert, modify holder

For inserts, see pages: DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382) • GRIP (229) • GRIP (full radius) (230)

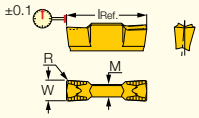
For holders, see pages: TGTBU-JHP (393)

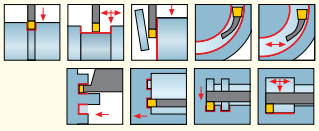
HELI-GRIP

GRIP

Utility Double-Ended Inserts for External, Internal and Face Machining







No depth penetration limit

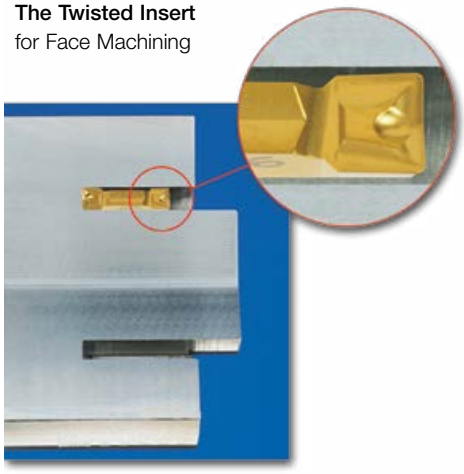
Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3002Y	3.00	0.20	16.00	2.30	•	•	•	•	•			•	0.25-1.80	0.14-0.18	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 3003Y	3.00	0.30	16.00	2.30	•	•	•	•		•	•		0.40-1.80	0.15-0.19	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 318-040Y	3.18	0.40	16.00	2.30	•	•		•	•	•			0.50-1.90	0.17-0.22	0.07-0.12	0.08-0.20	0.10-0.20
GRIP 4002Y	4.00	0.20	19.00	2.80	•	•	•	•	•			•	0.25-2.40	0.16-0.21	0.09-0.14	0.10-0.24	0.15-0.30
GRIP 4004Y	4.00	0.40	19.00	2.80	•	•	•	•	•	•	•	•	0.50-2.40	0.18-0.24	0.09-0.15	0.10-0.24	0.15-0.30
GRIP 476-080Y	4.76	0.80	19.00	3.10	•	•		•	•	•			1.00-2.80	0.21-0.33	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5005Y	5.00	0.50	19.00	3.30	•	•	•	•	•	•	•	•	0.60-3.00	0.20-0.30	0.11-0.20	0.12-0.24	0.15-0.35
GRIP 5008Y	5.00	0.80	19.00	3.40	•	•		•	•	•	•	•	1.00-3.00	0.23-0.35	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6005Y	6.00	0.50	19.00	4.20	•	•		•	•	•	•	•	0.60-3.60	0.22-0.36	0.13-0.23	0.12-0.28	0.15-0.40
GRIP 6008Y	6.00	0.80	19.00	4.20	•	•		•	•	•	•	•	1.00-3.60	0.24-0.42	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-080Y	6.35	0.80	19.00	4.20	•	•		•	•	•			1.00-3.80	0.25-0.44	0.14-0.27	0.12-0.28	0.15-0.40

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFS (372) • DGPAD-XL-JHP (379) • DGTR/L (376) • HELIIR/L (301) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFIR/L-MC (446) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGAER/L-3 (440) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

The Twisted Insert

for Face Machining



The double-ended, twisted insert body makes it possible to machine deeper than the inserts' length. A unique chipformer for controlled chip flow in axial and radial directions.
The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface as the tool penetrates deeply into the workpiece.

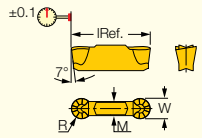


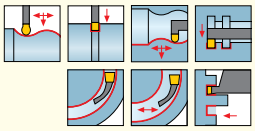
HELIGRIP

GRIP (full radius)

Utility Double-Ended Full Radius Inserts for External, Internal and Face Machining







No depth penetration limit

Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3015Y	3.00	1.50	15.80	2.10	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 318-159Y	3.18	1.59	16.00	2.30				●	●				0.00-1.50	0.19-0.28	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 4020Y	4.00	2.00	19.00	2.80	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17	0.10-0.24	0.15-0.30
GRIP 476-238Y	4.76	2.38	19.00	3.20				●	●	●			0.00-2.30	0.21-0.40	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5025Y	5.00	2.50	19.00	3.40	●	●		●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6030Y	6.00	3.00	19.00	4.20	●	●	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-318Y	6.35	3.18	19.00	4.00				●	●				0.00-3.10	0.25-0.53	0.14-0.27	0.12-0.28	0.15-0.40

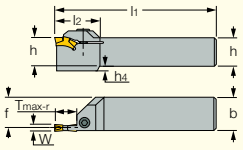
• For cutting speed recommendations and user guide, see pages 340-351

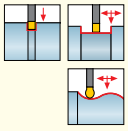
For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFS (372) • DGTR/L (376) • HELIIR/L (301) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFIR/L-MC (446) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGAER/L-3 (440) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

TOPGRIP

TGDR/L

External Holders for Turning, Grooving and Profiling





Right-hand shown

Designation	W min	W max	Tmax-r(1)	h	b	l1	l2	f	h4	Insert		
TGDR/L 1616-3M	3.00	3.00	7.50	16.0	16.0	100.00	30.5	14.7	6.0	TGMF 3	SR M5X12 DIN912	HW 4.0
TGDR/L 2020-3M	3.00	3.00	7.50	20.0	20.0	125.00	30.5	18.7	-	TGMF 3	SR M5X12 DIN912	HW 4.0
TGDR/L 2525-3M	3.00	3.00	7.50	25.0	25.0	140.00	30.5	23.7	-	TGMF 3	SR M5X12 DIN912	HW 4.0
TGDR/L 1616-4M	4.00	5.00	9.00	16.0	16.0	100.00	32.2	14.2	6.0	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0
TGDR/L 2020-4M	4.00	5.00	9.00	20.0	20.0	125.00	32.2	18.2	6.0	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0
TGDR/L 2525-4M	4.00	5.00	15.50	25.0	25.0	140.00	34.0	23.2	-	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0
TGDR/L 2525-5M	5.00	5.00	18.00	25.0	25.0	140.00	37.0	22.7	-	TGMF 5	SR M5X12 DIN912	HW 4.0
TGDR/L 3232-5M	5.00	5.00	22.00	32.0	32.0	150.00	45.0	29.8	-	TGMF 5	SR M6X12DIN912	HW 5.0
TGDR/L 2525-6M	6.00	6.35	22.00	25.0	25.0	150.00	43.0	22.5	-	TGMF 6	SR M6X16 DIN912	HW 5.0
TGDR/L 3232-6M	6.00	6.35	22.00	32.0	32.0	150.00	43.0	29.5	-	TGMF 6	SR M6X16 DIN912	HW 5.0

• For user guide, see pages 340-351

(1) Grooving depth is limited by the insert

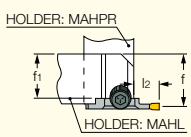
For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

TOPGRIP

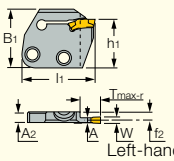
MODULARGRIP

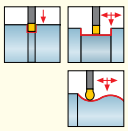
TGPAD

Adapters for TGMF / TGMP Groove-Turn Inserts



Right-hand shown





Left-hand shown • f=f1(shank)+f2(adapter)

Designation	W min	W max	Tmax-r(1)	f2	A	A2	l2	l1	h1	B1
TGPAD 3R/L-T9	3.00	3.00	9.00	4.00	2.40	5.2	12.7	37.20	24.0	30.0
TGPAD 4R/L-T16	4.00	5.00	16.00	3.50	3.40	5.2	17.2	41.70	24.0	30.0
TGPAD 5R/L-T16	5.00	5.00	16.00	3.00	4.40	5.2	17.2	41.70	24.0	30.0
TGPAD 6R/L-T22	6.00	6.35	22.00	3.50	5.00	6.0	23.2	47.10	24.0	32.0

• For user guide, see pages 340-351

(1) Grooving depth is limited by the insert

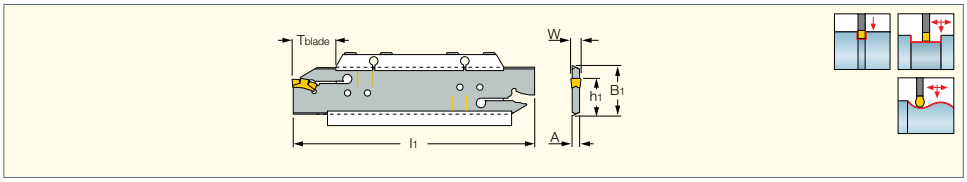
For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

TOP-GRIP

TGHN-D

Double-Ended Blades Carrying Utility Inserts for Grooving and Turning



Designation	B_1	W min	W max	T blmin	T blade	h_1	l_1	A	Insert
TGHN 26-3D	26.0	3.00	3.00	10.0	15.0	21.4	110.00	2.40	TGMF 3
TGHN 26-4D	26.0	4.00	5.00	10.0	15.0	21.4	110.00	3.20	TGMF 4, TGMF/P 5
TGHN 26-5D	26.0	5.00	5.00	10.0	20.0	21.4	110.00	4.00	TGMF/P 5
TGHN 32-3D	32.0	3.00	3.00	10.0	18.0	24.8	150.00	2.40	TGMF 3
TGHN 32-4D	32.0	4.00	5.00	12.0	21.0	24.8	150.00	3.20	TGMF 4, TGMF/P 5
TGHN 32-5D	32.0	5.00	5.00	12.0	26.0	24.8	150.00	4.00	TGMF/P 5
TGHN 32-6D	32.0	6.00	6.35	16.0	26.0	24.8	150.00	5.20	TGMF 6

• Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 340-351

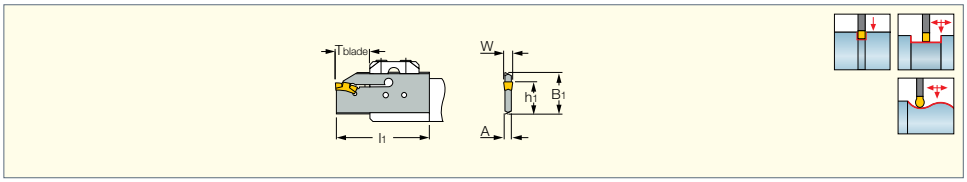
For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

For holders, see pages: SGTBU/SGTBN (472) • UBHCR/L (473)

TOP-GRIP

TGHN-S

Single-Ended Blades Carrying Utility Inserts for Grooving and Turning



Designation	B_1	W min	W max	T blmin	T blade	h_1	l_1	A	Insert
TGHN 32-3S	32.0	3.00	3.00	10.0	18.0	24.8	48.30	2.40	TGMF 3
TGHN 32-5S	32.0	5.00	5.00	12.0	25.0	24.8	54.00	4.00	TGMF/P 5
TGHN 32-6S	32.0	6.00	6.35	16.0	25.0	24.8	55.70	5.20	TGMF 6

• Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 340-351

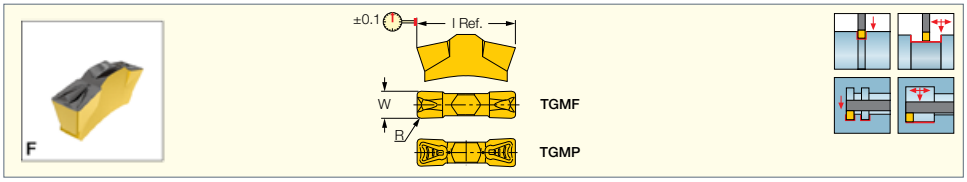
For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

For holders, see pages: C#-TBU (477) • IM-TBU (483) • UBHCR/L (473)

TOP-GRIP

TGMF/P

Utility Double-Ended Inserts for External and Internal Grooving and Turning



Designation	Dimensions W±0.05	R±0.05	l	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC20N	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 302	3.00	0.20	13.50	10.50	•	•	•	•	•	•	0.25-1.80	0.14-0.18	0.07-0.11
TGMF 304	3.00	0.40	13.55	10.30	•	•	•	•	•	•	0.50-1.80	0.16-0.20	0.07-0.12
TGMF 402	4.00	0.20	17.70	14.70	•	•	•	•	•	•	0.20-2.40	0.16-0.21	0.09-0.14
TGMF 404	4.00	0.40	17.70	14.60	•	•	•	•	•	•	0.50-2.40	0.18-0.24	0.09-0.15
TGMP 506	5.00	0.60	17.60	15.00		•			•		0.75-3.00	0.21-0.32	0.11-0.20
TGMF 508	5.00	0.80	17.80	14.20	•	•	•	•	•	•	1.00-3.00	0.23-0.35	0.11-0.21
TGMF 635-080	6.35	0.80	22.15	18.60	•	•	•	•	•	•	1.00-3.80	0.25-0.44	0.14-0.27

• Dmin for internal application=20.5 mm • For cutting speed recommendations and user guide, see pages 340-351

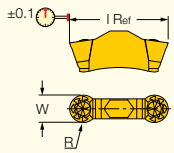
For tools, see pages: TGDR/L (230) • TGHN 26-M (300) • TGHN-D (231) • TGHN-S (231) • TGIR/L-C (300) • TGPAD (230)

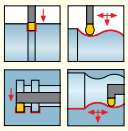
TOPGRIP

TGMF (full radius)

Utility Double-Ended Full Radius Inserts for External and Internal Grooving and Profiling







Designation	Dimensions W±0.05	R±0.05	l	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 315	3.00	1.50	13.50	11.40	●	●	●	●	●		0.00-1.50	0.18-0.26	0.07-0.13
TGMF 420	4.00	2.00	17.80	14.90	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
TGMF 525	5.00	2.50	17.75	14.30	●	●	●	●		●	0.00-2.50	0.23-0.42	0.11-0.21
TGMF 630	6.00	3.00	22.15	18.30	●	●	●	●			0.00-3.00	0.24-0.50	0.13-0.25

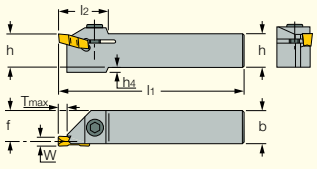
• Can cut arcs to 250° • Dmin for internal application=20.5 mm • For cutting speed recommendations and user guide, see pages 340-351

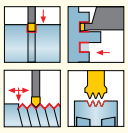
For tools, see pages: TGDR/L (230) • TGHN 26-M (300) • TGHN-D (231) • TGHN-S (231) • TGIR/L-C (300) • TGPAD (230)

CUTGRIP

GHMR/L

Toolholders for Shallow Radial and Axial Grooving with Narrow and Special Profile Inserts





Right-hand shown

Designation	W max	Tmax-r	Tmax-a	h	b	l1	l2	f	h4		
GHMR/L 12	4.00	4.80	4.80	12.0	12.0	110.00	25.0	10.8	4.0	SR 76-1021	T-20/5
GHMR/L 16	4.80	4.80	4.80	16.0	16.0	115.00	25.0	14.5	-	SR M6X16 DIN912	HW 5.0
GHMR 16-3 ST (1)	5.00	4.80	4.80	16.0	16.0	78.00	25.0	15.0	-	SR M6X16 DIN912	HW 5.0
GHMR/L 20	6.40	4.80	4.80	20.0	20.0	125.00	25.0	18.5	-	SR M6X16 DIN912	HW 5.0
GHMR/L 25	6.40	4.80	4.80	25.0	25.0	140.00	25.0	23.5	-	SR M6X16 DIN912	HW 5.0
GHMR/L 32	6.40	4.80	4.80	32.0	32.0	150.00	25.0	30.2	-	SR M6X16 DIN912	HW 5.0

• **Use for recessing:** light turning, small depth of cut (ap=0.1-0.5 mm) and small feed (f=0.1 mm/rev) • For user guide, see pages 340-351

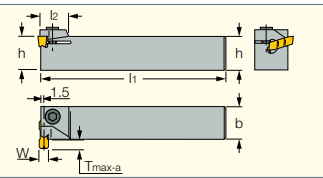
(1) For Star and multi-spindle machines

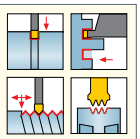
For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIG (252) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (flat top W<M) (251) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-RX/LX (258) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

CUTGRIP

GHMPR/L

Perpendicular Toolholders for Shallow Radial and Axial Grooving with Narrow and Special Profile Inserts





Right-hand shown

Designation	W max	Tmax-r	Tmax-a	h	b	l1	l2		
GHMPR/L 16	4.80	4.80	4.80	16.0	16.0	110.00	17.0	SR M6X16 DIN912	HW 5.0
GHMPR/L 20	6.40	4.80	4.80	20.0	20.0	120.00	17.0	SR M6X16 DIN912	HW 5.0
GHMPR/L 25	6.40	4.80	4.80	25.0	25.0	135.00	17.0	SR M6X16 DIN912	HW 5.0

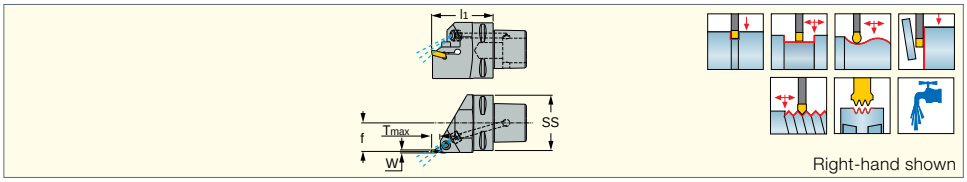
• **Use for recessing:** light turning, small depth of cut (ap=0.1-0.5 mm) and small feed (f=0.1 mm/rev) • For user guide, see pages 340-351

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIG (252) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (flat top W<M) (251) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-RX/LX (258) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

CUTGRIP CAMFIX

C#-GHDR/L

External Grooving, Turning and Parting Toolholders with CAMFIX Exchangeable Tapered Shanks



Right-hand shown

Designation	W min	W max	SS	Tmax-r	l1	f			
C4 GHDR/L-3	2.80	4.00	40	9.00	55.00	20.0	SR M5X20DIN912	HW 4.0	EZ 104
C5 GHDR/L-3	2.80	4.00	50	9.00	55.00	24.0	SR M5X20DIN912	HW 4.0	EZ 104
C6 GHDR/L-3	2.80	4.00	63	9.00	55.00	32.0	SR M5X16 DIN912	HW 4.0	EZ 125
C4 GHDR/L-4	4.00	5.00	40	10.00	55.00	20.0	SR M6X25 DIN912	HW 5.0	EZ 104
C5 GHDR/L-4	4.00	5.00	50	10.00	55.00	24.0	SR M6X25 DIN912	HW 5.0	EZ 104
C6 GHDR/L-4	4.00	5.00	63	10.00	55.00	32.0	SR M6X16 DIN912	HW 5.0	EZ 125
C5 GHDR/L-5	5.00	6.40	50	12.00	55.00	24.0	SR M6X25 DIN912	HW 5.0	EZ 104
C6 GHDR/L-5	5.00	6.40	63	12.00	55.00	32.0	SR M6X16 DIN912	HW 5.0	EZ 125
C6 GHDR/L-8 (1)	7.00	8.40	63	25.00	70.00	30.0	SR M6X20 DIN912	HW 5.0	EZ 146

• When using GPV and TIP inserts, toolholder must be modified according to insert profile to ensure clearance.

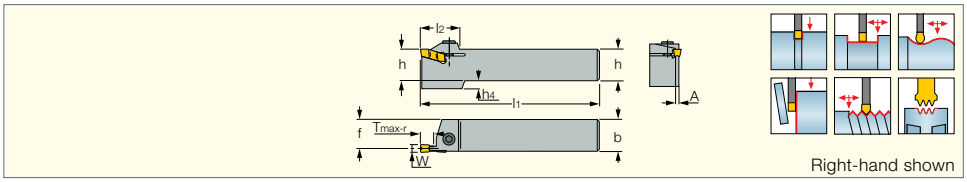
(1) Used with GIF 8, GIA 8, GIPA 8, GDMM, GIDA, GDMY, GDMF, GDMU inserts

For inserts, see pages: GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF (long pocket) (253) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPA/GIDA 8 (full radius) (257) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

CUTGRIP

GHDR/L (short pocket)

External Tools for Turning, Grooving and Parting



Right-hand shown

Designation	W min	W max	Tmax-r	h	b	l1	l2	f	A	h4		
GHDR/L 12-3	2.80	4.00	8.00	12.0	12.0	110.00	25.0	10.8	2.40	4.0	SR 76-1021	T-20/5
GHDR/L 16-3	2.80	4.00	9.00	16.0	16.0	110.00	26.0	14.8	2.40	4.0	SR M5X16 DIN912	HW 4.0
GHDR/L 16-3 ST (1)	2.80	4.00	9.00	16.0	16.0	78.00	24.0	15.0	2.20	4.0	SR M5X16 DIN912	HW 4.0
GHDR/L 20-3	2.80	4.00	9.00	20.0	20.0	120.00	26.0	18.8	2.40	-	SR M5X16 DIN912	HW 4.0
GHDR/L 25-3	2.80	4.00	9.00	25.0	25.0	135.00	26.0	23.8	2.40	-	SR M5X16 DIN912	HW 4.0
GHDR/L 16-4	4.00	5.00	10.00	16.0	16.0	110.00	26.0	14.4	3.20	4.0	SR M6X16 DIN912	HW 5.0
GHDR 16-4 ST (1)	4.00	5.40	10.00	16.0	16.0	78.00	24.6	14.0	3.40	4.0	SR M6X16 DIN912	HW 5.0
GHDR/L 20-4	4.00	5.00	10.00	20.0	20.0	120.00	26.0	18.4	3.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 25-4	4.00	5.00	10.00	25.0	25.0	135.00	27.0	23.4	3.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 32-4	4.00	5.00	10.00	32.0	32.0	150.00	27.0	30.4	3.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 20-5	5.00	6.40	12.00	20.0	20.0	120.00	29.0	17.9	4.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 25-5	5.00	6.40	12.00	25.0	25.0	135.00	29.0	22.9	4.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 32-5	5.00	6.40	12.00	32.0	32.0	150.00	29.0	29.9	4.20	-	SR M6X16 DIN912	HW 5.0
GHDR/L 25-6	6.00	6.40	12.00	25.0	25.0	135.00	29.0	22.3	5.40	-	SR M6X16 DIN912	HW 5.0
GHDR/L 25-P8 (2)	7.00	10.00	16.50	25.0	25.0	150.00	35.7	21.8	6.50	-	SR M8X20DIN912	HW 6.0
GHDR/L 32-P8 (2)	7.00	10.00	16.50	32.0	32.0	170.00	35.7	28.8	6.50	-	SR M8X20DIN912	HW 6.0

• For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

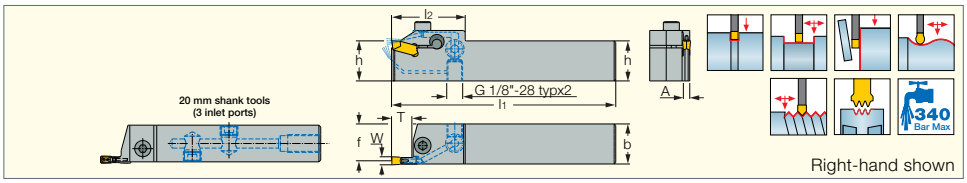
(1) For Star and multi-spindle machines.

(2) Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV inserts.

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIG (252) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMM 8CC (454) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (flat top W<M) (251) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

CUTGRIP JETCUT

GHDR/L-JHP (short pocket)
Grooving and Turning Tools with
Channels for High Pressure Coolant



Right-hand shown

Designation	W min	W max	h	Tmax-r	b	l1	l2	f	A
GHDR/L 20-3-JHP	2.80	4.00	20.0	9.00	20.0	120.00	29.0	18.8	2.40
GHDR/L 25-3-JHP	2.80	4.00	25.0	9.00	25.0	140.00	44.0	23.8	2.40
GHDR/L 20-4-JHP	4.00	5.00	20.0	10.00	20.0	120.00	29.0	18.4	3.20
GHDR/L 25-4-JHP	4.00	5.00	25.0	10.00	25.0	140.00	45.0	23.4	3.20
GHDR/L 25-5-JHP	5.00	6.40	25.0	12.00	25.0	140.00	46.0	22.9	4.20
GHDR/L 25-P8-JHP (1)	7.00	10.00	25.0	16.50	25.0	150.00	50.0	21.8	6.50

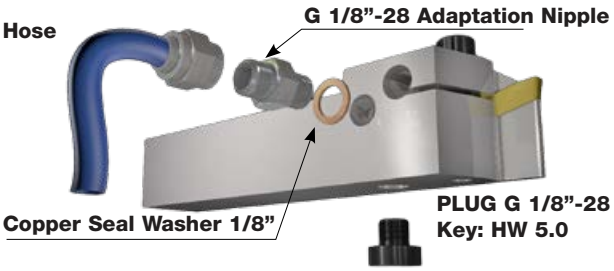
• For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.
• For user guide and accessories see pages 340-355
(1) Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV inserts.

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMM 8CC (454) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHDR/L 20-3-JHP	5-7	7-9	9-11
GHDR/L 20-4-JHP	6-8	10-12	12-14
GHDR/L 25-3-JHP	6-8	8-10	10-12
GHDR/L 25-4-JHP	10-12	14-16	16-18
GHDR/L 25-5-JHP	13-16	19-21	22-24

GHDR...-JHP



Spare Parts

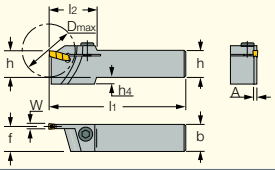
Designation				
GHDR/L 20-3-JHP	SR M5X16 DIN912	HW 5.0	SR M4X6 DIN913	PLG 1/8BSP TL360
GHDR/L 25-3-JHP	SR M5X20DIN912	HW 5.0	SR M4X4 DIN913	PLG 1/8ISO1179
GHDR/L 20-4-JHP	SR M6X16 DIN912	HW 5.0	SR M4X6 DIN913	PLG 1/8BSP TL360
GHDR/L 25-4-JHP	SR M6X20 DIN912	HW 5.0	SR M4X4 DIN913	PLG 1/8ISO1179
GHDR/L 25-5-JHP	SR M6X20 DIN912	HW 5.0	SR M4X4 DIN913	PLG 1/8ISO1179
GHDR/L 25-P8-JHP	SR M6X20 DIN912	HW 5.0	SR M4X4 DIN913	PLG 1/8ISO1179

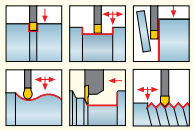


CUTGRIP

GHGR/L

External Holders for Deep Grooving and Parting





Left-hand shown

Designation	W min	W max	D max(3)	h	b	l1	l2	f	A	h4		
GHGR/L 20-2 (1)	0.40	2.40	34.0	20.0	20.0	120.00	33.0	19.2	1.70	-	SR M5X16 DIN912	HW 4.0
GHGR/L 25-2 (1)	0.40	2.40	34.0	25.0	25.0	140.00	33.0	24.2	1.70	-	SR M5X16 DIN912	HW 4.0
GHGR/L 16-3	3.00	4.00	40.0	16.0	16.0	110.00	36.0	14.7	2.50	4.0	SR M6X16 DIN912	HW 5.0
GHGR/L 16-3 ST (2)	3.00	4.00	34.0	16.0	16.0	78.00	33.0	15.0	2.40	4.0	SR M6X16 DIN912	HW 5.0
GHGR/L 20-3	3.00	4.00	40.0	20.0	20.0	120.00	36.0	18.7	2.50	-	SR M6X16 DIN912	HW 5.0
GHGR/L 25-3	3.00	4.00	40.0	25.0	25.0	140.00	36.0	23.7	2.50	-	SR M6X16 DIN912	HW 5.0
GHGR 16-4	4.00	5.00	40.0	16.0	16.0	110.00	36.0	14.4	3.20	4.0	SR M6X16 DIN912	HW 5.0
GHGR/L 20-4	4.00	5.00	40.0	20.0	20.0	120.00	36.0	18.2	3.50	-	SR M6X16 DIN912	HW 5.0
GHGR/L 25-4	4.00	5.00	40.0	25.0	25.0	140.00	36.0	23.2	3.50	-	SR M6X16 DIN912	HW 5.0
GHGR/L 25-425	4.00	5.00	50.0	25.0	25.0	140.00	41.0	23.2	3.50	-	SR M6X16 DIN912	HW 5.0
GHGR/L 25-5	5.00	6.40	50.0	25.0	25.0	140.00	41.0	22.9	4.20	-	SR M6X16 DIN912	HW 5.0
GHGR/L 32-5	5.00	6.40	50.0	32.0	32.0	150.00	41.0	29.9	4.20	-	SR M6X16 DIN912	HW 5.0
GHGR/L 25-630	6.00	8.00	60.0	25.0	25.0	140.00	45.0	22.3	5.40	-	SR M6X16 DIN912	HW 5.0
GHGR/L 32-632	6.00	8.00	64.0	32.0	32.0	170.00	50.0	29.4	5.40	-	SR M6X16 DIN912	HW 5.0

• For machining depth over 13 mm, a single-ended insert is required (GIM, GIMF, GIMY) • Tmax for grooving depth depends on part diameter D • For grooving a part with a diameter larger than Dmax, see next table • For using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 340-351

(1) In the case of inserts with W<2 mm, tool pocket should be ground to 0.3 mm thinner than the insert's grooving width.

(2) For Star and multi-spindle machines.

(3) Maximum parting diameter

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIG (252) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMM 8CC (454) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (flat top W<M) (251) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

Depth Capacity*

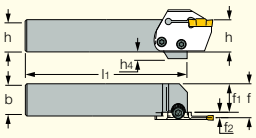
Designation	D												
GHGR/L 16-3	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 20-2	—	—	—	—	—	—	66	80	120	270	1000	—	—
GHGR/L 20-3	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 20-4	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 25-2	—	—	—	—	—	—	66	72	86	110	130	220	320
GHGR/L 25-3	—	—	—	—	40	80	105	120	190	450	1500	—	—
GHGR/L 25-4	—	—	—	—	40	80	105	120	190	450	1500	—	—
GHGR/L 25-425	—	—	99	135	350	700		—	—	—	—	—	—
GHGR/L 25-5	—	—	50	130	300	600		—	—	—	—	—	—
GHGR/L 25-630	—	100	350		—	—	—	—	—	—	—	—	—
GHGR/L 32-5	—	—	50	130	300	600		—	—	—	—	—	—
GHGR 32-632		—	—	—	—	—	—	—	—	—	—	—	—
Depth T	32	30	25	23	20	19	17	16	14	12	11	9	8

* For over 13 mm depth: GIM, GIMF and GIMY, GPV (single ended insert) only.

MODULARGRIP

MAHR/L

Adapter Holders for all GRIP Systems



Right-hand shown

Left-hand shown • f=f1(shank)+f2(adapter)

Designation	h	b	l1	h4	f1
MAHR/L 20	20.0	20.0	130.00	10.0	17.1
MAHR/L 25	25.0	25.0	130.00	5.0	22.1
MAHR/L 32	32.0	32.0	140.00	-	29.1

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

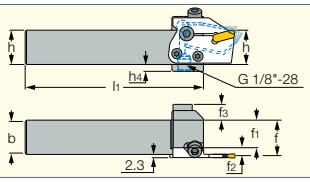
Designation						
MAHR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT(a)	HW 5.0	SR M6X6DIN551 14H/22H

(a) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

MODULAR-GRIP
JETCUT

MAHR/L-JHP

Holders with High Pressure Coolant Channels for MODULAR-GRIP Adapters



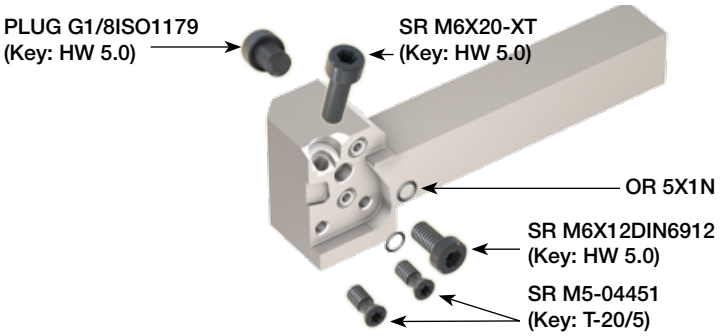
340 Bar Max

Left-hand shown • f=f1(shank)+f2(adapter)

Designation	h	b	l_1	h_4	f_1	f_3
MAHR/L 20-JHP	20.0	20.0	130.00	10.0	15.1	16.50
MAHR/L 25-JHP	25.0	25.0	130.00	5.0	20.1	11.50
MAHR/L 32-JHP	32.0	32.0	140.00	-	27.1	4.50

• For user guide and accessories, see pages 340-355

For tools, see pages: CGPAD-JHP (238) • DGPAD-JHP (379) • TAGPAD-JHP (394) • HGPAD-JHP (227) • PCADR/L-JHP (268) • CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)



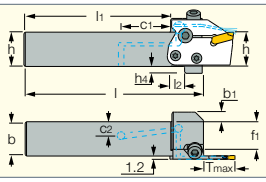
Spare Parts

Designation							
MAHR/L-JHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	PLG 1/8ISO1179

MODULAR-GRIP
JETCUT

MAHR/L-JHP-MC

Holders with Bottom Inlets for High Pressure Coolant Channels Carrying MODULAR-GRIP Adapters

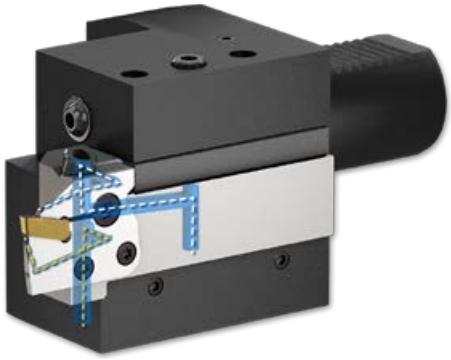


340 Bar Max

Designation	h	b	HBKW	l_1	h_4	f_1
MAHR/L 20-JHP-MC	20.0	20.0	6.0	98.00	10.0	14.0
MAHR/L 25-JHP-MC	25.0	25.0	-	98.00	5.0	19.0

• For Tmax, refer to the adapters data.

For tools, see pages: CGPAD-JHP (238) • DGPAD-JHP (379) • HGPAD-JHP (227) • PCADR/L-JHP (268) • TAGPAD-JHP (394) • CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)



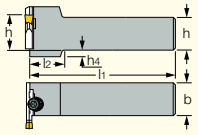
Spare Parts

Designation							
MAHR/L-JHP-MC	SR M6X20-XT	HW 5.0	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X6 DIN913 TL360	OR 5X1N

MODULAR-GRIP

MAHPR/L

Holders for Perpendicularly Mounted Adapters for all GRIP Systems



Right-hand shown

Designation	h	b	l_1	l_2	h_4
MAHPR/L 20	20.0	20.0	140.00	25.0	10.0
MAHPR/L 25	25.0	25.0	140.00	25.0	5.0
MAHPR/L 32	32.0	32.0	150.00	25.0	-

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation						
MAHPR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT(a)	HW 5.0	SR M6X6DIN551 14H/22H

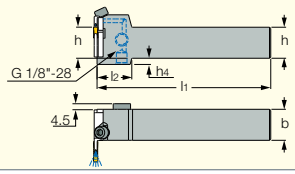
(a) For CGPAD, HGPAD, TGPAD and HFPAD adapters. Supplied with the tools.

MODULAR-GRIP

JET CUT

MAHPR/L-JHP

Holders with High Pressure Coolant Channels for MODULAR-GRIP Perpendicularly Mounted Adapters

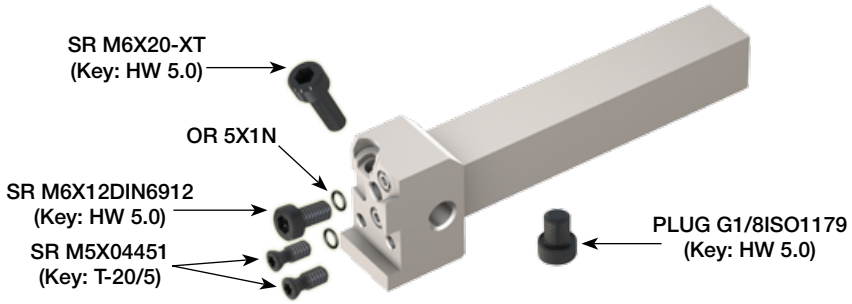


Right-hand shown

Designation	h	b	l_1	l_2	h_4
MAHPR/L 20-JHP	20.0	20.0	140.00	28.0	10.0
MAHPR/L 25-JHP	25.0	25.0	140.00	28.0	5.0
MAHPR/L 32-JHP	32.0	32.0	150.00	-	-

• For user guide and accessories, see pages 340-355

For tools, see pages: DGPAD-JHP (379) • TAGPAD-JHP (394) • CGPAD-JHP (238) • HGPAD-JHP (227) • PCADR/L-JHP (268) • CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)



Spare Parts

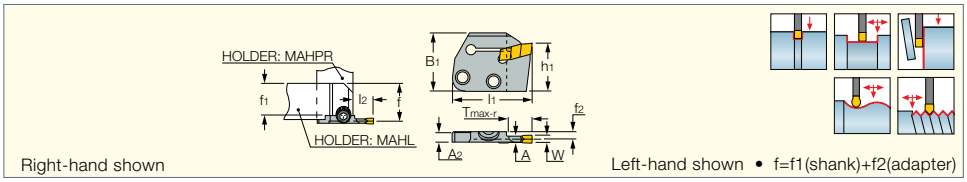
Designation							
MAHPR/L-JHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	PLG 1/8ISO1179

CUTGRIP

MODULARGRIP

CGPAD

Adapters for CUT-GRIP Inserts



Right-hand shown

Left-hand shown • f=f1(shank)+f2(adapter)

Designation	W min	W max	Tmax-r	l2	f2	A	A2	l1	B1	h1
CGPAD 3R/L-T16	2.80	4.00	16.00	17.3	4.00	2.40	5.2	42.00	30.0	24.0
CGPAD 3R/L-T22	2.80	4.00	22.00	23.0	4.00	2.40	5.2	47.70	30.0	24.0
CGPAD 4R/L-T16	4.00	5.00	16.00	17.3	3.60	3.50	5.2	42.00	30.0	24.0
CGPAD 4R/L-T22	4.00	5.00	22.00	23.0	3.50	3.50	5.2	47.70	30.0	24.0
CGPAD 5R/L-T16	5.00	6.40	16.00	17.3	3.10	4.50	5.2	42.00	30.0	24.0
CGPAD 5R/L-T22	5.00	6.40	22.00	23.0	3.00	4.50	5.2	47.70	30.0	24.0
CGPAD 8R/L-T16	6.40	8.00	16.00	17.3	3.00	6.00	6.0	42.00	30.0	24.0
CGPAD 8R/L-T22	6.40	8.00	22.00	23.0	3.00	6.00	6.0	47.70	30.0	24.0

• For using TIP insert, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

For inserts, see pages: GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMM 8CC (454) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

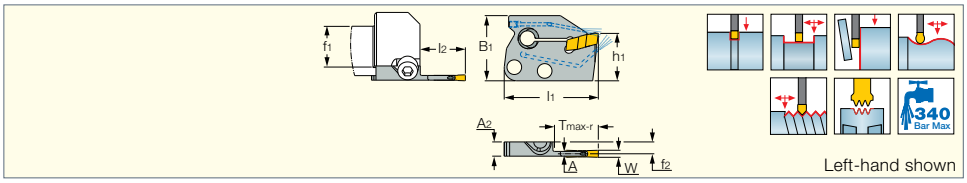
For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

CUTGRIP JETCUT

MODULARGRIP

CGPAD-JHP

Adapters with High Pressure Coolant Channels for CUT-GRIP Inserts



Left-hand shown

Designation	W min	W max	Tmax-r	l2	f2	A	A2	l1	B1	h1
CGPAD 3R/L-T16-JHP	2.80	4.00	16.00	17.3	6.00	2.40	7.2	42.00	33.0	24.0
CGPAD 3R-T22-JHP	2.80	4.00	22.00	23.0	6.00	2.40	7.2	47.70	33.0	24.0
CGPAD 4R/L-T16-JHP	4.00	5.00	16.00	17.3	5.45	3.50	7.2	42.00	33.0	24.0
CGPAD 5R/L-T16-JHP	5.00	6.40	16.00	17.3	4.95	4.50	7.2	42.00	33.0	24.0
CGPAD 8R/L-T22-JHP	6.00	8.00	22.00	23.0	4.20	4.20	7.2	47.00	33.0	24.0

• For using TIP insert, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide and accessories see pages 340-355

For inserts, see pages: GDMF (244) • GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • GPV (259) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

For holders, see pages: MAHR/L-JHP-MC (236)

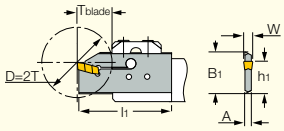
Flow Rate vs. Pressure

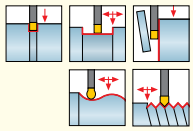
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
CGPAD 3R/L-T16-JHP	6-8	7-9	8-10
CGPAD 3R-T22-JHP	5-7	6-8	7-9
CGPAD 4R/L-T16-JHP	10-12	11-13	12-14
CGPAD 5R/L-T16-JHP	12-14	16-18	19-21

CUTGRIP

CGHN-S

External Machining
Single-Ended Blades





Designation	B1	W min	W max	T blmin	T blade	h1	l1	A
CGHN 32-3S	32.0	2.80	4.00	10.0	19.0	24.8	51.00	2.40
CGHN 32-4S	32.0	3.50	5.00	12.0	21.0	24.8	53.00	3.20
CGHN 32-5S	32.0	4.40	6.40	12.0	25.0	24.8	56.00	4.00
CGHN 32-6S	32.0	5.50	6.40	12.0	25.0	24.8	56.00	5.20

• For user guide, see pages 340-351

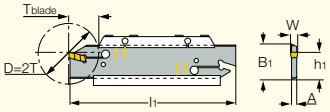
For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

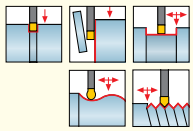
For holders, see pages: C#-TBU (477) • IM-TBU (483) • UBHCR/L (473)

CUTGRIP

CGHN-D

Double-Ended Blades for
External Grooving and Turning





Designation	B1	W min	W max	T blmin	T blade	h1	l1	A
CGHN 26-3D	26.0	2.80	4.00	10.0	15.0	21.4	110.00	2.40
CGHN 26-4D	26.0	3.50	4.50	10.0	15.0	21.4	110.00	3.20
CGHN 26-5D	26.0	4.40	6.40	10.0	20.0	21.4	110.00	4.00
CGHN 32-3D	32.0	2.80	4.00	10.0	19.0	24.8	150.00	2.40
CGHN 32-4D	32.0	3.50	5.00	12.0	21.0	24.8	150.00	3.20
CGHN 32-5D	32.0	4.40	6.40	12.0	26.0	24.8	150.00	4.00
CGHN 32-6D	32.0	5.50	6.40	12.0	26.0	24.8	150.00	5.20

• For user guide, see pages 340-351

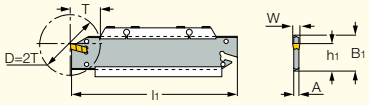
For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

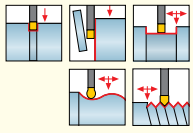
For holders, see pages: SGTBU/SGTBN (472) • UBHCR/L (473)

CUTGRIP

CGHN-DG

Double-Ended Blades for
External Grooving and Turning
Self-Clamped Inserts





Designation	B1	W min	W max	T turn	T groove	h1	l1	A	
CGHN 32-3DG	32.0	2.80	4.00	25.0	50.0	24.8	150.00	2.40	EDG 44A*
CGHN 32-4DG	32.0	3.50	5.00	30.0	50.0	24.8	150.00	3.20	EDG 44A*
CGHN 32-5DG	32.0	4.40	6.40	33.0	60.0	24.8	150.00	4.00	EDG 44A*
CGHN 32-6DG	32.0	5.50	6.40	35.0	60.0	24.8	150.00	5.20	EDG 44A*

• DO-GRIP clamping insert is self-retained for long overhang • When using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance • When using a double-ended insert, grooving depth is limited by the insert • For user guide, see pages 340-351

* Optional, should be ordered separately

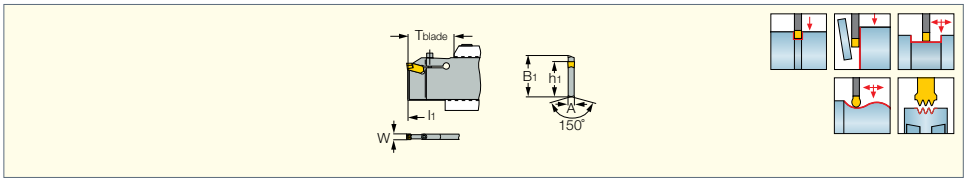
For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIP-UN (259) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBU/SGTBN (472) • UBHCR/L (473)

CUTGRIP

CGHN-P8

Blades for Deep Grooving and Turning



Designation	W	T blade	Tmax-r	A	h1	B1	l1		
CGHN 52-P8 (1)	8.00	50.0	43.00	7.40	45.0	52.6	190.00	SR 76-1637	HW 4.0
CGHN 53-P8 (2)	8.00	70.0	63.00	7.40	45.0	52.6	260.00	SR 76-1637	HW 4.0

• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

(2) If D (workpiece) is smaller than 200 mm, then Tmax=68. If D (workpiece) is larger than 200 mm, then Tmax=63.

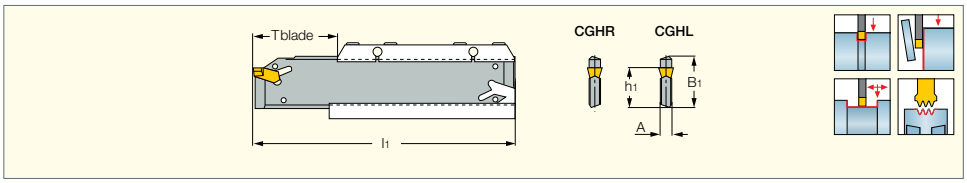
For inserts, see pages: GIMF (244) • GIMM 8CC (454) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIPY (255)

For holders, see pages: SGTBK (473) • SGTBU/SGTBN (472)

CUTGRIP

CGHR/L-P8DG

Double-Ended Heavy Duty Self-Clamped Grooving and Turning Blades



Designation	W	T blade(1)	A	h1	B1	l1	
CGHR/L 32-P8DG	8.00	40.0	6.80	24.8	32.0	150.00	EDG 44A*

• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

* Optional, should be ordered separately

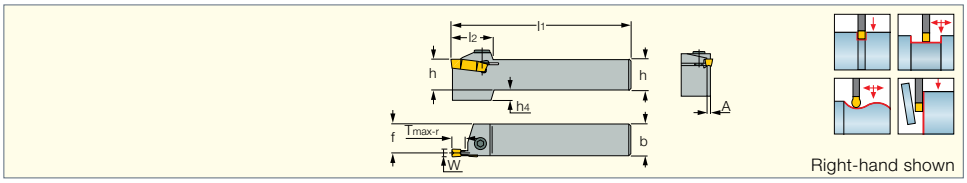
For inserts, see pages: GIMF (244) • GIMM 8CC (454) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIPY (255)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBK (473) • SGTBU/SGTBN (472)

CUTGRIP

GHDR/L (long pocket)

External Tools for Grooving, Turning and Parting



Right-hand shown

Designation	W min	W max	Tmax-r	h	b	l1	f	A	l2	h4		
GHDR/L 25-8	6.60	8.30	25.00	25.0	25.0	150.00	22.0	6.00	40.0	7.6	SR M6X16 DIN912	HW 5.0
GHDR/L 3225-8	6.60	8.30	25.00	32.0	25.0	168.50	22.0	5.90	40.0	-	SR M6X16 DIN912	HW 5.0
GHDR/L 25-812	6.60	8.30	12.00	25.0	25.0	140.00	22.0	5.90	33.0	-	SR M6X16 DIN912	HW 5.0
GHDR/L 32-8	6.60	8.30	25.00	32.0	32.0	170.00	29.0	6.00	40.0	-	SR M6X16 DIN912	HW 5.0
GHDR/L 32-812	6.60	8.30	12.00	32.0	32.0	160.00	29.0	5.90	33.0	-	SR M6X16 DIN912	HW 5.0
GHDR/L 32-836	7.00	8.30	36.00	32.0	32.0	170.00	28.9	6.30	56.0	8.0	SR M8X20DIN912	HW 6.0
GHDR/L 25-10	8.60	11.10	25.00	25.0	25.0	150.00	21.3	7.40	43.0	7.6	SR M8X20DIN912	HW 6.0
GHDR/L 32-10	8.60	11.10	25.00	32.0	32.0	170.00	28.3	7.40	43.0	-	SR M8X20DIN912	HW 6.0
GHDR/L 40-10	8.60	11.10	25.00	40.0	40.0	200.00	36.3	7.40	43.0	-	SR M8X20DIN912	HW 6.0

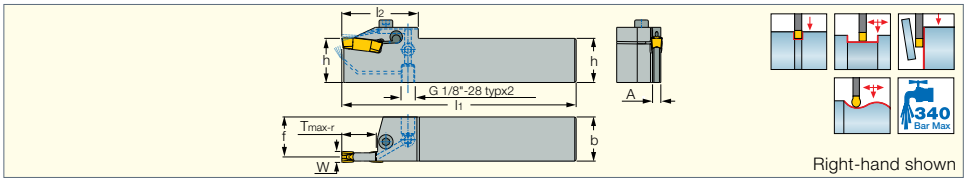
• For user guide, see pages 340-351

For inserts, see pages: GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GDPY (249) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

CUTGRIP JETCUT

GHDR/L-JHP (long pocket)

Grooving and Turning
CUT-GRIP Tools with Channels
for High Pressure Coolant



Right-hand shown

Designation	W min	W max	Tmax-r	h	b	l1	l2	f	A
GHDR/L 32-8-JHP	6.60	8.30	25.00	32.0	32.0	170.00	55.0	29.0	6.00

• For user guide and accessories see pages 340-355

For inserts, see pages: GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHDR/L 32-8-JHP	13-16	19-21	22-24

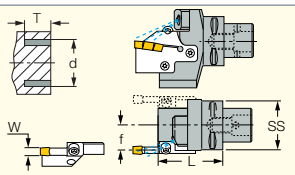
Spare Parts

Designation				
GHDL 32-8-JHP	SR M6X25 DIN912	HW 5.0	PLG 1/8ISO1179	SR M4X4 DIN913
GHDR 32-8-JHP	SR M6X25 DIN912	HW 5.0	PLG 1/8ISO1179	SR M4X4 DIN913 TL360

CUTGRIP CAMFIX

C#-GHAD-8

Holders for Grooving, Turning and
Facing Adapters with CAMFIX
Exchangeable Shanks



T= See specific adapter dimensions

Designation	SS	L	f	W	d Range	T Range
C5 GHAD-8	50	65.00	26.00	8.00	80-510	15-25
C6 GHAD-8	63	65.00	32.50	8.00	80-510	15-25

• For user guide and accessories see pages 340-351

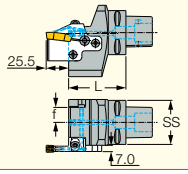
Spare Parts

Designation							
C#-GHAD-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	SR 76-1022	EZA 125	EZ 125

CUTGRIP JETCUT

CAMFIX

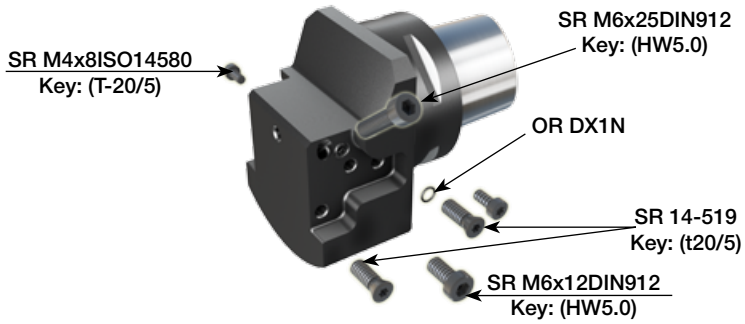
C#-GHAD-JHP
Holders with High Pressure Coolant Channels and CAMFIX Exchangeable Shanks for Grooving and Turning



340 Bar Max

Designation	SS	L	f	W
C5 GHAD-8-JHP	50	65.00	17.00	8.00
C6 GHAD-8-JHP	63	65.00	23.50	8.00
C8 GHAD-8-JHP	80	74.00	38.50	8.00

• For user guide and accessories see pages 340-355

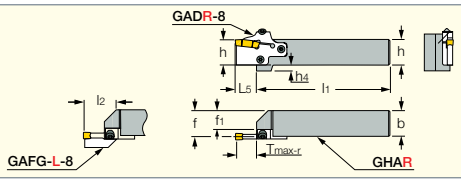


Spare Parts

Designation							
C5 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912		SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK
C6 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0X120 MM	SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK
C8 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0X120 MM	SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK

CUTGRIP

GHAR/L-8
External Holders for Grooving and Turning Adapters



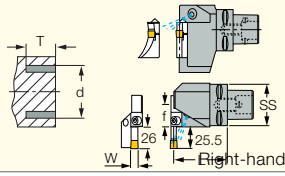
Right-hand shown

Designation	h	b	f1	l1	l2	L5	h4	TG	Tmax-r(1)	FG	Tmax-a(1)				
GHAR/L 25-8	25.0	25.0	16.0	124.50	45.0	25.50	14.0	GADR/L 8	25.50	GAFG...R/L-8	25.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0
GHAR/L 32-8	32.0	32.0	23.0	144.50	45.0	25.50	7.0	GADR/L 8	25.50	GAFG...R/L-8	25.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

• Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving (to be ordered separately)
(1) See specific adapter dimensions
For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

CAMFIX

C#-GHAPR/L-8
Perpendicular Holders for Grooving, Turning and Facing Adapters with CAMFIX Exchangeable Shanks



Right-hand shown • T= See specific blade dimensions

Designation	SS	L	f	W	d Range	T Range
C5 GHAPR/L-8	50	64.00	26.00	8.00	80-510	15-25
C6 GHAPR/L-8	63	75.00	33.00	8.00	80-510	15-25

• For user guide and accessories see pages 340-351

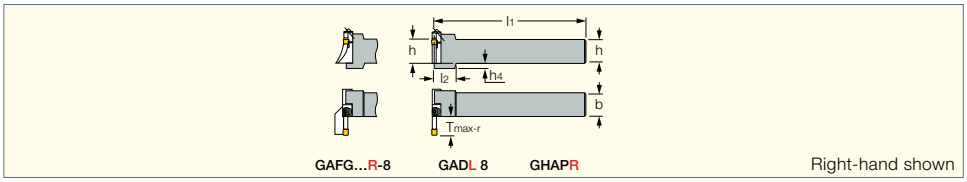
Spare Parts

Designation					
C#-GHAPR/L-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	EZ 125

CUTGRIP

GHAPR/L-8

External Holders for Grooving and Turning Perpendicularly Oriented Adapters



Designation	h	b	l1	l2	h4	TG	Tmax-r(1)	FG	Tmax-a(1)				
GHAPR/L 32-8	32.0	32.0	155.00	30.0	7.0	GADR/L 8	25.50	GAFG...R/L-8	26.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

• Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving (to be ordered separately)

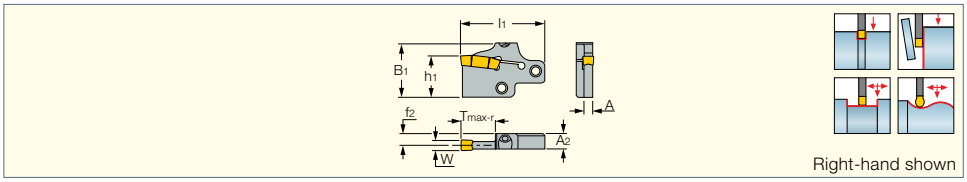
(1) See specific adapter dimensions

For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

CUTGRIP

GADR/L-8

Adapters for up to 25 mm Deep Machining



Designation	W min	W max	Tmax-r	A	h1	B1	l1	A2	f2
GADR/L 8	6.60	8.30	25.50	6.00	0.0	42.0	63.00	12.0	9.00

• For user guide, see pages 340-351

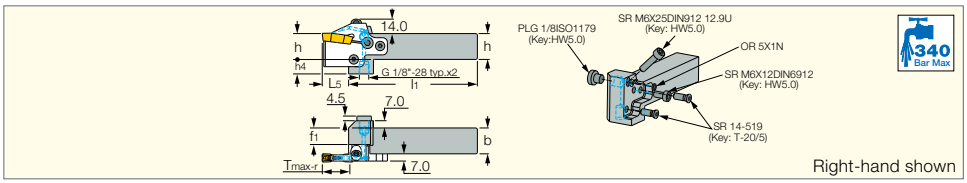
For inserts, see pages: GDMA (256) • GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

For holders, see pages: C#-GHAD-8 (241) • C#-GHAPR/L-8 (242) • GHAPR/L-8 (243) • GHAR/L-8 (242) • IM-GHAD-8 (484) • IM-GHAPR/L-8 (484)

CUTGRIP JETCUT

GHAR/L-JHP

Holders with High Pressure Coolant Channels for Grooving and Turning Adapters



Designation	h	b	f1	l1	L5	h4	Tmax-r(1)
GHAR/L 25-8-JHP	25.0	25.0	16.0	124.50	25.00	14.0	25.50

• For user guide and accessories see pages 340-355

(1) See specific adapter dimensions

For tools, see pages: GADR/L-JHP (243)

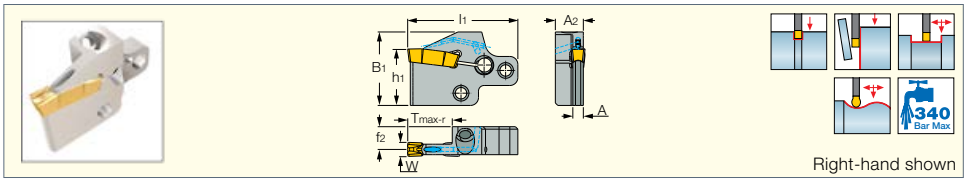
Spare Parts

Designation							
GHAR/L-JHP	SR 14-519	T-20/5	OR 5X1N	SR M6X12DIN6912	SR M6X25 DIN912	PLG 1/8ISO1179	HW 5.0X120 MM

CUTGRIP JETCUT

GADR/L-JHP

Adapters for up to 25 mm Deep Machining with High Pressure Coolant Channels Carrying Groove-Turn Inserts



Designation	W min	W max	Tmax-r	A	h1	B1	l1	A2	f2
GADR/L 8-JHP	6.60	8.30	25.50	6.00	32.0	42.0	63.00	17.0	14.00
GADR/L 10-JHP	8.60	10.30	25.50	7.40	32.0	42.0	63.00	17.7	14.00

• For user guide and accessories see pages 340-355

For inserts, see pages: GDMA (256) • GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GDPY (249) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

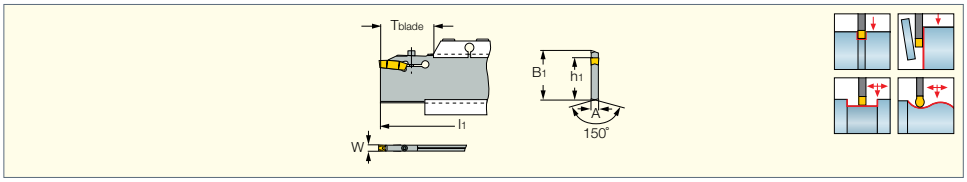
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GADR/L-JHP	15-17	23-25	27-29

CUTGRIP

CGHN-8-10D

Heavy Duty Deep Grooving and Turning Blades



Designation	W min	W max	T blade(1)	A	h1	B1	l1		
CGHN 52-8D	8.00	8.30	50.0	7.40	45.0	52.6	190.00	SR 76-1637	HW 4.0
CGHN 53-8D	8.00	8.30	70.0	7.40	45.0	52.6	260.00	SR 76-1637	HW 4.0
CGHN 52-10D	10.00	11.00	70.0	9.20	45.0	52.6	190.00	SR 76-1289	HW 5.0
CGHN 53-10D	10.00	11.00	100.0	9.20	45.0	52.6	260.00	SR 76-1289	HW 5.0

• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

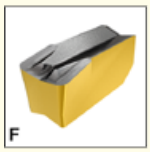
For inserts, see pages: GDMF (244) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GDPY (249) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

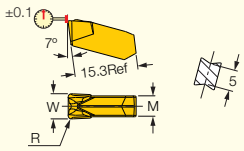
For holders, see pages: SGTBK (473) • SGTBU/SGTBN (472)

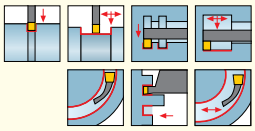
CUTGRIP

GIMF

Utility Single-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	IC907	IC4	IC804	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMF 406	4.00	0.60	3.40	●	●	●	●	●	●	●	●	●	●	●	0.75-2.40	0.19-0.25	0.09-0.16
GIMF 502	5.00	0.20	4.00		●			●							0.25-3.00	0.18-0.26	0.11-0.18
GIMF 508	5.00	0.80	4.00	●	●	●		●	●	●	●		●	●	1.00-3.00	0.23-0.35	0.11-0.21
GIMF 605	6.00	0.50	5.00	●		●									0.60-3.60	0.22-0.36	0.13-0.23
GIMF 608	6.00	0.80	5.00	●	●	●		●	●		●		●	●	1.00-3.60	0.24-0.42	0.13-0.25
GIMF 808	8.00	0.80	6.00	●	●	●									1.00-4.80	0.32-0.56	0.18-0.34

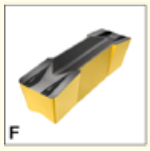
• Dmin for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

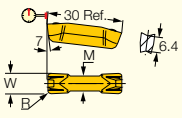
For tools, see pages: C#-GHDR/L (233) • CGFG 51-P8 (452) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHN-S (239) • CGHR/L-P8DG (240) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

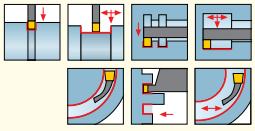
CUTGRIP

GDMF

Utility Double-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.05	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMF 808	8.00	0.80	27.00	6.00	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

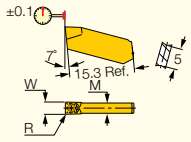
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • CGPAD-JHP (238) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

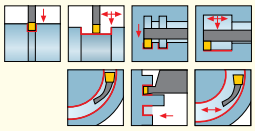
CUTGRIP

GIMY

Utility Single-Ended Inserts
for Grooving and Turning







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC806	IC4	IC804	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 304	3.00	0.40	2.40	●	●			●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12
GIMY 808	8.00	0.80	6.00	●	●	●	●	●	●			1.00-4.80	0.32-0.56	0.18-0.34
GIMY 1008	10.00	0.80	8.00	●		●						1.00-6.00	0.35-0.65	0.22-0.40

• Dmin for internal applications =70 mm • For cutting speed recommendations and user guide, see pages 340-351

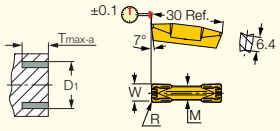
For tools, see pages: C#-GHDR/L (233) • CGFG 51-P8 (452) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHN-S (239) • CGHR/L-P8DG (240) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

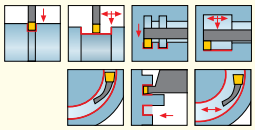
CUTGRIP

GDMY

Utility Double-Ended Inserts
for Grooving and Turning







Designation	Dimensions W±0.05	R±0.05	M	D1 min	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 808	8.00	0.80	6.00	50.0	27.00	●	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

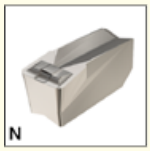
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

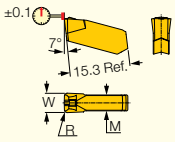
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

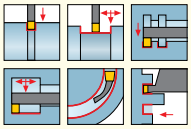
CUTGRIP

GIMN

Utility Single-Ended Inserts for
Grooving and Turning Ductile Materials







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC908	IC907	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMN 302	3.00	0.20	2.40		●	0.30-1.20	0.07-0.11	0.04-0.09
GIMN 406	4.00	0.60	3.40		●	0.75-1.60	0.11-0.18	0.05-0.14
GIMN 508	5.00	0.80	4.10	●	●	1.00-2.00	0.15-0.25	0.06-0.18
GIMN 608	6.00	0.80	5.00		●	1.00-2.40	0.18-0.30	0.07-0.22

• Dmin for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

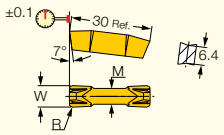
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

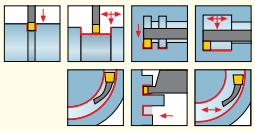
CUTGRIP

GDMN

Utility Double-Ended Inserts for Grooving and Turning Ductile Materials







Designation	Dimensions W±0.05	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC907	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMN 808	8.00	0.80	27.00	6.00	●	●	●	●	1.00-3.20	0.20-0.35	0.10-0.30

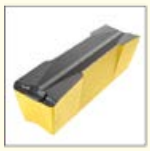
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

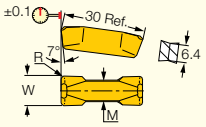
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

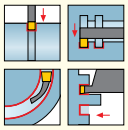
CUTGRIP

GDMU

Utility Inserts for Heavy Grooving on Ductile Materials







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	Recommended Machining Data f groove (mm/rev)
GDMU 808	8.00	0.80	6.00	●	●	0.10-0.24

• For cutting speed recommendations and user guide, see pages 340-351

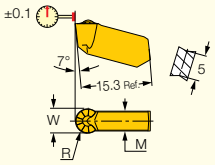
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

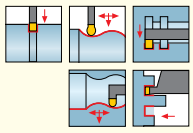
CUTGRIP

GIMY (full radius)

Utility Single-Ended Inserts for Grooving and Profiling







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC20N	IC806	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315	3.00	1.50	2.40	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13
GIMY 420	4.00	2.00	3.20	●	●	●	●	●	●	0.00-2.00	0.20-0.28	0.09-0.17
GIMY 525	5.00	2.50	3.90	●	●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21
GIMY 630	6.00	3.00	5.00	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25
GIMY 635-318	6.35	3.18	5.10	●	●	●	●			0.00-3.10	0.25-0.53	0.14-0.27
GIMY 840	8.00	4.00	5.60	●	●	●	●			0.00-4.00	0.32-0.67	0.18-0.34

• Dmin for internal application=70 mm • Can cut arcs to 250° • For cutting speed recommendations and user guide, see pages 340-351

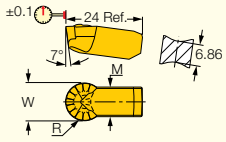
For tools, see pages: C#-GHDR/L (233) • CGFG 51-P8 (452) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHN-S (239) • CGHR/L-P8DG (240) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

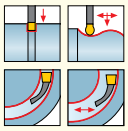
CUTGRIP

GIMY 1260

Utility Single-Ended Inserts for External Grooving and Profiling







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 1260	12.00	6.00	9.50	●	●	●	●	0.00-6.00	0.42-0.86	0.26-0.45

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 340-351

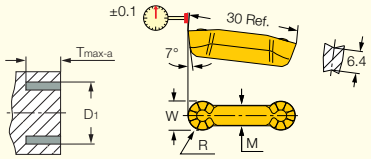
For tools, see pages: CGHR/L-12-14D (284) • GHDR/L/N 12/14 (284)

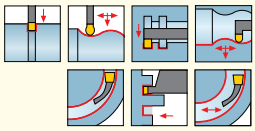
CUTGRIP

GDMY (full radius)

Utility Double-Ended Full Radius Inserts for Grooving and Profiling







Designation	Dimensions W±0.05	R±0.05	M	D1 min	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	IC806	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840	8.00	4.00	5.60	50.0	25.00	●	●	●	●	●	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• Can cut arcs to 250° • Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

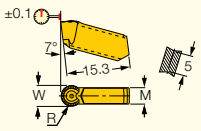
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

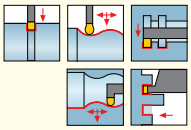
CUTGRIP

GIMY-F

Utility Single-Ended Inserts for Grooving and Profiling Ductile Materials







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC8250	IC808	IC908	IC806	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315F	3.00	1.50	2.40		●			0.00-1.50	0.18-0.26	0.07-0.13
GIMY 525F	5.00	2.50	3.90		●		●	0.00-2.50	0.23-0.42	0.11-0.21
GIMY 630F	6.00	3.00	5.00		●	●	●	0.00-3.00	0.24-0.50	0.13-0.25
GIMY 840F	8.00	4.00	5.60	●				0.00-4.00	0.32-0.67	0.18-0.34

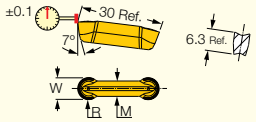
• Dmin for internal applications =70 mm • Can cut arcs to 250° • For cutting speed recommendations and user guide, see pages 340-351

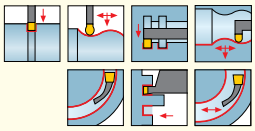
For tools, see pages: C#-GHDR/L (233) • CGFG 51-P8 (452) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHN-S (239) • CGHR/L-P8DG (240) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

CUTGRIP

GDMY-F
Utility Double-Ended Inserts for Grooving and Profiling Ductile Materials







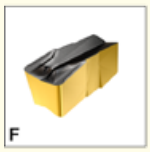
Designation	Dimensions W±0.05	R±0.05	M	Tmax-r	Tough ↔ Hard IC808	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840F	8.00	4.00	5.60	25.00	●	●	0.00-4.00	0.32-0.67	0.18-0.34

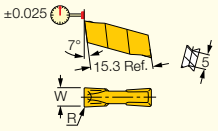
• Dmin for internal applications = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

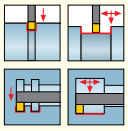
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

CUTGRIP

GIF-E (W=4-6)
Precision Double-Ended Inserts for Grooving and Turning







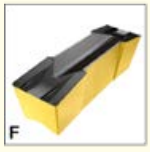
Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-0.40	4.00	0.40	0.030	3.20	13.00	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
GIF 4.00E-0.60	4.00	0.60	0.050	3.20	13.00	●	●		●		0.75-2.40	0.19-0.25	0.09-0.16
GIF 4.00E-0.80	4.00	0.80	0.050	3.20	13.00	●	●	●	●	●	1.00-2.40	0.20-0.28	0.09-0.17
GIF 5.00E-0.40	5.00	0.40	0.030	4.00	13.00	●	●	●	●		0.50-3.00	0.20-0.30	0.11-0.19
GIF 5.00E-0.60	5.00	0.60	0.050	4.00	13.00	●	●		●		0.75-3.00	0.21-0.32	0.11-0.20
GIF 5.00E-0.80	5.00	0.80	0.050	4.00	13.00	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21
GIF 6.00E-0.40	6.00	0.40	0.030	4.80	13.00	●	●	●	●		0.50-3.60	0.22-0.36	0.13-0.23
GIF 6.00E-0.80	6.00	0.80	0.050	4.80	13.00	●	●	●	●		1.00-3.60	0.24-0.42	0.13-0.25
GIF 6.00E-1.20	6.00	1.20	0.050	4.80	13.00		●		●		1.45-3.60	0.24-0.46	0.13-0.25

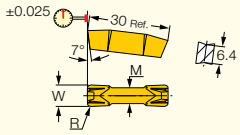
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

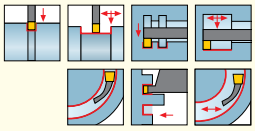
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GIF-E (W=8,10)
Precision Double-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	IC806	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-0.40	8.00	0.40	0.030	6.00	27.00		●	●						0.50-4.80	0.29-0.48	0.18-0.31
GIF 8.00E-0.80	8.00	0.80	0.050	6.00	27.00	●	●	●	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34
GIF 8.00E-1.20	8.00	1.20	0.050	6.00	27.00	●	●	●	●	●	●			1.45-4.80	0.32-0.62	0.18-0.34
GIF 10.00E-0.80	10.00	0.80	0.050	8.00	27.00	●	●	●	●	●	●		●	1.00-6.00	0.35-0.65	0.22-0.40
GIF 10.00E-1.20	10.00	1.20	0.050	8.00	27.00	●	●	●	●			●		1.45-6.00	0.35-0.72	0.22-0.40

• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

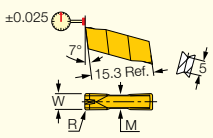
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

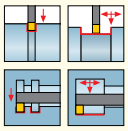
CUTGRIP

GIP-E

Precision Double-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	IC5010	IC428	IC806	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-0.00	3.00	0.00	0.030	2.40	13.00	•										0.00-1.80	0.12-0.16	0.07-0.11
GIP 3.00E-0.20	3.00	0.20	0.030	2.40	13.00	•	•	•			•			•	•	0.25-1.80	0.15-0.20	0.08-0.13
GIP 3.00E-0.40	3.00	0.40	0.030	2.40	13.00	•	•	•	•	•	•	•	•	•	•	0.50-1.80	0.17-0.22	0.08-0.14
GIP 3.00E-0.80	3.00	0.80	0.050	2.40	13.00		•									1.00-1.80	0.19-0.26	0.08-0.15
GIP 4.00E-0.40	4.00	0.40	0.030	3.20	13.00	•	•	•		•	•	•	•	•	•	0.50-2.40	0.19-0.26	0.10-0.18
GIP 4.00E-0.60	4.00	0.60	0.050	3.20	13.00	•	•	•		•		•	•			0.75-2.40	0.21-0.28	0.10-0.19
GIP 4.00E-0.80	4.00	0.80	0.050	3.20	13.00	•	•	•	•	•		•	•	•	•	1.00-2.40	0.22-0.31	0.10-0.20
GIP 4.78E-0.55	4.78	0.55	0.050	4.00	13.00	•	•	•		•		•	•			0.70-2.80	0.21-0.31	0.12-0.20
GIP 5.00E-0.40	5.00	0.40	0.030	4.00	13.00	•	•	•		•				•		0.50-3.00	0.22-0.33	0.13-0.21
GIP 5.00E-0.60	5.00	0.60	0.050	4.00	13.00	•	•	•		•	•					0.75-3.00	0.23-0.35	0.13-0.22
GIP 5.00E-0.80	5.00	0.80	0.050	4.00	13.00	•	•	•		•		•	•			1.00-3.00	0.24-0.39	0.13-0.23
GIP 5.55E-0.55	5.55	0.55	0.050	4.80	13.00		•									0.70-3.30	0.21-0.36	0.14-0.23
GIP 6.00E-0.80	6.00	0.80	0.050	4.80	13.00		•	•		•		•	•			1.00-3.60	0.26-0.46	0.15-0.27
GIP 6.00E-1.20	6.00	1.20	0.050	4.80	13.00		•			•						1.45-3.60	0.26-0.51	0.15-0.27
GIP 6.35E-0.80	6.35	0.80	0.050	4.80	13.00	•	•	•		•						1.00-3.80	0.27-0.49	0.16-0.29

• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

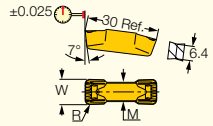
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

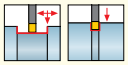
CUTGRIP

GDPY

Precision Double-Ended Inserts for External Heavy-Duty Grooving and Turning







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDPY 10.00-0.80	10.00	0.80	8.00	•	•	•	1.00-6.00	0.35-0.65	0.22-0.40
GDPY 10.00-1.20	10.00	1.20	8.00	•			1.45-6.00	0.45-0.80	0.22-0.40
GDPY 10.00-2.00	10.00	2.00	8.00	•		•	2.40-6.00	0.35-0.78	0.22-0.40
GDPY 11.00-1.20	11.00	1.20	8.00	•			1.45-6.60	0.39-0.73	0.24-0.41
GDPY 11.00-2.00	11.00	2.00	8.00	•			2.40-6.60	0.39-0.79	0.24-0.41

• For cutting speed recommendations and user guide, see pages 340-351

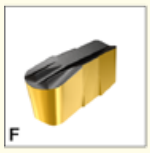
For tools, see pages: CGHN-8-10D (244) • GADR/L-JHP (243) • GHDR/L (long pocket) (240)

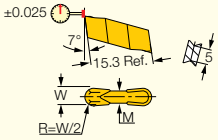


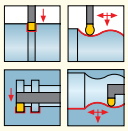
CUTGRIP

GIF-E (W=4-6 full radius)

Precision Double-Ended Full Radius Inserts for Profiling and Grooving







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-2.00	4.00	2.00	3.20	11.80	•	•	•	•	0.00-2.00	0.20-0.34	0.09-0.17
GIF 5.00E-2.50	5.00	2.50	4.00	11.30	•	•		•	0.00-2.50	0.23-0.42	0.11-0.21
GIF 6.00E-3.00	6.00	3.00	4.80	10.80	•	•		•	0.00-3.00	0.24-0.50	0.13-0.25

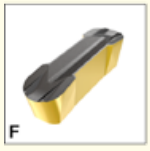
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

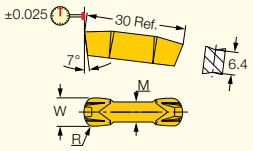
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

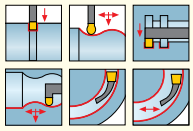
CUTGRIP

GIF-E (W=8,10 full radius)

Precision Double-Ended Full Radius Inserts for Profiling and Grooving







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC830	IC8250	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-4.00	8.00	4.00	6.00		•	0.00-4.00	0.32-0.67	0.18-0.34
GIF 10.00E-5.00	10.00	5.00	8.00	•	•	0.00-5.00	0.35-0.78	0.22-0.40

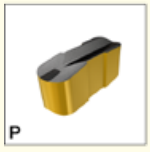
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

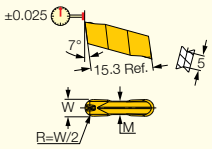
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

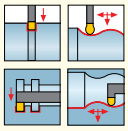
CUTGRIP

GIP-E (full radius)

Precision Double-Ended Full Radius Inserts for Profiling and Grooving







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-1.50	3.00	1.50	2.40	12.30	•	•	•	•			•	0.00-1.50	0.18-0.28	0.08-0.15
GIP 4.00E-2.00	4.00	2.00	3.20	11.80	•	•	•	•	•	•	•	0.00-2.00	0.20-0.34	0.10-0.20
GIP 5.00E-2.50	5.00	2.50	4.00	11.30		•		•	•	•		0.00-2.50	0.25-0.42	0.13-0.23
GIP 6.00E-3.00	6.00	3.00	4.80	10.80		•		•				0.00-3.00	0.27-0.54	0.15-0.27
GIP 6.35E-3.18	6.35	3.18	4.80	10.63		•		•				0.00-3.10	0.29-0.57	0.16-0.29

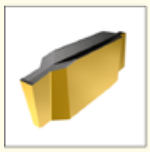
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

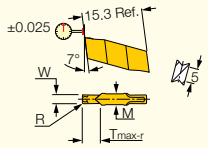
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

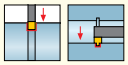
CUTGRIP

GIP (flat top W<M)

Flat Top Precision Double-Ended Inserts for Grooving







Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC20	IC20N	IC807	Recommended Machining Data f groove (mm/rev)
GIP 0.50-0.00	0.50	0.00	1.00	2.20		●	●			0.02-0.04
GIP 0.80-0.00	0.80	0.00	1.60	2.20		●	●			0.02-0.04
GIP 1.04-0.00	1.04	0.00	2.00	2.20	●	●	●	●	●	0.02-0.05
GIP 1.20-0.00	1.20	0.00	2.00	2.20	●	●	●	●	●	0.03-0.05
GIP 1.40-0.00	1.40	0.00	2.00	2.20	●	●	●			0.03-0.06
GIP 1.47-0.00	1.47	0.00	2.50	2.20	●	●	●			0.03-0.06
GIP 1.57-0.15	1.57	0.15	2.70	2.20	●	●	●		●	0.04-0.06
GIP 1.70-0.10	1.70	0.10	3.00	2.20	●	●	●	●		0.04-0.07
GIP 1.78-0.18	1.78	0.18	3.00	2.20	●	●	●			0.04-0.07
GIP 1.96-0.15	1.96	0.15	3.00	2.20	●	●	●	●	●	0.04-0.08

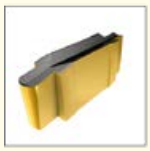
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

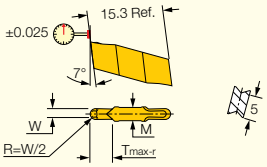
For tools, see pages: GHDR/L (short pocket) (233) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

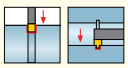
CUTGRIP

GIP (full radius W<M)

Flat Top Precision Double-Ended Inserts with Full Radius for Grooving



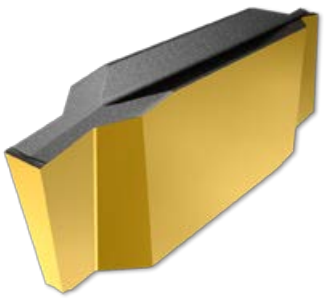




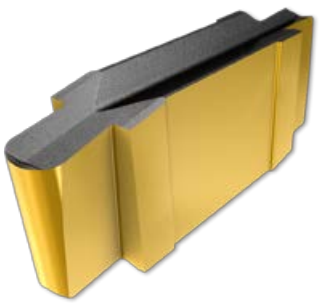
Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC908	IC20	IC806	IC807	Recommended Machining Data f groove (mm/rev)
GIP 1.00-0.50	1.00	0.50	2.00	2.20		●				●	0.03-0.06
GIP 1.40-0.70	1.40	0.70	2.00	2.20		●					0.04-0.07
GIP 1.57-0.79	1.57	0.79	2.70	2.20	●	●	●	●		●	0.04-0.08
GIP 2.00-1.00	2.00	1.00	3.00	2.20	●	●		●	●	●	0.05-0.11
GIP 2.39-1.20	2.39	1.20	4.70	2.40		●		●		●	0.06-0.12

• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GHDR/L (short pocket) (233) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)



GIP (flat top W<M)



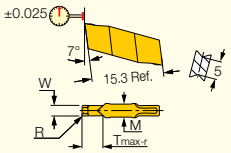
GIP (full radius W<M)

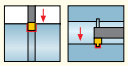
CUTGRIP

GIG

Precision Double-Ended Inserts for Grooving







Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIG 1.04-0.00	1.04	0.00	2.00	2.20		●		0.02-0.03
GIG 1.20-0.00	1.20	0.00	2.00	2.20		●		0.02-0.03
GIG 1.25-0.10	1.25	0.10	2.00	2.20	●	●		0.02-0.04
GIG 1.40-0.00	1.40	0.00	2.00	2.20		●		0.02-0.04
GIG 1.45-0.10	1.45	0.10	2.00	2.20	●	●		0.02-0.04
GIG 1.47-0.00	1.47	0.00	2.50	2.20		●		0.02-0.04
GIG 1.50-0.10	1.50	0.10	2.50	2.20	●	●		0.02-0.04
GIG 1.57-0.15	1.57	0.15	2.70	2.20		●		0.03-0.05
GIG 1.70-0.10	1.70	0.10	3.00	2.20		●		0.03-0.05
GIG 1.78-0.18	1.78	0.18	3.00	2.20		●		0.03-0.05
GIG 1.85-0.15	1.85	0.15	3.00	2.20	●	●		0.03-0.05
GIG 1.86-0.15	1.86	0.15	3.00	2.20		●		0.03-0.05
GIG 1.96-0.15	1.96	0.15	3.00	2.20		●		0.03-0.06
GIG 2.00-0.20	2.00	0.20	3.00	2.20	●	●	●	0.04-0.06
GIG 2.22-0.15	2.22	0.15	3.50	2.20		●		0.04-0.06
GIG 2.30-0.20	2.30	0.20	3.50	2.20	●	●		0.04-0.07

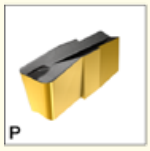
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

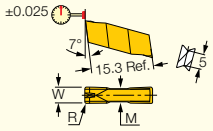
For tools, see pages: GHDR/L (short pocket) (233) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

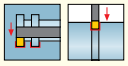
CUTGRIP

GIP

Precision Double-Ended Inserts for Grooving







Designation	Dimensions W±0.02	R	R±toler	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC20N	IC806	IC807	Recommended Machining Data f groove (mm/rev)
GIP 2.22-0.15	2.22	0.15	0.030	3.50	2.20	●		●	●			●	0.05-0.09
GIP 2.39-0.15	2.39	0.15	0.030	4.70	2.40	●		●	●	●		●	0.05-0.09
GIP 2.47-0.20	2.47	0.20	0.030	5.00	2.40	●		●	●	●		●	0.06-0.10
GIP 2.70-0.10	2.70	0.10	0.030	13.00	2.40	●		●	●			●	0.06-0.10
GIP 2.70-0.20	2.70	0.20	0.030	13.00	2.40			●	●				0.07-0.11
GIP 2.87-0.20	2.87	0.20	0.030	13.00	2.40	●		●	●				0.07-0.12
GIP 3.00-0.00	3.00	0.00	0.030	13.00	2.40	●		●	●				0.07-0.11
GIP 3.00-0.20	3.00	0.20	0.030	13.00	2.40	●		●	●		●	●	0.08-0.13
GIP 3.00-0.40	3.00	0.40	0.030	13.00	2.40				●				0.08-0.14
GIP 3.15-0.15	3.15	0.15	0.030	13.00	2.40	●	●	●	●	●			0.07-0.12
GIP 3.18-0.20	3.18	0.20	0.030	13.00	2.40	●	●	●	●			●	0.08-0.13
GIP 3.30-0.10	3.30	0.10	0.030	13.00	2.40	●	●	●	●				0.07-0.12
GIP 3.48-0.20	3.48	0.20	0.030	13.00	3.20		●		●				0.09-0.15
GIP 3.56-0.20	3.56	0.20	0.030	13.00	3.20		●		●				0.09-0.15
GIP 3.74-0.20	3.74	0.20	0.030	13.00	3.20		●	●	●				0.09-0.16
GIP 3.98-0.20	3.98	0.20	0.030	13.00	3.20	●	●	●	●			●	0.10-0.17
GIP 4.00-0.80	4.00	0.80	0.050	13.00	3.20				●				0.10-0.20
GIP 4.23-0.10	4.23	0.10	0.030	13.00	3.20	●	●	●	●				0.10-0.16
GIP 5.00-0.40	5.00	0.40	0.030	13.00	4.00				●				0.13-0.21
GIP 6.00-0.40	6.00	0.40	0.030	13.00	4.80				●				0.15-0.25
GIP 6.00-0.80	6.00	0.80	0.050	13.00	4.80				●				0.15-0.27

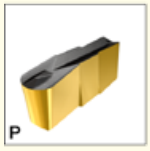
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

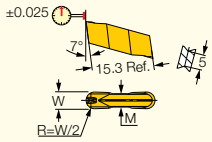
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

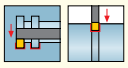
CUTGRIP

GIP (full radius)

Precision Double-Ended Full Radius Inserts for Grooving







Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIP 3.00-1.50	3.00	1.50	12.30	2.40				●	0.08-0.15
GIP 3.18-1.59	3.18	1.59	12.20	2.40	●	●	●	●	0.08-0.16
GIP 3.98-1.99	3.98	1.99	11.80	3.20		●		●	0.10-0.20
GIP 4.78-2.39	4.78	2.39	11.40	4.80		●		●	0.12-0.22
GIP 5.00-2.50	5.00	2.50	11.30	4.00				●	0.13-0.23

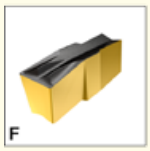
• For cutting speed recommendations and user guide, see pages 340-351

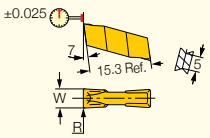
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

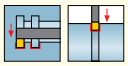
CUTGRIP

GIF

Precision Double-Ended Inserts for Grooving







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIF 3.48-0.20	3.48	0.20	0.030	3.20	13.00	●	●	●	●	0.08-0.12
GIF 3.56-0.20	3.56	0.20	0.030	3.20	13.00		●	●		0.08-0.13
GIF 3.74-0.20	3.74	0.20	0.030	3.20	13.00		●	●		0.08-0.13
GIF 3.98-0.20	3.98	0.20	0.030	3.20	13.00	●	●	●	●	0.09-0.14
GIF 4.23-0.10	4.23	0.10	0.030	3.20	13.00	●	●	●		0.08-0.13
GIF 4.45-0.15	4.45	0.15	0.030	4.00	13.00	●	●	●	●	0.09-0.14
GIF 4.78-0.55	4.78	0.55	0.050	4.00	13.00	●	●	●	●	0.11-0.18
GIF 4.86-0.30	4.86	0.30	0.030	4.00	13.00		●	●	●	0.11-0.18
GIF 5.28-0.20	5.28	0.20	0.030	4.00	13.00		●	●	●	0.12-0.18
GIF 5.39-0.20	5.39	0.20	0.030	4.00	13.00		●	●	●	0.12-0.19
GIF 5.90-0.20	5.90	0.20	0.030	4.80	13.00		●	●		0.12-0.21
GIF 6.35-0.50	6.35	0.50	0.050	4.80	13.00		●	●	●	0.14-0.24
GIF 6.35-0.55	6.35	0.55	0.050	4.80	13.00		●	●		0.14-0.24

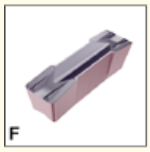
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

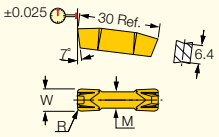
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

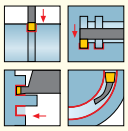
CUTGRIP

GIF (long pocket)

Precision Double-Ended Inserts for Grooving







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC20	IC806	Recommended Machining Data f groove (mm/rev)	f face-groove (mm/rev)
GIF 8.00-0.40	8.00	0.40	0.030	6.00	27.00	●	●	0.18-0.31	0.14-0.23
GIF 8.00-0.80	8.00	0.80	0.050	6.00	27.00	●	●	0.18-0.34	0.14-0.25

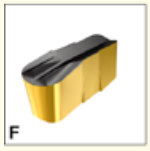
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

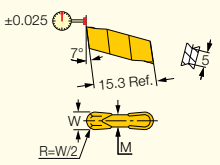
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450)

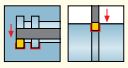
CUTGRIP

GIF (full radius)

Precision Double-Ended Full Radius Inserts for Grooving







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIF 4.78-2.39	4.78	2.39	4.00	11.40	●	●		0.11-0.20
GIF 6.35-3.18	6.35	3.18	4.80	10.60			●	0.14-0.27

• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

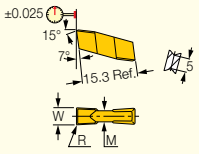
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

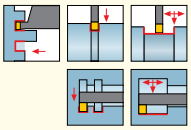
CUTGRIP

GIA-K (W=3-6)

Flat Top Precision Double-Ended Inserts with T-Land for Machining Cast Iron







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIA 3.00K-0.40	3.00	0.40	0.030	2.40	13.00	●	●	0.50-1.80	0.12-0.20	0.07-0.13
GIA 4.00K-0.40	4.00	0.40	0.030	3.20	13.00	●	●	0.50-2.40	0.16-0.27	0.09-0.18
GIA 4.00K-0.80	4.00	0.80	0.050	3.20	13.00	●	●	1.00-2.40	0.18-0.32	0.09-0.19
GIA 5.00K-0.80	5.00	0.80	0.050	4.00	13.00	●	●	1.00-3.00	0.23-0.40	0.11-0.24
GIA 6.00K-0.80	6.00	0.80	0.050	4.80	13.00	●	●	1.00-3.60	0.27-0.48	0.14-0.29

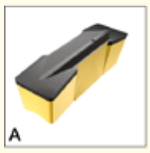
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

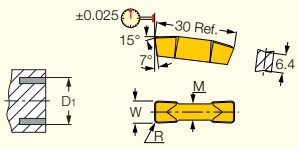
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

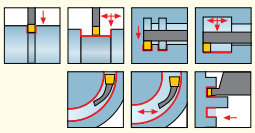
CUTGRIP

GIA-K (long pocket)

Flat Top Precision Double-Ended Inserts with T-Land for Machining Cast Iron







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	D1 min	Tough ↔ Hard IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIA 8.00K-0.80	8.00	0.80	6.00	25.00	160.0	●	●	1.00-4.80	0.36-0.64	0.18-0.38
GIA 8.00K-1.20	8.00	1.20	6.00	25.00	160.0	●	●	1.45-4.80	0.36-0.70	0.18-0.38

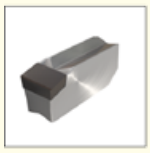
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

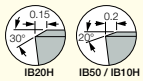
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

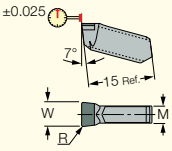
CUTGRIP

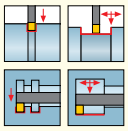
GITM

CBN Tipped Inserts for Turning and Grooving on Hard Ferrous Materials









HARD MATERIALS

Designation	Dimensions W±0.02	R±0.05	R	M	Tough ↔ Hard IB20H	IB50	IB10H	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GITM 3.00K-0.20	3.00	0.20	0.20	2.40	•	•	•	0.00-0.30	0.02-0.07	0.02-0.05
GITM 4.00K-0.20	4.00	0.20	0.20	3.20	•	•	•	0.00-0.40	0.03-0.09	0.02-0.07
GITM 5.00K-0.40	5.00	0.40	0.40	4.00	•	•	•	0.00-0.50	0.05-0.13	0.03-0.10
GITM 6.00K-0.40	6.00	0.40	0.40	4.80	•	•	•	0.00-0.60	0.05-0.15	0.04-0.12
GITM 8.00K-0.40	8.00	0.40	0.40	6.00		•		0.00-0.80	0.07-0.20	0.05-0.16

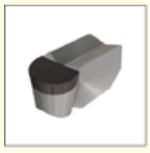
• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

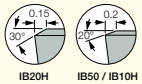
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

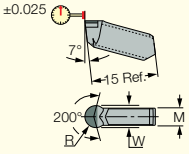
CUTGRIP

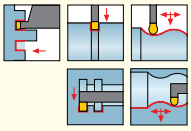
GITM (full radius)

Full Radius CBN Tipped Inserts for Grooving and Turning on Hard Ferrous Materials









HARD MATERIALS

Designation	Dimensions W±0.02	R±0.05	M	D1 min	Tough ↔ Hard IB20H	IB50	IB10H	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GITM 3.00K-1.50	3.00	1.50	2.40	160.0	•	•	•	0.00-0.30	0.03-0.10	0.02-0.06
GITM 4.00K-2.00	4.00	2.00	3.20	160.0	•	•	•	0.00-0.40	0.04-0.14	0.02-0.09
GITM 5.00K-2.50	5.00	2.50	3.90	160.0	•	•	•	0.00-0.50	0.05-0.18	0.03-0.11
GITM 6.00K-3.00	6.00	3.00	5.00	160.0	•	•	•	0.00-0.60	0.06-0.22	0.04-0.13
GITM 8.00K-4.00	8.00	4.00	5.60	160.0		•		0.00-0.80	0.08-0.29	0.05-0.17

• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

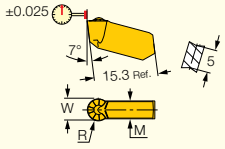
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

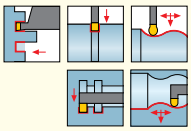
CUTGRIP

GIPY

Single-Ended Full Radius Sharp Edged Precision Inserts for Profiling of High Temperature Alloys







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC20	IC07	IC806	IC907	IC4	IC804	Recommended Machining Data f turn (mm/rev)	f groove (mm/rev)
GIPY 3.00-1.50	3.00	1.50	2.40	•	•	•	•	•	•	0.19-0.28	0.08-0.15
GIPY 4.00-2.00	4.00	2.00	3.20	•		•	•	•	•	0.22-0.37	0.10-0.20
GIPY 5.00-2.50	5.00	2.50	3.90	•		•	•	•	•	0.24-0.46	0.13-0.23
GIPY 6.00-3.00	6.00	3.00	5.00	•		•	•	•		0.26-0.55	0.15-0.27
GIPY 8.00-4.00	8.00	4.00	5.60	•	•	•	•			0.34-0.74	0.20-0.36

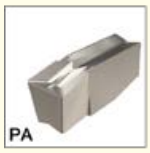
• Can cut arcs to 250° • Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

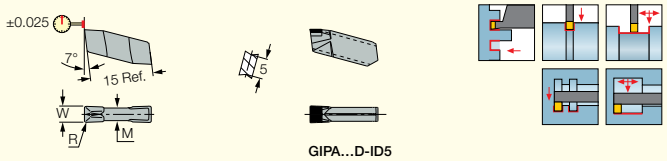
For tools, see pages: C#-GHDR/L (233) • CGFG 51-P8 (452) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHN-S (239) • CGHR/L-P8DG (240) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

CUTGRIP

GIPA (W=3-6)

Double-Ended Precision Ground Inserts with a Polished Top Rake for Machining Aluminum





Designation	Dimensions W±0.02	R±0.03	M	Tough ↔ Hard IC20	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-0.20	3.00	0.20	2.40	•		0.25-1.80	0.12-0.20	0.08-0.14
GIPA 3.00-0.20-D (1)	3.00	0.20	2.40		•	0.25-1.80	0.12-0.25	0.09-0.16
GIPA 4.00-0.40	4.00	0.40	3.20	•		0.50-2.40	0.14-0.31	0.10-0.20
GIPA 5.00-0.40	5.00	0.40	4.00	•		0.50-3.00	0.16-0.34	0.11-0.23
GIPA 6.00-0.40	6.00	0.40	4.80	•		0.50-3.60	0.19-0.41	0.11-0.26

• Dmin for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 340-351

(1) Single-ended PCD tipped insert

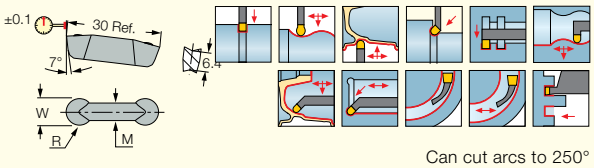
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

CUTGRIP

GDMA

Utility Double-Ended Insert with a Polished Top Rake for Machining Aluminum





Can cut arcs to 250°

Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC07	IC507	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMA 840	8.00	4.00	5.60	•	•	0.00-4.00	0.24-0.67	0.14-0.38

• For heavy-duty machining • Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHIFR/L-A (357) • GHIR/L (W=7.0-8.3) (301) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHIUR/L-UC (357)

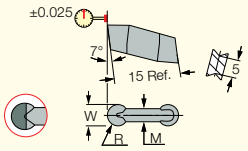


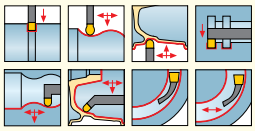
CUTGRIP

GIPA (full radius W=3-6)

Precision Double-Ended Inserts with Polished Top Rake for Machining Aluminum







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC20	IC806	IC4	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-1.50	3.00	1.50	2.40	•				0.00-1.50	0.15-0.30	0.08-0.16
GIPA 3.00-1.50-D (1)	3.00	1.50	2.40				•	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 3.00-1.50YZ-D (2)	3.00	1.50	2.40				•	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 4.00-2.00	4.00	2.00	3.20	•	•			0.00-2.00	0.20-0.43	0.10-0.22
GIPA 4.00-2.00-D (1)	4.00	2.00	3.20				•	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 4.00-2.00YZ-D (2)	4.00	2.00	3.20				•	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 5.00-2.50	5.00	2.50	3.90	•	•			0.00-2.50	0.21-0.48	0.09-0.24
GIPA 5.00-2.50-D (1)	5.00	2.50	3.90				•	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 5.00-2.50YZ-D (2)	5.00	2.50	3.90				•	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 6.00-3.00	6.00	3.00	4.80	•		•		0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00-D (1)	6.00	3.00	4.80				•	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00YZ	6.00	3.00	4.80	•				0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00YZ-D (2)	6.00	3.00	4.80				•	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00CB (3)	6.00	3.00	4.80				•	0.00-3.00	0.21-0.58	0.11-0.29

• For cutting speed recommendations and user guide, see pages 340-351

(1) Single-ended PCD tipped insert

(2) Single-ended molded PCD chipformer tipped insert

(3) Single-ended flat PCD tipped insert with chip deflector

For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDKR/L (358) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHIFR/L-A (357) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)





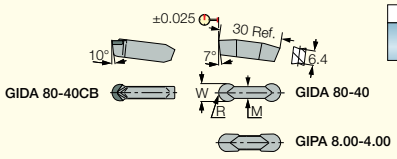


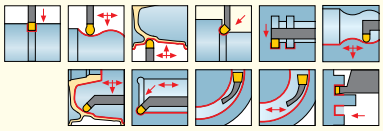
CUTGRIP

GIPA/GIDA 8 (full radius)

Precision Double-Ended Inserts with Polished Top Rake for Machining Aluminum





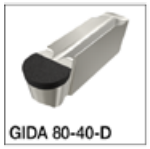


Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC20	IC4	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIDA 80-40	8.00	4.00	5.60	•	•		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40-D	8.00	4.00	5.60			•	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40CB-D (1)	8.00	4.00	5.60			•	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ	8.00	4.00	5.60	•	•		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ-D	8.00	4.00	5.60			•	0.00-4.00	0.35-0.96	0.18-0.48
GIPA 8.00-4.00	8.00	4.00	6.00	•			0.00-4.00	0.24-0.67	0.14-0.38

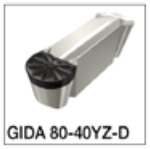
• ID5 is a single-ended PCD tipped insert • For cutting speed recommendations and user guide, see pages 340-351

(1) Should not be clamped on tools with "A" suffix

For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHDR/L (long pocket) (240) • GHDR/L-8A (358) • GHDR/L-JHP (long pocket) (241) • GHFGR/L-8 (450) • GHIFR/L-A (357) • GHIR/L (W=7.0-8.3) (301) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHIUR/L-UC (357)









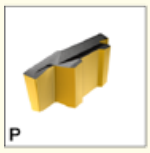


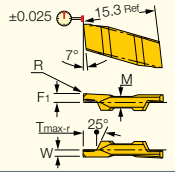


CUTGRIP

GIP-RX/LX

Precision Double-Ended Inserts for External Grooving Next to a Shoulder





Designation	Dimensions W±0.02	R	R±toler	Tmax-r	M	F1	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
GIP 0.80-0.00R/LX	0.80	0.00	0.030	1.60	2.40	1.6	•		0.02-0.04
GIP 1.00-0.00R/LX	1.00	0.00	0.030	2.00	2.40	1.6	•		0.02-0.05
GIP 1.19-0.1RX	1.19	0.10	0.030	2.00	2.40	1.6		•	0.03-0.05
GIP 1.57-0.15 R/LX	1.57	0.15	0.030	2.70	2.40	1.7	•		0.04-0.06
GIP 1.57-0.79RX	1.57	0.79	0.030	2.80	2.40	1.7		•	0.04-0.08
GIP 2.00-0.15 R/LX	2.00	0.15	0.030	3.00	2.40	1.7	•		0.05-0.08
GIP 2.39-0.15 RX	2.39	0.15	0.030	3.50	2.40	1.7	•		0.05-0.09
GIP 2.39-1.19RX	2.39	1.19	0.050	3.90	2.40	1.7		•	0.06-0.12

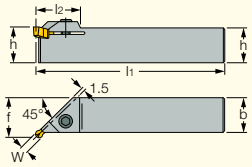
• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GHMUR/L

External Holders for 45° Undercutting



Right-hand shown

Designation	W max	h	b	l1	l2	f		
GHMUR/L 16	4.80	16.0	16.0	112.00	25.0	19.0	SR M6X16 DIN912	HW 5.0
GHMUR/L 20	6.40	20.0	20.0	122.00	25.0	23.0	SR M6X16 DIN912	HW 5.0
GHMUR/L 25	6.40	25.0	25.0	137.00	25.0	28.0	SR M6X16 DIN912	HW 5.0

• For D>100 mm, GIP/GIF inserts can be used (clearance types UN, D or G are not required).

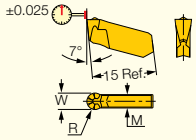
For inserts, see pages: GIMY-UN (258) • GIP-UN (259)

CUTGRIP

GIMY-UN

Utility Single-Ended Inserts for External Undercutting





Designation	Dimensions W±0.05	R±0.05	M	Tmax-r	IC8250	Recommended Machining Data f groove (mm/rev)
GIMY 315-UN	3.00	1.50	2.40	2.00	•	0.05-0.15
GIMY 420-UN	4.00	2.00	3.20	2.50	•	0.05-0.15

• For 45° undercutting on D 100 mm, regular GIMY inserts may be used. • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GHMUR/L (258)

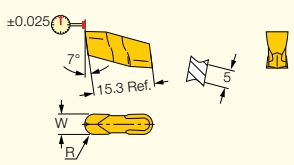


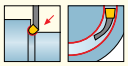
CUTGRIP

GIP-UN

Precision Double-Ended Inserts
for External Undercutting







Designation	Dimensions W±0.05	R±0.05	D min	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIP 3.00-1.50UN	3.00	1.50	35.00	2.40	4.00	●	●	●	●	0.05-0.15
GIP 4.00-2.0UN	4.00	2.00	35.00	3.20	4.00		●		●	0.05-0.15

• Not recommended for turning. • For undercutting at 45° and D100 mm, other GIP inserts apply as well.
• For cutting speed recommendations and user guide, see pages 340-351

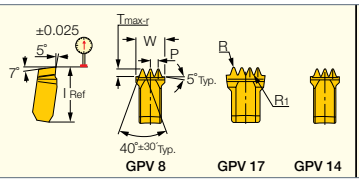
For tools, see pages: C#-GHDR/L (233) • CGHN-DG (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHMPR/L (232) • GHMR/L (232) • GHMUR/L (258)

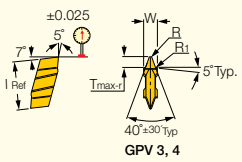
CUTGRIP

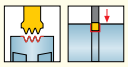
GPV

Precision Inserts for Grooving
Multi V-Ribbed Pulleys









Designation	Dimensions W	P±0.03	Tmax-r	R±0.05	R1±0.05	Z	l	Tough ↔ Hard IC8250	IC5010	IC428	Recommended Machining Data f groove (mm/rev)
GPV 3-2.34-1 (1)	2.80	2.34	2.21	0.32	0.20	1	15.30	●	●		0.06-0.15
GPV 4-3.56-1 (1)	4.03	3.56	3.42	0.45	0.30	1	15.30	●	●	●	0.06-0.15
GPV 8-2.34-3 (2)	7.48	2.34	2.21	0.32	0.20	3	15.30	●		●	0.06-0.15
GPV 14-2.34-4 (3)	9.82	2.34	2.21	0.32	0.20	4	24.00	●	●	●	0.06-0.15
GPV 14-3.56-3 (3)	11.14	3.56	3.42	0.45	0.30	3	24.00	●	●	●	0.06-0.15
GPV 17-3.56-4 (4)	14.68	3.56	3.42	0.45	0.30	4	24.00	●	●	●	0.06-0.15

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 340-351
(1) Use holders which are suitable for GIP 3 / GIP 4
(2) Use holders which are suitable for GIMY 808
(3) Use holders which are suitable for TIGER 14
(4) Use holders which are suitable for TIGER 17

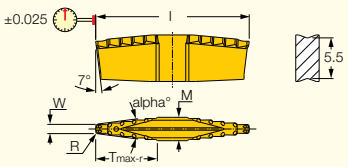
For tools, see pages: C#-GHDR/L (233) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHDR/L/N 12/14 (284) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GDK

Inserts for Rough Grooving
V-Shaped Piston Grooves







Designation	Dimensions W±0.02	R	Tmax-r	alpha	l	M	IC808	Recommended Machining Data f groove (mm/rev)
GDK 1.5-MS	1.50	0.50	8.40	14.0	21.00	3.50	●	0.15-0.25
GDK 1.81-MS	1.81	0.50	8.40	12.0	19.70	3.50	●	0.15-0.25

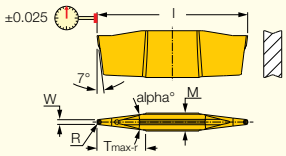
• For steel grooves

CUTGRIP

GDP

Inserts for Precision Grooving of V-Shaped Piston Grooves





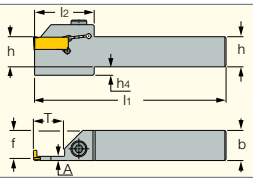
Designation	Dimensions W±0.02	R	Tmax-r	alpha	l	M	Tough ↔ Hard IC308	IC908	Recommended Machining Data f groove (mm/rev)
GDP 1.20-0.30-4768V2Q	1.20	0.30	6.50	11.0	25.00	2.40	●	●	0.12-0.18
GDP 1.55-0.30-1404Q	1.55	0.30	6.50	10.0	20.90	3.50		●	0.12-0.18
GDP 1.75-1406Q	1.75	0.30	7.50	- (1)	20.95	3.50	●		0.12-0.18

(1) Left edge 7.17° + right edge 7.83°

CUTGRIP

HLPGR/L

Tools for L-Type LPGIR/L Inserts



Designation	Tmax-r	h	h1	h4	b	A	f	l1	l2	Insert	SR M6X20 DIN912	HW 5.0
HLPGR/L 2525-12-A3.5-T25	25.00	25.0	25.0	7.0	25.0	3.50	23.3	160.00	50.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-12-A3.5-T25	25.00	32.0	32.0	-	25.0	3.50	23.3	160.00	50.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 2525-12-A4.5-T30	30.00	25.0	25.0	7.0	25.0	4.50	22.8	160.00	55.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-12-A4.5-T30	30.00	32.0	32.0	-	25.0	4.50	22.8	160.00	55.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 2525-16-A6-T30	30.00	25.0	25.0	7.0	25.0	6.00	22.0	160.00	55.0	LPGIR/L 16	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-16-A6-T30	30.00	32.0	32.0	-	32.0	6.00	22.0	160.00	55.0	LPGIR/L 16	SR M6X20 DIN912	HW 5.0

• In case of face penetration prior to radial grooving, please check that the lower insert support is relieved from the groove's outer diameter.

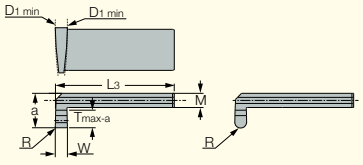
For inserts, see pages: LPGIR/L (260)

CUTGRIP

LPGIR/L

Inserts for Axial Grooves Inside Radial Grooves and for Radial Grooves Inside Axial Grooves





Right-hand shown

Designation	Dimensions W±0.02	R	M	Tmax-a	L3	a	D1 min	IC907
LPGIR/L 12-8-2T4PR	2.00	0.20	4.00	3.50	30.00	8.00	200.0	●
LPGIR/L 12-8-210T4	2.00	1.00	4.00	3.50	30.00	8.00	200.0	●
LPGIR/L 12-8.5-3T5PR	3.00	0.30	3.50	4.50	30.00	8.50	200.0	●
LPGIR/L 12-8.5-315T5	3.00	1.50	3.50	4.50	30.00	8.50	200.0	●
LPGIR/L 12-9.5-4T6PR	4.00	0.40	3.50	5.50	30.00	9.50	200.0	●
LPGIR/L 12-9.5-420T6	4.00	2.00	3.50	5.50	30.00	9.50	200.0	●
LPGIR/L 12-11-5T6.5PR	5.00	0.40	4.50	6.00	30.00	11.00	200.0	●
LPGIR/L 12-11-525T6.5	5.00	2.50	4.50	6.00	30.00	11.00	200.0	●
LPGIR/L 16-15.5-3T9PR	3.00	0.30	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-315T9	3.00	1.50	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-4T9PR	4.00	0.40	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-420T9	4.00	2.00	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-5T9PR	5.00	0.40	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-525T9	5.00	2.50	6.00	8.50	30.60	15.50	200.0	●

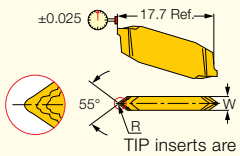
• For cutting speed recommendations and user guide, see pages 340-351

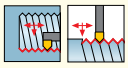
For tools, see pages: HLPGR/L (260)

ISCARTHREAD
CUTGRIP

TIP-WT
Precision Ground 55° Partial Profile, Double-Ended Threading Inserts with a Chipformer







TIP inserts are 1.6 mm longer than GIP in the same pocket

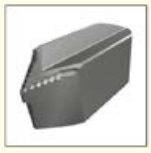
Designation	Dimensions W	R±0.03	TPI max	TPI min(1)	Tough ↔ Hard IC08	IC908
TIP 2WT-0.05	2.40	0.05	54	D/6.4	●	●
TIP 4WT-0.15	4.00	0.15	19	D/6.4	●	●
TIP 5WT-0.25	5.50	0.25	12	D/6.4		●

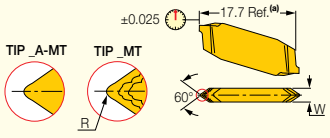
• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.187xD
(1) D-Diameter of thread (inch)

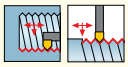
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD
CUTGRIP

TIP-MT
Precision Ground 60° Partial Profile Double-Ended Threading Inserts with Chipformers







Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIP 2A-MT-0.05 (1)	2.40	0.05	0.45	56		●
TIP 2MT-0.05	2.40	0.05	0.45	56	●	●
TIP 2MT-0.14	2.40	0.14	1.11	23	●	●
TIP 4A-MT-0.15 (1)	4.00	0.15	1.25	20		●
TIP 4MT-0.15	4.00	0.15	1.25	20		●
TIP 4MT-0.20	4.00	0.20	1.63	16	●	●
TIP 5MT-0.25	5.50	0.25	1.94	13	●	●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket • Toolholder seat needs to be modified according to insert profile to ensure clearance
(1) Without chipformer (flat rake)

For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)



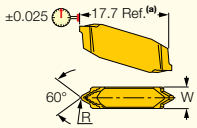
ISCAR THREAD

CUTGRIP

TIP-P-ISO

Precision Ground ISO Metric Full Profile Double-Ended External Threading Inserts with a Chipformer







Designation	Dimensions				Tough ↔ Hard	
	Pitch	W	R	R±toler	IC08	IC908
TIP 2P0.5-ISO	0.50	2.40	0.08	0.030	●	●
TIP 2P0.75-ISO	0.75	2.40	0.11	0.030	●	●
TIP 2P0.8-ISO	0.80	2.40	0.12	0.030	●	●
TIP 2P1.0-ISO	1.00	2.40	0.14	0.030	●	●
TIP 2P1.25-ISO	1.25	2.40	0.18	0.030	●	●
TIP 2P1.5-ISO	1.50	2.40	0.22	0.030	●	●
TIP 2P1.75-ISO	1.75	2.40	0.25	0.030	●	●
TIP 4P2.0-ISO	2.00	4.00	0.28	0.030	●	●
TIP 4P2.5-ISO	2.50	4.00	0.35	0.050	●	●
TIP 4P3.0-ISO	3.00	4.00	0.42	0.050		●
TIP 4P3.5-ISO	3.50	4.00	0.48	0.050		●
TIP 5P4.0-ISO	4.00	5.50	0.55	0.050		●
TIP 5P5.0-ISO	5.00	5.50	0.68	0.050		●

• [a] TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

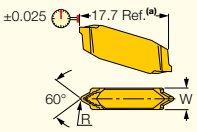
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCAR THREAD

TIP-P-UN

Precision Ground American UN (UNC,UNF,UNEF) Full Profile Double-Ended External Threading Inserts with a Chipformer







Designation	Dimensions				Tough ↔ Hard		
	W	R	R±toler	TPI	IC08	IC808	IC908
TIP 2P32-UN	2.40	0.10	0.030	32.0	●		●
TIP 2P28-UN	2.40	0.11	0.030	28.0	●		●
TIP 2P24-UN	2.40	0.13	0.030	24.0	●		●
TIP 2P20-UN	2.40	0.16	0.030	20.0	●		●
TIP 2P18-UN	2.40	0.18	0.030	18.0	●		●
TIP 2P16-UN	2.40	0.20	0.030	16.0	●		●
TIP 2P14-UN	2.40	0.23	0.030	14.0	●		●
TIP 2P13-UN	2.40	0.25	0.030	13.0	●		●
TIP 2P12-UN	2.40	0.27	0.030	12.0	●		●
TIP 4P11-UN	4.00	0.30	0.030	11.0			●
TIP 4P10-UN	4.00	0.33	0.050	10.0		●	●
TIP 4P08-UN	4.00	0.41	0.050	8.0			●

• [a] TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

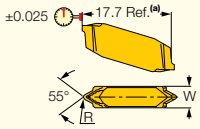
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD

TIP-P-BSW

Precision Ground American BSW, BSF, BSP Full Profile Double-Ended External Threading Inserts with a Chipformer





Designation	Dimensions W	R	TPI	Tough ↔ Hard IC08	IC908
TIP 2P28-BSW	2.40	0.11	28.0	•	•
TIP 2P26-BSW	2.40	0.12	26.0	•	•
TIP 2P-24BSW	2.40	0.12	24.0		•
TIP 2P24-BSW	2.40	0.12	24.0	•	
TIP 2P-20BSW	2.40	0.16	20.0		•
TIP 2P20-BSW	2.40	0.16	20.0	•	
TIP 2P19-BSW	2.40	0.16	19.0	•	•
TIP 2P-18BSW	2.40	0.17	18.0		•
TIP 2P18-BSW	2.40	0.17	18.0	•	
TIP 2P-16BSW	2.40	0.19	16.0		•
TIP 2P16-BSW	2.40	0.19	16.0	•	
TIP 2P14-BSW	2.40	0.22	14.0	•	•
TIP 4P12-BSW	4.00	0.25	12.0		•
TIP 4P11-BSW	4.00	0.28	11.0	•	•
TIP 4P10-BSW	4.00	0.31	10.0		•

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

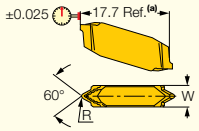
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD

TIP-P-NPT

Precision Ground NPT (National Pipe Threads) Full Profile Double-Ended External Threading Inserts with a Chipformer





Designation	Dimensions W	R±0.03	TPI	Tough ↔ Hard IC08	IC908
TIP 2P27-NPT	2.40	0.05	27.0	•	•
TIP 2P18-NPT	2.40	0.07	18.0	•	•
TIP 2P14-NPT	2.40	0.09	14.0		•
TIP 4P11.5-NPT	4.00	0.10	11.5	•	•
TIP 4P8-NPT	4.00	0.13	8.0	•	•

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

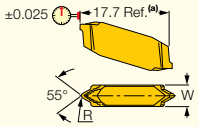
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD

TIP-P-BSPT

Precision Ground BSPT (British Standard Pipe) Full Profile Double-Ended External Threading Inserts with a Chipformer





Designation	Dimensions W	R±0.03	TPI	Tough ↔ Hard IC08	IC908
TIP 2P28-BSPT	2.40	0.11	28.0	•	•
TIP 2P19-BSPT	2.40	0.16	19.0	•	•
TIP 2P14-BSPT	2.40	0.22	14.0	•	•
TIP 4P11-BSPT	4.00	0.28	11.0	•	•

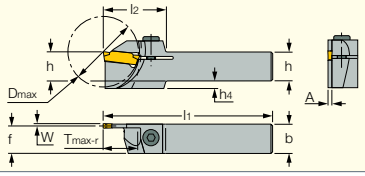
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

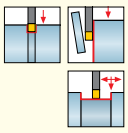
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

CUTGRIP

PHGR/L

Holders for External Grooving and Turning





Left-hand shown

Designation	W min	W max	D max(1)	Tmax-r	h	b	l1	l2	f	h4	A	Insert		
PHGR/L 16-2.4	2.40	3.18	34.0	17.00	16.0	16.0	110.00	33.0	15.1	5.5	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0
PHGR/L 20-2.4	2.40	3.18	34.0	17.00	20.0	20.0	120.00	33.0	19.1	-	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0
PHGR/L 25-2.4	2.40	3.18	34.0	17.00	25.0	25.0	140.00	33.0	24.1	-	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0

• For user guide, see pages 340-351

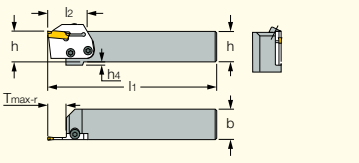
(1) Maximum parting diameter.

For inserts, see pages: GDMW 2.4 (265)

CUTGRIP

PHAR/L

External Machining Holders for PADR/L Adapters



Right-hand shown

Designation	Tmax-r	h	b	l1	h4	Adapter(1)				
PHAR/L 20	16.30	20.0	20.0	140.00	10.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5
PHAR/L 25	16.30	25.0	25.0	140.00	5.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5

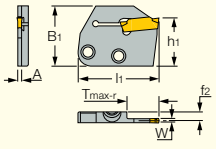
(1) Adapters to be ordered separately.

For tools, see pages: PADR/L (264)

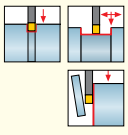
CUTGRIP

PADR/L

Adapters for GDMW/GDMY Groove-Turn Inserts



Right-hand shown



Left-hand shown

Designation	W min	W max	Tmax-r	l1	A	h1	B1	f2	Insert
PADR/L 2.4	2.40	3.18	16.30	41.00	1.90	24.0	30.0	4.20	GDMW 2.4

• For user guide, see pages 340-351

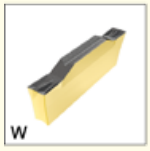
For inserts, see pages: GDMW 2.4 (265)

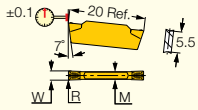
For holders, see pages: PHAR/L (264)

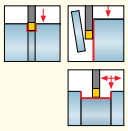
CUTGRIP

GDMW 2.4

Utility Double-Ended Inserts for External Turning, Grooving and Parting







Designation	Dimensions W±0.04	R±0.03	M	Tmax-r	Tough ↔ Hard IC830	IC808	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMW 2.4	2.40	0.18	2.00	18.00	•	•	•	•	0.25-1.50	0.07-0.12	0.05-0.08

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: PADR/L (264) • PHGR/L (264) • PHSR/L (312)

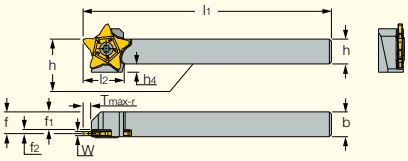
PENTACUT

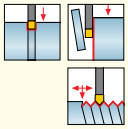
PCHR/L-24

Grooving, Parting and Recessing Holders Carrying Inserts with 5 Cutting Edges

W	f2
0.50-3.20	2.0
3.21-4.23	2.5
4.24-5.20	3.0
5.21-6.20	3.5
6.21-8.20	4.5

f=f1+f2





Right-hand shown

Designation	h	b	W min	W max	f1	Tmax-r(2)	l1	l2	h4		
PCHR/L 10-24	10.0	10.0	0.50	3.20	6.5	6.50	120.00	19.5	6.0	SR 16-212-01397L	T-2010/5
PCHR/L 12-24	12.0	12.0	0.50	3.20	8.5	6.50	120.00	19.5	4.0	SR 16-212-01397L	T-2010/5
PCHR/L 16-24	16.0	16.0	0.50	3.20	12.5	6.50	120.00	19.5	-	SR 16-212-01397L	T-2010/5
PCHR/L 20-24	20.0	20.0	0.50	3.20	16.5	6.50	120.00	19.5	-	SR 16-212-01397L	T-2010/5
PCHR/L 25-24	25.0	25.0	0.50	3.20	21.5	6.50	135.00	19.5	-	SR 16-212-01397L	T-2010/5
PCHR/L 16-24-5	16.0	16.0	3.21	5.20	11.5	6.40	120.00	21.5	4.0	SR PCHL-8-06642	T-15/5
PCHR/L 20-24-5	20.0	20.0	3.21	5.20	15.5	6.40	120.00	21.5	-	SR PCHL-8-06642	T-15/5
PCHR/L 25-24-5	25.0	25.0	3.21	5.20	20.5	6.40	135.00	21.5	-	SR PCHL-8-06642	T-15/5
PCHR/L 25-24-8 (1)	25.0	25.0	5.21	8.20	18.5	6.50	135.00	19.5	-	SR PCHL-8-06642	T-15/5

• f=f1+f2 (according to insert width (W) being used)

(1) Used with special inserts only

(2) For specific information, refer to insert data

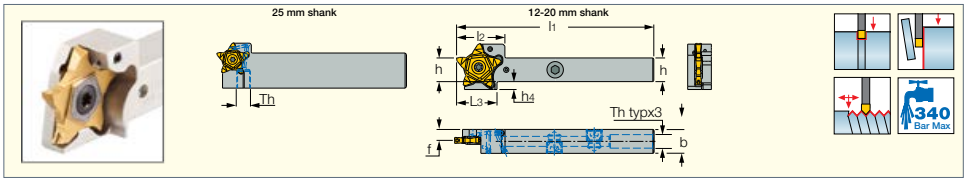
For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411)



PENTACUT JETCUT

PCHR/L-24-JHP

Grooving, Parting and Recessing Tools Carrying PENTA Inserts with Channels for High Pressure Coolant



Designation	h	b	W min	W max(1)	f	l_1	l_2	L_3	h_4	Th	Tmax-r(2)	Insert
PCHR/L 12-24-JHP	12.0	12.0	0.50	3.20	5.5	100.00	24.5	20.50	4.0	UNF 5/16-24	6.50	PENTA 24
PCHR/L 16-24-JHP	16.0	16.0	0.50	3.20	9.5	120.00	24.5	0.00	-	UNF 5/16-24	6.50	PENTA 24
PCHR/L 20-24-JHP	20.0	20.0	0.50	3.20	13.5	135.00	24.5	0.00	-	G 1/8-28	6.50	PENTA 24
PCHR/L 25-24-JHP	25.0	25.0	0.50	3.20	18.5	135.00	24.5	0.00	-	G 1/8-28	6.50	PENTA 24

• For user guide and accessories see pages 340-355

(1) Up to 6.2 mm width may be ordered on request.

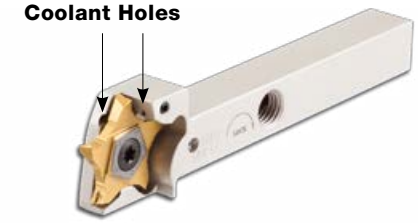
(2) For specific information, refer to insert data.

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
PCHR/L 12-24-JHP	5-8	9-11	11-13
PCHR/L 16/20/25-24-JHP	12-14	14-16	16-18

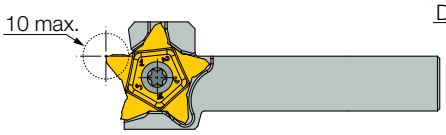
Coolant Holes



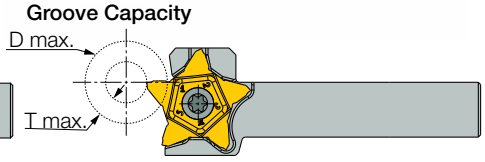
(2) Grooving Depth Tmax Relative to Dmax

Tmax	3.5	4	4.5	5
Dmax	No-limit	210	135	50

Cut-off to Center



Groove Capacity



Spare Parts

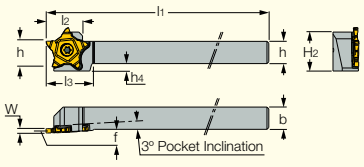
Designation				
PCHL 12-24-JHP	SR 16-212-01397L-L8.5	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHR 12-24-JHP	SR 16-212-01397-L8.5	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHL 16-24-JHP	SR 16-212-01397L	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHR 16-24-JHP	SR 16-212-01397	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHL 20-24-JHP	SR 16-212-01397L	T-2010/5	PLG 1/8BSP TL360	HW 5.0
PCHR 20-24-JHP	SR 16-212-01397	T-2010/5	PLG 1/8BSP TL360	HW 5.0
PCHL 25-24-JHP	SR 16-212-01397L	T-2010/5		
PCHR 25-24-JHP	SR 16-212-01397	T-2010/5		

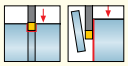


PENTACUT

PCHRS/LS

Holders Carrying Inserts with 5 Cutting Edges for Grooving, Parting and Recessing Next to High Shoulders

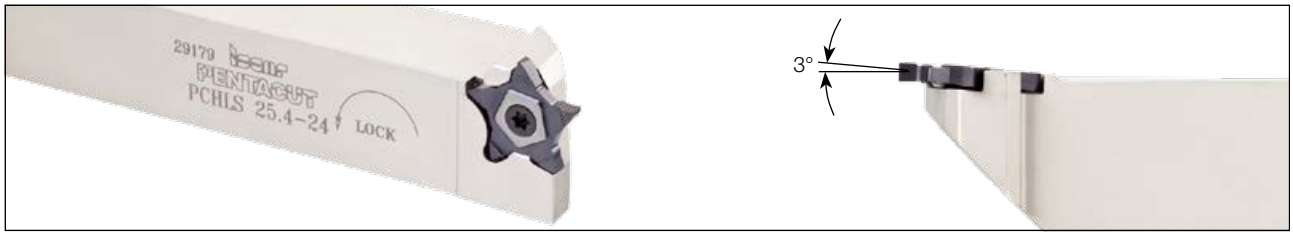




Right-hand shown

Designation	h	b	W min	W max	l1	l2	L3	h4	H2		
PCHR/LS 12-24	12.0	12.0	0.80	4.80	120.00	19.5	24.50	4.0	21.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 16-24	16.0	16.0	0.80	4.80	120.00	19.5	-	-	21.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 20-24	20.0	20.0	0.80	4.80	120.00	19.5	-	-	25.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 25-24	25.0	25.0	0.80	4.80	135.00	19.5	-	-	30.0	SR 16-212-01397LS	T-2010/5

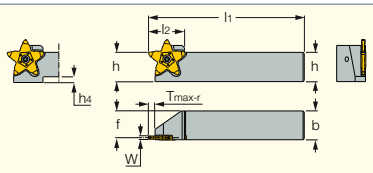
For inserts, see pages: PENTA 24N-J-RS (273) • PENTA 24N-RS/LS (274)

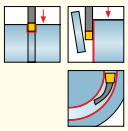


PENTACUT

PCHR/L-34

Grooving, Parting and Recessing Holders Carrying Inserts with 5 Cutting Edges





Right-hand shown

Designation	h	b	W min	W max	f	Tmax-r(2)	l1	l2	h4		
PCHR/L 16-34	16.0	16.0	1.50	4.00	14.2	10.00	120.00	31.0	9.0	SR 16-212-01397	T-2010/5
PCHR/L 20-34	20.0	20.0	1.50	4.00	18.2	10.00	120.00	31.0	6.0	SR 16-212-01397	T-2010/5
PCHR/L 25-34	25.0	25.0	1.50	4.00	23.2	10.00	135.00	31.0	-	SR 16-212-01397	T-2010/5
PCHR/L 25-34-8 (1)	25.0	25.0	3.19	8.20	22.5	10.00	135.00	31.0	-	SR PCHR-8-06642	T-15/5
PCHR/L 32-34	32.0	32.0	1.50	4.00	30.1	10.00	135.00	31.0	-	SR 16-212-01397	T-2010/5

(1) Used with special inserts only

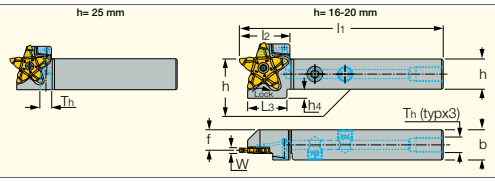
(2) For specific information, refer to insert data

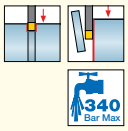
For inserts, see pages: PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

PENTACUT JETCUT

PCHR/L-34-JHP

Grooving, Parting and Recessing Tools Carrying PENTA Inserts with Channels for High Pressure Coolant





Right-hand shown

Designation	h	b	W min	W max	f	l1	l2	L3	h4	Th	Tmax-r(1)	Insert
PCHR/L 16-34-JHP	16.0	16.0	1.50	4.00	9.6	120.00	33.5	28.00	9.0	UNF 5/16-24 (x3)	10.00	PENTA 34
PCHR/L 20-34-JHP	20.0	20.0	1.50	4.00	13.6	135.00	33.5	26.00	6.0	G 1/8-28 (x3)	10.00	PENTA 34
PCHR/L 25-34-JHP	25.0	25.0	1.50	4.00	18.6	135.00	33.5	-	-	G 1/8-28	10.00	PENTA 34

• For user guide and accessories, see pages 340-355

(1) For specific information, refer to insert data

For inserts, see pages: PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

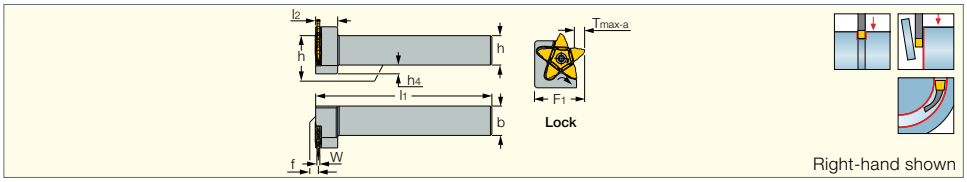
Spare Parts

Designation				
PCHR/L 16-34-JHP	SR 16-212-01397	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHR/L 20-34-JHP	SR 16-212-01397	T-2010/5	PLG 1/8BSP TL360	HW 5.0
PCHR/L 25-34-JHP	SR 16-212-01397	T-2010/5		

PENTACUT

PCHPR/L

Perpendicular Holders Carrying Inserts with 5 Cutting Edges for Facing, Grooving, Parting and Recessing



Designation	h	b	W min	W max	f	F1	l1	l2	h4	Tmax-a(1)		
PCHPR/L 16-24	16.0	16.0	0.50	3.20 (2)	1.5 (3)	23.5	120.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 20-24	20.0	20.0	0.50	3.20 (2)	1.5 (3)	28.0	120.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 25-24	25.0	25.0	0.50	3.20 (2)	1.5 (3)	33.0	135.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 20-34	20.0	20.0	1.40	4.00	1.9	34.0	120.00	15.0	6.0	10.00	SR 16-212-01397	T-20/5
PCHPR/L 25-34	25.0	25.0	1.40	4.00	1.9	34.0	135.00	15.0	-	10.00	SR 16-212-01397	T-20/5

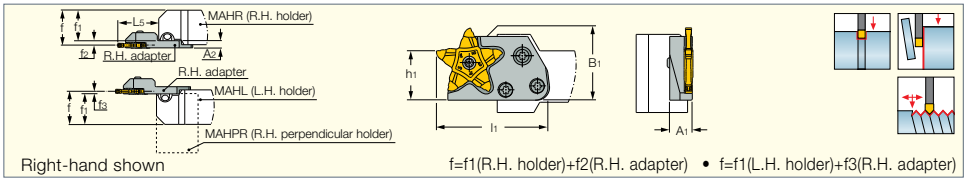
(1) For specific information, refer to insert data.
(2) Up to 6.2 mm width may be ordered on request.
(3) Valid for inserts with W<3.2 mm

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411) • PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

PENTACUT MODULARGRIP

PCADR/L

Adapters for PENTACUT Grooving Inserts



Designation	W min	W max	L5	l1	f2	f3	A1	A2	h1	B1		
PCADR/L 24N	0.50	3.18 (1)	17.00	41.50	3.20	2.00	9.00	5.2	24.0	30.3	SR 16-212-01397L(a)	T-2010/5
PCADR/L 34N	1.50	4.00	29.60	54.20	3.35	1.85	11.00	5.2	24.0	31.0	SR 16-212-01397	T-2010/5

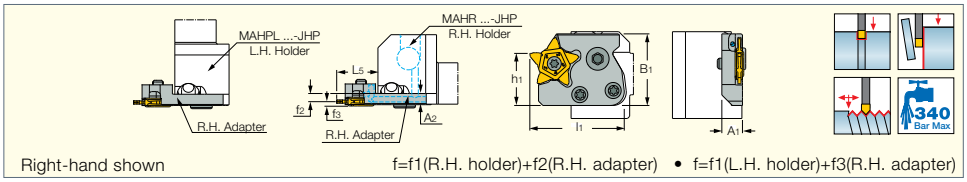
• Tmax and Dmax according to insert limitation
(1) Up to 6.2 mm width may be ordered on request
(a) For left-hand holders

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411) • PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)
For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

PENTACUT JETCUT MODULARGRIP

PCADR/L-JHP

Adapters with High Pressure Coolant Holes for PENTACUT Grooving Inserts



Designation	W min	W max	L5	l1	f2	f3	A1	A2	h1	B1	Insert		
PCADR/L 24-JHP	0.50	3.18 (1)	19.30	43.80	5.20	2.00	10.00	7.2	24.0	33.0	PENTA 24	SR 16-212-01397L	T-2010/5

• Tmax and Dmax according to insert limitation • For user guide and accessories, see pages 340-355
(1) Up to 6.2 mm width can be ordered on request

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411)
For holders, see pages: MAHR/L-JHP-MC (236)

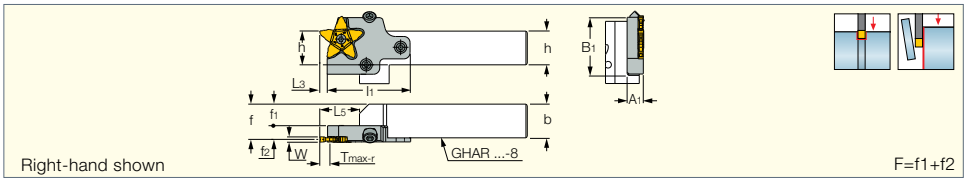
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
PCADR/L 24-JHP	9-11	11-13	12-14

PENTACUT

PCADR/L 34N-RE

Reinforced Adapters for PENTACUT Grooving Inserts



Designation	W min	W max	L3	L5	l1	f2	B1	A1		
PCADR/L 34N-RE	1.50	4.00	5.50	29.50	61.50	10.15	42.0	12.00	SR 16-212-01397	T-2010/5

• Tmax and Dmax according to insert limitation • h, b, and f1 according to holder being used

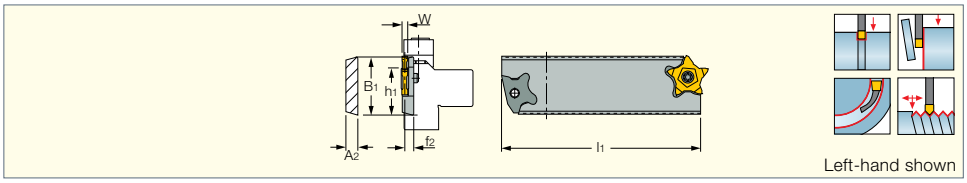
For inserts, see pages: PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

For holders, see pages: C#-GHAD-8 (241) • C#-GHAPR/L-8 (242) • GHAPR/L-8 (243) • GHAR/L-8 (242) • IM-GHAD-8 (484) • IM-GHAPR/L-8 (484)

PENTACUT

PCHBR/L

Double-Ended Parting and Grooving Blades for PENTACUT Inserts



Designation	B1	W min	W max	h1	f2(2)	l1	A2	Insert
PCHBR/L 26-24R	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24
PCHBR 26-24L	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24
PCHBL 32-24R	32.0	0.50	6.20	24.8	7.00	110.00	8.5	PENTA 24
PCHBR 32-24L	32.0	0.50	6.20	24.8	7.00	110.00	8.5	PENTA 24
PCHBR/L 26-34R (1)	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34
PCHBR 26-34L (1)	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34
PCHBL 32-34R	32.0	1.50	4.00	24.8	7.15	110.00	8.5	PENTA 34
PCHBR 32-34L	32.0	1.50	4.00	24.8	7.15	110.00	8.5	PENTA 34

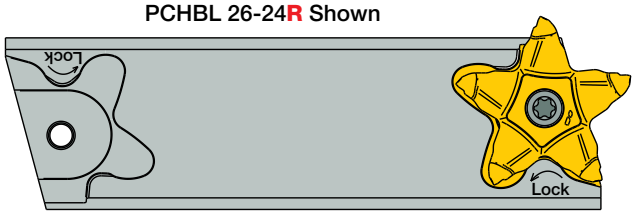
• For insert/blade orientation, see the following drawings

(1) Single pocket blade

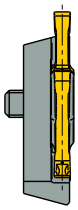
(2) To the center of inserts up to 4.15 mm width

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411) • PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

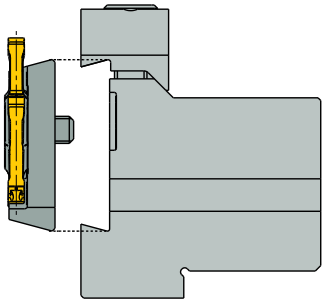
PCHBL 26-24R Shown



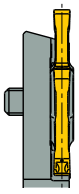
PCHBL 26-24L



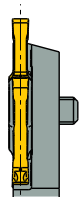
PCHBL 26-24R



PCHBR 26-24L



PCHBR 26-24R



Right-hand blade

Right-hand pocket location on the blade

Spare Parts

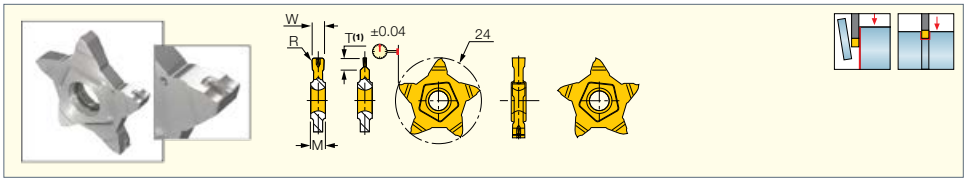
Designation		
PCHBR/L 26-24R	SR 16-212-01397L	T-2010/5
PCHBR 26-24L	SR 16-212-01397	T-2010/5
PCHBL 32-24R	SR 16-212-01397L	T-2010/5
PCHBR 32-24L	SR 16-212-01397	T-2010/5
PCHBR/L 26-34R	SR 16-212-01397	T-2010/5
PCHBR 26-34L	SR 16-212-01397	T-2010/5
PCHBL 32-34R	SR 16-212-01397	T-2010/5
PCHBR 32-34L	SR 16-212-01397	T-2010/5

Identification System for Standard Inserts

PENTA	24	N	150	J	010
Family name	Circular circumference of the insert	Insert lead angle (K) **N, R, L**	Cutting edge width W(mm)x100	Chipbreaker style **J, Z**	Corner radius R (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts. (eg. 15D=15º)

PENTACUT

PENTA 24N-J
Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Tubes, Small and Thin-Walled Parts



Designation	Dimensions W±0.02	R	M	Tmax-r(1)	Tough ↔ Hard IC1008	IC908	IC807G	Recommended Machining Data f groove (mm/rev)
PENTA 24N050J000	0.50	0.00	4.00	1.00		•		0.02-0.04
PENTA 24N050J004	0.50	0.04	4.00	2.50	•			0.02-0.05
PENTA 24N080J000	0.80	0.00	4.00	1.60		•		0.02-0.05
PENTA 24N100J004	1.00	0.04	4.00	3.50		•		0.03-0.07
PENTA 24N100J006	1.00	0.06	4.00	3.50	•		•	0.03-0.07
PENTA 24N104J000	1.04	0.00	4.00	2.00		•		0.02-0.07
PENTA 24N120J000	1.20	0.00	4.00	2.00		•	•	0.03-0.07
PENTA 24N125J010	1.25	0.10	4.00	2.00		•		0.03-0.07
PENTA 24N140J000	1.40	0.00	4.00	2.00		•		0.03-0.08
PENTA 24N147J000	1.47	0.00	4.00	2.50		•		0.03-0.08
PENTA 24N150J010	1.50	0.10	4.00	5.00	•	•	•	0.03-0.10
PENTA 24N157J015	1.57	0.15	4.00	3.00		•	•	0.00-0.12
PENTA 24N170J010	1.70	0.10	4.00	3.00		•	•	0.03-0.12
PENTA 24N178J018	1.78	0.18	4.00	3.00		•	•	0.04-0.12
PENTA 24N185J015	1.85	0.15	4.00	3.00		•		0.04-0.12
PENTA 24N196J015	1.96	0.15	4.00	3.00		•	•	0.04-0.12
PENTA 24N200J020	2.00	0.20	4.00	6.00	•	•	•	0.04-0.12
PENTA 24N222J015	2.22	0.15	4.00	3.50		•	•	0.04-0.16
PENTA 24N230J020	2.30	0.20	4.00	3.50		•	•	0.04-0.16
PENTA 24N239J015	2.39	0.15	4.00	5.00		•	•	0.04-0.16
PENTA 24N247J020	2.47	0.20	4.00	5.00		•	•	0.04-0.16
PENTA 24N270J010	2.70	0.10	4.00	5.00		•		0.04-0.16
PENTA 24N287J020	2.87	0.20	4.00	6.50		•		0.04-0.16
PENTA 24N300J000	3.00	0.00	4.00	6.50		•		0.04-0.10
PENTA 24N300J020	3.00	0.20	4.00	6.50		•	•	0.04-0.16
PENTA 24N300J040	3.00	0.40	4.00	6.50		•	•	0.04-0.16
PENTA 24N315J015	3.15	0.15	4.00	6.50		•		0.04-0.16
PENTA 24N318J020	3.18	0.20	4.00	6.50		•	•	0.04-0.16
PENTA 24N330J010	3.30	0.10	5.00	6.40		•		0.04-0.16
PENTA 24N348J020	3.48	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N356J020	3.56	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N374J020	3.74	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N398J020	3.98	0.20	5.00	6.20		•		0.04-0.18
PENTA 24N400J040	4.00	0.40	5.00	6.20		•		0.04-0.18
PENTA 24N423J010	4.23	0.10	5.00	6.20		•		0.04-0.18

• (1)Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 340-351

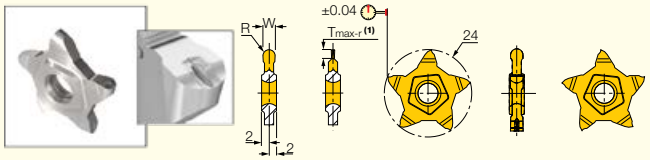
(1) For grooving and parting depth relative to part diameter, see page 273

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-J (full radius)

Precision Grooving Pentagonal Full Radius Inserts for Soft Materials



Designation	Dimensions W±0.02	R	Tmax-r(1)	Tough ↔ Hard IC908	IC807G	Recommended Machining Data f groove (mm/rev)
PENTA 24N100J050	1.00	0.50	3.50	•		0.03-0.07
PENTA 24N120J060	1.20	0.60	2.00	•		0.03-0.07
PENTA 24N140J070	1.40	0.70	2.00	•		0.05-0.08
PENTA 24N157J079	1.57	0.79	3.00	•	•	0.05-0.08
PENTA 24N200J100	2.00	1.00	3.00	•	•	0.05-0.12
PENTA 24N239J120	2.39	1.20	5.00	•		0.06-0.16
PENTA 24N300J150	3.00	1.50	6.50	•	•	0.06-0.20
PENTA 24N318J159	3.18	1.59	6.50	•		0.06-0.20
PENTA 24N400J200	4.00	2.00	6.25	•		0.06-0.20

• Recessing is possible only with 2.39 mm and wider inserts. • For cutting speed recommendations and user guide, see pages 340-351

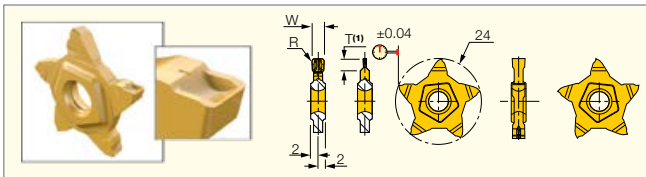
(1) For grooving depth relative to part diameter, see page 273

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-C

Parting and Grooving Inserts with 5 Cutting Edges for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150C010	1.50	0.10	5.00	•	0.05-0.11
PENTA 24N157C015	1.57	0.15	3.00	•	0.05-0.12
PENTA 24N178C018	1.78	0.18	3.00	•	0.05-0.14
PENTA 24N200C020	2.00	0.20	6.00	•	0.05-0.16
PENTA 24N230C020	2.30	0.20	3.50	•	0.06-0.17
PENTA 24N239C015	2.39	0.15	5.00	•	0.07-0.18
PENTA 24N247C020	2.47	0.20	5.00	•	0.08-0.20
PENTA 24N300C020	3.00	0.20	6.20	•	0.10-0.25
PENTA 24N300C040	3.00	0.40	6.20	•	0.10-0.25
PENTA 24N318C020	3.18	0.20	6.20	•	0.10-0.25

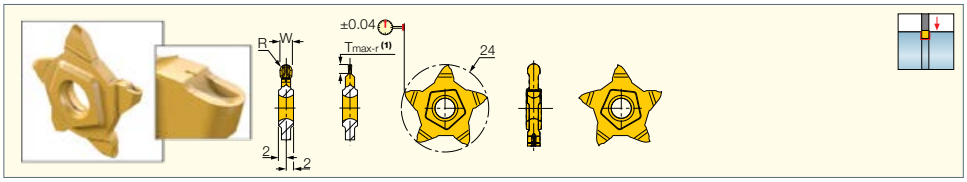
• (1)Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 340-351

(1) For grooving and parting depths relative to part diameter, see page 273

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-C (full radius)
Full Radius Grooving Inserts with 5 Cutting Edges for Hard Materials and Tough Applications

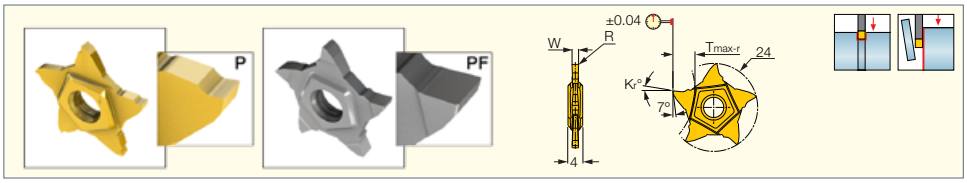


Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N200C100	2.00	1.00	3.00	●	0.04-0.16

• Recessing is possible only with 2.39 mm and wider inserts. • For cutting speed recommendations and user guide, see pages 340-351
(1) For grooving depth relative to part diameter, see page 273
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-PF/P
Pentagonal Inserts with a High Positive Flat Rake for Parting and Precision Grooving



Designation	Dimensions W±0.02	R	R±toler	Tmax-r(1)	Kr°	Tough ↔ Hard IC1008	IC908	IC30N	Recommended Machining Data f groove (mm/rev)
PENTA 24N100P005	1.00	0.05	0.020	3.50	12.0	●			0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.020	4.00	6.0		●	●	0.03-0.06
PENTA 24N150P005	1.50	0.05	0.020	5.00	12.0	●			0.02-0.07
PENTA 24N150PF020	1.50	0.20	0.030	6.00	6.0		●	●	0.03-0.09
PENTA 24N185PF020	1.85	0.20	0.030	6.00	6.0			●	0.03-0.10
PENTA 24N200P005	2.00	0.05	0.020	6.00	12.0	●			0.02-0.08
PENTA 24N200PF020	2.00	0.20	0.030	6.50	6.0		●	●	0.04-0.10
PENTA 24N239PF015	2.39	0.15	0.030	6.50	6.0		●		0.04-0.14
PENTA 24N250PF020	2.50	0.20	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N300PF020	3.00	0.20	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N400PF020	4.00	0.20	0.030	6.50	6.0			●	0.04-0.16

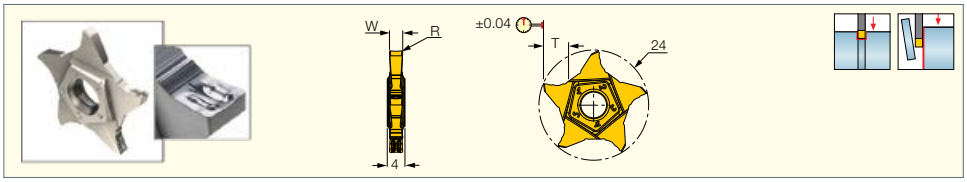
• For cutting speed recommendations and user guide, see pages 340-351
(1) For grooving and parting depths relative to part diameter, see page 273
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)



PENTACUT

PENTA 24N-Z

Inserts with 5 Cutting Edges for Grooving and Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150Z010	1.50	0.10	5.00	●	0.05-0.08
PENTA 24N200Z020	2.00	0.20	6.40	●	0.04-0.12
PENTA 24N300Z020	3.00	0.20	6.40	●	0.04-0.16

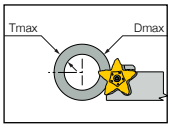
• Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds • For cutting speed recommendations and user guide, see pages 340-351

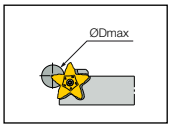
(1) For grooving and parting depths relative to part diameter, see page 273

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts

W±0.02	Tmax(3)	Tmax / Dmax	T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.5	T≤6.4
W=0.50 (1)	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-
W=0.50 (2)	2.5			250						
W=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-
W=1.00	3.5		N.L.	250	-	-	-	-	-	-
1.04≤W≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-
W=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-
W=1.50	5.0		N.L.	470	210	70	30	-	-	-
1.57≤W≤1.96	3.0		N.L.	-	-	-	-	-	-	-
W=2.00	6.0(4)		N.L.	470	210	130	75	45	20	-
2.22≤W≤2.30	3.5		N.L.	250	-	-	-	-	-	-
2.39≤W≤2.50	5.0		N.L.	470	210	70	30	-	-	-
2.70≤W≤3.18	6.4		N.L.	470	210	135	100	70	40	20





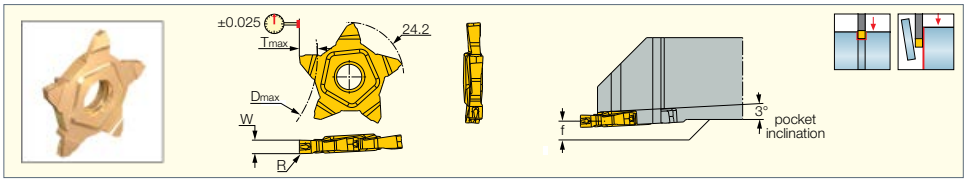
(1) Refers to PENTA 24N050J000 - a precision grooving insert (2) Refers to PENTA 24N050J004 - a parting insert (3) Dmax for parting = 2 x Tmax

(4) For full radius insert, Tmax = 3.0, Dmax = No limit

PENTACUT

PENTA 24N-J-RS

Parting and Precision Grooving Pentagonal Inserts for Next to High Shoulder Applications



Designation	Dimensions W±0.02	R	Tmax-r	D max	f	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N157J079RS	1.57	0.79	3.00	-	1.2	●	0.04-0.12
PENTA 24N200J020RS	2.00	0.20	3.00	-	1.0	●	0.04-0.12
PENTA 24N239J119RS	2.39	1.19	5.00	3.0	0.8	●	0.04-0.16
PENTA 24N300J020RS	3.00	0.20	6.20	16.0	0.4	●	0.04-0.16
PENTA 24N318J020RS	3.18	0.20	6.20	16.0	0.4	●	0.04-0.16
PENTA 24N318J159RS	3.18	1.59	6.20	16.0	0.4	●	0.04-0.16

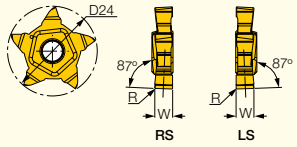
For tools, see pages: PCHRS/LS (267)

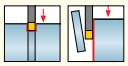
PENTACUT

PENTA 24N-RS/LS

Pentagonal Inserts for Parting and Precision Grooving Next to High Shoulder Applications







f - refer to inserts data

Designation	Dimensions W±0.02	R	Tmax-r	D max	f	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	1.60	- (1)	1.6	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	1.80	- (1)	1.5	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	2.00	- (1)	1.4	●	0.03-0.06
PENTA 24N157NF020R/LS	1.57	0.20	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N157NF079R/LS	1.57	0.79	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N200NF020R/LS	2.00	0.20	3.00	- (1)	1.0	●	0.03-0.10
PENTA 24N239NF020R/LS	2.39	0.20	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N239NF119R/LS	2.39	1.19	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N300NF020R/LS	3.00	0.20	6.20	16.0	0.5	●	0.04-0.14
PENTA 24N318NF020R/LS	3.18	0.20	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N318NF159R/LS	3.18	1.59	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N400NF020R/LS	4.00	0.20	6.50	13.0	1.0	●	0.04-0.16
PENTA 24N480NF020R/LS	4.80	0.20	6.50	13.0	1.6	●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 340-351

(1) No limit

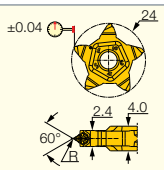
For tools, see pages: PCHRS/LS (267)

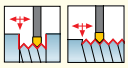
PENTACUT THREADING LINE

PENTA 24-ISO

ISO Metric Full Profile Pentagonal, External Threading Precision Ground Inserts with a Chipformer







Designation	Dimensions Pitch	R	IC908
PENTA 24-0.5-ISO	0.50	0.08	●
PENTA 24-0.75-ISO	0.75	0.11	●
PENTA 24-0.8-ISO	0.80	0.12	●
PENTA 24-1.0-ISO	1.00	0.14	●
PENTA 24-1.25-ISO	1.25	0.18	●
PENTA 24-1.5-ISO	1.50	0.22	●
PENTA 24-1.75-ISO	1.75	0.25	●
PENTA 24-2.0-ISO	2.00	0.28	●

• Dmin(mm)=5.435xP

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

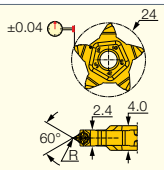


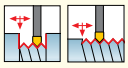
PENTACUT THREADING LINE

PENTA 24-UN

American UN (UNC, UNF, UNEF)
Full Profile, Pentagonal External
Threading Precision Ground
Inserts with a Chipformer







Designation	Dimensions TPI	R	IC908
PENTA 24-24-UN	24.0	0.13	•
PENTA 24-20-UN	20.0	0.16	•
PENTA 24-18-UN	18.0	0.18	•
PENTA 24-16-UN	16.0	0.21	•
PENTA 24-14-UN	14.0	0.23	•

• **Dmin(inch)=5.435/TPI** • **Tolerance:** Class 2A.

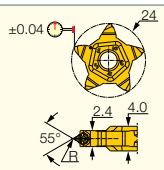
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

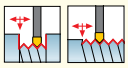
PENTACUT THREADING LINE

PENTA 24-W

Whitworth (BSW, BSF, BSP),
B.S.84-1956 DIN 259 Pentagonal
Full Profile, External Threading
Inserts with a Chipformer







Designation	Dimensions TPI	R	IC908
PENTA 24-28-W	28.0	0.09	•
PENTA 24-19-W	19.0	0.15	•
PENTA 24-14-W	14.0	0.21	•

• Dmin(inch)=5.435/TPI

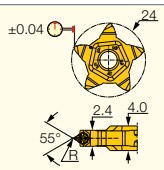
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

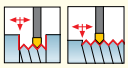
PENTACUT THREADING LINE

PENTA 24-BSPT

BSPT (British Standard Pipe)
Full Profile, Pentagonal External
Threading Precision Ground
Inserts with a Chipformer







Designation	Dimensions TPI	R	IC908
PENTA 24-19-BSPT	19.0	0.16	•
PENTA 24-14-BSPT	14.0	0.22	•

• Dmin(inch)=5.435/TPI

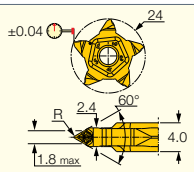
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

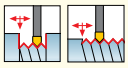
PENTACUT THREADING LINE

PENTA 24-MT

60° Partial Profile, Pentagonal External Threading Precision Ground Inserts







Designation	Dimensions			IC908
	P_{min}	P_{max}	R	
PENTA 24-MT-0.05	0.50	1.75	0.05	●
PENTA 24A-MT-0.05 (1)	0.50	1.75	0.05	●

• Pmax=0.175xD

(1) Flat rake (without a chipformer)

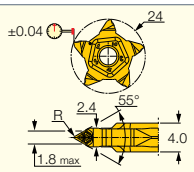
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

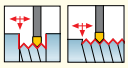
PENTACUT THREADING LINE

PENTA 24-WT

Whitworth 55° Partial Profile, Pentagonal External Threading Precision Ground Inserts with a Chipformer







Designation	Dimensions			IC908
	TPI max	TPI min	R	
PENTA 24-WT-0.05	48	14	0.05	●
PENTA 24A-WT-0.05 (1)	48	14	0.05	●

• TPImin=6.4/D(inch) D-nominal thread diameter (inch)

(1) Flat rake (without a chipformer)

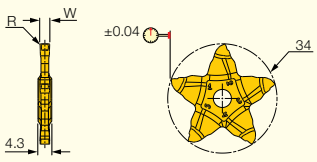
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

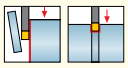
PENTACUT

PENTA 34N-PB

Parting and Grooving Pentagonal Inserts for Parting Bearing Steel and Other Ductile Materials







Designation	Dimensions			IC908	Recommended Machining Data
	$W^{\pm 0.02}$	R	T_{max-r} (1)		f groove (mm/rev)
PENTA 34N150PB015	1.50	0.15	8.50	●	0.03-0.06
PENTA 34N200PB020	2.00	0.20	8.50	●	0.03-0.08
PENTA 34N300PB020	3.00	0.20	9.50	●	0.03-0.10

• For cutting speed recommendations and user guide, see pages 340-351

(1) For grooving and parting depths relative to part diameter, see page 277

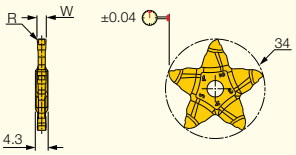
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

PENTACUT

PENTA 34N-C

Inserts with 5 Cutting Edges for Parting and Grooving Hard Materials, Tough and General Applications





Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150C015	1.50	0.15	8.00	•	0.03-0.07
PENTA 34N200C020	2.00	0.20	8.00	•	0.04-0.14
PENTA 34N200C100	2.00	1.00	8.00	•	0.05-0.16
PENTA 34N222C015	2.22	0.15	8.00	•	0.05-0.14
PENTA 34N230C020	2.30	0.20	8.00	•	0.05-0.14
PENTA 34N239C015	2.39	0.15	8.00	•	0.05-0.15
PENTA 34N239C120	2.39	1.20	8.00	•	0.05-0.18
PENTA 34N247C020	2.47	0.20	8.00	•	0.05-0.18
PENTA 34N250C020	2.50	0.20	8.00	•	0.05-0.18
PENTA 34N270C010	2.70	0.10	10.00	•	0.05-0.18
PENTA 34N287C020	2.87	0.20	10.00	•	0.05-0.18
PENTA 34N300C000	3.00	0.00	10.00	•	0.04-0.10
PENTA 34N300C020	3.00	0.20	10.00	•	0.06-0.22
PENTA 34N300C040	3.00	0.40	10.00	•	0.06-0.25
PENTA 34N300C150	3.00	1.50	10.00	•	0.06-0.20
PENTA 34N315C015	3.15	0.15	10.00	•	0.06-0.20
PENTA 34N318C020	3.18	0.20	10.00	•	0.06-0.22
PENTA 34N330C010	3.30	0.10	10.00	•	0.06-0.20
PENTA 34N348C020	3.48	0.20	10.00	•	0.06-0.25
PENTA 34N350C025	3.50	0.25	10.00	•	0.06-0.30
PENTA 34N398C020	3.98	0.20	10.00	•	0.06-0.30
PENTA 34N400C030	4.00	0.30	10.00	•	0.06-0.30

• For cutting speed recommendations and user guide, see pages 340-351

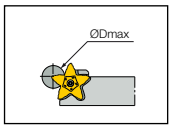
(1) For grooving and parting depths relative to part diameter, see page 277

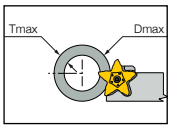
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts						
W±0.02	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤8.5	T≤9.0	T≤10.0
1.50 ≤ W ≤ 2.69	N.L.	350	165	100	55	-	-
2.70 ≤ W ≤ 4.00						55	20

Dmax for parting = 2 x Tmax

N.L. = No Limit





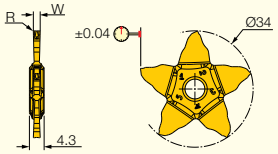


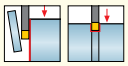
PENTACUT

PENTA 34N-J

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts







Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150J015	1.50	0.15	8.50	•	0.03-0.10
PENTA 34N200J020	2.00	0.20	8.50	•	0.04-0.12
PENTA 34N200J100	2.00	1.00	8.50	•	0.05-0.12
PENTA 34N239J015	2.39	0.15	8.50	•	0.04-0.16
PENTA 34N239J120	2.39	1.20	8.50	•	0.06-0.16
PENTA 34N250J020	2.50	0.20	8.50	•	0.04-0.16
PENTA 34N270J010	2.70	0.10	10.00	•	0.04-0.16
PENTA 34N300J000	3.00	0.00	10.00	•	0.04-0.10
PENTA 34N300J020	3.00	0.20	10.00	•	0.04-0.16
PENTA 34N300J040	3.00	0.40	10.00	•	0.04-0.16
PENTA 34N300J150	3.00	1.50	10.00	•	0.06-0.20
PENTA 34N318J020	3.18	0.20	3.18	•	0.20-0.16

• Recessing is possible only with 2.39 mm and wider inserts. • For cutting speed recommendations and user guide, see pages 340-351

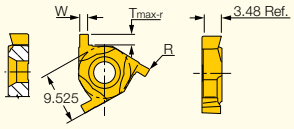
(1) For grooving and parting depths relative to part diameter, see page 277

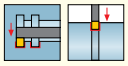
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

GTGA

Precision Shallow Grooving Inserts with 3 Cutting Edges







GTGA 16 ER/IL shown

Designation	Dimensions W±0.02	Tmax-r	R±0.03	Tough ↔ Hard IC528	IC508	Recommended Machining Data f groove (mm/rev)
GTGA 16EL/IR 100	1.00	1.55	0.10	•	•	0.02-0.03
GTGA 16ER/IL 100	1.00	1.55	0.10	•	•	0.02-0.03
GTGA 16EL/IR 120	1.20	1.60	0.10	•	•	0.02-0.03
GTGA 16ER/IL 120	1.20	1.60	0.10	•	•	0.02-0.03
GTGA 16EL/IR 140	1.40	1.80	0.10	•	•	0.02-0.04
GTGA 16ER/IL 140	1.40	1.80	0.10	•	•	0.02-0.04
GTGA 16EL/IR 170	1.70	2.00	0.10	•	•	0.03-0.05
GTGA 16ER/IL 170	1.70	2.00	0.10	•	•	0.03-0.05
GTGA 16EL/IR 195	1.95	2.00	0.10	•	•	0.03-0.06
GTGA 16ER/IL 195	1.95	2.00	0.10	•	•	0.03-0.06
GTGA 16EL/IR 225	2.25	2.10	0.10	•	•	0.04-0.06
GTGA 16ER/IL 225	2.25	2.10	0.10	•	•	0.04-0.06

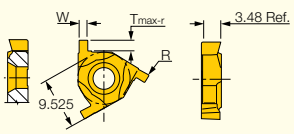
• Inserts for right-hand external grooving can be used as left-hand internal grooving. • Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools. • For cutting speed recommendations and user guide, see pages 340-351

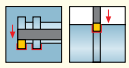
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529) • SIR/L (531)

GTMA

Utility Shallow Grooving Inserts with 3 Cutting Edges







GTMA 16 ER/IL shown

Designation	Dimensions W±0.05	Tmax-r	R±0.05	IC508	Recommended Machining Data f groove (mm/rev)
GTMA 16ER/IL 120	1.20	1.60	0.10	•	0.02-0.03
GTMA 16ER/IL 140	1.40	1.80	0.10	•	0.02-0.04
GTMA 16ER/IL 160	1.60	2.00	0.10	•	0.03-0.05
GTMA 16ER/IL 175	1.75	2.00	0.10	•	0.03-0.05
GTMA 16ER/IL 195	1.95	2.00	0.10	•	0.03-0.06
GTMA 16ER/IL 222	2.22	2.10	0.10	•	0.04-0.06

• Inserts for right-hand external grooving can be used as left-hand internal grooving. • Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools. • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: C#-SER/L (530) • SER/L (529) • SIR/L (531)

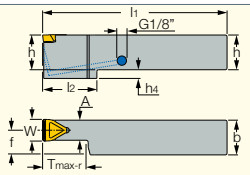
HEAVY DUTY

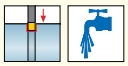


DOVE IQ GRIP TIGER LINE

THDR/L-IQ

External Holders for Wide Grooving Inserts





Left-hand shown

Designation	W	Tmax-r	h	b	l1	A	f	h4	l2
THDR/L 2525-10T20-IQ	10.00	20.00	25.0	25.0	170.00	9.20	20.4	8.0	30.0
THDR/L 3232-10T20-IQ	10.00	20.00	32.0	32.0	170.00	9.20	27.4	8.0	30.0
THDR/L 2525-12T20-IQ	12.00	20.00	25.0	25.0	170.00	11.00	19.5	8.0	30.0
THDR/L 3232-12T20-IQ	12.00	20.00	32.0	32.0	170.00	11.00	26.5	8.0	30.0
THDR/L 2525-14T20-IQ	14.00	20.00	25.0	25.0	170.00	13.00	18.5	8.0	30.0
THDR/L 3232-14T20-IQ	14.00	20.00	32.0	32.0	170.00	13.00	25.5	8.0	30.0
THDR/L 3232-16T40-IQ	16.00	40.00	32.0	32.0	170.00	14.80	24.6	8.0	48.0
THDR/L 4040-16T50-IQ	16.00	50.00	40.0	40.0	180.00	14.80	32.6	-	-
THDR/L 3232-18T40-IQ	18.00	40.00	32.0	32.0	170.00	16.50	23.8	8.0	48.0
THDR/L 4040-18T50-IQ	18.00	50.00	40.0	40.0	180.00	16.50	31.8	-	-
THDR/L 3232-20T40-IQ	20.00	40.00	32.0	32.0	170.00	18.00	23.0	8.0	48.0
THDR/L 4040-20T50-IQ	20.00	50.00	40.0	40.0	180.00	18.00	31.0	-	-

• For grooving only

For inserts, see pages: TIGER-IQ (281)



Spare Parts

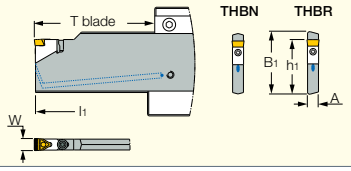
Designation				
THDR/L 2525-10T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-10T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 2525-12T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-12T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 2525-14T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-14T20-IQ	PIN 5.5	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-16T40-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 4040-16T50-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 3232-18T40-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 4040-18T50-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 3232-20T40-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 4040-20T50-IQ	PIN 6.5	SR M8-26393	BLD T20/S7	SW6-T

DOVE IQ GRIP TIGER LINE

THBR/L/N-IQ

Blades Carrying Cartridges for Wide Grooving Inserts







Designation	W	T blade	Tmax-r(1)	A	l1	h1	B1				
THBN 53K-10-IQ	10.00	100.0	93.00	9.00	260.00	45.2	52.6	SR M5X3.5PL	SGCU 341*	BLD IP20/S7	SW6-T
THBR/L 53K-12-IQ	12.00	100.0	93.00	10.80	260.00	45.2	52.6	SR M5X3.5PL	SGCU 341*	BLD IP20/S7	SW6-T
THBR/L 53K-14-IQ	14.00	100.0	93.00	12.60	260.00	45.2	52.6	SR M5X3.5PL	SGCU 341*	BLD IP20/S7	SW6-T

• For user guide, see pages 340-351

(1) If D (workpiece) is smaller than 200 mm, then Tmax=98, if D (workpiece) is larger than 200 mm, then Tmax=93.

* Optional, should be ordered separately

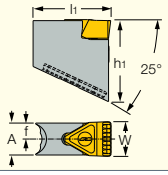
For tools, see pages: CR THDN-IQ (281)

DOVE IQ GRIP TIGER LINE

CR THDN-IQ

Cartridges for Blades Carrying Wide Grooving Inserts





Designation	W	f	h_1	l_1	A				
CR THDN-10-IQ	10.00	4.6	24.0	22.60	9.20	SR M6-26392	PIN 5.5	BLD T15/S7	SW6-T
CR THDN-12-IQ	12.00	5.5	23.7	23.60	11.00	SR M6-26392	PIN 5.5	BLD T15/S7	SW6-T
CR THDN-14-IQ	14.00	6.5	23.7	24.20	13.00	SR M6-26392	PIN 5.5	BLD T15/S7	SW6-T

• For user guide, see pages 340-351

For inserts, see pages: TIGER-IQ (281)

For holders, see pages: THBR/L/N-IQ (280)

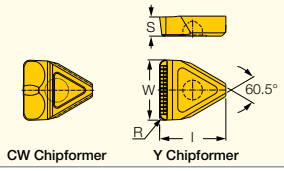
DOVE IQ GRIP TIGER LINE

TIGER-IQ

Utility Single-Ended Inserts for External Heavy Grooving and Deep Machining



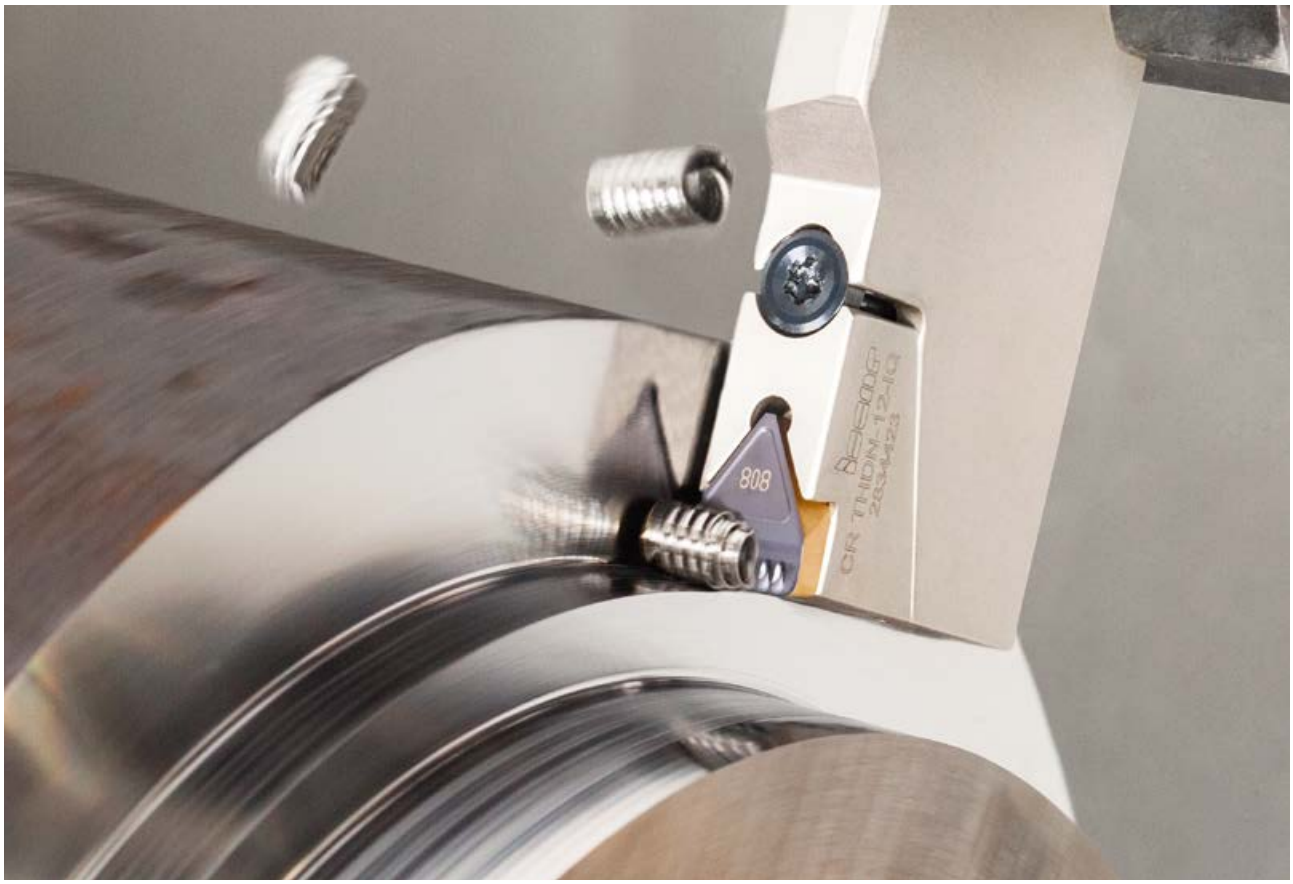




Designation	Dimensions W±0.08	R±0.05	S	l	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
TIGER 1008Y-IQ	10.00	0.80	5.05	13.30	•	•	0.20-0.35
TIGER 1212Y-IQ	12.00	1.20	5.05	14.00	•	•	0.20-0.40
TIGER 1415-CW-IQ	14.00	1.50	5.15	16.10		•	0.22-0.45
TIGER 1415Y-IQ	14.00	1.50	5.15	16.10	•	•	0.22-0.45
TIGER 1615Y-IQ	16.00	1.50	6.35	20.00	•	•	0.22-0.50
TIGER 1820Y-IQ	18.00	2.00	6.35	20.90	•	•	0.25-0.55
TIGER 2020-CW-IQ	20.00	2.00	6.35	22.00		•	0.25-0.60
TIGER 2020Y-IQ	20.00	2.00	6.35	22.00	•	•	0.25-0.60

• For cutting speed recommendations and user guide, see pages 340-351

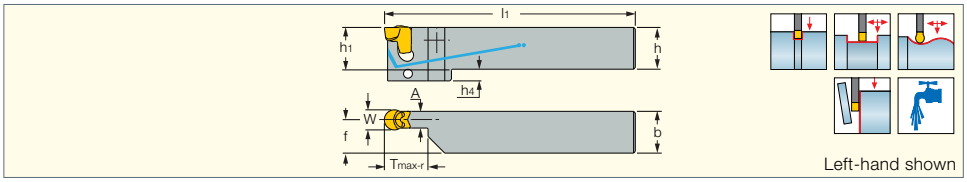
For tools, see pages: CR THDN-IQ (281) • THDR/L-IQ (280)



SUMO GRIP HEAVY DUTY LINE

TGBHR/L

Toolholders for Heavy Duty
Groove-Turn and Parting Applications



Designation	W	h	h1	b	A	l1	Tmax-r	f	h4
TGBHR/L 20C-6 (1)	6.00	20.0	20.0	20.0	5.20	135.00	12.00	17.4	5.0
TGBHR/L 25C-6 (1)	6.00	25.0	25.0	25.0	5.20	135.00	12.00	22.4	-
TGBHR/L 32C-6 (1)	6.00	32.0	32.0	32.0	5.20	150.00	12.00	29.4	-
TGBHR/L 25C-8	8.00	25.0	25.0	25.0	7.00	150.00	25.00	21.5	12.0
TGBHR/L 32C-8	8.00	32.0	32.0	32.0	7.00	170.00	30.00	28.5	5.0
TGBHR/L 25C-10	10.00	25.0	25.0	25.0	8.00	150.00	25.00	21.0	12.0
TGBHR/L 32C-10	10.00	32.0	32.0	32.0	8.00	170.00	30.00	28.0	5.0
TGBHR/L 25C-12	12.00	25.0	25.0	25.0	10.00	150.00	25.00	20.0	12.0
TGBHR/L 32C-12	12.00	32.0	32.0	32.0	10.00	170.00	30.00	27.0	5.0
TGBHR/L 25C-14T20	14.00	25.0	25.0	25.0	12.00	140.00	20.00	19.0	12.0
TGBHR/L 32C-14T40	14.00	32.0	32.0	32.0	12.00	170.00	40.00	26.0	5.0
TGBHR/L 40C-14T40	14.00	40.0	40.0	40.0	12.00	170.00	40.00	34.0	-

• The tools for the 14 mm inserts feature a 1/8" port thread for standard tube fittings • For user guide, see pages 340-351

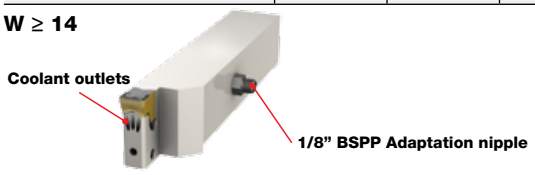
(1) For detailed depth capacity, see table below

For inserts, see pages: TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)

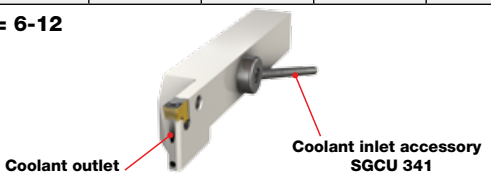
Depth Capacity for TGBHR/L...C-6

Tmax	28	26	24	22	20	18	16	14	12
Dmax	35	55	75	100	120	150	200	350	∞

W ≥ 14



W = 6-12



Spare Parts

Designation				
TGBHR/L 20C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 32C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-12	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-12	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-14T20	ETG 8-12*		PLG 1/8BSP TL360	JHP NIPPLE G1/8"-7/16"UNF*
TGBHR/L 32C-14T40	ETG 8-12*		PLG 1/8BSP TL360	JHP NIPPLE G1/8"-7/16"UNF*
TGBHR/L 40C-14T40	ETG 8-12*		PLG 1/8BSP TL360	JHP NIPPLE G1/8"-7/16"UNF*

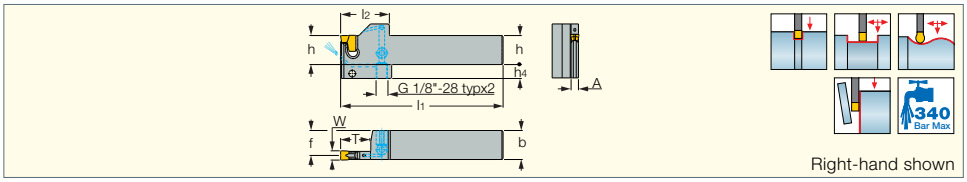
* Optional, should be ordered separately



SUMO-GRIP HEAVY DUTY LINE JETCUT

TGBHR/L-JHP

Grooving and Turning
SUMO-GRIP Tools with Channels
for High Pressure Coolant



Right-hand shown

Designation	h	W	b	l_2	A	l_1	T_{max-r}	f	h_4			
TGBHR/L 25-8-JHP	25.0	8.00	25.0	42.0	7.00	150.00	25.00	21.5	12.0	ETG 8-12*	PLG 1/8ISO1179	HW 5.0
TGBHR/L 32-8-JHP	32.0	8.00	32.0	42.0	7.00	170.00	25.00	28.5	12.0	ETG 8-12*	PLG 1/8ISO1179	HW 5.0

• For user guide see pages 340-355
* Optional, should be ordered separately
For inserts, see pages: TAG N-C/W/M (399) • TAGB/TAGBA (284)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
TGBHR/L-JHP	13-16	19-21	22-24

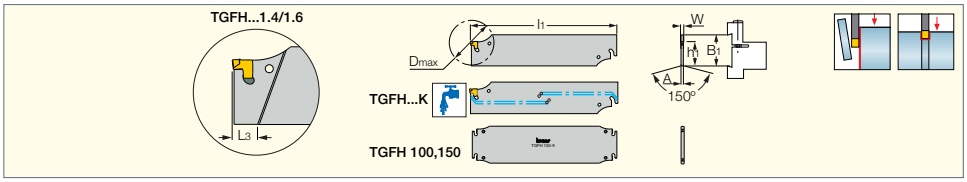
ETG 8-12 Extractor for 8 to 12.7 mm Inserts



TANG-GRIP PARTING LINE
SUMO-GRIP HEAVY DUTY LINE

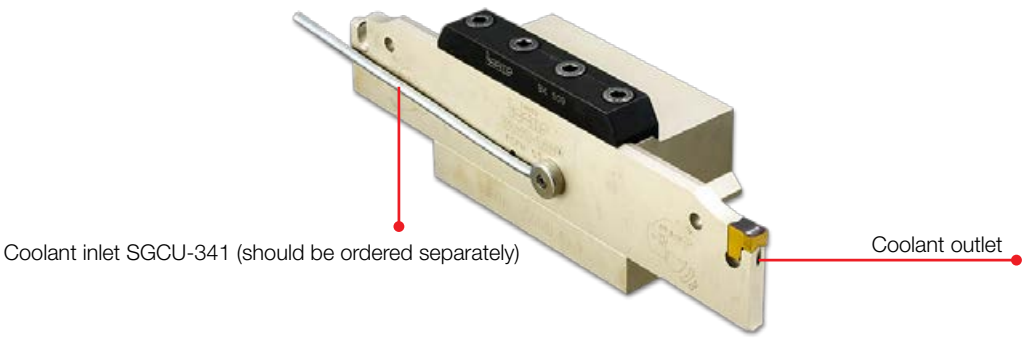
TGFH/R/L

Blades with a Tangentially Oriented
Pocket Carrying TANG-GRIP Single-
Ended Inserts for Parting and Grooving



Designation	B_1	W min	W max	A	l_1	L_3	h_1	D max		Insert		
TGFH 52K-8 (1)	52.6	7.70	8.50	7.20	190.00	-	45.2	190.0	Y	TAG 8	ETG 8-12*	
TGFH 53K-8 (1)	52.6	7.70	8.50	7.20	260.00	-	45.2	215.0	Y	TAG 8	ETG 8-12*	
TGFH 52K-9 (1)	52.6	8.70	10.00	8.20	190.00	-	45.2	190.0	Y	TAG 9	ETG 8-12*	
TGFH 53K-9 (1)	52.6	8.70	10.00	8.20	260.00	-	45.2	215.0	Y	TAG 9	ETG 8-12*	
TGFHR/L 53K-12 (1)	52.6	11.70	12.70	10.00	260.00	-	45.2	215.0	Y	TAG 12	ETG 8-12*	
TGFH 100-9	100.0	8.70	10.00	8.20	460.00	-	92.5	450.0	N	TAG 9	ETG 8-12*	
TGFH 100-12	100.0	11.70	12.70	10.00	460.00	-	92.5	450.0	N	TAG 12	ETG 8-12*	
TGFH 150-12	150.0	11.70	12.70	10.00	610.00	-	142.5	600.0	N	TAG 12	ETG 8-12*	

• For user guide, see pages 340-351
(1) With coolant holes, the recommended coolant pressure is 10 bar min.; cooling tube SGCU 341 should be ordered separately
* Optional, should be ordered separately
(2) Thickness beyond the D.O.C. area is 2.50 mm
(3) Thickness beyond the D.O.C. area is 1.60 mm
For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)
For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

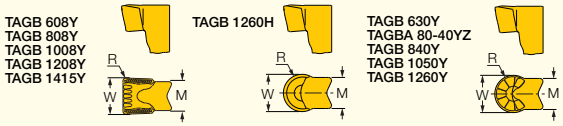


SUMO-GRIP HEAVY DUTY LINE

TAGB/TAGBA

Single-Ended Utility Inserts for Grooving, Turning and Parting





Designation	Dimensions W	W tol(±)	R±0.05	M	Tough ↔ Hard IC8250	IC808	IC07	IC806	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
TAGB 608Y	6.00	0.05	0.80	5.20		●		●		1.00-3.60	0.20-0.60	0.18-0.30
TAGB 630Y	6.00	0.05	3.00	5.20		●		●		0.00-3.00	0.25-0.55	0.18-0.32
TAGB 808Y	8.00	0.05	0.80	6.20	●	●		●	●	1.00-5.60	0.25-0.55	0.18-0.32
TAGB 840Y (1)	8.00	0.05	4.00	6.20	●	●		●	●	0.00-4.00	0.24-0.67	0.18-0.32
TAGBA 80-40YZ (1)	8.00	0.05	4.00	6.00			●			0.00-4.00	0.40-0.70	0.25-0.40
TAGB 1008Y	10.00	0.05	0.80	8.00	●	●				1.00-7.00	0.30-0.70	0.22-0.40
TAGB 1050Y (2)	10.00	0.05	5.00	8.00	●	●				0.00-5.00	0.30-0.85	0.22-0.40
TAGB 1208Y	12.00	0.07	0.80	10.00	●	●				1.00-8.40	0.35-0.85	0.26-0.48
TAGB 1260Y (2)	12.00	0.07	6.00	10.00	●	●				0.00-6.00	0.35-0.90	0.26-0.48
TAGB 1260H (2)	12.00	0.07	6.00	10.00	●	●				0.00-6.00	0.45-1.00	0.35-0.55
TAGB 1415Y	14.00	0.07	1.50	12.00	●	●				1.80-8.40	0.35-0.85	0.26-0.50

• H-type chipformer with a negative T-land for machining heavy interrupted applications and cast iron parts • For cutting speed recommendations and user guide, see pages 340-351

(1) Blade's pocket must be modified

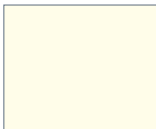
(2) Tool's pocket must be modified

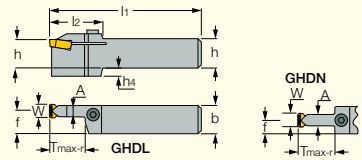
For tools, see pages: TGBHR/L (282) • TGBHR/L-JHP (283) • TGFH-JHP (390) • TGFH/R/L (283) • TGSU (392) • TGTR/L-IQ (396)

CUT-GRIP

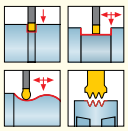
GHDR/L/N 12/14

External Tools for Wide Grooving Inserts





Right-hand shown



Left-hand shown

Designation	W min	W max	Tmax-r	h	b	l1	f	A	l2	h4	Insert		
GHDR/L 32-12	12.00	14.53	30.00	32.0	32.0	170.00	27.3	9.50	50.0	-	GIMY 1260,TIGER 1453	SR M8X20DIN912	HW 6.0
GHDR/L 2525-14T12	13.00	17.40	12.00	25.0	25.0	150.00	19.0	12.00	41.0	-	TIGER/GPV 14/16/17	SR M8X20DIN912	HW 6.0
GHDR/L 3232-14T12	13.00	17.40	12.00	32.0	32.0	170.00	26.0	12.00	41.0	-	TIGER/GPV 14/16/17		
GHDR/L 3232-14T38	13.00	17.40	38.00	32.0	32.0	170.00	26.0	12.00	59.0	8.0	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDN 3232-14T38	13.00	17.40	38.00	32.0	32.0	170.00	16.0	12.00	57.5	8.0	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDR/L 4040-14T38	13.00	17.40	38.00	40.0	40.0	170.00	34.0	12.00	59.0	-	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDN 4040-14T45	14.50	17.40	45.00	40.0	40.0	170.00	20.0	12.00	55.5	-	TIGER 14/16/17	SR 76-1289	HW 5.0

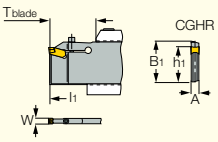
• For user guide, see pages 340-351

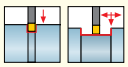
For inserts, see pages: GIMY 1260 (247) • GPV (259) • TIGER (285)

CUT-GRIP

CGHR/L-12-14D

Deep Machining Screw-Clamped Blades for Wide Grooving and Heavy Turning Applications





Designation	W min	W max	T blade	Tmax-r(1)	A	l1	h1	B1		
CGHR/L 53-12D	12.00	14.50	100.0	93.00	9.50	260.00	45.0	52.6	SR 76-4002	HW 5.0
CGHR/L 53-14D	12.50	17.40	100.0	93.00	11.10	260.00	45.0	52.6	SR M6X25 DIN912	HW 5.0

• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

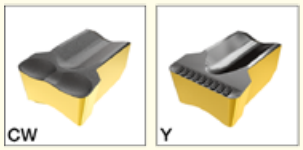
For inserts, see pages: GIMY 1260 (247) • TIGER (285)

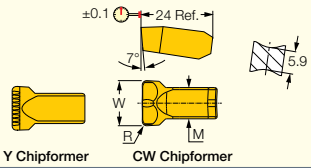
For holders, see pages: SGTBK (473) • SGTBU/SGTBN (472)

CUTGRIP

TIGER

Utility Single-Ended Inserts for External Heavy Grooving and Deep Machining





Designation	Dimensions W	W tol(±)	R	R±toler	M	l	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
TIGER 1453-152	14.53	0.08	1.52	0.050	10.00	24.00	●	●	●	0.22-0.44
TIGER 1453-152-CW	14.53	0.08	1.52	0.050	10.00	24.00		●		0.15-0.50
TIGER 16.63-1.52	16.63	0.02	1.52	0.050	12.70	24.00		●		0.25-0.50
TIGER 1740-200	17.40	0.08	2.00	0.100	12.70	24.00		●		0.26-0.52

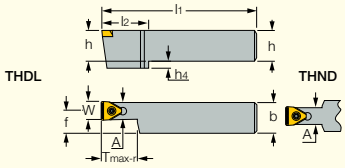
• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: CGHR/L-12-14D (284) • GHDR/L/N 12/14 (284)

CUTGRIP

THDR/L/N

External Holders for Wide Grooving Inserts



Right-hand shown

Left-hand shown

Designation	W	Tmax-r	h	b	l1	A	f	h4	l2	Insert			
THDR 3232-17T38	17.00	38.00	32.0	32.0	170.00	16.00	24.0	8.0	50.0	TIGERV 1740	SR 14-519	BLD T20/M7	SW6-T
THDR/L 4040-17T45	17.00	45.00	40.0	40.0	170.00	15.00	32.5	-	-	TIGERV 1740	SR 14-519	BLD T20/M7	SW6-T
THDR/L 3232-20T38	20.06	38.00	32.0	32.0	170.00	17.50	23.3	8.0	50.0	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDN 3232-20T38	20.06	38.00	32.0	32.0	170.00	17.50	16.0	8.0	50.0	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDR/L 4040-20T45	20.06	45.00	40.0	40.0	170.00	17.50	31.3	-	-	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDN 4040-20T45	20.06	45.00	40.0	40.0	170.00	17.50	20.0	-	-	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T

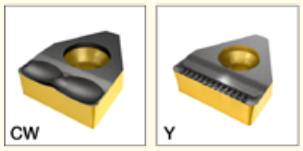
• For grooving only

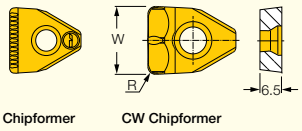
For inserts, see pages: TIGERV (285)

CUTGRIP

TIGERV

Utility Single-Ended Inserts for External Heavy Grooving and Deep Machining





Designation	Dimensions W±0.08	R±0.05	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
TIGERV 1700-200-CW	17.00	2.00		●		0.20-0.60
TIGERV 2006-152	20.06	1.52	●	●	●	0.30-0.60

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: THDR/L/N (285)



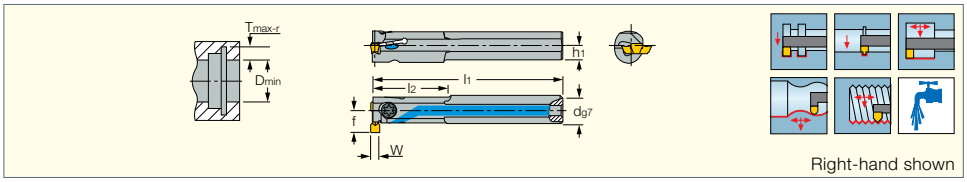
INTERNAL TOOLS AND INSERTS



CUTGRIP

GEHIMR/L

Internal Machining Boring Bars with Coolant Holes for Insert Widths Less than 1.9 mm



Right-hand shown

Designation	W min	W max(1)	d	D min	Tmax-r	l1	l2	f	h1	Inlet			
GEHIMR/L 10-13	0.80	1.90	10.00	12.50	2.50	125.00	25.0	7.6	5.0	3.5 mm	SR 16-236	T-15/5	
GEHIMR/L 12-14	0.80	1.90	12.00	14.00	2.50	150.00	35.0	9.0	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIMR/L 16-13	0.80	1.90	16.00	12.50	2.50	125.00	20.0	10.6	7.5	M6 (2)	SR 16-236	T-15/5	PL 16
GEHIMR/L 16-14	0.80	1.90	16.00	14.00	2.50	125.00	25.0	10.9	7.5	M6 (2)	SR 16-236	T-15/5	PL 16
GEHIMR/L 16-16	0.80	1.90	16.00	16.00	2.50	160.00	40.0	10.5	7.5	M6 (2)	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 340-351

(1) Plastic seal with M6 thread.

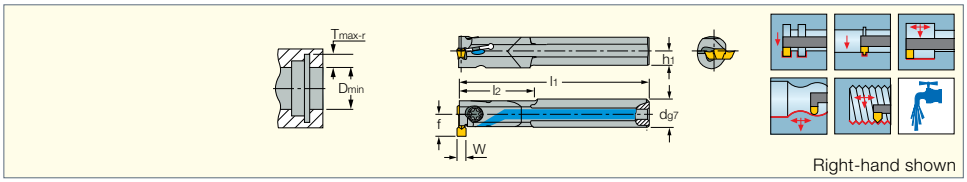
(2) Plastic seal with M6 thread.

For inserts, see pages: GEPI (291) • GEPI (W<M) (290) • GEPI-MT (292) • GEPI-RX/LX (292) • GEPI-WT (293)

CUTGRIP

GEHIMR/L-SC

Internal Machining Solid Carbide Bars with Coolant Holes for Insert Widths Less than 1.9 mm



Right-hand shown

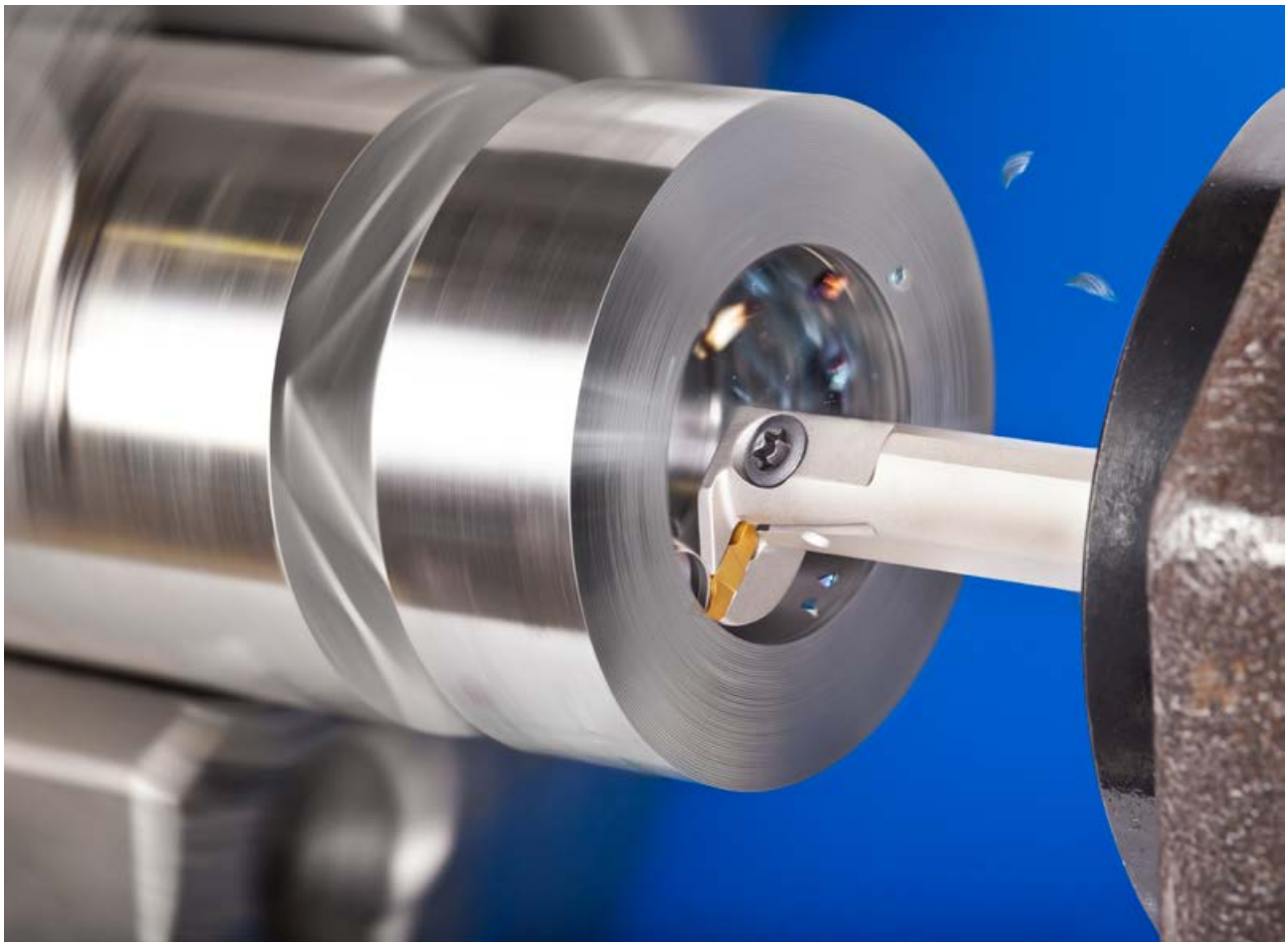
Designation	W min	W max(1)	d	D min	Tmax-r	l1	l2	f	h1	Inlet			
GEHIMR/L 10SC-13	0.80	1.90	10.00	12.50	2.50	125.00	30.0	7.6	5.0	3.5 mm	SR 16-236	T-15/5	
GEHIMR/L 12SC-14	0.80	1.90	12.00	14.00	2.50	125.00	40.0	9.0	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIMR/L 16SC-13	0.80	1.90	16.00	12.50	2.50	125.00	35.0	10.6	7.5	M6 (2)	SR 16-236	T-15/5	PL 16
GEHIMR/L 16SC-16	0.80	1.90	16.00	16.00	2.50	160.00	70.0	10.5	7.5	M6 (2)	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 340-351

(1) Plastic seal with M6 thread.

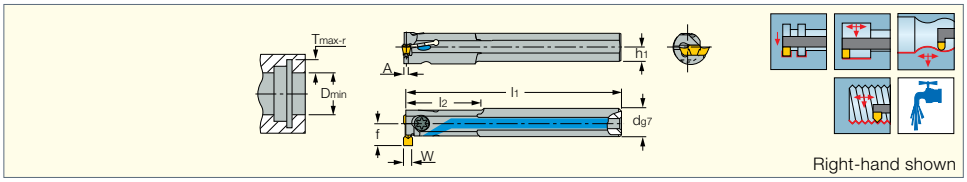
(2) Plastic seal with M6 thread.

For inserts, see pages: GEPI (291) • GEPI (W<M) (290) • GEPI-MT (292) • GEPI-RX/LX (292) • GEPI-WT (293)



CUTGRIP

GEHIR/L
Internal Machining Bars
with Coolant Holes



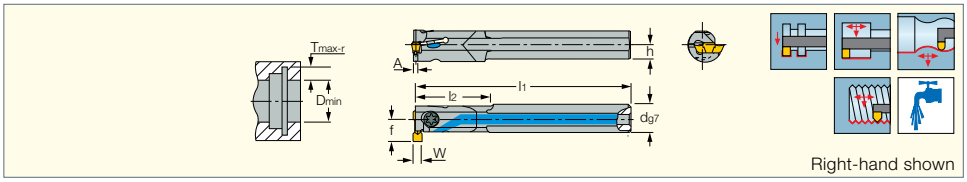
Right-hand shown

Designation	W min	W max	d	D min	Tmax-r	l1	l2	f	A	h1	Inlet			
GEHIR/L 10-11.5-2-T3	1.90	2.40	10.00	11.50	3.00	125.00	25.0	8.8	1.60	5.0	3.5 mm	SR 14-513	T-8/5	
GEHIR/L 10-13-2-T2.4	1.90	2.40	10.00	12.50	2.40	125.00	25.0	7.5	1.60	5.0	3.5 mm	SR 16-236	T-15/5	
GEHIR/L 12-11.5-2-T3	1.90	2.40	12.00	11.50	3.00	125.00	20.0	11.6	1.60	6.0	6.0 mm			
GEHIR/L 12-14-2-T2.6	1.90	2.40	12.00	14.00	2.60	150.00	35.0	9.1	1.60	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIR/L 12-14-2-T4	1.90	2.40	12.00	14.00	4.00	150.00	35.0	10.3	1.60	6.0	6.0 mm	SR 14-562	T-10/5	
GEHIR/L 12-15-2-T6	1.90	2.40	12.00	15.00	6.00	150.00	29.0	12.3	1.60	6.0	6.0 mm	SR 14-513	T-8/5	
GEHIR/L 16-11.5-2-T3	1.90	2.40	16.00	11.50	3.00	125.00	20.0	11.6	1.60	7.5	M6 (1)	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-2-T2.4	1.90	2.40	16.00	12.50	2.40	125.00	20.0	10.5	1.60	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T2.6	1.90	2.40	16.00	14.00	2.60	125.00	25.0	11.0	1.60	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T4	1.90	2.40	16.00	14.00	4.00	125.00	25.0	12.4	1.60	7.5	M6 (1)	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-2-T3	1.90	2.40	16.00	16.00	3.00	160.00	40.0	11.0	1.60	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-2-T8	1.90	2.40	16.00	20.00	8.00	160.00	40.0	16.1	1.60	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16
GEHIR/L 12-14-3-T2.6	2.40	3.20	12.00	14.00	2.60	150.00	35.0	9.1	2.00	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIR/L 12-14-3-T4	2.40	3.20	12.00	14.00	4.00	150.00	35.0	10.3	2.00	6.0	6.0 mm	SR 14-562	T-10/5	
GEHIR/L 12-15-3-T6	2.40	3.20	12.00	15.00	6.00	150.00	29.0	12.3	2.00	6.0	6.0 mm	SR 14-513	T-8/5	
GEHIR/L 16-11.5-3-T3	2.40	3.20	16.00	11.50	3.00	125.00	20.0	11.6	2.00	7.5	M6 (1)	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-3-T2.4	2.40	3.20	16.00	12.50	2.40	125.00	20.0	10.5	2.00	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T2.6	2.40	3.20	16.00	14.00	2.60	125.00	25.0	11.0	2.00	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T4	2.40	3.20	16.00	14.00	4.00	125.00	25.0	12.4	2.00	7.5	M6 (1)	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-3-T3	2.40	3.20	16.00	16.00	3.00	160.00	40.0	11.0	2.00	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-3-T8	2.40	3.20	16.00	20.00	8.00	160.00	40.0	16.1	2.00	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 340-351
(1) Plastic seal with M6 thread
For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI-MT (292) • GEPI-WT (293)

CUTGRIP

GEHIR/L-SC
Internal Machining Solid Carbide
Bars with Coolant Holes



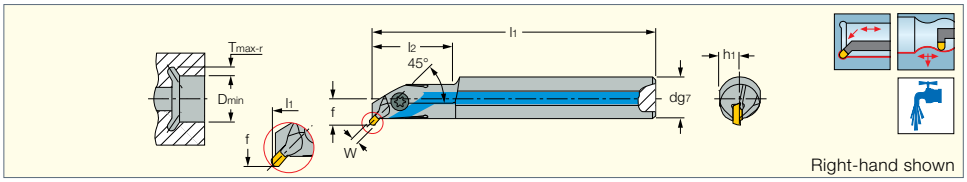
Right-hand shown

Designation	W min	W max	d	D min	Tmax-r	l1	l2	f	A	h1	Inlet			
GEHIR/L 10SC-13-2	1.90	2.40	10.00	12.50	2.40	125.00	30.0	7.5	1.60	5.0	3.5 mm	SR 16-236	T-15/5	
GEHIR 12SC-14-2	1.90	2.40	12.00	14.00	2.60	125.00	40.0	9.1	1.60	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIR/L 16SC-16-2	1.90	2.40	16.00	16.00	3.00	160.00	70.0	11.0	1.60	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16
GEHIR 12SC-14-3	2.40	3.20	12.00	14.00	2.60	125.00	40.0	9.1	2.00	6.0	6.0 mm	SR 16-236	T-15/5	
GEHIR 16SC-13-3	2.40	3.20	16.00	12.50	2.40	125.00	35.0	10.5	2.00	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16SC-14-3	2.40	3.20	16.00	14.00	2.60	140.00	40.0	11.0	2.00	7.5	M6 (1)	SR 16-236	T-15/5	PL 16
GEHIR/L 16SC-16-3	2.40	3.20	16.00	16.00	3.00	160.00	70.0	11.0	2.00	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 340-351
(1) Plastic seal with M6 thread
For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI-MT (292) • GEPI-WT (293)

CUTGRIP

GEHIUR/L
Undercutting and Turning Boring
Bars with Coolant Holes



Right-hand shown

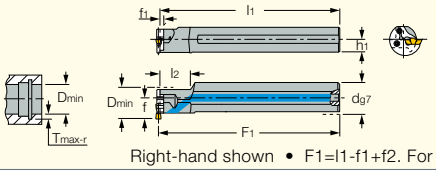
Designation	W max	d	D min	Tmax-r	l1	l2	f	h1	Inlet			
GEHIUR/L 12U	3.20	12.00	14.00	2.00	125.00	20.0	8.7	6.0	6.0 mm	SR 16-236 P	T-15/5	
GEHIUR/L 16U	3.20	16.00	16.00	2.00	125.00	32.0	9.7	7.5	M6 (1)	SR M5-04451	T-20/5	PL 16

• For profiling use GEPI (full radius) inserts only, for undercutting use GEPI - UN/UR/UL.
(1) Plastic seal with M6 thread.
For inserts, see pages: GEPI (full radius) (291) • GEPI-UN/UR/UL (292)

CUTGRIP

GHAIR/L-GE

Bars with Coolant Holes for Internal Grooving and Turning Adapters



Right-hand shown • F1=l1-f1+f2. For f2 dimension, see GEAIR/L adapters.

Designation	d	l2	l1	f	h1	f1	Adapter			
GHAIR/L 16-20	16.00	-	150.00	11.5	7.5	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 16
GHAIR/L 20-20	20.00	20.0	150.00	13.5	9.0	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 20
GHAIR/L 25-20	25.00	25.0	200.00	16.0	11.5	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 25
GHAIR/L 32-20	32.00	32.0	200.00	19.5	14.5	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 32
GHAIR/L 20-25	20.00	-	150.00	14.5	9.0	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 20
GHAIR/L 25-25	25.00	25.0	200.00	17.0	11.5	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 25
GHAIR/L 32-25	32.00	32.0	200.00	20.5	14.5	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 32

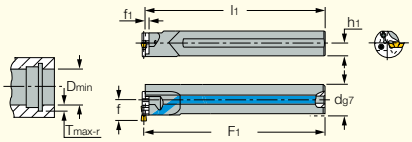
• For Dmin & Tmax refer to GEAIR/L adapters.

For tools, see pages: GEAIR/L (289)

CUTGRIP

GHAIR/L-SC-GE

Solid Carbide Bars with Coolant Holes for Internal Grooving and Turning Adapters



Right-hand shown • F1=l1-f1+f2. For f2 dimension, see GEAIR/L adapters.

Designation	d	D min	Tmax-r	l1	f	h1	f1	Adapter			
GHAIR 20SC-20	20.00	25.00	3.00	200.00	13.5	9.0	2.4	GEAIR/L 20-...	SR 76-2057	T-8/5	PL 20
GHAIR/L 25SC-25	25.00	31.00	4.00	200.00	17.0	11.5	2.4	GEAIR/L 25-...	SR 16-236 P	T-15/5	PL 25

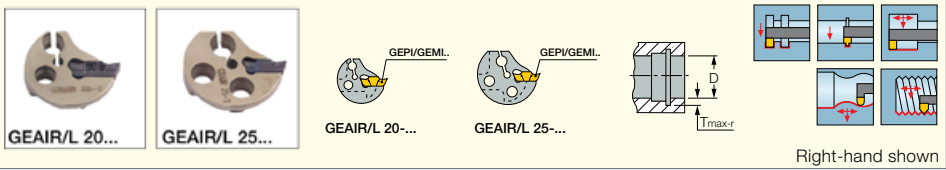
• For D min & T max refer to GEAIR/L adapters.

For tools, see pages: GEAIR/L (289)

CUTGRIP

GEAIR/L

Internal Grooving and Turning Adapters



Right-hand shown

Designation	D min	W min	W max	Tmax-r	f2	A
GEAIR/L 20-2	20.00	1.90	2.40	3.00	3.40	1.60
GEAIR/L 20-3	20.00	2.40	3.00	3.00	3.60	2.00
GEAIR/L 20-4	20.00	3.00	4.00	3.00	3.90	2.50
GEAIR/L 25-2	25.00	1.90	2.40	4.00	3.40	1.60
GEAIR/L 25-3	25.00	2.40	3.00	4.00	3.60	2.00
GEAIR/L 25-4	25.00	3.00	4.00	4.00	3.90	2.50

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

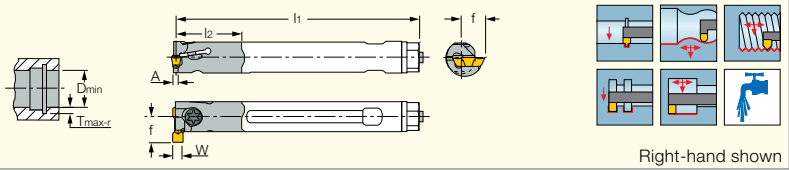
For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI-MT (292) • GEPI-WT (293)

For holders, see pages: GHAIR/L-GE (289) • GHAIR/L-SC-GE (289)

CUTGRIP

E-GEHIR / E-GHIR

Interchangeable Heads for Internal Grooving and Turning



Right-hand shown

Designation	W min	W max	D min	Tmax-r	l1	l2	f	A	Insert		
E12 GEHIR 16-1	1.50	1.90	16.00	2.20	174.00	21.0	9.0	1.20	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-2	1.90	2.40	16.00	2.20	174.00	21.0	9.0	1.60	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-3	2.40	3.00	16.00	2.20	174.00	21.0	9.0	2.00	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E16 GHIR 25-3	2.40	3.00	25.00	4.00	209.00	28.7	12.8	2.00	GIPI,GIMIY,GIFI,TIPI	SR M5-04451	T-20/5

• Left-hand heads on request • The shank assembly is the same for right- and left-hand heads • For user guide, see pages 340-351

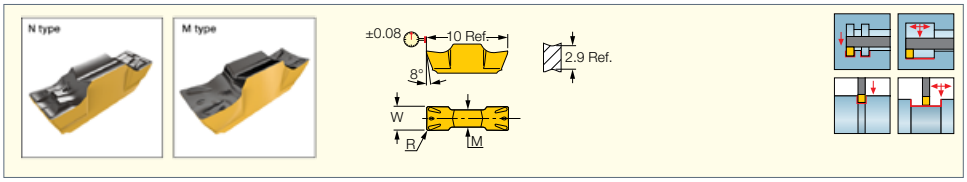
For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI (W<M) (290) • GEPI-MT (292) • GEPI-WT (293) • GIMIY (295) • GINI-E (297) • GIPI (297) • GIPI-E (296)

For holders, see pages: E-SHANK (78)

CUTGRIP

GEMI

Utility Double-Ended Inserts for Internal and External Grooving and Turning



Designation	Dimensions W±0.04	R±0.05	M	Tough ↔ Hard IC808	IC908	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GEMI 2002N	2.00	0.20	1.60	●			0.25-0.80	0.05-0.10	0.04-0.08
GEMI 3002M	3.00	0.20	2.20	●	●		0.25-1.30	0.10-0.14	0.05-0.09
GEMI 3002N	3.00	0.20	2.20	●		●	0.25-1.00	0.07-0.12	0.04-0.08

• GEMI N inserts for ductile materials and low feed • Dmin for internal application=11.5 mm

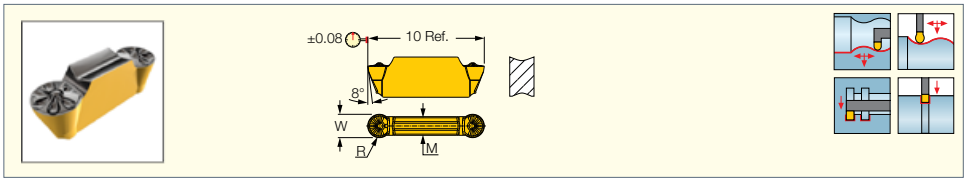
• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

CUTGRIP

GEMI (full radius)

Utility Double-Ended Full Radius Inserts for Internal and External Grooving and Profiling



Designation	Dimensions W±0.04	R±0.05	M	IC808	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GEMI 2010Y	2.00	1.00	1.60	●	0.10-1.00	0.06-0.12	0.03-0.08
GEMI 3015Y	3.00	1.50	2.20	●	0.10-1.50	0.10-0.18	0.05-0.10

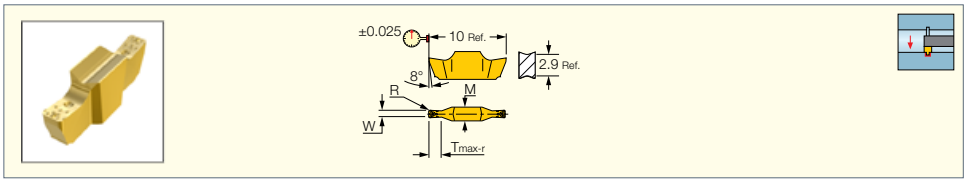
• Dmin for internal application=11.5 mm • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

CUTGRIP

GEPI (W<M)

Precision Ground Double-Ended Inserts for Internal Grooving



Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC528	IC08	IC908	Recommended Machining Data f groove (mm/rev)
GEPI 1.00-0.10	1.00	0.10	1.60	1.80	●	●	●	0.01-0.03
GEPI 1.00-0.50	1.00	0.50	1.60	1.80			●	0.01-0.04
GEPI 1.04-0.00	1.04	0.00	1.60	1.80	●	●	●	0.01-0.03
GEPI 1.20-0.00	1.20	0.00	1.80	1.80	●	●	●	0.01-0.03
GEPI 1.25-0.10	1.25	0.10	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.40-0.00	1.40	0.00	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.47-0.00	1.47	0.00	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.50-0.10	1.50	0.10	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.57-0.15	1.57	0.15	2.00	1.80	●	●	●	0.02-0.05
GEPI 1.70-0.05	1.70	0.05	2.50	1.80	●	●	●	0.02-0.05
GEPI 1.78-0.15	1.78	0.15	2.50	1.80	●	●	●	0.02-0.05

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Dmin for internal application=11.5mm

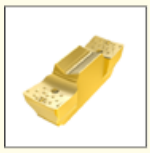
• For cutting speed recommendations and user guide, see pages 340-351

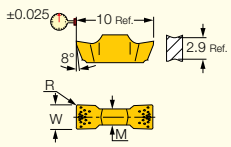
For tools, see pages: E-GEHIR / E-GHIR (289) • GEHIMR/L (287) • GEHIMR/L-SC (287)

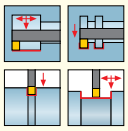
CUTGRIP

GEPI

Precision Ground Double-Ended Inserts for Internal and External Grooving







Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC528	IC08	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 1.85-0.10 (1)	1.85	0.10	2.50	1.80	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.10	1.96	0.10	2.50	1.80	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.15	1.96	0.15	2.50	1.80	●		●	0.20-0.50	0.05-0.07	0.03-0.05
GEPI 2.00-0.10	2.00	0.10	9.00	1.80	●	●	●	0.15-0.60	0.05-0.07	0.03-0.05
GEPI 2.22-0.10	2.22	0.10	9.00	1.80	●	●	●	0.15-0.60	0.06-0.08	0.04-0.06
GEPI 2.22-0.15	2.22	0.15	9.00	1.80	●			0.20-0.60	0.06-0.08	0.04-0.06
GEPI 2.39-0.10	2.39	0.10	9.00	2.20	●			0.15-1.00	0.07-0.09	0.04-0.06
GEPI 2.39-0.15	2.39	0.15	9.00	2.20	●	●	●	0.20-1.00	0.07-0.09	0.04-0.06
GEPI 2.47-0.20	2.47	0.20	9.00	2.20	●	●	●	0.25-1.10	0.08-0.11	0.04-0.07
GEPI 2.50-0.10	2.50	0.10	9.00	2.20	●			0.15-1.10	0.07-0.09	0.04-0.07
GEPI 2.50-0.20	2.50	0.20	9.00	2.20	●	●	●	0.25-1.10	0.08-0.11	0.05-0.08
GEPI 2.70-0.20	2.70	0.20	9.00	2.20	●	●	●	0.25-1.20	0.09-0.12	0.05-0.08
GEPI 3.00-0.20	3.00	0.20	9.00	2.20	●	●	●	0.25-1.30	0.10-0.14	0.05-0.09
GEPI 3.18-0.20	3.18	0.20	9.00	2.20	●		●	0.25-1.40	0.11-0.14	0.06-0.10

• Dmin for internal application=11.5mm • For cutting speed recommendations and user guide, see pages 340-351

(1) Tool pocket should be modified

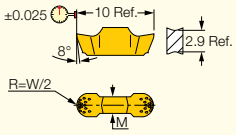
For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIMR/L (287) • GEHIMR/L-SC (287) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

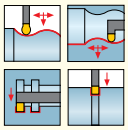
CUTGRIP

GEPI (full radius)

Precision Double-Ended Full Radius Inserts for Internal and External Profiling and Grooving







Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC528	IC08	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 2.00-1.00	2.00	1.00	5.00	1.80	●	●	●	0.00-0.60	0.08-0.12	0.04-0.07
GEPI 3.00-1.50	3.00	1.50	5.00	2.20	●	●	●	0.00-1.50	0.13-0.20	0.05-0.11
GEPI 3.18-1.59	3.18	1.59	5.00	2.20	●	●	●	0.00-1.59	0.13-0.21	0.06-0.11

• Dmin for internal application=11.5mm • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHIUR/L (288) • GEHSR (311) • GEHSR/L-SL (311)

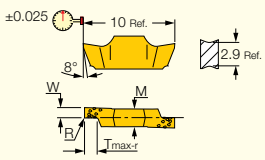


CUTGRIP

GEPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to Shoulder







Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC528	IC908	Recommended Machining Data f groove (mm/rev)
GEPI 0.80-0.00RX	0.80	0.00	1.50	1.80		•	0.01-0.02
GEPI 1.00-0.10 LX	1.00	0.10	1.50	1.80	•		0.01-0.03
GEPI 1.00-0.10 RX	1.00	0.10	1.50	1.80	•		0.01-0.03
GEPI 1.57-0.15RX	1.57	0.15	2.00	1.80		•	0.02-0.05

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Dmin for internal application=11.5mm • For cutting speed recommendations and user guide, see pages 340-351

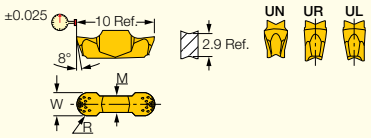
For tools, see pages: GEHIMR/L (287) • GEHIMR/L-SC (287)

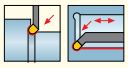
CUTGRIP

GEPI-UN/UR/UL

Precision Double-Ended Inserts for Internal Undercutting







Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC528	IC08	Recommended Machining Data f groove (mm/rev)
GEPI 3.00-1.50UN	3.00	1.50	2.00	2.20	•		0.03-0.12
GEPI 2.00-1.00UR	2.00	1.00	2.00	1.80	•	•	0.03-0.12
GEPI 2.00-1.00UL	2.00	1.00	2.00	1.80	•	•	0.03-0.12

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GEHIUR/L (288)

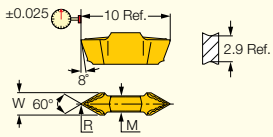
ISCARTHREAD

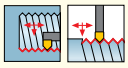
CUTGRIP

GEPI-MT

Internal Double-Ended Precision Threading Inserts for 60° Partial Profile for General Applications







Designation	Dimensions W	R±0.03	a°	M	Pmin	TPI max	Tough ↔ Hard IC08	IC908
GEPI 2.5-MT0.05	2.50	0.05	60	1.80	0.90	28	•	•

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • Pitch max 0.187xD, TPI min D/5.35 • D=Diameter of thread (pitch max<=W)

For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIMR/L (287) • GEHIMR/L-SC (287) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

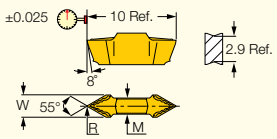
ISCARTHREAD

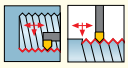
CUTGRIP

GEPI-WT

Precision Ground 55° Partial Profile Double-Ended Threading Inserts with a Chipformer for 11.5 mm Bore Diameter







Designation	Dimensions W	R±0.03	M	TPI max	Pmin	Tough ↔ Hard IC08	IC908
GEPI 2.5-WT0.05	2.50	0.05	1.80	54	0.47	•	•

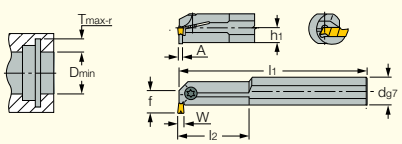
• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.167xD, TPI min D/6.0

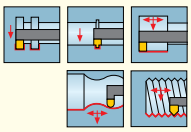
For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIMR/L (287) • GEHIMR/L-SC (287) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

CUTGRIP

GHIR/L (W=1.9-6.4)

Internal Grooving and Turning Bars





Right-hand shown

Designation	W min	W max	d	D min	Tmax-r	l1	l2	f	h1	A		
GHIR/L 20-3	1.90	3.50	20.00	20.00	4.50	160.00	16.0	14.5	9.0	1.60	SR 76-1021	T-20/5
GHIR/L 20-20-3	2.00	3.50	20.00	20.00	4.50	200.00	40.0	14.5	9.0	1.60	SR 76-1021	T-20/5
GHIR/L 20-4	3.00	4.80	20.00	20.00	4.50	160.00	25.0	14.5	9.0	2.60	SR 76-1021	T-20/5
GHIR/L 20-20-4	3.00	4.80	20.00	20.00	4.50	200.00	40.0	14.5	9.0	2.60	SR 76-1021	T-20/5
GHIR/L 25-25-4	2.50	4.00	25.00	25.00	5.00	200.00	50.0	17.5	11.5	2.10	SR 76-1022	T-20/5
GHIR/L 32-4	2.50	4.00	32.00	38.00	5.00	250.00	-	21.3	14.5	2.10	SR 76-1021	T-20/5
GHIR/L 25-5	3.20	5.30	25.00	26.00	6.00	160.00	25.0	18.5	11.5	2.80	SR 76-1022	T-20/5
GHIR/L 25-25-6	4.00	6.40	25.00	25.00	5.00	200.00	50.0	17.5	11.5	3.60	SR 76-1022	T-20/5
GHIR/L 32-6	4.00	6.40	32.00	39.00	6.50	250.00	-	22.8	14.5	3.60	SR 76-1022	T-20/5
GHIR/L 40-6	4.00	6.40	40.00	49.00	8.00	300.00	-	28.3	18.0	3.60	SR 76-1022	T-20/5

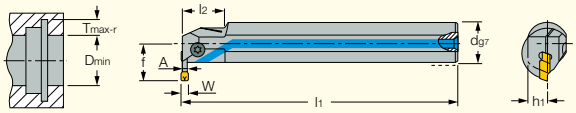
• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

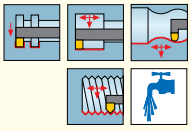
For inserts, see pages: GIFI (298) • GIFI-E (296) • GIFI-E (full radius) (296) • GIMIY (295) • GINI-E (297) • GIPI (297) • GIPI (full radius W<M) (298) • GIPI (full radius) (298) • GIPI (W<M) (297) • GIPI-E (296) • GIPI-RX/LX (299) • TIPI-MT (299) • TIPI-WT (299)

CUTGRIP

GHIR/L-C (W=4-6.4)

Grooving and Turning Bars with Internal Coolant Holes





Right-hand shown

Designation	d	W min	W max	D min	Tmax-r	h1	l1	l2	f	A	Inlet			
GHIR/L 25C-510	25.00	4.00	5.30	32.00	10.00	11.5	160.00	25.0	22.5	3.50	R1/8	SR 76-1022	T-20/5	PL 25
GHIR/L 32C-610	32.00	4.80	6.40	43.00	10.00	14.5	200.00	-	26.2	4.40	R1/8	SR 76-1022	T-20/5	PL 32
GHIR/L 40C-612	40.00	4.80	6.40	53.00	12.00	18.0	250.00	-	32.2	4.40	R1/8	SR 76-1022	T-20/5	PL 40

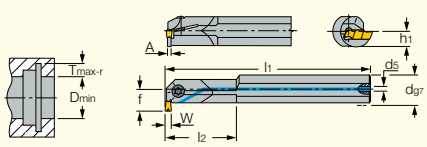
• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

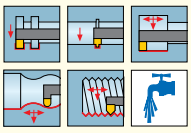
For inserts, see pages: GIFI (298) • GIFI-E (296) • GIFI-E (full radius) (296) • GIMIY (295) • GINI-E (297) • GIPI (297) • GIPI (full radius) (298) • GIPI-E (296) • TIPI-MT (299)

CUTGRIP

GHIR/L-SC (W=2-4.8)

Grooving and Turning Solid Carbide Bars with Internal Coolant Holes





Right-hand shown

Designation	W min	W max	d	D min	Tmax-r	l1	l2	f	h1	d5	A			
GHIR/L 20SC-3	2.00	3.50	20.00	20.00	4.50	200.00	60.0	14.5	9.0	8.5	1.60	SR 76-1021	T-20/5	PL 20
GHIR/L 20SC-4	3.00	4.80	20.00	20.00	4.50	200.00	60.0	14.5	9.0	8.5	2.60	SR 76-1021	T-20/5	PL 20

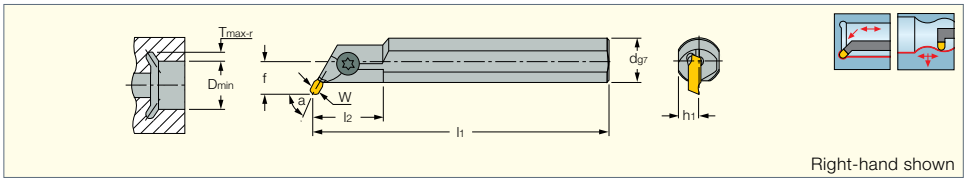
• Tool head is made of steel. • When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.
• For user guide, see pages 340-351

For inserts, see pages: GIFI (298) • GIFI-E (296) • GIFI-E (full radius) (296) • GIMIY (295) • GINI-E (297) • GIPI (297) • GIPI (full radius W<M) (298) • GIPI (full radius) (298) • GIPI-E (296) • GIPI-RX/LX (299) • TIPI-MT (299) • TIPI-WT (299)

CUTGRIP

GHIUR/L

Undercutting and Turning Boring Bars



Right-hand shown

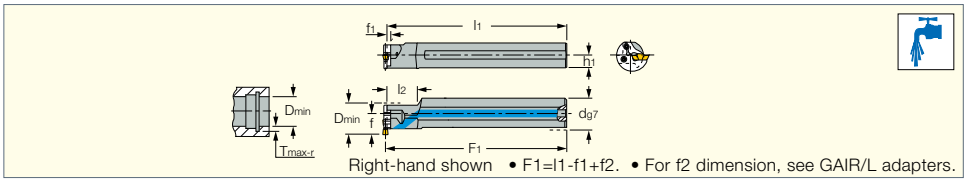
Designation	W max	d	D min	Tmax-r	l1	l2	f	h1	a°		
GHIUR/L 20U	4.80	20.00	20.00	2.50	160.00	40.0	12.5	9.0	45.0	SR 76-1021	T-20/5
GHIUR/L 20-20-5	4.80	20.00	20.00	3.00	200.00	51.0	13.0	9.0	60.0	SR 76-1021	T-20/5
GHIUR/L 25U	6.40	25.00	25.00	3.00	160.00	50.0	15.5	11.5	45.0	SR 76-1022	T-20/5
GHIUR/L 25-25-6	6.40	25.00	25.00	3.50	200.00	60.0	16.0	11.5	60.0	SR 76-1022	T-20/5

For inserts, see pages: GIPI-UR/UL (299)

CUTGRIP

GHAIR/L-GI

Bars with Coolant Holes for Internal Grooving and Turning Adapters



Right-hand shown • F1=l1-f1+f2. • For f2 dimension, see GAIR/L adapters.

Designation	d	l2	l1	f	h1	f1	Adapter				
GHAIR/L 25-32	25.00	25.0	200.00	19.7	11.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 25	
GHAIR/L 32-32	32.00	32.0	200.00	23.2	14.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 32	
GHAIR/L 32-40	32.00	40.0	200.00	24.0	14.5	3.0	GAIR/L 40..	SR 16-212	T-20/5	PL 32	SR 14-519

• For Dmin & Tmax refer to GAIR/L adapters.

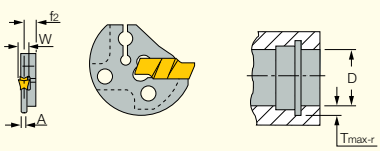
For tools, see pages: GAIR/L (294)

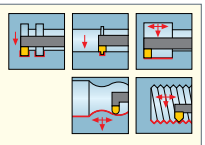
CUTGRIP

GAIR/L

Internal Grooving and Turning Adapters







Right-hand shown

Designation	D min	W min	W max	Tmax-r	f2	A
GAIR/L 32-2	32.00	1.50	2.10	3.00	3.80	1.20
GAIR/L 32-3	32.00	2.10	3.00	3.00	4.10	1.80
GAIR/L 32-4	32.00	3.00	4.50	5.00	4.50	2.50
GAIR/L 32-5	32.00	4.50	6.40	5.00	5.20	4.00
GAIR/L 40-2	40.00	1.50	2.10	3.00	3.80	1.20
GAIR/L 40-3	40.00	2.10	3.00	4.00	4.10	1.80
GAIR/L 40-4	40.00	3.00	4.50	7.00	4.50	2.50
GAIR/L 40-5	40.00	4.50	6.40	7.00	5.20	4.00

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 340-351

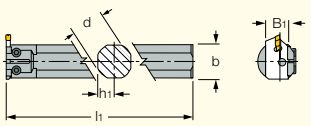
For inserts, see pages: GIMIY (295) • GIPI-E (296) • GIFI-E (296) • GIFI-E (full radius) (296) • GINI-E (297) • GIPI (W<M) (297) • GIPI (297) • GIPI (full radius W<M) (298) • GIPI (full radius) (298) • GIFI (298) • GIPI-RX/LX (299) • TIPI-MT (299) • TIPI-WT (299)

For holders, see pages: GHAIR/L-GI (294)

CUTGRIP

GHIC-50

Boring Bars for Internal Grooving and Turning Blades Dmin=50 mm



Designation	B1	d	l1	h1	b		
GHIC 32-50	26.0	32.00	220.00	14.5	29.0	SR M5X16 DIN912	HW 4.0
GHIC 40-50	26.0	40.00	260.00	18.0	36.0	SR M5X16 DIN912	HW 4.0

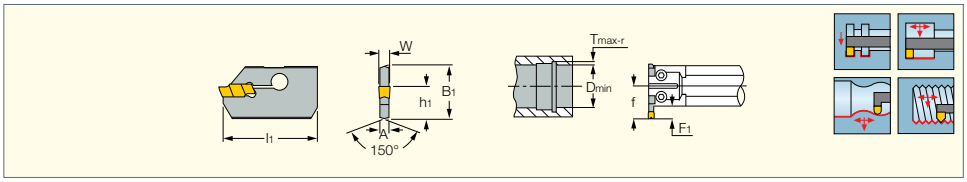
• For both right and left hand applications.

For tools, see pages: CGIN 26 (295)

CUTGRIP

CGIN 26

Internal Grooving and Turning
Blades for GHIC...-50 Bars



Designation	W min	W max	A	fmin(1)	fmax(1)	F1min(1)	F1max(1)	l1	B1	D min
CGIN 26K-3	2.80	4.00	2.40	28.0	33.0	10.0	15.0	45.00	26.0	50.00
CGIN 26K-4	3.60	4.50	3.20	28.0	33.0	10.0	15.0	45.00	26.0	50.00
CGIN 26K-5	4.40	6.40	4.00	28.0	33.0	10.0	15.0	45.00	26.0	54.00
CGIN 26A-3	2.80	4.00	2.40	32.5	37.5	14.5	19.5	49.50	26.0	54.00
CGIN 26A-4	3.60	4.50	3.20	32.5	37.5	14.5	19.5	49.50	26.0	54.00
CGIN 26A-5	4.40	6.40	4.00	32.5	37.5	14.5	19.5	49.50	26.0	54.00

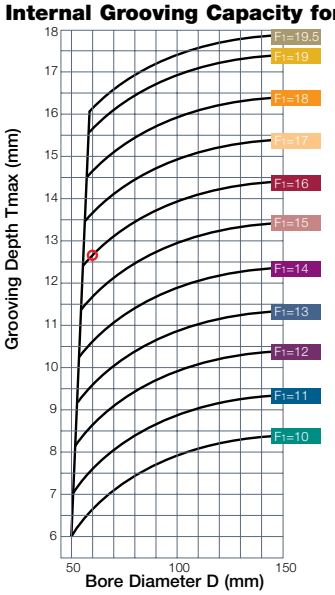
• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

For inserts, see pages: GIFI (298) • GIFI-E (296) • GIFI-E (full radius) (296) • GIMIY (295) • GINI-E (297) • GIPI (297) • GIPI (full radius) (298) • GIPI-E (296) • TIPI-MT (299)

For holders, see pages: GHIC-50 (294)

Internal Grooving Capacity for CGIN Blades



Example:

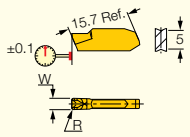
For grooving depth T=12.7 mm and grooving width=4 mm in bore øD=60, use blade CGIN 26A-4 and adjust overhang to F1=16 mm.

CUTGRIP

GIMIY

Utility Single-Ended Inserts for
Internal Grooving and Turning





Designation	Dimensions W±0.02	Dimensions R±0.05	Tough ↔ Hard IC830	IC08	IC808	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMIY 304	3.00	0.40	•	•	•	0.50-1.50	0.10-0.14	0.05-0.08
GIMIY 404	4.00	0.40	•		•	0.50-2.00	0.13-0.19	0.06-0.11

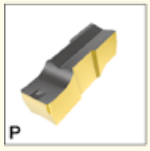
• Dmin for internal applications=20 mm • For cutting speed recommendations and user guide, see pages 340-351

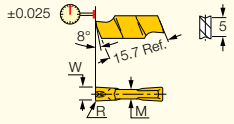
For tools, see pages: CGIN 26 (295) • E-GEHIR / E-GHIR (289) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

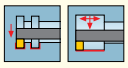
CUTGRIP

GIPI-E

Precision Double-Ended Inserts for Internal Grooving and Turning







Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPI 3.00E-0.40	3.00	0.40	0.030	2.40	15.50	●	●	●	●	●	●	0.50-1.50	0.14-0.18	0.06-0.12
GIPI 4.00E-0.40	4.00	0.40	0.030	3.20	15.50	●	●	●	●	●		0.50-2.00	0.15-0.21	0.08-0.15
GIPI 5.00E-0.50	5.00	0.50	0.050	4.00	15.50	●	●	●		●		0.70-3.10	0.19-0.33	0.11-0.20
GIPI 6.35E-0.55	6.35	0.55	0.050	4.80	15.50		●			●		0.70-3.10	0.23-0.30	0.13-0.21

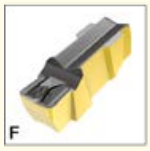
• Dmin for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 340-351

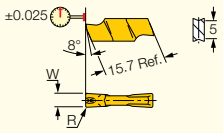
For tools, see pages: CGIN 26 (295) • E-GEHIR / E-GHIR (289) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

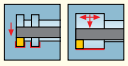
CUTGRIP

GIFI-E

Precision Double-Ended Inserts for Internal Grooving and Turning







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIFI 4.00E-0.40	4.00	0.40	3.20	15.50	●	●	●	●	0.50-2.00	0.13-0.19	0.06-0.11
GIFI 5.00E-0.50	5.00	0.50	4.00	15.50	●	●		●	0.60-2.50	0.16-0.24	0.08-0.14
GIFI 6.00E-0.80	6.00	0.80	4.80	15.50		●			1.00-3.00	0.19-0.34	0.09-0.18

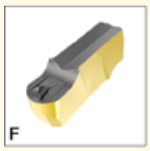
• Dmin for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 340-351

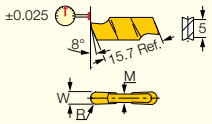
For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

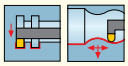
CUTGRIP

GIFI-E (full radius)

Precision Double-Ended Full Radius Inserts for Internal Profiling and Grooving



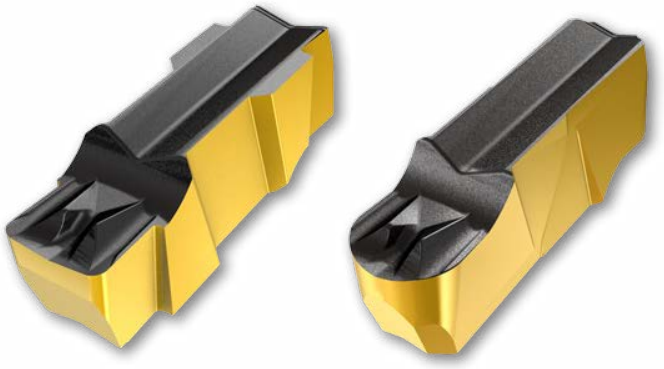




Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIFI 4.00E-2.00	4.00	2.00	3.20	14.00	●	●	●	●	0.00-2.00	0.14-0.27	0.06-0.12
GIFI 5.00E-2.50	5.00	2.50	4.00	13.50	●	●	●	●	0.00-2.50	0.18-0.34	0.08-0.15

• Dmin for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 340-351

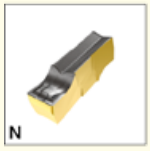
For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

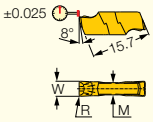


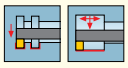
CUTGRIP

GINI-E

Precision Double Ended Inserts for Internal Grooving and Turning of Ductile Materials







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	IC808	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GINI 3.00E-0.40	3.00	0.40	2.40	15.50	●	0.50-1.20	0.08-0.13	0.03-0.09
GINI 4.00E-0.40	4.00	0.40	3.20	15.50	●	0.50-1.60	0.10-0.17	0.04-0.12
GINI 5.00E-0.50	5.00	0.50	4.00	15.50	●	0.50-2.00	0.12-0.20	0.05-0.14

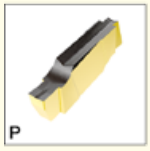
• Dmin for internal applications=20 mm • For cutting speed recommendations and user guide, see pages 340-351

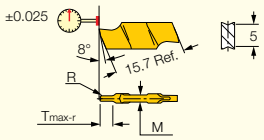
For tools, see pages: CGIN 26 (295) • E-GEHIR / E-GHIR (289) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

CUTGRIP

GIPI (W<M)

Precision Double-Ended Inserts for Internal Grooving and Recessing







Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 1.57-0.15	1.57	0.15	2.50	2.20	●	●		●	0.03-0.05
GIPI 1.70-0.00	1.70	0.00	2.50	2.20	●	●		●	0.03-0.06
GIPI 1.78-0.10	1.78	0.10	2.50	2.20	●	●	●	●	0.03-0.06
GIPI 1.96-0.10	1.96	0.10	2.50	2.20		●	●	●	0.04-0.06
GIPI 1.96-0.15	1.96	0.15	2.50	2.20	●	●	●		0.04-0.06

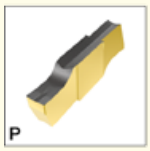
• The tool pocket should be modified • Dmin for internal application=20 mm • For cutting speed recommendations and user guide, see pages 340-351

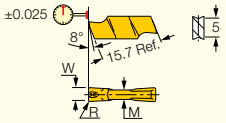
For tools, see pages: GAIR/L (294) • GHIR/L (W=1.9-6.4) (293)

CUTGRIP

GIPI

Precision Double-Ended Inserts for Internal Grooving and Recessing







Designation	Dimensions W±0.02	R	R±toler	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	Recommended Machining Data f groove (mm/rev)
GIPI 2.22-0.10	2.22	0.10	0.030	2.50	2.20	●		●	●	●		0.04-0.07
GIPI 2.22-0.15	2.22	0.15	0.030	2.50	2.20			●	●			0.04-0.07
GIPI 2.30-0.20	2.30	0.20	0.030	3.00	2.20	●				●		0.05-0.08
GIPI 2.39-0.15	2.39	0.15	0.030	6.40	2.40	●		●	●	●		0.04-0.07
GIPI 2.50-0.20	2.50	0.20	0.030	6.00	2.40	●				●		0.05-0.09
GIPI 2.70-0.10	2.70	0.10	0.030	-	2.40	●		●	●	●	●	0.05-0.08
GIPI 2.70-0.15	2.70	0.15	0.030	-	2.40			●	●			0.05-0.08
GIPI 3.00-0.40	3.00	0.40	0.030	-	2.40					●		0.06-0.11
GIPI 3.18-0.20	3.18	0.20	0.030	-	2.40	●	●	●	●	●	●	0.06-0.11
GIPI 3.30-0.10	3.30	0.10	0.030	-	2.40	●	●	●		●		0.06-0.10
GIPI 3.96-0.20	3.96	0.20	0.030	-	3.20		●			●		0.08-0.13
GIPI 4.23-0.10	4.23	0.10	0.030	-	3.20		●			●		0.08-0.13
GIPI 4.78-0.55	4.78	0.55	0.050	-	4.00	●	●	●		●		0.08-0.15

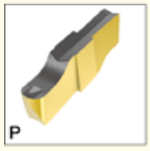
• Dmin for internal application = 20 mm • For cutting speed recommendations and user guide, see pages 340-351

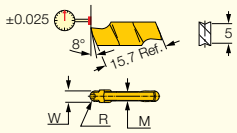
For tools, see pages: CGIN 26 (295) • E-GEHIR / E-GHIR (289) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

CUTGRIP

GIPI (full radius W<M)

Precision Double-Ended Full Radius Inserts for Internal Grooving and Recessing





Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 2.39-1.20	2.39	1.20	6.40	2.40	●	●	●	●	0.05-0.10

• The tool pocket should be modified • Dmin for internal applications= 20 mm • For cutting speed recommendations and user guide, see pages 340-351

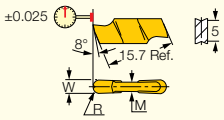
For tools, see pages: GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

CUTGRIP

GIPI (full radius)

Precision Double-Ended Full Radius Inserts for Internal Grooving and Recessing





Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 3.18-1.59	3.18	1.59	2.40	●	●	0.06-0.13
GIPI 3.96-1.98	3.96	1.98	3.20	●		0.08-0.16
GIPI 4.78-2.39	4.78	2.39	4.00	●	●	0.08-0.16
GIPI 6.35-3.18	6.35	3.18	4.80	●		0.11-0.21

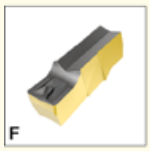
• Dmin for internal application= 20 mm • For cutting speed recommendations and user guide, see pages 340-351

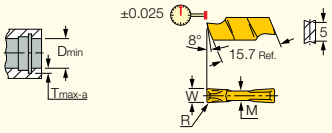
For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

CUTGRIP

GIFI

Precision Double-Ended Inserts for Internal Grooving and Recessing





Designation	Dimensions W±0.02	R	R±toler	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIFI 4.78-0.55	4.78	0.55	0.050	4.00	15.50	●	●	●	0.07-0.13
GIFI 5.28-0.20	5.28	0.20	0.030	4.00	15.50		●	●	0.08-0.13

• Dmin for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 340-351

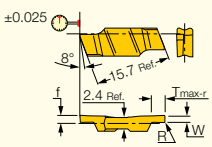
For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

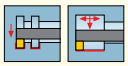
CUTGRIP

GIPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to Shoulder







RX shown

Designation	Dimensions W±0.02	R	R±toler	f	Tmax-r	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
GIPI 0.78-0.1LX	0.78	0.10	0.030	1.6	1.30		●	0.02-0.04
GIPI 1.00-0.00R/LX	1.00	0.00	0.030	1.6	2.00	●		0.02-0.04
GIPI 1.19-0.1LX	1.19	0.10	0.030	1.6	2.00		●	0.03-0.05
GIPI 1.57-0.15LX	1.57	0.15	0.030	1.7	2.80		●	0.03-0.05
GIPI 1.57-0.79LX	1.57	0.79	0.050	1.7	2.80		●	0.03-0.06
GIPI 2.00-0.10R/LX	2.00	0.10	0.030	1.7	2.70	●		0.04-0.06
GIPI 2.39-0.2LX	2.39	0.20	0.030	1.7	3.90		●	0.05-0.08
GIPI 2.39-1.19LX	2.39	1.19	0.050	1.7	3.90		●	0.05-0.10

• Tool's pocket should be modified • For grooving and recessing only • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

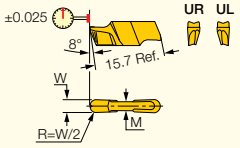
CUTGRIP

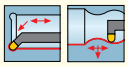
GIPI-UR/UL

Precision Double-Ended Inserts for Internal Undercutting









Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 3.00-1.5UR/L	3.00	1.50	2.40	●	●	0.05-0.15
GIPI 4.00-2.0UR/L	4.00	2.00	3.20	●	●	0.05-0.15

• The tool's pocket should be modified • For cutting speed recommendations and user guide, see pages 340-351

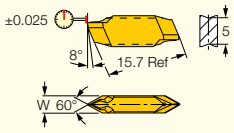
For tools, see pages: GHIUR/L (294)

ISCARTHREAD

TIPI-MT

Precision Ground 60° Partial Profile Double-Ended Internal Threading Inserts with a Chipformer for 20 mm Min. Bore Dia.







Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIPI 3.4MT-0.10	3.40	0.10	1.80	14	●	●
TIPI 5.4MT-0.20	5.40	0.20	3.19	8	●	●

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • Pitch max 0.205xD, TPI min D/4.8 • D=Diameter of thread (pitch max<=W)
• TIPI inserts are 1.6 mm longer than GIPI in the same pocket.

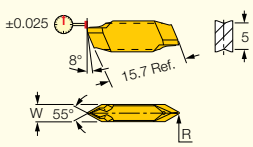
For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

ISCARTHREAD

TIPI-WT

55° Partial Profile Double-Ended Internal Threading Inserts with a Chipformer for 20 mm Minimum Bore Diameters







Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIPI 3.4WT-0.10	3.40	0.10	0.95	27	●	●
TIPI 5.4WT-0.20	5.40	0.20	1.67	15		●

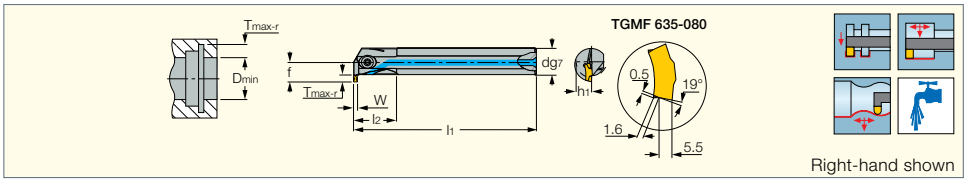
• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.187xD, TPI min D/5.25 D=Diameter of thread (pitch max<=W)
• For detailed cutting data, see pages 340-351

For tools, see pages: GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

TOP-GRIP

TGIR/L-C

Grooving and Turning Bars
with Coolant Holes Carrying
TOP-GRIP Utility Inserts



Designation	d	W min	W max	D min	Tmax-r	h1	l1	l2	f	Inlet	Insert
TGIR/L 16C-3	16.00	3.00	3.00	20.50	5.50	7.5	150.00	25.0	12.0	M6	TGMF 3
TGIR/L 20C-3	20.00	3.00	3.00	25.00	5.50	9.0	180.00	32.0	14.2	M6	TGMF 3
TGIR/L 25C-3	25.00	3.00	3.00	32.00	8.00	11.5	200.00	40.0	18.8	R1/8	TGMF 3
TGIR/L 25C-4	25.00	4.00	5.00	32.50	8.50	11.5	200.00	40.0	19.5	R1/8	TGMF 4, TGMF/P 5
TGIR/L 32C-4	32.00	4.00	5.00	42.00	11.00	14.5	220.00	50.0	25.5	R1/8	TGMF 4, TGMF/P 5
TGIR/L 32C-6	32.00	6.00	6.35	57.00 (1)	17.50	14.5	220.00	50.0	29.0	R1/8	TGMF 6
TGIR/L 40C-6	40.00	6.00	6.35	57.00 (1)	17.50	18.0	300.00	60.0	35.2	R1/8	TGMF 6

• For user guide, see pages 340-351

(1) For Dmin 47 mm, modify insert according to sketch

For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

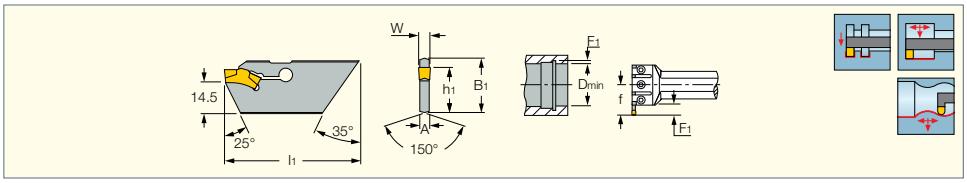
Spare Parts

Designation				
TGIR/L 16C-3	SR 76-1400	T-20/5		PL 16
TGIR/L 20C-3	SR 76-1400	T-20/5		PL 20
TGIR/L 25C-3	SR M5X16 DIN912		HW 4.0	PL 25
TGIR/L 25C-4	SR M5X16 DIN912		HW 4.0	PL 25
TGIR/L 32C-4	SR M6X20 DIN912		HW 5.0	PL 32
TGIR/L 32C-6	SR M6X20 DIN912		HW 5.0	PL 32
TGIR/L 40C-6	SR M6X25 DIN912		HW 5.0	PL 40

TOP-GRIP

TGHN 26-M

Internal Grooving and Turning
Blades for GHIC...-70 Bars



Designation	W min	W max	A	fmin(1)	fmax(1)	F1min(1)	F1max(1)	h1	l1	B1	D min
TGHN 26-3M	3.00	3.00	2.40	40.0	41.5	13.5	15.0	21.4	63.00	26.0	70.00
TGHN 26-4M	4.00	5.00	3.20	40.0	41.5	13.5	15.0	21.4	63.00	26.0	70.00
TGHN 26-5M	5.00	5.00	4.00	40.0	46.5	13.5	20.0	21.4	63.00	26.0	70.00

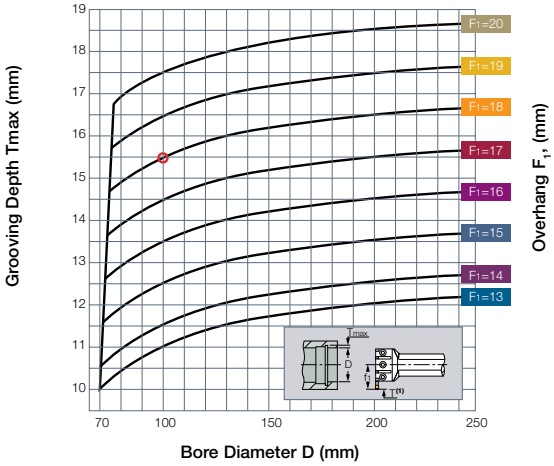
• Grooving depth (Tmax-r) varies in conformance with blade's overhang (f andF1) and depends on the bore diameter (D). • TGHN 26...-M can be modifiedfrom external double-sided TGHN blades • For user guide, see pages 340-351

(1) Adjustable extension

For inserts, see pages: TGMF (full radius) (232) • TGMF/P (231)

For holders, see pages: GHIC-70 (301)

Internal Grooving Capacity for TGHN Blades



Example:

For grooving depth T=15.5 mm
and grooving width=5 mm
in bore øD=100, use blade
TGHN 26-5M and adjust overhang to F_1=18 mm.

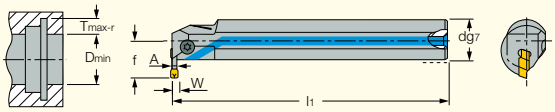


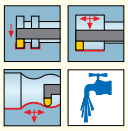
TGHN 26-...M

HELI-GRIP

HELIIR/L

Grooving and Turning Bars with Coolant Holes for HELI-GRIP Utility Inserts





Right-hand shown

Designation	d	W min	W max	D min	Tmax-r	l1	f	Inlet	Insert(1)			
HELIIR/L 20C-305	20.00	3.00	3.18	26.00	5.00	160.00	15.2	M6	GRIP 3	SR 76-1400	PL 20	T-20/5
HELIIR/L 25C-305	25.00	3.00	3.18	31.00	5.00	160.00	17.7	R1/8	GRIP 3	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-410	25.00	4.00	4.76	43.00	10.00	160.00	22.7	R1/8	GRIP 4	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-510	25.00	5.00	5.00	43.00	10.00	160.00	22.7	R1/8	GRIP 5	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-610	25.00	6.00	6.35	43.00	10.00	160.00	22.7	R1/8	GRIP 6	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 32C-410	32.00	4.00	4.76	43.00	10.00	200.00	26.2	R1/8	GRIP 4	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 32C-510	32.00	5.00	5.00	43.00	10.00	200.00	26.2	R1/8	GRIP 5	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 32C-610	32.00	6.00	6.35	43.00	10.00	200.00	26.2	R1/8	GRIP 6	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 40C-412	40.00	4.00	4.76	53.00	12.00	250.00	32.2	R1/8	GRIP 4	SR M5X16 DIN912	PL 40	HW 4.0
HELIIR/L 40C-512	40.00	5.00	5.00	53.00	12.00	250.00	32.2	R1/8	GRIP 5	SR M5X16 DIN912	PL 40	HW 4.0
HELIIR/L 40C-612	40.00	6.00	6.35	53.00	12.00	250.00	32.2	R1/8	GRIP 6	SR M5X16 DIN912	PL 40	HW 4.0

• For user guide, see pages 340-351

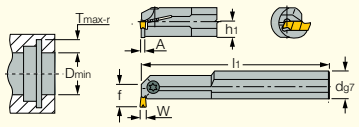
(1) **DO-GRIP DGN inserts may be used only for grooving:** DGN 4.. (Dmin=51 mm), DGN 5.. (Dmin=57 mm) and DGN 6.. (Dmin=62 mm)

For inserts, see pages: GRIP (229) • GRIP (full radius) (230)

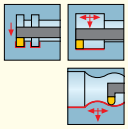
CUT-GRIP

GHIR/L (W=7.0-8.3)

Internal Grooving and Turning Boring Bars



Right-hand shown



Right-hand shown

Designation	W min	W max	d	D min	Tmax-r	l1	f	h1	A		
GHIR/L 40-815	7.00	8.30	40.00	64.00	15.00	300.00	36.0	18.0	6.00	SR M8X20DIN912	HW 6.0
GHIR/L 40-820	7.00	8.30	40.00	65.00	20.00	300.00	41.0	18.0	6.00	SR M8X20DIN912	HW 6.0

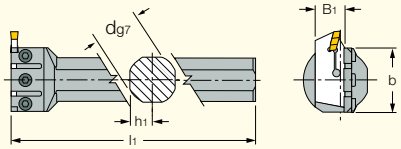
• For user guide, see pages 340-351

For inserts, see pages: GDMA (256) • GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIPA/GIDA 8 (full radius) (257)

CUT-GRIP

GHIC-70

Boring Bars for Internal Grooving and Turning Blades, Dmin=70 mm



Designation	B1	d	l1	h1	b		
GHIC 40-70	26.0	40.00	260.00	18.0	53.0	SR M6X16 DIN912	HW 5.0
GHIC 50-70	26.0	50.00	300.00	23.0	53.0	SR M6X16 DIN912	HW 5.0

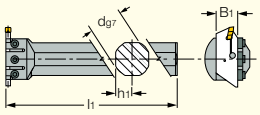
• For both right and left hand applications.

For tools, see pages: CGHN 26-M (302) • TGHN 26-M (300)

CUT-GRIP

GHIC-85

Boring Bars for Internal Grooving and Turning Blades, Dmin=85 mm



Designation	B1	d	l1	h1		
GHIC 40-85	32.0	40.00	260.00	18.0	SR M6X16 DIN912	HW 5.0
GHIC 50-85	32.0	50.00	300.00	23.0	SR M6X16 DIN912	HW 5.0

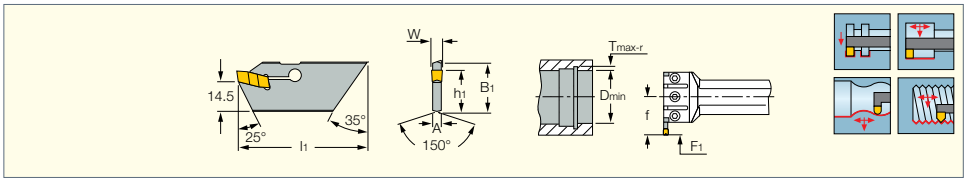
• For both right and left hand applications.

For tools, see pages: CGHN 32-DGM (304) • CGHN 32-M (303)

CUTGRIP

CGHN 26-M

Internal Grooving and Turning Blades for GHIC...-70 Bars



Designation	W min	W max	A	D min	f_{min}(1)	F_{1min}(1)	f_{max}(1)	F_{1max}(1)	h_1	l_1	B_1
CGHN 26-3M	2.80	4.00	2.40	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0
CGHN 26-4M	3.60	4.50	3.20	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0
CGHN 26-5M	4.40	6.40	4.00	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0

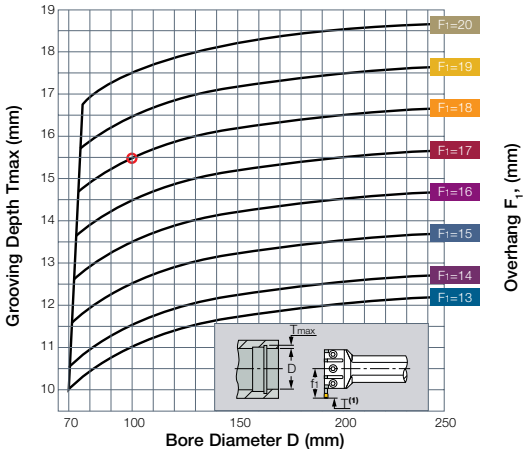
• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

For inserts, see pages: GIPM-A46 / GIP-1250 (313) • GIMF (244) • GIMY (245) • GIMN (245) • GIMY (full radius) (246) • GIMY-F (247) • GIF-E (W=4-6) (248) • GIF-E (W=4-6 full radius) (250) • GIP-E (249) • GIP-E (full radius) (250) • GIP (252) • GIP (full radius) (253) • GIF (253) • GIF (full radius) (254) • GIA-K (W=3-6) (254) • GITM (255) • GITM (full radius) (255) • GIPY (255) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • TIP-MT (261) • TIP-WT (261)

For holders, see pages: GHIC-70 (301)

Internal Grooving Capacity for CGHN 26 Blades



Example:

For grooving depth T=15.5 mm
and grooving width=5 mm
in bore øD=100, use blade
CGHN 26-5M and adjust overhang to F_1=18 mm.



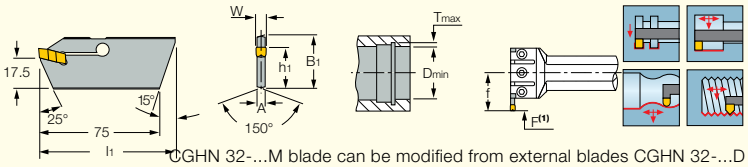
CGHN 26-...M



CUTGRIP

CGHN 32-M

Internal Grooving and Turning
Blades for GHIC...-85 Bars



CGHN 32-...M blade can be modified from external blades CGHN 32-...D

Designation	W min	W max	A	fmin(1)	fmax(1)	F1min(1)	F1max(1)	h1	l1	B1	D min
CGHN 32-3M	2.80	4.00	2.40	44.0	48.0	15.0	19.0	24.8	82.00	32.0	85.00
CGHN 32-4M	3.60	5.00	3.20	44.0	50.0	15.0	21.0	24.8	82.00	32.0	85.00
CGHN 32-5M	4.40	6.40	4.00	44.0	55.0	15.0	26.0	24.8	82.00	32.0	85.00
CGHN 32-6M	5.60	6.40	5.20	44.0	55.0	15.0	26.0	24.8	82.00	32.0	85.00

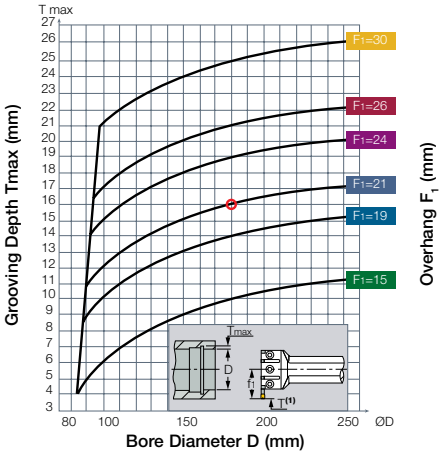
• For user guide, see pages 340-351

(1) When using a double-ended insert, grooving depth is limited by the insert.

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-WT (261)

For holders, see pages: GHIC-85 (301)

Internal Machining Grooving Capacity for CGHN 32 Blades



Example:
For grooving depth T=16 and grooving width= 4 in bore øD=180, use blade CGHN-32-4M and adjust overhang to F1=21 mm.



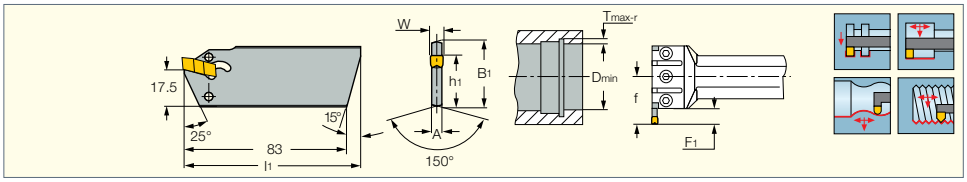
CGHN 32-...M/DGM



CUTGRIP

CGHN 32-DGM

Internal Grooving and Turning Blades
for GHIC...-85 Bars (self-clamping)



Designation	W min	W max	A	f_{min}(1)	f_{max}(1)	F_{1min}(1)	F_{1max}(1)	h_1	l_1	B_1	D min	
CGHN 32-3DGM	2.80	4.00	2.40	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*
CGHN 32-4DGM	3.50	5.00	3.20	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*
CGHN 32-5DGM	4.40	6.40	4.00	53.0	59.0	24.0	30.0	24.8	90.00	32.0	98.00	EDG 44A*
CGHN 32-6DGM	5.60	6.40	5.20	53.0	59.0	24.0	30.0	24.8	90.00	32.0	98.00	EDG 44A*

• For user guide, see pages 340-351

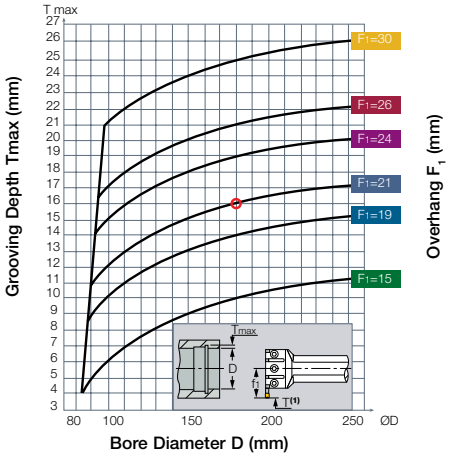
(1) When using a double-ended insert, grooving depth is limited by the insert.

* Optional, should be ordered separately

For inserts, see pages: GIA-K (W=3-6) (254) • GIF (253) • GIF (full radius) (254) • GIF-E (W=4-6 full radius) (250) • GIF-E (W=4-6) (248) • GIM-C (402) • GIM-J (403) • GIM-J-RA/LA (403) • GIM-UT (404) • GIM-UT-RA/LA (404) • GIM-W (403) • GIM-W-RA/LA (404) • GIMF (244) • GIMN (245) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-WT (261)

For holders, see pages: GHIC-85 (301)

Internal Machining Grooving Capacity for CGHN 32 Blades



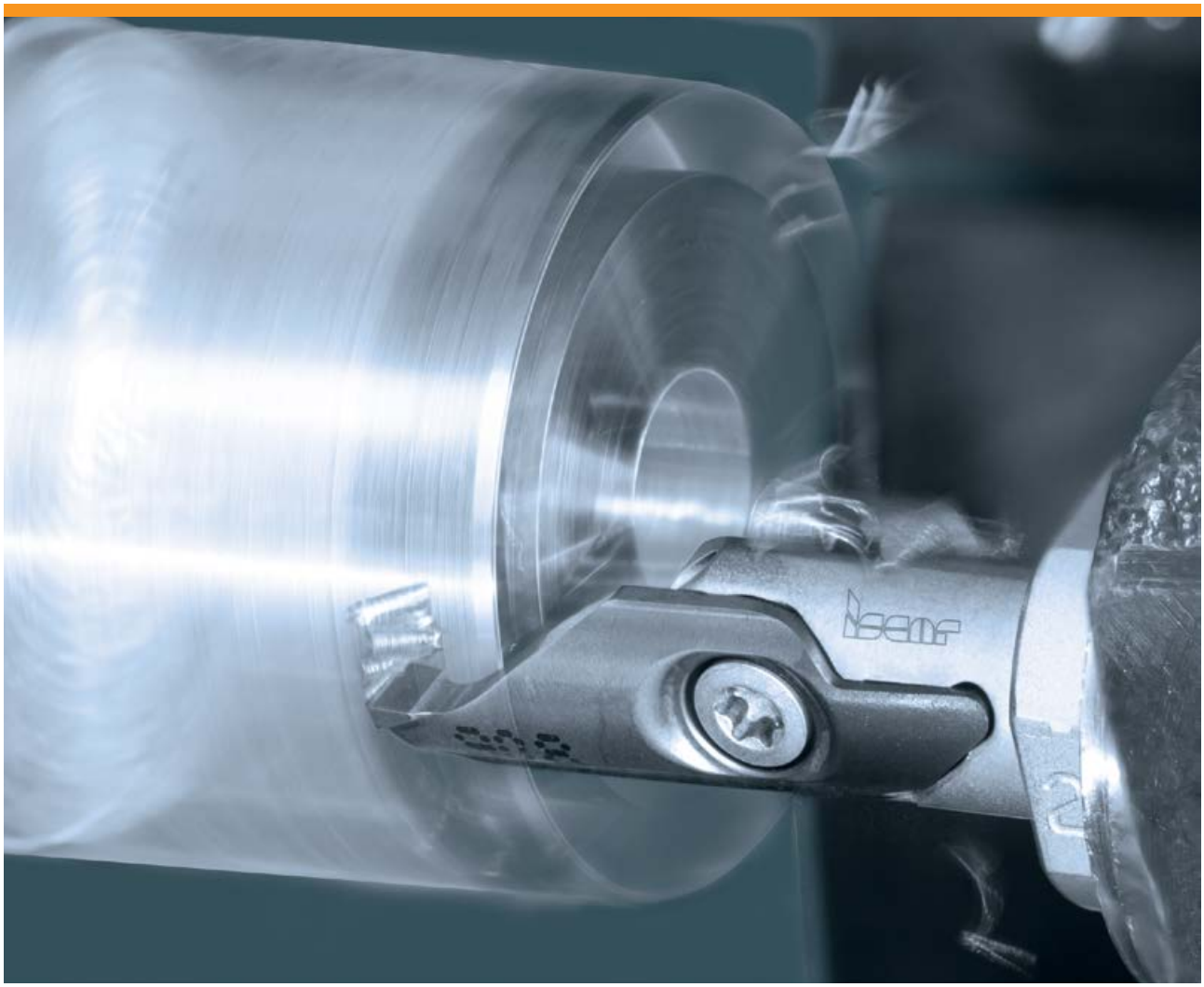
Example:
For grooving depth T=16 and grooving width= 4 in bore øD=180, use blade CGHN-32-4DGM and adjust overhang to F1=21 mm.



CGHN 32-...M/DGM



MINIATURE



External Tools and Inserts **306**
SWISS-CUT 306
CUT-GRIP 311

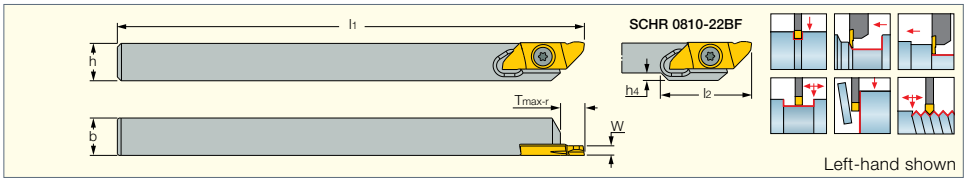
Internal Boring Bars and Inserts **314**
PICCO-CUT 314
MINCHAM 327
MINCUT 329
CHAMGROOVE 330

FACE GROOVING **431**

SWISSCUT INNOVAL LINE

SCHR/L-BF

Grooving and Turning Holders with Back and Front Clamping for Swiss-Type and Automatic Machines



Designation	h	b	l_1	h_4	l_2	T_{max-r} (1)	W min	W max		
SCHR/L 0810-22BF	8.0	10.0	125.00	2.0	24.0	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 10-22BF	10.0	10.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 12-22BF	12.0	12.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 16-22BF	16.0	16.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5

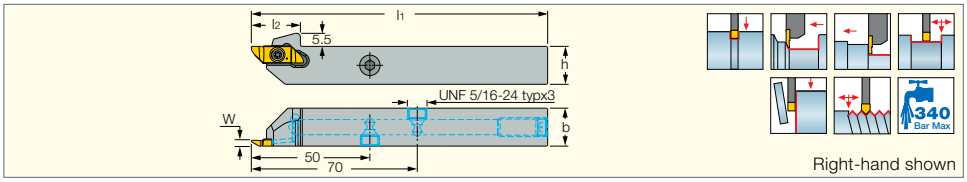
(1) See insert dimensions

For inserts, see pages: SCIR-22-MTR-ISO (310) • SCIR/L-22-AD (309) • SCIR/L-22-AR/AL (309) • SCIR/L-22-BR/BL (307) • SCIR/L-22-ER/EL (308) • SCIR/L-22-MTR/MTL (310) • SCIR/L-22-N/L/R (307) • SCIR/L-22-NP (309) • SCIR/L-22-NX (310)

SWISSCUT INNOVAL LINE

SCHR/L-BF-JHP

Grooving and Turning Tools with High Pressure Coolant Channels for Swiss-Type and Automatic Machines



Designation	h	b	l_1	l_2	W min	W max	T_{max-r} (1)				
SCHR/L 10-22BF-JHP	10.0	10.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16XUNF-TL-S	HW 5/32"
SCHR/L 12-22BF-JHP	12.0	12.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16UNF TL360	HW 5/32"
SCHR/L 16-22BF-JHP	16.0	16.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16UNF TL360	HW 5/32"

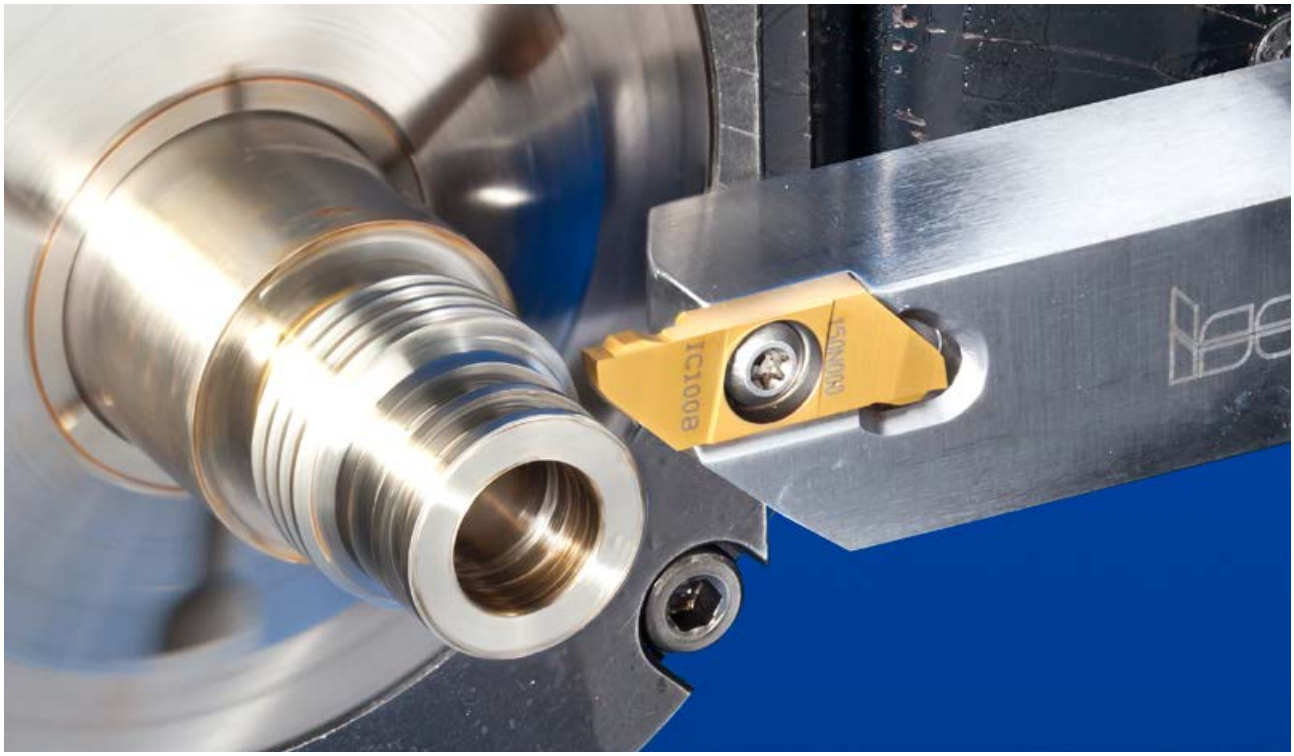
• **Note:** Coolant ports of the left-hand tools are in the same position as those of the right-hand tools.

(1) See insert dimensions

For inserts, see pages: SCIR-22-MTR-ISO (310) • SCIR/L-22-AD (309) • SCIR/L-22-AR/AL (309) • SCIR/L-22-BR/BL (307) • SCIR/L-22-ER/EL (308) • SCIR/L-22-MTR/MTL (310) • SCIR/L-22-N/L/R (307) • SCIR/L-22-NP (309) • SCIR/L-22-NX (310)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
SCHR/L 10-22BF-JHP	1-3	2-4	3-5
SCHR/L 12-22BF-JHP	3-5	4-6	5-7
SCHR/L 16-22BF-JHP	6-8	7-9	8-10

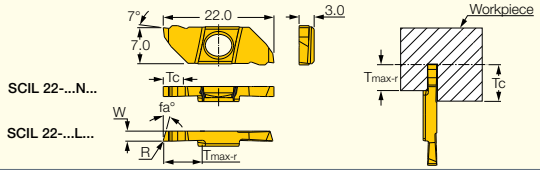


SWISSCUT INNOVAL LINE

SCIR/L-22-N/L/R

Grooving and Parting Inserts



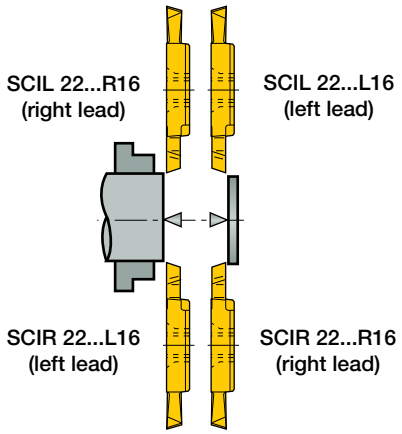


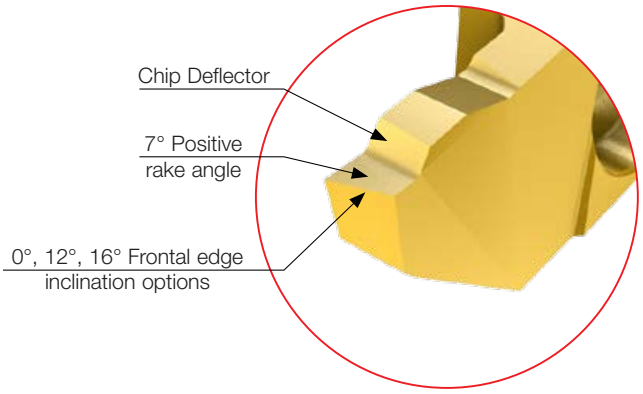
Left-hand shown

Designation	Dimensions W±0.02	fa°	R	Tmax-r	Tc	IC1008	Recommended Machining Data f groove (mm/rev)
SCIR/L 22-050N-00	0.50	0.0	0.00	1.80	5.5	•	0.02-0.04
SCIR/L 22-100N-00	1.00	0.0	0.00	4.00	5.5	•	0.03-0.05
SCIR/L 22-150N-00	1.50	0.0	0.00	5.50	8.0	•	0.03-0.07
SCIR/L 22-200N-10	2.00	0.0	0.10	7.00	8.0	•	0.03-0.09
SCIL 22-050R/L12-00	0.50	12.0	0.00	2.00	5.5	•	0.01-0.03
SCIR 22-050R/L12-00	0.50	12.0	0.00	2.00	5.5	•	0.01-0.03
SCIL 22-100R/L16-00	1.00	16.0	0.00	4.00	5.5	•	0.02-0.04
SCIR 22-100R/L16-00	1.00	16.0	0.00	4.00	5.5	•	0.02-0.04
SCIL 22-150R/L16-00	1.50	16.0	0.00	5.50	8.0	•	0.03-0.06
SCIR 22-150R/L16-00	1.50	16.0	0.00	5.50	8.0	•	0.03-0.06
SCIL 22-200R/L16-00	2.00	16.0	0.00	7.00	8.0	•	0.03-0.07
SCIR 22-200R/L16-00	2.00	16.0	0.00	7.00	8.0	•	0.03-0.07

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)



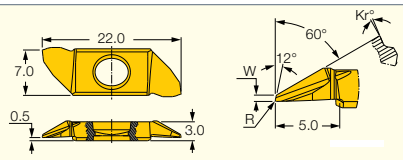


SWISSCUT INNOVAL LINE

SCIR/L-22-BR/BL

Back Turning Inserts





Left-hand shown

Designation	Dimensions W	Kr°	R±0.02	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)
SCIL 22-BL00-05K7	0.50	7.0	0.00	•	0.05-3.00	0.01-0.15
SCIL 22-BL10-05K7	0.50	7.0	0.10	•	0.12-3.00	0.01-0.15
SCIR 22-BR00-05K7	0.50	7.0	0.00	•	0.05-3.00	0.01-0.15
SCIR 22-BR10-05K7	0.50	7.0	0.10	•	0.12-3.00	0.01-0.15
SCIR 22-BR10-05K15	0.50	15.0	0.10	•	0.12-3.00	0.01-0.15
SCIL 22-BL08-10K7	1.00	7.0	0.08	•	0.10-3.00	0.01-0.15
SCIR 22-BR08-10K7	1.00	7.0	0.08	•	0.10-3.00	0.01-0.15
SCIR 22-BR08-10K15	1.00	15.0	0.08	•	0.10-3.00	0.01-0.15

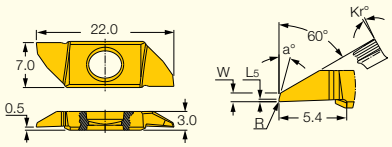
• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

SWISSCUT INNOVAL LINE

SCIR/L-22-ER/EL
Back Turning Inserts for
Short Chipping Materials





Left-hand shown

Designation	Dimensions R±0.02	W	L5	a°	Kr°	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)
SCIL 22-EL00-03K0	0.00	0.30	0.10	6.0	0.0	•	0.05-2.50	0.01-0.15
SCIR 22-ER00-03K0	0.00	0.30	0.10	6.0	0.0	•	0.05-2.50	0.01-0.15
SCIR/L 22-EL00-07K0	0.00	0.70	0.20	15.0	0.0	•	0.05-2.50	0.01-0.15
SCIR 22-ER00-07K0	0.00	0.70	0.20	15.0	0.0	•	0.05-2.50	0.01-0.15
SCIL 22-EL00-07K10	0.00	0.70	0.20	3.0	10.0	•	0.05-2.50	0.01-0.15
SCIR 22-ER00-07K10	0.00	0.70	0.20	3.0	10.0	•	0.05-2.50	0.01-0.15

• For cutting speed recommendations and user guide, see pages 340-351
For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

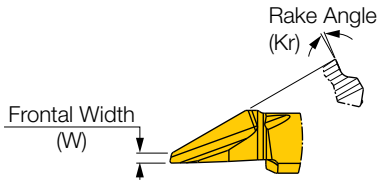
Rake Angle (Kr°) Selection Guide

	Brass	Ledloy	Steel	St. Steel	Titanium	Aluminum
0°						
8°						
15°						

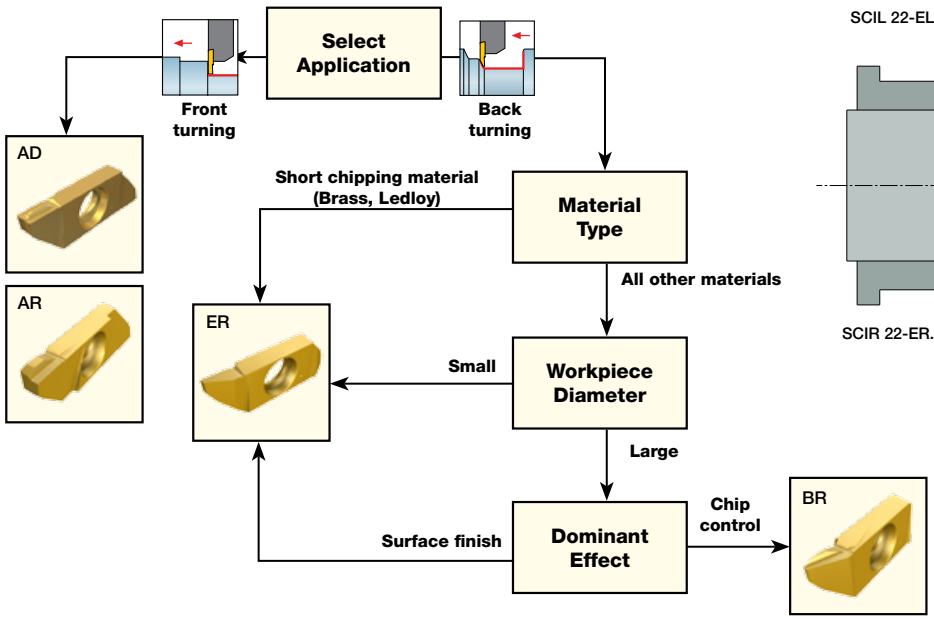
For brittle workpieces and small diameters always prefer Kr=0°

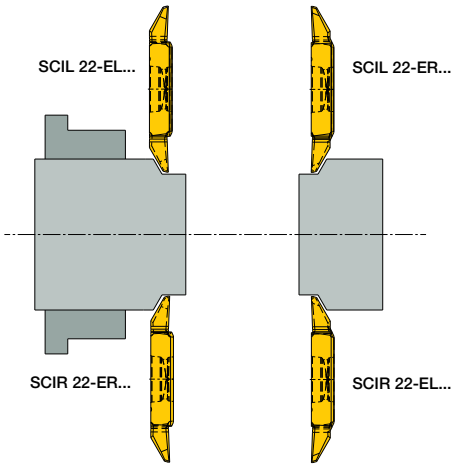
Frontal Width Selection Guide

- **Small diameters and brittle workpiece:** small W (less radial force)
- **Large diameters:** larger W (stronger cutting edge)



Turning Insert Selection Process





SWISSCUT INNOVAL LINE

SCIR/L-22-AD

Turning Inserts with a Frontal Relief Angle



Designation	Dimensions W	R±0.02	Tc	Kr°	Tmax-r	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-AD08-24K8	2.40	0.08	8.0	8.0	5.50	•	0.12-3.80	0.01-0.15	0.01-0.06

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

SWISSCUT INNOVAL LINE

SCIR/L-22-AR/AL

Turning Inserts with a Frontal Relief Angle



Designation	Dimensions R±0.02	Tc	fa°	Kr°	Tmax-r	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)
SCIL 22-AL00-25K16	0.00	8.0	8.0	16.0	3.80	•	0.05-3.80	0.01-0.15
SCIR 22-AR00-25K16	0.00	8.0	8.0	16.0	3.80	•	0.05-3.80	0.01-0.15
SCIL 22-AL10-25K8	0.10	8.0	12.0	8.0	3.80	•	0.12-3.80	0.01-0.15
SCIR 22-AR10-25K8	0.10	8.0	12.0	8.0	3.80	•	0.12-3.80	0.01-0.15

• For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

SWISSCUT INNOVAL LINE

SCIR/L-22-NP

Grooving, Turning and Parting Inserts



Designation	Dimensions W±0.02	R±0.02	Tmax-r	Tc	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-080NP00	0.80	0.00	2.50	8.0	•	0.05-0.70	0.02-0.06	0.02-0.05
SCIR/L 22-100NP08	1.00	0.08	3.00	8.0	•	0.05-0.80	0.02-0.08	0.02-0.06
SCIR/L 22-150NP05	1.50	0.05	6.00	8.0	•	0.05-1.80	0.02-0.11	0.02-0.07
SCIR/L 22-200NP05	2.00	0.05	6.00	8.0	•	0.05-2.50	0.03-0.15	0.03-0.09
SCIR/L 22-250NP05	2.50	0.05	6.00	8.0	•	0.05-3.10	0.03-0.19	0.03-0.11

• For cutting speed recommendations and user guide, see pages 340-351

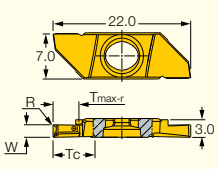
For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

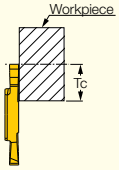
SWISSCUT INNOVAL LINE

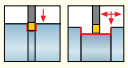
SCIR/L-22-NX

Grooving and Turning Inserts with a Chipformer









Right-hand shown

Designation	Dimensions W±0.02	R±0.02	Tmax-r	Tc(1)	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-150NX080	1.50	0.08	4.30	6.8	•	0.05-1.80	0.02-0.11	0.02-0.07
SCIR/L 22-200NX080	2.00	0.08	4.30	6.8	•	0.05-2.50	0.03-0.15	0.03-0.09
SCIR/L 22-250NX080	2.50	0.08	6.30	6.8	•	0.05-3.10	0.03-0.19	0.03-0.11

• For cutting speed recommendations and user guide, see pages 340-351

(1) Maximum 32 mm diameter for face turning.

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

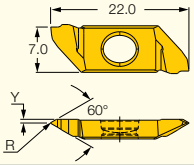
ISCARTHREAD

SWISSCUT INNOVAL LINE

SCIR/L-22-MTR/MTL

60° Partial Profile Threading Inserts







Left-hand shown

Designation	Dimensions R	Y	Pmin	Pmax	TPI max	TPI min	IC1008
SCIL 22-MTL003	0.03	0.4	0.30	0.90	83	28	•
SCIR 22-MTR003	0.03	0.4	0.30	0.90	83	28	•
SCIL 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	•
SCIR 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	•
SCIL 22-MTL010	0.10	0.8	0.90	1.70	28	15	•
SCIR 22-MTR010	0.10	0.8	0.90	1.70	28	15	•

• For detailed cutting data, see pages 340-351

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

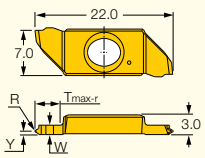
ISCARTHREAD

SWISSCUT INNOVAL LINE

SCIR-22-MTR-ISO

Precision Ground ISO Metric Full Profile Threading Inserts







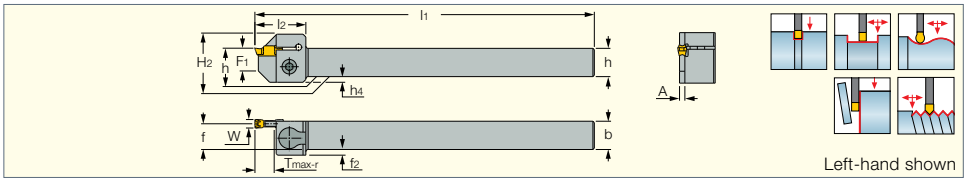
Designation	Dimensions Pitch	W	Tmax-r	R	Y	IC1008
SCIR 22-MTR-0.3ISO	0.30	1.00	3.00	0.03	0.2	•
SCIR 22-MTR-0.4ISO	0.40	1.00	3.00	0.04	0.2	•
SCIR 22-MTR-0.5ISO	0.50	1.00	3.00	0.06	0.3	•
SCIR 22-MTR-0.75ISO	0.75	1.00	3.00	0.10	0.4	•
SCIR 22-MTR-1.0ISO	1.00	1.50	4.00	0.14	0.6	•
SCIR 22-MTR-1.5ISO	1.50	2.00	4.00	0.20	0.8	•

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

CUTGRIP

GEHSR/L-SL

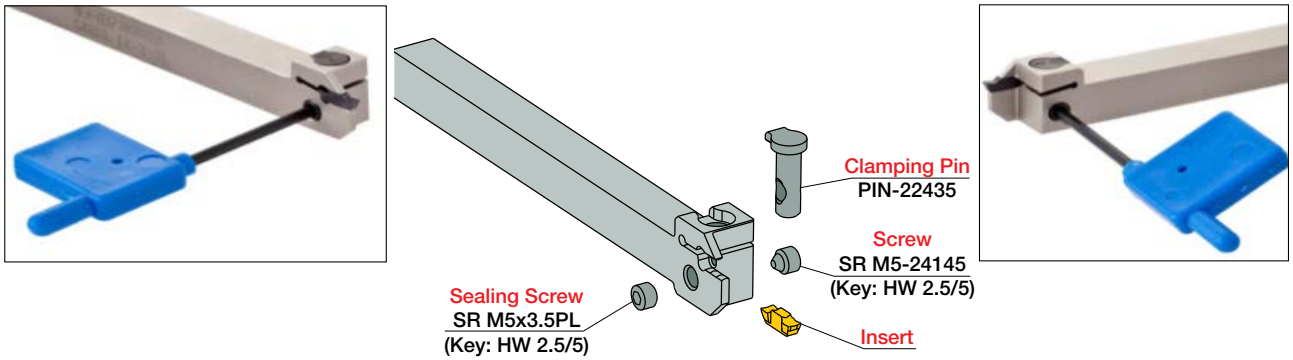
External Machining Tools with Side Clamping Mechanism for Swiss-Type and Automatic Machines



Designation	h	W min	W max	Tmax-r	b	l1	f	h4	f2	A	l2	F1	H2
GEHSR/L 10-2-SL	10.0	2.20	3.20	6.80	10.0	120.00	9.1	2.0	2.00	1.80	18.0	8.0	15.0
GEHSR/L 12-2-SL	12.0	2.20	3.20	6.80	12.0	120.00	11.1	-	-	1.80	18.0	8.0	17.0
GEHSR/L 16-2-SL	16.0	2.20	3.20	6.80	16.0	120.00	15.1	-	-	1.80	18.0	8.0	21.0

• For user guide, see pages 340-351

For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI-MT (292) • GEPI-WT (293)



Spare Parts

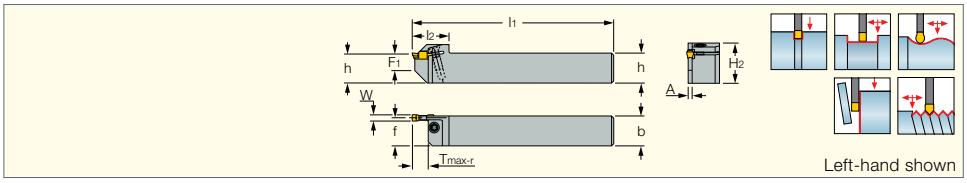
Designation				
GEHSR/L-SL	PIN-22435*	SR M5-24145	HW 2.5/5	SR M5X3.5PL

* Optional, should be ordered separately

CUTGRIP

GEHSR

External Machining Holders for Swiss-Type and Automatic Machines



Designation	h	W min	W max	Tmax-r	b	l1	f	A	l2	F1	H2		
GEHSR 20-2	20.0	2.20	3.20	6.80	20.0	120.00	19.1	1.80	20.0	-	24.0	SR 16-236 P	T-15/3
GEHSR 25-2	25.0	2.20	3.20	6.80	25.0	120.00	24.1	1.80	20.0	-	29.0	SR 16-236 P	T-15/3

• For user guide, see pages 340-351

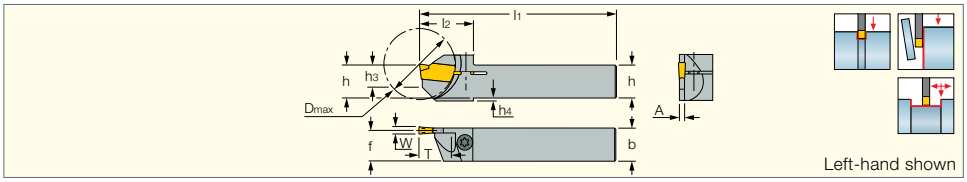
For inserts, see pages: GEMI (290) • GEMI (full radius) (290) • GEPI (291) • GEPI (full radius) (291) • GEPI-MT (292) • GEPI-WT (293)



CUTGRIP

PHSR/L

External Machining Holders for
Swiss-Type and Automatic Machines



Left-hand shown

Designation	W min	W max	D max(1)	h	b	l1	f	h3	l2	h4	A		
PHSR/L 10-2.4	2.40	3.18	20.0	10.0	10.0	150.00	9.0	8.0	18.0	2.0	1.90	SR 16-236 P	T-15/3
PHSR/L 12-2.4	2.40	3.18	25.0	12.0	12.0	150.00	11.1	7.0	20.0	-	1.90	SR 16-236 P	
PHSR/L 16-2.4	2.40	3.18	32.0	16.0	16.0	150.00	15.1	8.0	24.1	-	1.90	SR 16-236 P	T-15/3

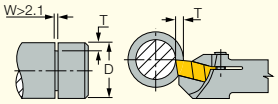
• T=Max depth capacity, see chart below • For user guide, see pages 340-351

(1) Limited by part diameter

For inserts, see pages: GDMW 2.4 (265)

Grooving Depth

Grooving Depth Tmax per
Diameter for Width > 2.1 mm



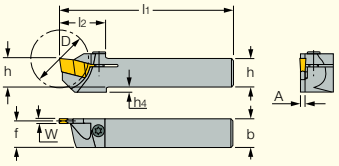
Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

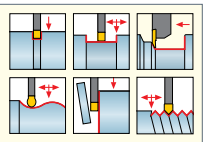
Tmax is also limited by insert

CUTGRIP

GHSR/L

External Machining Holders for
Swiss-Type and Automatic Machines





Left-hand shown

Designation	W min	W max	D max(1)	h	b	l1	f	l2	h4	A		
GHSR/L 10-2	2.20	3.15	20.0	10.0	10.0	120.00	9.1	18.0	2.0	1.80	SR 16-236 P	T-15/3
GHSR/L 12-2	2.20	3.15	25.0	12.0	12.0	120.00	11.1	20.0	2.0	1.80	SR 16-236 P	T-15/3
GHSR/L 14-2	2.20	3.15	26.0	14.0	14.0	120.00	13.1	20.0	-	1.80	SR 16-236 P	T-15/3
GHSR/L 16-2	2.20	3.15	32.0	16.0	16.0	120.00	15.1	26.0	-	1.80	SR 16-212	T-20/3

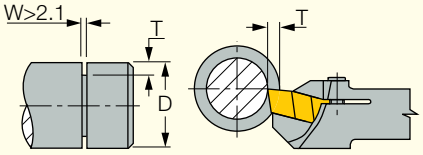
• For user guide, see pages 340-351

(1) **For W>2.1 mm:** grooving depth depends on part diameter

For inserts, see pages: GIG (252) • GIM-J (403) • GIM-J-RA/LA (403) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

Grooving Depth

Grooving Depth Tmax per
Diameter for Width > 2.1 mm



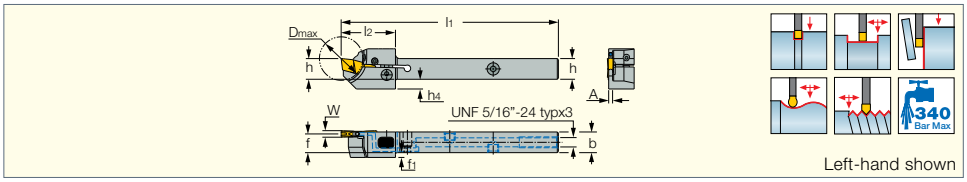
Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

Tmax is also limited by insert

CUTGRIP JETCUT

GHSR/L-JHP-SL

Grooving and Turning Side Lock Tools with Channels for High Pressure Coolant on Swiss-Type and Automatic Machines



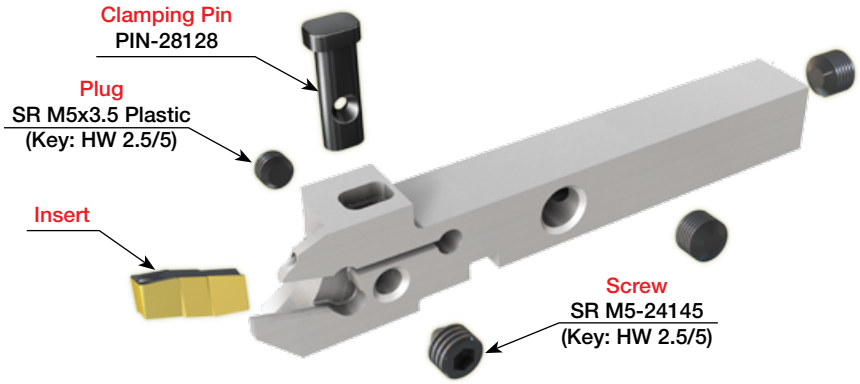
Designation	W min	W max	h	b	D max	l1	l2	f	f1	A
GHSR/L 10-2-JHP-SL	2.20	3.00	10.0	10.0	20.0	100.00	25.0	9.1	2.2	1.80
GHSR/L 12-2-JHP-SL	2.20	3.00	12.0	12.0	25.0	100.00	25.0	11.1	-	1.80
GHSR/L 16-2-JHP-SL	2.20	3.00	16.0	16.0	25.0	120.00	27.0	15.1	-	1.80
GHSR/L 12-3-JHP-SL	2.80	4.00	12.0	12.0	25.0	100.00	25.0	10.8	-	2.40
GHSR/L 16-3-JHP-SL	2.80	4.00	16.0	16.0	25.0	120.00	27.0	14.8	-	2.40

• For user guide and accessories, see pages 340-355

For inserts, see pages: GIG (252) • GIM-J (403) • GIM-J-RA/LA (403) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIP (252) • GIP (full radius W<M) (251) • GIP (full radius) (253) • GIP-E (249) • GIP-E (full radius) (250) • GIPA (full radius W=3-6) (257) • GIPA (W=3-6) (256) • GIPM-A46 / GIP-1250 (313) • GIPY (255) • GITM (255) • GITM (full radius) (255) • TIP-MT (261) • TIP-P-BSPT (264) • TIP-P-BSW (263) • TIP-P-ISO (262) • TIP-P-NPT (263) • TIP-P-UN (262) • TIP-WT (261)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHSR/L...-JHP-SL	4-6	7-9	9-11



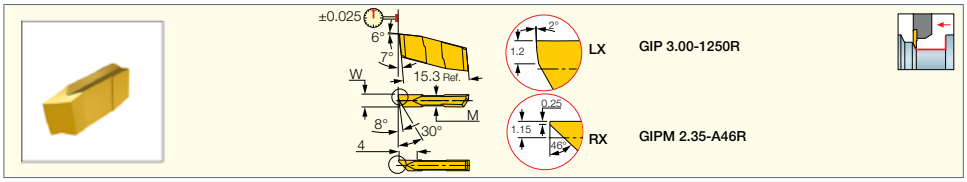
Spare Parts

Designation					
GHSR/L 10-2-JHP-SL	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16XUNF-TL-S	HW 5/32"
GHSR/L 12-2-JHP-SL	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 16-2-JHP-SL	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 12-3-JHP-SL	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 16-3-JHP-SL	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"

CUTGRIP

GIPM-A46 / GIP-1250

Precision Back Turning Inserts for External Machining on Swiss-Type and Automatic Machines



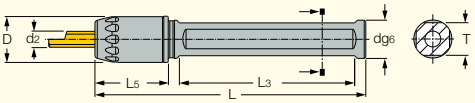
Designation	Dimensions W±0.05	R±0.03	M	Tough ↔ Hard IC328	IC908	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)
GIPM 2.35-A46L	2.35	0.05	2.20	•	•		0.10-1.00	0.02-0.15
GIPM 2.35-A46R	2.35	0.05	2.20	•	•		0.10-1.00	0.02-0.15
GIP 3.00-1250L	3.00	0.00	2.40	•		•	0.10-1.00	0.02-0.15
GIP 3.00-1250R	3.00	0.00	2.40	•		•	0.10-1.00	0.02-0.15

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For grooving, reduce cutting speed by 30% and feed by 50%. • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

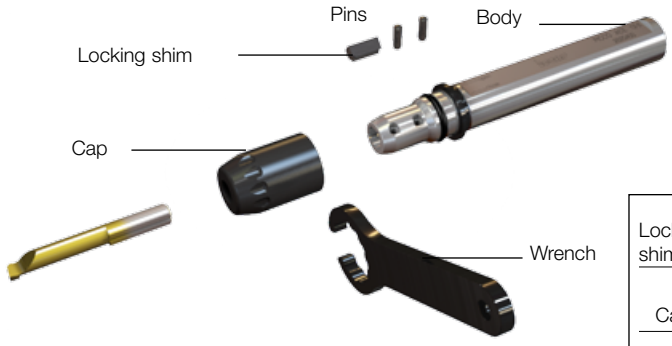
PICCOACE

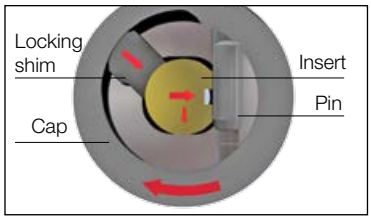
PICCO ACE Metric
Holders for PICCOCUT Inserts

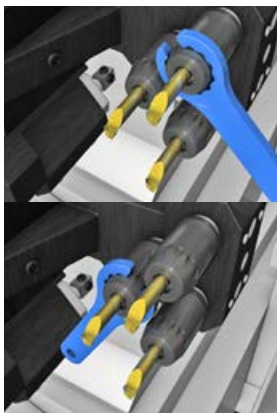


Designation	d	d2	D	L	L5	L3	T		
PICCO ACE 12-4	12.00	4.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 12-5	12.00	5.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-4	16.00	4.00	14.50	85.00	21.50	53.50	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-5	16.00	5.00	14.50	85.00	21.50	53.00	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-6	16.00	6.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 16-7	16.00	7.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-4	20.00	4.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-5	20.00	5.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-6	20.00	6.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-7	20.00	7.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-4	22.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-5	22.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-6	22.00	6.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-7	22.00	7.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-4	25.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-5	25.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-6	25.00	6.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-7	25.00	7.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7

• Holders are suitable for right- and left-hand PICCO inserts

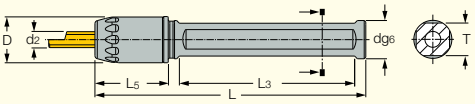






PICCOACE

PICCO ACE Inch
Holders for PICCOCUT Inserts

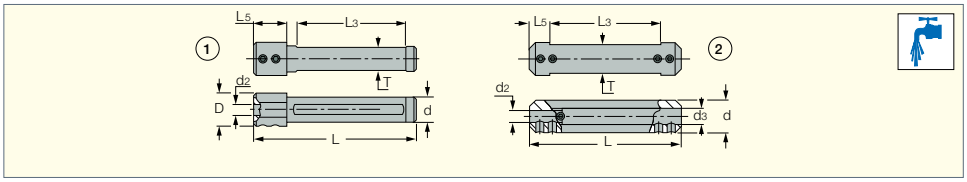


Designation	d	d2	D	L	L5	L3	T		
PICCO ACE 12.7-4	.500	.157	.571	3.346	.906	2.087	.457	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 12.7-5	.500	.197	.571	3.346	.906	2.087	.457	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-4	.625	.157	.571	3.346	.846	2.087	.551	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-5	.625	.197	.571	3.346	.846	2.087	.551	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-6	.625	.236	.783	3.346	.906	2.087	.551	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 15.9-7	.625	.276	.783	3.346	.906	2.087	.551	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 19-4	.750	.157	.571	5.906	.846	4.646	.677	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 19-5	.750	.197	.571	5.906	.846	4.646	.677	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 19-6	.750	.236	.783	5.906	.906	4.646	.677	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 19-7	.750	.276	.783	5.906	.906	4.646	.677	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25.4-4	1.000	.157	.571	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25.4-5	1.000	.197	.571	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25.4-6	1.000	.236	.783	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25.4-7	1.000	.276	.783	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 6-7

• Holders are suitable for right- and left-hand PICCO inserts

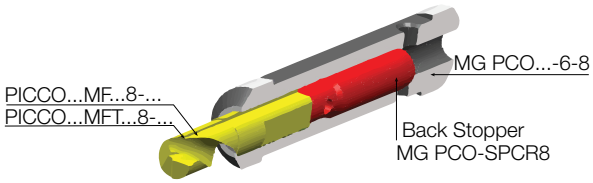
PICCOCUT

PICCO/MG PCO (holder)
Metric
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d2	d3	L	L5	L3	T	D	Fig.				
PICCO 12-4-5	12.00	4.00	5.00	75.00	10.00	55.00	10.3	-	2	SR M5X4-PF	HW 2.5		
PICCO 16-4-5	16.00	4.00	5.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-4-5	20.00	4.00	5.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-4-5 (1)	22.00	4.00	5.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 16-6-7	16.00	6.00	7.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-6-7	20.00	6.00	7.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-6-7 (1)	22.00	6.00	7.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
MG PCO-12-6	12.00	6.00	-	75.00	15.00	50.80	11.0	18.00	1	SR M5X6-PF	HW 2.5		
MG PCO-16-6-8	16.00	6.00	8.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-20-6-8	20.00	6.00	8.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-22-6-8 (1)	22.00	6.00	8.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25-6-8	25.00	6.00	8.00	90.00	10.00	70.00	23.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	16.00	9.00	-	75.00	15.00	53.00	15.0	20.00	1	SR M5X6-PF	HW 2.5	PL 16	

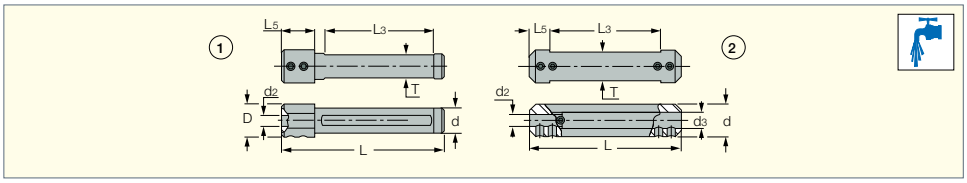
• Holders are suitable for right- and left-hand inserts, and boring bars.
(1) Tools for Swiss-type CNC



Inch

PICCOCUT

PICCO/MG PCO (holder)
Holders for PICCO Inserts and Small Diameter Boring Bars



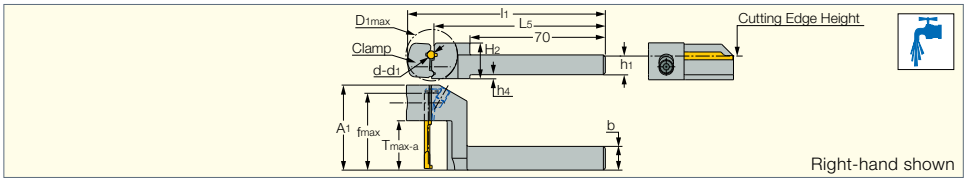
Designation	d	d2	d3	L	L5	L3	T	D	Fig.				
PICCO 12.7-4-5	.500	.157	.197	2.950	.394	2.170	.410	-	2	SR M5X4-PF	HW 2.5		
PICCO 15.9-4-5	.625	.157	.197	2.950	.394	2.170	.550	-	2	SR M5X6-PF	HW 2.5		
PICCO 19-4-5	.750	.157	.197	3.540	.394	2.760	.710	-	2	SR M5X6-PF	HW 2.5		
PICCO 25.4-4-5 (1)	1.000	.157	.197	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		
PICCO 15.9-6-7	.625	.236	.276	2.950	.394	2.170	.550	-	2	SR M5X6-PF	HW 2.5		
PICCO 19-6-7	.750	.236	.276	3.540	.394	2.760	.710	-	2	SR M5X6-PF	HW 2.5		
PICCO 25.4-6-7 (1)	1.000	.236	.276	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		
MG PCO-12.7-6	.500	.236	-	3.000	.590	2.090	.460	.709	1	SR M5X6-PF	HW 2.5		
MG PCO-15.9-6-8	.625	.236	.315	3.000	.390	2.170	.551	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-19-6-8	.750	.236	.315	3.500	.390	2.760	.709	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25.4-6-8 (1)	1.000	.236	.315	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	.630	.354	-	2.953	.591	2.087	.591	.787	1	SR M5X6-PF	HW 2.5	PL 16	

• Holders are suitable for left- and right-hand inserts, and boring bars.
(1) Tools for Swiss-type CNC

PICCOCUT

GHPCOR

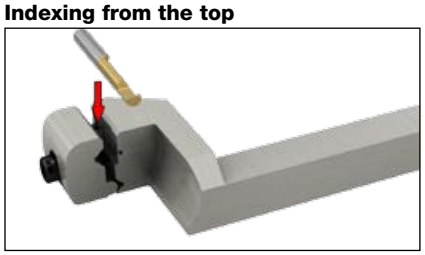
Perpendicular Square-Shank Tools for Use on Cross Slide Units of Swiss-Type and Automatic Machines



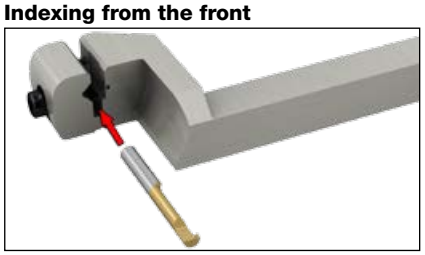
Designation	h	b	l_1	L_5	h_4	H_2	A_1	$D_{1\ max}$	T_{max-a}	f_{max}	d	d_1
GHPCOR 08-16-4-5	8.0	8.0	102.00	88.00	4.0	15.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOR 10-16-4-5	10.0	10.0	102.00	88.00	2.0	18.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOR 12-16-4-6	12.0	12.0	102.00	88.00	-	18.0	34.00	26.0	16.00	30.0	4.00	6.00
GHPCOR 12-25-4-6	12.0	12.0	102.00	88.00	-	18.0	43.00	26.0	25.00	39.0	4.00	6.00
GHPCOR 16-16-4-6	16.0	16.0	112.00	98.00	-	22.0	35.00	36.0	16.00	31.0	4.00	6.00
GHPCOR 16-25-4-6	16.0	16.0	112.00	98.00	-	22.0	44.00	36.0	25.00	40.0	4.00	6.00
GHPCOR 16-30-7-8	16.0	16.0	116.00	98.00	-	22.0	49.00	36.0	30.00	45.0	7.00	8.00

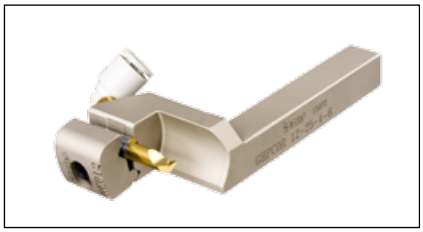
• **PICCOCUT insert should not exceed A1 length.** • **Left-hand holders are available upon request.** • **Coolant tube adapter:** KQ2L06-M5 (for 6 mm coolant tube).

Indexing from the top



Indexing from the front





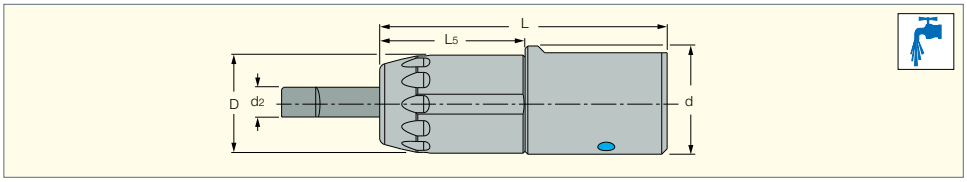
Spare Parts

Designation				
GHPCOR 08-16-4-5	HED 08	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 10-16-4-5	HED 10	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 12-16-4-6	HED 12	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 12-25-4-6	HED 12	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-16-4-6	HED 16-4-6	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-25-4-6	HED 16-4-6	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-30-7-8	HED 16-7-8	SR M4X14 DIN912	HW 3.0	

PICCOACE ITSBORE

PICCO ACE-BH

Holders with Short Shanks for ITSBORE System Carrying PICCOCUT Inserts



Designation	d	d_2	D	L	L_5	
PICCO ACE-BH 16-4	16.00	4.00	14.50	42.50	21.50	WRENCH ACE 4-5
PICCO ACE-BH 16-5	16.00	5.00	14.50	42.50	21.50	WRENCH ACE 4-5
PICCO ACE-BH 16-6	16.00	6.00	19.90	43.50	21.50	WRENCH ACE 6-7
PICCO ACE-BH 16-7	16.00	7.00	19.90	43.50	21.50	WRENCH ACE 6-7

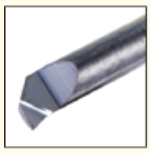
• Holders are suitable for right- and left-hand PICCO inserts

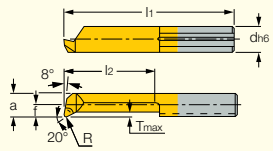


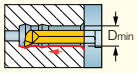
PICCOCUT

PICCO R/L 050, 053, 055

Inserts for Internal Turning
and Chamfering









Right-hand shown

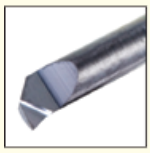
Designation	Dimensions d	f	a	l_1	l_2	$R^{\pm 0.05}$	T_{max}	D_{min}	Tough ↔ Hard IC228	IC908	IC902
PICCO R 050.06-2 (1)	4.00	-	0.50	20.00	2.0	0.04	0.08	0.60	•	•	
PICCO R 050.06-3 (1)	4.00	-	0.50	20.00	3.0	0.04	0.08	0.60	•	•	
PICCO R 050.08-4	4.00	-	0.70	20.00	4.0	0.04	0.08	0.80		•	
PICCO R/L 050.1-5	4.00	-	0.90	20.00	4.5	0.05	0.10	1.00	•	•	
PICCO R/L 050.1-7	4.00	-	0.90	22.00	6.5	0.05	0.10	1.00	•	•	
PICCO R 050.15-5	4.00	-	1.30	19.00	5.0	0.05	0.10	1.50		•	
PICCO R 050.15-10	4.00	-	1.30	24.00	10.0	0.05	0.10	1.50		•	
PICCO R/L 050.2-5	4.00	-	1.70	19.00	4.0	0.05	0.10	2.00	•	•	
PICCO R 055.2-5	4.00	-	1.70	19.00	5.0	0.05	0.10	2.00		•	
PICCO R/L 050.2-10	4.00	-	1.70	24.00	9.0	0.05	0.10	2.00	•	•	
PICCO R 055.2-10	4.00	-	1.70	24.00	10.0	0.05	0.10	2.00		•	
PICCO R/L 050.2-15	4.00	-	1.70	29.00	14.0	0.05	0.10	2.00	•	•	
PICCO R 055.2-15	4.00	-	1.70	29.00	15.0	0.05	0.10	2.00		•	
PICCO R 050.25-5	4.00	0.2	2.20	19.00	5.0	0.05	0.15	2.50		•	
PICCO R 050.25-10	4.00	0.2	2.20	24.00	10.0	0.05	0.15	2.50		•	
PICCO R 050.25-16	4.00	0.2	2.20	30.00	16.0	0.05	0.15	2.50		•	
PICCO R 053.3-10	4.00	0.6	2.60	24.00	9.0	0.03	0.20	2.80		•	
PICCO R 055.3-10	4.00	0.6	2.60	24.00	10.0	0.05	0.20	2.80		•	
PICCO R/L 050.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80	•	•	
PICCO LHD 050.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80			•
PICCO R 053.3-16	4.00	0.6	2.60	30.00	15.0	0.03	0.20	2.80		•	
PICCO R 055.3-16	4.00	0.6	2.60	30.00	16.0	0.05	0.20	2.80		•	
PICCO R/L 050.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80	•	•	
PICCO LHD 050.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80			•
PICCO R 053.3-20	4.00	0.6	2.60	34.00	19.0	0.03	0.20	2.80		•	
PICCO R/L 050.3-20	4.00	0.6	2.60	34.00	19.0	0.10	0.20	2.80	•	•	
PICCO R 050.35-10	4.00	1.1	3.10	24.00	10.0	0.10	0.25	3.50		•	
PICCO R 050.35-16	4.00	1.1	3.10	30.00	16.0	0.10	0.25	3.50		•	
PICCO R 050.35-20	4.00	1.1	3.10	34.00	20.0	0.10	0.25	3.50		•	
PICCO R 050.35-24	4.00	1.1	3.10	38.00	24.0	0.10	0.25	3.50		•	
PICCO R 053.4-10	4.00	1.5	3.50	24.00	9.0	0.03	0.30	4.00		•	
PICCO R 055.4-10	4.00	1.5	3.50	24.00	10.0	0.05	0.30	4.00		•	
PICCO R/L 050.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00	•	•	
PICCO LHD 050.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00			•
PICCO R 053.4-16	4.00	1.5	3.50	30.00	15.0	0.03	0.30	4.00		•	
PICCO R 055.4-16	4.00	1.5	3.50	30.00	16.0	0.05	0.30	4.00		•	
PICCO R/L 050.4-16	4.00	1.5	3.50	30.00	15.0	0.10	0.30	4.00	•	•	
PICCO R 053.4-20	4.00	1.5	3.50	34.00	19.0	0.03	0.30	4.00		•	
PICCO R 055.4-20	4.00	1.5	3.50	34.00	20.0	0.05	0.30	4.00		•	
PICCO R/L 050.4-20	4.00	1.5	3.50	34.00	19.0	0.10	0.30	4.00	•	•	
PICCO LHD 050.4-20	4.00	1.5	3.50	34.00	19.0	0.10	0.30	4.00			•
PICCO R/L 050.4-24	4.00	1.5	3.50	38.00	23.0	0.10	0.30	4.00	•	•	
PICCO R/L 050.4-28	4.00	1.5	3.50	42.00	27.0	0.10	0.30	4.00	•	•	
PICCO R 055.4-28	4.00	1.5	3.50	42.00	28.0	0.05	0.50	4.00		•	
PICCO R 055.5-10	5.00	1.9	4.40	25.00	9.0	0.05	0.50	5.00		•	
PICCO R/L 050.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00	•	•	
PICCO LHD 050.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00			•
PICCO R 055.5-15	5.00	1.9	4.40	30.00	14.0	0.05	0.50	5.00		•	
PICCO R/L 050.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00	•	•	
PICCO LHD 050.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00			•
PICCO R 055.5-20	5.00	1.9	4.40	35.00	19.0	0.05	0.50	5.00		•	
PICCO R/L 050.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	•	•	
PICCO R 055.5-25	5.00	1.9	4.40	40.00	24.0	0.05	0.50	5.00		•	
PICCO R/L 050.5-25	5.00	1.9	4.40	40.00	24.0	0.15	0.50	5.00	•	•	
PICCO R 055.5-30	5.00	1.9	4.40	45.00	29.0	0.05	0.50	5.00		•	
PICCO R/L 050.5-30	5.00	1.9	4.40	45.00	29.0	0.15	0.50	5.00	•	•	
PICCO R/L 050.5-35	5.00	1.9	4.40	50.00	34.0	0.15	0.50	5.00	•	•	
PICCO R 055.6-15	6.00	2.3	5.30	30.00	14.0	0.05	0.50	6.00		•	

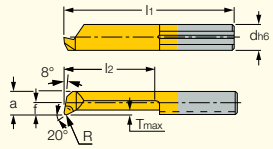
• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

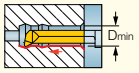
(1) Maximum D.O.C.=0.01-0.03 mm, maximum feed=0.01 mm/rev.

PICCOCUT

PICCO R/L 050, 053, 055 (continued)
Inserts for Internal Turning and Chamfering









Right-hand shown

Designation	Dimensions								Tough ↔ Hard		
	d	f	a	l_1	l_2	$R^{\pm 0.05}$	T_{max}	D_{min}	IC228	IC908	IC902
PICCO R/L 050.6-15	6.00	2.3	5.30	30.00	14.0	0.15	0.50	6.00	•	•	
PICCO R 055.6-22	6.00	2.3	5.30	37.00	21.0	0.05	0.50	6.00		•	
PICCO R/L 050.6-22	6.00	2.3	5.30	37.00	21.0	0.15	0.50	6.00	•	•	
PICCO R 055.6-25	6.00	2.3	5.30	40.00	24.0	0.05	0.50	6.00		•	
PICCO R/L 050.6-25	6.00	2.3	5.30	40.00	24.0	0.15	0.50	6.00	•	•	
PICCO R 055.6-30	6.00	2.3	5.30	45.00	29.0	0.05	0.50	6.00		•	
PICCO R/L 050.6-30	6.00	2.3	5.30	45.00	29.0	0.15	0.50	6.00	•	•	
PICCO R/L 050.6-35	6.00	2.3	5.30	50.00	34.0	0.15	0.50	6.00	•	•	
PICCO R/L 050.6-42	6.00	2.3	5.30	57.00	41.0	0.15	0.50	6.00	•	•	
PICCO R/L 050.7-20	7.00	2.8	6.30	35.00	19.0	0.15	0.60	6.80	•	•	
PICCO LHD 050.7-20	7.00	2.8	6.30	35.00	19.0	0.15	0.60	6.80			•
PICCO R/L 050.7-25	7.00	2.8	6.30	40.00	24.0	0.15	0.60	6.80	•	•	
PICCO LHD 050.7-25	7.00	2.8	6.30	40.00	24.0	0.15	0.60	6.80			•
PICCO R/L 050.7-30	7.00	2.8	6.30	45.00	29.0	0.15	0.60	6.80	•	•	
PICCO R/L 050.7-35	7.00	2.8	6.30	50.00	34.0	0.15	0.60	6.80	•	•	
PICCO LHD 050.7-35	7.00	2.8	6.30	50.00	34.0	0.15	0.60	6.80			•
PICCO R/L 050.7-40	7.00	2.8	6.30	55.00	39.0	0.15	0.60	6.80	•	•	
PICCO R/L 050.7-45	7.00	2.8	6.30	60.00	44.0	0.15	0.60	6.80	•	•	
PICCO R/L 050.7-50	7.00	2.8	6.30	65.00	49.0	0.15	0.60	6.80	•	•	

• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

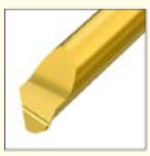
(1) Maximum D.O.C.=0.01-0.03 mm, maximum feed=0.01 mm/rev.

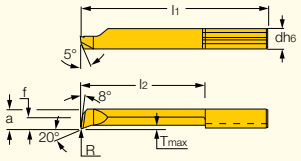


PICCOCUT

PICCO R/L 050-C

Inserts with Chipformers for
Internal Boring and Profiling







Right-hand shown

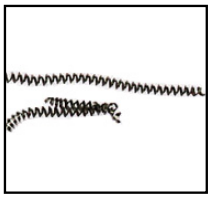
Designation	Dimensions d	f	a	l_1	l_2	T_{max}	D min	$R^{\pm 0.05}$	IC908
PICCO R/L 050.4-10C	4.00	1.5	3.50	24.00	10.0	0.30	4.00	0.20	●
PICCO R/L 050.4-20C	4.00	1.5	3.50	34.00	20.0	0.30	4.00	0.20	●
PICCO R/L 050.4-24C	4.00	1.5	3.50	38.00	24.0	0.30	4.00	0.20	●
PICCO R/L 050.4-28C	4.00	1.5	3.50	42.00	28.0	0.30	4.00	0.20	●
PICCO R 050.4-16C	4.00	1.5	3.50	30.00	16.0	0.30	4.00	0.20	●
PICCO R/L 050.5-10C	5.00	1.9	4.40	25.00	10.0	0.50	5.00	0.20	●
PICCO R/L 050.5-15C	5.00	1.9	4.40	30.00	15.0	0.50	5.00	0.20	●
PICCO R/L 050.5-20C	5.00	1.9	4.40	35.00	20.0	0.50	5.00	0.20	●
PICCO R/L 050.5-25C	5.00	1.9	4.40	40.00	25.0	0.50	5.00	0.20	●
PICCO R/L 050.5-30C	5.00	1.9	4.40	45.00	30.0	0.50	5.00	0.20	●
PICCO R/L 050.5-35C	5.00	1.9	4.40	50.00	35.0	0.50	5.00	0.20	●
PICCO R/L 050.6-15C	6.00	2.3	5.30	30.00	15.0	0.50	6.00	0.20	●
PICCO R/L 050.6-22C	6.00	2.3	5.30	37.00	22.0	0.50	6.00	0.20	●
PICCO R/L 050.6-25C	6.00	2.3	5.30	40.00	25.0	0.50	6.00	0.20	●
PICCO R/L 050.6-30C	6.00	2.3	5.30	45.00	30.0	0.50	6.00	0.20	●
PICCO R/L 050.6-35C	6.00	2.3	5.30	50.00	35.0	0.50	6.00	0.20	●
PICCO R/L 050.6-42C	6.00	2.3	5.30	57.00	42.0	0.50	6.00	0.20	●
PICCO R/L 050.7-20C	7.00	2.8	6.30	35.00	20.0	0.60	6.80	0.20	●
PICCO R/L 050.7-25C	7.00	2.8	6.30	40.00	25.0	0.60	6.80	0.20	●
PICCO R/L 050.7-30C	7.00	2.8	6.30	45.00	30.0	0.60	6.80	0.20	●
PICCO R/L 050.7-35C	7.00	2.8	6.30	50.00	35.0	0.60	6.80	0.20	●
PICCO R/L 050.7-40C	7.00	2.8	6.30	55.00	40.0	0.60	6.80	0.20	●
PICCO L 050.7-50C	7.00	2.8	6.30	65.00	50.0	0.60	6.80	0.20	●

• All left-hand inserts on request • For cutting speed recommendations, see pages 340-341

Stainless Steel 316L

PICCO R 050.6-35C with Chipbreaker

f= 0.03 mm/rev



f= 0.05 mm/rev



PICCO R 050.6-35 Standard

f= 0.03 mm/rev



f= 0.05 mm/rev

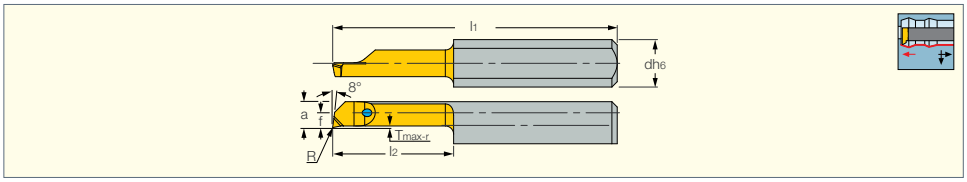




PICCOCUT

PICCO R/LM

Profiling Inserts with Coolant Channels
Optimized for Machining Medical Parts



Designation	Dimensions								IC909
	D min	l2	d	f	a	Tmax-r	R±0.05	l1	
PICCO R/LM050.05-2	0.50	2.0	4.00	0.2	0.40	0.02	0.02	20.00	●
PICCO R/LM050.08-4	0.80	4.0	4.00	0.2	0.70	0.03	0.02	20.00	●
PICCO R/LM050.1-5	1.00	5.0	4.00	0.4	0.90	0.05	0.02	20.00	●
PICCO R/LM050.1-7	1.00	7.0	4.00	0.4	0.90	0.05	0.02	22.00	●
PICCO R/LM050.15-5	1.50	5.0	4.00	0.6	1.15	0.08	0.02	19.00	●
PICCO R/LM050.15-10	1.50	10.0	4.00	0.6	1.15	0.08	0.02	24.00	●
PICCO R/LM050.2-5	2.00	5.0	4.00	0.8	1.70	0.08	0.02	19.00	●
PICCO R/LM050.2-10	2.00	10.0	4.00	0.8	1.70	0.08	0.02	24.00	●
PICCO R/LM050.25-5	2.50	5.0	4.00	0.2	2.20	0.10	0.02	19.00	●
PICCO R/LM050.25-10	2.50	10.0	4.00	0.2	2.20	0.10	0.02	24.00	●
PICCO R/LM050.3-10	3.00	10.0	4.00	0.6	2.60	0.15	0.02	24.00	●
PICCO R/LM050.3-16	3.00	16.0	4.00	0.6	2.60	0.15	0.02	30.00	●
PICCO R/LM050.35-10	3.50	10.0	4.00	1.1	3.40	0.17	0.02	24.00	●
PICCO R/LM050.35-16	3.50	16.0	4.00	1.1	3.10	0.17	0.02	30.00	●
PICCO R/LM050.35-20	3.50	20.0	4.00	1.1	3.10	0.17	0.02	34.00	●
PICCO R/LM050.4-10	4.00	10.0	4.00	1.5	3.50	0.20	0.02	24.00	●
PICCO R/LM050.4-16	4.00	16.0	4.00	1.5	3.50	0.20	0.02	30.00	●
PICCO R/LM050.4-20	4.00	20.0	4.00	1.5	3.50	0.20	0.02	34.00	●
PICCO R/LM050.4-24	4.00	24.0	4.00	1.5	3.50	0.20	0.02	38.00	●

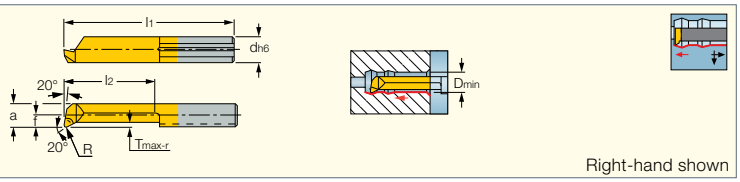
• An optimized insert geometry and carbide grade for machining medical parts made from titanium, medical standard stainless steel and other difficult to machine materials.

PICCOCUT

PICCO R 050.20

Inserts for Internal Turning
and Chamfering Next to the
Bottom of Blind Holes

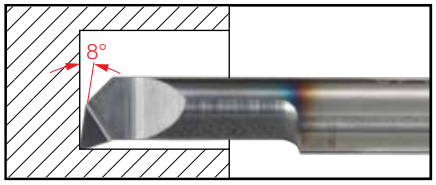




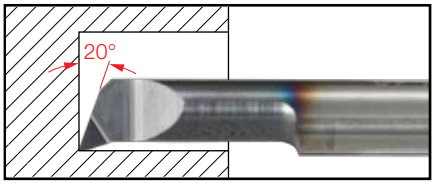
Designation	Dimensions								IC908
	d	f	a	l1	l2	R±0.05	Tmax-r	D min	
PICCO R 050.20.2-10	4.00	-	1.70	24.00	10.0	0.05	0.10	2.00	●
PICCO R 050.20.3-10	4.00	0.6	2.60	24.00	10.0	0.10	0.20	2.80	●
PICCO R 050.20.4-16	4.00	1.5	3.50	30.00	16.0	0.10	0.30	4.00	●
PICCO R 050.20.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	●

• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCO 050...



PICCO 050.20...

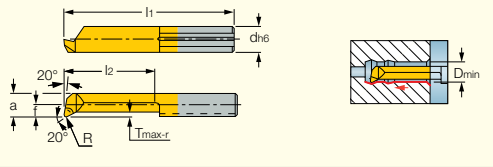


PICCOCUT

PICCO R/LHD 050

Inserts for Internal Turning and Chamfering of Hard Steel - Up to 65 HRC





Designation	Dimensions d	f	a	l_1	l_2	$R^{\pm 0.05}$	T_{max}	D min	IC902
PICCO R/LHD 050.2-5	4.00	-	1.70	19.00	4.0	0.05	0.10	2.00	•
PICCO RHD 050.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80	•
PICCO RHD 050.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80	•
PICCO RHD 050.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00	•
PICCO RHD 050.4-20	4.00	1.5	3.50	34.00	19.0	0.10	0.30	4.00	•
PICCO RHD 050.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00	•
PICCO RHD 050.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00	•
PICCO R/LHD 050.6-15	6.00	2.3	5.30	30.00	14.0	0.15	0.50	6.00	•
PICCO RHD 050.7-20	7.00	2.8	6.30	35.00	19.0	0.15	0.60	6.80	•
PICCO RHD 050.7-25	7.00	2.8	6.30	40.00	24.0	0.15	0.60	6.80	•
PICCO RHD 050.7-35	7.00	2.8	6.30	50.00	34.0	0.15	0.60	6.80	•

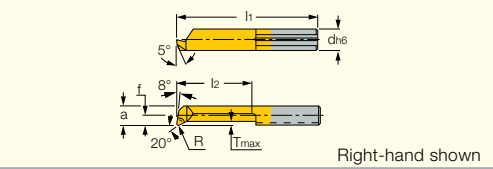
• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R 050 (CBN)

CBN Tipped Inserts for Internal Turning, Profiling and Chamfering of Hard Steel





Right-hand shown • HARD MATERIALS

Designation	Dimensions d	f	a	l_1	l_2	T_{max}	D min	$R^{\pm 0.05}$	IB55
PICCO R 050.3-10B	4.00	0.6	2.60	25.50	10.0	0.20	2.80	0.10	•
PICCO R 050.4-10B	4.00	1.5	3.50	25.50	10.0	0.30	4.00	0.10	•
PICCO R 050.5-15B	5.00	1.9	4.40	31.50	15.0	0.50	5.00	0.15	•
PICCO R 050.6-15B	6.00	2.3	5.30	31.50	15.0	0.50	6.00	0.15	•
PICCO R 050.7-20B	7.00	2.8	6.30	36.50	20.0	0.60	6.80	0.15	•

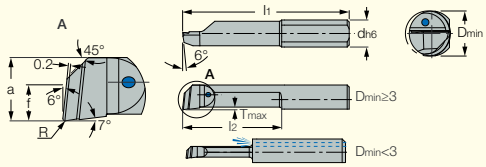
• It is not recommended to use coolant when machining with CBN tipped tools • Available on request only • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/LX050

Reinforced Boring Inserts with Internal Coolant Holes





Designation	Dimensions d	f	a	$R^{\pm 0.05}$	l_1	l_2	T_{max}	D min	IC908
PICCO R/LX050.2-5R15	4.00	-	1.80	0.15	19.00	5.0	0.10	2.00	•
PICCO R/LX050.2-10R05	4.00	-	1.80	0.05	24.00	10.0	0.10	2.00	•
PICCO R/LX050.2-10R15	4.00	-	1.80	0.15	24.00	10.0	0.10	2.00	•
PICCO R/LX050.3-16R10	4.00	0.7	2.70	0.10	30.00	16.0	0.15	3.00	•
PICCO R/LX050.3-16R20	4.00	0.7	2.70	0.20	30.00	16.0	0.15	3.00	•
PICCO R/LX050.4-10R10	4.00	1.6	3.60	0.10	24.00	10.0	0.20	4.00	•
PICCO R/LX050.4-10R20	4.00	1.6	3.60	0.20	24.00	10.0	0.20	4.00	•
PICCO R/LX050.4-16R10	4.00	1.6	3.60	0.10	30.00	16.0	0.20	4.00	•
PICCO R/LX050.4-16R20	4.00	1.6	3.60	0.20	30.00	16.0	0.20	4.00	•
PICCO R/LX050.5-15R10	5.00	2.1	4.60	0.10	30.00	15.0	0.30	5.00	•
PICCO R/LX050.5-15R20	5.00	2.1	4.60	0.20	30.00	15.0	0.30	5.00	•
PICCO R/LX050.5-25R10	5.00	2.1	4.60	0.10	40.00	25.0	0.30	5.00	•
PICCO R/LX050.5-25R20	5.00	2.1	4.60	0.20	40.00	25.0	0.30	5.00	•
PICCO R/LX050.6-15R10	6.00	2.5	5.50	0.10	30.00	15.0	0.40	6.00	•
PICCO R/LX050.6-15R20	6.00	2.5	5.50	0.20	30.00	15.0	0.40	6.00	•
PICCO R/LX050.6-22R20	6.00	2.5	5.50	0.20	37.00	22.0	0.40	6.00	•
PICCO R/LX050.6-35R20	6.00	2.5	5.50	0.20	50.00	35.0	0.40	6.00	•

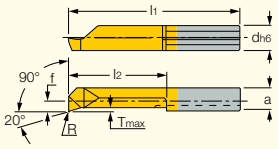
• Left-hand inserts on request • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 090

Inserts for Internal Turning and Profiling





Right-hand shown

Designation	Dimensions d	f	a	l1	l2	R±0.05	Tmax	D min	IC228
PICCO R/L 090.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80	●
PICCO R/L 090.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80	●
PICCO R/L 090.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00	●
PICCO R/L 090.4-16	4.00	1.5	3.50	30.00	15.0	0.10	0.30	4.00	●
PICCO R/L 090.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00	●
PICCO R/L 090.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00	●
PICCO R/L 090.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	●

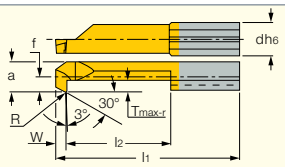
• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 080

Inserts for Internal Back Turning

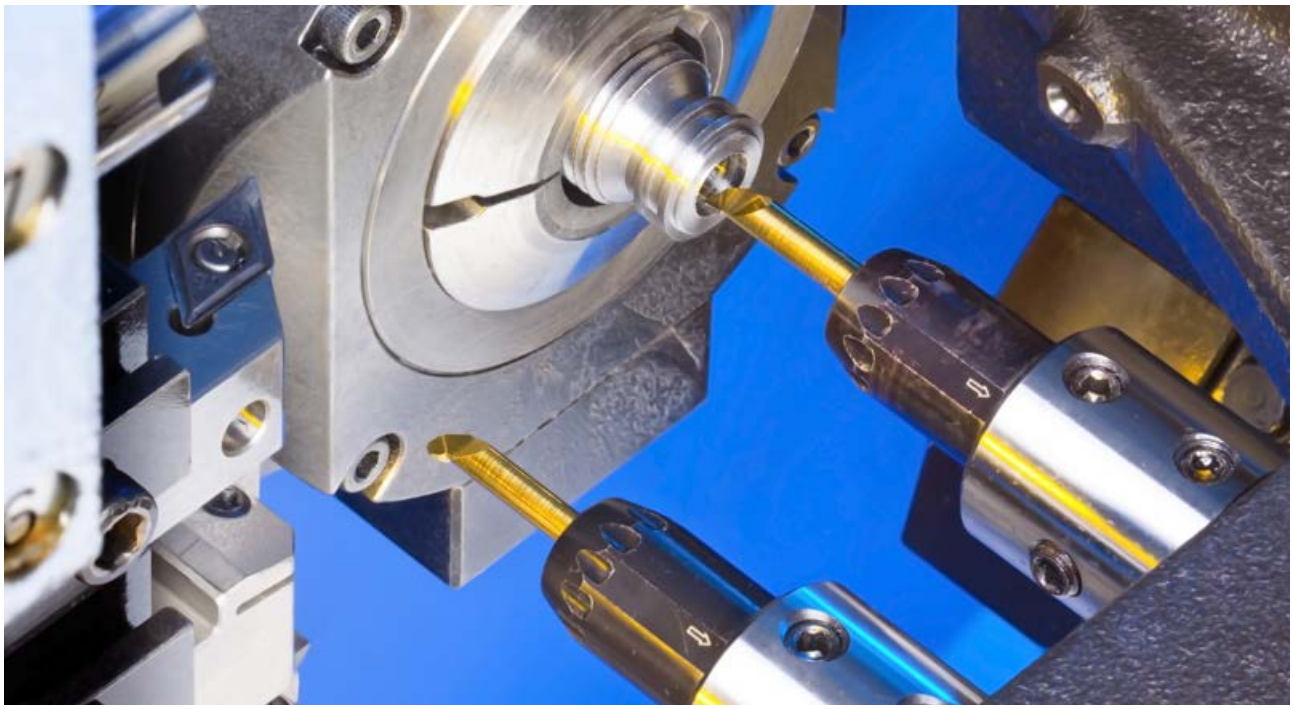




Right-hand shown

Designation	Dimensions d	f	a	W	l1	l2	R±0.05	Tmax-r	D min	IC228
PICCO R/L 080.0003-15	4.00	0.6	2.60	1.50	29.00	14.0	0.10	0.50	3.00	●
PICCO R/L 080.0003-20	4.00	0.6	2.60	1.50	34.00	19.0	0.10	0.50	3.00	●
PICCO R/L 080.0004-15	4.00	1.5	3.50	1.50	29.00	14.0	0.15	0.80	4.00	●
PICCO R/L 080.0004-25	4.00	1.5	3.50	1.50	39.00	24.0	0.15	0.80	4.00	●
PICCO R/L 080.0005-20	5.00	1.9	4.40	1.50	35.00	19.0	0.20	1.00	5.00	●
PICCO R/L 080.0005-30	5.00	1.9	4.40	1.50	45.00	29.0	0.20	1.00	5.00	●
PICCO R/L 080.0006-20	6.00	2.3	5.30	1.50	35.00	19.0	0.20	1.80	6.00	●
PICCO R/L 080.0006-30	6.00	2.3	5.30	1.50	45.00	29.0	0.20	1.80	6.00	●
PICCO R/L 080.0007-20	7.00	2.8	6.30	1.50	35.00	19.0	0.20	2.50	7.00	●
PICCO R/L 080.0007-30	7.00	2.8	6.30	1.50	45.00	29.0	0.20	2.50	7.00	●

• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

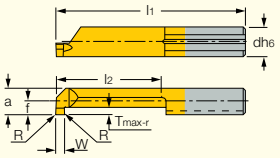


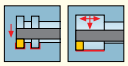
PICCOCUT

PICCO R/L 002-007

Inserts for Internal Grooving and Turning







Right-hand shown

Designation	Dimensions									Tough ↔ Hard	
	d	W±0.05	f	a	R±0.05	l_1	l_2	T_{max-r}	D min	IC228	IC908
PICCO R 002.0050-5	4.00	0.50	0.2	1.80	0.00	19.00	5.0	0.40	2.00		●
PICCO R 002.0050-10	4.00	0.50	0.2	1.80	0.00	24.00	10.0	0.40	2.00		●
PICCO R/L 002.0050-15	4.00	0.50	0.2	1.80	0.00	29.00	15.0	0.40	2.00		●
PICCO R 003.0070-5	4.00	0.70	0.7	2.70	0.00	19.00	5.0	0.60	3.00		●
PICCO R 003.0070-10	4.00	0.70	0.7	2.70	0.00	24.00	10.0	0.60	3.00		●
PICCO R 003.0070-16	4.00	0.70	0.7	2.70	0.00	29.00	15.0	0.60	3.00		●
PICCO R/L 004.0100-10	4.00	1.00	1.5	3.50	0.00	24.00	9.0	0.80	4.00	●	
PICCO R/L 004.0100-16	4.00	1.00	1.5	3.50	0.00	30.00	15.0	0.80	4.00	●	
PICCO R/L 004.0100-20	4.00	1.00	1.5	3.50	0.00	34.00	19.0	0.80	4.00	●	
PICCO R/L 005.0100-10	5.00	1.00	1.9	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0100-15	5.00	1.00	1.9	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0100-20	5.00	1.00	1.9	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0100-25	5.00	1.00	1.9	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0100-30	5.00	1.00	1.9	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0150-10	5.00	1.50	1.9	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0150-15	5.00	1.50	1.9	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R 005M0150-15	5.00	1.50	1.9	4.00	0.10	30.00	14.0	1.00	5.00		●
PICCO R/L 005.0150-20	5.00	1.50	1.9	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0150-25	5.00	1.50	1.9	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0150-30	5.00	1.50	1.9	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0200-10	5.00	2.00	1.9	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0200-15	5.00	2.00	1.9	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0200-20	5.00	2.00	1.9	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0200-25	5.00	2.00	1.9	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0200-30	5.00	2.00	1.9	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 006.0100-10	6.00	1.00	2.3	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0100-15	6.00	1.00	2.3	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0100-22	6.00	1.00	2.3	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0100-25	6.00	1.00	2.3	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0100-30	6.00	1.00	2.3	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0150-10	6.00	1.50	2.3	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0150-15	6.00	1.50	2.3	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0150-22	6.00	1.50	2.3	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0150-25	6.00	1.50	2.3	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0150-30	6.00	1.50	2.3	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0200-10	6.00	2.00	2.3	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0200-15	6.00	2.00	2.3	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R 006M0200-15	6.00	2.00	2.3	5.30	0.10	30.00	14.0	1.80	6.00		●
PICCO R/L 006.0200-22	6.00	2.00	2.3	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0200-25	6.00	2.00	2.3	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0200-30	6.00	2.00	2.3	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 007.0100-10	7.00	1.00	2.8	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0100-15	7.00	1.00	2.8	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0100-22	7.00	1.00	2.8	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0100-25	7.00	1.00	2.8	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0100-30	7.00	1.00	2.8	6.30	0.00	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0150-10	7.00	1.50	2.8	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0150-15	7.00	1.50	2.8	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0150-22	7.00	1.50	2.8	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0150-25	7.00	1.50	2.8	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0150-30	7.00	1.50	2.8	6.30	0.00	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0200-10	7.00	2.00	2.8	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0200-15	7.00	2.00	2.8	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R 007M0200-15	7.00	2.00	2.8	6.30	0.10	30.00	14.0	2.50	6.80		●
PICCO R/L 007.0200-22	7.00	2.00	2.8	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0200-25	7.00	2.00	2.8	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0200-30	7.00	2.00	2.8	6.30	0.00	45.00	29.0	2.50	6.80	●	

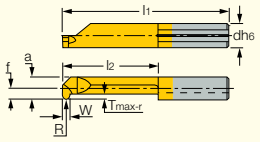
• All carbide bars with sharp corners • Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 004-007 (radius)

Full Radius Inserts for Internal Profiling





Right-hand shown

Designation	Dimensions d	W±0.05	f	a	R	l1	l2	Tmax-r	D min	IC228
PICCO R/L 004.0.50-16	4.00	1.00	1.5	3.50	0.50	30.00	15.0	0.80	4.00	●
PICCO R/L 005.0.50-20	5.00	1.00	1.9	4.40	0.50	35.00	19.0	1.00	5.00	●
PICCO R/L 005.0.75-20	5.00	1.50	1.9	4.40	0.75	35.00	19.0	1.00	5.00	●
PICCO R/L 005.1.00-20	5.00	2.00	1.9	4.40	1.00	35.00	19.0	1.00	5.00	●
PICCO R/L 006.0.50-25	6.00	1.00	2.3	5.30	0.50	40.00	24.0	1.80	6.00	●
PICCO R/L 006.0.75-25	6.00	1.50	2.3	5.30	0.75	40.00	24.0	1.80	6.00	●
PICCO R/L 006.1.00-25	6.00	2.00	2.3	5.30	1.00	40.00	24.0	1.80	6.00	●
PICCO R/L 007.0.50-30	7.00	1.00	2.8	6.30	0.50	45.00	29.0	2.50	6.80	●
PICCO R/L 007.0.75-30	7.00	1.50	2.8	6.30	0.75	45.00	29.0	2.50	6.80	●
PICCO R/L 007.1.00-30	7.00	2.00	2.8	6.30	1.00	45.00	29.0	2.50	6.80	●

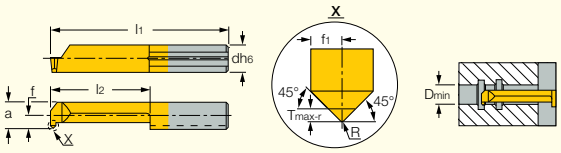
• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 060

Inserts for Internal Turning and 45° Chamfering





Right-hand shown

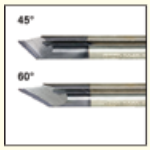
Designation	Dimensions d	R±0.04	f1	f	a	l2	l1	Tmax-r	D min	Tough ↔ Hard IC228	IC908
PICCO R/L 060.5-15	5.00	0.20	1.0	1.9	4.40	14.0	30.00	0.70	5.00	●	
PICCO R/L 060.5-20	5.00	0.20	1.0	1.9	4.40	19.0	35.00	0.70	5.00	●	
PICCO R 060.6-20	6.00	0.20	1.0	2.3	5.30	20.0	35.00	0.70	6.00		●
PICCO R 060.6-25	6.00	0.20	1.0	2.3	5.30	25.0	40.00	0.70	6.00		●
PICCO R/L 060.7-20	7.00	0.20	1.0	2.8	6.30	19.0	35.00	0.70	6.80	●	
PICCO R 060.7-40	7.00	0.20	1.0	2.8	6.30	40.0	55.00	0.70	6.80		●

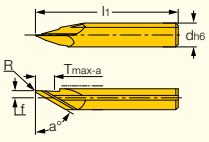
• Specify right- or left-hand bars • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 520

Inserts for Internal Chamfering





Right-hand shown

Designation	Dimensions d	f	a°	l1	R±0.05	Tmax-a	D min	IC908
PICCO R/L 520.0045-15	5.00	1.5	45	30.00	0.20	3.50	1.00	●
PICCO R/L 520.0060-15	5.00	1.5	60	30.00	0.20	4.00	1.00	●

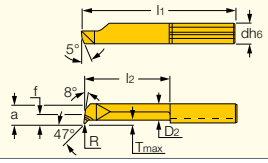
• Left hand inserts on request • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 047

Inserts for Internal Deep Profiling







Right-hand shown

Designation	Dimensions d	f	a	l1	l2	D2	Tmax	D min	R±0.05	IC908
PICCO R/L 047.4-20	4.00	1.5	3.50	34.00	20.0	3.00	0.30	4.00	0.15	•
PICCO R/L 047.5-25	5.00	1.9	4.40	40.00	25.0	3.80	0.50	5.00	0.15	•
PICCO R/L 047.6-30	6.00	2.3	5.30	45.00	30.0	4.50	0.50	6.00	0.15	•
PICCO R 047.T6-22	6.00	2.3	5.30	37.00	22.0	3.40	1.80	6.00	0.15	•
PICCO R 047.T6-30	6.00	2.3	5.30	45.00	30.0	3.40	1.80	6.00	0.15	•

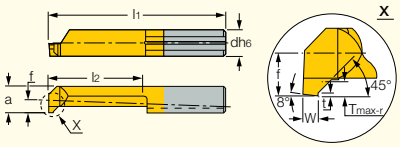
• Left hand inserts on request • For cutting speed recommendations, see pages 340-341

PICCOCUT

PICCO R/L 070

Back Chamfering Inserts for Pre-Parting Operations







Right-hand shown

Designation	Dimensions d	W	f	a	l2	l1	t	Tmax-r	D min	IC228
PICCO R/L 070.5-15	5.00	1.00	1.9	4.40	15.0	30.00	0.20	1.00	5.00	•
PICCO R/L 070.5-20	5.00	1.00	1.9	4.40	20.0	35.00	0.20	1.00	5.00	•

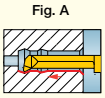
• All carbide bars with sharp corners • Specify right- or left-hand bars

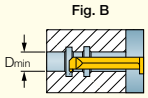
PICCOCUT

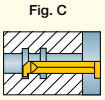
KIT PICCO SET

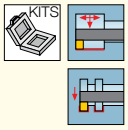
Contains 2 Toolholders and a Set of Solid Carbide Miniature Turning and Grooving Boring Bars











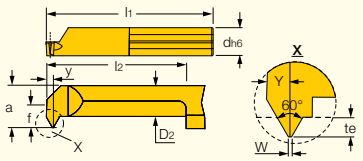
Designation	D min	Qty
KIT PICCO SET-1R	3.00	12

Designation	Min Bore Dia.	L1	t max	W	Pcs.	Fig.No.	Description
PICCO 16-4-5					1x		Holder
PICCO 16-6-7					1x		Holder
PICCO R 050.3-16	3.0	15	—	—	1x	A	Mini carbide bar
PICCO R 050.4-16	4.0	15	—	—	1x	A	Mini carbide bar
PICCO R 050.5-20	5.0	19	—	—	1x	A	Mini carbide bar
PICCO R 050.6-22	6.0	21	—	—	1x	A	Mini carbide bar
PICCO R 060.5-20	5.0	19	—	—	1x	B	Mini carbide bar
PICCO R 004.0100-16	4.0	15	0.8	1.0	1x	C	Mini carbide bar
PICCO R 005.0150-20	5.0	19	1.0	1.5	1x	C	Mini carbide bar
PICCO R 005.0200-20	5.0	19	1.0	2.0	1x	C	Mini carbide bar
PICCO R 006.0150-22	6.0	21	1.8	1.5	1x	C	Mini carbide bar
PICCO R 006.0200-22	6.0	21	1.8	2.0	1x	C	Mini carbide bar

PICCOCUT

PICCO ISO Full Profile
Inserts for ISO Standard
Full Profile Thread





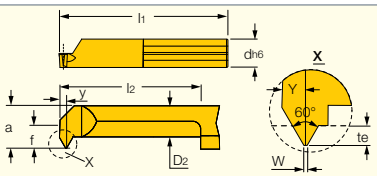
Right-hand shown

Designation	Dimensions											IC908
	Pitch	d	f	a	l_1	l_2	D_2	Y	t_e	w	D min	
PICCO R/L 105.0510-15	1.00	5.00	1.9	4.40	30.00	15.0	3.30	0.6	0.54	0.12	4.80	●
PICCO R/L 106.0612-15	1.25	6.00	2.3	5.30	30.00	15.0	3.40	0.7	0.67	0.15	6.00	●
PICCO R/L 106.0815-15	1.50	6.00	2.3	5.30	30.00	15.0	3.40	0.8	0.81	0.18	6.00	●
PICCO R/L 107.0815-15	1.50	7.00	2.8	6.30	30.00	15.0	3.80	0.8	0.81	0.18	7.00	●

PICCOCUT

PICCO ISO Full Profile Fine
Inserts for ISO Fine Pitch
Full Profile Thread





Right-hand shown

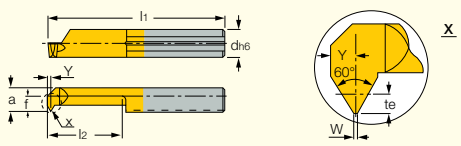
Designation	Dimensions											IC908
	Pitch	d	f	a	l_1	l_2	D_2	Y	t_e	w	D min	
PICCO R/L 104.0205-15	0.50	5.00	1.5	3.50	30.00	15.0	2.40	0.4	0.27	0.06	4.00	●
PICCO R/L 105.0205-15	0.50	5.00	1.9	4.40	30.00	15.0	3.30	0.4	0.27	0.06	5.00	●
PICCO R/L 105.0407-15	0.75	5.00	1.9	4.40	30.00	15.0	3.30	0.5	0.40	0.09	5.00	●
PICCO R/L 106.0510-15	1.00	6.00	2.3	5.30	30.00	15.0	3.40	0.6	0.54	0.12	6.00	●

ISCARTHREAD

PICCOCUT

PICCO R/L-60°-Thread
Mini-Carbide Bars for 60° Internal
Thread Turning, Dmin 2.4 mm





Right-hand shown

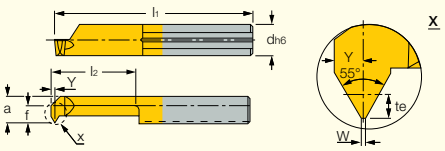
Designation	Dimensions										Tough ↔ Hard	
	d	Pitch	t_e	w	Y	f	a	l_2	l_1	D min	IC228	IC908
PICCO R 003.0105-8	4.00	0.50	0.27	0.04	0.3	0.3	2.30	8.0	22.00	2.40		●
PICCO R 004.0105-10	4.00	0.50	0.27	0.09	0.4	1.0	3.00	10.0	24.00	3.20		●
PICCO R/L 004.0205-15	4.00	0.50	0.27	0.06	0.4	1.5	3.50	15.0	30.00	4.00	●	
PICCO R/L 005.0205-15	5.00	0.50	0.27	0.06	0.4	1.9	4.40	15.0	30.00	5.00	●	
PICCO R/L 005.0407-15	5.00	0.75	0.40	0.09	0.5	1.9	4.40	15.0	30.00	5.00	●	●
PICCO R 005.0407-20	5.00	0.75	0.40	0.09	0.5	1.9	4.40	20.0	35.00	5.00		●
PICCO R/L 005.0510-15	5.00	1.00	0.55	0.12	0.6	1.9	4.40	15.0	30.00	4.80	●	
PICCO R 005.0510-20	5.00	1.00	0.55	0.12	0.6	1.9	4.40	20.0	35.00	4.80		●
PICCO R/L 006.0510-15	6.00	1.00	0.55	0.12	0.6	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0510-22	6.00	1.00	0.55	0.12	0.6	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 006.0612-15	6.00	1.25	0.68	0.15	0.7	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0612-22	6.00	1.25	0.68	0.15	0.7	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 006.0815-15	6.00	1.50	0.81	0.18	0.8	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0815-22	6.00	1.50	0.81	0.18	0.8	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 007.0815-15	7.00	1.50	0.81	0.18	0.8	2.7	6.30	15.0	30.00	7.00	●	

ISCARTHREAD

PICCOCUT

PICCO-55°-Thread
Mini-Carbide Bars for 55° Profile Internal Threading





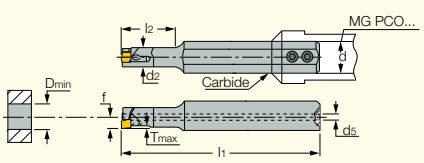
Right-hand shown

Designation	Dimensions											IC228
	d	TPI max	TPI min	t_e	w	Y	f	a	l_2	l_1	D min	
PICCO R 005.5548-15	5.00	48	24	0.40	0.06	0.5	1.9	4.40	15.0	30.00	4.80	•
PICCO R 006.5548-15	6.00	48	24	0.40	0.06	0.5	2.3	5.30	15.0	30.00	6.00	•
PICCO R 006.5524-15	6.00	24	16	0.81	0.12	0.8	2.3	5.30	15.0	30.00	6.00	•
PICCO R 007.5524-15	7.00	24	16	0.81	0.12	0.8	2.8	6.30	15.0	30.00	7.00	•

• All mini-bars have sharp corners

MINICHAM

MGUHR
Solid Carbide Bars for Internal Turning and Threading at 4 mm Minimum Bore Diameter



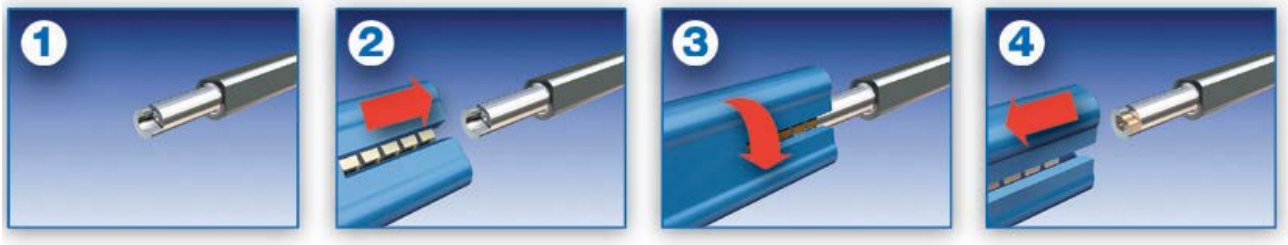
Right-hand shown

Designation	D min	Tmax	f(2)	d	l_1	l_2	d_2	d_5
MGUHR 06-04L10 (1)	4.00	0.50	2.2	6.00	62.00	10.0	3.45	1.3
MGUHR 06-04L20	4.00	0.50	2.2	6.00	62.00	20.0	3.45	1.3

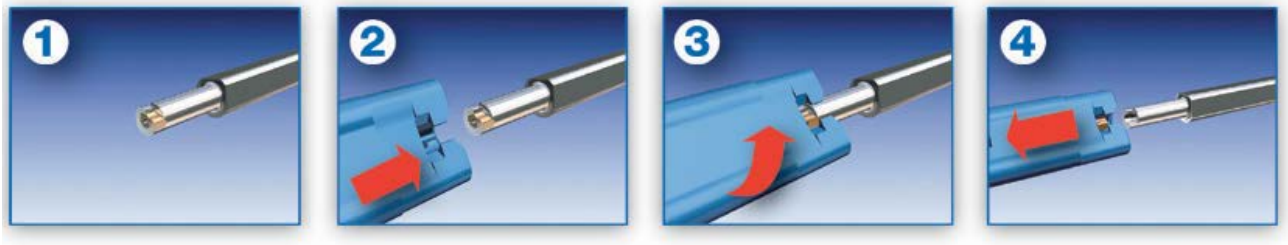
(1) Dmin for turning 4.0 mm & Tmax 0.43 mm; Dmin for threading 5.0 mm & Tmax 1.00 mm
(2) f=2.17 for turning, f=2.7 for threading

For inserts, see pages: UMGR (328) • UMGR-A55 (328) • UMGR-A60 (328)
For holders, see pages: PICCO/MG PCO (holder) (315) • SBB (100)

Mounting Operation

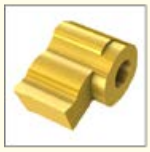


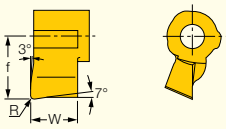
Dismounting Operation



MINICHAM

UMGR
Miniature Indexable Inserts for Internal Turning







Right-hand shown

Designation	Dimensions W±0.02	R±0.02	f	D min	IC508
UMGR 4.0-0.0	1.63	0.00	2.2	4.00	●
UMGR 4.0-0.1	1.63	0.10	1.6	0.10	●

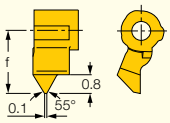
For tools, see pages: MGUHR (327)

ISCARTHREAD

MINICHAM

UMGR-A55
Mini Indexable Inserts for Threading Whitworth, Partial Profile in 5.2 mm and Larger Holes







Right-hand shown

Designation	Dimensions f	TPI max	TPI min	Pmin	Pmax	D min	IC508
UMGR 4.0-A55	2.7	48	18	0.50	1.40	5.20	●

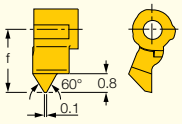
For tools, see pages: MGUHR (327)

ISCARTHREAD

MINICHAM

UMGR-A60
Mini Indexable Inserts for Threading 60° Partial Profile in 5.2 mm and Larger Holes







Right-hand shown

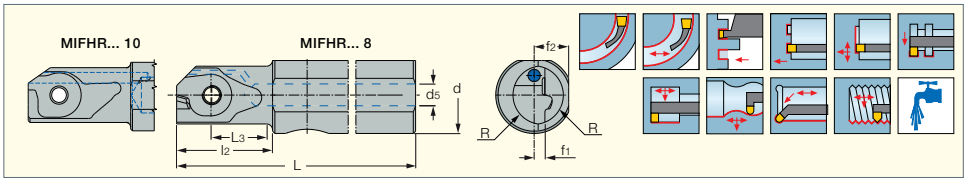
Designation	Dimensions f	D min	Pmin	Pmax	IC508
UMGR 4.0-A60	2.7	5.20	0.50	1.25	●

For tools, see pages: MGUHR (327)

MIN CUT MINI FACE LINE

MIFHR

Bars for Face and Internal Grooving, Undercutting and Threading Inserts



Designation	d	d5	f1	f2	L	L3	l2	R	Insert		
MIFHR 8SC-8-SRK (1)	8.00	1.2	1.4	3.70	75.00	7.40	11.7	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 10C-8	10.00	4.0	1.4	4.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 12C-8	12.00	5.0	1.4	5.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 12C-10 (2)	12.00	6.0	2.4	5.50	90.00	11.20	17.2	4.60	MIFR 10	SR 34-506	T-9/5
MIFHR 16C-10 (2)	16.00	6.0	2.4	7.50	90.00	11.20	17.2	4.60	MIFR 10	SR 34-506	T-9/5

(1) Solid carbide shank

(2) Only face grooving inserts are available for this tool

For inserts, see pages: MEFL (435) • MIFR (434) • MIGR 8 (329) • MITR 8-MT (330) • MIUR 8 (329)

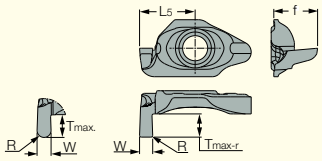
For holders, see pages: PICCO/MG PCO (holder) (315)

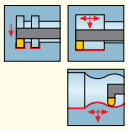
MIN CUT MINI FACE LINE

MIGR 8

Internal Shallow Grooving Inserts







Designation	Dimensions W±0.02	R±0.02	D min	Tmax-r	L5	f	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
MIGR 8-0.50-0.00	0.50	-	8.50	1.40	6.30	4.0	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.00-0.05	1.00	0.05	8.50	1.40	6.80	4.0	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.05	1.20	0.05	9.20	2.10	6.80	4.7	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.60	1.20	0.60	9.20	2.10	6.80	4.7	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.50-0.05	1.50	0.05	9.20	2.10	6.80	4.7	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.60-0.80	1.60	0.80	9.20	2.10	6.80	4.7	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-0.10	2.00	0.10	8.90	1.80	6.80	4.4	•	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-1.00	2.00	1.00	9.20	2.10	6.80	4.7	•	0.05-0.50	0.03-0.10	0.01-0.03

• For cutting speed recommendations, see pages 340-341

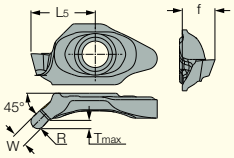
For tools, see pages: MIFHR (329)

MIN CUT MINI FACE LINE

MIUR 8

45° Full Radius Internal Undercutting Inserts







Designation	Dimensions W±0.02	R±0.02	D min	Tmax-r	L5	f	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
MIUR 8-1.00-0.50	1.00	0.50	8.00	1.10	6.70	3.6	•	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-1.5-0.75	1.50	0.75	8.10	1.20	6.70	3.6	•	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-2.00-1.00	2.00	1.00	8.30	1.36	6.70	3.6	•	0.03-0.50	0.03-0.10	0.01-0.03

• For cutting speed recommendations, see pages 340-341

For tools, see pages: MIFHR (329)

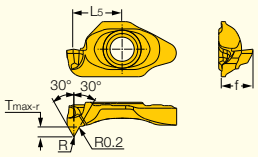
ISCARTHREAD

MINICUT MINI FACE LINE

MITR 8-MT

Internal Partial Profile ISO Metric Threading Inserts





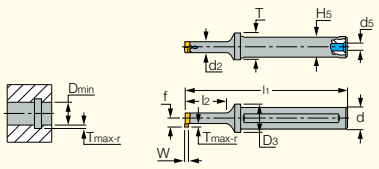
Designation	Dimensions						IC908
	Tmax-r	R±0.02	l	D min	Pmin	Pmax	
MITR 8-MT2-0.1	1.17	0.10	5.75	10.00	1.50	2.00	•
MITR 8-MT1-0.05	1.23	0.05	5.75	10.00	0.75	1.25	•

For tools, see pages: MIFHR (329)

CHAMGROOVE

MG

Internal Grooving, Turning and Threading Bars



Designation	d	D min(1)	Tmax-r(1)	d2	l1	l2	f(2)	H5	W min	W max	T	D3	d5	Insert		
MG 12-08C16	12.00	8.00	1.50	6.00	92.00	16.0	4.8	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8	SR 76-1499	T-8/5
MG 12-08C23	12.00	8.00	1.50	6.00	92.00	23.0	4.8	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8	SR 76-1499	T-8/5
MG 12-11C25	12.00	11.00	2.30	8.00	92.50	25.0	6.7	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 11	SR M3.5-08134	T-9/5

• The same tool applies on right and left machining

(1) Check according to specific insert data

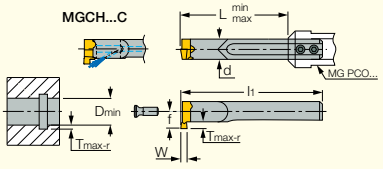
(2) Cutting edge radius on rotating tool

For inserts, see pages: GIQR/L 8 (331) • GIQR/L 8-R (331) • GIQR/L 11 (332) • GIQR/L 11-R (332) • GIQR/L 11-15 (333) • GIQR/L 11-15-R (333) • GIQR/L-A18 (333) • GIQR/L-B18 (334) • GIQR/L-MT (334) • GIQR/L-WT (334)

CHAMGROOVE

MGCH

Solid Carbide Bars for Internal Grooving, Turning and Threading, Dmin 8 mm



Designation	D min(1)	Tmax-r(1)	d	l1	L min	L max	f	W min	W max		Insert		
MGCH 06	8.00	1.50	6.00	62.00	16.0	42.0	4.8	0.50	4.00	N	GIQR/L 8	SR 76-1499	T-8/5
MGCH 06C	8.00	1.50	6.00	62.00	16.0	42.0	4.8	0.50	4.00	Y	GIQR/L 8	SR 76-1499	T-8/5
MGCH 06-L100	8.00	1.50	6.00	100.00	16.0	80.0	4.8	0.50	4.00	N	GIQR/L 8	SR 76-1499	T-8/5
MGCH 08	- (2)	- (3)	8.00	76.00	20.0	56.0	- (4)	0.50	5.00	N	GIQR/L 11/11-15	SR M3.5-08134	T-9/5
MGCH 08C	- (2)	- (3)	8.00	76.00	20.0	56.0	- (4)	0.50	5.00	Y	GIQR/L 11/11-15	SR M3.5-08134	T-9/5
MGCH 08-L125	- (2)	- (3)	8.00	125.00	70.0	105.0	- (4)	0.50	5.00	N	GIQR/L 11/11-15	SR M3.5-08134	T-9/5

• The same tool applies on right and left machining .

(1) Check according to specific insert data

(2) Dmin=11 mm for GIQR 11, Dmin=15 mm for GIQR 11-15

(3) Tmax-r=2.30 for GIQR 11, Tmax-r=6.3 for GIQR 11-15

(4) f=6.70 mm for GIQR 11, f=10.6 mm for GIQR 11-15

For inserts, see pages: GIQR/L 8 (331) • GIQR/L 8-R (331) • GIQR/L 11 (332) • GIQR/L 11-R (332) • GIQR/L 11-15 (333) • GIQR/L 11-15-R (333) • GIQR/L-A18 (333) • GIQR/L-B18 (334) • GIQR/L-MT (334) • GIQR/L-WT (334)

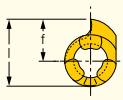
For holders, see pages: PICCO/MG PCO (holder) (315) • SBB (100)

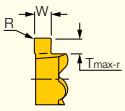
CHAMGROOVE

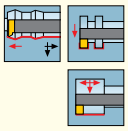
GIQR/L 8

Precision Ground Single-Ended Inserts for Internal Grooving and Turning









Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	f	IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-0.50-0.00 (1)	0.50	0.00	0.70	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-0.75-0.00 (1)	0.75	0.00	1.20	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-0.85-0.00 (1)	0.85	0.00	1.20	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-0.95-0.00 (1)	0.95	0.00	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.00-0.00 (1)	1.00	0.00	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.04-0.05 (1)	1.04	0.05	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.20-0.05 (1)	1.20	0.05	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.40-0.05 (1)	1.40	0.05	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.47-0.05 (1)	1.47	0.05	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.50-0.05 (1)	1.50	0.05	1.50	8.00	4.8	•	-	-	0.01-0.03
GIQR/L 8-1.70-0.10	1.70	0.10	1.50	8.00	4.8	•	0.12-0.68	0.02-0.05	0.01-0.03
GIQR/L 8-1.96-0.10	1.96	0.10	1.50	8.00	4.8	•	0.12-0.78	0.02-0.05	0.01-0.03
GIQR/L 8-2.00-0.10	2.00	0.10	1.50	8.00	4.8	•	0.12-0.80	0.02-0.05	0.01-0.03
GIQR/L 8-2.22-0.10	2.22	0.10	1.50	8.00	4.8	•	0.12-0.88	0.02-0.05	0.01-0.03
GIQR/L 8-2.50-0.20	2.50	0.20	1.50	8.00	4.8	•	0.24-1.00	0.02-0.05	0.01-0.03
GIQR/L 8-3.00-0.20	3.00	0.20	1.50	8.00	4.8	•	0.24-1.20	0.02-0.05	0.01-0.03
GIQR 8-3.18-0.20	3.18	0.20	1.50	8.00	4.8	•	0.24-1.27	0.02-0.05	0.01-0.03
GIQR 8-3.50-0.20	3.50	0.20	1.50	8.00	4.8	•	0.24-1.40	0.02-0.05	0.01-0.03
GIQR 8-4.00-0.20	4.00	0.20	1.50	8.00	4.8	•	0.24-1.60	0.02-0.05	0.01-0.03

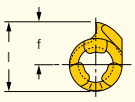
• According to retaining rings standard DIN 471/472. • Can be used for groove milling by circular interpolation.
• For cutting speed recommendations, see pages 340-341
(1) For grooving only
For tools, see pages: MG (330) • MGCH (330)

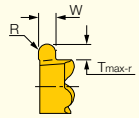
CHAMGROOVE

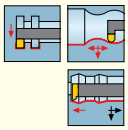
GIQR/L 8-R

Precision Ground Single-Ended Full Radius Inserts for Internal Grooving and Profiling









Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	f	l	IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-1.20-R060	1.20	0.60	1.50	8.00	4.8	7.78	•	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 8-2.00-R100	2.00	1.00	1.50	8.00	4.8	7.78	•	0.50-1.00	0.02-0.05	0.01-0.03
GIQR 8-3.00-R150	3.00	1.50	1.50	8.00	4.8	7.78	•	0.70-1.50	0.02-0.05	0.01-0.03

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation. • For cutting speed recommendations, see pages 340-341
For tools, see pages: MG (330) • MGCH (330)

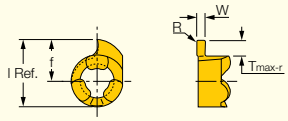


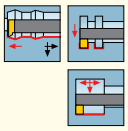
CHAMGROOVE

GIQR/L 11

Precision Ground Single-Ended Inserts for Internal Grooving and Turning, Dmin 11 mm







Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	l	f	IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-0.50-0.00 (1)	0.50	0.00	1.50	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-0.75-0.00 (1)	0.75	0.00	1.50	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-0.85-0.00 (1)	0.85	0.00	1.50	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-0.95-0.00 (1)	0.95	0.00	1.80	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.04-0.05 (1)	1.04	0.05	2.00	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.20-0.05 (1)	1.20	0.05	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.40-0.05 (1)	1.40	0.05	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.50-0.05 (1)	1.50	0.05	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.70-0.05 (1)	1.70	0.05	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-1.96-0.10 (1)	1.96	0.10	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-2.00-0.10 (1)	2.00	0.10	2.30	11.00	10.68	6.7	•	-	-	0.01-0.03
GIQR/L 11-2.22-0.10	2.22	0.10	2.30	11.00	10.68	6.7	•	0.12-0.88	0.03-0.07	0.02-0.05
GIQR/L 11-2.39-0.15	2.39	0.15	2.30	11.00	10.68	6.7	•	0.18-0.95	0.03-0.07	0.02-0.05
GIQR/L 11-2.47-0.20	2.47	0.20	2.30	11.00	10.68	6.7	•	0.24-0.98	0.03-0.07	0.02-0.05
GIQR/L 11-2.50-0.20	2.50	0.20	2.30	11.00	10.68	6.7	•	0.24-1.00	0.03-0.07	0.02-0.05
GIQR/L 11-2.70-0.20	2.70	0.20	2.30	11.00	10.68	6.7	•	0.24-1.08	0.03-0.07	0.02-0.05
GIQR/L 11-3.00-0.20	3.00	0.20	2.30	11.00	10.68	6.7	•	0.24-1.20	0.03-0.07	0.02-0.05
GIQR 11-3.18-0.20	3.18	0.20	2.30	11.00	10.68	6.7	•	0.24-1.27	0.03-0.07	0.02-0.05
GIQR 11-4.00-0.20	4.00	0.20	2.30	11.00	10.68	6.7	•	0.24-1.60	0.03-0.07	0.02-0.05
GIQR 11-5.00-0.20	5.00	0.20	2.30	11.00	10.68	6.7	•	0.24-2.00	0.03-0.07	0.02-0.05

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation. • For cutting speed recommendations, see pages 340-341

(1) For grooving only

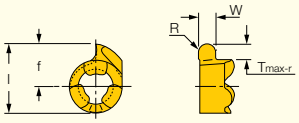
For tools, see pages: MG (330) • MGCH (330)

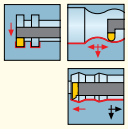
CHAMGROOVE

GIQR/L 11-R

Precision Ground Single-Ended Full Radius Inserts for Internal Grooving and Profiling







Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	f	l	IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-1.20-R060	1.20	0.60	2.30	11.00	6.7	10.68	•	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 11-1.80-R090	1.80	0.90	2.30	11.00	6.7	10.68	•	0.40-0.90	0.02-0.05	0.01-0.03
GIQR/L 11-2.00-R100	2.00	1.00	2.30	11.00	6.7	10.68	•	0.50-1.00	0.02-0.05	0.01-0.03
GIQR/L 11-3.00-R150	3.00	1.50	2.30	11.00	6.7	10.68	•	0.70-1.50	0.02-0.05	0.01-0.03
GIQR 11-4.00-R200	4.00	2.00	2.30	11.00	6.7	10.68	•	1.00-2.00	0.02-0.05	0.01-0.03

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation. • For cutting speed recommendations, see pages 340-341

For tools, see pages: MG (330) • MGCH (330)

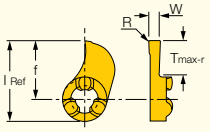


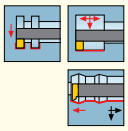
CHAMGROOVE

GIQR/L 11-15

Precision Ground Single-Ended Inserts for Internal Deep Grooving and Turning







Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	l	f		IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-1.50-0.05	1.50	0.05	6.30	15.00	14.60	10.6	SR M3.5-08134	●	0.10-0.40	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.00-0.10	2.00	0.10	6.30	15.00	14.60	10.6	SR M3.5-08134	●	0.15-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-0.20	2.50	0.20	6.30	15.00	14.60	10.6	SR M3.5-08134	●	0.25-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-0.20	3.00	0.20	6.30	15.00	14.60	10.6	SR M3.5-08134	●	0.25-0.75	0.02-0.05	0.02-0.06

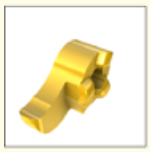
• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation. • For cutting speed recommendations, see pages 340-341

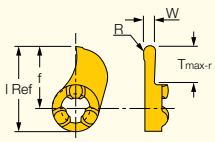
For tools, see pages: MG (330) • MGCH (330)

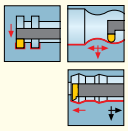
CHAMGROOVE

GIQR/L 11-15-R

Precision Ground Single-Ended Full Radius Inserts for Deep Internal Grooving and Profiling







Left-hand shown

Designation	Dimensions W±0.02	R±0.03	Tmax-r	D min	f	l		IC528	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-2.00-R100	2.00	1.00	6.30	15.00	10.6	14.60	SR M3.5-08134	●	0.00-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-R125	2.50	1.25	6.30	15.00	10.6	14.60	SR M3.5-08134	●	0.00-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-R150	3.00	1.50	6.30	15.00	10.6	14.60	SR M3.5-08134	●	0.00-0.75	0.02-0.05	0.02-0.06

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation. • For cutting speed recommendations, see pages 340-341

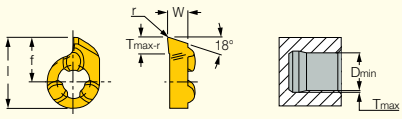
For tools, see pages: MG (330) • MGCH (330)

CHAMGROOVE

GIQR/L-A18

Internal Boring and Profiling Inserts







Left-hand shown

Designation	Dimensions D min	W	r	Tmax	l	f	IC528	Recommended Machining Data ap (mm)	f (mm/rev)	f groove (mm/rev)
GIQR/L 8-A18-0.15	7.80	3.00	0.15	1.60	7.60	4.6	●	0.02-1.30	0.02-0.05	0.01-0.03
GIQR/L 11-A18-0.15	11.00	3.00	0.15	2.50	10.70	6.7	●	0.02-2.20	0.02-0.05	0.01-0.03

• For cutting speed recommendations, see pages 340-341

For tools, see pages: MG (330) • MGCH (330)

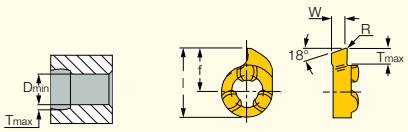
CHAMGROOVE

GIQR/L-B18

Internal Back Boring and Profiling Inserts



Right-hand shown



Left-hand shown

Designation	Dimensions D min	W	R±0.03	Tmax	f	l	IC528	Recommended Machining Data ap (mm)	f (mm/rev)
GIQR/L 8-B18-0.15	7.80	2.50	0.15	1.30	4.6	7.60	●	0.02-1.00	0.02-0.05
GIQR/L 11-B18-0.15	11.00	2.50	0.15	2.30	6.7	10.70	●	0.02-2.00	0.02-0.05

• For cutting speed recommendations, see pages 340-341

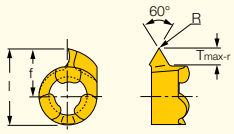
For tools, see pages: MG (330) • MGCH (330)

ISCARTHREAD CHAMGROOVE

GIQR/L-MT

Internal Threading Inserts for Threading 60° Partial Profile in 8 mm and Larger Holes





Left-hand shown

Designation	Dimensions l	R±0.03	Tmax-r	f	D min	Pmin	TPI max	IC528
GIQR/L 8-MT-0.05	7.78	0.05	1.50	4.8	8.00	0.90	28	●
GIQR/L 11-MT-0.05	10.68	0.05	2.00	6.7	11.00	0.90	28	●

• Can be used for thread milling by circular interpolation. • Pitch max 0.19xD. • D-diameter of thread • For cutting speed recommendations, see pages 340-341

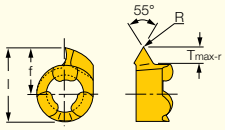
For tools, see pages: MG (330) • MGCH (330)

ISCARTHREAD CHAMGROOVE

GIQR/L-WT

Internal Threading Inserts for Threading Whitworth, Partial Profile in 8 mm and Larger Holes





Left-hand shown

Designation	Dimensions l	R±0.03	Tmax-r	f	D min	Pmin	TPI max	IC528
GIQR/L 8-WT-0.05	7.78	0.05	1.50	4.8	8.00	0.50	50	●
GIQR/L 11-WT-0.05	10.68	0.05	2.00	6.7	11.00	0.50	50	●

• Can be used for thread milling by circular interpolation. • TPI min D/5.9 • D-diameter of thread (pitch max<=W)

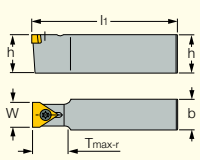
• For cutting speed recommendations, see pages 340-341

For tools, see pages: MG (330) • MGCH (330)

V-LOCK

SXCNN

External Toolholders for Specially Tailored Wide Profile Inserts





Designation	W	Tmax-r	h	b	l1	Insert		
SXCNN 1212 K10-06	10.40	17.00	12.0	12.0	125.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 1616 K10-06	10.40	17.00	16.0	16.0	125.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 2020 P10-06	10.40	17.00	20.0	20.0	170.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 2525 P10-06	10.40	17.00	25.0	25.0	170.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 1212 K13-05	13.00	20.00	12.0	12.0	125.00	XNUW 13	SR 76-2068	T-20/5
SXCNN 1414 K13-05	13.00	23.00	14.0	14.0	125.00	XNUW 13	SR 76-2068	T-20/5
SXCNN 1616 K13-05	13.00	23.00	16.0	16.0	125.00	XNUW 13	SR 14-591	T-20/5
SXCNN 2020 P13-05	13.00	23.00	20.0	20.0	170.00	XNUW 13	SR 14-591	T-20/5
SXCNN 2525 P13-05	13.00	23.00	25.0	25.0	170.00	XNUW 13	SR 14-591	T-20/5
SXCNN 1212 K14-03	14.50	-	12.0	12.0	125.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 1616 K14-03	14.50	17.00	16.0	16.0	125.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 2020 P14-03	14.50	17.00	20.0	20.0	170.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 2525 P14-03	14.50	17.00	25.0	25.0	170.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 1616 K20-05	20.50	-	16.0	16.0	125.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2020 P20-05	20.50	24.00	20.0	20.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2525 P20-05	20.50	24.00	25.0	25.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 3232 P20-05	20.50	24.00	32.0	32.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2525 P24-05	24.50	28.00	25.0	25.0	170.00	XNUW 24	SR 14-591	T-20/5
SXCNN 3232 P36-10	36.50	-	32.0	32.0	170.00	XNUW 36	SR 14-519	T-20/5

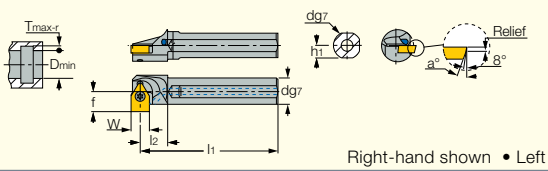
• Toolholder seat needs to be modified according to insert profile to ensure clearance.

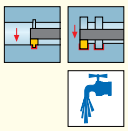
For inserts, see pages: XNUW (336)

V-LOCK

SXCIR

Internal Toolholders for Specially Tailored Profile Inserts





Right-hand shown • Left hand bars, on request.

Designation	W	d	l1	l2	f	D min	Tmax-r	h1	a°(2)	Relief(2)			
SXCIR 16-10 (1)	10.40	16.00	125.00	20.0	11.5	25.00	3.00	7.5	15.0	1.5	SR 76-2067	T-15/5	PL 16
SXCIR 20-10 (1)	10.40	20.00	150.00	25.0	13.0	25.00	3.00	9.0	15.0	1.5	SR 76-2067	T-15/5	PL 20
SXCIR 16-13	13.00	16.00	125.00	20.0	13.0	30.00	4.00	7.5	20.0	2.0	SR 76-2068	T-20/5	PL 16
SXCIR 20-13	13.00	20.00	150.00	25.0	14.5	30.00	4.00	9.0	20.0	2.0	SR 76-2068	T-20/5	PL 20
SXCIR 25-13	13.00	25.00	170.00	30.0	17.0	30.50	4.00	11.5	20.0	2.0	SR 76-2068	T-20/5	PL 25
SXCIR 32-13	13.00	32.00	200.00	35.0	20.0	37.00	4.00	14.5	20.0	2.0	SR 76-2068	T-20/5	PL 32
SXCIR 25-14 (1)	14.50	25.00	170.00	30.0	15.5	30.00	3.00	11.5	15.0	2.0	SR 76-2067	T-15/5	PL 25
SXCIR 20-20	20.50	20.00	150.00	25.0	15.0	40.00	4.00	9.0	15.0	2.5	SR 14-591	T-20/5	PL 20
SXCIR 32-20	20.50	32.00	200.00	35.0	20.5	40.00	4.00	14.5	15.0	2.5	SR 14-591	T-20/5	PL 32
SXCIR 25-24	24.50	25.00	170.00	30.0	17.5	40.00	4.00	11.5	15.0	2.5	SR 14-591	T-20/5	PL 25
SXCIR 32-24	24.50	32.00	200.00	35.0	20.5	40.00	4.00	14.5	15.0	2.5	SR 14-591	T-20/5	PL 32

(1) On request.

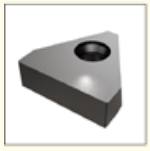
(2) Blank insert reference dimensions

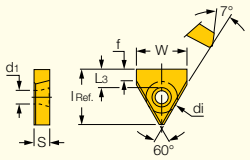
For inserts, see pages: XNUW (336)

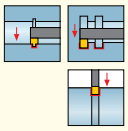


V-LOCK

XNUW
Blank Inserts for Wide Profile Grooving





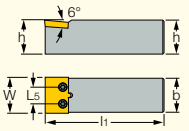


Designation	Dimensions W	f	L_3	di	S	d_1	l	Tough ↔ Hard IC28	IC08	IC20	IC07
XNUW 1003-06	10.40	6.0	10.50	6.35	3.18	4.53	17.00	●	●		
XNUW 1305-05	13.00	5.0	11.40	12.70	5.35	5.50	20.60	●	●	●	
XNUW 14T3-03	14.50	3.0	3.70	9.52	3.97	4.40	14.00	●	●	●	
XNUW 2006-05	20.50	4.8	5.00	12.70	6.35	5.50	20.30	●		●	●
XNUW 2406-05	24.50	5.0	6.00	15.87	6.35	5.50	25.00	●	●	●	●
XNUW 3606-10	36.50	5.4	10.00	19.05	6.35	6.50	34.60	●	●	●	

For tools, see pages: SXCIR (335) • SXCNN (335)

FORMTOOL

FTHN
Square Shank Toolholders for
FTB Profile Turning Inserts





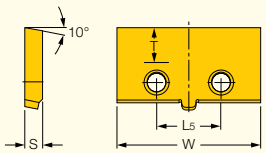
Designation	W	h	b	l_1	L_5		
FTHN 2525M-3010	30.40	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 2525M-3510	35.40	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 3232P-3510	35.40	32.0	32.0	170.00	14.00	SR 14-591	T-20/5
FTHN 3232P-4510	45.40	32.0	32.0	170.00	18.00	SR 14-591	T-20/5
FTHN 3232P-5107	51.40	32.0	32.0	170.00	21.90	SR 14-591	T-20/5

For inserts, see pages: FTB (336)

FORMTOOL

FTB
Blank Inserts for Wide Profile Grooving





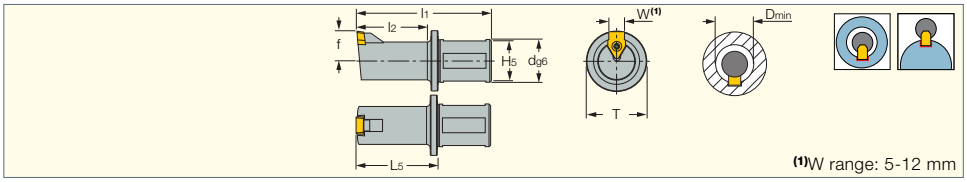


Designation	Dimensions W	T groove	S	L_5	IC08
FTB 3010	30.40	10.0	5.00	14.00	●
FTB 3510	35.40	10.0	5.00	14.00	●
FTB 4010	40.40	10.0	5.00	18.00	●
FTB 4510	45.40	10.0	5.00	18.00	●
FTB 5107	51.40	7.0	5.00	21.90	●

For tools, see pages: FTHN (336)

ISCARBROACH

SXCIB
Broaching Holders for Lathe and Milling Machines



(1)W range: 5-12 mm

Designation	d	l_1	l_2	L_5	f	D min	H_5	T	Insert		
SXCIB 25-22-50	25.00	100.00	50.0	60.00	12.0	22.00	23.0	33.0	Group #1	SR M5X13 T20	T-20/5
SXCIB 32-30-50	32.00	100.00	50.0	60.00	16.5	30.00	30.0	45.0	Group #2	SR M5X13 T20	T-20/5
SXCIB 32-38-50	32.00	100.00	50.0	60.00	22.0	38.00	30.0	45.0	Group #3	SR M5X13 T20	T-20/5
SXCIB 32-30-75	32.00	125.00	75.0	85.00	16.5	30.00	30.0	45.0	Group #2	SR M5X13 T20	T-20/5
SXCIB 32-38-75	32.00	125.00	75.0	85.00	22.0	38.00	30.0	45.0	Group #3	SR M5X13 T20	T-20/5

For inserts, see pages: XNUWB (337) • XNUWB (light fit) (338) • XNUWB (tight fit) (338)

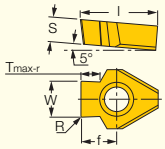
Insert Group #1	Insert Group #2	Insert Group #3
XNUWB 13-4.98-0.2	XNUWB 13-7.98-0.2	XNUWB 13-10.13-1.05
XNUWB 13-5.01-0.2	XNUWB 13-8.13-1.05	XNUWB 13-11.98-0.3
XNUWB 13-5.98-0.2	XNUWB 13-9.98-0.3	XNUWB 13-12.02-0.3
XNUWB 13-6.01-0.2	XNUWB 13-10.01-0.3	XNUWB 13-12.02-0.5
XNUWB 13-6.12-0.85		XNUWB 13-12.15-1.35
XNUWB 13-7.13-0.85		XNUWB 13-12.15-1.75
XNUWB 13-7.98-0.2		XNUWB 13-12.15-2.25
XNUWB 13-8.01-0.2		
XNUWB 13-8.13-1.05		

Spare Parts Clamping screw: SR M5X13 T20 Key: T-20/5

ISCARBROACH

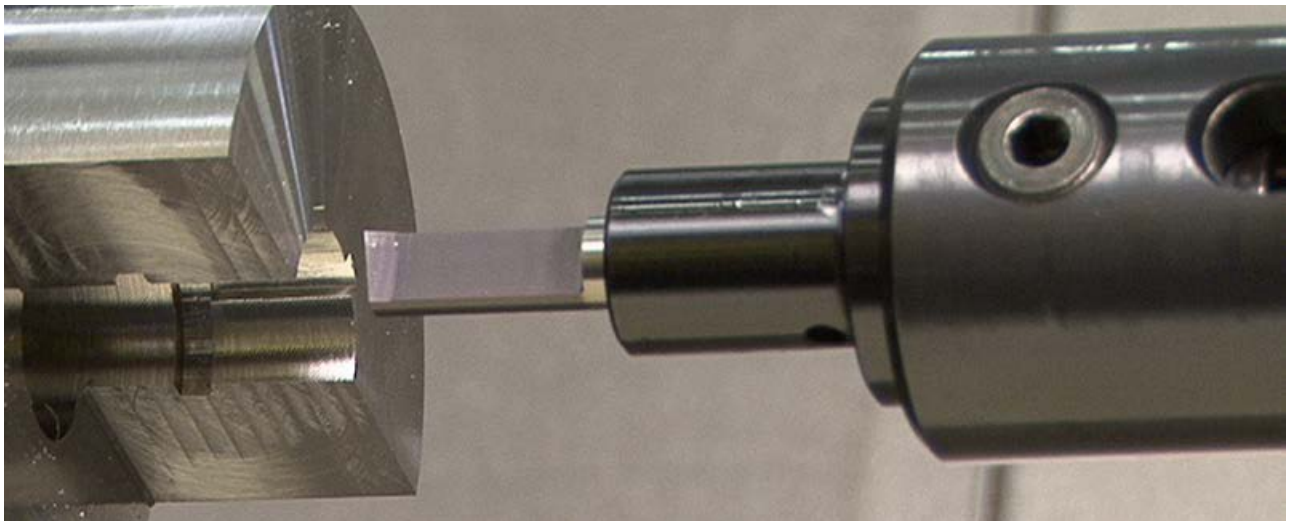
XNUWB
DIN138 (Tolerance C11) Inserts for Keyway Broaching on Lathe and Milling Machines





Designation	Dimensions						IC908
	$W^{\pm 0.02}$	$R^{\pm 0.05}$	f	l	T_{max-r}	S	
XNUWB 13-6.12-0.85	6.12	0.85	8.0	17.30	2.60	5.30	•
XNUWB 13-7.13-0.85	7.13	0.85	8.0	17.30	3.30	5.30	•
XNUWB 13-8.13-1.05	8.13	1.05	8.0	17.30	3.40	5.30	•
XNUWB 13-10.13-1.05	10.13	1.05	10.9	20.20	4.20	5.30	•
XNUWB 13-12.15-1.35	12.15	1.35	10.9	20.20	5.10	5.30	•
XNUWB 13-12.15-1.75	12.15	1.75	10.9	20.20	6.60	5.30	•
XNUWB 13-12.15-2.25	12.15	2.25	10.9	20.20	8.50	5.30	•

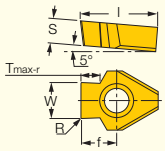
• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm
For tools, see pages: SXCIB (337)



ISCARBROACH

XNUWB (light fit)
DIN6885 Inserts for Light Fit (JS9) Keyway Broaching on Lathe and Milling Machines





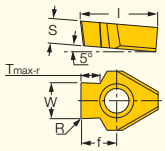
Designation	Dimensions W(1)	R	R±toler	f	l	Tmax-r	S	IC908
XNUWB 13-5.01-0.2	5.01	0.20	0.030	8.0	17.30	2.70	5.30	•
XNUWB 13-6.01-0.2	6.01	0.20	0.030	8.0	17.30	3.40	5.30	•
XNUWB 13-8.01-0.2	8.01	0.20	0.030	8.0	17.30	4.10	5.30	•
XNUWB 13-10.01-0.3	10.01	0.30	0.030	8.0	17.30	4.20	5.30	•
XNUWB 13-12.02-0.3	12.02	0.30	0.030	10.9	20.20	5.70	5.30	•
XNUWB 13-12.02-0.5	12.02	0.50	0.050	10.9	20.20	8.50	5.30	•

• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm
(1) **Tolerance:** +0 -0.03
For tools, see pages: SXCIB (337)

ISCARBROACH

XNUWB (tight fit)
DIN6885 Inserts for Tight Fit (P9) Keyway Broaching on Lathe and Milling Machines



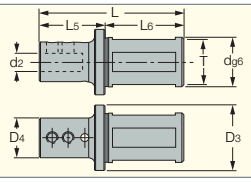


Designation	Dimensions W(1)	R±0.03	f	l	Tmax-r	S	IC908
XNUWB 13-4.98-0.2	4.98	0.20	8.0	17.30	2.70	5.30	•
XNUWB 13-5.98-0.2	5.98	0.20	8.0	17.30	3.40	5.30	•
XNUWB 13-7.98-0.2	7.98	0.20	8.0	17.30	4.10	5.30	•
XNUWB 13-9.98-0.3	9.98	0.30	8.0	17.30	4.20	5.30	•
XNUWB 13-11.98-0.3	11.98	0.30	10.9	20.20	5.70	5.30	•

• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm
(1) **Tolerance:** +0 -0.03
For tools, see pages: SXCIB (337)

ISCARBROACH

BHDN
Broaching Holders for Lathe and Milling Machines



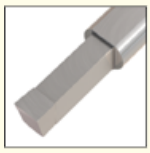
Designation	d2	d	D4	D3	L5	L	L6	T	Insert		
BHDN 25-10-33	10.00	25.00	20.00	33.00	33.00	73.00	40.00	23.0	SCB 010	SR M5X6 DIN913	HW 2.5
BHDN 32-10-33	10.00	32.00	20.00	40.00	33.00	73.00	40.00	30.0	SCB 010	SR M5X6 DIN913	HW 2.5

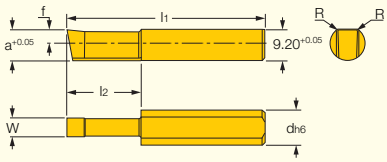
• Holders are suitable for left- and right-hand mini-bars and ISO bars.

ISCARBROACH

SCB

DIN138 (Tolerance C11) Inserts for Keyway Broaching on Lathe and Milling Machines





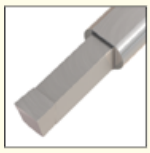
Designation	Dimensions W±0.02	R±0.05	d	f	a	l1	l2	D min	IC908
SCB 010.410.050-25	4.10	0.50	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.410.050-41	4.10	0.50	10.00	4.0	9.00	66.00	41.0	10.00	•
SCB 010.510.050-25	5.10	0.50	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.510.050-41	5.10	0.50	10.00	4.0	9.00	66.00	41.0	10.00	•

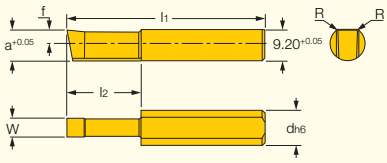
• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm

ISCARBROACH

SCB (light fit)

DIN6885 Inserts for Light Fit (JS9) Keyway Broaching on Lathe and Milling Machines





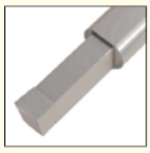
Designation	Dimensions W±0.015	R±0.03	d	f	a	l1	l2	D min	IC908
SCB 010.400.020-25	4.00	0.20	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.400.020-41	4.00	0.20	10.00	4.0	9.00	66.00	41.0	10.00	•
SCB 010.500.020-25	5.00	0.20	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.500.020-41	5.00	0.20	10.00	4.0	9.00	66.00	41.0	10.00	•

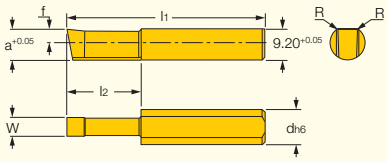
• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm

ISCARBROACH

SCB (tight fit)

DIN6885 Inserts for Tight Fit (P9) Keyway Broaching on Lathe and Milling Machines





Designation	Dimensions W(1)	R±0.03	d	f	a	l1	l2	D min	IC908
SCB 010.398.020-25	3.98	0.20	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.398.020-41	3.98	0.20	10.00	4.0	9.00	66.00	41.0	10.00	•
SCB 010.498.020-25	4.98	0.20	10.00	4.0	9.00	50.00	25.0	10.00	•
SCB 010.498.020-41	4.98	0.20	10.00	4.0	9.00	66.00	41.0	10.00	•

• **Typical conditions:** Vc = 4000-8000 mm/min, ap = 0.02-0.08 mm

(1) **Tolerance:** +0.01 -0.02

Groove-Turn Cutting Speed Recommendations

ISO	Material		Condition	Tensile Strength [N/mm2]	Hardness HB	Material No.(1)
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
		>= 0.55 %C	Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% all elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel, tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
P	Stainless steel and cast steel		Ferritic/martensitic	680	200	12
			Martensitic	820	240	13
M	Stainless steel		Austenitic	600	180	14
K	Grey cast iron (GG)		Pearlitic/ferritic		180	15
			Pearlitic/martensitic		260	16
	Ductile cast iron (nodular) (GGG)		Ferritic		160	17
			Pearlitic		250	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum-wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe Baswd	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium and Ti alloys			RM 400		36
			Alpha+beta alloys cured	RM 1050		37
H	Hardened steel		Hardened		55 HRc	38
			Hardened		60 HRc	39
	Chilled cast iron		Cast		400	40
	Cast iron		Hardened		55 HRc	41

(1) For material groups, see H8-60

Material No.	IC20N	IC8250	IC807	IC808	IC908	IC354	IC830	IC228/328/528		
1	225 - 335	210 - 315	160 - 240	145 - 220	140-210	110 - 170	105 - 155	100 - 145		
2	210 - 290	195 - 270	150 - 205	135 - 190	130-180	105 - 145	95 - 135	90 - 125		
3	160 - 240	150 - 225	115 - 170	105 - 155	100-150	80 - 120	75 - 110	70 - 105		
4	175 - 270	165 - 255	125 - 195	115 - 180	110-170	90 - 135	80 - 125	75 - 120		
5	145 - 225	135 - 210	105 - 160	95 - 145	90-140	70 - 110	65 - 105	65 - 100		
6	175 - 270	165 - 255	125 - 195	115 - 180	110-170	90 - 135	80 - 125	75 - 120		
7	145 - 240	135 - 225	105 - 170	95 - 155	90-150	70 - 120	65 - 110	65 - 105		
8	145 - 225	135 - 210	105 - 160	95 - 145	90-140	70 - 110	65 - 105	65 - 100		
9	130 - 210	120 - 195	90 - 150	85 - 135	80-130	65 - 105	60 - 95	55 - 90		
10	210 - 290	195 - 270	150 - 205	135 - 190	130-180	105 - 145	95 - 135	90 - 125		
11	130 - 210	120 - 195	90 - 150	85 - 135	80-130	65 - 105	60 - 95	55 - 90		

	IC20N	IC806	IC907/807	IC8250	IC808	IC908	IC320	IC830	IC354	
12	180 - 320	130 - 240	125 - 230	120 - 220	115 - 210	110-200	100 - 180	80 - 150	90 - 160	
13	160 - 300	120 - 230	115 - 220	110 - 210	105 - 200	100-190	90 - 170	75 - 140	80 - 150	

	IC20N	IC806	IC907/807	IC8250	IC808	IC908	IC320	IC830	IC354	
14	140 - 270	110 - 205	105 - 195	100 - 185	95 - 180	90-170	80 - 155	65 - 125	70 - 135	

	IC5010	IC418	IC428	IC8250	IC907/807	IC908/808				
15	165 - 295	140 - 255	150-270	135 - 245	105 - 190	95 - 175				
16	145 - 210	125 - 180	130-190	115 - 170	90 - 135	85 - 125				
17	155 - 255	135 - 220	140-230	125 - 205	100 - 160	90 - 150				
18	120 - 200	105 - 170	110-180	100 - 160	75 - 125	70 - 115				
19	185 - 310	160 - 265	170-280	155 - 250	120 - 195	110 - 180				
20	155 - 255	135 - 220	140-230	125 - 205	100 - 160	90 - 150				

	ID5	IC04	IC807	IC20	IC04	IC07	IC08			
21	400-2500	460 - 1380	440 - 1320	400-1200	460 - 1380	440 - 1320	320 - 960			
22	400-2500	345 - 1150	330 - 1100	300-1000	345 - 1150	330 - 1100	240 - 800			
23	400-2500	345 - 1150	330 - 1100	300-1000	345 - 1150	330 - 1100	240 - 800			
24	400-2500	230 - 690	220 - 660	200-600	230 - 690	220 - 660	160 - 480			
25	300-1500	230 - 460	220 - 440	200-400	230 - 460	220 - 440	160 - 320			
26	300-1000	230 - 460	220 - 440	200-400	230 - 460	220 - 440	160 - 320			
27	300-800	170 - 345	165 - 330	150-300	170 - 345	165 - 330	120 - 240			
28	300-800	115 - 230	110 - 220	100-200	115 - 230	110 - 220	80 - 160			
29	150-600	55 - 230	55 - 220	50-200	55 - 230	55 - 220	40 - 160			
30										

No.	IC804	IC806	IC807	IC907	IC908	IC808	IC04	IC07	IC20	IC08
31	60 - 95	50 - 80	50 - 80	45 - 75	40-65	40 - 70	30 - 50	30 - 45	25 - 40	25 - 40
32	45 - 65	35 - 55	35 - 55	35 - 50	30-45	30 - 45	25 - 35	20 - 30	20 - 30	20 - 25
33	45 - 65	35 - 55	35 - 55	35 - 50	30-45	30 - 45	25 - 35	20 - 30	20 - 30	20 - 25
34	35 - 60	30 - 50	30 - 50	30 - 45	25-40	25 - 40	20 - 30	15 - 30	15 - 25	15 - 25
35	30 - 45	25 - 35	25 - 35	25 - 35	20-30	20 - 30	15 - 25	15 - 20	15 - 20	10 - 20
36	150 - 255	125 - 210	120 - 205	115 - 195	100-170	105 - 180	80 - 135	70 - 120	65 - 110	60 - 100
37	50 - 65	45 - 60	40 - 50	40 - 50	35-45	35 - 45	50 - 65	40 - 55	40 - 50	35 - 45

No.	IB10H	IB50	IB20H	IC807	IC907	IC808	IC908			
38	100-155	90-140	80-125	35-45	30-40	30-40	25-35			
39	90-135	80-120	75-110	30-40	25-35	25-35	20-30			
40	110-175	100-160	90-145	45-65	40-60	40-60	30-50			
41	100-135	90-120	80-110	40-50	35-45	35-45	30-40			

What is a GRIP Insert?

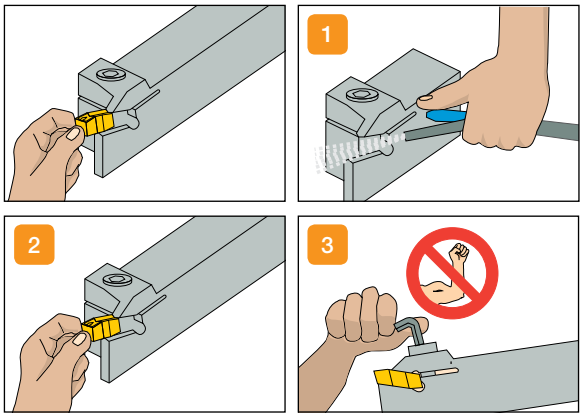
A grip insert is a grooving, groove-turn or parting insert that is clamped between 2 prisms.

Clamping a grip insert correctly in the holder is necessary for stable machining.

1 Ensure that the seat is clean of dirt and swarf.

2 In the first stage of clamping, ease the insert gently into place. Make sure that the prismatic surfaces match.

3 Always use the wrench supplied with the tool. Use reasonable force to the point of resistance for final clamping.
The maximum recommended clamping torque is 1.5xd Nm or 15xd Kgf x cm.
d=clamping screw dia. in mm.

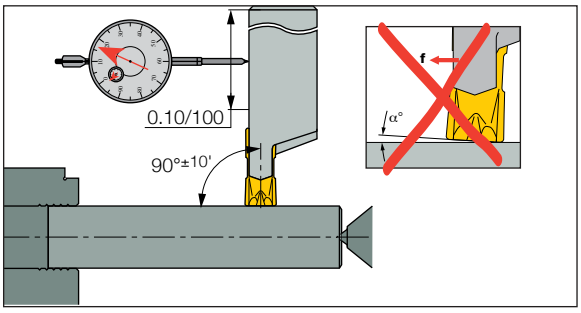


It is very important not to overtighten a grip insert, even though you may get the impression that the insert is more secure. When overtightened, the insert doesn't clamp into its correct and carefully designed clamping points, and therefore, is less stable.

Positioning the Tool on the Turret

Successful machining can be achieved only if the tool is properly positioned on the turret.
The following sequence should be followed:

- Position the grip holder perpendicular to the workpiece; deviation may be 0.10/100 mm along the holder
- Check to ensure that the frontal cutting edge is aligned parallel to the workpiece



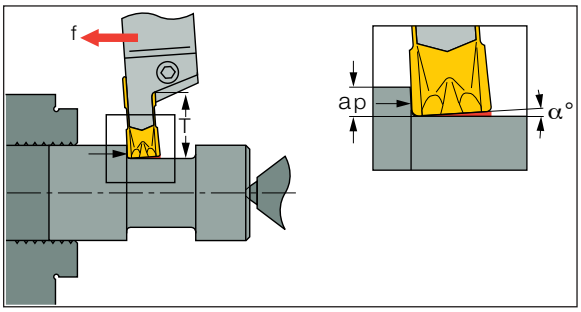
If the cutting edge is not parallel to the workpiece or is positioned as shown, the deflection during machining (in the indicated direction) will be too small and chatter may occur.

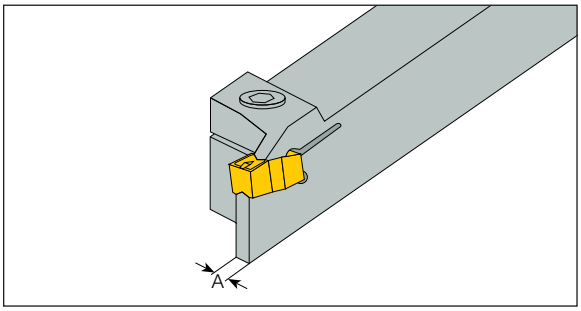
Principles of Turning with Groove-Turn Tools

The basic principle in turning with groove-turn tools is the deflection of the cutting tool, which results in a frontal clearance angle α^{o} between the insert and the workpiece. The clearance angle α^{o} is a function of the side cutting forces and is not constant, as is the case with **ISO** inserts. The deflection is influenced by the following factors:

Feed **f**
Depth of Cut **ap**
Overhang of Insert Support **T**
Width of Insert Support **A**
Cutting Speed **Vc**
Workpiece Material

When all of the above factors remain constant during turning, a high degree of accuracy with a tolerance up to ±0.01 mm can be achieved.





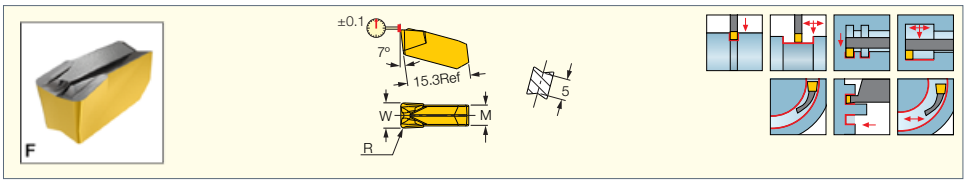
If the conditions are too light (such as in a super finish operation), there may not be enough deflection and the clearance angle will be very small. This may result in chatter and vibration.

Cutting Conditions

Choosing the correct cutting conditions

Specific cutting conditions are listed in the catalog for every individual insert as shown below:

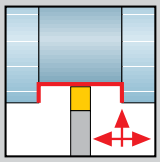
Example: GIMF 608 Utility Inserts for Grooving and Turning



Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC428	IC5010	IC907	IC806	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMF 608	6.00	0.80	5.0	•	•	•		•		•		•	1.00-3.60	0.24-0.42	0.13-0.25
													Depth of cut	Turning feed	Grooving feed

Grades for Applications and Materials

- Carbide grades and cutting speeds:
- Cutting speed recommendations are derived from the type of workpiece material and choice of carbide grade
- Choose the carbide grade according to the chart below. For specific workpiece material and cutting speed recommendations, refer to pages 340-341

Material groups		ISO P 1-11 Steel	ISO P 12-13 Stainless Steel Ferritic & Martensitic	ISO M 14 Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	ISO K 15-20 Cast Iron	ISO N 21-28 Non-ferrous	ISO S 31-37 High Temperature Alloys	ISO H 38-41 Hard Steel & Cast Iron
 GROOVE TURN	Harder	IC20N	IC807	IC807	IC5010	ID5	IC804	IB50
		IC807					IC806	
		IC808 (IC908)	IC808 (IC908)	IC808 (IC908)	IC428		IC907 IC807	IC807
		IC8250					IC07	
					IC8250	IC20	IC20	IC808
							IC908	
	Tougher	IC830	IC830	IC830			IC08	

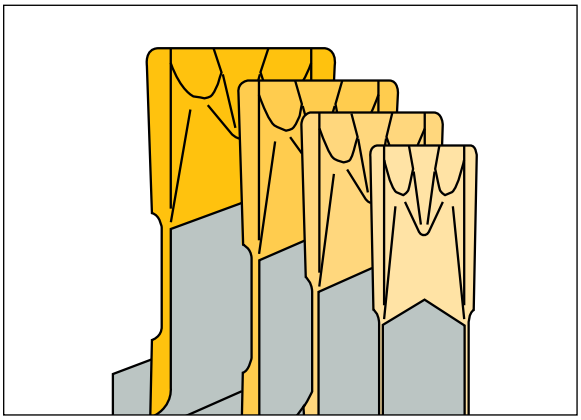
■ First choice

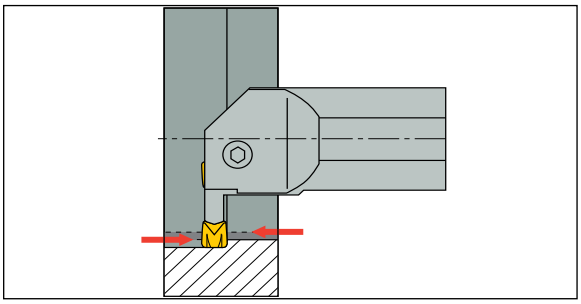
Machining Tips

Insert Width

Generally, the insert width should be as wide as possible as it contributes to its strength. However, there are additional considerations that should be taken into account in order to choose the correct width:

- Workpiece size and clamping stability: A larger width means higher cutting forces during grooving. A width that is too large can cause deformation of the workpiece and/or vibration.
- When using a larger width, make sure your machine has enough power. (see page 349)
- Machining strategy: Grooving in a correct sequence should also affect your choice. (see page 345)
- Required overhang: A larger tool overhang will require a wider insert to maintain stability.
- The larger the insert, the wider the upper and lower jaws can be, therefore, higher forces are required to effect the necessary side deflection.
- If the depth of cut is small, the width of the insert should be proportionately smaller to guarantee the required deflection.



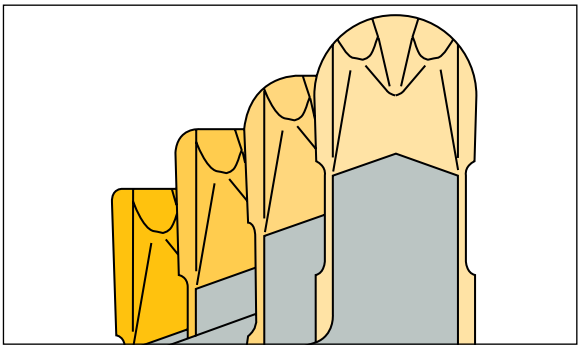


Efficient use of insert's corners:
Always try to evenly split machining between the two corners. This optimization will increase the insert's life.

Insert Radius

Choosing the insert radius for a particular application is a combination of many factors. The corner radius of the groove-turn insert influences the product shape and tool life.

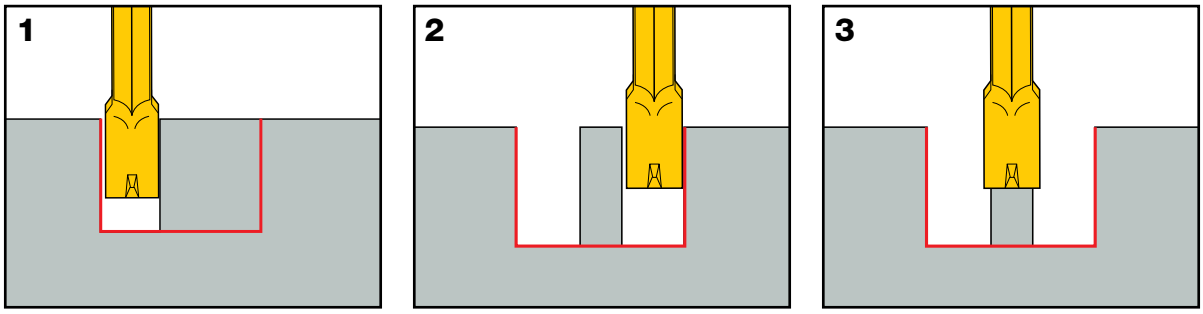
- A larger radius in turning operations normally improves surface quality.
- An insert with a larger radius has a better distribution of the cutting load and of the generated heat. It is stronger and ensures longer tool life.
- Small radii on grip inserts result in increased side forces and side deflection, preventing instability, especially with small depths of cut and feed.
- The best radius to use is basically determined by the geometry and dimensions of the workpiece. The more securely the workpiece is fastened in the machine tool, the larger the radius may be.
- When the ratio of a workpiece's length compared to its diameter is large, inserts with smaller radii will prevent chatter.
- A larger corner radius enables machining at a larger feed rate.
- In profiling operations, inserts with larger corner radii or full radii are required.



Machining Tips

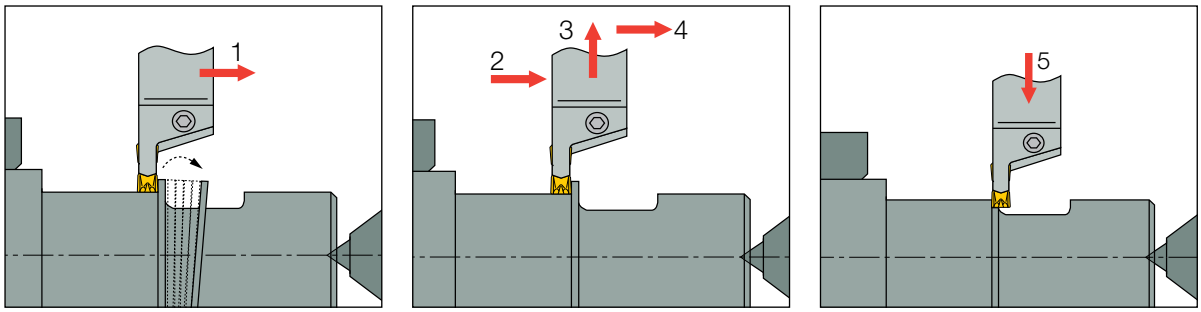
Correct grooving sequence

When making a groove where the insert's width is not identical to the groove, it is recommended to select an insert that will enable to groove symmetrically in such a way that the material is always in the center of the insert. This practice will ensure better chipbreaking and symmetrical cutting forces.



Eliminating a "Hanging Ring"

When turning at the end of a bar or towards a recess between two walls, a "hanging ring" may be formed. To eliminate the unwanted "hanging ring":



1. Turn toward the recess. Stop a short distance before reaching the recess.
2. Pull back the groove-turn tool and re-position it.
3. Machine as shown. This final operation achieves the size and flatness of the side wall.

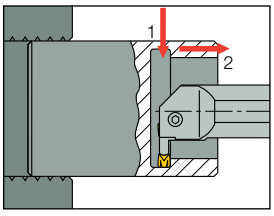
Internal Machining

Improving Internal Turning in a Blind Hole

Internal turning in a blind hole brings about the problem of chip exit. When the tool reaches the rear side wall, chips may be caught between the wall and the insert, possibly causing insert breakage. Two solutions that can eliminate this problem:

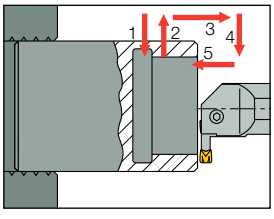
First Solution

1. Start by grooving at the rear wall.
2. Continue by turning from the inside toward the outside.



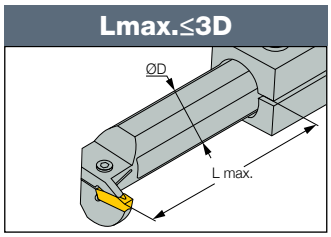
Second Solution

Start by grooving at the rear wall. Pull the tool back to the outside. Turn the final diameter from outside, toward the groove.



Optimizing Internal Machining Toolholder Overhang

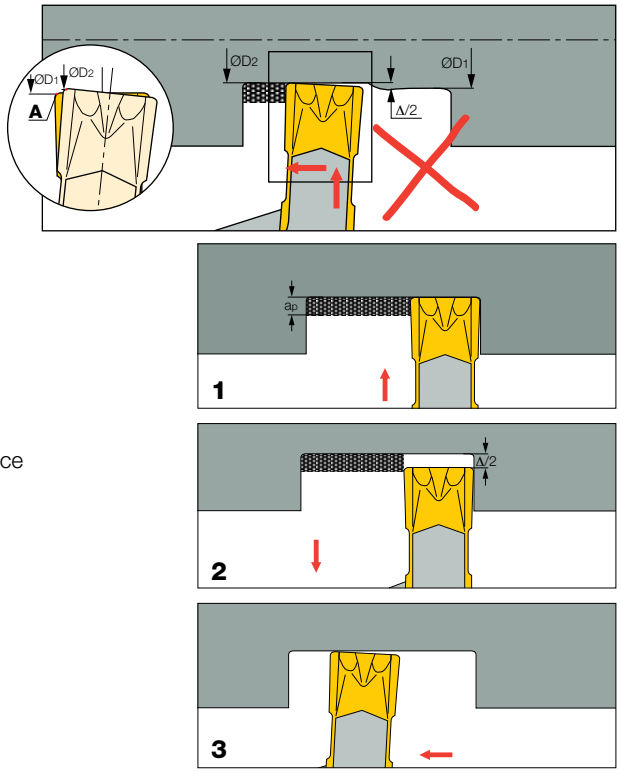
It is always recommended to use the minimum possible overhang in order to maintain maximum toolholder rigidity. As a general rule, maximum overhang should not exceed three times the holder-bar diameter.



Finishing Operation: Diameter Compensation

A compensation factor for the final diameter must be used in the final machining operation.
After the initial grooving to the required final diameter, the machining direction is normally changed for longitudinal turning. At this point the deflection occurs.
If machining continues without correction, corner A will penetrate the material.
This will result in two different diameters:
øD1 from the grooving and øD2 from the turning.
The difference between øD1 and øD2 is a value we define as Δ.
The compensation factor is Δ/2, as shown below.

$$\frac{\Delta}{2} = \frac{\text{øD}^1\text{-øD}^2}{2}$$



Using the compensation factor will eliminate the small surface step. Follow this simple procedure during machining:

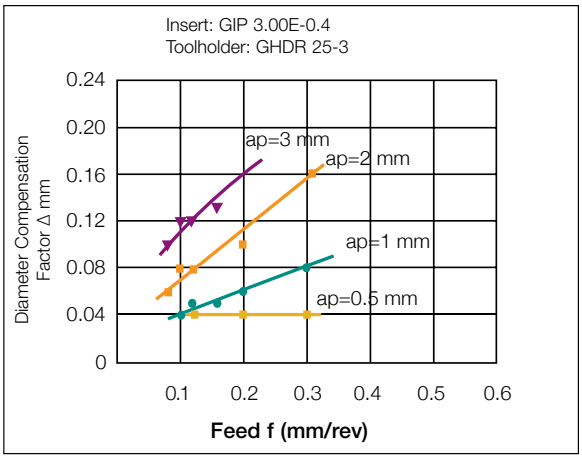
1. Groove to the final diameter
2. Pull the tool back, a distance equal to the value of Δ/2
3. Continue the finish turning operation

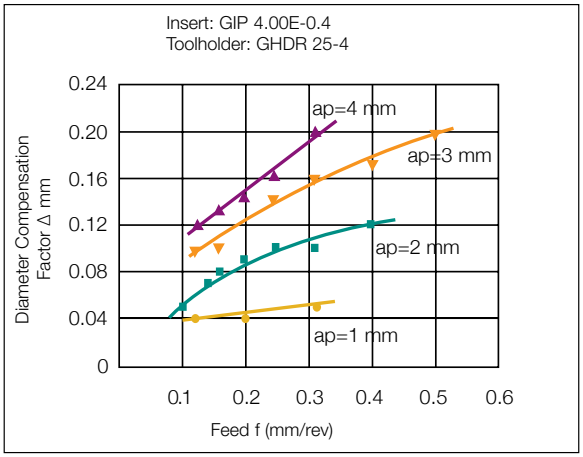
Characteristic values of Δ are shown in the diagrams on the next page.

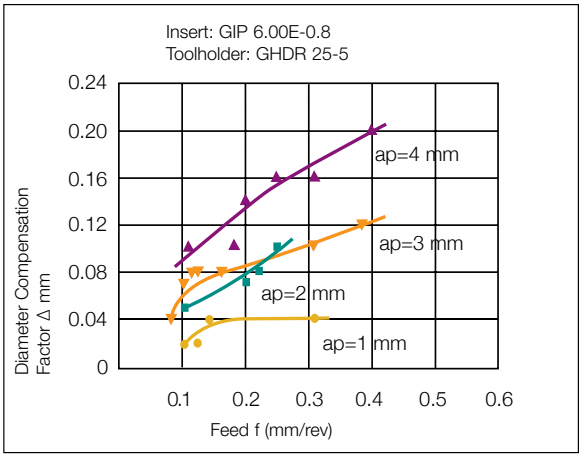
Characteristic Values of Δ

The diagrams show experimental results for specific machining conditions. These are sample values that will vary with different workpiece materials and different holder types.

Measure the Δ value for your finishing operation in a short test using your selected finishing conditions. Do not run your test using the final diameter.

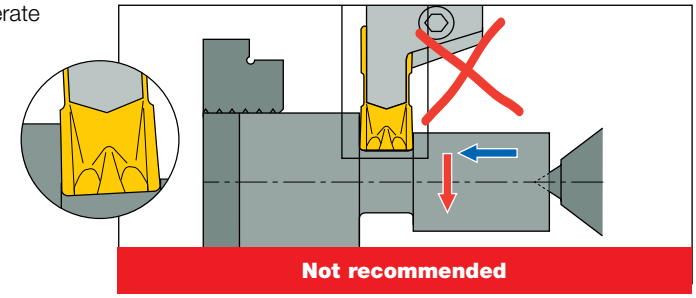




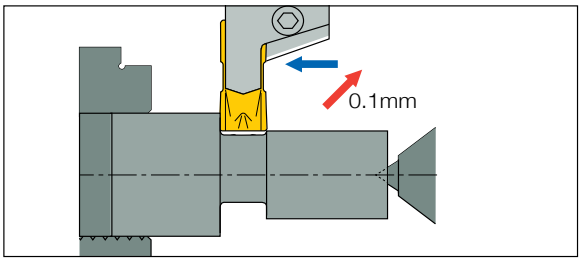


Multifunction Operations

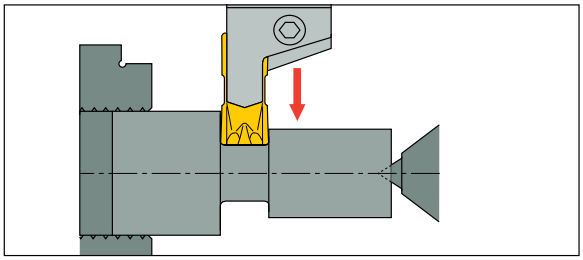
The groove-turn are multifunction tools, able to operate in a sequence of grooving and turning modes. Moving from turning to grooving requires consideration of the basic Grip principle, thereby eliminating the possibility of insert breakage. In this situation one must release the side deflection which is necessary in turning, but not recommended in grooving.



The following machining sequence is suggested: After completing the longitudinal turning, but before starting the grooving, the side deflection must be released. Move the tool in the direction opposite that of feed, approximately 0.1 mm, and return to the original position without side load.



Then, after the deflection has been released and the holder is perpendicular to the workpiece, the grooving operation may start.



Prior move

Actual move

Machining Between Walls

One of the most important advantages of the **GROOVE-TURN** systems is the ability to machine between walls. To achieve the best results, the following sequence is recommended:

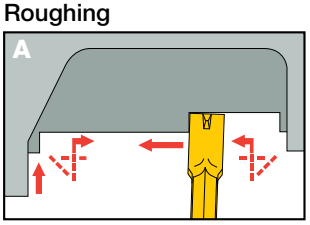
Roughing

Plunge to depth of cut. Pull back 0.2 mm radially. Turn longitudinally, retract at the end of the cut by 0.2 mm, simultaneously in radial and axial directions. Plunge again and repeat same cycle leaving steps of 0.2 mm at the shoulders for the finishing cut. Minimum **D.O.C.** has to be ap≥Rx1.2 (corner radius).

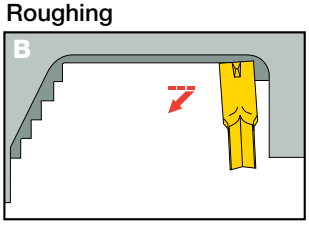
Finishing

Plunge on the right side, reaching the tangent of the bottom radius. Retract and relieve the tangent point of the radius on the other side. Retract and machine all of the contour, pulling back by compensation value along the bottom (see page 346).

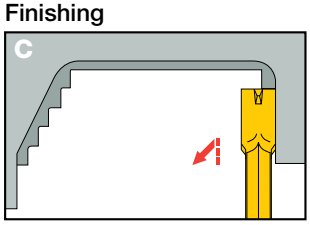
Roughing



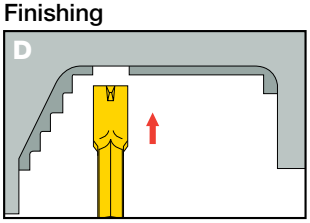
Roughing



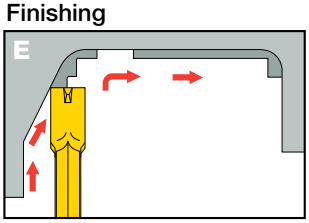
Finishing



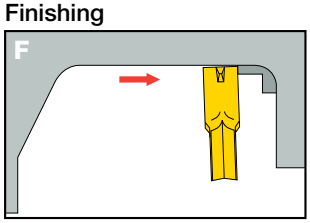
Finishing



Finishing



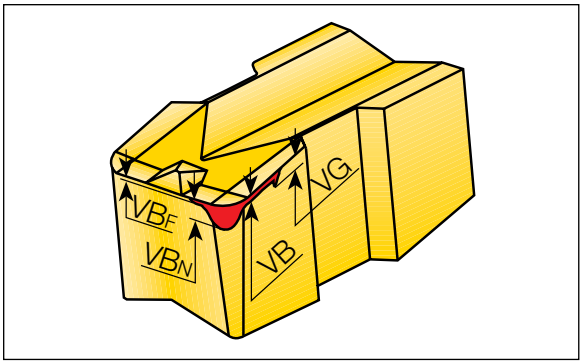
Finishing



These instructions can be viewed at:
http://www.youtube.com/watch?v=HXhEtc1zl4w

Recommended Criteria for Replacement of the Cutting Edge

The cutting edge should be replaced in time to save costly downtime. The recommended value of wear at replacement is defined as the wear land size. The insert should be replaced when the wear land size is such that the increase in side forces is still small - not causing the insert to break and still maintaining the required workpiece tolerances. Wear is a function of machining time. The cutting edge should normally be replaced after 15 minutes of machining time.



Insert Wear - Tool Life

Wear on the Clearance Face

Wear land on groove turn inserts generally occurs at the corner of the clearance face **VBN**, on the side near the corner **VB**, on the frontal cutting edge **VBF** and at the end of the cutting side **VG**. The effective life of the cutting edge ends when any of the wear land values - **VB, VB, VBF** or **VG** - exceed the recommended maximum values shown.

Maximum Recommended Wear Land Values Relative to Insert Widths

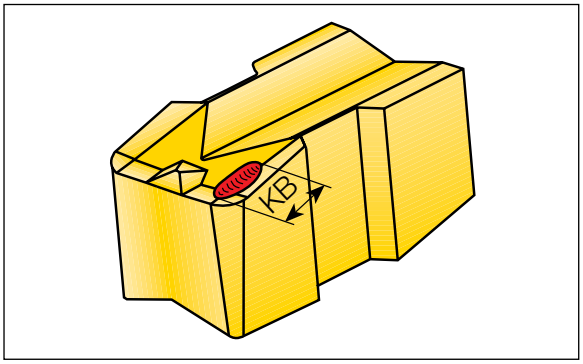
W Insert Width (mm)	Maximum Wear Land (mm)
≤3	0.20
4	0.22
5	**0.25**
6	**0.27**
8	**0.27**
≥10	**0.30**

The largest wear land is normally measured at the corner of the clearance face **VBN**. It has the most influence on the dimensions and tolerances of the final workpiece. The wear land shape on **GRIP** inserts differs slightly from that of **ISO** inserts. Although the frontal cutting surface of **GRIP** inserts absorbs more heat and wear, the wear land **VBF** is generally negligible in turning operations when compared to **VB** and **VBN**. Wear and may be found only occasionally at the end of the cutting side **VG**.

Crater Wear and Tool Life

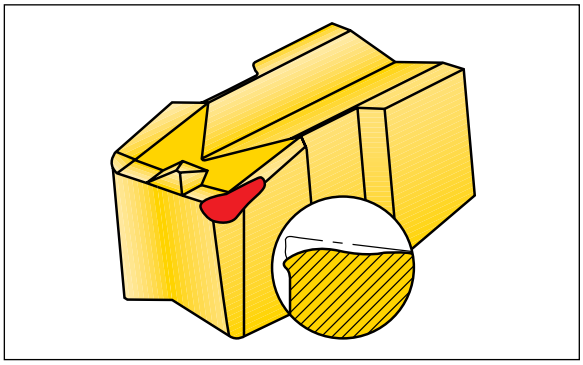
Crater wear **KB** occurs on the rake face and is mainly affected by feed and cutting speed. Crater wear develops over time toward the frontal cutting edge.

If penetration of the frontal cutting edge occurs, it will immediately affect the quality of the machined surface.



Plastic Deformation

Plastic deformation occurs when the hardness of a cutting edge is decreased due to heat and pressure. The so-called “hot hardness” of the cutting tool material limits the feed and the cutting speed. Plastic deformation will affect the dimensions and tolerances of the finished product. It generally occurs when a small corner radius is used with high cutting speeds and high feeds. Using the proper insert geometry and the correct speed and feed ranges should eliminate the problem.



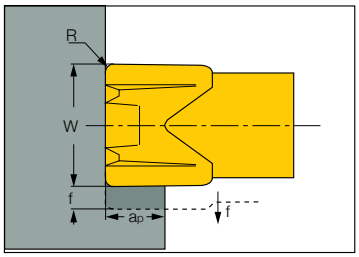
Machine Power Calculation

Calculation of Required Machine Power

Use the formulas below or use our internet web tool at: http://mpwr.iscar.com/machinimgpwr

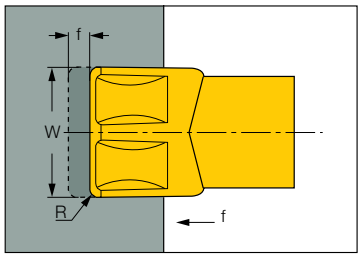
Turning

$$P = \frac{K_c \bullet a_p \bullet f \bullet v_c}{h \bullet 61 \bullet 10^3} \text{ [kW]}$$



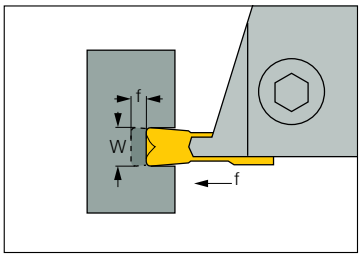
Grooving/Parting

$$P = \frac{K_c \bullet W \bullet f \bullet v_c}{h \bullet 61 \bullet 10^3} \text{ [kW]}$$



Face Grooving

$$P = \frac{K_c \bullet W \bullet f \bullet v_c}{h \bullet 61 \bullet 10^3} \text{ [kW]}$$



Where:

Kc - Specific cutting forces (N/mm^2), turning values could be used

h - Efficiency (**h**≈0.8)

Kc Values

Mtl. Gr. No.	Kc [N/mm2]	Mtl. Gr. No.	Kc [N/mm2]
1	2000	21	500
2	2100	22	800
3	2150	23	800
4	2200	26	700
5	2100	27	700
6	2100	28	1700
7	2100	31	3000
8	2100	32	3100
9	2100	33	3300
10	2500	34	3300
11	3250	35	3200
12	2300	36	1700
13	2800	37	1700
14	2600	38	4600
15	1100	39	4700
16	1300	40	4600
17	1100	41	4500
18	1800		
19	900		
20	1000		

For material groups, see page 340

M-type Tools

- M-type tools have no support under the insert's cutting edge
- For an insert with a width smaller than 2.2 mm, there are no standard catalog tools available. There are 2 options as to how to use these narrow inserts:

1. Modify an existing tool and adjust the support under the insert to the required width
2. Use a standard M-type tool without support

- In wider widths, there are also cases where the support under the insert will disturb machining (threading inserts, pulley-V inserts and various specially tailored inserts) and therefore the above explanation should be considered
- These tools also provide the option for customers to use a very wide range of insert widths on the same tool (up to 6.4 mm)
- **Machining conditions need to be light due to little support and limited gripping forces**





Recommended Clamping Torques and Interchangeable Key Blades and Adjustable Torque Handles (optional) for GROOVE-TURN Tools



TOP-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
TGDR/L			
TGDR/L 1616-3M	6-7	TSA 6 5-14	BLD 6 HEX4
TGDR/L 1616-4M	7-8		BLD 6 HEX4
TGDR/L 2020-3M	7-8		BLD 6 HEX4
TGDR/L 2020-4M	7-8		BLD 6 HEX4
TGDR/L 2525-3M	7-8		BLD 6 HEX4
TGDR/L 2525-4M	6-7		BLD 6 HEX4
TGDR/L 2525-5M	6-7		BLD 6 HEX4
TGDR/L 2525-6M	8-9		BLD 6 HEX5
TGDR/L 3232-5M	7-8		BLD 6 HEX5
TGDR/L 3232-6M	12-13		BLD 6 HEX5

CUT-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
GHDR/L (short pocket)			
GHDR/L 12-3	4-5	TSA 6 5-14	BLD 6 T20
GHDR/L 16-3	5-6		BLD 6 HEX4
GHDR/L 16-3 ST	5-6		BLD 6 HEX4
GHDR/L 16-4	7-8		BLD 6 HEX5
GHDR/L 16-4 ST	7-8		BLD 6 HEX5
GHDR/L 20-3	5-6		BLD 6 HEX4
GHDR/L 20-4	7-8		BLD 6 HEX5
GHDR/L 20-5	8-9		BLD 6 HEX5
GHDR/L 25-3	5-6		BLD 6 HEX4
GHDR/L 25-4	7-8		BLD 6 HEX5
GHDR/L 25-5	8-9		BLD 6 HEX5
GHDR/L 25-6	9-10		BLD 6 HEX5
GHDR/L 32-3	6-7		BLD 6 HEX4
GHDR/L 32-4	8-10		BLD 6 HEX5
GHDR/L 32-5	9-11		BLD 6 HEX5
GHDR/L 25-P8	13-14		BLD 6 HEX6
GHDR/L 32-P8	10-12		BLD 6 HEX6

GHDR/L-JHP (short pocket)			
GHDR/L 20-3-JHP	5-6	TSA 6 5-14	BLD 6 HEX4
GHDR/L 20-4-JHP	7-8		BLD 6 HEX5
GHDR/L 25-3-JHP	7-8		BLD 6 HEX4
GHDR/L 25-4-JHP	10-11		BLD 6 HEX5
GHDR/L 25-5-JHP	10-12		BLD 6 HEX5
GHDR/L 25-P8-JHP	10-11		BLD 6 HEX5

HELI-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
HELIR/L			
HELIR/L 1212-3T12	5-6	TSA 6 5-14	BLD 6 HEX4
HELIR/L 1616-3T12	7-8		BLD 6 HEX4
HELIR/L 1616-3T20	8-9		BLD 6 HEX5
HELIR/L 1616-4T12	5-6		BLD 6 HEX4
HELIR/L 1616-4T20	11-12		BLD 6 HEX5
HELIR/L 2020-3T12	6-7		BLD 6 HEX4
HELIR/L 2020-3T20	7-8		BLD 6 HEX5
HELIR/L 2020-4T12	6-7		BLD 6 HEX4
HELIR/L 2020-4T25	7-8		BLD 6 HEX5
HELIR/L 2020-5T12	7-8		BLD 6 HEX5
HELIR/L 2020-5T25	9-10		BLD 6 HEX5
HELIR/L 2525-3T12	6-7		BLD 6 HEX4
HELIR/L 2525-3T20	10-11		BLD 6 HEX5
HELIR/L 2525-4T12	6-7		BLD 6 HEX4
HELIR/L 2525-4T25	8-9		BLD 6 HEX5
HELIR/L 2525-5T12	8-9		BLD 6 HEX5
HELIR/L 2525-5T25	10-11		BLD 6 HEX5
HELIR/L 2525-6T12	11-12		BLD 6 HEX5
HELIR/L 2525-6T30	10-11		BLD 6 HEX5
HELIR/L 3232-3T20	9-10		BLD 6 HEX5
HELIR/L 3232-4T25	9-10		BLD 6 HEX5
HELIR/L 3232-5T25	10-11		BLD 6 HEX5
HELIR/L 3232-6T30	11-12		BLD 6 HEX5
HELIR/L 4032-4T25	9-10		BLD 6 HEX5

C#-HELIR/L			
C4 HELIR/L 3T20	9-10	TSA 6 5-14	BLD 6 HEX5
C4 HELIR/L 4T25	11-12		BLD 6 HEX5
C5 HELIR/L 3T20	10-11		BLD 6 HEX5
C5 HELIR/L 4T25	11-12		BLD 6 HEX5
C5 HELIR/L 5T25	11-12		BLD 6 HEX5
C6 HELIR/L 3T20	10-11		BLD 6 HEX5
C6 HELIR/L 4T25	12-13		BLD 6 HEX5
C6 HELIR/L 5T25	12-13		BLD 6 HEX5
C6 HELIR/L 6T30	13-14		BLD 6 HEX5

CUT-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
GHDR/L-JHP (long pocket)			
GHDR/L 32-8-JHP	15-17	Not Available	Not Available
GHDR/L-8A			
GHDR/L 25-8A	10-12	TSA 6 5-14	BLD 6 HEX5
GHDR/L 32-8A	10-12		BLD 6 HEX5
GHDR/L (long pocket)			
GHDR/L 25-8	10-12	TSA 6 5-14	BLD 6 HEX5
GHDR/L 25-812	10-12		BLD 6 HEX5
GHDR/L 32-8	10-12		BLD 6 HEX5
GHDR/L 3225-8	10-12		BLD 6 HEX5
GHDR/L 32-812	11-12		BLD 6 HEX5
GHDR/L 25-10	15-17	Not Available	Not Available
GHDR/L 32-836	16-17		
GHDR/L 32-10	15-17		
GHDR/L 40-10	16-17		
C#-GHDR/L			
C4 GHDR/L-3	6-7	TSA 6 5-14	BLD 6 HEX4
C4 GHDR/L-4	7-8		BLD 6 HEX5
C5 GHDR/L-3	6-7		BLD 6 HEX4
C5 GHDR/L-4	7-8		BLD 6 HEX5
C5 GHDR/L-5	8-9		BLD 6 HEX5
C6 GHDR/L-3	6-7		BLD 6 HEX4
C6 GHDR/L-4	7-8		BLD 6 HEX5
C6 GHDR/L-5	8-9		BLD 6 HEX5
C6 GHDR/L-8	10-12		BLD 6 HEX5
GHDR/L/N 12/14			
GHDR/L 2525-14T12	16-17	Not Available	Not Available
GHDR/L 32-12	15-16		
GHDR/L 3232-14T12	16-17		
GHDR/L 3232-14T38	18-20		
GHDN 3232-14T38	18-20		
GHDR/L 4040-14T38	18-20		
GHDN 4040-14T38	18-20		
GHGR/L			
GHGR/L 16-3	7-8	TSA 6 5-14	BLD 6 HEX5
GHGR/L 16-3 ST	7-8		BLD 6 HEX5
GHGR 16-4	7-8		BLD 6 HEX5
GHGR/L 20-2	4-6	HSA 4 1-5	BLD 4 HEX4
GHGR/L 20-3	7-8	TSA 6 5-14	BLD 6 HEX5
GHGR/L 20-4	7-8		BLD 6 HEX5
GHGR/L 25-2	4-5	HSA 4 1-5	BLD 4 HEX4
GHGR/L 25-3	6-8	TSA 6 5-14	BLD 6 HEX5
GHGR/L 25-4	8-10		BLD 6 HEX5
GHGR/L 25-425	8-10		BLD 6 HEX5
GHGR/L 25-5	9-11		BLD 6 HEX5
GHGR/L 25-630	10-12		BLD 6 HEX5
GHGR/L 32-5	10-12		BLD 6 HEX5
GHGR/L 32-632	10-12		BLD 6 HEX5

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
GHMR/L			
GHMR/L 12	8-9	TSA 6 5-14	BLD 6 T20
GHMR/L 16	10-12		BLD 6 HEX5
GHMR/L 16-3 ST	10-12		BLD 6 HEX5
GHMR/L 20	10-12		BLD 6 HEX5
GHMR/L 25	10-12		BLD 6 HEX5
GHMR/L 32	10-12		BLD 6 HEX5
GHMPR/L			
GHMPR/L 16	4-5	TSA 6 5-14	BLD 6 HEX5
GHMPR/L 20	5-6		BLD 6 HEX5
GHMPR/L 25	8-9		BLD 6 HEX5
GHMUR/L			
GHMUR/L 16	6-7	TSA 6 5-14	BLD 6 HEX5
GHMUR/L 20	8-10		BLD 6 HEX5
GHMUR/L 25	10-11		BLD 6 HEX5
GHSR/L			
GHSR/L 10-2	2-3	HSA 4 1-5	BLD 4 T15
GHSR/L 12-2	2-3		BLD 4 T15
GHSR/L 14-2	2-3		BLD 4 T15
GHSR/L 16-2	4-5	TSA 6 5-14	BLD 6 T20
CGHN-P8			
CGHN 52-P8	6-7	TSA 6 5-14	BLD 6 HEX4
CGHN 53-P8	6-7		BLD 6 HEX4
CGHN-8-10D			
CGHN 52-8D	7-8	TSA 6 5-14	BLD 6 HEX4
CGHN 53-8D	7-8		BLD 6 HEX4
CGHN 52-10D	9-11		BLD 6 HEX5
CGHN 53-10D	9-11		BLD 6 HEX5
CGHR/L-12-14D			
CGHR/L 53-12D	10-12	TSA 6 5-14	BLD 6 HEX5
CGHR/L 53-14D	10-12		BLD 6 HEX5

All JETCUT tools also provide great advantages to standard low-pressure (7-10 Bars) machine tools

The **JETCUT** tools provide a great advantage when standard machine pressure (10-20 bars) is applied and on a wide range of popular materials such as alloy & stainless steel, improving their tool life and in some cases chip control.

The main reasons for the improvement in both high and low pressure are:

- The **JETCUT** coolant is pinpointed exactly to the cutting edge where it is most effective.



- The **JETCUT** coolant is steady and not influenced by the operator's attention or interrupted by the chips.



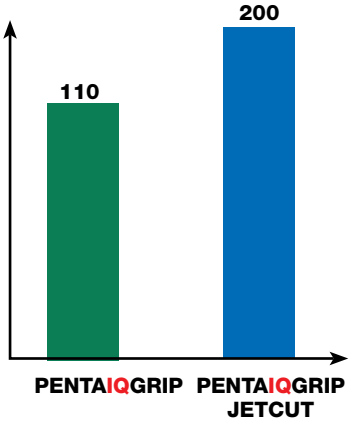
- In parting-off and deep grooving, external coolant loses its effectiveness as the groove becomes deeper. With **JETCUT** tools and blades, the coolant delivery is not influenced by the groove's depth.



These advantages were reported by many customers and are presented in various test reports.

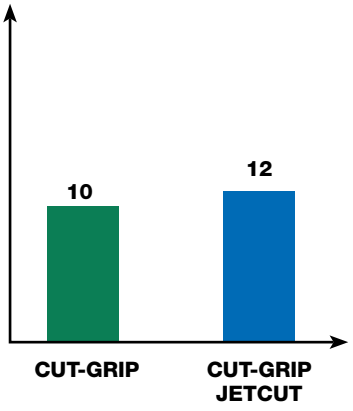
	PENTAIQGRIP	PENTAIQGRIP JETCUT
Material	Stainless Steel AISI 316	
Operation	Grooving	
Pressure (Bar)	10 (external)	10 (Internal)
Tool	PCHR 25-D40-3	PCHR 25-D40-3-JHP
Insert	PENTA D40N300C020 IC808G	
Vc (mm/min)	180	
f (mm/rev)	0.2	
Toolife (number of grooves)	110	**200**

Tool life increase 82%



	CUT-GRIP	CUT-GRIP JETCUT
Material	Stainless Steel 1.4301 (AISI 304)	
Operation	External Grooving	
Pressure (Bar)	20 (external)	20 (Internal)
Tool	GHDR 20-4	GHDR 20-4-JHP
Insert	GIP 4.00E-0.4 IC808	GIP 4.00E-0.4 IC808
Vc (m/min)	120	**140**
f (mm/rev)	0.12	**0.2**
Cycle time (min)	128.5	**67.4**
Parts/Edge	10	**12**

Tool life increase 20%
Cycle time improvement 52%



JETCUT Tools High Pressure (up to 340 Bar)

The high pressure coolant feature has been in existence for a long time in the metal removal world, taking a bigger role in today's machining. **ISCAR** was one of the first cutting tools companies to respond to market needs by designing and producing tools for ultra high and high pressure coolant flow.

High pressure coolant was initially implemented mainly for difficult-to-machine materials such as titanium, inconel and other heat resistant alloys. Later it was found that tool-life, productivity and chip control can be improved when machining stainless and alloyed steel.

JETCUT tools are essential and important in the aviation, aerospace and medical industries.

How does it work?

The stream velocity of the coolant emitted from the pump increases as the coolant holes become smaller. When it emerges out of the tool through the nozzle, the velocity is very high, exerting considerable force on the chips, lowering their temperature and protecting the cutting edge from thermal shock. High temperature alloys produce a very high temperature as they are being cut. By effectively removing the heat, the chips become less ductile and thus easier to break. Shorter chips are easily managed - they do not tangle around the workpiece or machine parts, so there is no need to stop the process frequently. Usually in conventional cooling the chip prevents the coolant from reaching the insert rake face in the cutting zone. The coolant stream of the **JETCUT** tools is directed precisely between the insert rake face and the flowing chip. This results in longer tool life and a much more reliable process.

The coolant channels of the **JETCUT** tools feature outlets very close to the cutting edges, thus gaining the following advantages:

- Shorter machining time – the cutting speed may be increased by up to 200% when machining titanium & heat resistant alloys
- Longer tool life – tool life increases by up to 100% not only on titanium and heat resistant alloys, but also on stainless and alloy steels
- Improved chip control – even on the most ductile and problematic materials, small chips can be obtained
- Very effective cooling down of the cutting edge, which reduces sensitivity to heat fluctuations
- Safer and more stable process

JETCUT tools provide advantageous performance also when conventional pressure is applied.

General Information

Pressure Ranges

Up to 30 Bar – Low pressure (**LP**) may provide some improvement in tool life. Usually will not have an effect on chip control.
30 **–** 120 Bar – High pressure (**HP**) the most commonly used pressure range used with **JETCUT** tools. Increase in tool life, increase in cutting speeds, improved chip control.
120 **–** 400 Bar – Ultra high pressure (**UHP**) requires special tool design in order to take advantage of the extra pressure. Minor increase in tool life compared to **HP** range.
Ultra high pressure coolant is usually implemented for machining titanium and heat resistant alloys when there is a need for very small chips and higher machining rates.
Since 2000**, ISCAR** has provided hundreds of special tools featuring ultra high pressure coolant capability, for various customers and applications.

Pressure vs. Flow

Each **JETCUT** tool is designed to work at a certain flow rate, depending on the pressure. The flow rates are listed in the catalog pages for each tool. The user should verify that his pump can supply the required flow in order to achieve the optimal results. The pump data sheet will usually list the maximum flow rate for each pressure range.

Chips & Pressure

The coolant flow will start to break the chips at a certain pressure, depending on the specific tool and the workpiece material. If the chips are not breaking, the pressure should be increased until chip control is achieved. Above this pressure, as it is increased the chips become smaller and smaller. It is possible to control the size of the chips by modifying the pressure in order to achieve the desired chip size.

High Pressure Coolant with Groove-Turn and Parting Tools

In grooving and parting operations, applying high pressure coolant provides excellent chip breaking results on all materials.
On exotic alloys such as inconel and titanium, it is usually impossible to break the chips with standard external coolant pressure.
Applying high coolant pressure provides excellent chip breaking results.
On some alloyed and stainless steel, especially when low feeds are applied, high pressure coolant may solve chip breaking problems.

High pressure coolant reduces or even eliminates built-up edge phenomenon, especially when machining stainless steel and high temperature alloys.

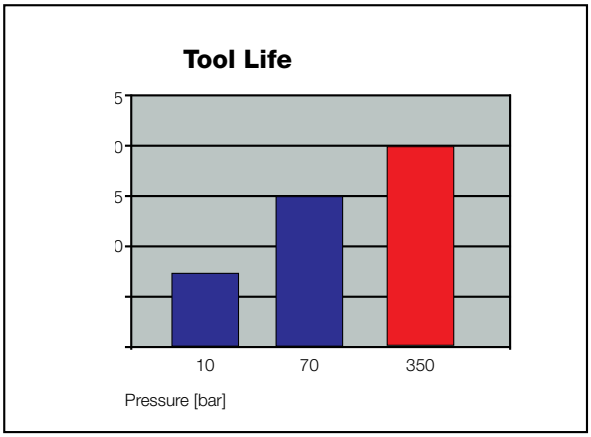
In turning operations, applying high pressure coolant is less effective because the jet is directed to the frontal edge.

Grooving Test



Material: Titanium (Ti6Al4v)
Operation: Grooving
Tool: GHDL 25-6-**JHP**
Insert: GIMF 608 **IC07**
Vc: 50 mm/min
f: 0.15 mm/rev

Pressure [bar]		
10 (External)	70	350
		

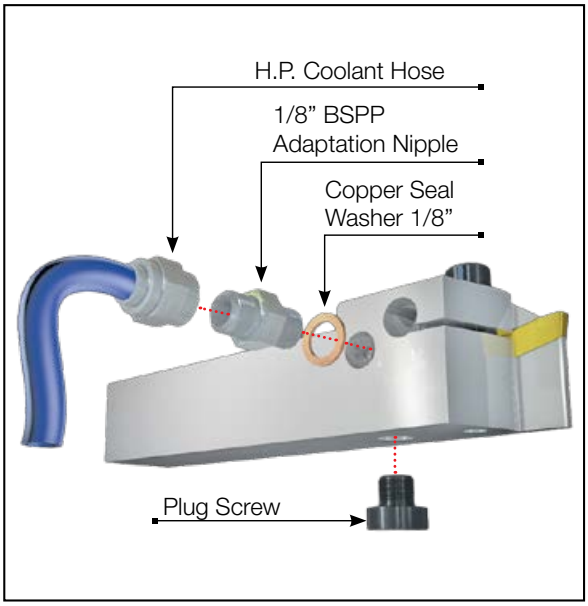


Important
Always pay attention not to exceed the maximum safe working pressure for **GROOVE-TURN tools 340 bar** and **PARTING OFF tools 300 bar**.

Assembly and Safety Guidelines When Using the JET HP ISO Turning and Grooving Tools

Before use, please ensure that:

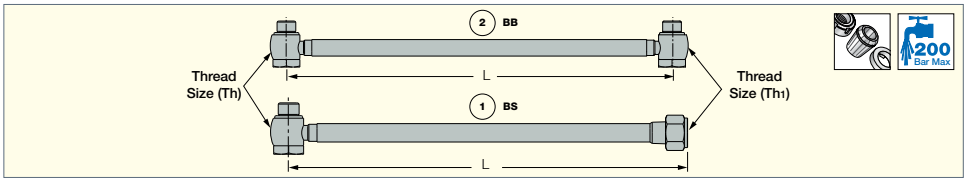
- The machine door is in a fully closed position
- The coolant hose is in the correct location and fully tightened with all seals in position
- A blank plug is inserted into the unused coolant hole
- All O-rings and washers are in place
- The coolant hose is tightened securely to the toolholder and tool block, to prevent leakage of coolant





Accessories

JHP HOSE
High Pressure Coolant Hose



Designation	L	Fig.	Th	Th1
JHP HOSE G1/8-7/16-200BS	200.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE 5/16-G1/8-200BS	200.00	1	5/16"-24 UNF	G1/8"-28 BSPP
JHP HOSE 5/16-7/16-200BS	200.00	1	5/16"-24 UNF	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-200BB	200.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP
JHP HOSE G1/8-7/16-250BS	250.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-250BB	250.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP

Spare Parts

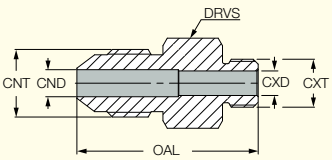
Designation			
JHP HOSE G1/8-7/16-200BS	JHP HOSE G1/8-7/16-200BS	JHP BANJO BOLT G1/8"	JHP COPPER SEAL 1/8"*
JHP HOSE 5/16-G1/8-200BS		JHP BANJO BOLT 5/16" UNF	JHP COPPER SEAL 5/16"
JHP HOSE 5/16-7/16-200BS	JHP HOSE 5/16-7/16-200BS	JHP BANJO BOLT 5/16" UNF	JHP COPPER SEAL 5/16"
JHP HOSE G1/8-G1/8-200BB	JHP HOSE G1/8-G1/8-200BB	JHP BANJO BOLT G1/8"*	JHP COPPER SEAL 1/8"*
JHP HOSE G1/8-7/16-250BS	JHP HOSE G1/8-7/16-250BS		
JHP HOSE G1/8-G1/8-250BB	JHP HOSE G1/8-G1/8-250BB	JHP BANJO BOLT G1/8"*	JHP COPPER SEAL 1/8"*

* Optional, should be ordered separately

Accessories

JHP NIPPLE
High Pressure Adaptation Nipple





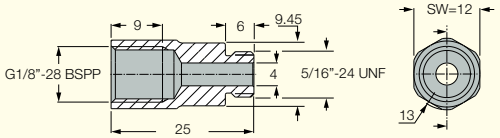


Designation	OAL	TDZ	CNT	CND	CXD	DRVS	
JHP NIPPLE G1/8"-7/16"UNF	28.80	1/8"-28 BSPP	7/16"-20 UNF	4.00	4.00	14.3	JHP NIPPLE G1/8"-7/16"UNF
JHP NIPPLE 1/8NPT-7/16UNF	31.00	1/8"-27 NPT	7/16"-20 UNF	4.80	4.40	12.7	JHP NIPPLE 1/8NPT-7/16UNF
JHP NIPPLE 1/4NPT-7/16UNF	36.00	1/4"-18 NPT	7/16"-20 UNF	4.40	4.40	14.3	
JHP NIPPL 5/16UNF-7/16UNF	29.50	5/16"-24 UNF	7/16"-20 UNF	4.00	4.40	12.7	JHP COPPER SEAL 5/16"

Accessories

JHP CONNECTOR
High Pressure Connector





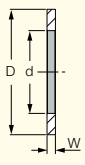


Designation	L	
JHP CONECTOR 5/16"-G1/8"	25.00	JHP COPPER SEAL 5/16"-2.5

Accessories

JHP COPPER SEAL
High Pressure Copper Seal





Designation	D	d	W	
JHP COPPER SEAL 5/16"-2.5	9.40	8.00	2.50	JHP COPPER SEAL 1/8"
JHP COPPER SEAL 5/16"	11.00	8.00	1.00	JHP COPPER SEAL 1/8"
JHP COPPER SEAL 1/8"	15.00	10.00	1.00	JHP COPPER SEAL 1/8"

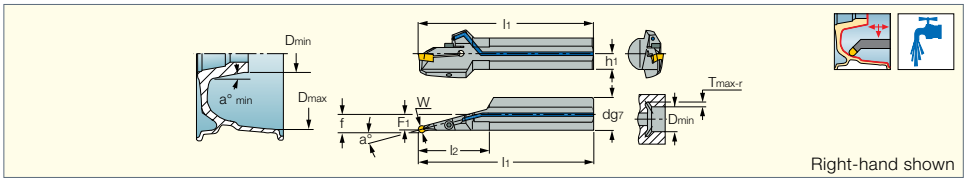
TOOLS FOR MACHINING ALUMINUM WHEELS



CUTGRIP

GHIUR/L-C-A(15° & 27.5°) Bars

Internal Grooving and Turning Bars for Machining Aluminum Wheels



Designation	W	d	D min	Tmax-r(1)	l1	l2	f	F1	h1	a°			
GHIUR/L 40C-15A-6	6.00	40.00	160.00	-	320.00	83.0	21.2	19.0	18.0	15.0	SR M5X25DIN912	HW 4.0	PL 40
GHIUR/L 40C-15A-8	8.00	40.00	160.00	0.00 (2)	320.00	83.0	21.0	18.0	18.0	15.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50C-15A-8	8.00	50.00	100.00	0.00 (3)	350.00	83.0	26.0	23.0	23.0	15.0	SR M6X25 DIN912	HW 5.0	PL 40
GHIUR/L 40C-27.5A-6	6.00	40.00	90.00	0.60 (4)	320.00	80.0	25.1	23.5	18.0	27.5	SR M6X25 DIN912	HW 5.0	PL 40
GHIUR/L 50C-27.5A-8	8.00	50.00	120.00	1.80 (4)	350.00	82.0	30.2	28.0	23.0	27.5	SR M6X25 DIN912	HW 5.0	PL 40

• Upper jaw with hard coating to sustain chip deflection

(1) Dimension for minimum bore diameter

(2) For bore diameter D>200, Tmax is 0.5 mm

(3) For bore diameter D>200, Tmax is 1.4 mm

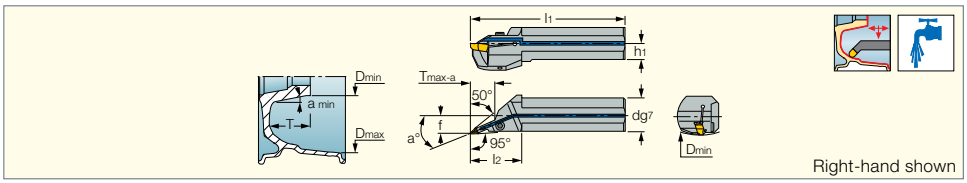
(4) For bore diameter D>200, Tmax is 4.0 mm

For inserts, see pages: GDMA (256) • GIPA (full radius W=3-6) (257) • GIPA 8-35V (V-shape) (360) • GIPA/GIDA 8 (full radius) (257)

CUTGRIP

GHIUR/L-C-22.5A-8V

22.5° Approach Angle Bars for Facing and Internal Machining



Designation	W	d	D min	Tmax-a(1)	l1	l2	h1	f	a°			
GHIUR/L 40C-22.5A-8V	8.00	40.00	300.00	28.50	250.00	60.0	18.0	21.0	22.5	SR M6X20 DIN912	HW 5.0	PL 40

• Upper jaw with hard coating to sustain chip deflection

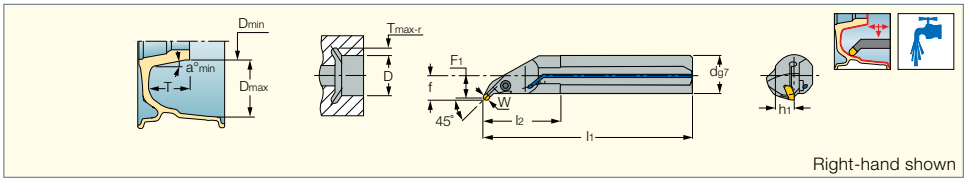
(1) Dimension for min. bore diameter & up to 200 mm

For inserts, see pages: GIPA 8-35V (V-shape) (360)

CUTGRIP

GHIUR/L-UC

45° Undercutting Bars for Internal Turning of Aluminum Wheels



Designation	W	d	D min	Tmax-r	l1	l2	f	F1	h1			
GHIUR/L 40UC-6	6.00	40.00	70.00	0.00 (1)	350.00	75.0	23.8	24.7	18.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50UC-6	6.00	50.00	78.00	0.00 (2)	350.00	75.0	28.8	29.7	23.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR/L 40UC-8	8.00	40.00	68.00	0.00 (3)	350.00	79.0	28.8	26.0	18.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50UC-8	8.00	50.00	58.00	0.00 (4)	350.00	80.0	30.2	31.4	23.0	SR M6X20 DIN912	HW 5.0	PL 40

(1) For bore diameter more than 200, Tmax is 2.0 mm

(2) For bore diameter more than 200, Tmax is 1.3 mm

(3) For bore diameter more than 200, Tmax is 2.8 mm

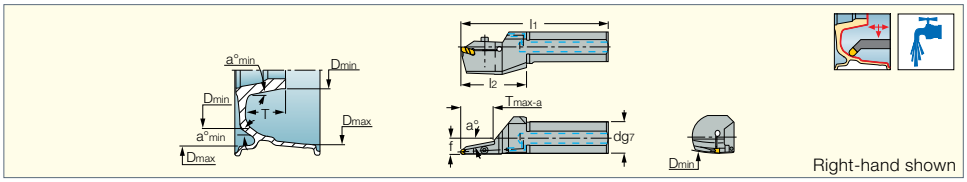
(4) For bore diameter more than 200, Tmax is 6.0 mm

For inserts, see pages: GDMA (256) • GIPA 8-35V (V-shape) (360) • GIPA/GIDA 8 (full radius) (257)

CUTGRIP

GHIFR/L-A

8° / 10° Approach Angle Bars for Facing and Internal Machining



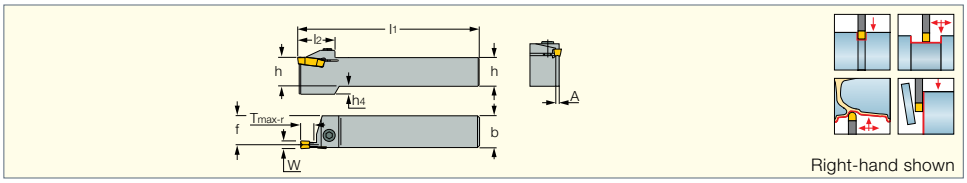
Designation	W	D min	D max	l1	l2	Tmax-a	f	a°	d			
GHIFR/L 40C-10A-6	6.00	300.00	360.0	300.00	80.0	40.00	19.3	10	40.00	SR M5X20DIN912	HW 4.0	PL 40
GHIFR/L 40C-8A-8	8.00	300.00	360.0	320.00	100.0	70.00	19.5	8	40.00	SR M6X25 DIN912	HW 5.0	PL 40

• Upper jaw with hard coating to sustain chip deflection

For inserts, see pages: GDMA (256) • GIPA (full radius W=3-6) (257) • GIPA/GIDA 8 (full radius) (257)

CUTGRIP

GHDR/L-8A
External Tools for Turning, Grooving and Parting; Upper Jaw with Hard Coating to Sustain Chip Deflection



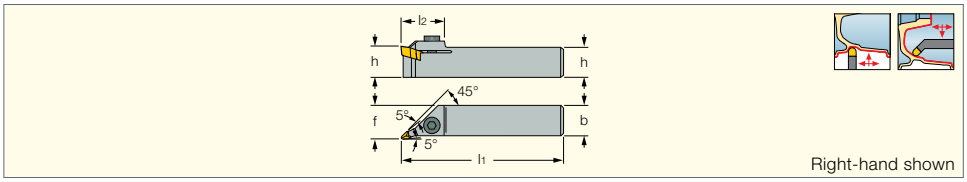
Designation	h	W min	W max	Tmax-r	b	l1	f	A	l2	h4		
GHDR/L 25-8A	25.0	8.00	8.00	25.00	25.0	150.00	22.0	6.00	40.0	7.6	SR M6X16 DIN912	HW 5.0
GHDR/L 32-8A	32.0	8.00	8.00	25.00	32.0	170.00	29.0	6.00	40.0	-	SR M6X16 DIN912	HW 5.0

• Upper jaw with hard coating to sustain chip deflection • For user guide, see pages 340-351

For inserts, see pages: GIPA/GIDA 8 (full radius) (257)

CUTGRIP

GHVR/L
Internal and External Profiling Holders for Machining Aluminum Wheels

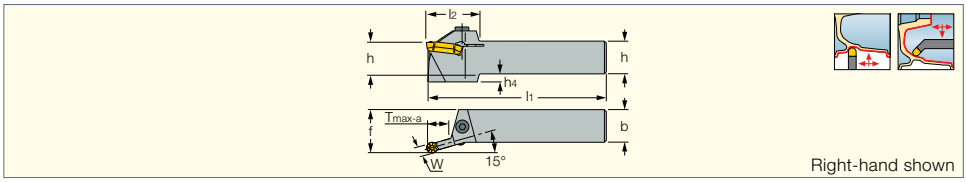


Designation	W	h	b	l1	f	l2		
GHVR/L 25-8	8.00	25.0	25.0	150.00	29.0	41.0	SR M6X25 DIN912	HW 5.0

For inserts, see pages: GIPA 8-35V (V-shape) (360)

CUTGRIP

GHDKR/L
External and Internal Profiling Holders for Machining Aluminum Wheels



Designation	W	h	b	l1	l2	f	h4		
GHDKR/L 25-6 (1)	6.00	25.0	25.0	150.00	40.0	32.2	6.0	SR M6X20 DIN912	HW 5.0
GHDKR/L 25-8	8.00	25.0	25.0	150.00	44.0	33.0	6.0	SR M6X20 DIN912	HW 5.0
GHDKR/L 32-8	8.00	32.0	32.0	170.00	44.0	40.0	-	SR M6X20 DIN912	HW 5.0

(1) Only insert GIPA 6.00-3.00 is suitable for this tool.

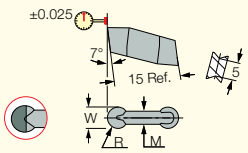
For inserts, see pages: GDMA (256) • GDMY (full radius) (247) • GIPA (full radius W=3-6) (257) • GIPA/GIDA 8 (full radius) (257)

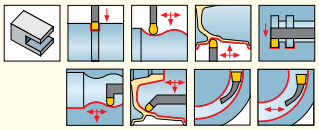
CUTGRIP

GIPA (full radius W=3-6)

Precision Double-Ended Inserts with Polished Top Rake for Machining Aluminum







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC20	IC806	IC4	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-1.50	3.00	1.50	2.40	●				0.00-1.50	0.15-0.30	0.08-0.16
GIPA 3.00-1.50-D (1)	3.00	1.50	2.40				●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 3.00-1.50YZ-D (2)	3.00	1.50	2.40				●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 4.00-2.00	4.00	2.00	3.20	●	●			0.00-2.00	0.20-0.43	0.10-0.22
GIPA 4.00-2.00-D (1)	4.00	2.00	3.20				●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 4.00-2.00YZ-D (2)	4.00	2.00	3.20				●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 5.00-2.50	5.00	2.50	3.90	●	●			0.00-2.50	0.21-0.48	0.09-0.24
GIPA 5.00-2.50-D (1)	5.00	2.50	3.90				●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 5.00-2.50YZ-D (2)	5.00	2.50	3.90				●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 6.00-3.00	6.00	3.00	4.80	●		●		0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00-D (1)	6.00	3.00	4.80				●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00YZ	6.00	3.00	4.80	●				0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00YZ-D (2)	6.00	3.00	4.80				●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00CB (3)	6.00	3.00	4.80				●	0.00-3.00	0.21-0.58	0.11-0.29

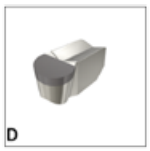
• For cutting speed recommendations and user guide, see pages 340-351

(1) Single-ended PCD tipped insert

(2) Single-ended molded PCD chipformer tipped insert

(3) Single-ended flat PCD tipped insert with chip deflector

For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDKR/L (358) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHIFR/L-A (357) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)





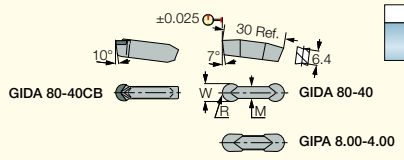


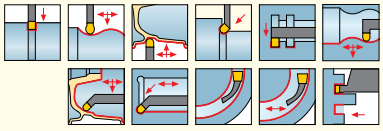
CUTGRIP

GIPA/GIDA 8 (full radius)

Precision Double-Ended Inserts with Polished Top Rake for Machining Aluminum







Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC20	IC4	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIDA 80-40	8.00	4.00	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40-D	8.00	4.00	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40CB-D (1)	8.00	4.00	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ	8.00	4.00	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ-D	8.00	4.00	5.60			●	0.00-4.00	0.35-0.96	0.18-0.48
GIPA 8.00-4.00	8.00	4.00	6.00	●			0.00-4.00	0.24-0.67	0.14-0.38

• ID5 is a single-ended PCD tipped insert • For cutting speed recommendations and user guide, see pages 340-351

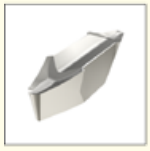
(1) Should not be clamped on tools with "A" suffix

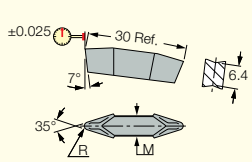
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHDR/L (long pocket) (240) • GHDR/L-8A (358) • GHDR/L-JHP (long pocket) (241) • GHFGR/L-8 (450) • GHIFR/L-A (357) • GHIR/L (W=7.0-8.3) (301) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHIUR/L-UC (357)

CUTGRIP

GIPA 8-35V (V-shape)

V-Shaped Inserts for Machining Aluminum Wheels







Designation	Dimensions R	R±toler	M	Tough ↔ Hard IC20	IC4	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)
GIPA 6.0-35V-0.8	0.80	0.050	4.80	•			1.00-3.60	0.21-0.48
GIPA 8YZ-35V-0.80	0.80	0.050	6.00		•		1.00-4.80	0.24-0.56
GIPA 8YZ-35V-1.20	1.20	0.050	6.00		•		1.45-4.80	0.24-0.62
GIPA 8YZ-35V-1.20-D (1)	1.20	0.050	6.00			•	1.45-4.80	0.35-0.88
GIPA 8-35V-1.20	1.20	0.050	6.00	•			1.45-4.80	0.24-0.62
GIPA 8-35V-1.20-D (1)	1.20	0.050	6.00			•	1.45-4.80	0.35-0.88
GIPA 8-35V-3.0	3.00	0.050	6.00	•	•		3.60-4.80	0.24-0.67

• Precision ground and polished rake to avoid built-up edge • Toolholder seat needs to be modified according to insert profile to ensure clearance

(1) Single-ended PCD tipped insert

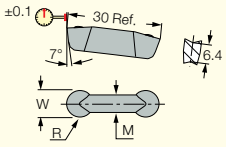
For tools, see pages: GHIUR/L-C-22.5A-8V (357) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHIUR/L-UC (357) • GHVR/L (358)

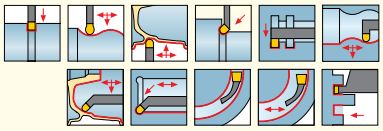
CUTGRIP

GDMA

Utility Double-Ended Insert with a Polished Top Rake for Machining Aluminum







Can cut arcs to 250°

Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC07	IC507	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMA 840	8.00	4.00	5.60	•	•	0.00-4.00	0.24-0.67	0.14-0.38

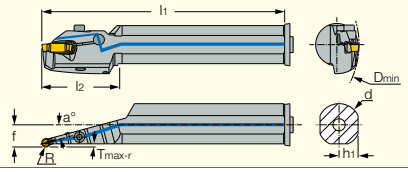
• For heavy-duty machining • Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 340-351

For tools, see pages: GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHIFR/L-A (357) • GHIR/L (W=7.0-8.3) (301) • GHIUR/L-C-A (15° & 27.5°) Bars (357) • GHIUR/L-UC (357)

FIXGRIP

FSHIUR

10° / 15° Approach Angle Bars for Facing and Internal Profiling of Aluminum





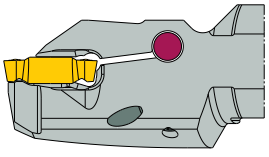
Right-hand shown

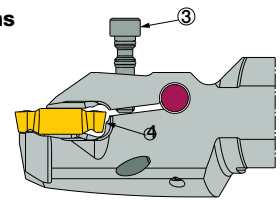
Designation	W	d	D min	l1	l2	Tmax-r	f	a°					
FSHIUR 40C-15A-6	6.00	40.00	160.00	320.00	68.0	2.20	21.0	15	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40
FSHIUR 40C-10A-8	8.00	40.00	160.00	320.00	68.0	2.40	24.3	10	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40
FSHIUR 40C-15A-8	8.00	40.00	160.00	320.00	68.0	3.00	21.0	15	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40

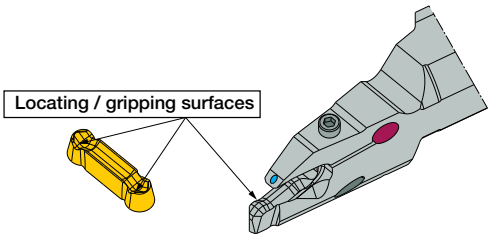
• **Clamping torque for FSHIUR..-6: 9 Nxm, for FSHDR..-8:** 10.5 Nxm

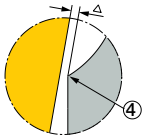
For inserts, see pages: FSP/MA (362)

Insert Clamping Instructions









1. Position the insert in the pocket so the notch (1) on the insert sits on top of the frontal bulge (2) of the pocket

2. Close the clamping screw (3)

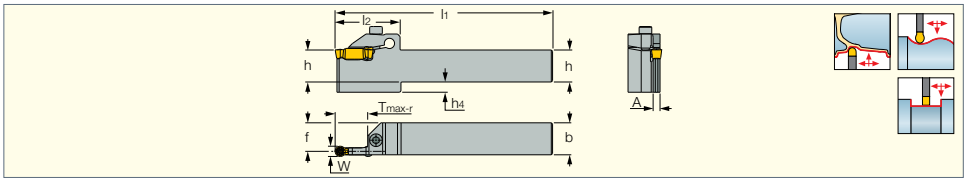
Warning

1. Do not apply any force and do not hold the insert in place while closing the screw
2. There is no contact between the insert and pocket rear wall (4)

FIXGRIP

FSHDR

Tools with a Very Strong Insert Grip for Interrupted Cuts and Back Turning of Aluminum Wheels

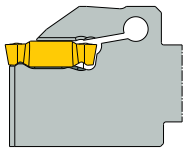


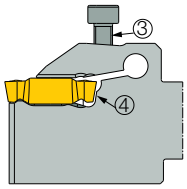
Designation	W	Tmax-r	h	b	f	A	l2	h4	l1		
FSHDR 25-6	6.00	21.00	25.0	25.0	22.8	4.40	51.0	8.0	150.00	SR M5X20DIN912	HW 4.0
FSHDR 25-8	8.00	25.50	25.0	25.0	22.3	5.40	51.5	8.0	170.00	SR M6X25 DIN912	HW 5.0

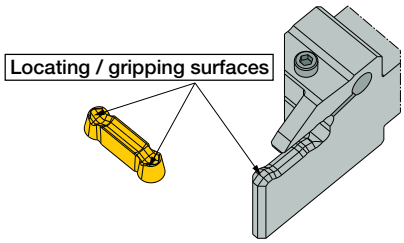
• **Clamping torque for FSHDR..-6: 7.5 Nxm, for FSHDR..-8:** 10 Nxm

For inserts, see pages: FSP/MA (362)

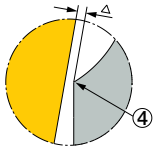
Insert Clamping Instructions







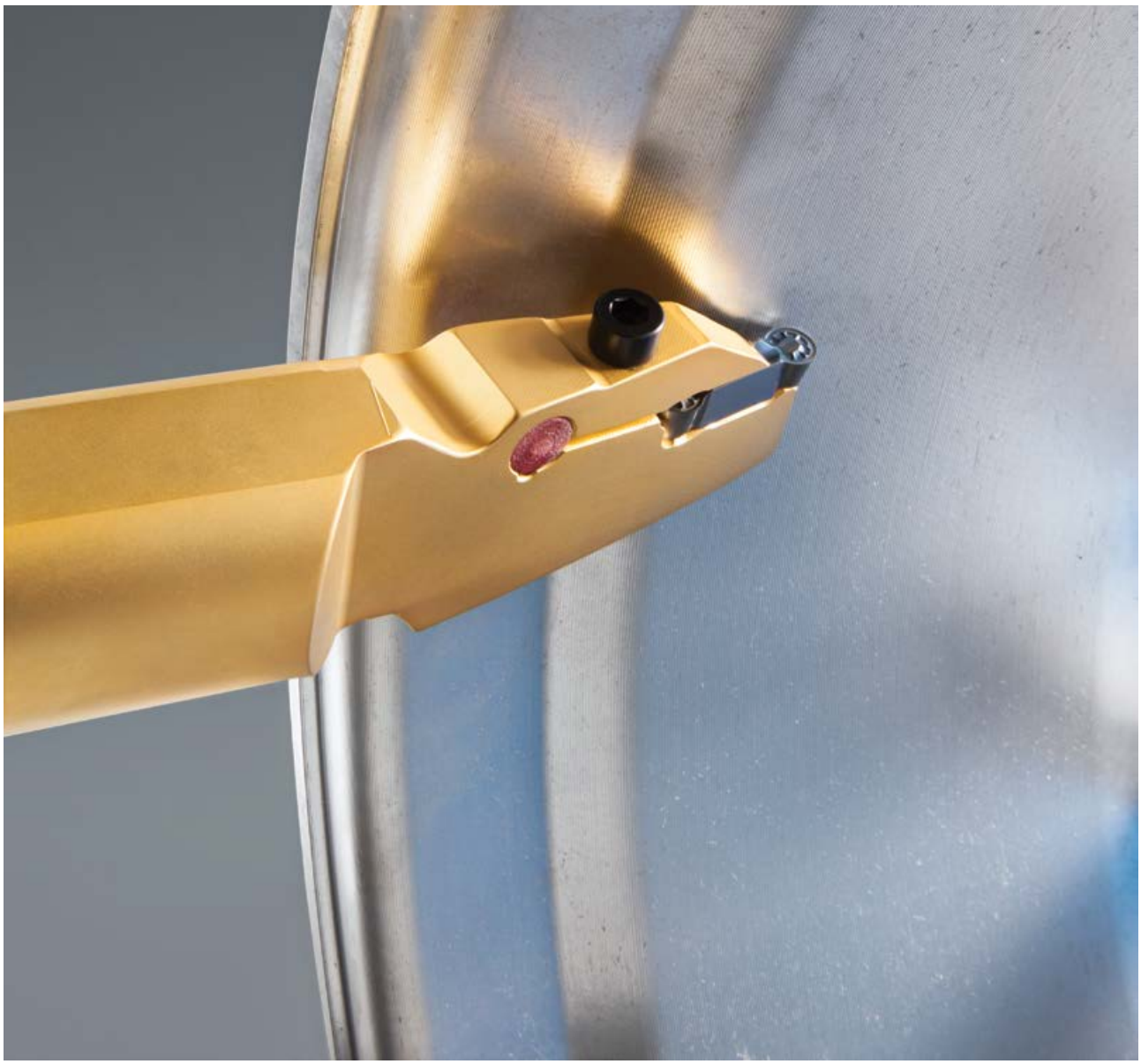
1. Position the insert in the pocket so the notch (1) on the insert sits on top of the frontal bulge (2) of the pocket



2. Close the clamping screw (3).

Warning

1. Do not apply any force and do not hold the insert in place while closing the screw.
2. There is no contact between the insert and pocket rear wall (4)

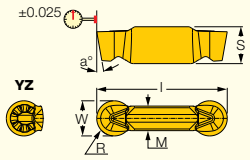


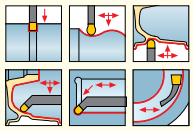
FIXGRIP

FSP/MA

Full Radius Precision Inserts for Machining Aluminum at Medium to High Feeds



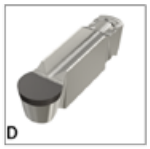




Designation	Dimensions W	W tol(±)	R±0.05	S	M	l	a°	Tough ↔ Hard IC20	IC07	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)
FSPA 6.00-3.00	6.00	0.02	3.00	7.50	4.60	25.00	9.0	•			0.05-3.00	0.30-0.55
FSPA 6.00-3.00YZ	6.00	0.02	3.00	7.50	4.60	25.00	9.0	•			0.05-3.00	0.30-0.55
FSPA 6.00-3.00YZ-D	6.00	0.02	3.00	7.50	4.60	25.00	9.0			•	0.05-3.00	0.30-0.55
FSPA 80-40	8.00	0.02	4.00	8.40	5.60	29.70	10.0	•			0.05-4.00	0.40-0.72
FSPA 80-40-D	8.00	0.02	4.00	8.40	5.60	29.70	10.0			•	0.05-4.00	0.40-0.72
FSPA 80-40YZ	8.00	0.02	4.00	8.40	5.60	29.70	10.0	•			0.05-4.00	0.40-0.72
FSPA 80-40YZ-D	8.00	0.02	4.00	8.40	5.60	29.70	10.0			•	0.05-4.00	0.40-0.72
FSMA 80-40 (1)	8.00	0.04	4.00	8.40	5.60	29.70	10.0		•		0.05-4.00	0.40-0.72

(1) Utility insert

For tools, see pages: FSHDR (361) • FSHIUR (360)



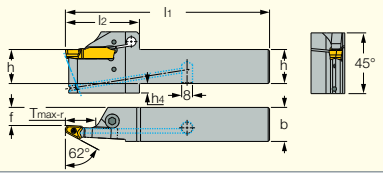




FIXGRIP

FGHDUR

Tools for Interrupted Cuts and Back Turning of Aluminum Wheels





Right-hand shown

Designation	Tmax-r	h	b	l1	f	l2	h4		
FGHDUR 25C-3A-10S	22.30	25.0	25.0	150.00	13.3	54.4	7.0	SR M6X25 DIN912	HW 5.0

• Upper jaw with hard coating to sustain chip deflection • For mounting and removing the inserts, see page 340-351

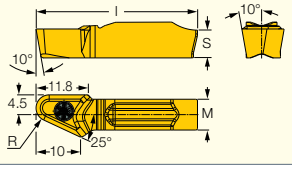
For inserts, see pages: FGPAM (362)

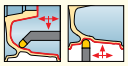
FIXGRIP

FGPAM

V-Shaped Inserts for Machining Aluminum Wheels







Designation	Dimensions R	M	S	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)
FGPAM 10S-3R-25A	3.00	7.00	8.20	•	0.05-12.00	0.40-0.72

For tools, see pages: FGHDUR (362)

PARTING



TABLE OF CONTENTS

Selection Guide **365**

Tools and Inserts **370**

DO-GRIP 370

TANG-GRIP 389

CUT-GRIP 402

PENTACUT 405

Modular Adaptations 415

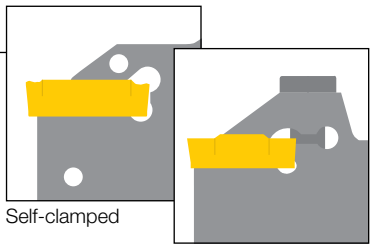
User Guide **416**

Clamping Systems

DO-GRIP

- First choice for parting
- Double-ended insert
- Self clamped for deep grooving and large diameters
- Screw clamped for small diameters
- See also **HELI-GRIP**, page 219

FIRST CHOICE!



Self-clamped

Screw-clamped

TANG-GRIP

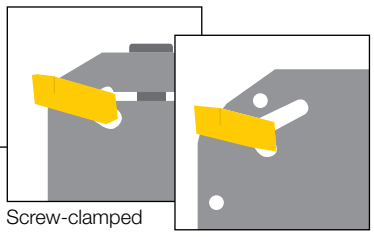
- Very rigid clamping in a tangentially oriented pocket
- Enables machining at very high feed rates and provides excellent straightness and surface finish
- Recommended for parting large diameter parts and for interrupted cuts
- Offers a free, unobstructed chip flow
- Excellent tool and pocket life



TANG-GRIP

CUT-GRIP

- Single-ended insert
- Self- and screw-clamped options

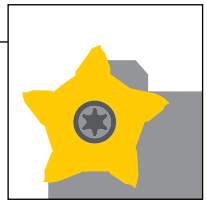


Screw-clamped

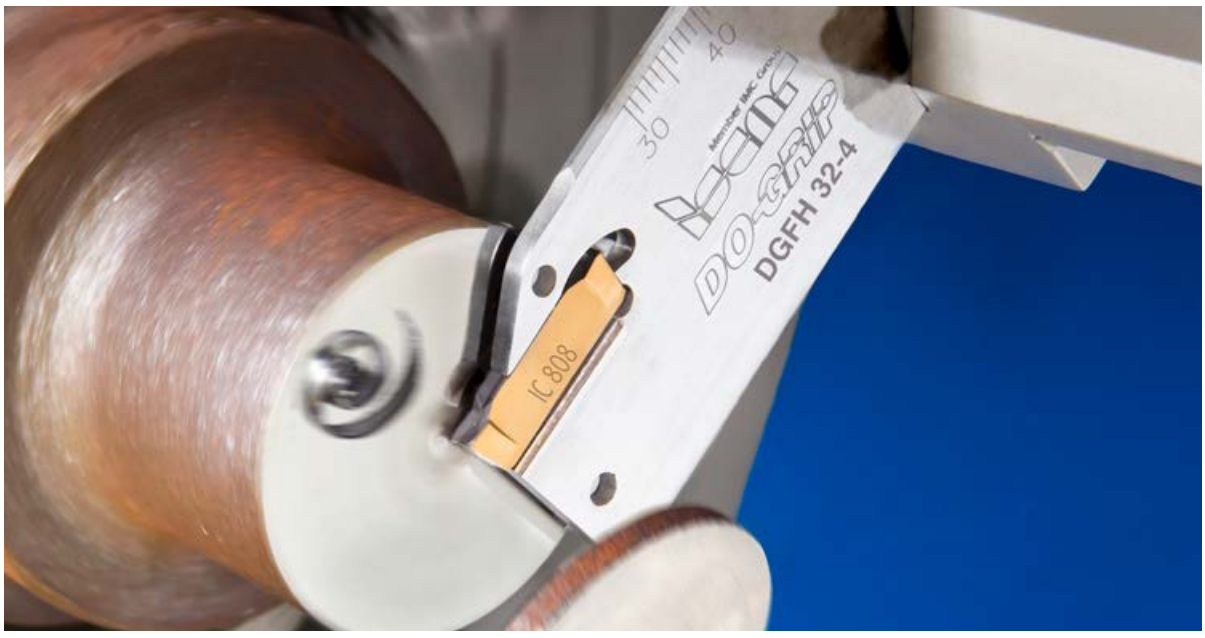
Self-clamped

PENTACUT

- 5 cutting edges
- Fast edge indexing
- For shallow grooving and up to 20 mm parting diameter



PENTACUT



Main Chipformers

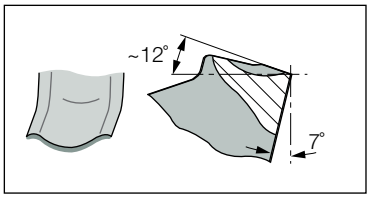
C-Type

- First choice for parting of bars, hard materials and tough applications.
- A positive rake, single cavity with negative land and shoulders provides extra cutting-edge strength.
- Medium-to-high feed

$$f \approx \frac{W\ insert}{18}\ [mm/rev]$$

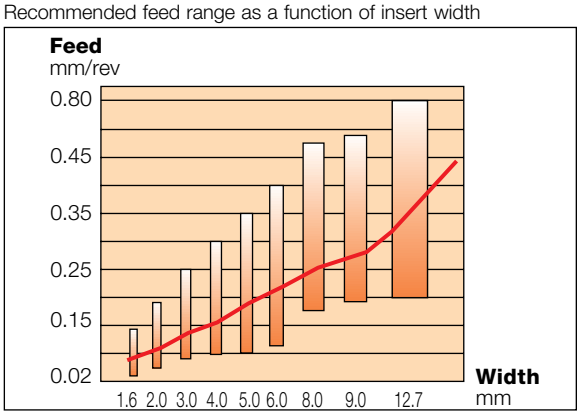
Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✘	✔ (**IC20** only)	✔ (**IC20** only)	✔

Recommendations are for neutral inserts.
For R/L inserts, reduce feed by 20-40%.





Recommended feed range as a function of insert width

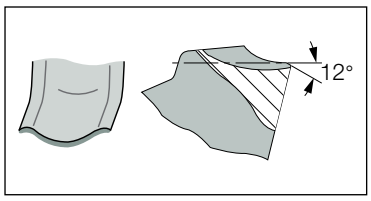


MF Type

- Parting and Grooving Double-Sided Insert for Soft and Hard Materials, Medium Feed

$$f \approx \frac{W\ insert}{21}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✔	✘	✔





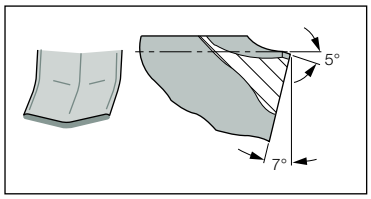
JT-Type

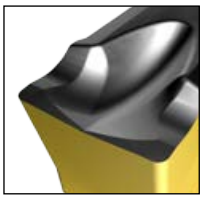
The **JT** chipformer design is based on the J-type chipformer with a T-land reinforced frontal cutting edge.

- Provides a solution for the intermediate range between the strong and negative C-type configuration and the positive edged J-type chipformer.
- Can be used on a wide range of materials, including soft or hard alloy and stainless steel, high temperature alloys and also cast iron.
- The **JT** chipformer deforms the chips into compact shapes, in the same manner as the J-type, but it can be used at higher feeds due to its reinforced edge.

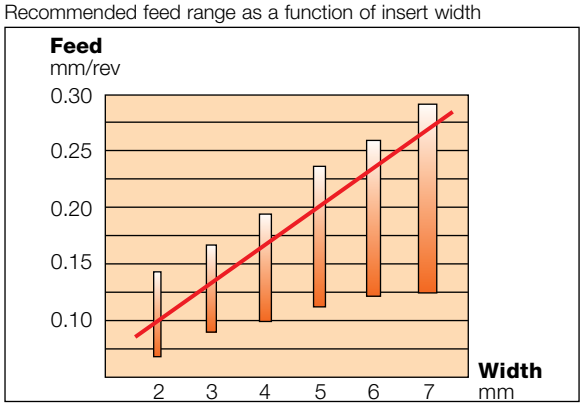
$$f \approx \frac{W\ insert}{24}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✔	✘	✔



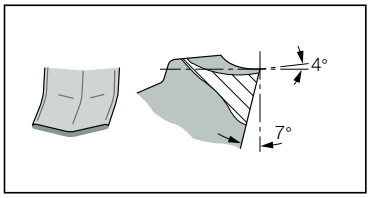


Recommended feed range as a function of insert width



J-Type

- First choice for soft materials, parting tubes, small diameters and thin-walled parts
- Cutting edge with positive rake
- General application on low carbon steel, alloy steel, austenitic stainless steel
- Low-to-medium feed





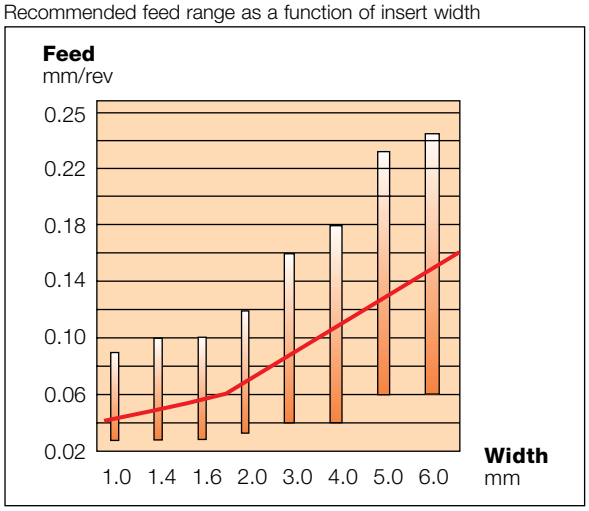
Material: Austenitic stainless steel

$$f \approx \frac{W\ insert}{26}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✔	✔	✘

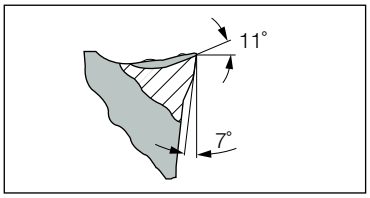
Recommendations are for neutral inserts.
For R/L inserts, reduce feed by 20-40%.

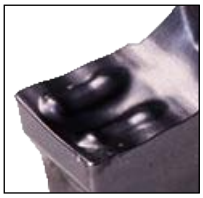
Recommended feed range as a function of insert width



Z-Type

- Cutting edge with high positive rake, suitable for parting tubes, thin walled arts and for small diameters
- Suitable for soft materials
- Excellent for cutting bearing steel and stainless steel
- Low-to-medium feeds



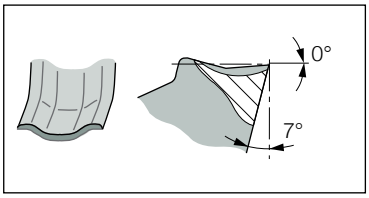


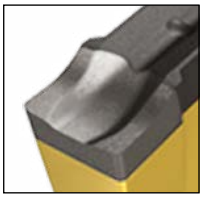
$$f \approx \frac{W\ insert}{28}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✔	✔	✘

LF

- Double-Sided Parting and Grooving Insert for Stainless Steel





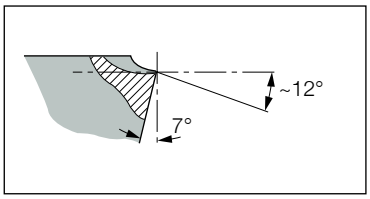
$$f \approx \frac{W\ insert}{31}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✔	✘	✘

UA/UT-Type

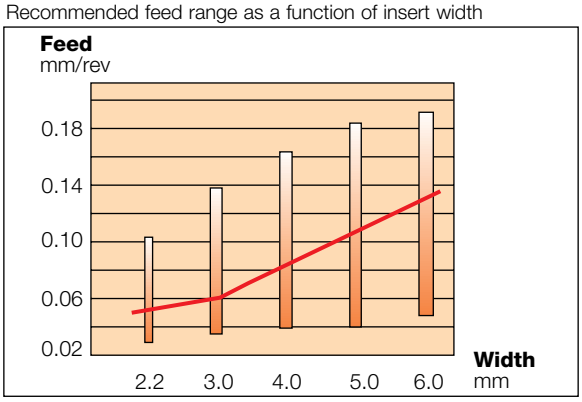
- A chipformer for use at low feeds
- Recommended for CrNi alloys and low carbon steel, especially in the bearing industry and on similar, problematic materials
- The narrow chipformer design ensures short deformed chips and provides improved performance
- **UA** and **UT** are similar chipformers. **UT** is slightly tighter than the **UA** chipformer

$$f \approx \frac{W\ insert}{40}\ [mm/rev]$$





Recommended feed range as a function of insert width

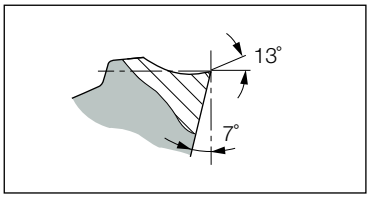


P-Type

- Very positive rake inclination and sharp cutting edge
- For soft materials, slim parts and general parting

$$f \approx \frac{W\ insert}{55}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✔	✘	✔	✘



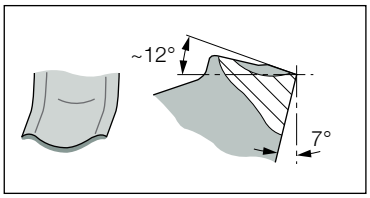


M-Type

- Similar to C-type, but with modified edge
- Improved chip control at medium feed

$$f \approx \frac{W\ insert}{22}\ [mm/rev]$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✔	✘	✔	✘	✘



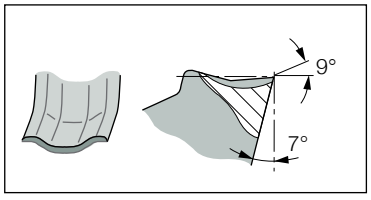


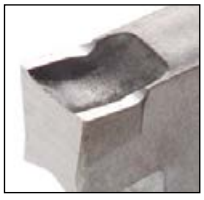
A-Type

- Positive rake, sharp edge
- For parting aluminum
- In grade **IC20**

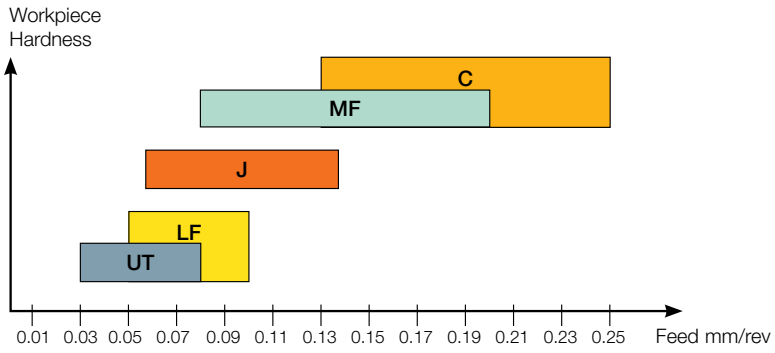
$$f \approx \frac{W\ insert}{43}\ [mm/rev]$$

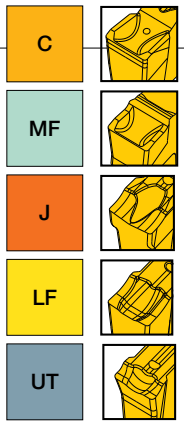
Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✘	✘	✘	✔	✘



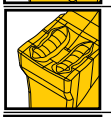
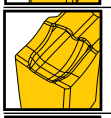
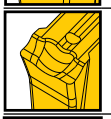


Main Chipformers - Recommended Feed





Selection of Chipformers for Various Workpiece Materials

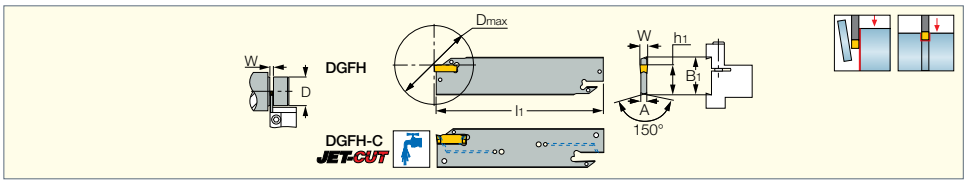
	Inserts		Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
High		C	✔	✘	✔ (IC20 only)	✔ (IC20 only)	✔
		W	✔	✘	✘	✘	✔
		C-jet (Coolant)	✔	✔	✔	✘	✘
		MF	✔	✔ Medium to high feed	✔	✘	✔
		JT	✔	✔	✔	✘	✔
Feed		J	✔	✔	✔	✔	✘
		Z	✔	✔	✔	✔	✘
		LFT	✔	✔	✔	✘	✘
		LF	✔	✔	✔	✘	✘
		UT	✔	✘	✘	✘	✘
Low		P	✔	✔	✘	✔	✘
		A	✘	✘	✘	✔	✘

✔ First choice

DO-GRIP HELI-GRIP TWISTED 2-SIDED

DGFH

Parting and Grooving Blades with and without Coolant Channels for DO-GRIP and HELI-GRIP Inserts



Designation	B_1	W min	W max	A	l_1	h_1	D max	Insert
DGFH 26-1.4	26.0	1.40	1.40	2.50 (5)	110.00	21.4	26.0	DG. 14..
DGFH 26-2 (1)	26.0	1.90 (4)	2.50	1.60	110.00	21.4	39.0 (6)	DG. 1.../DG. 2...
DGFH 26-3 (1)	26.0	3.00 (4)	3.18	2.40	110.00	21.4	39.0 (6)	DG. 1.../DG. 3...
DGFH 26C-3 (2)	26.0	3.00	3.18	2.40	110.00	21.4	39.0 (6)	DG. 3..C
DGFH 26-4	26.0	4.00	4.00	3.20	110.00	21.4	80.0	DG. 4.../GRIP 4...
DGFH 32-1.4	32.0	1.40	1.40	2.50 (5)	150.00	24.8	26.0	DG. 14
DGFH 32-2 (1)	32.0	1.90 (4)	2.50	1.80	150.00	24.8	39.0 (6)	DG. 1.../DG. 2...
DGFH 32-3 (1)	32.0	3.00 (4)	3.18	2.40	150.00	24.8	39.0 (6)	DG. 1.../DG. 3...
DGFH 32C-3 (2)	32.0	3.00	3.18	2.40	150.00	24.8	39.0 (6)	DG. 3..C
DGFH 32-4	32.0	4.00	4.00	3.20	150.00	24.8	100.0	DG. 4.../GRIP 4...
DGFH 32C-4 (3)	32.0	4.00	4.00	3.20	150.00	24.8	69.0	DG. 4..C
DGFH 32-5	32.0	5.00	5.00	4.00	150.00	24.8	120.0	DG. 5.../GRIP 5...
DGFH 32-6	32.0	6.00	6.35	5.20	150.00	24.8	120.0	DG. 6.../GRIP 6...
DGFH 45-3	45.0	3.00 (4)	3.18	2.40	225.00	38.0	160.0	DG. 1.../DG. 3...
DGFH 45-4	45.0	4.00	4.10	3.20	225.00	38.0	160.0	DG. 4.../GRIP 4...
DGFH 45-5	45.0	4.80	5.00	4.00	225.00	38.0	160.0	DG. 5.../GRIP 5...
DGFH 45-6	45.0	6.00	6.40	5.20	225.00	38.0	160.0	DG. 6.../GRIP 6...

• For user guide, see pages 416-422

(1) When using a double-ended insert, grooving depth is limited by the insert.

(2) Blades with frontal coolant holes (JET-CUT) • For Dmax 50 mm, use single-ended insert (should be modified by the user).

(3) These blades are suitable for turning, using GRIP 4 inserts • Blades with frontal coolant holes (JET-CUT)

(4) For DG. 1... insert, modify holder

(5) Thickness at the D.O.C. area is 1.0 mm

(6) Maximum diameter with double-sided inserts.

For inserts, see pages: DGN-MF (383) • DGN/DGNC/DGNM-C (380) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • DGR/L-J/JS (382) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • GRIP (229) • GRIP (full radius) (230)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

Spare Parts

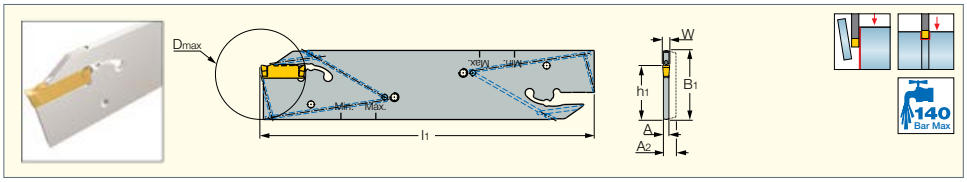
Designation						
DGFH 26-1.4	EDG 23B*					
DGFH 26-2	EDG 23A*					
DGFH 26-3	EDG 23A*					
DGFH 26C-3	EDG 23A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*					
DGFH 32-1.4	EDG 23B*					
DGFH 32-2	EDG 33A*					
DGFH 32-3	EDG 33A*					
DGFH 32C-3	EDG 33A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-4	EDG 33A*					
DGFH 32C-4	EDG 33A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-5	EDG 33A*					
DGFH 32-6	EDG 33A*					
DGFH 45-3	EDG 33A*					
DGFH 45-4	EDG 33A*					
DGFH 45-5	EDG 33A*					
DGFH 45-6	EDG 33A*					

* Optional, should be ordered separately

DO-GRIP JETCUT TWISTED 2-SIDED

DGFH-JHP

Parting and Grooving Blades with Channels for Low and High Pressure Coolant Carrying DO-GRIP Inserts



Designation	W min	W max	A	A2	l1	B1	h1	D max	Insert	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-2-JHP (1)	1.90 (2)	2.50	1.80	2.4	150.00	32.0	24.8	39.0	DG. 1.../DG. 2...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-3-JHP	3.00 (2)	3.18	2.50	-	150.00	32.0	24.8	90.0	DG. 1.../DG. 3...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-4-JHP	4.00	4.00	3.20	-	150.00	32.0	24.9	90.0	DG. 4.../GRIP 4...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-5-JHP	5.00	5.00	4.00	-	150.00	32.0	24.9	90.0	DG. 5.../GRIP 5...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*
DGFH 32-6-JHP (1)	6.00	6.35	5.20	-	160.00	32.0	24.9	90.0	DG. 6.../GRIP 6...	SR M2.0X2.5DIN916	SGC 340	EDG 33A-JHP*

• For user guide and accessories, see pages 416-422

(1) Only an upper channel

(2) For DG. 1... insert, modify holder

* Optional, should be ordered separately

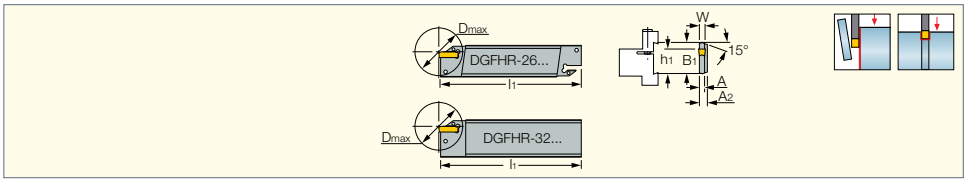
For inserts, see pages: DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382) • GRIP (229) • GRIP (full radius) (230)

For holders, see pages: TGTBU-JHP (393)

DO-GRIP TWISTED 2-SIDED

DGFHR/L

Parting and Grooving Reinforced Blades for DO-GRIP Inserts



Designation	B1	W min(1)	W max	A2	A	l1	h1	D max(2)	Machines	Insert	
DGFHR 26T16-2	26.0	1.90	2.50	8.0	1.70	110.00	21.4	42.0	TNS-30	DG. 1.../DG. 2..	EDG 23A*
DGFHR/L 26T23-2	26.0	1.90	2.50	8.0	1.60	110.00	21.4	42.0	TNS-30/112	DG. 1.../DG. 2..	EDG 23A*
DGFHR/L 26T16-3	26.0	3.00	3.18	8.0	2.40	110.00	21.4	30.0	TNS-30	DG. 1.../DG. 3..	EDG 23A*
DGFHR/L 26T23-3	26.0	3.00	3.18	8.0	2.40	110.00	21.4	42.0	TNS-30/42	DG. 1.../DG. 3..	EDG 23A*
DGFHR/L 32T22-2	32.0	1.90	2.50	8.0	1.60	110.00	24.8	42.0	TNS-42	DG. 1.../DG. 2..	EDG 33A*
DGFHR/L 32T22-4	32.0	4.00	4.00	8.0	3.40	110.00	24.8	42.0	TNS-42	DG. 4.../GRIP 4..	EDG 33A*
DGFHR/L 32T33-3	32.0	3.00	3.18	8.0	2.40	110.00	24.8	60.0	TNS-42/60/65	DG. 1.../DG. 3..	EDG 33A*
DGFHR/L 32T33-4	32.0	4.00	4.00	8.0	3.40	110.00	24.8	60.0	TNS-42/60/65	DG. 4.../GRIP 4..	EDG 33A*
DGFHR/L 32T41-4	32.0	4.00	4.00	10.0	3.40	110.00	24.8	80.0	TNS-65/80/480	DG. 4.../GRIP 4..	EDG 33A*

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified - see page 378 • For user guide, see pages 416-422

(1) **For DG:** 1.0 insert - modify holder

(2) The specified limit refers to the tool

* Optional, should be ordered separately

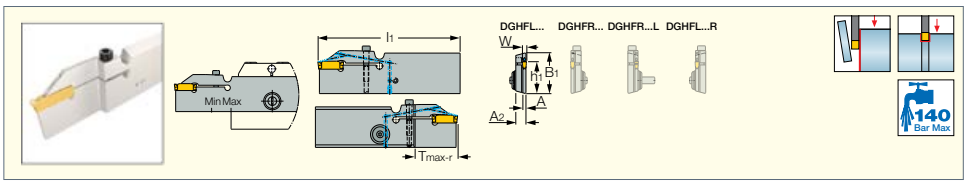
For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

DO-GRIP JETCUT TWISTED 2-SIDED

DGFHR/L-BC-JHP

Parting and Grooving Reinforced Blades with Channels for High Pressure Coolant for DO-GRIP Inserts



Designation	W min(1)	W max	A2	A	l1	B1	h1	Tmax-r(2)	Insert	SR M4-21532	HW 3.0	SGC 340
DGFHR/L 32BC-3T33-JHP	3.00	3.18	7.9	2.40	111.00	32.0	24.8	33.00	DG. 3..	SR M4-21532	HW 3.0	SGC 340
DGFHL 32BC-3T33R-JHP	3.00	3.18	7.9	2.40	111.00	32.0	24.8	33.00	DG. 3..	SR M4-21532	HW 3.0	SGC 340
DGFHR 32BC-3T33L-JHP	3.00	3.18	7.9	2.40	111.00	32.0	24.8	33.00	DG. 3..	SR M4-21532	HW 3.0	SGC 340

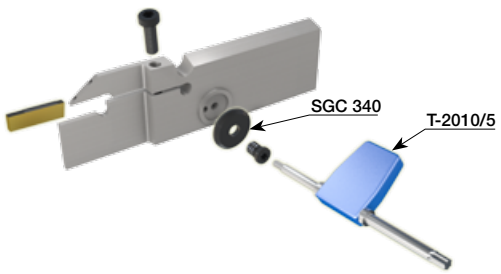
• For user guide and accessories, see pages 416-422

(1) **For DG:** 1.0 insert - modify holder

(2) The specified limit refers to the tool

For inserts, see pages: DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-Z (383) • DGN/DGNM-J/JS/JT (381) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

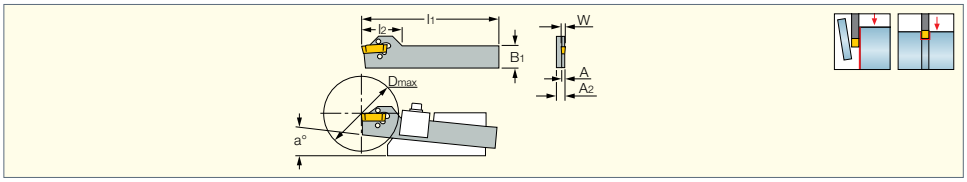
For holders, see pages: TGTBU-JHP (393)



DO-GRIP TWISTED 2-SIDED

DGFS

Blades for Multi-Spindle Machines, Replacement for HSS and Brazed Tools



Designation	B_1	W min[7]	W max	D max	A	l_1	l_2	a°	
DGFS 0-12-2 [1]	12.7	1.90	2.50	32.0	1.60	110.00	32.0	0	EDG 33B*
DGFS 0-17-2 [2]	17.4	1.90	2.50	35.0	1.60	110.00	32.0	0	EDG 33B*
DGFS 0-17-3 [2]	17.4	3.00	3.18	60.0	2.40	110.00	32.0	0	EDG 33B*
DGFS 5-17-2 [3]	17.4	1.90	2.50	35.0	1.60	110.00	32.0	5	EDG 33B*
DGFS 5-17-3 [3]	17.4	3.00	3.18	60.0	2.40	110.00	32.0	5	EDG 33B*
DGFS 5-17-4 [3]	17.4	4.00	4.00	60.0	3.20	110.00	32.0	5	EDG 33B*
DGFS 5-22-2 [4]	22.2	1.90	2.50	50.0	1.60	150.00	32.0	5	EDG 33B*
DGFS 5-22-3 [5]	22.2	3.00	3.18	75.0	2.40	150.00	32.0	5	EDG 33B*
DGFS 5-22-4 [5]	22.2	4.00	4.00	80.0	3.20	150.00	32.0	5	EDG 33B*
DGFS 5-24-3	23.8	3.00	3.18	80.0	2.40	150.00	32.0	5	EDG 33B*
DGFS 5-28-2 [6]	28.5	1.90	2.50	65.0	1.60	150.00	32.0	5	EDG 33B*
DGFS 5-28-4 [6]	28.5	4.00	4.00	100.0	3.20	150.00	32.0	5	EDG 33B*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified -see page 378 • For user guide, see pages 416-422

[1] Toolholder assembly X18-1,46,47-WT,160-CL,354-CL,701-ACL,702,702-CL,703,703-CL,704,704-CL,6921,6925.

[2] Toolholder assembly E-7,47,102-CL,103-CL,161-A-CL,162-A-CL.

[3] Toolholder assembly 226,226-CL,275,275-CL,276-CL,361-CL,431,630,707-A,707-A-CL.

[4] Toolholder assembly 100-CL,274,277,277-CL,274-CL,370,383-CL, 6722,6754,6755,6854,6855,6922,51,51-CL,353-CL,167,370-CL

[5] Toolholder assembly 100-CL,274,277,277-CL,274-CL,370,383-CL, 6722,6754,6755,6854,6855,51,51-CL,353-CL,167,370-CL.

[6] Toolholder assembly 278,278-CL,279,279-CL,280,280-CL,281,281-CL,375-CL,359-CL,372-CL,A6120,52,52-CL.

[7] **For DG:** 1.0 insert - modify holder

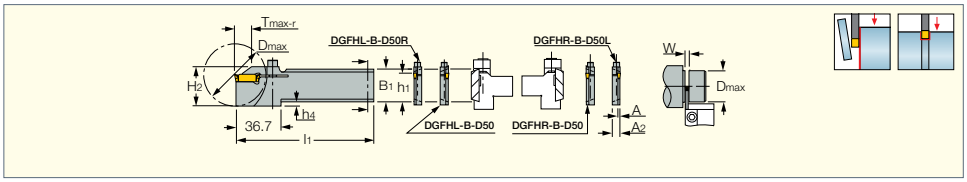
* Optional, should be ordered separately

For inserts, see pages: DGN-LF/LFT (383) • DGN/DGNC/DGNM-C (380) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • DGR/L-J/JS (382) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • GRIP (229) • GRIP (full radius) (230)

DO-GRIP TWISTED 2-SIDED

DGFHR/L-B-D..(R/L)

Reinforced Type Blades with Screw Clamping



Designation	B_1[4]	W min[5]	W max	A	A_2	l_1	H_2	h_1	h_4	T_{max-r}	D max[6]	Insert
DGFHR/L 26B-2D50 [1]	26.0	1.90	2.50	1.60	8.0	110.00	33.7	21.4	3.6	18.00	42.0	DG. 1.../DG. 2..
DGFHL 26B-2D50R [2]	26.0	1.90	2.50	1.60	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 2..
DGFHR 26B-2D50L [2]	26.0	1.90	2.50	1.60	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 2..
DGFHR/L 26B-3D50 [1]	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	30.0	DG. 1.../DG. 3..
DGFHL 26B-3D50R [2]	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 3..
DGFHR 26B-3D50L [2]	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 3..
DGFHR/L 32B-2D50 [3]	32.0	1.90	2.50	1.60	8.0	120.00	31.5	24.8	-	18.00	42.0	DG. 1.../DG. 2..
DGFHL 32B-2D50R [2]	32.0	1.90	2.50	1.60	8.0	120.00	31.5	24.8	-	18.00	50.0	DG. 1.../DG. 2..
DGFHR 32B-2D50L [2]	32.0	1.90	2.50	1.60	8.0	120.00	31.5	24.8	-	18.00	50.0	DG. 1.../DG. 2..
DGFHR/L 32B-3D50 [3]	32.0	3.00	3.18	2.40	8.0	120.00	31.5	24.8	-	18.00	42.0	DG. 1.../DG. 3..
DGFHL 32B-3D50R [2]	32.0	3.00	3.18	2.40	8.0	120.00	31.5	24.8	-	18.00	50.0	DG. 1.../DG. 3..
DGFHR 32B-3D50L [2]	32.0	3.00	3.18	2.40	8.0	120.00	31.5	24.8	-	18.00	50.0	DG. 1.../DG. 3..

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified -see page 378 • For user guide, see pages 416-422

[1] For Traub machines, model TNC 30, TNM 28, TNS 26/30/42/112, TNA 300, TNK 260.

[2] For Tornos Bechler, Emco 2000/20, 2000/26 machines.

[3] For Traub machines, model TNC 42/65, TNM 42/65, TNS 42/60/65, TNA 300/400.

[4] Mounted on all ISCAR standard blocks.

[5] **For DG:** 1.0 insert - modify holder.

[6] The specified limit refers to the tool.

For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

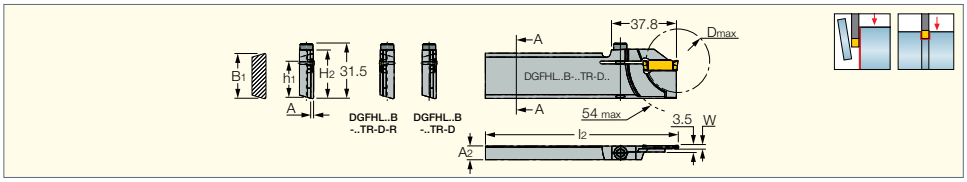
Spare Parts

Designation		
DGFHR/L-B-D..(R/L)	SR M4X20 DIN912	HW 3.0

DO-GRIP TWISTED 2-SIDED

DGFHL-26B-TR-D

Reinforced Type Blades with Screw Clamping for Traub and Index Machines



Designation	B1(2)	W min	W max	A	A2	l1	H2	h1	D max(3)	Insert		
DGFHL 26B-1.5TR-D20 (1)	26.0	1.00	1.50	1.20	7.9	110.00	27.9	21.4	20.0	DG. 1.../DG. 15..	SR M5X20-01172	HW 3.0
DGFHL 26B-2TR-D36	26.0	1.90 (4)	2.50	1.60	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 2..	SR M5X20-01172	HW 3.0
DGFHL 26B-2TR-D36R	26.0	1.90 (4)	2.50	1.60	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
DGFHL 26B-3TR-D36	26.0	3.00 (4)	3.18	2.40	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 3..	SR M5X20-01172	HW 3.0
DGFHL 26B-3TR-D36R	26.0	3.00 (4)	3.18	2.40	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 3..	SR M5X20-01172	HW 3.0

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified - see page 378 • For user guide, see pages 416-422

(1) Do not use DG.. 1.4 on this tool!

(2) Mounted on all ISCAR standard blocks

(3) The specified limit refers to the tool

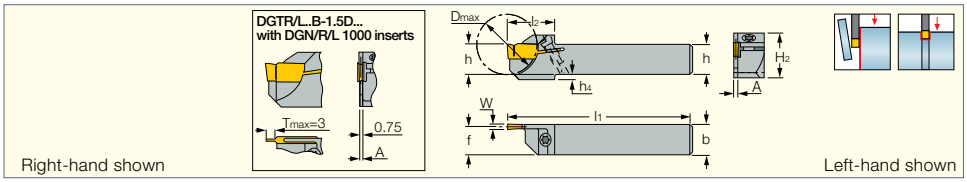
(4) **For DG:** 1.0 insert - modify holder.

For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

DO-GRIP TWISTED 2-SIDED

DGTR/L-B-D-SH

Parting and Grooving Short Head Tools for CNC and Swiss Automatics



Designation	W min	W max	h	b	A	f	l2	D max	H2	h4	l1	Insert		
DGTR/L 8B-1.4SH	1.40	1.40	8.0	8.0	1.00	7.5	18.0	10.0	15.4	2.0	125.00	DG. 14..	SR 16-236 P	T-15/5
DGTR/L 10B-1.4D20SH	1.40	1.40	10.0	10.0	1.00	9.5	18.0	20.0	13.7	-	120.00	DG. 14..	SR 16-236 P	T-15/5
DGTR/L 10B-1.5D20SH (1)	1.00	1.50	10.0	10.0	1.00	9.5	19.0	20.0	15.7	2.0	120.00	DG. 1.../DG. 15..	SR 16-236 P	T-15/5
DGTR/L 10B-2D20SH	1.90	2.50	10.0	10.0	1.60	9.2	19.0	20.0	15.7	2.0	120.00	DG. 1.../DG. 2..	SR 16-236 P	T-15/5
DGTR/L 12B-1.4D24SH	1.40	1.40	12.0	12.0	1.00	11.5	19.0	24.0	15.7	-	120.00	DG. 14..	SR 16-236 P	T-15/5
DGTR/L 12B-1.5D24SH (1)	1.00	1.50	12.0	12.0	1.00	11.4	19.0	24.0	15.7	-	120.00	DG. 1.../DG. 15..	SR 16-236 P	T-15/5
DGTR/L 12B-2D24SH	1.90	2.50	12.0	12.0	1.60	11.2	19.0	24.0	15.7	-	120.00	DG. 1.../DG. 2..	SR 16-236 P	T-15/5
DGTR/L 12B-2D24SH-L85	1.90	2.50	12.0	12.0	1.60	11.2	19.0	24.0	15.7	-	85.00	DG. 1.../DG. 2..	SR 16-236 P	T-15/5
DGTR/L 12B-3D24SH	3.00	3.18	12.0	12.0	2.40	10.8	19.0	24.0	15.7	-	120.00	DG. 3.../DG. 10..	SR 16-236 P	T-15/5
DGTR/L 16B-1.5D25SH (1)	1.00	1.50	16.0	16.0	1.20	15.4	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 15..	SR 16-236 P	T-15/5
DGTR/L 16B-2D25SH	1.90	2.50	16.0	16.0	1.60	15.2	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 2..	SR 16-236 P	T-15/5
DGTR/L 16B-3D25SH	3.00	3.18	16.0	16.0	2.40	14.8	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 3..	SR 16-236 P	T-15/5
DGTR/L 20B-1.5D25SH (1)	1.00	1.50	20.0	20.0	1.20	19.4	19.5	25.4	23.7	-	120.00	DG. 1.../DG. 15..	SR 16-236 P	T-15/5
DGTR/L 20B-3D25SH	3.00	3.18	20.0	20.0	2.40	18.8	19.5	25.4	23.7	-	120.00	DG. 1.../DG. 3..	SR 16-236 P	T-15/5

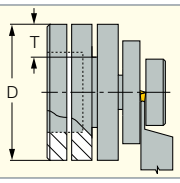
• DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3. For insert depth capacity table and modification instructions for the 2 and 3 holder pockets, see page 378 • For user guide, see pages 416-422

(1) Do not use DG.. 1.4 on this tool!

For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

Depth Capacity DGTR/L-B-D

Depth of Cut Function of Workpiece Diameter (DGN/R/L-100... excluded)



Designation	øDmax																
DGTR/L 10B-1.4D20	–	–	–	–	–	–	–	–	–	–	20	23	26	32	45	76	NL
DGTR/L 12B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 20B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 10B-2D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 12B-2D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-2D32	–	–	–	–	32	35	37	41	47	55	69	93	150	400	NL	NL	NL
DGTR/L 20B-2D35	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-2D35	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 12B-3D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-3D35	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 20B-3D40	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-3D40	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL
Depth T →	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4

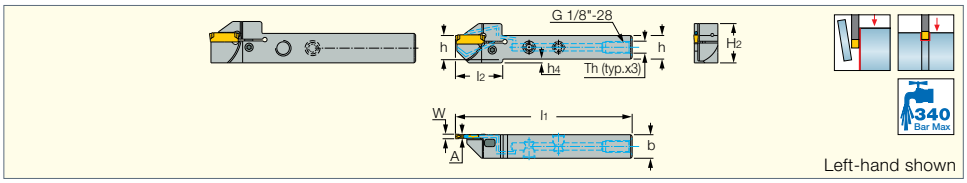
NL - No Limit

Example:
For 9 mm depth of groove on a 75 mm workpiece diameter, six tools may be used.

DO-GRIP JETCUT TWISTED 2-SIDED

DGTR/L-B-D-JHP-SL

Parting and Grooving Short Head Tools with Channels for High Pressure Coolant for CNC and Swiss Automatics



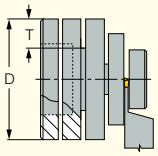
Designation	W min	W max	h	b	A	l2	D max	H2	h4	l1	Insert
DGTR/L 12B-2D24-JHP-SL	1.90	2.50	12.0	12.0	1.60	29.4	24.0	25.7	6.5	100.00	DG. 2...
DGTR/L 16B-2D35-JHP-SL	1.90	2.50	16.0	16.0	1.60	32.0	35.0	26.7	2.6	120.00	DG. 2...
DGTR/L 20B-2D35-JHP-SL	1.90	2.50	20.0	20.0	1.60	32.0	35.0	28.1	-	140.00	DG. 2...
DGTR/L 12B-3D24-JHP-SL	3.00	3.18	12.0	12.0	2.40	29.4	24.0	25.7	6.5	100.00	DG. 3..
DGTR/L 16B-3D35-JHP-SL	3.00	3.18	16.0	16.0	2.40	32.0	35.0	26.7	2.6	120.00	DG. 3..
DGTR/L 20B-3D40-JHP-SL	3.00	3.18	20.0	20.0	2.40	35.6	40.0	28.1	-	140.00	DG. 3..
DGTR/L 25B-2D35-JHP-SL	1.90	2.50	25.0	25.0	1.60	32.1	35.0	33.1	-	140.00	DG. 2..
DGTR/L 25B-3D40-JHP-SL	3.00	3.18	25.0	25.0	2.40	35.6	40.0	33.1	-	140.00	DG. 3..

• For insert depth capacity table and modification instructions for the holder pockets, see page 378 • For user guide, see pages 416-422

For inserts, see pages: DGN-LF/LFT (383) • DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

Depth Capacity
DGTR/L-B-D-JHP-SL

Depth of Cut Function of Workpiece Diameter (DGN/R/L-100... excluded)



Designation	øDmax																
DGTR/L 12B-2D24-JHP-SL	–	–	–	–	–	–	–	–	24	26	27	28	30	32	36	42	52
DGTR/L 16B-2D35-JHP-SL	–	–	–	–	–	–	–	–	24	26	27	28	30	32	36	42	52
DGTR/L 20B-2D35-JHP-SL	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 25B-2D35-JHP-SL	–	–	–	65	70	75	80	90	100	120	140	180	250	410	1200	NL	NL
DGTR/L 12B-3D24-JHP-SL	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 16B-3D35-JHP-SL	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 20B-3D40-JHP-SL	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-3D40-JHP-SL	50	55	60	67	75	85	100	115	140	200	350	1500	NL	NL	NL	NL	NL
Depth T →	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4

NL - No Limit

Example:
For a 9 mm depth of groove on a 75 mm workpiece diameter, six tools may be used.

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
DGTR/L ...2-JHP-SL	3-4	4-5	5-6
DGTR/L ...3-JHP-SL	5-6	6-7	7-8

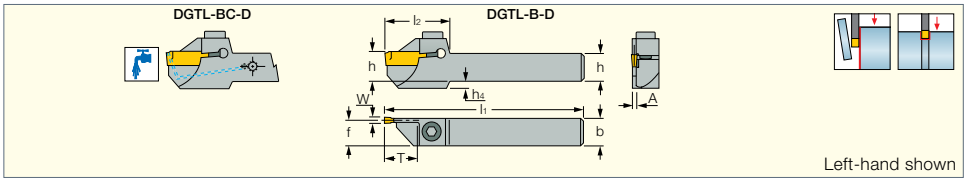
Spare Parts

Designation							
DGTR/L 12B-2D24-JHP-SL	PIN-32121	SR M5-24145	SR 5/16UNF TL360	HW 2.5	SR M2.5X6 DIN913	HW 5/32"	SR M2.5X2.5 DIN913
DGTR/L 16B-2D35-JHP-SL	PIN-32121	SR M5-24145	SR 5/16UNF TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5/32"	SR M2.5X2.5 DIN913
DGTR/L 20B-2D35-JHP-SL	PIN-32121	SR M5-24145	PLG 1/8BSP TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5.0	SR M2.5X2.5 DIN913
DGTR/L 12B-3D24-JHP-SL	PIN-32121	SR M5-24145	SR 5/16UNF TL360	HW 2.5	SR M2.5X6 DIN913	HW 5/32"	SR M2.5X2.5 DIN913
DGTR/L 16B-3D35-JHP-SL	PIN-32121	SR M5-24145	SR 5/16UNF TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5/32"	SR M2.5X2.5 DIN913
DGTR/L 20B-3D40-JHP-SL	PIN-32121	SR M5-24145	PLG 1/8BSP TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5.0	SR M2.5X2.5 DIN913
DGTR/L 25B-2D35-JHP-SL	PIN-32121	SR M5-24145	PLG 1/8BSP TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5.0	SR M2.5X2.5 DIN913
DGTR/L 25B-3D40-JHP-SL	PIN-32121	SR M5-24145	PLG 1/8BSP TL360	HW 2.5/5	SR M2.5X6 DIN913	HW 5.0	SR M2.5X2.5 DIN913

DO-GRIP TWISTED 2-SIDED

DGTR/L-B/BC-D

Integral Shank Reinforced
Parting and Grooving Tools



Designation	W min	W max	h	b	A	l1	l2	Tmax-r(3)	f	h4		Insert
DGTR/L 10B-1.4D20	1.40	1.40	10.0	10.0	1.00	140.00	23.6	10.00	9.5	2.0	N	DG. 14..
DGTR/L 12B-1.4D30	1.40	1.40	12.0	12.0	1.00	140.00	29.6	15.00	11.5	3.5	N	DG. 14..
DGTR/L 16B-1.4D30	1.40	1.40	16.0	16.0	1.00	140.00	29.6	15.00	15.5	-	N	DG. 14..
DGTR/L 20B-1.4D30	1.40	1.40	20.0	20.0	1.00	140.00	29.6	15.00	19.5	-	N	DG. 14..
DGTR/L 10B-2D30	1.90	2.50	10.0	10.0	1.60	140.00	29.6	15.00	9.2	6.6	N	DG. 1.../DG. 2..
DGTR/L 12B-2D30	1.90	2.50	12.0	12.0	1.60	140.00	29.6	15.00	11.2	3.5	N	DG. 1.../DG. 2..
DGTR/L 16B-2D32	1.90	2.50	16.0	16.0	1.60	140.00	30.6	16.00	15.2	-	N	DG. 1.../DG. 2..
DGTR/L 20B-2D35	1.90	2.50	20.0	20.0	1.60	140.00	32.1	17.50	19.2	-	N	DG. 1.../DG. 2..
DGTR/L 25B-2D35	1.90	2.50	25.0	25.0	1.60	140.00	32.1	17.50	24.2	-	N	DG. 1.../DG. 2..
DGTR/L 12B-3D30	3.00	3.18	12.0	12.0	2.40	140.00	29.6	15.00	10.8	3.5	N	DG. 1.../DG. 3..
DGTR/L 16B-3D35	3.00	3.18	16.0	16.0	2.40	140.00	32.1	16.00	14.8	2.6	N	DG. 1.../DG. 3..
DGTR/L 16BC-3D35 (1)	3.00	3.18	16.0	16.0	2.40	140.00	31.1	16.00	14.8	2.6	Y	DG.C 3..
DGTR/L 20B-3D40 (2)	3.00	3.18	20.0	20.0	2.40	140.00	35.6	20.00	18.8	-	N	DG. 1.../DG. 3..
DGTR/L 20BC-3D40 (1)	3.00	3.18	20.0	20.0	2.40	140.00	34.6	20.00	18.8	-	Y	DG.C 3..
DGTR/L 25B-3D40 (2)	3.00	3.18	25.0	25.0	2.40	140.00	35.6	20.00	23.8	-	N	DG. 1.../DG. 3..

• **Important:** 1.4 mm width inserts should be used only on tools for 1.4 mm specific width tools. • DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3. For insert depth capacity table and modification instructions for the 2 and 3 holder pockets, see page 378 • For user guide, see pages 416-422

(1) Tools for inserts with coolant holes for high temperature alloys and stainless steel

(2) Insert's Tmax=18 mm, for deeper penetration modify insert into single-ended.

(3) The specified limit refers to the tool

For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

Spare Parts

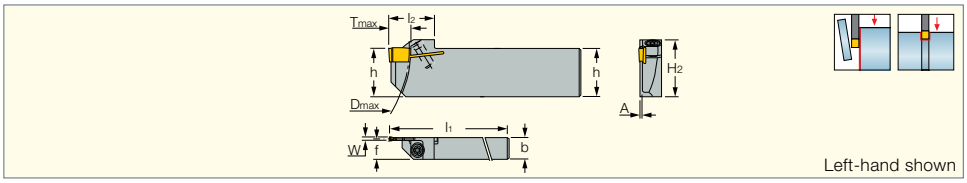
Designation						
DGTR/L 10B-1.4D20	SR M5X12 DIN912	HW 4.0				
DGTR/L 12B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 20B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 10B-2D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 12B-2D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-2D32	SR M4X14 DIN912	HW 3.0				
DGTR/L 20B-2D35	SR M4X14 DIN912	HW 3.0				
DGTR/L 25B-2D35	SR M5X12 DIN912	HW 4.0				
DGTR/L 12B-3D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-3D35	SR M5X12 DIN912	HW 4.0				
DGTR/L 16BC-3D35	SR M5X12 DIN912	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*
DGTR/L 20B-3D40	SR M5X12 DIN912	HW 4.0				
DGTR/L 20BC-3D40	SR M5X12 DIN912	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*
DGTR/L 25B-3D40	SR M5X12 DIN912	HW 4.0				

* Optional, should be ordered separately

DO-GRIP TWISTED 2-SIDED

DGTR/L-B-T-SH

Reinforced Parting and Grooving
Tools for DGN Double-Ended Inserts



Designation	W min	W max	h	b	A	f	l1	l2	D max	Tmax-r	H2		
DGTR/L 2009B-1.5T9SH	1.00	1.50	20.0	9.0	1.20	8.4	100.00	19.0	95.0	9.00	23.7	SR 16-236 P	T-15/5

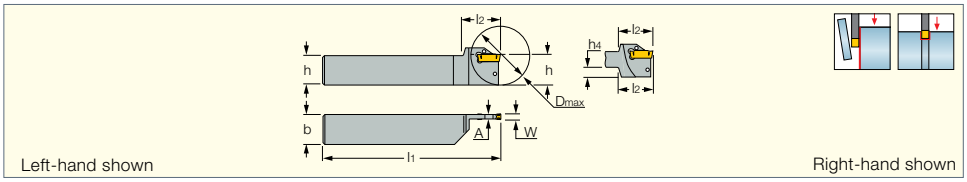
• **Important:** 1.4 mm width inserts should be used only on tools for 1.4 mm specific width • For user guide, see pages 416-422

For inserts, see pages: DGN-P (384) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR/L-J/JS (382)

DO-GRIP TWISTED 2-SIDED

DGTR/L

Integral Shank Parting and Grooving Tools



Designation	W min	W max	h	b	A	l1	l2	h4	D max	Insert	
DGTR/L 1010-2	1.90	2.50	10.0	10.0	1.80	150.00	29.0	6.6	35.0	DG. 1.../DG. 2..	EDG 33B*
DGTR/L 1212-2	1.90	2.50	12.0	12.0	1.80	150.00	29.0	6.6	35.0 (1)	DG. 1.../DG. 2..	EDG 33B*
DGTR/L 1616-2	1.90	2.50	16.0	16.0	1.80	150.00	29.0	2.6	35.0 (2)	DG. 1.../DG. 2..	EDG 33B*
DGTR/L 2012-2	1.90	2.50	20.0	12.0	1.80	125.00	29.0	-	35.0 (1)	DG. 1.../DG. 2..	EDG 33A*
DGTR/L 1212-3	3.00	3.18	12.0	12.0	2.50	150.00	29.0	6.6	35.0 (1)	DG. 1.../DG. 3..	EDG 33B*
DGTR/L 1616-3	3.00	3.18	16.0	16.0	2.50	150.00	29.0	6.6	35.0 (2)	DG. 1.../DG. 3..	EDG 33B*
DGTR/L 2012-3	3.00	3.18	20.0	12.0	2.50	125.00	29.0	-	35.0 (1)	DG. 1.../DG. 3..	EDG 33A*
DGTR/L 2020-3	3.00	3.18	20.0	20.0	2.50	125.00	29.0	-	35.0 (1)	DG. 1.../DG. 3..	EDG 33A*
DGTR/L 2525-3	3.00	3.18	25.0	25.0	2.50	150.00	29.0	-	35.0 (1)	DG. 1.../DG. 3..	EDG 33A*
DGTR/L 2020-4	4.00	4.76	20.0	20.0	3.40	125.00	31.0	-	51.0	DG. 4.../GRIP 4..	EDG 33A*
DGTR/L 2525-4	4.00	4.76	25.0	25.0	3.40	150.00	31.0	-	51.0	DG. 4.../GRIP 4..	EDG 33A*
DGTR/L 2020-5	4.80	5.00	20.0	20.0	4.00	125.00	33.0	-	59.0	DG. 5.../GRIP 5..	EDG 33A*
DGTR/L 2525-5	4.80	5.00	25.0	25.0	4.00	150.00	33.0	-	76.0	DG. 5.../GRIP 5..	EDG 33A*
DGTR/L 2525-6	6.00	6.35	25.0	25.0	5.30	150.00	33.0	-	76.0	DG. 6.../GRIP 6..	EDG 33A*

• For user guide, see pages 416-422

* Optional, should be ordered separately

(1) When using a double-ended insert, grooving depth is limited by the insert.

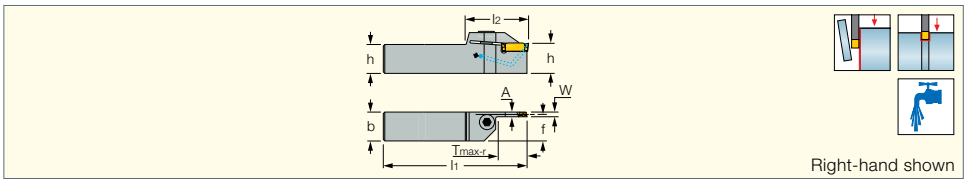
(2) Dmax=43(1.69") when single-ended insert is used

For inserts, see pages: DGN-LF/LFT (383) • DGN-MF (383) • DGN/DGNC/DGNM-C (380) • DGR/L-C DGRC/LC-C (380) • DGN/DGNM-J/JS/JT (381) • DGR/L-J/JS (382) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • GRIP (229) • GRIP (full radius) (230)

DO-GRIP TWISTED 2-SIDED

DGTR/L-BC-T

Parting and Grooving Tools with Coolant Holes for JET-CUT Inserts



Designation	h	b	W min	W max	l1	A	f	l2	Tmax-r
DGTR/L 20BC-4T25	20.0	20.0	4.00	4.00	140.00	3.40	18.3	42.0	25.00
DGTR/L 25BC-4T25	25.0	25.0	4.00	4.00	140.00	3.40	23.3	42.0	25.00

• For user guide, see pages 416-422

For inserts, see pages: DGN-UT/UA (384) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

Spare Parts

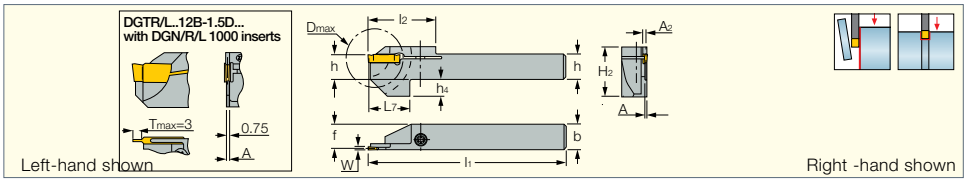
Designation						
DGTR/L-BC-T	SR M6X16 DIN912	SGCU 341*	CGF 343*	CF 343*	CGM 343*	HW 5.0

* Optional, should be ordered separately

DO-GRIP TWISTED 2-SIDED

DGTR/L-B-D-TR

Reinforced Parting and Grooving Tools for Double-Ended DO-GRIP Inserts



Designation	W min	W max	h	b	A	A2	f	l1	l2	L7	D max	H2	h4	Insert
DGTR/L 12B-1.4D20-TR12	1.40	1.40	12.0	12.0	1.00	2.3	11.5	95.00	32.5	20.00	20.0	23.7	8.0	DG. 14..
DGTL 12B-1.5D20-TR12	1.00	1.50	12.0	12.0	1.20	2.3	11.3	95.00	32.5	20.00	20.0	23.7	8.0	DG. 1.../DG. 15..
DGTR 12B-1.5-D20-TR12	1.00	1.50	12.0	12.0	1.20	2.3	11.3	95.00	32.5	20.00	20.0	23.7	8.0	DG. 1.../DG. 15..

• **Important:** 1.4 mm width inserts should be used only on tools for 1.4 mm specific width !! • For Traub machines, model TNL 12/7

• For user guide, see pages 416-422

For inserts, see pages: DGN-P (384) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR/L-J/JS (382)

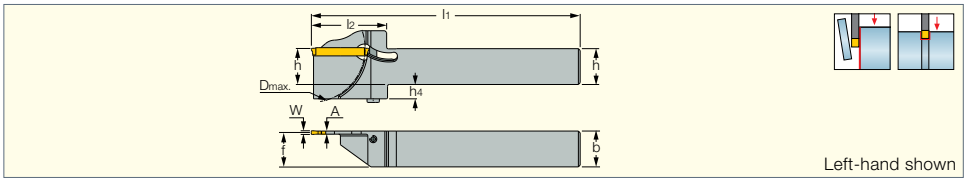
Spare Parts

Designation		
DGTR/L-B-D-TR	SR 16-236 P	T-15/5

DO-GRIP XL

DGTR/L-XL

Integral Shank Reinforced Parting and Grooving Tools for Parting
Up to 65 mm Diameters



Designation	W	D max	h	b	A	l1	l2	f	h4		
DGTR/L 20B-2XL-D60	2.00	60.0	20.0	20.0	1.74	150.00	41.3	19.1	8.0	SR M4X35DIN912	HW 3.0
DGTR/L 25B-2XL-D60	2.00	60.0	25.0	25.0	1.74	150.00	41.3	24.1	3.0	SR M4X35DIN912	HW 3.0
DGTR/L 20B-3XL-D65	3.00	65.0	20.0	20.0	2.40	150.00	41.3	18.8	12.0	SR M5X40DIN912	HW 4.0
DGTR/L 25B-3XL-D65	3.00	65.0	25.0	25.0	2.40	150.00	41.3	23.8	7.0	SR M5X40DIN912	HW 4.0

• For insert depth capacity table, see page 377 • For user guide, see pages 416-422

For inserts, see pages: DGN-C-XL (387) • DGN-J-XL (388) • DGR/L-C-XL (388) • DGR/L-J-XL (388)

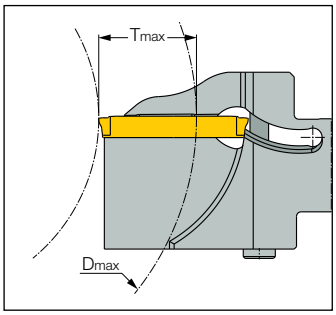
Depth of Cut Function of Workpiece Diameter

Tmax/Dmax for DGTR/L...-2XL

T max	D max
15	No limit
16	600
17	300
18	200
19	150
20	130
21	120
22	100
23	90
24	85
25	80
26	75
27	70
28	65
29	63
30	60

Tmax/Dmax for DGTR/L...-3XL

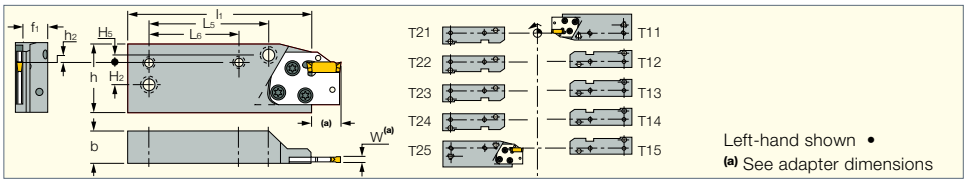
T max	D max
15	No limit
16	1000
17	400
18	300
19	230
20	180
21	150
22	130
23	115
24	105
25	95
26	90
27	85
28	80
29	75
30	72
31	70
32.5	65



DO-GRIP TWISTED 2-SIDED

DGHAL-DECO

Holders for DGAD Adapters for Tornos Bechler Deco Machines



Designation	h	b	l1	f1	h2	H2	H5	L6	L5
DGHAL DECO 7-10 (1)	40.3	18.2	106.00	15.0	-	12.8	4.8	52.00	69.00
DGHAL DECO 13 (2)	42.0	35.2	115.00	28.7	2.0	16.0	16.0	60.00	60.00
DGHAL DECO 20-26 (2)	44.8	23.2	120.00	20.0	4.0	17.0	17.0	65.00	65.00

• DGAD-... HGAD-... adapters should be ordered separately

(1) **Positioning combinations:** T11; T25

(2) **Positioning combinations:** All

For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62)

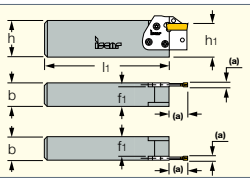
Spare Parts

Designation							
DGHAL DECO 7-10	SR 14-519-L9.7	HW 4.0	SR 16-212-L9.5	T-20/5	SR 16-212	SR M5X25DIN912	
DGHAL DECO 13	SR 14-519-L9.7	HW 5.0	SR 16-212-L7.5	T-20/5	SR 16-212	SR M6X25 DIN912	
DGHAL DECO 20-26	SR 14-519-L12.8	HW 5.0	SR 16-212-L7.5	T-20/5	SR 16-212	SR M6X25 DIN912	EZ 104

DO-GRIP TWISTED 2-SIDED

HMSN-New Britain

Holders for Grooving and Turning Adapters for New Britain Multi-Spindle Bar Machines



(a) See adapter dimensions

Designation	h	b	h_1	l_1	f_1	S_1 (2)			
HMSN 35/3722 (1)	36.5	22.4	34.5	181.70	18.4	226	SR 16-212	SR 14-519	T-20/5

• DGAD-... HGAD-..., adapters should be ordered separately

(1) For models #42; #52; #60; #61; #62; #602

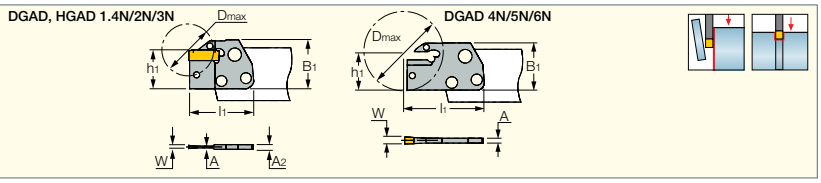
(2) Comparable Empire block

For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62)

DO-GRIP TWISTED 2-SIDED

DGAD/HGAD

Parting and Grooving Adapters for DO-GRIP Double-Ended Inserts



Designation	W min	W max	A	A_2	B_1	h_1	l_1	D max	
DGAD 1.4N	1.40	1.40	1.00	3.2	30.0	24.0	41.50	28.0	EDG 23B*
DGAD 2N	1.90 (2)	2.50	1.60	3.2	30.0	24.0	41.50	32.0	EDG 33A*
DGAD 3N (1)	3.00 (2)	3.18	2.40	4.0	30.0	24.0	41.50	32.0	EDG 33A*
HGAD 3N	3.00	3.00	2.40	4.0	30.0	24.0	50.50	50.0	EDG 23B*
DGAD 4N	4.00	4.00	3.20	-	30.0	24.0	50.50	50.0	EDG 33A*
DGAD 5N	4.80	5.00	4.00	-	30.0	24.0	50.50	50.0	EDG 33A*
DGAD 6N	6.00	6.35	5.20	-	30.0	24.0	50.50	50.0	EDG 33A*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified - see page 378 • For user guide, see pages 416-422

(1) Only the DGN/R/L inserts are suitable for this adapter

(2) For 1 mm inserts, modify adapter

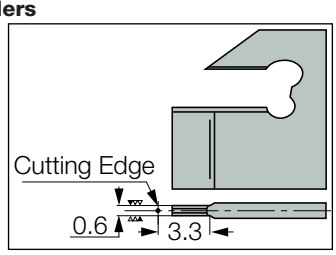
* Optional, should be ordered separately

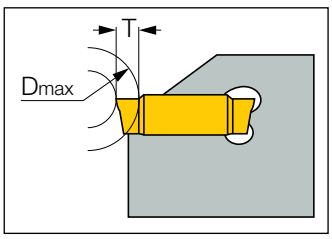
For inserts, see pages: DGN/DGNC/DGNM-C (380) • HGN-C (386) • DGR/L-C DGRC/LC-C (380) • HGR/L-C (386) • DGN/DGNM-J/JS/JT (381) • HGN-J (386) • DGR/L-J/JS (382) • HGR/L-J/JS (387) • DGN-P (384) • DGN-UT/UA (384) • DGN-W (381) • DGN-WP (385) • DGN-Z (383) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • HGN-UT (387) • GRIP (229) • GRIP (full radius) (230)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

Depth Capacity for DGN/R-1002J Insert on Standard Holders

Depth: T		D max	Depth: T		D max
Up to	1.2	No limit	Up to	2.2	32.3
	1.3	830		2.3	29.3
	1.4	218		2.4	26.7
	1.5	126		2.5	24.8
	1.6	88.4		2.6	23.2
	1.7	68.2		2.7	21.7
	1.8	55.6		2.8	20.5
	1.9	46.9		2.9	19.4
	2.0	40.7		3.0	18.4
	2.1	36.0			





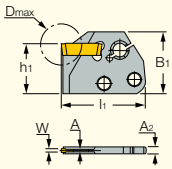
Standard Holders Modification

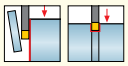
To achieve no limitation on the workpiece diameter up to 3 mm depth, the steel support under the insert should be ground, as per the shown sketch.

DO-GRIP TWISTED 2-SIDED

DGAD-B-D

Parting and Grooving
Screw-Clamped Adapters for
DO-GRIP Double-Ended Inserts





Designation	W min	W max	A	A2	l1	D max	h1	B1
DGAD 1.4B-D16	1.40	1.40	1.00	3.2	36.80	16.0	24.0	30.3
DGAD 1.5B-D20 (1)	1.00	1.50	1.00	3.2	41.00	20.0	24.0	30.3
DGAD 2B-D20	1.90	2.50	1.60	3.2	41.00	20.0	24.0	30.3

• Up to 3 mm depth, without any limitation on the diameter. • DG..1.0 insert can also be mounted into pocket sizes 2 and 3. In which case the pocket width has to be modified-see page 378 • For user guide, see pages 416-422

(1) Do not use DG.. 1.4 on this tool!

For inserts, see pages: DGN-LF/LFT (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

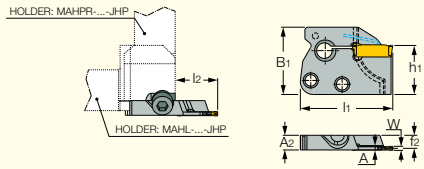
For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483) • HMSN-New Britain (378) • DGHAL-DECO (377)

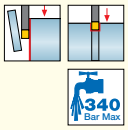
DO-GRIP JETCUT TWISTED 2-SIDED
MODULARGRIP

DGPAD-JHP

Adapters with High Pressure
Coolant Channels for DO-GRIP
Parting and Grooving Inserts







f=f1(shank)+f2(adapter)

Designation	W min	W max	D max	l2	f2	A	A2	l1	B1	h1	Insert	
DGPAD 2R/L-D22-JHP	1.90	2.50	22.0	21.0	6.40	1.60	7.2	45.50	33.0	24.0	DG. 2...	SR M3X3DIN913
DGPAD 2R/L-D32-JHP	1.90	2.50	32.0	21.0	6.40	1.60	7.2	45.50	33.0	24.0	DG. 2...	SR M3X3DIN913
DGPAD 3R/L-D32-JHP	3.00	3.18	32.0	21.0	6.00	2.40	7.2	45.50	33.0	24.0	DG. 3...	SR M3X3DIN913

• For user guide and accessories, see pages 416-422

For inserts, see pages: DGN-LF/LFT (383) • DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-WP (385) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-P (385) • DGR-WP (385) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382)

For holders, see pages: MAHR/L-JHP-MC (236)

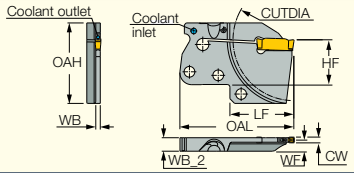
Flow Rate vs. Pressure

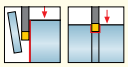
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
DGPAD 2R/L-D22-JHP	5	6	7
DGPAD 2R/L-D32-JHP	5	6	7
DGPAD 3R/L-D32-JHP	8.5	10	12

DO-GRIP JETCUT TWISTED 2-SIDED

DGPAD-XL-JHP

Parting and Grooving Extra
Long Adapters with Coolant
Channels for DO-GRIP Inserts





Designation	CW	CUTDIA	WF	WB	WB_2	LF	OAL	OAH	HF	Insert	
DGPAD-XL 3R/L-D52-JHP	3.00	52.0	6.00	2.4	7.2	27.70	53.40	43.0	34.0	DG. 3...	SR M3X3DIN913
DGPAD-XL 3R/L-D65-JHP	3.00	65.0	6.00	2.4	7.2	34.20	60.40	43.0	34.0	DG. 3...	SR M3X3DIN913

• For user guide and accessories see pages 416-422

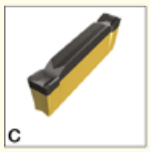
For inserts, see pages: DGN-LF/LFT (383) • DGN-MF (383) • DGN-P (384) • DGN-UT/UA (384) • DGN-Z (383) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGR-Z/ZS (384) • DGR/L-C DGRC/LC-C (380) • DGR/L-J/JS (382) • GRIP (229)

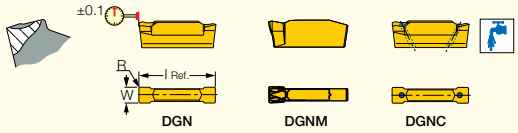
For holders, see pages: MAHR/L-MG-XL-JHP (394) • MAHR/L-MG-XL-JHP-MC (395)

DO-GRIP TWISTED 2-SIDED

DGN/DGNC/DGNM-C

Double-Sided Parting Inserts for Parting and Grooving Bars, Hard Materials and Tough Applications





Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC328	IC830	IC928	IC1028	IC354	IC5400	IC308	IC808	IC908	IC30N	IC20	IC807	IC907	Recommended Machining Data f groove (mm/rev)
DGN 2002C	2.00	0.03	0.20	18.00	19.90	●	●		●	●	●		●	●		●			0.05-0.16
DGN 2202C	2.20	0.03	0.20	18.00	19.80	●	●		●	●	●	●	●	●	●	●		●	0.05-0.16
DGN 2502C	2.50	0.03	0.20	18.00	20.70			●						●					0.08-0.20
DGN 3102C	3.10	0.04	0.20	18.00	20.10	●	●		●	●	●	●	●	●	●	●		●	0.10-0.25
DGNC 3102C (1)	3.10	0.04	0.20	18.00	21.00								●	●					0.10-0.25
DGNM 3202C (2)	3.18	0.04	0.20	- (3)	20.40	●				●				●					0.10-0.25
DGN 4003C	4.00	0.04	0.30	- (3)	18.80	●	●		●	●		●	●	●	●	●	●		0.10-0.30
DGNC 4003C (1)	4.00	0.04	0.30	- (3)	19.00								●	●					0.10-0.30
DGN 4803C	4.80	0.04	0.30	- (3)	19.90	●													0.12-0.35
DGN 5003C	5.00	0.04	0.30	- (3)	19.10	●	●		●	●			●	●	●	●			0.12-0.35
DGN 6303C	6.35	0.04	0.35	- (3)	19.10	●	●		●	●			●	●		●			0.15-0.40

• For user guide, see pages 416-422

(1) When using a double-ended insert, grooving depth is limited by the insert.

(2) Single-ended insert.

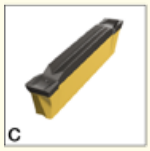
(3) No depth limit

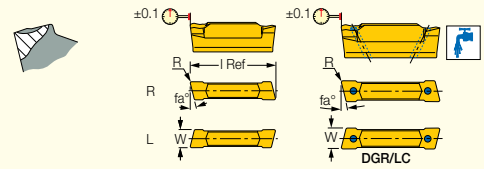
For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375) • DGTR/L-BC-T (376) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFIR/L-MC (446) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

DO-GRIP TWISTED 2-SIDED

DGR/L-C DGRC/LC-C

Double-Sided Inserts for Parting Bars, Hard Materials and Tough Applications





Designation	Dimensions W	R	T_{max-r}	f_a°	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGR/L 2202C-6D	2.20	0.20	18.00	6.0	20.80	●	●	●	●	●	●	●	0.04-0.12
DGR/L 3102C-15D	3.10	0.20	18.00	15.0	21.00	●	●	●					0.08-0.14
DGR/L 3102C-6D	3.10	0.20	18.00	6.0	21.00	●	●	●	●	●	●	●	0.08-0.18
DGR/LC 3102C-6D (1)	3.10	0.20	18.00	6.0	21.00					●	●		0.08-0.18
DGR 3102C-8D	3.10	0.20	18.00	8.0	21.10	●	●	●					0.05-0.15
DGR/L 4003C-4D	4.00	0.30	- (2)	4.0	18.90	●	●	●	●		●	●	0.08-0.20
DGR/LC 4003C-4D (1)	4.00	0.30	- (2)	4.0	19.00					●	●		0.08-0.20
DGR 4800CS-4D	4.80	0.02	- (2)	4.0	19.70	●							0.05-0.15
DGR 4800CS-8D	4.80	0.02	- (2)	8.0	19.70	●							0.05-0.15
DGR 4803C-4D	4.80	0.30	- (2)	4.0	20.30	●							0.10-0.25
DGR 4803C-8D	4.80	0.30	- (2)	8.0	20.30	●							0.10-0.20
DGR/L 5003C-4D	5.00	0.30	- (2)	4.0	19.10	●			●			●	0.10-0.25
DGR/L 6303C-4D	6.35	0.35	- (2)	4.0	19.10	●			●			●	0.12-0.30

• Feed values for grade IC20 should be decreased by 50% • For cutting speed recommendations and user guide, see pages 416-422

(1) Inserts with coolant holes, recommended coolant pressure 10 bar minimum

(2) No depth limit

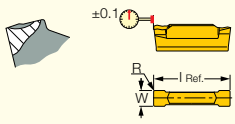
For tools, see pages: C#-HELIR/L (225) • DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375) • DGTR/L-BC-T (376) • HELIR/L (226)

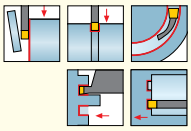
DO-GRIP TWISTED 2-SIDED

DGN-W

Double-Sided Inserts with Central Ridged Chipformer for Parting and Grooving Hard Materials and Interrupted Cuts







Designation	Dimensions W±0.04	R	l Ref.	Tough ↔ Hard IC328	IC354	Recommended Machining Data f groove (mm/rev)
DGN 5003W	5.00	0.30	19.00	●	●	0.12-0.33

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

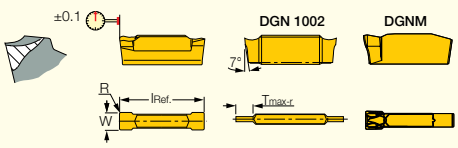
For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGTR/L (376) • HELIR/L (226) • HFAER/L-5T, 6T (441) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-5T (437) • HFIR/L-MC (446) • HFPAD-5 (439) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

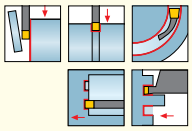
DO-GRIP TWISTED 2-SIDED

DGN/DGNM-J/JS/JT

Double-Sided Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts







Designation	Dimensions W	W tol(±)	R	Tmax-r	l Ref.	Tough ↔ Hard IC328	IC830	IC928	IC1028	IC354	IC5400	IC308	IC808	IC908	IC20	IC807	IC907	Recommended Machining Data f groove (mm/rev)
DGN 1002J	1.00	0.02	0.16	3.00	21.00	●			●					●				0.02-0.07
DGN 1402J	1.40	0.03	0.16	15.00	15.80	●	●		●	●		●	●	●				0.03-0.12
DGN 1502J	1.50	0.03	0.16	18.00	20.40	●			●					●				0.03-0.12
DGN 2002JT	2.00	0.03	0.20	18.00	19.80								●					0.04-0.14
DGN 2200JS (1)	2.20	0.03	0.02	18.00	19.40	●	●											0.03-0.08
DGN 2202J	2.20	0.03	0.20	18.00	19.80	●	●		●	●	●	●	●	●	●	●		0.04-0.12
DGN 2202JT	2.20	0.03	0.20	18.00	19.80		●				●		●					0.04-0.14
DGN 3100JS (1)	3.10	0.04	0.02	18.00	19.70	●						●						0.03-0.10
DGN 3102J	3.10	0.04	0.20	18.00	20.10	●	●		●	●	●	●	●	●	●		●	0.04-0.16
DGN 3102JT	3.10	0.04	0.20	18.00	20.10		●				●		●				●	0.05-0.18
DGN 3202J	3.18	0.04	0.20	18.00	21.00									●				0.04-0.16
DGNM 3202J (2)	3.18	0.04	0.20	- (3)	20.30	●				●				●				0.04-0.16
DGN 4003J	4.00	0.04	0.30	- (3)	18.90	●	●		●	●		●	●	●	●	●		0.05-0.18
DGN 4003JT	4.00	0.04	0.30	- (3)	18.90		●											0.05-0.18
DGN 4803J	4.80	0.04	0.30	- (3)	20.40	●												0.05-0.20
DGN 5003J	5.00	0.04	0.30	- (3)	19.00	●	●		●	●			●	●	●			0.05-0.20
DGN 5003JT	5.00	0.04	0.30	- (3)	19.00			●						●				0.05-0.20
DGN 6303J	6.35	0.04	0.35	- (3)	19.10	●	●		●	●			●	●	●			0.05-0.25
DGN 6303JT	6.35	0.04	0.35	- (3)	19.10			●						●				0.05-0.25

• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge; most suitable for soft materials at low to medium feeds. • For cutting speed recommendations and user guide, see pages 416-422

(1) Sharp corners

(2) Single-ended insert

(3) No depth limit

For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B-D-TR (376) • DGTR/L-B-T-SH (375) • DGTR/L-B/BC-D (375) • DGTR/L-BC-T (376) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFIR/L-MC (446) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

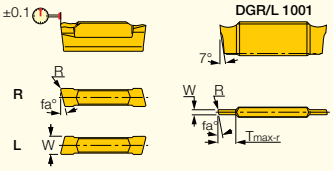
DO-GRIP TWISTED 2-SIDED

DGR/L-J/JS

Double-Sided Inserts for Parting Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts









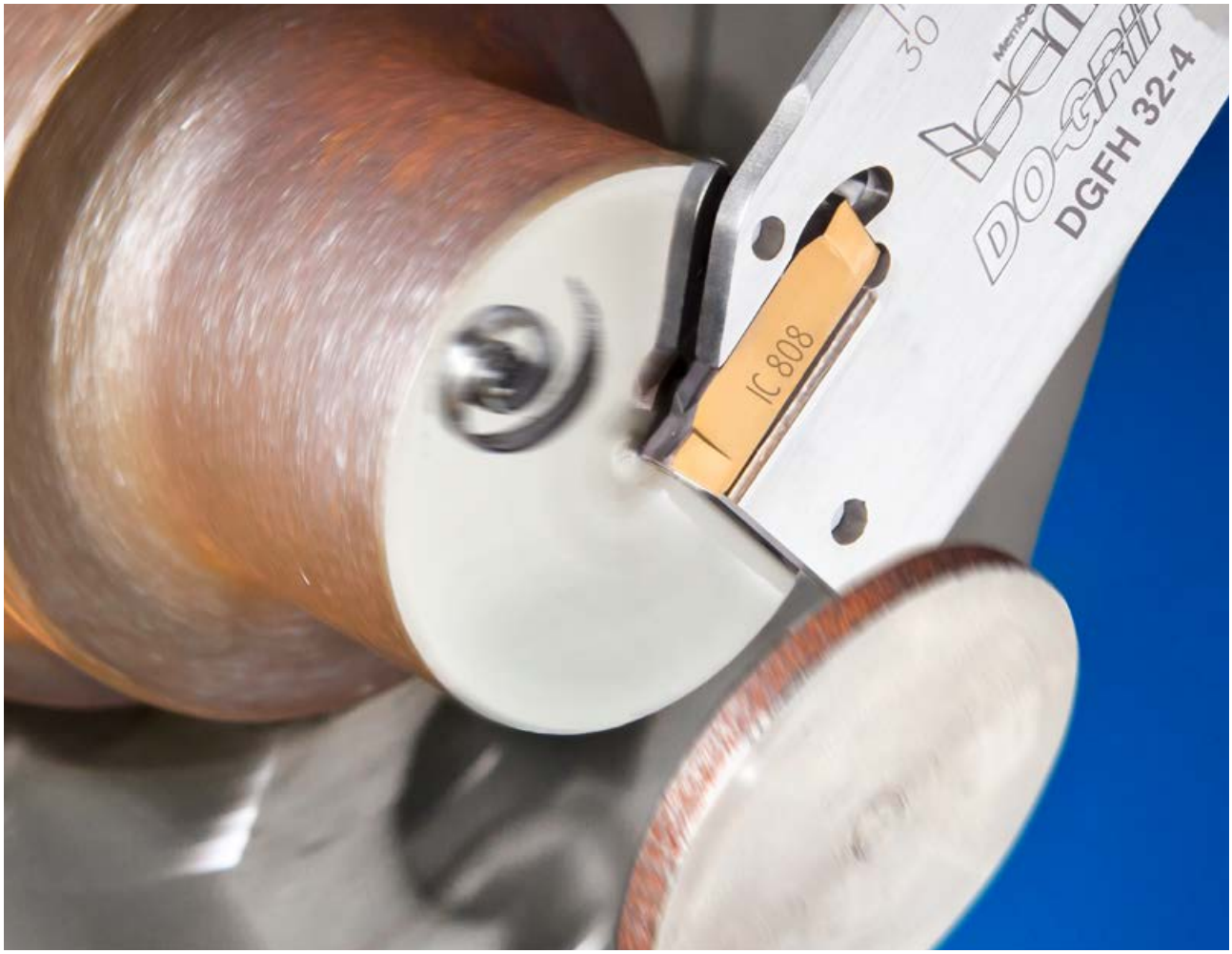
Designation	Dimensions W	R	T_{max-r}	f_a°	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC308	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGR/L 1001J-8D	1.00	0.07	3.00	8.0	21.00	●		●		●		●		0.02-0.06
DGR/L 1400JS-15D (1)	1.40	0.02	15.00	15.0	15.40	●	●	●		●		●		0.03-0.07
DGR/L 1402J-8D	1.40	0.16	15.00	8.0	15.80	●	●	●		●		●		0.03-0.08
DGR 1500J-8D	1.50	0.05	18.00	8.0	20.90	●	●	●		●				0.03-0.08
DGR/L 2200JS-15D (1)	2.20	0.02	18.00	15.0	20.40	●		●	●	●		●	●	0.03-0.07
DGR/L 2200JS-6D (1)	2.20	0.02	18.00	6.0	20.40	●	●	●	●	●		●		0.03-0.08
DGR/L 2202J-6D	2.20	0.20	18.00	6.0	21.00	●	●	●	●			●	●	0.03-0.10
DGR 2202J-15D	2.20	0.20	18.00	15.0	21.00	●	●	●						0.03-0.08
DGR/L 3100JS-15D (1)	3.10	0.02	18.00	15.0	20.60	●	●	●	●	●		●		0.03-0.07
DGR/L 3100JS-6D (1)	3.10	0.02	18.00	6.0	20.60	●	●	●	●	●		●		0.03-0.08
DGR/L 3102J-15D	3.10	0.20	18.00	15.0	21.00	●		●	●			●		0.04-0.10
DGR/L 3102J-6D	3.10	0.20	18.00	6.0	21.00	●	●	●	●		●	●	●	0.04-0.14
DGR 4000JS-15D (1)	4.00	0.00	- (2)	15.0	18.40	●								0.04-0.10
DGR/L 4003J-4D	4.00	0.30	- (2)	4.0	18.90	●	●	●	●		●	●	●	0.04-0.15
DGR 4800JS-4D (1)	4.80	0.03	- (2)	4.0	19.70	●								0.04-0.12
DGR 4800JS-8D (1)	4.80	0.03	- (2)	8.0	19.70	●								0.04-0.14
DGR 4803J-4D	4.80	0.30	- (2)	4.0	20.40	●								0.04-0.18
DGR 4803J-8D	4.80	0.30	- (2)	8.0	20.40	●								0.04-0.15
DGR/L 5003J-4D	5.00	0.30	- (2)	4.0	19.00	●		●	●				●	0.05-0.20
DGR/L 6303J-4D	6.35	0.35	- (2)	4.0	19.10	●			●				●	0.05-0.25

• For cutting speed recommendations and user guide, see pages 416-422

(1) Sharp corners

(2) No depth limit.

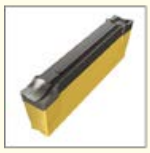
For tools, see pages: C#-HELIR/L (225) • DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B-D-TR (376) • DGTR/L-B-T-SH (375) • DGTR/L-B/BC-D (375) • DGTR/L-BC-T (376) • HELIR/L (226)

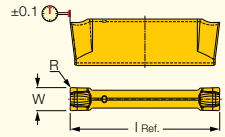


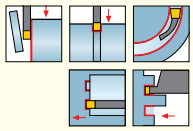
DO-GRIP TWISTED 2-SIDED

DGN-LF/LFT

Double-Sided Inserts for Parting and Grooving Stainless Steel







Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	Recommended Machining Data f groove (mm/rev)
DGN 2002LF	2.00	0.03	0.20	18.00	19.80	●		●	●		0.03-0.08
DGN 2202LF	2.20	0.03	0.20	18.00	19.80		●	●		●	0.03-0.08
DGN 3102LF	3.10	0.04	0.20	18.00	20.10	●	●	●	●	●	0.04-0.10
DGN 3102LFT	3.10	0.04	0.20	18.00	21.10		●			●	0.04-0.12

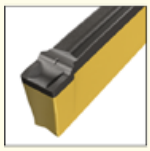
• The LFT chipformer features basically the same design as the LF chipformer, except that it was reinforced by a T-land to improve its durability in interrupted-cut or on hard materials applications. It can be applied at higher feeds than the LF chipformer.

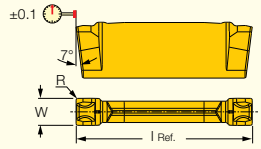
For tools, see pages: DGAD-B-D (379) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375)

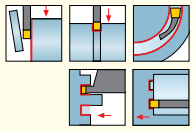
DO-GRIP TWISTED 2-SIDED

DGN-MF

Double-Sided Inserts for Parting and Grooving Soft and Hard Materials at Medium Feeds







Designation	Dimensions $W^{\pm 0.04}$	R	T_{max-r}	l Ref.	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
DGN 2002MF	2.00	0.20	18.00	19.90	●	●	●	0.04-0.12
DGN 3002MF	3.00	0.20	18.00	20.10		●		0.06-0.18
DGN 3102MF	3.10	0.20	18.00	20.10	●	●	●	0.06-0.18
DGN 4003MF	4.00	0.30	18.00	18.80	●		●	0.08-0.20

• For cutting speed recommendations and user guide, see pages 416-422

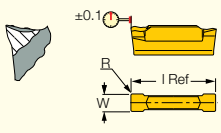
For tools, see pages: DGFH (228) • DGFH-JHP (229) • DGFHR/L-BC-JHP (371) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374)

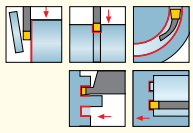
DO-GRIP TWISTED 2-SIDED

DGN-Z

Double-Sided Inserts for Parting Tubes, Thin-Walled and Small Parts







Designation	Dimensions $W^{\pm 0.03}$	T_{max-r}	R	l Ref.	Tough ↔ Hard IC808	IC908	Recommended Machining Data f groove (mm/rev)
DGN 2002Z	2.00	18.00	0.20	20.90	●	●	0.03-0.12
DGN 3002Z	3.00	18.00	0.20	20.90	●	●	0.03-0.16

• For cutting speed recommendations and user guide, see pages 416-422

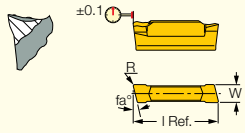
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D.. (R/L) (372) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375)

DO-GRIP TWISTED 2-SIDED

DGR-Z/ZS

Double-Sided Inserts with Very Positive Rake for Parting Tubes and Thin-Walled and Small Parts







Designation	Dimensions W	R	l Ref.	T_{max-r}	f_a°	IC908	Recommended Machining Data f groove (mm/rev)
DGR 2000ZS-15D (1)	2.00	0.02	20.40	18.00	15.0	●	0.03-0.07
DGR 2000ZS-6D (1)	2.00	0.02	20.40	18.00	6.0	●	0.03-0.08
DGR 2002Z-15D	2.00	0.20	20.40	18.00	15.0	●	0.03-0.10
DGR 2002Z-6D	2.00	0.20	20.90	18.00	6.0	●	0.03-0.10
DGR 3000ZS-15D (1)	3.00	0.02	20.40	18.00	15.0	●	0.03-0.10
DGR 3000ZS-6D (1)	3.00	0.02	20.40	18.00	6.0	●	0.03-0.12
DGR 3002Z-6D	3.00	0.20	20.90	18.00	6.0	●	0.03-0.14

• For cutting speed recommendations and user guide, see pages 416-422

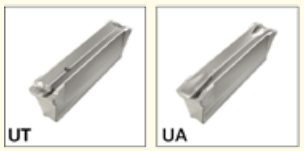
(1) Sharp corners

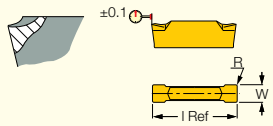
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D.. (R/L) (372) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375)

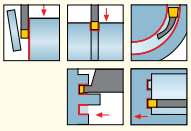
DO-GRIP TWISTED 2-SIDED

DGN-UT/UA

Double-Sided Inserts for Parting and Grooving Cr-Ni Alloys, Low Carbon Steel and Ductile Materials at Low Feeds







Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC328	IC1028	IC354	IC350	IC308	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGN 2202UA	2.20	0.03	0.20	18.00	19.90	●	●	●					0.04-0.13
DGN 2202UT	2.20	0.03	0.20	18.00	19.60				●		●		0.03-0.11
DGN 3003UA	3.00	0.03	0.25	18.00	20.50	●	●	●		●		●	0.04-0.15
DGN 3003UT	3.00	0.03	0.25	18.00	20.50					●	●		0.04-0.13
DGN 4003UA	4.00	0.04	0.30	- (1)	19.40	●		●					0.05-0.16
DGN 4003UT	4.00	0.04	0.30	- (1)	19.30	●		●		●	●		0.04-0.15
DGN 5003UT	5.00	0.04	0.30	- (1)	19.00	●	●			●	●		0.05-0.18
DGN 6008UT	6.00	0.04	0.80	- (1)	19.10	●		●		●	●		0.06-0.20

• For cutting speed recommendations and user guide, see pages 416-422

(1) No depth limit

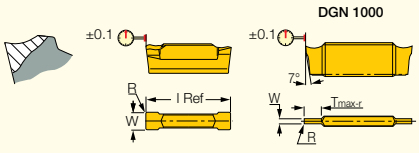
For tools, see pages: C#-HELIR/L (225) • DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375) • DGTR/L-BC-T (376) • HELIR/L (226) • HGPAD (227) • HGPAD-JHP (227)

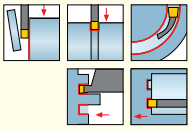
DO-GRIP TWISTED 2-SIDED

DGN-P

Double-Sided Inserts for Parting and Grooving Soft Materials, Thin and Miniature Parts







Designation	Dimensions W±0.02	R	l Ref.	T_{max-r}	IC508	Recommended Machining Data f groove (mm/rev)
DGN 1000P	1.00	0.05	20.00	3.00	●	0.02-0.05
DGN 1500P	1.50	0.05	20.00	18.00	●	0.02-0.07
DGN 2000P	2.00	0.05	20.00	18.00	●	0.02-0.08
DGN 3000P	3.00	0.05	20.00	18.00	●	0.02-0.10

• For cutting speed recommendations and user guide, see pages 416-422

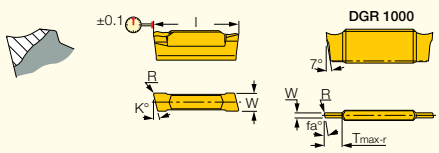
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D.. (R/L) (372) • DGFHR/L-BC-JHP (371) • DGFS (372) • DGPAD-JHP (379) • DGPAD-XL-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B-D-TR (376) • DGTR/L-B-T-SH (375) • DGTR/L-B/BC-D (375)

DO-GRIP TWISTED 2-SIDED

DGR-P

Double-Sided Inserts for Parting Soft Materials, Thin and Miniature Parts





Designation	Dimensions W	R	l	Tmax-r	fa°	IC508	Recommended Machining Data f groove (mm/rev)
DGR 1000P-15D	1.00	0.05	20.00	3.00	15.0	●	0.02-0.03
DGR 1000P-6D	1.00	0.05	20.00	3.00	6.0	●	0.02-0.04
DGR 1500P-15D	1.50	0.05	20.00	18.00	15.0	●	0.02-0.04
DGR 1500P-6D	1.50	0.05	20.00	18.00	6.0	●	0.02-0.05
DGR 2000P-15D	2.00	0.05	20.00	18.00	15.0	●	0.02-0.05
DGR 2000P-6D	2.00	0.05	20.00	18.00	6.0	●	0.02-0.07

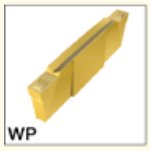
• For cutting speed recommendations and user guide, see pages 416-422

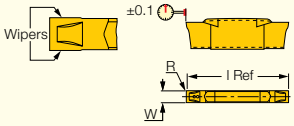
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHR/L (371) • DGFS (372) • DGPAD-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B-D-TR (376) • DGTR/L-B-T-SH (375) • DGTR/L-B/BC-D (375)

DO-GRIP TWISTED 2-SIDED

DGN-WP

Double-Sided Parting and Grooving Inserts with a Wiper Design for High Flatness and Surface Finish





Designation	Dimensions W±0.02	R	Tmax-r	l	IC328	Recommended Machining Data f groove (mm/rev)
DGN 1900WP	1.90	0.05	6.00	19.70	●	0.04-0.12
DGN 2400WP	2.39	0.05	6.00	20.40	●	0.05-0.14

• For user guide, see pages 416-422

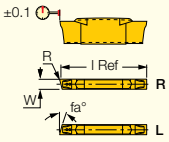
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHL-26B-TR-D (373) • DGFHR/L (371) • DGFHR/L-B-D.. (R/L) (372) • DGFS (372) • DGPAD-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375)

DO-GRIP TWISTED 2-SIDED

DGR-WP

Double-Sided Parting Inserts with a Wiper Design for High Flatness and Surface Finish





Designation	Dimensions W	R	Tmax-r	l	fa°	IC328	Recommended Machining Data f groove (mm/rev)
DGR 1900WP-12D	1.90	0.05	6.00	19.70	12.0	●	0.04-0.10
DGR 1900WP-5D	1.90	0.05	6.00	19.70	5.0	●	0.04-0.10
DGR 2400WP-12D	2.39	0.05	6.00	20.40	12.0	●	0.04-0.10
DGR 2400WP-5D	2.39	0.05	6.00	20.40	5.0	●	0.04-0.12

• For cutting speed recommendations and user guide, see pages 416-422

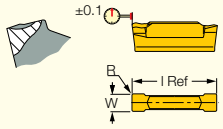
For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFHR/L (371) • DGFS (372) • DGPAD-JHP (379) • DGTR/L (376) • DGTR/L-B-D-JHP-SL (374) • DGTR/L-B-D-SH (373) • DGTR/L-B/BC-D (375)

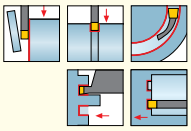
DO-GRIP TWISTED 2-SIDED

HGN-C

Parting and Grooving Inserts for Parting Bars, Hard Materials and Tough Applications







Designation	Dimensions W±0.05	R	l	Tough ↔ Hard IC328	IC830	IC354	IC308	IC908	Recommended Machining Data f groove (mm/rev)
HGN 3003C	3.00	0.30	15.80	●	●	●	●	●	0.08-0.20

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

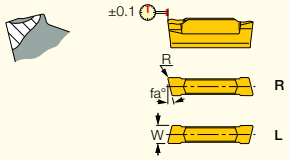
For tools, see pages: C#-HELIR/L (225) • DGAD/HGAD (378) • HELIR/L (226) • HFPAD-3 (438) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227)

DO-GRIP TWISTED 2-SIDED

HGR/L-C

Inserts for Parting Bars, Hard Materials and Tough Applications







Designation	Dimensions W	R	l	fa°	Tough ↔ Hard IC328	IC830	Recommended Machining Data f groove (mm/rev)
HGR/L 3003C-6D	3.00	0.30	15.60	6.0	●	●	0.06-0.16

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

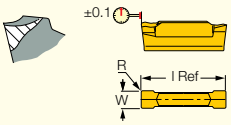
For tools, see pages: DGAD/HGAD (378) • HGFH (227)

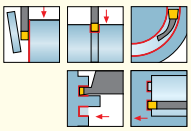
DO-GRIP TWISTED 2-SIDED

HGN-J

Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts







Designation	Dimensions W±0.05	R	l	Tough ↔ Hard IC328	IC830	IC354	IC308	Recommended Machining Data f groove (mm/rev)
HGN 3002J	3.00	0.20	16.10	●	●	●	●	0.04-0.15

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

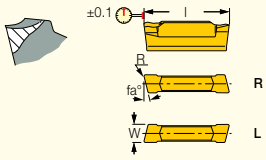
For tools, see pages: C#-HELIR/L (225) • DGAD/HGAD (378) • HELIR/L (226) • HFPAD-3 (438) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227)

DO-GRIP TWISTED 2-SIDED

HGR/L-J/JS

Double-Sided Inserts for Parting Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts







Designation	Dimensions W	R	l	f_a°	Tough ↔ Hard IC328	IC830	IC354	Recommended Machining Data f groove (mm/rev)
HGR/L 3000JS-15D (1)	3.00	0.02	15.20	15.0	•			0.03-0.07
HGR/L 3002J-6D	3.00	0.20	15.70	6.0	•	•	•	0.04-0.12

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

(1) Sharp corners

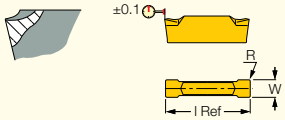
For tools, see pages: DGAD/HGAD (378) • HGFH (227)

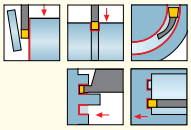
DO-GRIP TWISTED 2-SIDED

HGN-UT

Double-Sided Inserts for Parting and Grooving Low Feeds on Cr-Ni Alloys and Low Carbon Steel







Designation	Dimensions W±0.05	R	l	Tough ↔ Hard IC328	IC354	Recommended Machining Data f groove (mm/rev)
HGN 3003UT	3.00	0.30	15.80	•	•	0.04-0.13

• No depth limit • For cutting speed recommendations and user guide, see pages 416-422

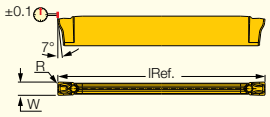
For tools, see pages: C#-HELIR/L (225) • DGAD/HGAD (378) • HELIR/L (226) • HFPAD-3 (438) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227)

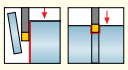
DO-GRIP XL

DGN-C-XL

Parting and Grooving Inserts for Parting Bars Up to 65 mm Diameters, Hard Materials and Tough Applications







Designation	Dimensions W±0.04	R	Tmax-r	l Ref.	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
DGN 2002C-XL	2.05	0.20	30.00	32.00	•	•	•	0.05-0.16
DGN 3002C-XL	3.00	0.20	32.50	35.00	•		•	0.07-0.20

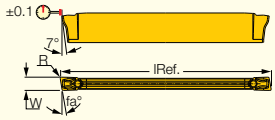
• For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: DGTR/L-XL (377)

DO-GRIP XL

DGR/L-C-XL
Double-Sided Inserts for Parting Bars, Hard Materials and Tough Applications







Right-hand shown

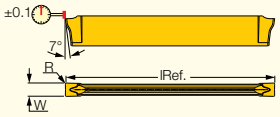
Designation	Dimensions W	R	Tmax-r	fa°	l Ref.	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
DGR/L 2002C-6D-XL	2.00	0.20	30.00	6.0	32.00	●	●	0.05-0.12
DGR/L 3002C-6D-XL	3.00	0.20	32.50	6.0	35.00	●	●	0.08-0.18

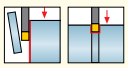
• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: DGTR/L-XL (377)

DO-GRIP XL

DGN-J-XL
Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts







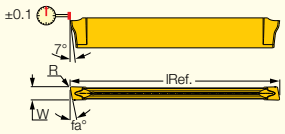
Designation	Dimensions W±0.04	R	Tmax-r	l Ref.	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
DGN 2002J-XL	2.05	0.20	30.00	32.00	●	●	●	0.04-0.14
DGN 3002J-XL	3.00	0.20	32.50	35.00	●		●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: DGTR/L-XL (377)

DO-GRIP XL

DGR/L-J-XL
Double-Sided Inserts for Parting Soft Materials, Tubes, Small Diameters and Thin-Walled Parts







Right-hand shown

Designation	Dimensions W	R	Tmax-r	fa°	l Ref.	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
DGR/L 2002J-6D-XL	2.00	0.20	30.00	6.0	32.00	●	●	0.04-0.10
DGR/L 3002J-6D-XL	3.00	0.20	32.50	6.0	35.00	●	●	0.04-0.14

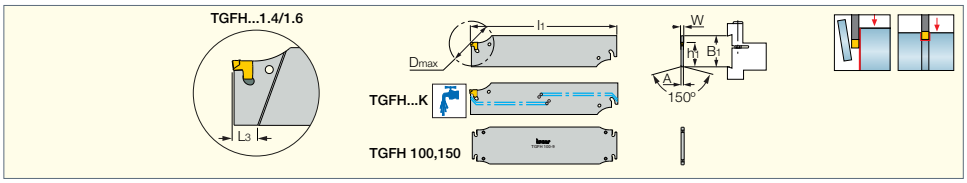
• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: DGTR/L-XL (377)

TANG-GRIP PARTING LINE

SUMO-GRIP HEAVY DUTY LINE

TGFH/R/L

Blades with Tangentially Oriented Pocket Carrying TANG-GRIP Single-Ended Inserts for Parting and Grooving



Designation	B1	W min	W max	A	l1	L3	h1	D max		Insert		
TGFH 19-1.4	19.0	1.40	1.40	1.05 (2)	86.00	9.60	15.7	30.0	N	TAG 1.4	ETG 1.4/1.6*	
TGFH 19-1.6	19.0	1.60	1.60	1.30 (3)	86.00	11.00	15.7	32.0	N	TAG 1.6	ETG 1.4/1.6*	
TGFH 19-2	19.0	1.80	2.40	1.65	86.00	-	15.7	38.0	N	TAG 2	ETG 2*	
TGFH 26-1.4	26.0	1.40	1.40	1.05 (2)	110.00	8.30	21.4	29.0	N	TAG 1.4	ETG 1.4/1.6*	
TGFH 26-1.6	26.0	1.60	1.60	1.30 (3)	110.00	10.00	21.4	35.0	N	TAG 1.6	ETG 1.4/1.6*	
TGFH 26-2	26.0	1.80	2.40	1.65	110.00	-	21.4	50.0	N	TAG 2	ETG 2*	
TGFH 26-3	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	N	TAG 3	ETG 3-4*	
TGFH 26K-3 (1)	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	Y	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 26-4	26.0	3.70	4.50	3.40	110.00	-	21.4	80.0	N	TAG 4	ETG 3-4*	
TGFH 26-5	26.0	4.70	5.50	4.00	150.00	-	21.4	80.0	N	TAG 5	ETG 5-7*	
TGFH 32-1.4	32.0	1.40	1.40	1.05 (2)	150.00	7.10	24.8	29.0	N	TAG 1.4	ETG 1.4/1.6*	
TGFH 32-1.6	32.0	1.60	1.60	1.30 (2)	150.00	10.00	24.8	38.0	N	TAG 1.6	ETG 1.4/1.6*	
TGFH 32-2	32.0	1.80	2.40	1.65 (2)	150.00	-	24.8	50.0	N	TAG 2	ETG 2*	
TGFH 32-3	32.0	2.80	3.50	2.50	150.00	-	24.8	100.0	N	TAG 3	ETG 3-4*	
TGFH 32K-3 (1)	32.0	2.80	3.50	2.50	150.00	-	24.8	100.0	Y	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 32-4	32.0	3.70	4.50	3.40	150.00	-	24.8	100.0	N	TAG 4	ETG 3-4*	
TGFH 32K-4 (1)	32.0	3.70	4.50	3.40	150.00	-	24.8	100.0	Y	TAG 4	ETG 3-4-SH*	SGC 340
TGFH 32-5	32.0	4.70	5.50	4.00	150.00	-	24.8	120.0	N	TAG 5	ETG 5-7*	
TGFH 32-6	32.0	5.70	6.50	5.20	150.00	-	24.8	120.0	N	TAG 6	ETG 5-7*	
TGFH 32-7	32.0	6.80	7.50	6.00	148.00	-	24.8	120.0	N	TAG 7	ETG 5-7*	
TGFH 45-3	45.0	2.80	3.50	2.50	225.00	-	38.1	160.0	N	TAG 3	ETG 3-4*	
TGFH 45-4	45.0	3.70	4.50	3.40	225.00	-	38.1	160.0	N	TAG 4	ETG 3-4*	
TGFH 45-5	45.0	4.70	5.50	4.00	225.00	-	38.1	160.0	N	TAG 5	ETG 5-7*	
TGFH 45-6	45.0	5.70	6.50	5.20	225.00	-	38.1	160.0	N	TAG 6	ETG 5-7*	
TGFH 45-7	45.0	6.80	7.50	6.00	225.00	-	38.1	160.0	N	TAG 7	ETG 5-7*	
TGFH 52-7	52.6	6.80	7.50	6.00	190.00	-	45.2	190.0	N	TAG 7	ETG 5-7*	
TGFH 53-7	52.6	6.80	7.50	6.00	260.00	-	45.2	220.0	N	TAG 7	ETG 5-7*	
TGFH 52K-8 (1)	52.6	7.70	8.50	7.20	190.00	-	45.2	190.0	Y	TAG 8	ETG 8-12*	
TGFH 53K-8 (1)	52.6	7.70	8.50	7.20	260.00	-	45.2	215.0	Y	TAG 8	ETG 8-12*	
TGFH 52K-9 (1)	52.6	8.70	10.00	8.20	190.00	-	45.2	190.0	Y	TAG 9	ETG 8-12*	
TGFH 53K-9 (1)	52.6	8.70	10.00	8.20	260.00	-	45.2	215.0	Y	TAG 9	ETG 8-12*	
TGFHR/L 53K-12 (1)	52.6	11.70	12.70	10.00	260.00	-	45.2	215.0	Y	TAG 12	ETG 8-12*	
TGFH 100-9	100.0	8.70	10.00	8.20	460.00	-	92.5	450.0	N	TAG 9	ETG 8-12*	
TGFH 100-12	100.0	11.70	12.70	10.00	460.00	-	92.5	450.0	N	TAG 12	ETG 8-12*	
TGFH 150-12	150.0	11.70	12.70	10.00	610.00	-	142.5	600.0	N	TAG 12	ETG 8-12*	

• For user guide, see pages 416-422

(1) With coolant holes, the recommended coolant pressure is 10 bar min.; cooling tube SGCU 341 should be ordered separately

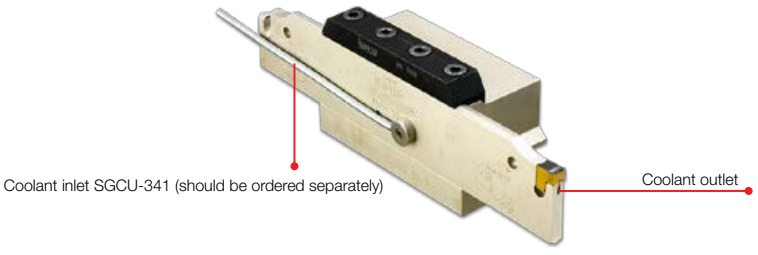
(2) Thickness beyond the D.O.C. area is 2.50 mm

(3) Thickness beyond the D.O.C. area is 1.60 mm

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)

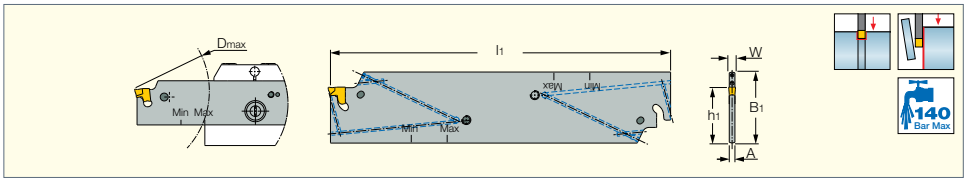
For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)



TANG-GRIP JETCUT PARTING LINE

TGFH-JHP

Parting and Grooving Blades with Channels for Low and High Pressure Coolant Carrying TANG-GRIP Inserts



Designation	B1	W min	W max	A	l1	h1	D max	Insert		
TGFH 26C-3-JHP	26.0	2.80	3.50	2.50	140.00	21.4	75.0	TAG 3	SGC 340	ETG 3-4-SH*
TGFH 32C-3-JHP	32.0	2.80	3.50	2.50	150.00	24.8	90.0	TAG 3	SGC 340	ETG 3-4-SH*
TGFH 26C-4-JHP	26.0	3.70	4.50	3.40	140.00	21.4	75.0	TAG 4	SGC 340	ETG 3-4-SH*
TGFH 32C-4-JHP	32.0	3.70	4.50	3.40	150.00	24.8	90.0	TAG 4	SGC 340	ETG 3-4-SH*
TGFH 32C-5-JHP	32.0	4.70	5.50	4.00	160.00	24.8	120.0	TAG 5	SGC 340	ETG 5-7*
TGFH 32C-6-JHP (1)	32.0	5.70	6.50	5.20	160.00	24.8	120.0	TAG 6	SGC 340	ETG 5-7*

• For user guide and accessories, see pages 416-422

(1) Only an upper channel

* Optional, should be ordered separately

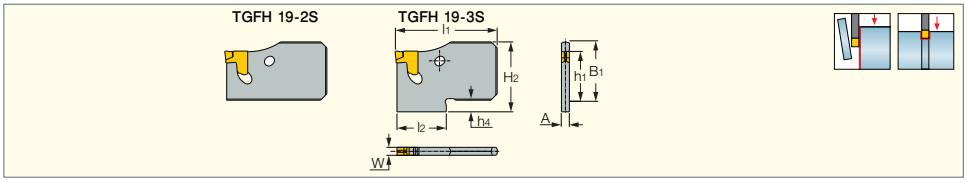
For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)

For holders, see pages: TGTBU-JHP (393)

TANG-GRIP PARTING LINE

TGFH-S

Parting and Grooving Single-Sided Blades for TANG-GRIP Inserts



Designation	B1	W min	W max	A	l1	h1	H2	h4	l2	Tmax-r	D max	
TGFH 19-2S	19.0	1.80	2.40	1.65	32.00	15.7	19.0	-	-	12.00	36.0	ETG 2*
TGFH 19-3S	19.0	2.80	3.50	2.50	32.00	15.7	22.0	3.0	15.5	16.00	40.0	ETG 3-4-SH*

• For Dmax and Tmax drawing, see SGBHR/L holder

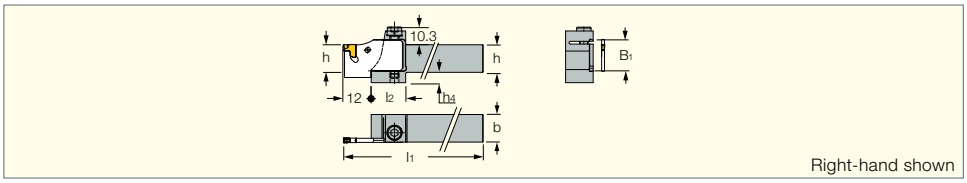
* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

SELF-GRIP

SGBHR/L

Tool Blocks for SELF-GRIP Single-Sided Blades



Right-hand shown

Designation	h	b	h4	l1	B1	l2	Tmax-r	D max		
SGBHR/L 1010	10.0	10.0	10.0	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0
SGBHR 1212	12.0	12.0	8.0	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0
SGBHR 1414	14.0	14.0	6.0	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0
SGBHR/L 1616	16.0	16.0	6.0	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0
SGBHR/L 2020	20.0	20.0	2.0	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0
SGBHR/L 2525	25.0	25.0	-	154.00	19.0	20.0	16.00	40.0	SR M5X25DIN912	HW 4.0

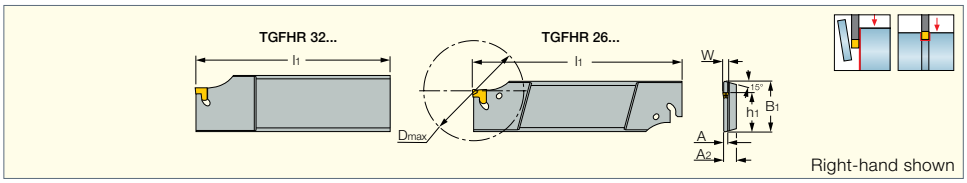
• For Dmax and Tmax dimensions, see TGFH-S adapters

For tools, see pages: TGFH-S (390)

TANG-GRIP PARTING LINE

TGFHR/L

Single- and Double-Ended Parting and Grooving Reinforced Blades Carrying TANG-GRIP Tangentially Clamped Inserts



Designation	B1	W min	W max	A	A2	l1	h1	D max	
TGFHL 26T16-2	26.0	1.80	2.40	1.65	7.9	110.50	21.4	43.0	ETG 2*
TGFHR 26T16-3	26.0	2.80	3.50	2.50	7.9	110.50	21.4	43.0	ETG 3-4-SH*
TGFHR/L 26T23-2	26.0	1.80	2.40	1.65	7.9	110.50	21.4	46.0	ETG 2*
TGFHR/L 26T23-3	26.0	2.80	3.50	2.50	7.9	110.50	21.4	46.0	ETG 3-4-SH*
TGFHR/L 32T22-2	32.0	1.80	2.40	1.65	7.9	110.50	24.8	42.0	ETG 2*
TGFHR/L 32T22-3	32.0	2.80	3.50	2.50	7.9	110.50	24.8	42.0	ETG 3-4-SH*
TGFHR/L 32T33-3	32.0	2.80	3.50	2.50	7.9	110.50	24.8	66.0	ETG 3-4-SH*
TGFHR/L 32T33-4	32.0	3.70	4.50	3.40	7.9	110.50	24.8	66.0	ETG 3-4-SH*

• For user guide, see pages 416-422

* Optional, should be ordered separately

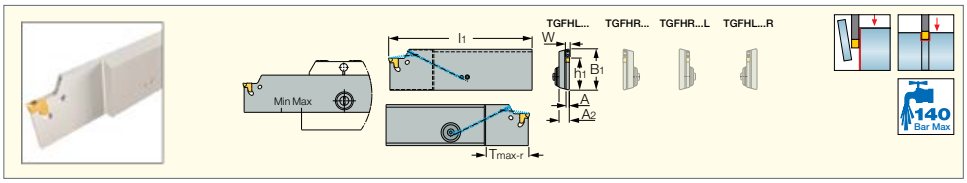
For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

TANG-GRIP PARTING LINE JETCUT

TGFHR/L-JHP

Parting and Grooving Reinforced Blades with Channels for High Pressure Coolant Carrying TANG-GRIP Inserts



Designation	W min	W max	A2	A	l1	B1	h1	Tmax-r	Insert		
TGFHR/L 32C-3T33-JHP	2.80	3.50	7.9	2.50	110.50	32.0	24.8	33.00	TAG 3	ETG 3-4-SH*	SGC 340
TGFHL 32C-3T33R-JHP	2.80	3.50	7.9	2.50	110.50	32.0	24.8	33.00	TAG 3	ETG 3-4-SH*	SGC 340
TGFHR 32C-3T33L-JHP	2.80	3.50	7.9	2.50	110.50	32.0	24.8	33.00	TAG 3	ETG 3-4-SH*	SGC 340

• For user guide and accessories see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

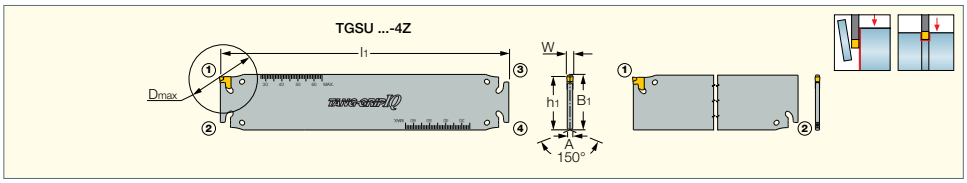
For holders, see pages: TGTBU-JHP (393)



TANG-GRIP IQ 350 LINE

TGSU

Parting and Grooving Flat Top Blades with Tangential Pockets Carrying TANG-GRIP Single-Ended Inserts



Designation	B1	W min	W max	D max	NOP(2)	A	l1	h1		Insert	
TGSU 35-1.4-IQ	35.0	1.40	1.40	35.0	2	2.50 (3)	180.00	33.2	N	TAG 1.4	ETG 1.4/1.6*
TGSU 35-2-IQ	35.0	1.80	2.40	59.5	2	2.50 (4)	160.00	33.2	N	TAG 2	ETG 2*
TGSU 35-3-IQ-4Z	35.0	2.80	3.50	120.0	4	2.50	180.00	33.2	N	TAG 3	ETG 3-4-SH*
TGSU 35-4-IQ-4Z	35.0	3.70	4.50	120.0	4	3.40	180.00	33.2	N	TAG 4	ETG 3-4-SH*
TGSU 35-5-IQ	35.0	4.70	5.50	144.0	2	4.00	180.00	33.2	N	TAG 5	ETG 5-7*
TGSU 35-6-IQ	35.0	5.70	6.50	144.0	2	5.20	180.00	33.2	N	TAG 6	ETG 5-7*
TGSU 35-7-IQ	35.0	6.80	7.50	144.0	2	6.00	180.00	33.2	N	TAG 7	ETG 5-7*
TGSU 35C-8-IQ (1)	35.0	7.70	8.50	144.0	2	7.20	180.00	33.2	Y	TAG 8	ETG 8-12*
TGSU 35C-9-IQ (1)	35.0	8.70	10.00	144.0	2	8.20	180.00	33.2	Y	TAG 9	ETG 8-12*
TGSU 56C-7-IQ (1)	56.0	6.80	7.50	220.0	2	6.00	260.00	53.6	Y	TAG 7	ETG 5-7*
TGSU 56C-8-IQ (1)	56.0	7.70	8.50	220.0	2	7.20	260.00	53.6	Y	TAG 8	ETG 8-12*
TGSU 56C-9-IQ (1)	56.0	8.70	10.00	220.0	2	8.20	260.00	53.6	Y	TAG 9	ETG 8-12*

• For user guide, see pages 416-422

(1) C- Internal coolant, use with TGTBU HD blocks only; cooling tube SGCU 341 should be ordered separately

(2) Number of pockets

(3) Thickness at the D.O.C. area is 1.05 mm

(4) Thickness at the D.O.C. area is 1.65 mm

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)

For holders, see pages: TGTBU (392)

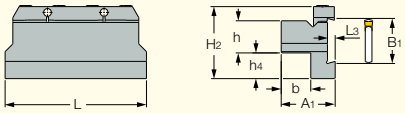
TGSU 35-3-IQ-4
TGSU 35-4-IQ-4



TANG-GRIP IQ 350 LINE

TGTBU

Tool Blocks for TGSU Parting and Grooving Blades



Choose blade by B1 dimension

Designation	h	b	B1	L3	A1	H2	h4	L			
TGTBU 20-35	20.0	19.0	35.0	6.00	38.00	56.0	23.7	110.00	BKU 110	SR M6X30 DIN912	HW 5.0
TGTBU 25-35	25.0	23.0	35.0	6.00	42.00	56.0	18.7	110.00	BKU 110	SR M6X30 DIN912	HW 5.0
TGTBU 32-35	32.0	29.0	35.0	6.00	48.00	56.0	11.7	110.00	BKU 110	SR M6X30 DIN912	HW 5.0
TGTBU 32-35 HD (1)	32.0	30.0	35.0	8.00	55.00	64.0	18.0	130.00	BK 509	SR M8X30DIN912	HW 6.0
TGTBU 40-35	40.0	41.0	35.0	6.00	60.00	56.0	3.7	110.00	BKU 110	SR M6X30 DIN912	HW 5.0
TGTBU 40-35 HD (1)	40.0	41.0	35.0	8.00	66.00	64.0	10.0	130.00	BK 509	SR M8X30DIN912	HW 6.0
TGTBU 40-56 HD (1)	40.0	41.0	56.0	8.00	66.00	72.0	28.0	130.00	BK 509	SR M8X30DIN912	HW 6.0

(1) HD - recommended blocks for TGSU...-8, TGSU...-9 blades

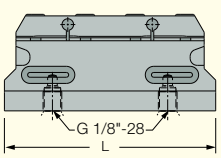
For tools, see pages: TGSU (392)

JETCUT

TGTBU-JHP

Tool Blocks for Parting and Grooving Blades for High Pressure Coolant





140 Bar Max

Choose blade by B1 dimension.

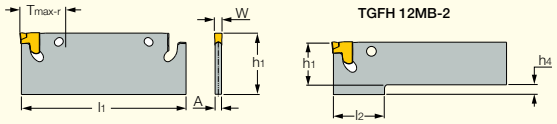
Designation	h	b	B1	A1	H2	h4	L3	L			
TGTBU 16-5G-JHP	16.0	16.9	26.0	35.60	29.9	13.1	4.10	86.00	BKU 86	SR M6X16 DIN912	HW 5.0
TGTBU 20-5G-JHP	20.0	20.9	26.0	39.60	33.9	9.1	4.10	86.00	BKU 86	SR M6X16 DIN912	HW 5.0
TGTBU 20-6G-JHP	20.0	19.0	32.0	39.20	36.4	15.0	5.30	100.00	BKU 100	SR M6X16 DIN912	HW 5.0
TGTBU 25-5G-JHP	25.0	26.1	26.0	44.10	39.0	5.5	4.10	110.00	BKU 105	SR M6X16 DIN912	HW 5.0
TGTBU 25-6G-JHP	25.0	23.0	32.0	43.20	41.4	8.0	5.30	110.00	BKU 110	SR M6X16 DIN912	HW 5.0
TGTBU 32-6G-JHP	32.0	29.0	32.0	49.20	48.4	5.0	5.30	110.00	BKU 110	SR M6X16 DIN912	HW 5.0

For tools, see pages: DGFH-JHP (229) • DGFHR/L-BC-JHP (371) • TGFH-JHP (390) • TGFHR/L-JHP (391)

TANG-GRIP PARTING LINE

TGFH-MB

Parting and Grooving Blades for Other Manufacturers Blocks

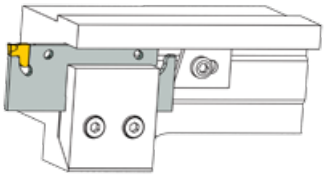


Designation	W min	W max	A	l1	h1	h4	l2	Tmax-r	Insert	
TGFH 12MB-2 L58	1.80	2.40	1.65	58.00	12.2	2.8	15.5	11.50	TAG 2	ETG 2*
TGFH 17MB-2 L58	1.80	2.40	1.65	58.00	17.2	-	-	11.50	TAG 2	ETG 2*
TGFH 22MB-2 L58	1.80	2.40	1.65	58.00	22.2	-	-	11.50	TAG 2	ETG 2*
TGFH 17MB-3	2.80	3.50	2.50	64.00	17.2	-	-	12.00	TAG 3	ETG 3-4-SH*
TGFH 22MB-3	2.80	3.50	2.50	64.00	22.2	-	-	12.00	TAG 3	ETG 3-4-SH*
TGFH 22MB-3-L84	2.80	3.50	2.50	84.00	22.2	-	-	16.00	TAG 3	ETG 3-4-SH*
TGFH 28MB-3	2.80	3.50	2.50	100.00	28.0	-	-	19.00	TAG 3	ETG 3-4-SH*
TGFH 17MB-4	3.70	4.50	3.40	70.00	17.2	-	-	14.00	TAG 4	ETG 3-4-SH*
TGFH 22MB-4	3.70	4.50	3.40	70.00	22.2	-	-	14.00	TAG 4	ETG 3-4-SH*
TGFH 22MB-4-L90	3.70	4.50	3.40	90.00	22.2	-	-	17.00	TAG 4	ETG 3-4-SH*
TGFH 28MB-4	3.70	4.50	3.40	100.00	28.0	-	-	19.00	TAG 4	ETG 3-4-SH*

• For user guide, see pages 416-422

* Optional, should be ordered separately

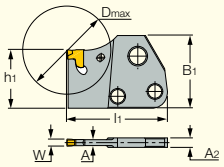
For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)



TANG-GRIP PARTING LINE

TGAD

Parting and Grooving Adapters for TANG-GRIP Tangentially Clamped Inserts



Designation	W min	W max	A	A2	l1	D max	h1	B1	Insert	
TGAD 1.4N	1.40	1.40	3.20	1.1	41.50	32.0	24.0	29.0	TAG 1.4	ETG 1.4/1.6*
TGAD 2N	1.80	2.40	3.20	1.7	41.50	32.0	24.0	30.0	TAG 2	ETG 2*
TGAD 3N	2.80	3.50	4.00	2.4	41.50	35.0	24.0	30.0	TAG 3	ETG 3-4-SH*
TGAD 4N	3.70	4.50	3.20	3.2	50.50	50.0	24.0	30.0	TAG 4	ETG 3-4-SH*
TGAD 5N	4.70	5.50	4.00	4.0	50.50	50.0	24.0	30.0	TAG 5	ETG 5-7*

• For user guide, see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

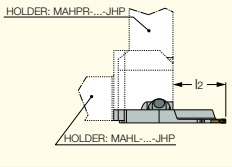
For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

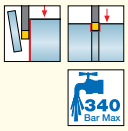
TANG-GRIP JETCUT PARTING LINE
MODULAR-GRIP

TAGPAD-JHP

Parting and Grooving Adapters with Coolant Channels for High Pressure Carrying TANG-GRIP Inserts







f=f1(shank)+f2(adapter)

Designation	W min	W max	D max	l2	f2	A	A2	l1	B1	h1	Insert		
TAGPAD 2R/L-D42-JHP	1.80	2.40	42.0	24.0	5.18	1.65	6.0	48.40	33.0	24.0	TAG 2	ETG 2*	SR M3X3DIN913
TAGPAD 2R/L-D52-JHP	1.80	2.40	52.0	29.0	5.18	1.65	6.0	53.40	33.0	24.0	TAG 2	ETG 2*	SR M3X3DIN913
TAGPAD 3R/L-D42-JHP	2.80	3.50	42.0	24.0	4.80	2.40	6.0	48.40	33.0	24.0	TAG 3	ETG 3-4-SH*	SR M3X3DIN913
TAGPAD 3R/L-D52-JHP	2.80	3.50	52.0	29.0	4.80	2.40	6.0	53.40	33.0	24.0	TAG 3	ETG 3-4-SH*	SR M3X3DIN913

• For user guide and accessories see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

For holders, see pages: MAHR/L-JHP-MC (236)

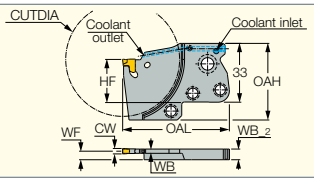
Flow Rate vs. Pressure

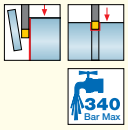
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
TAGPAD 2R/L-D42-JHP	5	6	7
TAGPAD 2R/L-D52-JHP	5	6	7
TAGPAD 3R/L-D42-JHP	8.5	10	12
TAGPAD 3R/L-D52-JHP	8.5	10	12

TANG-GRIP JETCUT PARTING LINE

TAGPAD-XL-JHP

Parting and Grooving Extra Long Adapters with Channels for High Pressure Coolant Carrying TANG-GRIP Inserts





Designation	W min	W max	f2	A	A2	l1	B1	h1	D max	Insert		
TAGPAD-XL 3R/L-D52-JHP	2.80	3.50	4.80	2.40	6.0	53.40	43.0	34.0	52.0	TAG 3	ETG 3-4-SH*	SR M3X3DIN913
TAGPAD-XL 3R/L-D65-JHP	2.80	3.50	4.80	2.40	6.0	59.90	43.0	34.0	65.0	TAG 3	ETG 3-4-SH*	SR M3X3DIN913
TAGPAD-XL 3R/L-D82-JHP	2.80	3.50	4.80	2.40	6.0	70.40	43.0	34.0	82.0	TAG 3	ETG 3-4-SH*	SR M3X3DIN913

• For user guide and accessories, see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

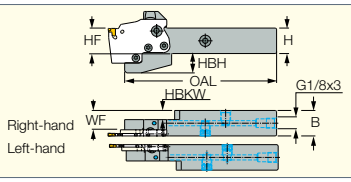
For holders, see pages: MAHR/L-MG-XL-JHP (394) • MAHR/L-MG-XL-JHP-MC (395)

JETCUT

MAHR/L-MG-XL-JHP

Holders with High Pressure Coolant Channels for Interchangeable Adapters







f=f1(shank)+f2(adapter)

Designation	h	b	l1	h4	f1	f3
MAHR/L 20-MG-XL-JHP	20.0	20.0	149.10	24.0	14.0	4.00
MAHR/L 25-MG-XL-JHP	25.0	25.0	149.10	19.0	19.0	9.00

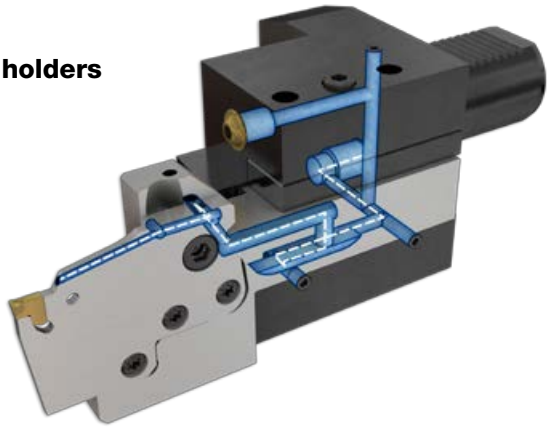
• For user guide and accessories, see pages 416-422

For tools, see pages: TAGPAD-XL-JHP (394).

Spare Parts

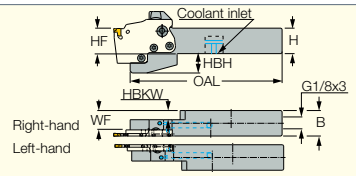
Designation							
MAHR/L 20-MG-XL-JHP	SR M6X12DIN6912	HW 5.0	SR M5-04451	T-20/5	OR 5X1N	SR M4X3 DIN913	PLG 1/8BSP TL360
MAHR/L 25-MG-XL-JHP	SR M6X12DIN6912	HW 5.0	SR M5-04451	T-20/5	OR 5X1N	SR M4X3 DIN913	PLG 1/8BSP TL360

MC Type Tools
for mounting on VDI DIN69880 toolholders



JETCUT

MAHR/L-MG-XL-JHP-MC
Holders with Bottom Fed Inlets for High Pressure Coolant Channels Carrying MODULAR-GRIP Adapters



Designation	h	b	l_1	h_4	f_1	f_3
MAHR/L 20-MG-XL-JHP-MC	20.0	20.0	116.10	10.0	14.0	4.00
MAHR/L 25-MG-XL-JHP-MC	25.0	25.0	114.00	10.0	19.0	9.00

• For Tmax, refer to the adapters data

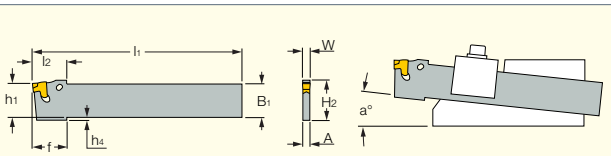
For tools, see pages: DGPAD-XL-JHP (379) • TAGPAD-XL-JHP (394)

Spare Parts

Designation					
MAHR/L-MG-XL-JHP-MC	SR M6X14-XT DIN 912	HW 5.0	SR M5-04451	T-20/5	OR 5X1N

TANG-GRIP PARTING LINE

TGFS
Blades for Multi-Spindle Machines - Replacement for HSS and Brazed Tools



Designation	W_{min}	W_{max}	B_1	A	l_1	H_2	h_1	l_2	f	h_4	D_{max}	a°	Insert	
TGFS 0-17-2	1.80	2.40	17.2	1.65	110.00	17.2	17.2	-	18.0	1.8	35.0	0	TAG 2	ETG 2*
TGFS 0-17-3	2.80	3.50	17.2	2.50	110.00	19.0	17.2	-	18.0	1.8	60.0	0	TAG 3	ETG 3-4-SH*
TGFS 5-17-2	1.80	2.40	17.4	1.65	110.00	18.9	17.5	18.0	18.0	1.5	35.0	5	TAG 2	ETG 2*
TGFS 5-17-3	2.80	3.50	17.4	2.50	110.00	20.7	17.5	18.0	18.0	1.5	60.0	5	TAG 3	ETG 3-4-SH*
TGFS 5-17-4	3.70	4.50	17.4	3.40	110.00	20.7	17.5	18.0	18.0	1.5	60.0	5	TAG 4	ETG 3-4-SH*
TGFS 5-22-2	1.80	2.40	22.2	1.65	150.00	23.8	22.4	18.0	-	-	50.0	5	TAG 2	ETG 2*
TGFS 5-22-3	2.80	3.50	22.2	2.50	150.00	24.1	22.4	18.0	-	-	75.0	5	TAG 3	ETG 3-4-SH*
TGFS 5-22-4	3.70	4.50	22.2	3.40	150.00	24.1	22.4	18.0	-	-	80.0	5	TAG 4	ETG 3-4-SH*
TGFS 5-28-4	3.70	4.50	28.6	3.40	150.00	30.4	28.7	18.0	-	-	100.0	5	TAG 4	ETG 3-4-SH*

• For user guide, see pages 416-422

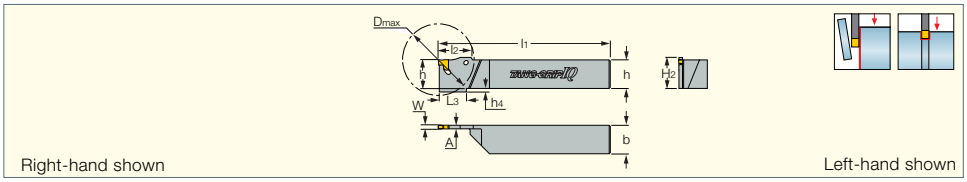
* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

TANG-GRIP IQ 350 LINE

TGTR/L-IQ

Integral Shank TANG-GRIP
Toolholders for Parting and Grooving



Designation	W min	W max	h	b	A	l_1	H_2	l_2	L_3	h_4	D max	Insert	
TGTR/L 1010-1.4-IQ	1.40	1.45	10.0	10.0	1.05	140.00	15.0	-	15.50	5.0	20.0	TAG 1.4	ETG 1.4/1.6*
TGTR/L 1212-1.4-IQ	1.40	1.45	12.0	12.0	1.05	140.00	12.0	-	16.00	3.0	30.0	TAG 1.4	ETG 1.4/1.6*
TGTR/L 1616-1.4-IQ	1.40	1.45	16.0	16.0	1.05	140.00	16.0	-	16.00	-	30.0	TAG 1.4	ETG 1.4/1.6*
TGTR/L 2020-1.4-IQ	1.40	1.45	20.0	20.0	1.05	140.00	20.0	-	16.00	-	30.0	TAG 1.4	ETG 1.4/1.6*
TGTR/L 1010-1.6-IQ	1.60	1.64	10.0	10.0	1.30	120.00	-	-	16.00	5.0	28.0	TAG 1.6	ETG 1.4/1.6*
TGTR/L 1212-1.6-IQ	1.60	1.64	12.0	12.0	1.30	120.00	-	-	16.00	3.0	32.0	TAG 1.6	ETG 1.4/1.6*
TGTR/L 1616-1.6-IQ	1.60	1.64	16.0	16.0	1.30	120.00	-	-	16.00	-	35.0	TAG 1.6	ETG 1.4/1.6*
TGTR/L 1010-2-IQ	1.80	2.40	10.0	10.0	1.65	150.00	15.0	-	15.50	5.0	28.0	TAG 2	ETG 2*
TGTR/L 1212-2-IQ	1.80	2.40	12.0	12.0	1.65	150.00	15.0	-	17.00	3.0	32.0	TAG 2	ETG 2*
TGTR/L 1612-2-L120-IQ	1.80	2.50	16.0	12.0	1.65	120.00	16.0	-	16.00	-	35.0	TAG 2	ETG 2*
TGTR/L 1616-2-IQ	1.80	2.40	16.0	16.0	1.65	150.00	16.0	-	16.00	-	35.0	TAG 2	ETG 2*
TGTR/L 2012-2-IQ	1.80	2.40	20.0	12.0	1.65	125.00	20.0	-	16.00	-	35.0	TAG 2	ETG 2*
TGTR/L 1212-3-IQ	2.80	3.50	12.0	12.0	2.50	150.00	19.0	-	19.00	7.0	32.0	TAG 3	ETG 3-4-SH*
TGTR/L 1612-3-L120-IQ	2.80	3.50	16.0	12.0	2.50	120.00	19.0	-	19.00	3.0	35.0	TAG 3	ETG 3-4-SH*
TGTR/L 1616-3-IQ	2.80	3.50	16.0	16.0	2.50	150.00	19.0	-	19.00	3.0	35.0	TAG 3	ETG 3-4-SH*
TGTR/L 2012-3-IQ	2.80	3.50	20.0	12.0	2.50	125.00	20.0	-	19.00	-	43.0	TAG 3	ETG 3-4-SH*
TGTR/L 2020-3-IQ	2.80	3.50	20.0	20.0	2.50	120.50	21.7	23.4	19.00	-	54.0	TAG 3	ETG 3-4*
TGTR/L 2525-3-IQ	2.80	3.50	25.0	25.0	2.50	150.50	26.7	23.4	19.00	-	56.0	TAG 3	ETG 3-4*
TGTR 2525K-3 (1)	2.80	3.50	25.0	25.0	2.50	150.00	26.7	23.4	19.00	-	56.0	TAG 3	ETG 3-4*
TGTR/L 2020-4-IQ	3.70	4.50	20.0	20.0	3.40	120.50	21.7	23.4	19.00	-	57.0	TAG 4	ETG 3-4*
TGTR/L 2525-4-IQ	3.70	4.50	25.0	25.0	3.40	150.50	26.7	23.4	19.00	-	65.0	TAG 4	ETG 3-4*
TGTR/L 2020-5-IQ	4.70	5.50	20.0	20.0	4.00	120.00	21.7	-	19.00	-	57.0	TAG 5	ETG 5-7*
TGTR/L 2525-5-IQ	4.70	5.50	25.0	25.0	4.00	150.00	25.0	-	19.00	-	76.0	TAG 5	ETG 5-7*
TGTR/L 2525-6-IQ	5.70	6.50	25.0	25.0	5.20	150.00	25.0	-	19.00	-	76.0	TAG 6	ETG 5-7*

• For user guide, see pages 416-422

(1) With coolant

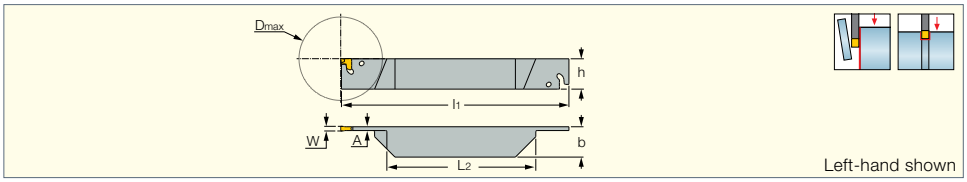
* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401) • TAGB/TAGBA (284)

TANG-GRIP IQ 350 LINE

TGTR/L-IQ-2Z

Integral Shank TANG-GRIP
Toolholders with 2 Pockets
for Parting and Grooving



Designation	W min	W max	D max	h	b	A	l_1	L_2	Insert	
TGTR/L 2020-3-IQ-2Z	2.80	3.50	54.0	20.0	20.0	2.50	150.00	98.90	TAG 3	ETG 3-4-SH*
TGTR/L 2525-3-IQ-2Z	2.80	3.50	56.0	25.0	25.0	2.50	150.00	98.00	TAG 3	ETG 3-4-SH*
TGTR/L 2020-4-IQ-2Z	3.70	4.50	57.0	20.0	20.0	3.40	150.00	95.00	TAG 4	ETG 3-4-SH*
TGTR/L 2525-4-IQ-2Z	3.70	4.50	65.0	25.0	25.0	3.40	150.00	88.00	TAG 4	ETG 3-4-SH*

• For user guide, see pages 416-422

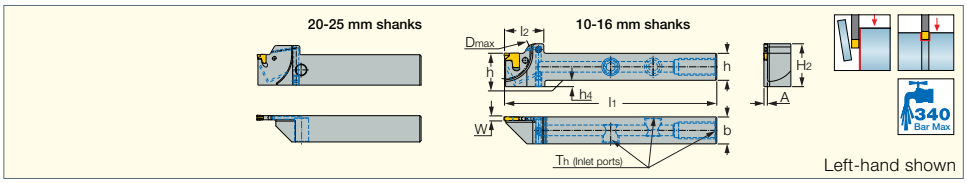
* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

TANG-GRIP JETCUT PARTING LINE

TGTR/L-JHP

Parting and Grooving Toolholders with Channels for High Pressure Coolant Carrying TANG-GRIP Inserts



Designation	W min	W max	h	b	A	l1	H2	l2	h4	Th	D max	Insert
TGTR/L 1010-2JHP	1.80	2.50	10.0	10.0	1.72	100.00	19.5	18.5	5.0	UNF 5/16-24	24.0	TAG 2
TGTR/L 1212-2JHP	1.80	2.50	12.0	12.0	1.72	100.00	19.5	18.5	3.0	UNF 5/16-24	24.0	TAG 2
TGTR/L 1616-2JHP	1.80	2.50	16.0	16.0	1.72	120.00	21.5	25.5	-	UNF 5/16-24	35.0	TAG 2
TGTR/L 2012-2JHP	1.80	2.50	20.0	12.0	1.72	120.00	25.6	25.5	-	UNF 5/16-24	35.0	TAG 2
TGTR/L 1616-3JHP	2.80	3.50	16.0	16.0	2.50	120.00	24.5	25.5	3.0	UNF 5/16-24	35.0	TAG 3
TGTR/L 2020-3JHP	2.80	3.50	20.0	20.0	2.50	120.00	27.0	35.0	-	G 1/8-28	54.0	TAG 3
TGTR/L 2525-3JHP	2.80	3.50	25.0	25.0	2.50	150.00	32.5	35.0	-	G 1/8-28	56.0	TAG 3
TGTR/L 2020-4JHP	3.70	4.50	20.0	20.0	3.40	120.00	27.0	35.0	-	G 1/8-28	54.0	TAG 4
TGTR/L 2525-4JHP	3.70	4.50	25.0	25.0	3.40	150.00	32.5	35.0	-	G 1/8-28	56.0	TAG 4

• For user guide and accessories, see pages 416-422

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
TGTR/L...-2JHP	2-4	4-6	6-8
TGTR/L...-3JHP	7-9	9-11	11-13
TGTR/L...-4JHP	7-9	9-11	11-13

Spare Parts

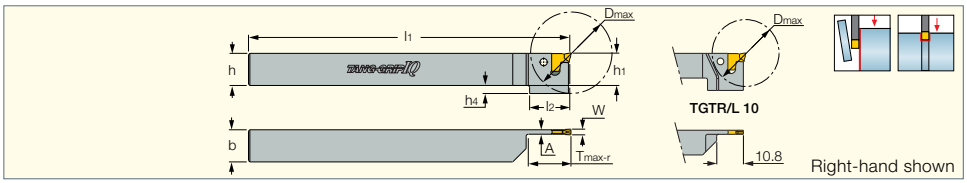
Designation				
TGTR/L 1010-2JHP	ETG 2-SH-T*	SR 5/16XUNF-TL-S		HW 5/32"
TGTR/L 1212-2JHP	ETG 2-SH-T*	SR 5/16UNF TL360		HW 5/32"
TGTR/L 1616-2JHP	ETG 2*	SR 5/16UNF TL360		HW 5/32"
TGTR/L 2012-2JHP	ETG 2*	SR 5/16UNF TL360		HW 5/32"
TGTR/L 1616-3JHP	ETG 3-4-SH*	SR 5/16UNF TL360		HW 5/32"
TGTR/L 2020-3JHP	ETG 3-4-SH*	PLG 1/8BSP TL360		HW 5.0
TGTR/L 2525-3JHP	ETG 3-4-SH*	PLG 1/8BSP TL360	SR 5/16UNF TL360	
TGTR/L 2020-4JHP	ETG 3-4-SH*	PLG 1/8BSP TL360		HW 5.0
TGTR/L 2525-4JHP	ETG 3-4-SH*	PLG 1/8BSP TL360	SR 5/16UNF TL360	

* Optional, should be ordered separately

TANG-GRIP IQ 350 LINE

TGTR/L-2T..SH-L120

Integral Shank Short-Head TANG-GRIP Toolholders for Parting and Grooving



Designation	W min	W max	h	h1	b	A	l1	l2	h4	Tmax-r	D max(1)	
TGTR/L 1010-2T10SH-L120-IQ	1.80	2.50	10.0	10.1	10.0	1.65	120.00	15.0	5.0	10.00	26.0	ETG 2-SH-T*
TGTR/L 1212-2T15SH-L120-IQ	1.80	2.50	12.0	12.1	12.0	1.65	120.00	15.0	3.0	15.00	30.0	ETG 2-SH-T*
TGTR/L 1616-2T18SH-L120-IQ	1.80	2.50	16.0	16.1	16.0	1.65	120.00	-	-	18.00	36.0	ETG 2-SH-T*

• For user guide, see pages 416-422

(1) For parting

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

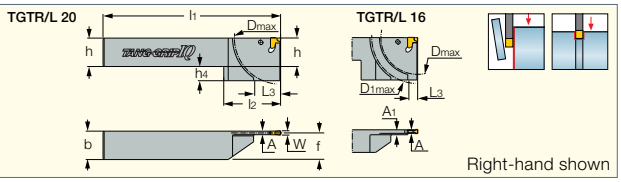


TANG-GRIP IQ 350 LINE

TGTR/L-D

Integral Shank TANG-GRIP Toolholders with Reinforced Blades for Parting and Grooving Mainly Sub-Spindle Machines





Designation	W	W min	W max	h	b	A	A1	l1	l2	f	h4	D max	D1 max	L3	Insert	
TGTR/L 1616-2-D52-IQ	2.00	1.80	2.40	16.0	16.0	1.65	3.50	125.00	40.0	15.2	14.0	52.0	65.0	6.00	TAG 2	ETG 2*
TGTR/L 2020-2-D65-IQ	2.00	1.80	2.40	20.0	20.0	1.65	-	125.00	40.0	19.2	10.0	65.0	-	18.00	TAG 2	ETG 2*
TGTR/L 1616-3-D52-IQ	3.00	2.80	3.50	16.0	16.0	2.50	3.50	125.00	40.0	14.8	14.0	52.0	65.0	6.00	TAG 3	ETG 3-4-SH*
TGTR/L 2020-3-D65-IQ	3.00	2.80	3.50	20.0	20.0	2.50	-	125.00	40.0	18.8	10.0	65.0	-	18.00	TAG 3	ETG 3-4-SH*

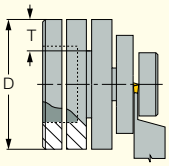
• For user guide, see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

Depth Capacity DGTR/L-D

Table Determining Depth of Cut Function of Workpiece Diameter



Designation	Tmax									
TGTR/L 1616-2-D52-IQ	20	25	19	16	15	13	11	10	9	8
TGTR/L 2020-2-D65-IQ	20	25	30	31	29	26	24	23	22	20
TGTR/L 1616-3-D52-IQ	20	25	20	17	15	13	11	10	9	8
TGTR/L 2020-3-D65-IQ	20	25	30	31	29	26	24	23	22	20
D →	40	50	60	70	80	100	120	150	200	300

TANG-GRIP PARTING LINE

TGFHL-TR

Reinforced Blades for Traub and Index Machines Carrying TANG-GRIP Tangentially Clamped Inserts



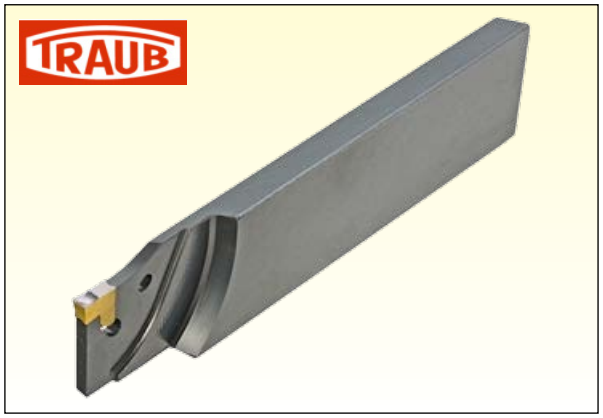
Designation	B1	W min	W max	A	l1	h1	D max	Insert	
TGFHL 26-2TR-D36	26.0	1.80	2.40	1.65	110.00	21.4	36.0	TAG 2	ETG 2*
TGFHL 26-2TR-D36R	26.0	1.80	2.40	1.65	110.00	21.4	36.0	TAG 2	ETG 2*
TGFHL 26-3TR-D36	26.0	2.80	3.50	2.50	110.00	21.4	36.0	TAG 3	ETG 3-4-SH*
TGFHL 26-3TR-D36R	26.0	2.80	3.50	2.50	110.00	21.4	36.0	TAG 3	ETG 3-4-SH*

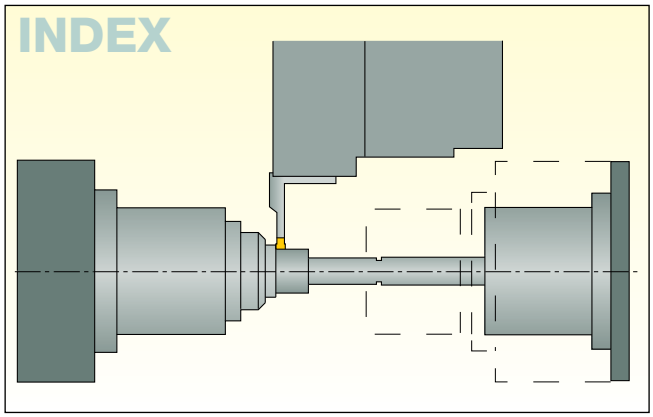
• For user guide, see pages 416-422

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (402) • TAG N-C/W/M (399) • TAG N-J/JS/JT (400) • TAG N-LF (401) • TAG N-MF (400) • TAG N-UT (402) • TAG R/L-C (399) • TAG R/L-J/JS (401)

For holders, see pages: SGTBR/L (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

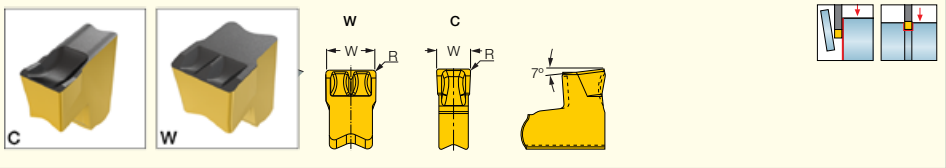




TANG-GRIP PARTING LINE

TAG N-C/W/M

Single-Ended Inserts for Parting, Grooving and Slitting Bars, Hard Materials and Tough Applications



Designation	Dimensions W	W tol(±)	R±0.04	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	IC30N	IC20	IC807	Recommended Machining Data f groove (mm/rev)
TAG N1.4C	1.40	0.05	0.16								●	0.04-0.10
TAG N1.6C	1.60	0.05	0.16	●			●					0.04-0.14
TAG N2C	2.00	0.05	0.20	●		●	●		●	●		0.05-0.16
TAG N2.4C	2.40	0.04	0.16	●			●					0.06-0.18
TAG N3CB (1)	3.00	0.05	0.35	●			●					0.12-0.30
TAG N3C	3.05	0.05	0.20	●	●	●	●	●	●	●	●	0.10-0.25
TAG N3M (2)	3.05	0.05	0.20	●				●				0.06-0.18
TAG N3W	3.05	0.05	0.20	●				●				0.10-0.25
TAG N4C	4.00	0.05	0.24	●	●	●	●	●		●	●	0.10-0.30
TAG N4CB (1)	4.00	0.05	0.40	●				●				0.10-0.33
TAG N4M (2)	4.00	0.05	0.24	●				●				0.06-0.20
TAG N4W	4.00	0.05	0.24	●				●				0.10-0.30
TAG N4.8C	4.80	0.05	0.30	●			●					0.10-0.35
TAG N5C	5.05	0.05	0.25	●			●			●		0.10-0.35
TAG N6.3C	6.30	0.10	0.35	●			●					0.15-0.40
TAG N7W	7.00	0.10	0.50	●			●					0.18-0.40
TAG N8C	8.00	0.10	0.50	●			●					0.20-0.70
TAG N9.5C	9.50	0.10	0.50	●			●					0.25-0.80
TAG N9.5W	9.50	0.10	0.50	●			●					0.22-0.80
TAG N12.7W	12.70	0.10	0.85	●			●					0.30-0.80

• Feed values for grade IC20 should be decreased by 50% • For cutting speed recommendations and user guide, see pages 416-422

(1) Larger corner radii for interrupted cut and high feed applications

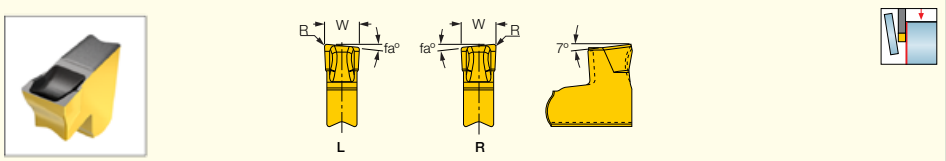
(2) Similar to C-type, but with a modified edge; Improved chip control at medium feeds

For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGBHR/L (282) • TGBHR/L-JHP (283) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

TANG-GRIP PARTING LINE

TAG R/L-C

Single-Ended Inserts for Parting Bars, Hard Materials and Tough Parting Applications



Designation	Dimensions W±0.10	R±0.05	fa°	W tol(±)	Tough ↔ Hard IC830	IC928	IC808	IC908	IC30N	Recommended Machining Data f groove (mm/rev)
TAG R/L2C-6D	2.05	0.20	6.0	0.10	●		●			0.04-0.12
TAG R2.4C-8D	2.40	0.16	8.0	0.10			●			0.05-0.13
TAG R/L3C-6D	3.00	0.20	6.0	0.10	●	●	●	●		0.08-0.18
TAG R3C-8D	3.00	0.20	8.0	0.10					●	0.06-0.16
TAG R/L3C-15D	3.00	0.20	15.0	0.10	●	●	●	●		0.08-0.16
TAG R/L4C-4D	4.05	0.24	4.0	0.10	●	●	●	●		0.08-0.20
TAG R/L5C-4D	5.05	0.25	4.0	0.10	●		●			0.10-0.25
TAG R/L6.3C-4D	6.35	0.35	4.0	0.10	●		●			0.12-0.30

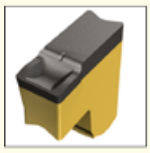
• For cutting speed recommendations and user guide, see pages 416-422

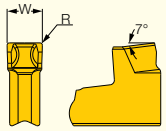
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGBHR/L (282) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

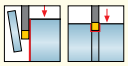
TANG-GRIP PARTING LINE

TAG N-MF

Single-Ended Inserts for Parting, Grooving and Slitting Stainless and Alloy Steels at Medium Feed Applications







Designation	Dimensions W	W tol(±)	R±0.03	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
TAG N2MF	2.00	0.05	0.20	●	●	●	0.04-0.12
TAG N3MF	3.00	0.05	0.20	●	●	●	0.06-0.18
TAG N4MF	4.00	0.05	0.25	●	●	●	0.07-0.22

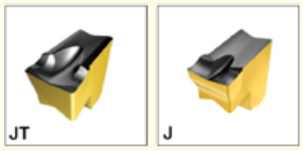
• For cutting speed recommendations and user guide, see pages 416-422

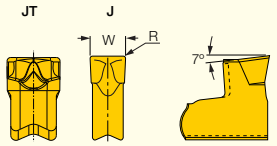
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

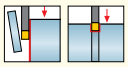
TANG-GRIP PARTING LINE

TAG N-J/JS/JT

Single-Ended Inserts for Parting, Grooving and Slitting Soft Materials







Designation	Dimensions W±0.04	R	R±toler	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	IC20	IC807	Recommended Machining Data f groove (mm/rev)
TAG N1.4J	1.40	0.16	0.050	●			●			●	0.03-0.10
TAG N1.6J	1.60	0.16	0.050	●			●				0.03-0.12
TAG N2JS (1)	2.00	0.02	0.020	●			●				0.03-0.08
TAG N2J	2.00	0.20	0.050	●		●	●		●		0.04-0.12
TAG N2JT	2.00	0.20	0.050	●	●	●	●	●			0.04-0.10
TAG N3JS (1)	3.05	0.02	0.020	●			●				0.04-0.10
TAG N3J	3.05	0.20	0.050	●	●	●	●	●	●	●	0.04-0.16
TAG N3JT	3.05	0.20	0.050	●		●	●	●			0.05-0.18
TAG N3.2JT	3.25	0.20	0.050				●				0.05-0.18
TAG N4J	4.00	0.24	0.050	●	●	●	●	●		●	0.04-0.18
TAG N4JT	4.05	0.24	0.050	●		●	●	●			0.06-0.20
TAG N5J	5.05	0.25	0.050	●			●				0.05-0.20
TAG N5JT	5.05	0.25	0.050	●			●	●			0.06-0.22
TAG N6.3J	6.35	0.34	0.050	●			●				0.06-0.22
TAG N6.3JT	6.35	0.34	0.050	●				●			0.08-0.25
TAG N7JT	7.05	0.50	0.050	●			●				0.10-0.28

• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge; most suitable for soft materials at low to medium feeds.

• For cutting speed recommendations and user guide, see pages 416-422

(1) Sharp corners cannot be used on TGSF slitting cutters

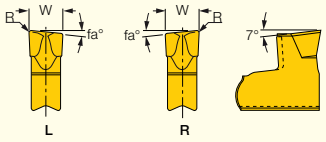
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGBHR/L (282) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

TANG-GRIP PARTING LINE

TAG R/L-J/JS

TANG-GRIP Inserts for Parting Soft Materials, Tubes, Small Diameters and Thin-Walled Parts







Designation	Dimensions W	R	f_a°	Tough ↔ Hard IC830	IC928	IC808	IC908	IC807	Recommended Machining Data f groove (mm/rev)
TAG R/L1.4J-8D	1.40	0.16	8.0	●		●		●	0.03-0.08
TAG R/L1.4JS-10D (1)	1.40	0.02	10.0	●		●		●	0.02-0.06
TAG R/L2J-6D	2.00	0.20	6.0	●		●			0.03-0.10
TAG R/L2JS-6D (1)	2.00	0.02	6.0	●		●			0.02-0.08
TAG R/L2J-15D	2.00	0.20	15.0	●		●			0.03-0.08
TAG R/L2JS-15D (1)	2.00	0.02	15.0	●		●			0.02-0.06
TAG R/L3J-6D	3.00	0.20	6.0	●	●	●	●		0.04-0.14
TAG R/L3JS-6D (1)	3.00	0.02	6.0	●		●			0.03-0.10
TAG R/L3J-15D	3.00	0.20	15.0	●	●	●	●		0.04-0.12
TAG R/L3JS-15D (1)	3.00	0.02	15.0	●		●			0.03-0.08
TAG R/L4J-4D	4.00	0.24	4.0	●	●	●	●		0.04-0.15
TAG R/L5J-4D	5.05	0.25	4.0	●		●			0.05-0.18
TAG R/L6.3J-4D	6.35	0.35	4.0	●		●			0.05-0.20

• For cutting speed recommendations and user guide, see pages 416-422

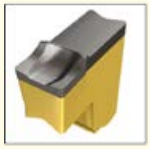
(1) Sharp corners cannot be used on TGSF slitting cutters

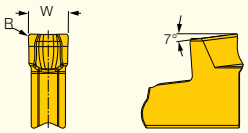
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGBHR/L (282) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

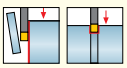
TANG-GRIP PARTING LINE

TAG N-LF

Single-Ended Inserts for Parting, Grooving and Slitting Stainless Steel







Designation	Dimensions $W^{\pm 0.04}$	$R^{\pm 0.03}$	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
TAG N2LF	2.00	0.20	●	●	●	0.03-0.08
TAG N3LF	3.05	0.20	●	●	●	0.04-0.10

• For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

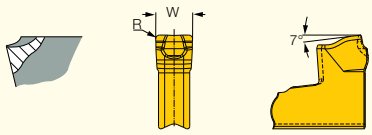


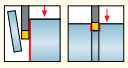
TANG-GRIP PARTING LINE

TAG N-UT

Single-Sided Inserts for Parting, Grooving & Slitting at Low Feeds on Cr-Ni Alloys, Ductile Materials & Low Carbon Steel







Designation	Dimensions W±0.04	Dimensions R±0.04	Tough ↔ Hard IC830	IC808	IC908	Recommended Machining Data f groove (mm/rev)
TAG N2UT	2.00	0.20	•	•	•	0.03-0.10
TAG N3UT	3.00	0.30	•	•		0.04-0.12
TAG N4UT	4.00	0.30			•	0.05-0.15
TAG N5UT	5.00	0.30			•	0.05-0.18
TAG N6UT	6.00	0.85			•	0.06-0.22

• For cutting speed recommendations and user guide, see pages 416-422

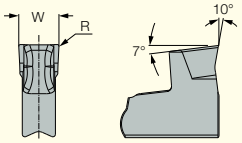
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGBHR/L (282) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

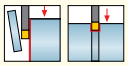
TANG-GRIP PARTING LINE

TAG N-A

Single-Ended Inserts for Parting, Grooving and Slitting Aluminum







Designation	Dimensions W±0.04	Dimensions R±0.05	IC20	Recommended Machining Data f groove (mm/rev)
TAG N2A	2.10	0.20	•	0.02-0.10
TAG N3A	3.05	0.20	•	0.03-0.14
TAG N4A	4.05	0.24	•	0.03-0.16

• For cutting speed recommendations and user guide, see pages 416-422

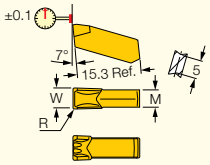
For tools, see pages: TAGPAD-JHP (394) • TAGPAD-XL-JHP (394) • TGAD (393) • TGFH-JHP (390) • TGFH-MB (393) • TGFH-S (390) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGFHR/L-JHP (391) • TGFS (395) • TGSU (392) • TGTR/L-2T..SH-L120 (397) • TGTR/L-D (398) • TGTR/L-IQ (396) • TGTR/L-IQ-2Z (396) • TGTR/L-JHP (397)

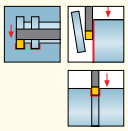
CUT-GRIP

GIM-C

Parting and Grooving Single-Sided Inserts for Parting Bars, Hard Materials and Tough Applications







Designation	Dimensions W±0.05	Dimensions R	Dimensions M	Tough ↔ Hard IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 3C	3.00	0.22	2.40	•	•	•	•	0.15-0.25
GIM 4C	4.00	0.25	3.40			•		0.15-0.25
GIM 5C	5.00	0.40	4.00	•	•	•	•	0.15-0.30
GIM 6C	6.00	0.40	4.80	•	•	•	•	0.15-0.30

• For cutting speed recommendations and user guide, see pages 416-422

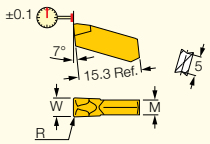
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

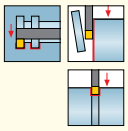
CUTGRIP

GIM-J

Utility Single-Sided Inserts for Parting and Grooving Soft Materials, Parting Tubes and Small Diameters







Designation	Dimensions W±0.05	R	M	Tough ↔ Hard IC656	IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.2J	2.20	0.17	1.70		●	●	●	●	0.06-0.13
GIM 3J	3.00	0.25	2.40	●	●	●	●	●	0.08-0.15
GIM 4J	4.00	0.25	3.20		●	●	●	●	0.08-0.18

• For cutting speed recommendations and user guide, see pages 416-422

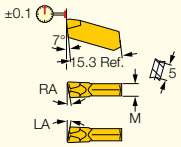
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

CUTGRIP

GIM-J-RA/LA

Utility Single-Sided Inserts for Parting and Grooving Soft Materials, Parting Tubes and Small Diameters







Designation	Dimensions W±0.05	R	f_a°	M	Tough ↔ Hard IC656	IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.2J-8R/LA	2.20	0.17	8.0	1.70	●	●	●	●	●	0.05-0.10
GIM 2.2JS-15R/LA	2.20	0.02	15.0	1.70		●	●	●	●	0.05-0.10
GIM 3J-4R/LA	3.00	0.25	4.0	2.40		●	●		●	0.05-0.12
GIM 3J-8R/LA	3.00	0.25	8.0	2.40	●	●	●	●	●	0.05-0.12
GIM 3JS-15R/LA	3.00	0.02	15.0	2.40		●		●	●	0.05-0.12
GIM 4J-6R/LA	4.00	0.25	6.0	3.20			●		●	0.08-0.15

• For cutting speed recommendations and user guide, see pages 416-422

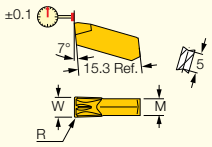
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

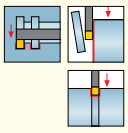
CUTGRIP

GIM-W

Single-Sided Inserts with Central Ridged Chipformer and Reinforced Edge for Parting and Grooving Alloy Steel







Designation	Dimensions W±0.05	R	M	Tough ↔ Hard IC656	IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.4	2.40	0.18	2.40			●	●	●	0.10-0.18
GIM 3	3.00	0.22	2.40		●	●	●	●	0.10-0.18
GIM 3.2	3.20	0.22	2.40	●	●	●	●	●	0.10-0.20
GIM 4	4.00	0.25	3.20	●	●	●	●	●	0.15-0.20

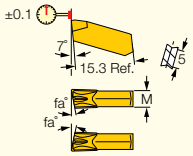
• For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GIM-W-RA/LA
Single-Sided Screw-Clamped Inserts with Central Ridged Chipformer for Parting Alloy Steel







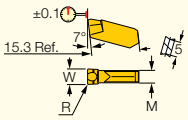
Designation	Dimensions W±0.05	R	fa°	M	Tough ↔ Hard IC656	IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 3-4R/LA	3.00	0.20	4.0	2.40	●	●	●	●	●	0.08-0.16
GIM 3-8R/LA	3.00	0.20	8.0	2.40	●	●	●	●	●	0.08-0.16
GIM 3S-15RA	3.00	0.22	15.0	2.40		●				0.08-0.16
GIM 3.2-4R/LA	3.20	0.22	4.0	2.40		●	●		●	0.08-0.16
GIM 3.2-8R/LA	3.20	0.22	8.0	2.40		●	●	●	●	0.08-0.16
GIM 4-4R/LA	4.00	0.25	4.0	3.20	●		●	●	●	0.10-0.16
GIM 4-8R/LA	4.00	0.25	8.0	3.20		●	●	●	●	0.10-0.16

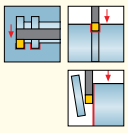
• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GIM-UT
Single-Ended Screw-Clamped Inserts for Parting and Grooving at Low Feeds on CrNi Alloys and Low Carbon Steel







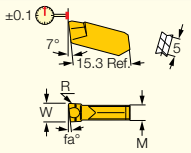
Designation	Dimensions W±0.03	R	M	Tough ↔ Hard IC656	IC328	Recommended Machining Data f groove (mm/rev)
GIM 4.6UT	4.60	0.60	3.80	●	●	0.03-0.10

• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GIM-UT-RA/LA
Single-Ended Screw-Clamped Inserts for Parting at Low Feeds on CrNi Alloys and Low Carbon Steel





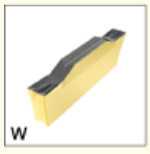


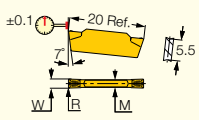
Designation	Dimensions W±0.03	R	fa°	M	IC328	Recommended Machining Data f groove (mm/rev)
GIM 3UT-1.5RA	3.12	0.25	1.5	2.50	●	0.03-0.10

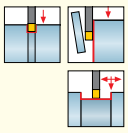
• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232)

CUTGRIP

GDMW 2.4
Utility Double-Ended Inserts for External Turning, Grooving and Parting







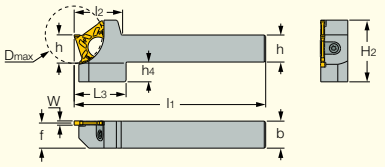
Designation	Dimensions W±0.04	R±0.03	M	Tmax-r	Tough ↔ Hard IC830	IC808	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMW 2.4	2.40	0.18	2.00	18.00	●	●	●	●	0.25-1.50	0.07-0.12	0.05-0.08

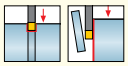
• For cutting speed recommendations and user guide, see pages 416-422
For tools, see pages: PADR/L (264) • PHGR/L (264) • PHSR/L (312)

PENTA IQ GRIP PARTING LINE

PCHR/L-D-IQ

Grooving and Parting Holders Carrying Inserts with 5 Cutting Edges





Left-hand shown

Designation	h	b	W min	W max	f	D max	l_1	l_2	L_3	h_4	H_2	Insert
PCHR/L 12-D22-2-IQ	12.0	12.0	2.00	2.40	11.4	22.0	100.00	26.9	25.70	8.0	25.5	PENTA D22
PCHR/L 16-D22-2-IQ	16.0	16.0	2.00	2.40	15.4	22.0	120.00	26.9	23.20	4.0	25.5	PENTA D22
PCHR/L 20-D22-2-IQ	20.0	20.0	2.00	2.40	19.4	22.0	120.00	26.9	-	-	25.5	PENTA D22
PCHR/L 12-D32-2-IQ	12.0	12.0	2.00	2.40	11.5	32.0	100.00	28.4	29.50	14.0	33.6	PENTA D32
PCHR/L 16-D32-2-IQ	16.0	16.0	2.00	2.40	15.5	32.0	120.00	28.4	29.50	10.0	33.6	PENTA D32
PCHR/L 20-D32-2-IQ	20.0	20.0	2.00	2.40	19.5	32.0	120.00	28.4	29.50	6.0	33.6	PENTA D32
PCHR/L 25-D32-2-IQ	25.0	25.0	2.00	2.40	24.5	32.0	120.00	28.4	-	-	33.6	PENTA D32
PCHR/L 16-D40-3-IQ	16.0	16.0	3.00	3.20	14.7	40.0	135.00	33.3	36.80	17.0	43.5	PENTA D40
PCHR/L 20-D40-3-IQ	20.0	20.0	3.00	3.20	18.7	40.0	135.00	33.3	35.60	13.0	43.5	PENTA D40
PCHR/L 25-D40-3-IQ	25.0	25.0	3.00	3.20	23.7	40.0	135.00	33.3	33.60	8.0	43.5	PENTA D40
PCHR/L 32-D40-3-IQ	32.0	32.0	3.00	3.20	30.7	40.0	135.00	33.3	-	-	43.5	PENTA D40

For inserts, see pages: PENTA D-N-C (407) • PENTA D-N-J (406) • PENTA D-N-PB (407) • PENTA D-R/L-C (407) • PENTA D-R/L-J (407) • PENTA D-R/L-PB (408)

Tmax as a Function of Dmax for PENTA D22

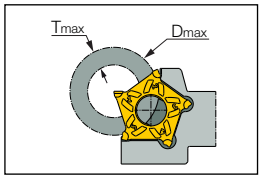
Tmax	T≤1.2	T≤2.0	T≤3.0	T≤4.0	T≤5.0	T≤7.0	T≤9.0	T≤11.0
Dmax	N.L[1]	600	130	60	40	30	25	22

Tmax as a Function of Dmax for PENTA D32

Tmax	T≤1.2	T≤2	T≤3.0	T≤4.0	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤9.0	T≤16.0
Dmax	N.L[1]	N.L[1]	250	130	80	60	50	45	40	32

Tmax as a Function of Dmax for PENTA D40

Tmax	T≤1.2	T≤2	T≤3.0	T≤4.0	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤9.0	T≤10.0	T≤11.0	T≤12.0	T≤13.0	T≤16.0	T≤20.0
Dmax	N.L[1]	N.L[1]	N.L[1]	350	200	140	105	85	75	65	60	55	50	45	40



[1] N.L = No Limit

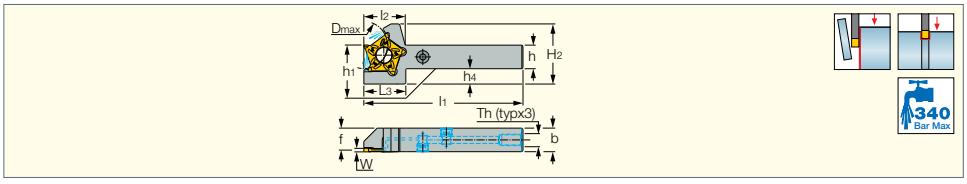
Spare Parts

Designation				
PCHL 12-D22-2-IQ	SR M6-R-L	LEVER PD22-2	BLD T15/S7	SW6-SD
PCHR 12-D22-2-IQ	SR M6-R-L	LEVER PD22-2	BLD T15/S7	SW6-SD
PCHR/L 16-D22-2-IQ	SR M6-R-L	LEVER PD22-2	BLD T15/S7	SW6-SD
PCHR/L 20-D22-2-IQ	SR M6-R-L	LEVER PD22-2	BLD T15/S7	SW6-SD
PCHR/L 12-D32-2-IQ	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD
PCHR/L 16-D32-2-IQ	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD
PCHR/L 20-D32-2-IQ	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD
PCHR/L 25-D32-2-IQ	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD
PCHR/L 16-D40-3-IQ	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD
PCHR/L 20-D40-3-IQ	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD
PCHR/L 25-D40-3-IQ	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD
PCHR/L 32-D40-3-IQ	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD

PENTA IQ GRIP PARTING LINE
JETCUT

PCHR/L-D-JHP

Grooving and Parting Tools Carrying Inserts with 5 Cutting Edges and Channels for High Pressure Coolant

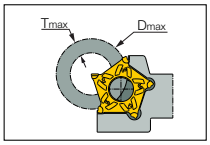


Designation	h	b	W min	W max	f	D max	l1	l2	L3	h4	H2	Th	Insert
PCHR/L 12-D22-2-JHP	12.0	12.0	2.00	2.40	11.0	22.0	101.50	29.0	29.50	8.0	32.0	UNF 5/16-24	PENTA D22
PCHR/L 16-D22-2-JHP	16.0	16.0	2.00	2.40	15.0	22.0	121.50	29.0	29.50	4.0	32.0	UNF 5/16-24	PENTA D22
PCHR/L 20-D22-2-JHP	20.0	20.0	2.00	2.40	19.0	22.0	121.50	29.0	29.50	-	32.0	G 1/8-28	PENTA D22
PCHR/L 12-D32-2-JHP	12.0	12.0	2.00	2.40	11.2	32.0	101.00	30.0	30.50	-	41.0	UNF 5/16-24	PENTA D32
PCHR/L 16-D32-2-JHP	16.0	16.0	2.00	2.40	15.0	32.0	101.00	30.0	30.50	10.5	41.0	UNF 5/16-24	PENTA D32
PCHR/L 20-D32-2-JHP	20.0	20.0	2.00	2.40	19.0	32.0	121.00	30.0	30.50	6.5	41.0	G 1/8-28	PENTA D32
PCHR/L 25-D32-2-JHP	25.0	25.0	2.00	2.40	24.0	32.0	121.00	30.0	30.50	1.5	41.0	G 1/8-28	PENTA D32
PCHR/L 16-D40-3-JHP	16.0	16.0	3.00	3.20	14.6	40.0	135.00	36.3	36.80	17.0	51.0	UNF 5/16-24	PENTA D40
PCHR/L 20-D40-3-JHP	20.0	20.0	3.00	3.20	18.6	40.0	135.00	35.1	35.60	13.0	51.0	G 1/8-28	PENTA D40
PCHR/L 25-D40-3-JHP	25.0	25.0	3.00	3.20	23.6	40.0	135.00	33.1	33.60	8.0	51.0	G 1/8-28	PENTA D40

For inserts, see pages: PENTA D-N-C (407) • PENTA D-N-J (406) • PENTA D-N-PB (407) • PENTA D-R/L-C (407) • PENTA D-R/L-J (407) • PENTA D-R/L-PB (408)

PCHR/L D22-2...-JHP Dmax for Partting Off 22/T11										
Tmax	T≤1.0	T≤2.0	T≤3.0	T≤4.0	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤9.0	T≤10.0
Dmax	89	64	48	40	34	31	28	27	24	21

PCHR/L D32-2...-JHP Dmax for Partting Off 32/T16										
Tmax	T≤1.0	T≤2.0	T≤3.0	T≤4.0	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤9.0	T≤10.0
Dmax	150	125	100	78	65	57	51	46	43	40
Tmax	T≤11.0	T≤12.0	T≤13.0	T≤14.0	T≤15.0					
Dmax	39	37	35	34	33					



PCHR/L D40-3...-JHP Dmax for Partting Off 40/T20										
Tmax	T≤1.0	T≤2.0	T≤3.0	T≤4.0	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤9.0	T≤10.0
Dmax	400	300	200	145	114	95	82	73	66	61
Tmax	T≤11.0	T≤12.0	T≤13.0	T≤14.0	T≤15.0	T≤16.0	T≤17.0	T≤18.0	T≤19.0	
Dmax	57	54	51	49	47	46	45	44	42	

Flow Rate vs. Pressure

Designation	70 bar Flow Rate (liters/min)	100 bar Flow Rate (liters/min)	140 bar Flow Rate (liters/min)
PCHR/L...-2JHP	2-4	4-6	6-8
PCHR/L...-3JHP	7-9	9-11	11-13

Spare Parts

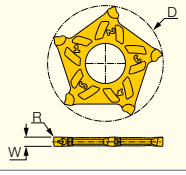
Designation							
PCHR/L 12-D32-2-JHP	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 16-D32-2-JHP	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 20-D32-2-JHP	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD	HW 5.0	PLG 1/8BSP TL360	SR M4X6 DIN913 TL180
PCHR/L 25-D32-2-JHP	SR M6-R-L	LEVER PD32-2	BLD T15/S7	SW6-SD	HW 5.0	PLG 1/8BSP TL360	SR M4X6 DIN913 TL180
PCHR/L 16-D40-3-JHP	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 20-D40-3-JHP	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD	HW 5.0	PLG 1/8BSP TL360	
PCHR/L 25-D40-3-JHP	SR M7-R-L	LEVER PD40	BLD T20/S7	SW6-SD	HW 5.0	PLG 1/8BSP TL360	

PENTA IQ GRIP PARTING LINE

PENTA D-N-J

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts





Designation	Dimensions W±0.02	R	D	IC808G	Recommended Machining Data f groove (mm/rev)
PENTA D22N200J020	2.00	0.20	22.00	•	0.04-0.12

• For cutting speed recommendations and user guide, see pages 416-422

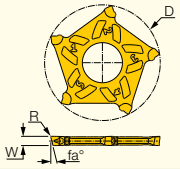
For tools, see pages: PCHR/L-D-IQ (405)

PENTA IQ GRIP PARTING LINE

PENTA D-R/L-J

Inserts with 5 Cutting Edges for Parting Tubes, Small and Thin-Walled Parts







Right-hand shown

Designation	Dimensions W	R	D	f_a°	IC808G	Recommended Machining Data f groove (mm/rev)
PENTA D22R/L200J-6D	2.00	0.20	22.00	6.0	•	0.04-0.10
PENTA D22R/L200J-15D	2.00	0.20	22.00	15.0	•	0.04-0.08

• For cutting speed recommendations and user guide, see pages 416-422

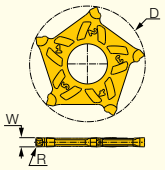
For tools, see pages: PCHR/L-D-IQ (405)

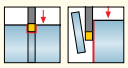
PENTA IQ GRIP PARTING LINE

PENTA D-N-C

Inserts with 5 Cutting Edges for Parting and Grooving Hard Materials, Tough and General Applications







Right-hand shown

Designation	Dimensions W±0.02	R	D	IC808G	Recommended Machining Data f groove (mm/rev)
PENTA D32N200C020	2.00	0.20	30.25	•	0.04-0.14
PENTA D40N300C020	3.02	0.20	37.80	•	0.06-0.22

• For cutting speed recommendations and user guide, see pages 416-422

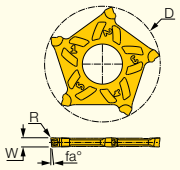
For tools, see pages: PCHR/L-D-IQ (405) • PCHR/L-D-JHP (406)

PENTA IQ GRIP PARTING LINE

PENTA D-R/L-C

Inserts with 5 Cutting Edges for Parting Hard Materials, Tough and General Applications







Right-hand shown

Designation	Dimensions W	R	D	f_a°	IC808G	Recommended Machining Data f groove (mm/rev)
PENTA D32R/L200C-6D	2.00	0.20	30.25	6.0	•	0.04-0.12
PENTA D32R/L200C-15D	2.00	0.20	30.25	15.0	•	0.04-0.10
PENTA D40R/L300C-6D	3.00	0.20	37.80	6.0	•	0.04-0.14
PENTA D40R/L300C-15D	3.00	0.20	37.80	15.0	•	0.04-0.10

• For cutting speed recommendations and user guide, see pages 416-422

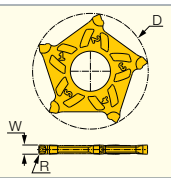
For tools, see pages: PCHR/L-D-IQ (405) • PCHR/L-D-JHP (406)

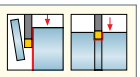
PENTA IQ GRIP PARTING LINE

PENTA D-N-PB

Pentagonal Inserts for Parting and Grooving Bearing Steel and Other Ductile Materials







Designation	Dimensions W±0.02	R	D	Recommended Machining Data f groove (mm/rev)
PENTA D40N300PB020 IC808G	3.00	0.20	37.80	0.03-0.10

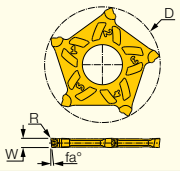
• For cutting speed recommendations and user guide, see pages 416-422

PENTA IQ GRIP PARTING LINE

PENTA D-R/L-PB

Pentagonal Inserts for Parting Bearing Steel and other Ductile Materials







Right-hand shown

Designation	Dimensions W	R	f_a°	D	Recommended Machining Data f groove (mm/rev)
PENTA D40R/L300PB-6D IC808G	3.00	0.20	6.0	37.80	0.03-0.08
PENTA D40R/L300PB-15D 808G	3.00	0.20	15.0	37.80	0.03-0.06

• For cutting speed recommendations and user guide, see pages 416-422

Identification System for Standard Inserts

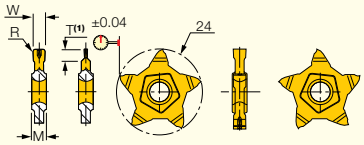
PENTA	24	N	150	J	010
Family name	Circular circumference of the insert	Insert lead angle (K) **N, R, L**	Cutting edge width W(mm)x100	Chipbreaker style **J, Z**	Corner radius R (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts. (eg. 15D=15º)

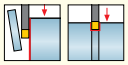
PENTACUT

PENTA 24N-J

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Tubes, Small and Thin-Walled Parts







Designation	Dimensions W±0.02	R	M	T_{max-r}(1)	Tough ↔ Hard IC1008	IC908	IC807G	Recommended Machining Data f groove (mm/rev)
PENTA 24N050J000	0.50	0.00	4.00	1.00		•		0.02-0.04
PENTA 24N050J004	0.50	0.04	4.00	2.50	•			0.02-0.05
PENTA 24N080J000	0.80	0.00	4.00	1.60		•		0.02-0.05
PENTA 24N100J004	1.00	0.04	4.00	3.50		•		0.03-0.07
PENTA 24N100J006	1.00	0.06	4.00	3.50	•		•	0.03-0.07
PENTA 24N104J000	1.04	0.00	4.00	2.00		•		0.02-0.07
PENTA 24N120J000	1.20	0.00	4.00	2.00		•	•	0.03-0.07
PENTA 24N125J010	1.25	0.10	4.00	2.00		•		0.03-0.07
PENTA 24N140J000	1.40	0.00	4.00	2.00		•		0.03-0.08
PENTA 24N147J000	1.47	0.00	4.00	2.50		•		0.03-0.08
PENTA 24N150J010	1.50	0.10	4.00	5.00	•	•	•	0.03-0.10
PENTA 24N157J015	1.57	0.15	4.00	3.00		•	•	0.00-0.12
PENTA 24N170J010	1.70	0.10	4.00	3.00		•	•	0.03-0.12
PENTA 24N178J018	1.78	0.18	4.00	3.00		•	•	0.04-0.12
PENTA 24N185J015	1.85	0.15	4.00	3.00		•		0.04-0.12
PENTA 24N196J015	1.96	0.15	4.00	3.00		•	•	0.04-0.12
PENTA 24N200J020	2.00	0.20	4.00	6.00	•	•	•	0.04-0.12
PENTA 24N222J015	2.22	0.15	4.00	3.50		•	•	0.04-0.16
PENTA 24N230J020	2.30	0.20	4.00	3.50		•	•	0.04-0.16
PENTA 24N239J015	2.39	0.15	4.00	5.00		•	•	0.04-0.16
PENTA 24N247J020	2.47	0.20	4.00	5.00		•	•	0.04-0.16
PENTA 24N270J010	2.70	0.10	4.00	5.00		•		0.04-0.16
PENTA 24N287J020	2.87	0.20	4.00	6.50		•		0.04-0.16
PENTA 24N300J000	3.00	0.00	4.00	6.50		•		0.04-0.10
PENTA 24N300J020	3.00	0.20	4.00	6.50		•	•	0.04-0.16
PENTA 24N300J040	3.00	0.40	4.00	6.50		•	•	0.04-0.16
PENTA 24N315J015	3.15	0.15	4.00	6.50		•		0.04-0.16
PENTA 24N318J020	3.18	0.20	4.00	6.50		•	•	0.04-0.16
PENTA 24N330J010	3.30	0.10	5.00	6.40		•		0.04-0.16
PENTA 24N348J020	3.48	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N356J020	3.56	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N374J020	3.74	0.20	5.00	6.40		•		0.04-0.18
PENTA 24N398J020	3.98	0.20	5.00	6.20		•		0.04-0.18
PENTA 24N400J040	4.00	0.40	5.00	6.20		•		0.04-0.18
PENTA 24N423J010	4.23	0.10	5.00	6.20		•		0.04-0.18

• (1)Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depth relative to part diameter, see page 411

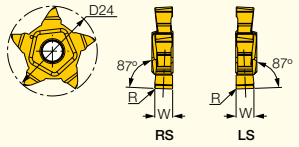
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-RS/LS

Pentagonal Inserts for Parting and Precision Grooving Next to High Shoulder Applications





f - refer to inserts data

Designation	Dimensions W±0.02	R	Tmax-r	D max	f	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	1.60	- (1)	1.6	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	1.80	- (1)	1.5	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	2.00	- (1)	1.4	●	0.03-0.06
PENTA 24N157NF020R/LS	1.57	0.20	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N157NF079R/LS	1.57	0.79	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N200NF020R/LS	2.00	0.20	3.00	- (1)	1.0	●	0.03-0.10
PENTA 24N239NF020R/LS	2.39	0.20	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N239NF119R/LS	2.39	1.19	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N300NF020R/LS	3.00	0.20	6.20	16.0	0.5	●	0.04-0.14
PENTA 24N318NF020R/LS	3.18	0.20	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N318NF159R/LS	3.18	1.59	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N400NF020R/LS	4.00	0.20	6.50	13.0	1.0	●	0.04-0.16
PENTA 24N480NF020R/LS	4.80	0.20	6.50	13.0	1.6	●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 416-422

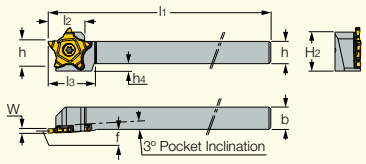
(1) No limit

For tools, see pages: PCHRS/LS (267)

PENTACUT

PCHRS/LS

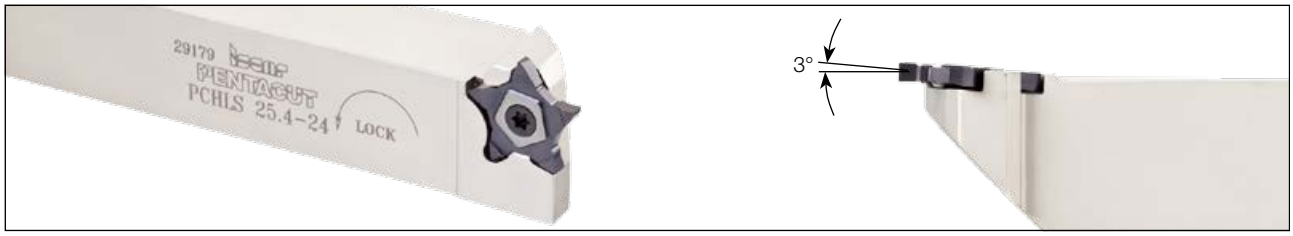
Holders Carrying Inserts with 5 Cutting Edges for Grooving, Parting and Recessing Next to High Shoulders



Right-hand shown

Designation	h	b	W min	W max	l1	l2	L3	h4	H2		
PCHR/LS 12-24	12.0	12.0	0.80	4.80	120.00	19.5	24.50	4.0	21.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 16-24	16.0	16.0	0.80	4.80	120.00	19.5	-	-	21.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 20-24	20.0	20.0	0.80	4.80	120.00	19.5	-	-	25.0	SR 16-212-01397LS	T-2010/5
PCHR/LS 25-24	25.0	25.0	0.80	4.80	135.00	19.5	-	-	30.0	SR 16-212-01397LS	T-2010/5

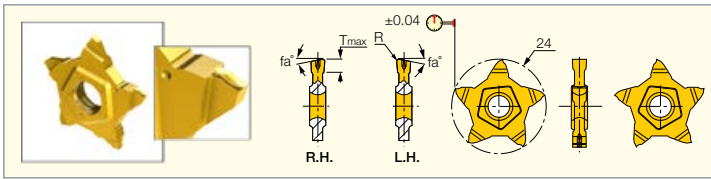
For inserts, see pages: PENTA 24N-J-RS (273) • PENTA 24N-RS/LS (274)



PENTACUT

PENTA 24R/L-J

Inserts with 5 Cutting Edges for Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions W±0.02	R	fa°	D max(1)	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R/L100J15D	1.00	0.06	15.0	7.0	●	0.02-0.06
PENTA 24R/L150J15D	1.50	0.06	15.0	10.0	●	0.03-0.08
PENTA 24R/L150J06D	1.50	0.10	6.0	10.0	●	0.03-0.09
PENTA 24R/L200J06D	2.00	0.10	6.0	12.0	●	0.04-0.10
PENTA 24R/L200J15D	2.00	0.10	15.0	12.0	●	0.04-0.09

• For cutting speed recommendations and user guide, see pages 416-422

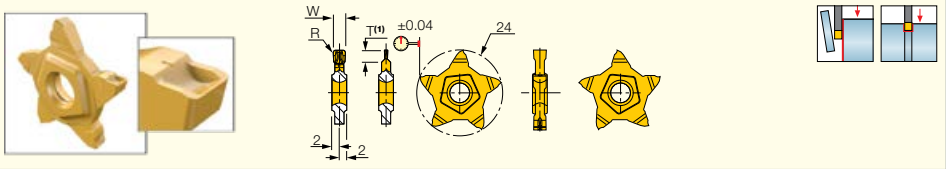
(1) For grooving and parting depths relative to part diameter, see page 411

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-C

Parting and Grooving Inserts with 5 Cutting Edges for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150C010	1.50	0.10	5.00	●	0.05-0.11
PENTA 24N157C015	1.57	0.15	3.00	●	0.05-0.12
PENTA 24N178C018	1.78	0.18	3.00	●	0.05-0.14
PENTA 24N200C020	2.00	0.20	6.00	●	0.05-0.16
PENTA 24N230C020	2.30	0.20	3.50	●	0.06-0.17
PENTA 24N239C015	2.39	0.15	5.00	●	0.07-0.18
PENTA 24N247C020	2.47	0.20	5.00	●	0.08-0.20
PENTA 24N300C020	3.00	0.20	6.20	●	0.10-0.25
PENTA 24N300C040	3.00	0.40	6.20	●	0.10-0.25
PENTA 24N318C020	3.18	0.20	6.20	●	0.10-0.25

• (1)Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 416-422

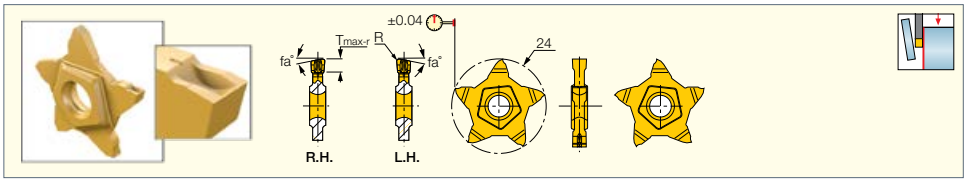
(1) For grooving and parting depths relative to part diameter, see page 411

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24R-C

Inserts with 5 Cutting Edges for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions W±0.02	R	fa°	Tmax-r	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R150C06D	1.50	0.06	6.0	5.00	●	0.03-0.10
PENTA 24R200C06D	2.00	0.10	6.0	6.00	●	0.04-0.12

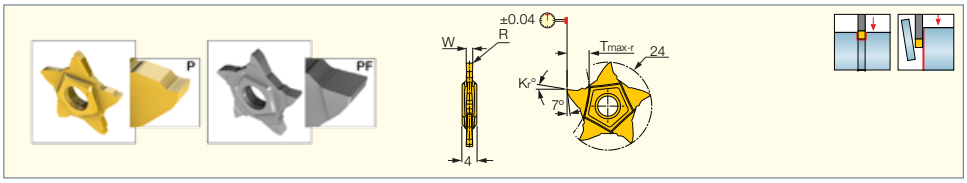
• For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-PF/P

Pentagonal Inserts with a High Positive Flat Rake for Parting and Precision Grooving



Designation	Dimensions W±0.02	R	R±toler	Tmax-r(1)	Kr°	Tough ↔ Hard IC1008	IC908	IC30N	Recommended Machining Data f groove (mm/rev)
PENTA 24N100P005	1.00	0.05	0.020	3.50	12.0	●			0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.020	4.00	6.0		●	●	0.03-0.06
PENTA 24N150P005	1.50	0.05	0.020	5.00	12.0	●			0.02-0.07
PENTA 24N150PF020	1.50	0.20	0.030	6.00	6.0		●	●	0.03-0.09
PENTA 24N185PF020	1.85	0.20	0.030	6.00	6.0			●	0.03-0.10
PENTA 24N200P005	2.00	0.05	0.020	6.00	12.0	●			0.02-0.08
PENTA 24N200PF020	2.00	0.20	0.030	6.50	6.0		●	●	0.04-0.10
PENTA 24N239PF015	2.39	0.15	0.030	6.50	6.0		●		0.04-0.14
PENTA 24N250PF020	2.50	0.20	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N300PF020	3.00	0.20	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N400PF020	4.00	0.20	0.030	6.50	6.0			●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 41

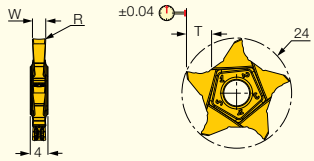
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 24N-Z

Inserts with 5 Cutting Edges for Grooving and Parting Tubes, Small and Thin-Walled Parts





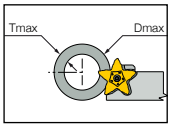
Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150Z010	1.50	0.10	5.00	●	0.05-0.08
PENTA 24N200Z020	2.00	0.20	6.40	●	0.04-0.12
PENTA 24N300Z020	3.00	0.20	6.40	●	0.04-0.16

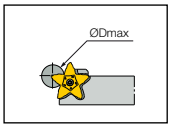
• Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds • For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 411

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts										
W±0.02	Tmax(3)	Tmax / Dmax	T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.5	T≤6.4
W=0.50 (1)	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-
W=0.50 (2)	2.5			250						
W=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-
W=1.00	3.5		N.L.	250	-	-	-	-	-	-
1.04≤W≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-
W=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-
W=1.50	5.0		N.L.	470	210	70	30	-	-	-
1.57≤W≤1.96	3.0		N.L.	-	-	-	-	-	-	-
W=2.00	6.0(4)		N.L.	470	210	130	75	45	20	-
2.22≤W≤2.30	3.5		N.L.	250	-	-	-	-	-	-
2.39≤W≤2.50	5.0		N.L.	470	210	70	30	-	-	-
2.70≤W≤3.18	6.4		N.L.	470	210	135	100	70	40	20





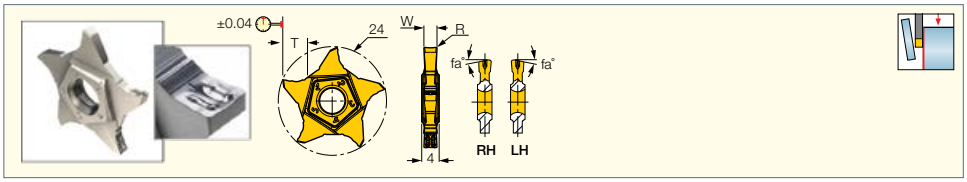
(1) Refers to PENTA 24N050J000 - a precision grooving insert (2) Refers to PENTA 24N050J004 - a parting insert (3) Dmax for parting = 2 x Tmax

(4) For full radius insert, Tmax = 3.0, Dmax = No limit

PENTACUT

PENTA 24R/L-Z

Inserts with 5 Cutting Edges for Parting Tubes, Small and Thin-Walled Parts

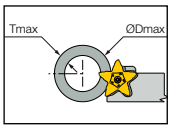


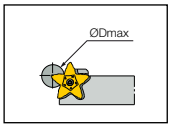
Designation	Dimensions W	fa°	R	D max	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R/L150Z06D	1.50	6.0	0.06	10.0	●	0.03-0.09
PENTA 24R/L150Z15D	1.50	15.0	0.06	10.0	●	0.03-0.08
PENTA 24R/L200Z06D	2.00	6.0	0.10	12.8	●	0.04-0.10
PENTA 24R/L200Z15D	2.00	15.0	0.10	12.8	●	0.04-0.09
PENTA 24R/L300Z06D	3.00	6.0	0.20	12.8	●	0.04-0.13
PENTA 24R/L300Z15D	3.00	15.0	0.20	12.8	●	0.04-0.12

• Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds • For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

W±0.02	Tmax(1)	Tmax / Dmax	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.0	T≤6.2	T≤6.4
W=0.50	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-	-
W=0.50	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-	-
W=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-	-
W=1.00	3.5		N.L.	250	-	-	-	-	-	-	-
1.04≤W≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-	-
W=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-	-
W=1.50	5.0		N.L.	470	210	70	30	-	-	-	-
1.57≤W≤1.96	3.0		N.L.	-	-	-	-	-	-	-	-
W=2.00	6.0(2)		N.L.	470	210	130	75	45	20	-	-
2.22≤W≤2.30	3.5		N.L.	250	-	-	-	-	-	-	-
2.39≤W≤2.50	5.0		N.L.	470	210	70	30	-	-	-	-
2.70≤W≤3.18	6.2		N.L.	470	210	135	100	70	40	20	-
3.19≤W≤3.74	6.4		N.L.	350	180	115	80	52	32	26	20
3.75≤W≤4.00	6.2		N.L.	350	180	115	80	62	32	18	-
4.01≤W≤4.23	6.2		N.L.	350	180	115	80	62	42	25	-





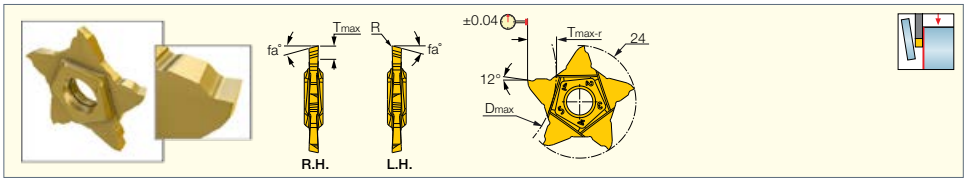
(1) Dmax for parting = 2 x Tmax

(2) For full radius insert , Tmax = 3.0, Dmax = No limit

PENTACUT

PENTA 24R-P

Inserts with 5 Cutting Edges for Parting Soft Materials, Thin Walls and Miniature Parts



Designation	Dimensions W±0.02	R	fa°	D max(1)	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R100P06D	1.00	0.05	6.0	7.2	•	0.02-0.04
PENTA 24R100P15D	1.00	0.05	15.0	7.2	•	0.02-0.03
PENTA 24R150P06D	1.50	0.05	6.0	11.0	•	0.02-0.05
PENTA 24R150P15D	1.50	0.05	15.0	11.0	•	0.02-0.04
PENTA 24R200P06D	2.00	0.05	6.0	12.6	•	0.02-0.07
PENTA 24R200P15D	2.00	0.05	15.0	12.6	•	0.02-0.05

• For cutting speed recommendations and user guide, see pages 416-422

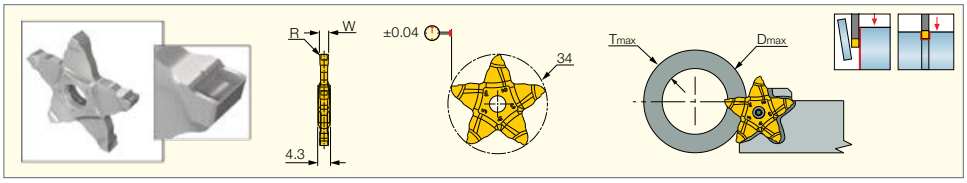
(1) For grooving and parting depths relative to part diameter, see page 411

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

PENTACUT

PENTA 34N-C

Inserts with 5 Cutting Edges for Parting and Grooving Hard Materials, Tough and General Applications



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150C015	1.50	0.15	8.00	•	0.03-0.07
PENTA 34N200C020	2.00	0.20	8.00	•	0.04-0.14
PENTA 34N200C100	2.00	1.00	8.00	•	0.05-0.16
PENTA 34N222C015	2.22	0.15	8.00	•	0.05-0.14
PENTA 34N230C020	2.30	0.20	8.00	•	0.05-0.14
PENTA 34N239C015	2.39	0.15	8.00	•	0.05-0.15
PENTA 34N239C120	2.39	1.20	8.00	•	0.05-0.18
PENTA 34N247C020	2.47	0.20	8.00	•	0.05-0.18
PENTA 34N250C020	2.50	0.20	8.00	•	0.05-0.18
PENTA 34N270C010	2.70	0.10	10.00	•	0.05-0.18
PENTA 34N287C020	2.87	0.20	10.00	•	0.05-0.18
PENTA 34N300C000	3.00	0.00	10.00	•	0.04-0.10
PENTA 34N300C020	3.00	0.20	10.00	•	0.06-0.22
PENTA 34N300C040	3.00	0.40	10.00	•	0.06-0.25
PENTA 34N300C150	3.00	1.50	10.00	•	0.06-0.20
PENTA 34N315C015	3.15	0.15	10.00	•	0.06-0.20
PENTA 34N318C020	3.18	0.20	10.00	•	0.06-0.22
PENTA 34N330C010	3.30	0.10	10.00	•	0.06-0.20
PENTA 34N348C020	3.48	0.20	10.00	•	0.06-0.25
PENTA 34N350C025	3.50	0.25	10.00	•	0.06-0.30
PENTA 34N398C020	3.98	0.20	10.00	•	0.06-0.30
PENTA 34N400C030	4.00	0.30	10.00	•	0.06-0.30

• For cutting speed recommendations and user guide, see pages 416-422

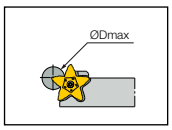
(1) For grooving and parting depths relative to part diameter, see page 411

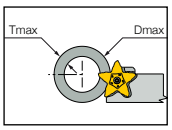
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts						
W±0.02	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤8.5	T≤9.0	T≤10.0
1.50 ≤ W ≤ 2.69	N.L.	350	165	100	55	-	-
2.70 ≤ W ≤ 4.00						55	20

Dmax for parting = 2 x Tmax

N.L. = No Limit



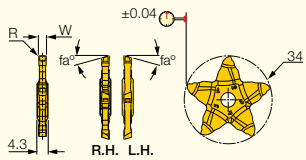


PENTACUT

PENTA 34R/L-C

Inserts with 5 Cutting Edges for Parting Hard Materials, Tough and General Applications





Designation	Dimensions W	R	D max(1)	fa°	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34R/L150C08D	1.50	0.07	18.0	8.0	•	0.03-0.08
PENTA 34R/L200C06D	2.00	0.10	18.0	6.0	•	0.04-0.12
PENTA 34R/L200C15D	2.00	0.10	18.0	15.0	•	0.04-0.10
PENTA 34R/L300C06D	3.00	0.20	20.0	6.0	•	0.04-0.14
PENTA 34R/L300C15D	3.00	0.20	20.0	15.0	•	0.04-0.10

• For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 412

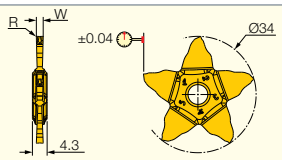
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

PENTACUT

PENTA 34N-J

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts





Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150J015	1.50	0.15	8.50	•	0.03-0.10
PENTA 34N200J020	2.00	0.20	8.50	•	0.04-0.12
PENTA 34N200J100	2.00	1.00	8.50	•	0.05-0.12
PENTA 34N239J015	2.39	0.15	8.50	•	0.04-0.16
PENTA 34N239J120	2.39	1.20	8.50	•	0.06-0.16
PENTA 34N250J020	2.50	0.20	8.50	•	0.04-0.16
PENTA 34N270J010	2.70	0.10	10.00	•	0.04-0.16
PENTA 34N300J000	3.00	0.00	10.00	•	0.04-0.10
PENTA 34N300J020	3.00	0.20	10.00	•	0.04-0.16
PENTA 34N300J040	3.00	0.40	10.00	•	0.04-0.16
PENTA 34N300J150	3.00	1.50	10.00	•	0.06-0.20
PENTA 34N318J020	3.18	0.20	3.18	•	0.20-0.16

• Recessing is possible only with 2.39 mm and wider inserts. • For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 412

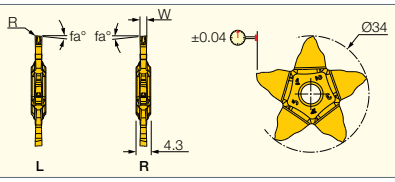
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

PENTACUT

PENTA 34R/L-J

Inserts with 5 Cutting Edges for Parting Tubes, Small and Thin-Walled Parts





Designation	Dimensions W±0.02	R	fa°	D max(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34R/L150J06D	1.50	0.07	6.0	18.0	●	0.03-0.09
PENTA 34R/L150J15D	1.50	0.07	15.0	18.0	●	0.03-0.08
PENTA 34R/L200J06D	2.00	0.10	6.0	18.0	●	0.04-0.10
PENTA 34R/L200J15D	2.00	0.10	15.0	18.0	●	0.04-0.09

• For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 412

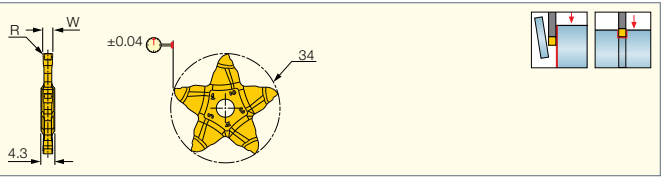
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

PENTACUT

PENTA 34N-PB

Parting and Grooving Pentagonal Inserts for Parting Bearing Steel and Other Ductile Materials





Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150PB015	1.50	0.15	8.50	●	0.03-0.06
PENTA 34N200PB020	2.00	0.20	8.50	●	0.03-0.08
PENTA 34N300PB020	3.00	0.20	9.50	●	0.03-0.10

• For cutting speed recommendations and user guide, see pages 416-422

(1) For grooving and parting depths relative to part diameter, see page 412

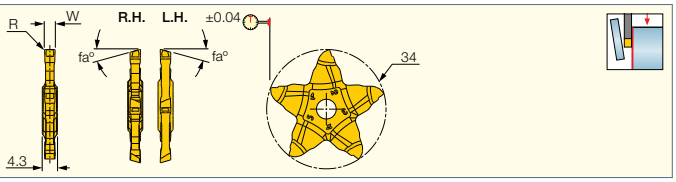
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

PENTACUT

PENTA 34R/L-PB

Pentagonal Inserts for Parting Bearing Steel and other Ductile Materials



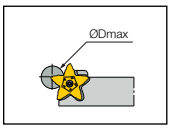


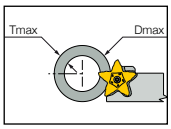
Designation	Dimensions W	R	D max	fa°	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34R/L150PB-6D	1.50	0.07	18.0	6.0	●	0.03-0.05
PENTA 34R/L200PB-6D	2.00	0.10	18.0	6.0	●	0.03-0.06
PENTA 34R/L300PB-6D	3.00	0.20	20.0	6.0	●	0.03-0.08

• For cutting speed recommendations and user guide, see pages 416-422

For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)

W±0.02	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤8.5	T≤9.0	T≤10.0
1.50 ≤ W ≤ 2.69	N.L.	350	165	100	55	-	-
2.70 ≤ W ≤ 4.00						55	20



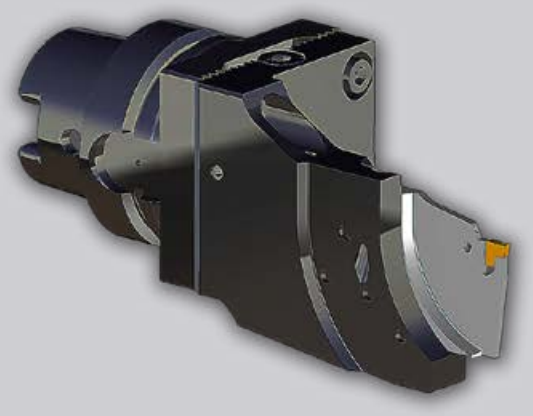


Dmax for parting = 2 x Tmax

N.L. = No Limit

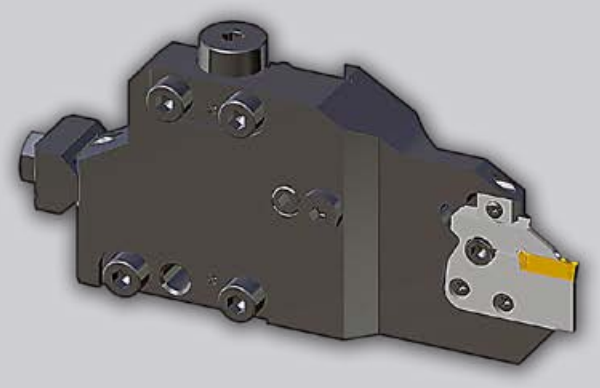
MODULAR GRIP ADAPTATIONS

Modular Adaptations Systems for
Turning Lathes and Multi-Spindle
Machine Tools Carrying ISCAR's
MODULAR-GRIP Adapters Featuring
Directed Internal Coolant Channels



Product Features

- The unique combination of a rigid tool and efficient coolant improves the insert's tool life, surface finish and part straightness
- Designed for high-pressure coolant up to 340 bars and **also very efficient when using low** coolant pressure of 7-10 bars
- No coolant tubes involved, which means no obstruction for chip evacuation
- Each adapter can carry several types of **MODULAR-GRIP** blades
- Excellent tool location repeatability after blade replacement for fast set-up
- Easy and user-friendly mounting



Available adapters for the following specific machines:

- STAR
- DOOSAN
- MAZAK
- MORI SEIKI
- BIGLIA
- MIYANO
- NAKAMURA-Tom
- INDEX ABC
- TRAUB

Multi-Spindle machine tools

- INDEX CNC
- SCHÜTTE
- Göltenbodt





Please contact an ISCAR representative for a detailed products brochure

Machining Data

ISO	Material		Condition	Tensile Strength [N/mm²]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
	Stainless steel and cast steel		Ferritic/martensitic	680	200	12
			Martensitic	820	240	13
M	Stainless steel		Austenitic	600	180	14
K	Cast iron nodular (GGG)		Ferritic/pearlitic		180	15
			Pearlitic		260	16
	Grey cast iron (GG)		Ferritic		160	17
			Pearlitic		250	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum-wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium Ti alloys			RM 400		36
			Alpha+beta alloys cured	RM 1050		37
H	Hardened steel		Hardened		55 HRC	38
			Hardened		60 HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron		Hardened		55 HRC	41

Parting Speed Recommendations

Material No.	IC907/807	IC30N	IC354	IC908/808/1008	IC5400	IC830/928/1028	IC328
1	160 - 240	130 - 190	115 - 170	135 - 200	110 - 160	100 - 150	95 - 140
2	150 - 205	120 - 160	105 - 145	125 - 170	100 - 135	95 - 125	85 - 120
3	115 - 170	90 - 135	80 - 120	95 - 140	75 - 110	70 - 105	65 - 100
4	125 - 190	100 - 150	90 - 135	105 - 160	85 - 130	80 - 120	75 - 110
5	100 - 160	80 - 130	70 - 115	85 - 135	70 - 110	65 - 100	60 - 95
6	125 - 190	100 - 150	90 - 135	105 - 160	85 - 130	80 - 120	75 - 110
7	100 - 170	80 - 135	70 - 120	85 - 140	70 - 110	65 - 105	60 - 100
8	100 - 160	80 - 130	70 - 115	85 - 135	70 - 110	65 - 100	60 - 95
9	90 - 150	70 - 120	65 - 105	75 - 125	60 - 100	55 - 95	50 - 85
10	150 - 205	120 - 160	105 - 145	125 - 170	100 - 135	95 - 125	85 - 120
11	90 - 150	70 - 120	65 - 105	75 - 125	60 - 100	55 - 95	50 - 85

	IC20N	IC907/807	IC808	IC908	IC5400	IC830/928/1028	IC328
12	170 - 300	115 - 210	110 - 200	105 - 190	85 - 150	80 - 140	75 - 135
13	150 - 290	105 - 200	100 - 190	95 - 180	75 - 145	70 - 135	65 - 125

	IC20N	IC907/807	IC808	IC908	IC5400	IC830/928/1028	IC328
14	140 - 260	95 - 175	90 - 170	85 - 160	70 - 130	65 - 120	60 - 110

	IC907/807	IC808	IC908	IC20			
15	170 - 305	145 - 270	140 - 255	70 - 125			
16	150 - 215	130 - 190	125 - 180	60 - 90			
17	160 - 265	140 - 230	135 - 220	65 - 110			
18	125 - 205	110 - 180	105 - 170	50 - 85			
19	190 - 320	170 - 280	160 - 265	80 - 130			
20	160 - 265	140 - 230	135 - 220	65 - 110			

	IC907/807	IC908/808	IC20				
21	360 - 1080	330 - 990	300 - 900				
22	270 - 900	250 - 825	225 - 750				
23	270 - 900	250 - 825	225 - 750				
24	180 - 540	165 - 495	150 - 450				
25	180 - 360	165 - 330	150 - 300				
26	180 - 360	165 - 330	150 - 300				
27	130 - 270	120 - 250	110 - 225				
28	90 - 180	80 - 165	75 - 150				
29	40 - 180	40 - 165	35 - 150				

	IC807	IC907	IC908	IC808	IC830/328/928/1028	IC20	
31	50 - 70	45 - 70	40 - 60	40 - 65	30 - 45	30 - 40	
32	35 - 55	35 - 50	30 - 45	30 - 45	20 - 35	20 - 30	
33	35 - 55	35 - 50	30 - 45	30 - 45	20 - 35	20 - 30	
34	30 - 50	30 - 45	25 - 40	25 - 40	20 - 30	15 - 30	
35	25 - 35	25 - 35	20 - 30	20 - 30	15 - 20	15 - 20	
36	115 - 190	110 - 185	95 - 160	100 - 170	70 - 120	65 - 110	
37	40 - 50	40 - 50	35 - 45	35 - 45	30 - 40	40 - 50	

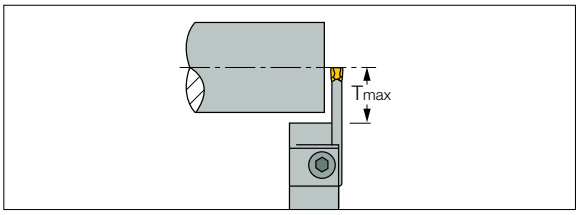
	IC807	IC907	IC808	IC908			
38	35-45	30-40	30-40	25-35			
39	30-40	25-35	25-35	20-30			
40	45-65	40-60	40-60	30-50			
41	40-50	35-45	35-45	30-40			

Parting and Grooving

Selection of Inserts
For a proper match of insert and cutting material to application, the following variables must be taken into consideration:
- Width of cut (width of insert)
- Chipformer style
- Lead angle
- Corner radius
- Carbide grade

Width of Cut (W.O.C.) and Depth of Cut (D.O.C.)
In selecting **W.O.C.**, the main factor to consider is the required **D.O.C**. The ratio **D.O.C.**≈ 8x**W.O.C**. is of practical use on alloy steel of average machinability.
For example, applying a 3 mm **W.O.C**. insert **TAG N3C** to cut-off a 48 mm solid bar.
Additional factors which affect **D.O.C**. capacity, relative to the ratio, are:

Holder or Blade Size
To minimize risk of vibration and deflection always choose:
- Blade or toolholder with smallest possible overhang.
- Toolholder with maximum shank dimension.
- Blade height (B) dimension which is larger than Tmax.
- Blade or holder with maximum blade width (largest possible insert seat size).
- Example:
- **A W.O.C.** 9.5 mm on blade TGFH 53K-9 (B=52.6 mm) extends the ratio of D.O.C. to W.O.C. by some 50% to 120 mm.



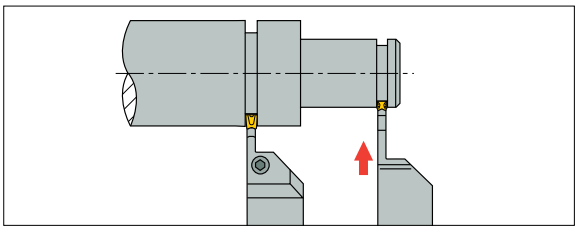
Insert Support
A self-clamped tool is recommended for deep radial machining.
A screw-clamp holder is recommended for axial and small **D.O.C**. machining.

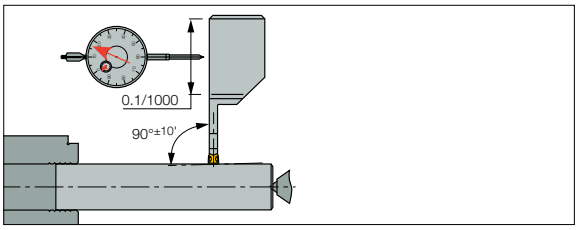
90˚ Mounting
It is very important that the insert is mounted at 90º to the center line of the workpiece in order to obtain perpendicular surfaces and reduce the risk of vibration.

Workpiece Machinability
The workpiece material affects all of the above factors.

Machine Power and Setup Rigidity
Excessive **W.O.C**. on a light-duty machine will yield vibration and may even stop spindle rotation.

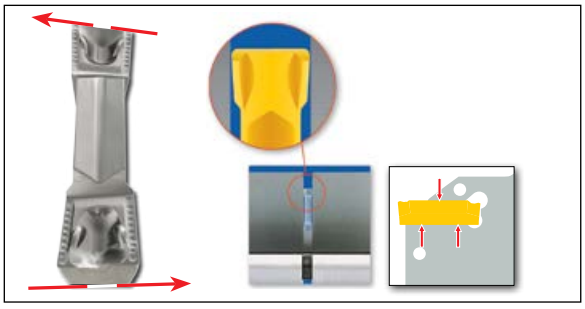
Expensive Workpiece Material
On costly metals the narrowest applicable **W.O.C**. should be used.



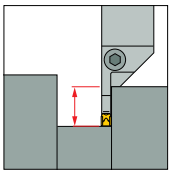


Insert Positioning

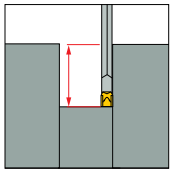
The Twisted Insert for Cut-Off and Grooving Applications
Machining depths longer than insert length is made possible with the double-ended, twisted insert body. The rear edge is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface when the tool penetrates deeply into the workpiece.



Clamping
Extended, prismatic surfaces guarantee reliable, foolproof clamping even in unstable machining conditions.



Screw-Clamping
Small diameters (D.O.C.) with screw-clamped Inserts



Self-Clamping
Large diameters (D.O.C.) with self-clamped Inserts

Setup

- The optimal cutting edge height above the center of **TANG-GRIP** tools is up to 0.08 mm + 0.025 mm **W.O.C.**, an advantage when cutting solid bar to center
- Cut-off as close to chuck as possible
- On new applications, first machine in the low or middle range of recommended speeds and feeds

Machining

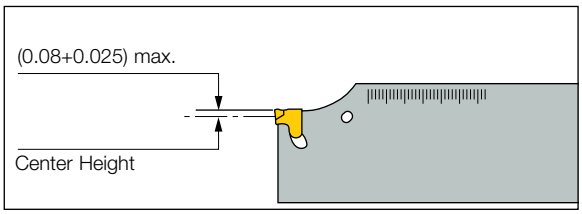
- Consistency of speed and feed improves performance
- Apply coolant abundantly
- Secure inserts into clean pockets
- Cutting forces on soft workpiece materials may be insufficient to push insert well into pocket. Tap insert into place using a plastic hammer
- On a conventional lathe, lock the carriage to prevent axial motion during cut-off

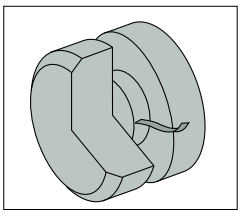
Usage

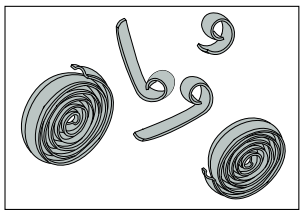
- Replace worn inserts promptly, the price of a new one is much less than the risk of damage from continuing with one that is worn out
- Replace blades that have worn or damaged pockets
- Never try to repair damaged pockets
- Chip curling is dependent on the chipformer type and the machining conditions

Chipformer Features

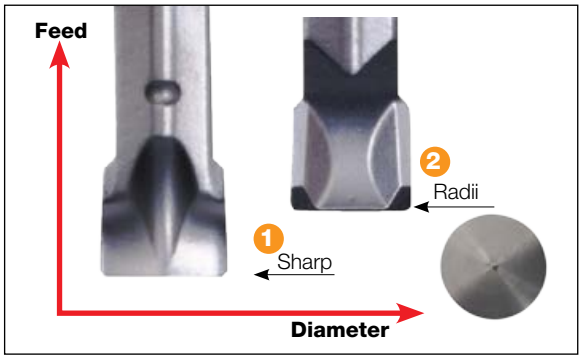
- Narrows the chip
- Eliminates friction with groove walls, prevents chip jam overload
- Permits higher feeds
- Produces unscratched surfaces, eliminating additional facing
- Curls the chips into compact spirals for easy disposal







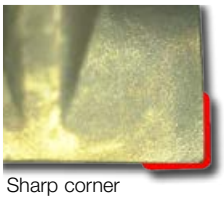
Selection of Corner Radius



1. A smaller corner radius (r) will reduce the load on the workpiece and produce a smaller size burr
2. At the same time, a large corner radius allows for higher feeds and increased tool life

"S" Sharp Corners





Sharp corner

JS/P

- Cutting edge with positive rake and sharp corners
- When a minimum burr (pip) size is essential
- For small feeds
- For small diameters or thin walls
- For CNCs, multi-spindle and screw machines



P **JS**

Standard Corner Radius





Medium (standard) corner radius

- Standard medium corner size
- For general applications and materials



"B" Large Corner Radius





Large corner radius

- Reinforced corners with stronger cutting edge
- For tough applications and interrupted cuts

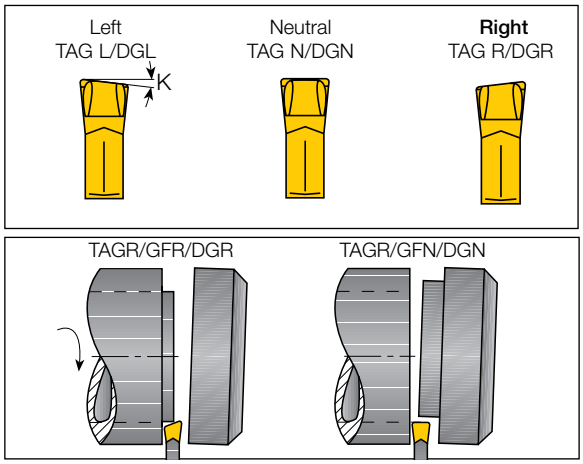


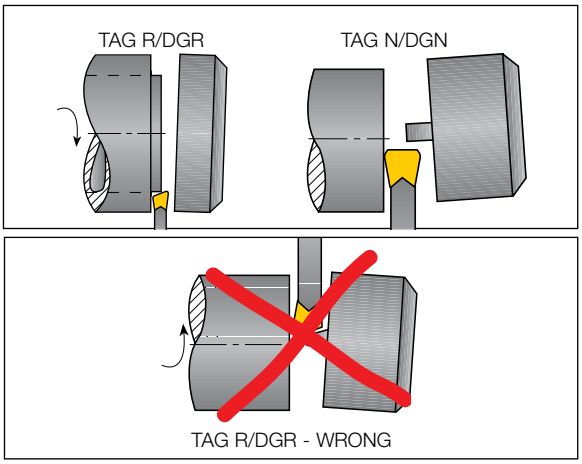
Lead Angle

Lead angle (K) on cut-off inserts reduces size of burr remaining on workpiece. Increasing the lead angle reduces the burr, but also reduces possible feed rates and tool life.
Therefore, neutral inserts are recommended for parts on which a burr is tolerated.

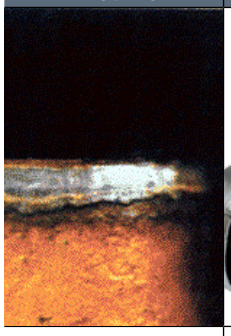
Insert designations such as **TAG R... DGR** (**R.H**.) and **TAG L... DGL** (**L.H**.) comply with standard terms for turning direction. When looking toward the chuck from the workpiece, **R.H**.=counterclockwise (**C.C**.) rotation of workpiece and **L.H**.=clockwise (C) rotation of workpiece. **C.C**. requires right-hand inserts; C requires left-hand inserts.

A neutral insert with 0° lead angle increases **D.O.C**. capacity.





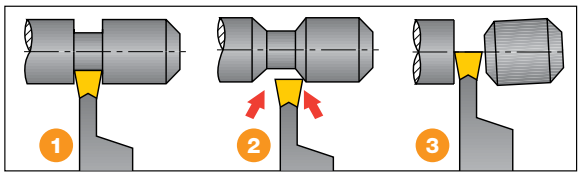
Neutral Insert vs. Lead Angle Type

Lifetime	Chip Control	Burr Size	Surface Finish	Part Straaightness	
					
✔	✔		✔	✔	
		✔			

General Rules for Specific Applications

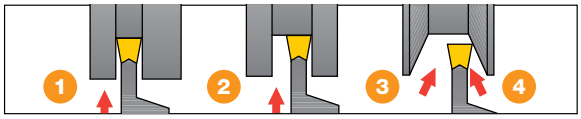
Chamfer and Cut-Off

1. Break in and/or groove
2. Chamfer
3. Cut-off



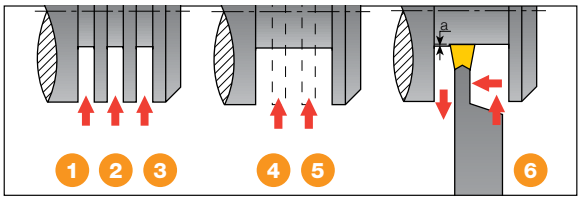
V-Belt Pulley Grooves

1. Break in
2. Multiple plunge to depth at minor width of groove
3-4. Bevel, plunge and turn to minor diameter



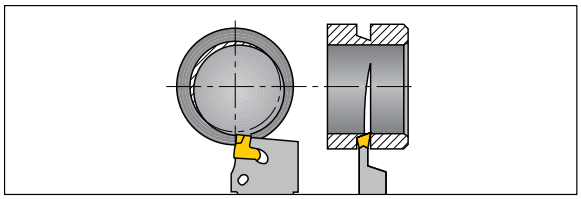
Neck Recessing

5. Multiple plunge grooves
6. Necking On neck turning, DOC (a)=up to size of insert corner radius



Cut-Off on Eccentric Tubes

Inserts with 4° lead angle are usually recommended for tubes. However, the combination of eccentric bore and machine resiliency may increase feed-snap on breakthrough and damage the cutting edge. Changing to 6° lead angle inserts will moderate breakthrough. Alternatively, inserts with an extra negative rake-land that strengthens the cutting edge are available on request.



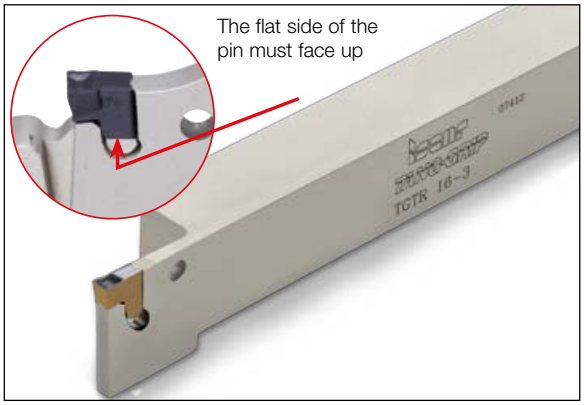
Clamping / Extraction Instructions

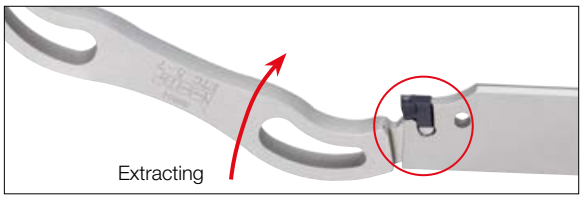
The tools are equipped with a user-friendly clamping and extraction device

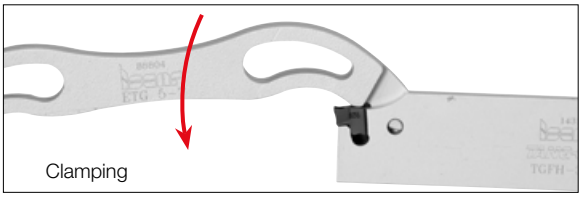
TANG-GRIP PARTING LINE

ETG 5-7 (for 5-7 mm tools)
ETG 2 (for 2 mm tools)
ETG 1.4 (for 1.4 mm tools)
ETG 8-12 Extractor for 8 to 12.7 mm Inserts

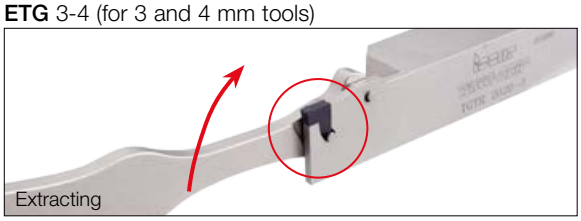








ETG 3-4 (for 3 and 4 mm tools)



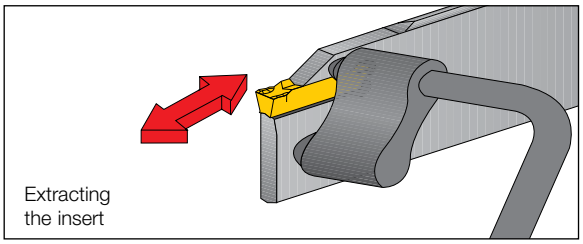


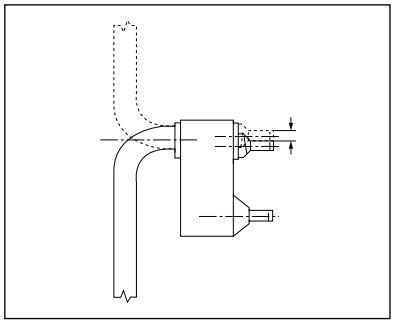
Clamping / Extraction Instructions

DO-GRIP

Extractor for DGN/R/L Double-Ended Inserts
DO-GRIP Insert Clamping/Extracting

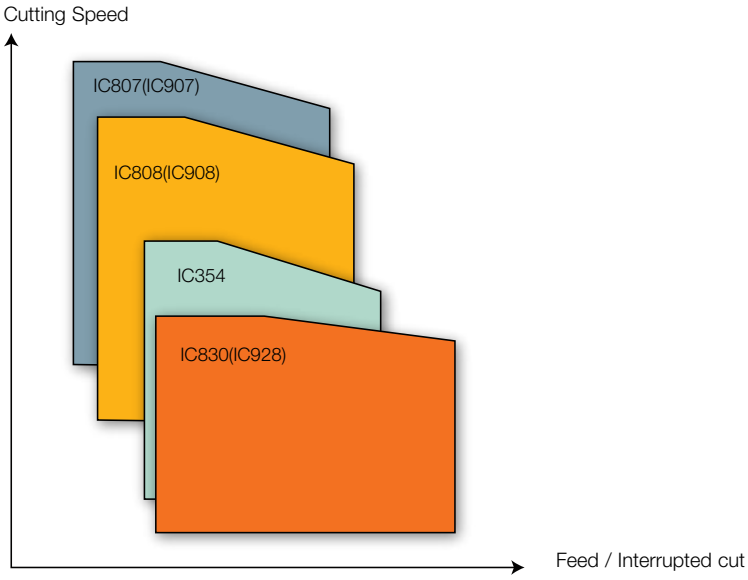






Extractor and Insert Replacement
The Eccentric Extractor
Simple to operate; controlled rotation requires low force; guarantees limited upper jaw movement and secures maximum load on blade.

Grade Application Range

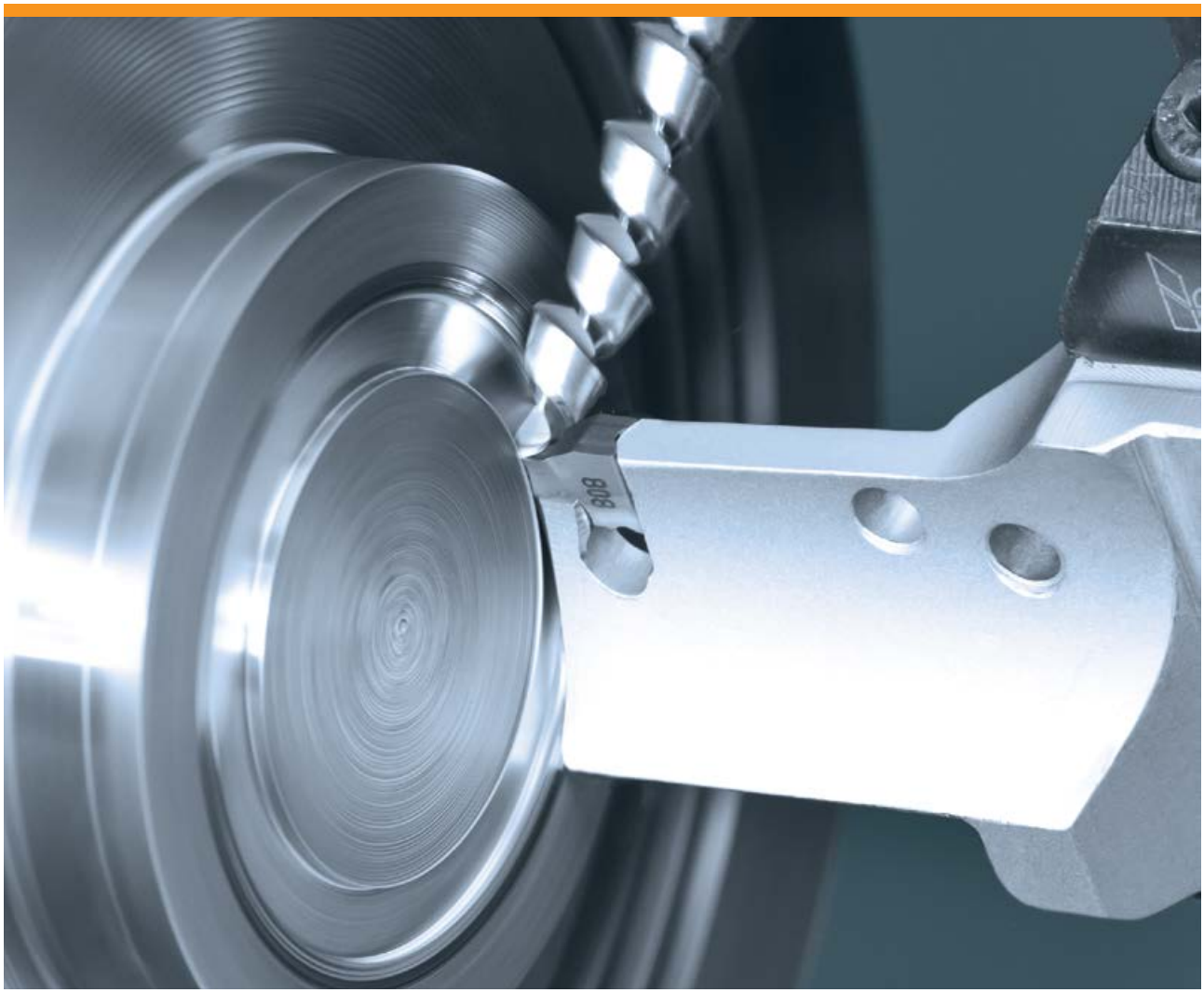


Selection Guide for Parting Grades

Material groups		ISO P 1-11 Steel	ISO P 12-13 Stainless Steel Ferritic & Martensitic	ISO M 14 Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	ISO K 15-20 Cast Iron	ISO N 21-28 Non-ferrous	ISO S 31-37 High Temperature Alloys	ISO H 38-41 Hard Steel & Cast Iron
PARTING	Harder	IC807 (IC907)	IC807 (IC907)	IC807 (IC907)		IC20	IC807 (IC907)	IC807 (IC907)
			IC808 (IC908)	IC808 (IC908)	IC807 (IC907)		IC20	
		IC808 (IC908)			IC20		IC808 (IC908)	IC808 (IC908)
			IC5400	IC5400	IC808 (IC908)			
	Tougher	IC830	IC830	IC830			IC830 (IC928)	

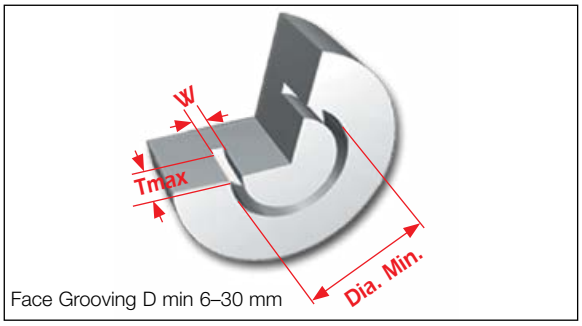
First choice

FACE GROOVING AND TURNING

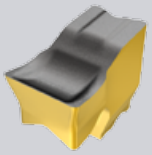


Selection Guide **424**
Tools and Inserts **431**
PICCO-CUT 431
CHAMGROOVE 433
MINCUT 434
HELI-FACE and HELI-GRIP 435
CUT-GRIP 450
TANG-GRIP 454
SELF-GRIP 456
PENTACUT 458
User Guide **460**

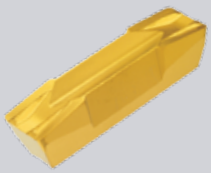
A Variety of Inserts for Face Machining Applications



Face Grooving D min 6–30 mm

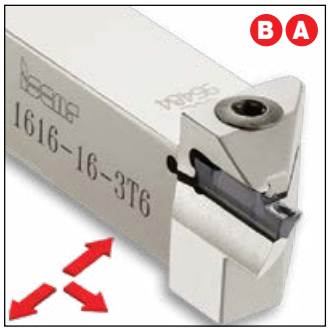
		D min	D max	W min	W max	T max	Page
PICCO		6	_	1	3	30	431-433
MIFR		8	30	1.5	3.5	9	434
GFQR		12	19	1	2.5	3	433
HGPL		12	∞	3	6	∞	449
GRIP		12	∞	3	6	∞	448-449
DGN		21	∞	4	6	∞	380-381
TNF		30	700	3	6	∞	455
HFPN		27	130	2	2	14	447

Face Grooving D min 24–80 mm

		D min	D max	W min	W max	T max	Page
HFPR/L		24	∞	3	6	∞	447-448
PENTA 34F		22	∞	2.39	4	5	458-459
GDMY/N		50	∞	8	8	25	246, 453
GIF 8		80	∞	8	8	25	452
GIFG 8		50	∞	8	8	25	452
GIMM 8CC		80	∞	7	8	∞	454
GDMM CC		50	∞	8	8	∞	454

HELIFACE

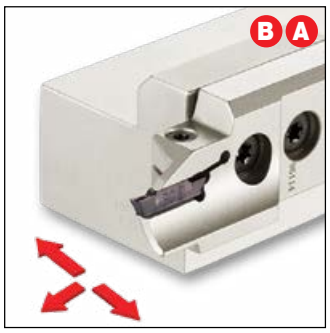
Small Diameter
Face Machining Systems



Tool: HGHR/L see page 436
Insert: GRIP... / HGPL...

W = 3 mm
Tmax = 6 mm
Min. dia. = 12 mm

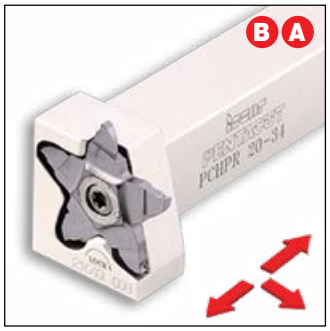
Integral shank toolholder which uses double-ended 3 mm inserts. Used for face grooving and face turning of small parts for 12 mm minimum groove diameter.



Tool: HGAER/L... (adapter) see page 440
Tool: HFAER/L... (adapter) see page 440-441
Insert: HFPR/L...

W = 3-6 mm
Tmax = 32 mm
Min. dia. = 12 mm

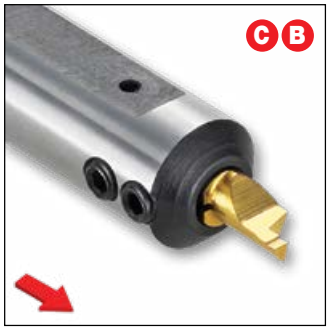
Exchangeable external adapters. Used with HELIFACE and GRIP inserts for deep face machining.



Tool: PCHPR/L see page 459
Insert: PENTA 34F...

W = 2.39-4 mm
Tmax = 5 mm
Min. dia. = 22 mm

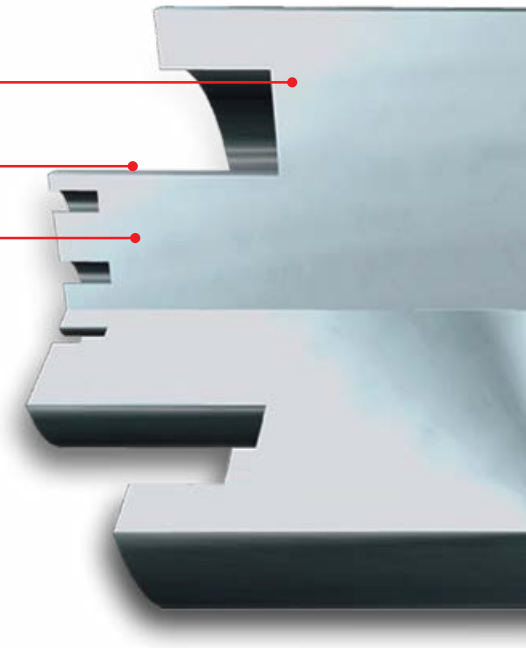
Pentagonal insert for face grooving and recessing up to 5 mm depth of cut at a minimum of 22 mm diameter.



Tool: PICCO R010 see pages 431

W = 1-3 mm
Tmax = 6 mm
Min. dia. = 6 mm

Small solid carbide bars for machining shallow grooves from 6 mm minimum diameter.





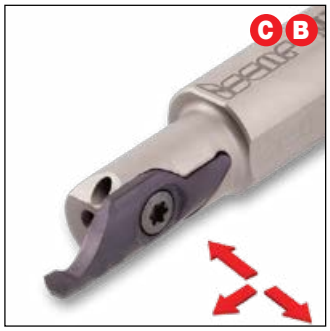
Tool: PICCO R015 see page 432

W = 2.5-3 mm

Tmax = 30 mm

Min. dia. = 15 mm

Small solid carbide bars for machining deep face grooves of up to 30 and 15 mm minimum diameter.



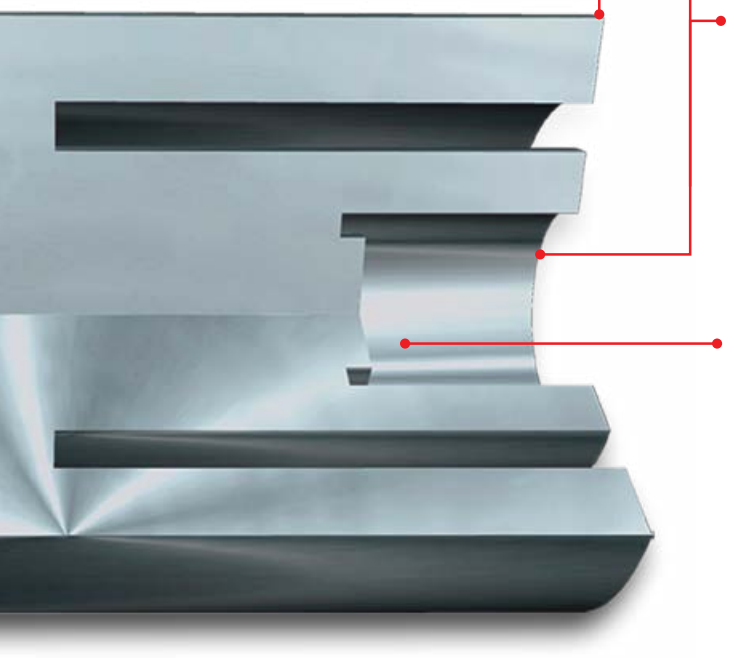
Tool: MIFHR ... see page 434
Insert: MIFR ...

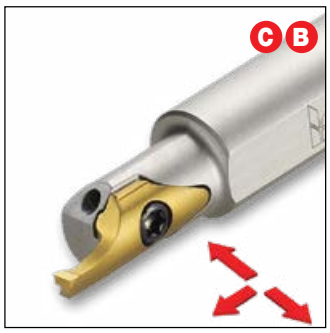
W = 2-3 mm

Tmax = 9 mm

Min. dia. = 10 mm

MINCUT - A family of internal face grooving and face turning tools for machining small diameters ranging from 10-34 mm.
Strong and stable tangential pocket with internal coolant.





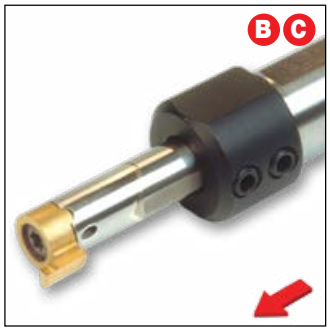
Tool: MIFHR ... see page 434
Insert: MIFR ...

W = 1.5-3 mm

Tmax = 5.5 mm

Min. dia. = 8 mm

MINCUT - A family of internal face grooving and face turning tools for machining small diameters ranging from 8-17 mm.
Strong and stable tangential pocket with internal coolant.



Tool: MGCH 09C see page 433
Insert: GFQR...

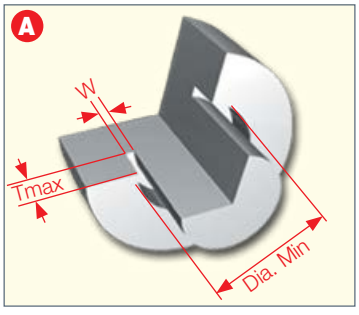
W = 1-2.5 mm

Tmax = 3 mm

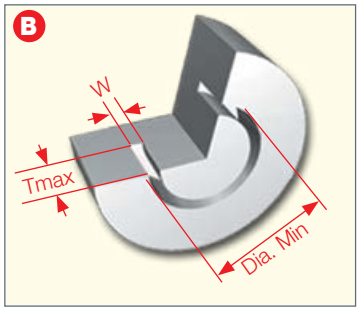
Min. dia. = 12 mm

A screw-clamped insert on an internal coolant solid carbide bar.
Used for machining shallow grooves from 12 mm minimum diameter.

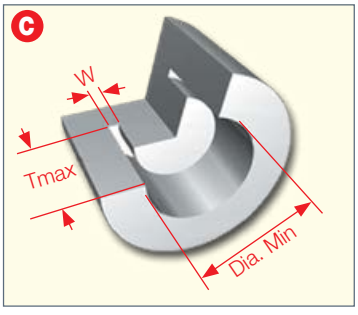
Main Applications



Grooving Next to a Shaft



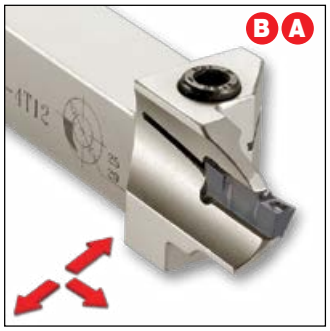
External Grooving



Internal Grooving

HELIFACE

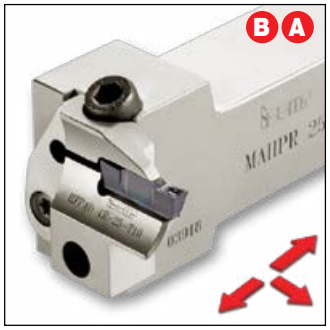
Medium Diameter
Face Machining Systems



Tool: HFHR/L... see pages 436-438
Insert: HFPR/L...

W = 3-6 mm
Tmax = 32 mm
Min. dia. = 25 mm

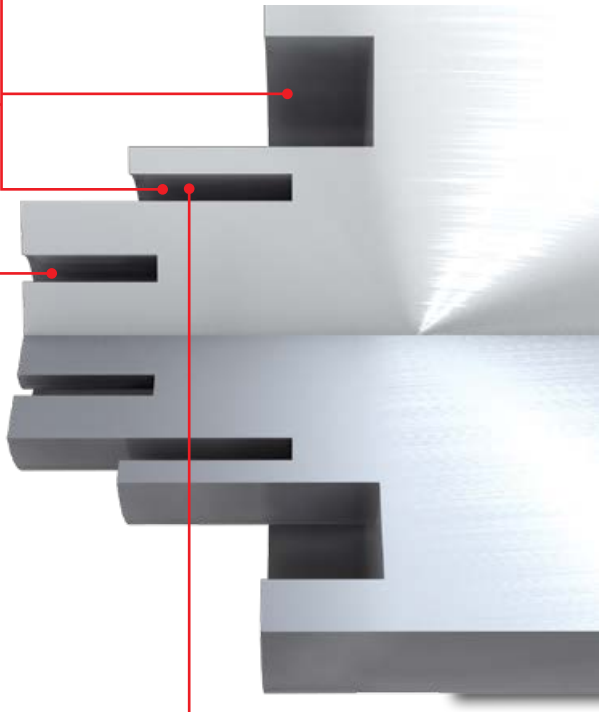
Integral shank toolholders carrying HELIFACE and GRIP inserts.
For deep face grooving and side face turning.

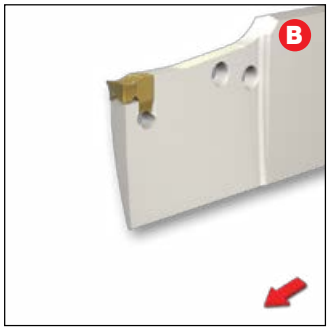


Tool: HFPAD... (adapter) see pages 438-439
Insert: HFPR/L...

W = 3-6 mm
Tmax = 22 mm
Min. dia. = 25 mm

Slanted, screw-clamped adapter carrying HELIFACE and GRIP inserts.
A part of the MODULAR-GRIP system.
Very rigid, for tough face operations.

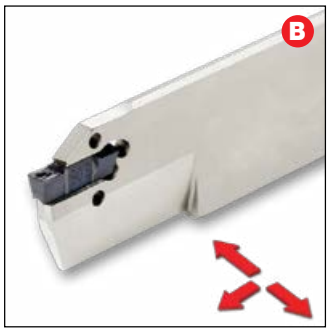




Tool: TNFFH see page 454
Insert: TNF 3-6C...

W = 3-6 mm
Tmax = 32 mm
Min. dia. = 30 mm

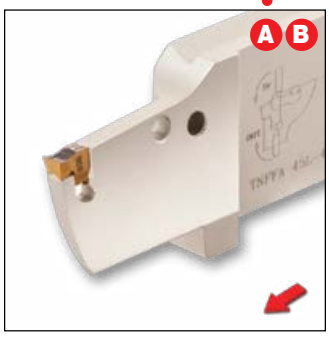
Adapter and blade toolholders carrying TNF 3-6C inserts.
For deep face grooving.



Tool: HFFR/L... see page 439
Insert: HFPR/L...

W = 4-6 mm
Tmax = 38 mm
Min. dia. = 48 mm

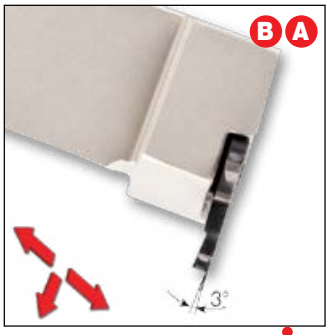
Economical, double-ended blades carrying HELIFACE and GRIP inserts.
Recommended for deep face grooving and face turning to a maximum depth of 38 mm.



Tool: TNFFA see page 455
Insert: TNF 3-6C...

W = 3-6 mm
Tmax = 32 mm
Min. dia. = 30 mm

Reinforced blades carrying TNF 3-6C inserts. Recommended for face grooving only.
Can machine along a shaft.
Excellent chip evacuation.



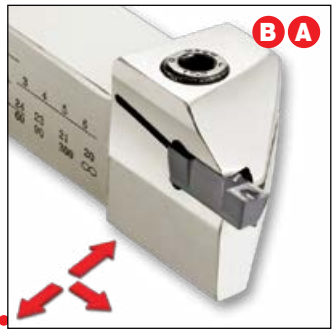
Tool: PCHPRS/LS see page 459
Insert: PENTA 34F-RS/LS...

W = 2.39-4 mm

Tmax = 5 mm

Min. dia. = 22 mm

Pentagonal insert for face grooving and recessing next to shoulders up to 5 mm depth of cut at a minimum of 22 mm diameter.



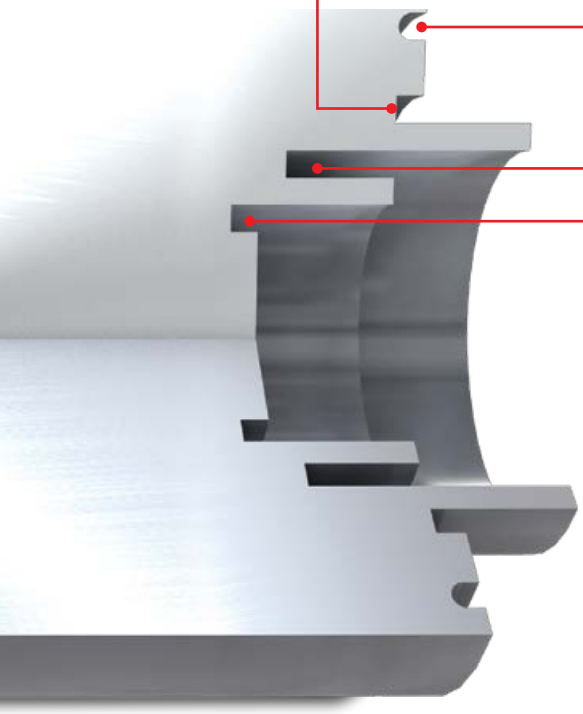
Tool: HFHR/L..-M see page 442
Insert: HFPR/L...

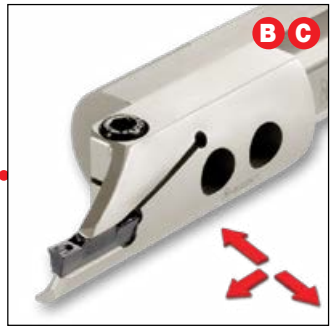
W = 3-6 mm

Tmax = 5 mm

Min. dia. = 20 mm

Integral toolholders carrying HELIFACE and GRIP inserts. For machining up to 5 mm depth of cut. 3-6 mm wide inserts can be mounted in the same pocket.





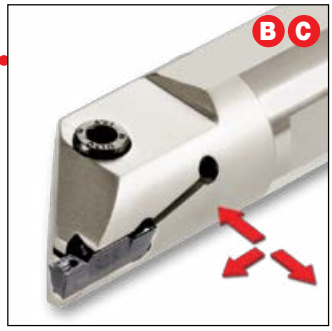
Tool: HFAIR/L...& HGAIR/L (adapter) see pages 444-445
Insert: HFPR/L...

W = 3-6 mm

Tmax = 12 mm

Min. dia. = 32 mm

Exchangeable, internal coolant adapters carrying HELIFACE and GRIP inserts. Recommended for deep internal face machining.



Tool: HFIR/L..-MC see page 446
Insert: HFPR/L...

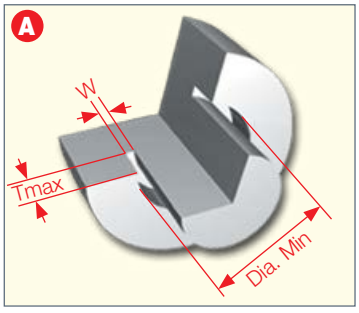
W = 3-6 mm

Tmax = 5 mm

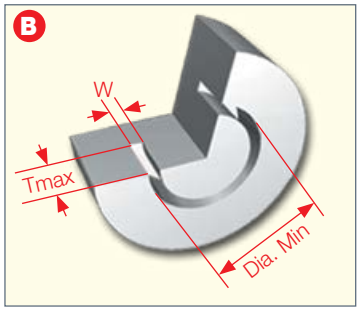
Min. dia. = 20 mm

Boring bars for shallow face machining of up to 5 mm depth carrying HELIFACE and GRIP inserts. Internal coolant. 3-6 mm width inserts can be mounted on the same pocket.

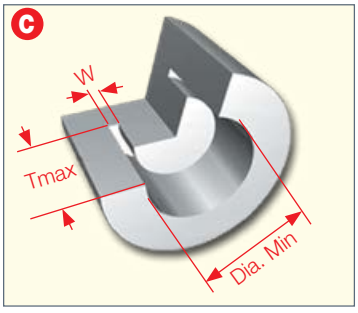
Main Applications



Grooving Next to a Shaft

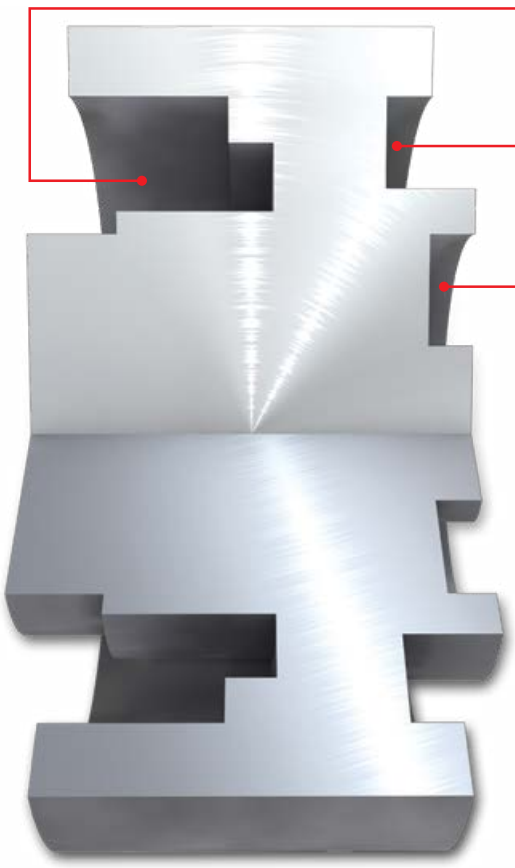


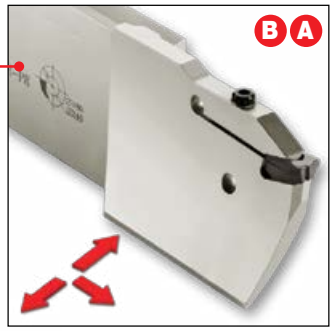
External Grooving



Internal Grooving

Large Diameter
Face Machining Systems





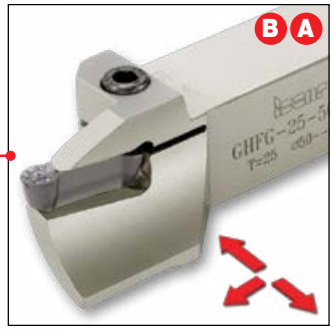
Tool: CGFG 51-..R/L-P8
see page 452
Insert: GIMY 8...

W = 8 mm

Tmax = 120 mm

Min. dia. = 180 mm

Blades carrying 8 mm single-ended CUT-GRIP inserts. Can machine up to 120 mm depth next to a shaft. Used for large diameters.



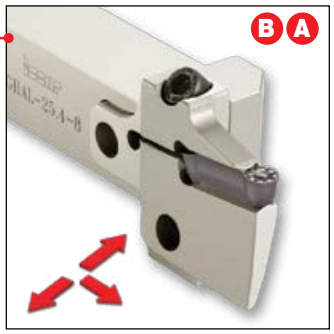
Tool: GHFG ..R/L-8 **see page 450**
Insert: GDMY 8..

W = 8 mm

Tmax = 25 mm

Min. dia. = 50 mm

Integral toolholders carrying 8 mm CUT-GRIP inserts. For heavy machining of medium and large parts. Can machine next to a shaft of up to 25 mm depth.



Tool: GAFG ..R/L-8 (adapter) **see page 451**
Insert: GDMM 8CC

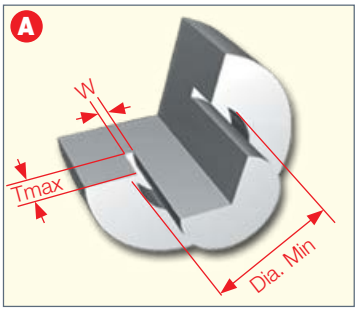
W = 8 mm

Tmax = 25 mm

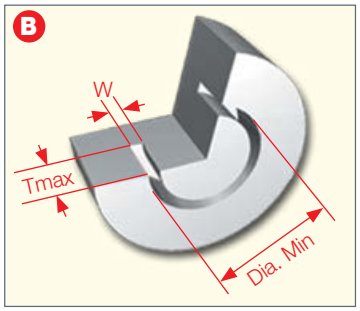
Min. dia. = 80 mm

Exchangeable adapters carrying 8 mm CUT-GRIP inserts. Can machine up to 25 mm depth next to a shaft.
For heavy machining of medium and large parts.

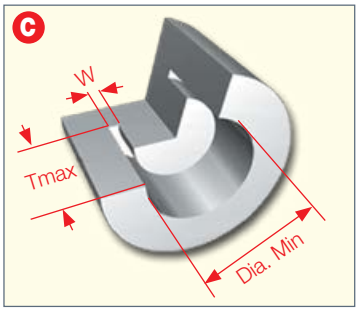
Main Applications



Grooving Next to a Shaft



External Grooving

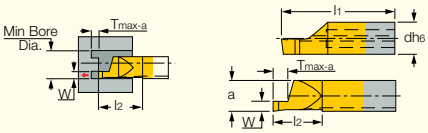


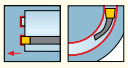
Internal Grooving

PICCOCUT

PICCO-010/610
(face grooving)
Inserts for Face Grooving







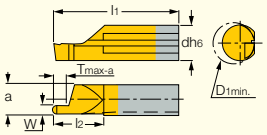
Right-hand shown

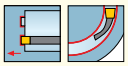
Designation	Dimensions							IC228	Recommended Machining Data
	$D_{1\ min}$	W	T_{max-a}	d	a	l_2	l_1		f face-groove (mm/rev)
PICCO R 010.1006-10	6.0	1.00	1.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 010.1506-10	6.0	1.50	2.00	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 010.1008-10	8.0	1.00	1.50	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 010.1008-20	8.0	1.00	1.50	7.00	5.90	21.0	35.00	●	0.01-0.04
PICCO R 010.1008-30	8.0	1.00	1.50	7.00	5.90	30.0	45.00	●	0.01-0.04
PICCO R 610.1008-10	8.0	1.00	1.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 610.1008-20	8.0	1.00	1.50	6.00	5.20	20.0	35.00	●	0.01-0.04
PICCO R/L 010.1508-20	8.0	1.50	2.50	7.00	5.90	21.0	35.00	●	0.01-0.04
PICCO R/L 010.1508-30	8.0	1.50	2.50	7.00	5.90	30.0	45.00	●	0.01-0.04
PICCO R 010.1508-10	8.0	1.50	2.50	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 610.1508-10	8.0	1.50	2.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 610.1508-20	8.0	1.50	2.50	6.00	5.20	20.0	35.00	●	0.01-0.04
PICCO R/L 010.2008-30	8.0	2.00	3.00	7.00	5.90	30.0	45.00	●	0.02-0.05
PICCO R 010.2008-10	8.0	2.00	3.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2008-20	8.0	2.00	3.00	7.00	5.90	21.0	35.00	●	0.02-0.05
PICCO R 610.2008-10	8.0	2.00	3.00	6.00	5.20	11.0	26.00	●	0.02-0.05
PICCO R 610.2008-20	8.0	2.00	3.00	6.00	5.20	20.0	35.00	●	0.02-0.05
PICCO R 010.2508-10	8.0	2.50	3.50	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2508-20	8.0	2.50	3.50	7.00	5.90	21.0	35.00	●	0.02-0.05
PICCO R 010.2508-30	8.0	2.50	3.50	7.00	5.90	30.0	45.00	●	0.02-0.05
PICCO R 610.2508-10	8.0	2.50	3.50	6.00	5.20	11.0	26.00	●	0.02-0.05
PICCO R 610.2508-20	8.0	2.50	3.50	6.00	5.20	20.0	35.00	●	0.02-0.05
PICCO R 010.3008-10	8.0	3.00	3.50	7.00	5.90	11.0	26.00	●	0.02-0.06
PICCO R 010.3008-20	8.0	3.00	3.50	7.00	5.90	21.0	35.00	●	0.02-0.06
PICCO R 010.3008-30	8.0	3.00	3.50	7.00	5.90	30.0	45.00	●	0.02-0.06
PICCO R 610.3008-10	8.0	3.00	3.50	6.00	5.20	11.0	26.00	●	0.02-0.06
PICCO R 610.3008-20	8.0	3.00	3.50	6.00	5.20	20.0	35.00	●	0.02-0.06

• Only right-hand inserts are available as standard • All inserts are with sharp corners • For detailed cutting data, see pages 466-467

PICCOCUT

PICCO-010
(round face groove)
Inserts for Round Profile Face Grooving





Right-hand shown

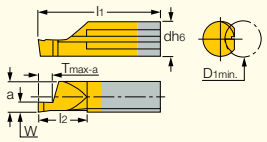
Designation	Dimensions								IC1008	Recommended Machining Data
	$D_{1\ min}$	W	R	T_{max-a}	d	a	l_2	l_1		f face-groove (mm/rev)
PICCO R 010.1005-10	8.0	1.00	0.50	2.00	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 010.1005-20	8.0	1.00	0.50	2.00	7.00	5.90	20.0	35.00	●	0.01-0.04
PICCO R 010.1608-10	8.0	1.60	0.80	3.00	7.00	5.90	11.0	26.00	●	0.01-0.05
PICCO R 010.1608-20	8.0	1.60	0.80	3.00	7.00	5.90	20.0	35.00	●	0.01-0.05
PICCO R 010.2010-10	8.0	2.00	1.00	4.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2010-20	8.0	2.00	1.00	4.00	7.00	5.90	20.0	35.00	●	0.02-0.05
PICCO R 010.2512-10	8.0	2.50	1.25	5.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2512-20	8.0	2.50	1.25	5.00	7.00	5.90	20.0	35.00	●	0.02-0.05
PICCO R 010.3015-10	8.0	3.00	1.50	6.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.3015-20	8.0	3.00	1.50	6.00	7.00	5.90	20.0	35.00	●	0.02-0.05

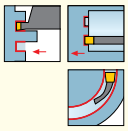
• Only right-hand inserts are available as standard, left-hand inserts on request. • For detailed cutting data, see pages 466-467

PICCOCUT

PICCO-620
(groove along shaft)
Inserts for Grooving Along a Shaft Dmin 6 mm







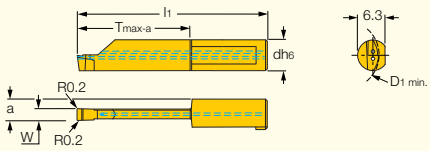
Right-hand shown

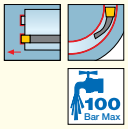
Designation	Dimensions D1 min	W	Tmax-a	d	a	l2	l1	IC1008	Recommended Machining Data f face-groove (mm/rev)
PICCO R 620.1006-20	6.0	1.00	2.00	6.00	5.20	20.0	35.00	•	0.01-0.04
PICCO R 620.1506-20	6.0	1.50	3.00	6.00	5.20	20.0	35.00	•	0.01-0.05
	6.0	2.00	4.00	6.00	5.20	20.0	35.00	•	0.02-0.06
PICCO R 620.2506-20	6.0	2.50	5.00	6.00	5.20	20.0	35.00	•	0.02-0.06
PICCO R 620.3006-20	6.0	3.00	6.00	6.00	5.20	20.0	35.00	•	0.02-0.06

• Only right-hand inserts are available as standard, left-hand inserts on request. • All carbide inserts are with sharp corners
• For detailed cutting data, see pages 466-467

PICCOCUT

PICCO-016/020
(face grooving)
Inserts with Coolant Holes for Deep Face Grooving





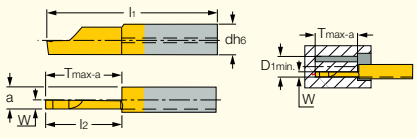
Right-hand shown

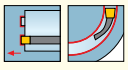
Designation	Dimensions D1 min	W	Tmax-a	d	a	l1	IC1008	Recommended Machining Data f face-groove (mm/rev)
PICCO R 016.0300-10	16.0	3.00	10.00	8.00	5.50	30.00	•	0.01-0.05
PICCO R 016.0300-20	16.0	3.00	20.00	8.00	5.50	40.00	•	0.01-0.05
PICCO R 016.0400-10	16.0	4.00	10.00	8.00	6.00	30.00	•	0.01-0.05
PICCO R 016.0400-20	16.0	4.00	20.00	8.00	6.00	40.00	•	0.01-0.05
PICCO R 020.0300-25	20.0	3.00	25.00	8.00	5.50	45.00	•	0.01-0.05
PICCO R 020.0300-30	20.0	3.00	30.00	8.00	5.50	50.00	•	0.01-0.04
PICCO R 020.0300-35	20.0	3.00	35.00	8.00	5.50	55.00	•	0.01-0.04
PICCO R 020.0300-40	20.0	3.00	40.00	8.00	5.50	60.00	•	0.01-0.04
PICCO R 020.0400-25	20.0	4.00	25.00	8.00	6.00	45.00	•	0.01-0.06
PICCO R 020.0400-30	20.0	4.00	30.00	8.00	6.00	50.00	•	0.01-0.06
PICCO R 020.0400-35	20.0	4.00	35.00	8.00	6.00	55.00	•	0.01-0.05
PICCO R 020.0400-40	20.0	4.00	40.00	8.00	6.00	60.00	•	0.01-0.05
PICCO R 020.0500-20	20.0	5.00	20.00	8.00	6.50	40.00	•	0.02-0.06
PICCO R 020.0500-25	20.0	5.00	25.00	8.00	6.50	45.00	•	0.02-0.06
PICCO R 020.0500-30	20.0	5.00	30.00	8.00	6.50	50.00	•	0.02-0.06
PICCO R 020.0500-35	20.0	5.00	35.00	8.00	6.50	55.00	•	0.02-0.05
PICCO R 020.0500-40	20.0	5.00	40.00	8.00	6.50	60.00	•	0.02-0.05

• All inserts have two coolant holes which may be used with coolant pressure up to 100 bars. • For detailed cutting data, see pages 466-467

PICCOCUT

PICCO-015 (face grooving)
Inserts for Deep Face Grooving





Right-hand shown

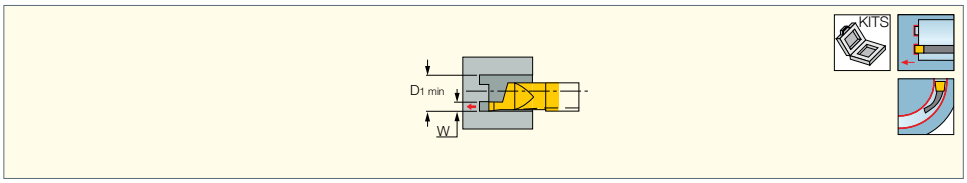
Designation	Dimensions D1 min	W	Tmax-a	d	a	l2	l1	IC228	Recommended Machining Data f face-groove (mm/rev)
PICCO R 015.2515-20	15.0	2.50	20.00	7.00	5.90	20.0	35.00	•	0.01-0.04
PICCO R/L 015.3015-20	15.0	3.00	20.00	7.00	5.90	20.0	35.00	•	0.02-0.05
PICCO R 015.3015-30	15.0	3.00	30.00	7.00	5.90	30.0	45.00	•	0.01-0.04

• Only right-hand inserts are available as standard, left-hand inserts on request. • All inserts are with sharp corners • For detailed cutting data, see pages 466-467

PICCOCUT

KIT PICCO Face

Contains One Toolholder and a Set of Solid Carbide Miniature Face Turning and Grooving Boring Bars



Designation	$D_{1\ min}$	W_{min}	W_{max}
KIT PICCO SET-4R	8.0	1.00	3.00

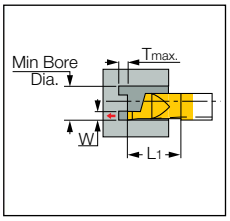
PICCO

Face Grooving PICCO Mini-Bar Tool Set - 4R

Designation	Mini Bore Dia.	L_1	T_{max}	W	Pcs.	Designation
PICCO 16.D6				1x		Holder
PICCO R/L 010.1008-10	8.0	11	1.5	1.0	1x	Mini Carbide Bar
PICCO R/L 010.1508-10	8.0	11	2.5	1.5	1x	Mini Carbide Bar
PICCO R/L 010.2008-10	8.0	11	3.0	2.0	1x	Mini Carbide Bar
PICCO R/L 010.2508-20	8.0	21	3.5	2.5	1x	Mini Carbide Bar
PICCO R/L 010.3008-20	8.0	21	3.5	3.0	1x	Mini Carbide Bar

Available grade: IC228

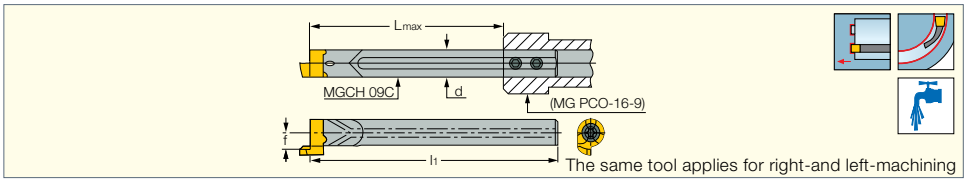




CHAMGROOVE

MGCH-C (face)

Face Machining Tools Carrying GFQR Inserts for Dmin 12 - Dmax 19 mm Penetration Range

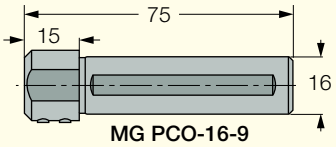


Designation	d	l_1	L_{max}	f		
MGCH 09C	9.00	83.50	65.0	5.5	SR 76-2145	T-15/5

For inserts, see pages: GFQR (433)
For holders, see pages: PICCO/MG PCO (holder) (315)

MG PCO

Holder Bar for Adjustable Shank



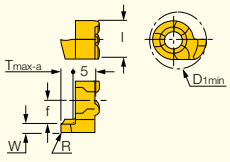
MG PCO-16-9

CHAMGROOVE

GFQR

Face Grooving Inserts





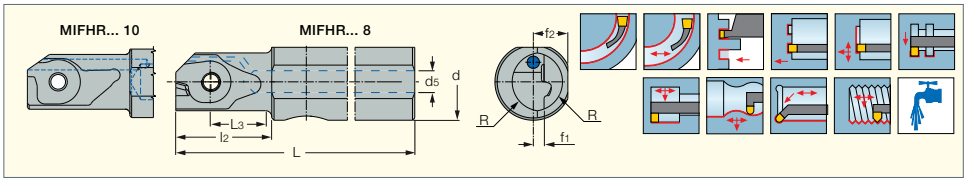
Designation	Dimensions $W^{\pm 0.02}$	T_{max-a}	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	IC528	Recommended Machining Data f face-groove (mm/rev)
GFQR 12-1.00-0.05	1.00	1.50	12.0	16.0	•	0.01-0.04
GFQR 12-1.50-0.20	1.50	2.50	12.0	17.0	•	0.01-0.04
GFQR 12-2.00-0.20	2.00	3.00	12.4	18.0	•	0.02-0.05
GFQR 12-2.50-0.20	2.50	3.00	13.0	19.0	•	0.02-0.05

• For detailed cutting data, see pages 466-467
(1) Minimum penetration diameter
(2) Maximum penetration diameter

MINI FACE LINE

MIFHR

Bars for Face and Internal Grooving, Undercutting and Threading Inserts



Designation	d	d5	f1	f2	L	L3	l2	R	Insert		
MIFHR 8SC-8-SRK (1)	8.00	1.2	1.4	3.70	75.00	7.40	11.7	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 10C-8	10.00	4.0	1.4	4.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 12C-8	12.00	5.0	1.4	5.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5
MIFHR 12C-10 (2)	12.00	6.0	2.4	5.50	90.00	11.20	17.2	4.60	MIFR 10	SR 34-506	T-9/5
MIFHR 16C-10 (2)	16.00	6.0	2.4	7.50	90.00	11.20	17.2	4.60	MIFR 10	SR 34-506	T-9/5

(1) Solid carbide shank

(2) Only face grooving inserts are available for this tool

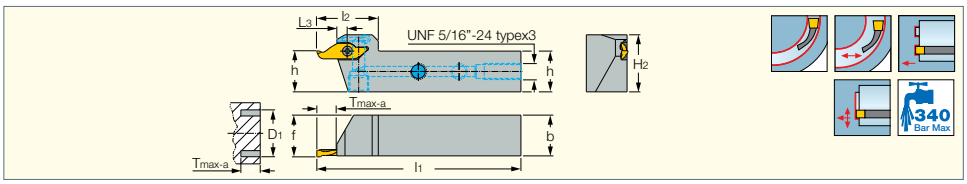
For inserts, see pages: MEFL (435) • MIFR (434) • MIGR 8 (329) • MITR 8-MT (330) • MIUR 8 (329)

For holders, see pages: PICCO/MG PCO (holder) (315)

MINI FACE LINE

MFHR-JHP

Square Shank Tools for MIFR 10 Face Grooving Inserts



Designation	h	b	l1	l2	L3	Tmax-a	D1 min	H2	Insert			
MFHR 12C-10-JHP	12.0	12.0	100.00	27.0	5.20	9.00	10.0	20.0	MIFR 10	SR 34-506	T-9/5	SR 5/16UNF TL360
MFHR 16C-10-JHP	16.0	16.0	100.00	27.0	5.20	9.00	10.0	24.0	MIFR 10	SR 34-506	T-9/5	SR 5/16UNF TL360
MFHR 20C-10-JHP	20.0	20.0	100.00	30.0	5.20	9.00	10.0	28.0	MIFR 10	SR 34-506	T-9/5	SR 5/16UNF TL360

• For D1max, refer to insert data • For user guide and accessories, see pages 460-470

For inserts, see pages: MIFR (434)

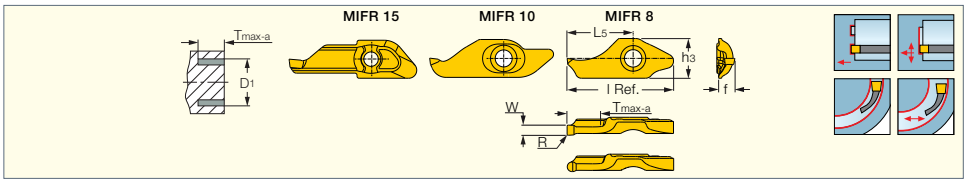
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
MFHR 12C-10-JHP	3	5-9	9-11
MFHR 16C-10-JHP	3	7-9	9-11

MINI FACE LINE

MIFR

Screw-Clamped Inserts for Internal Face Grooving and Turning, Penetration Diameter Range: 8-17 mm



Designation	Dimensions l Ref.	W±0.02	R±0.02	f	h3	D1 min	D1 max	Tmax-a	L5	IC908	Recommended Machining Data f face-groove (mm/rev)	f face-turn (mm/rev)
MIFR 8-1.50-0.20	17.70	1.50	0.20	2.6	6.5	8.0	11.5	5.50	11.00	•	0.02-0.10	0.02-0.06
MIFR 8-1.60-0.80	17.70	1.60	0.80	2.6	6.5	8.0	12.1	5.50	11.00	•	0.02-0.10	0.02-0.06
MIFR 8-2.00-0.20	17.70	2.00	0.20	2.8	6.5	8.0	16.0	5.50	11.00	•	0.02-0.10	0.02-0.06
MIFR 8-2.20-0.20	17.70	2.20	0.20	2.9	6.5	8.0	21.0	5.50	11.00	•	0.02-0.10	0.02-0.06
MIFR 10-2.00-0.20	25.10	2.00	0.20	3.0	7.6	10.0	-	9.00	14.80	•	0.02-0.10	0.02-0.06
MIFR 10-2.00-1.00	25.10	2.00	1.00	3.0	7.6	10.0	-	9.00	14.80	•	0.02-0.10	0.02-0.06
MIFR 10-2.50-0.20	25.10	2.50	0.20	3.1	7.6	10.0	30.0	9.00	14.80	•	0.02-0.10	0.02-0.06
MIFR 10-2.50-1.25	25.10	2.50	1.25	3.3	7.6	10.0	-	9.00	14.80	•	0.02-0.10	0.02-0.06
MIFR 10-3.00-0.20	25.10	3.00	0.20	3.4	7.6	10.0	30.0	9.00	14.80	•	0.02-0.10	0.02-0.06
MIFR 10-3.00-1.50	25.10	3.00	1.50	3.3	7.6	10.0	34.0	9.00	14.80	•	0.02-0.10	0.02-0.06

• For cutting speed recommendations, see pages 466-467

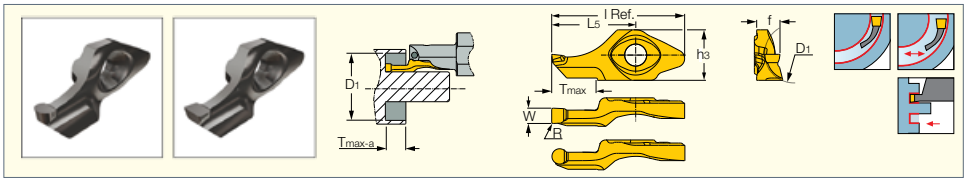
For tools, see pages: MFHR-JHP (434) • MIFHR (329)



MINCUT MINI FACE LINE

MEFL

Screw-Clamped Inserts for External Face Grooving and Turning Next to Shafts



Designation	Dimensions									IC908	Recommended Machining Data	
	l Ref.	W±0.02	R±0.02	f	h3	D1 min	D1 max	Tmax-a	L5		f face-groove (mm/rev)	f face-turn (mm/rev)
MEFL 8-1.50-0.20	17.40	1.50	0.20	2.6	6.6	8.0	15.0	5.50	11.00	•	0.02-0.10	0.02-0.06
MEFL 8-1.60-0.80	17.40	1.60	0.80	2.7	6.6	7.0	12.1	5.50	11.00	•	0.02-0.10	0.02-0.06
MEFL 8-2.00-0.20	17.40	2.00	0.20	3.1	6.6	7.0	20.0	5.50	11.00	•	0.02-0.10	0.02-0.06
MEFL 8-2.00-1.00	17.40	2.00	1.00	2.9	6.6	7.0	14.0	5.50	11.00	•	0.02-0.10	0.02-0.06
MEFL 8-2.20-0.20	17.40	2.20	0.20	3.1	6.6	7.0	20.0	5.50	11.00	•	0.02-0.10	0.02-0.06

• For cutting speed recommendations, see pages 466-467

For tools, see pages: MIFHR (329)

MINCUT MINI FACE LINE

KIT MINCUT

Contains One Toolholder and a Set of 6 Different Inserts for Internal Face Grooving and Turning Applications

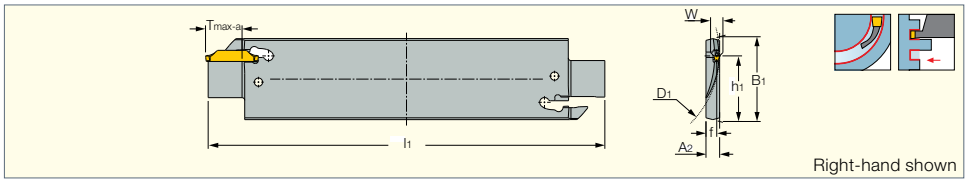


Designation	Qty
KIT MINCUT	7

HELIFACE

HFFH

Face Grooving Blades



Designation	W	D1 min(1)	D1 max(2)	Tmax-a	h1	B1	f	A2	l1	
HFFH 38R/L-2	2.00	38.0	45.0	14.00	24.8	32.0	8.2	5.2	150.00	EDG 33B*
HFFH 45R/L-2	2.00	45.0	60.0	14.00	24.8	32.0	8.2	5.2	150.00	EDG 33B*
HFFH 60R/L-2	2.00	60.0	80.0	14.00	24.8	32.0	8.2	5.2	150.00	EDG 33B*
HFFH 80R/L-2	2.00	80.0	100.0	14.00	24.8	32.0	8.2	5.2	150.00	EDG 33B*
HFFH 100R/L-2	2.00	100.0	130.0	14.00	24.8	32.0	8.2	5.2	150.00	EDG 33B*

• B1 dimension links blades and blocks

(1) Minimum penetration diameter

(2) Maximum penetration diameter

* Optional, should be ordered separately

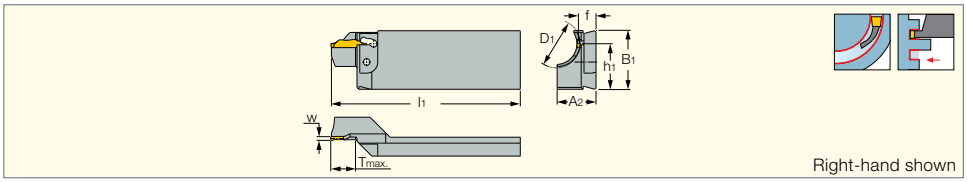
For inserts, see pages: HFPN (447)

For holders, see pages: C#-TBK-R/L (477) • HSK A-WH-TBK-R/L (482) • SGTBF (473) • SGTBK (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

HELIFACE

HFFA

Reinforced Face Grooving Blades



Designation	W	D1 min(1)	D1 max(2)	Tmax-a	B1	f	h1	l1	A2	
HFFA 27R/L-2	2.00	27.0	29.0	14.00	32.0	9.5	24.8	102.00	21.0	EDG 33B*
HFFA 29R/L-2	2.00	29.0	33.0	14.00	32.0	9.5	24.8	102.00	18.5	EDG 33B*
HFFA 33R/L-2	2.00	33.0	38.0	14.00	32.0	9.5	24.8	102.00	17.5	EDG 33B*
HFFA 38R/L-2	2.00	38.0	46.0	14.00	32.0	9.5	24.8	102.00	13.5	EDG 33B*
HFFA 46R/L-2	2.00	46.0	60.0	14.00	32.0	9.5	24.8	102.00	13.5	EDG 33B*
HFFA 60R/L-2	2.00	60.0	80.0	14.00	32.0	9.5	24.8	102.00	14.0	EDG 33B*
HFFA 80R/L-2	2.00	80.0	105.0	14.00	32.0	9.5	24.8	102.00	16.1	EDG 33B*

• For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

* Optional, should be ordered separately

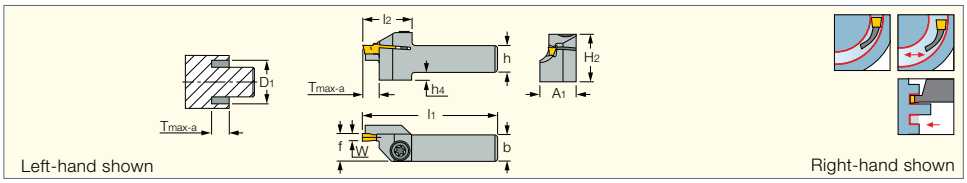
For inserts, see pages: HFPN (447)

For holders, see pages: SGTBU/SGTBN (472) • UBHCR/L (473)

HELIFACE

HGHR/L-3

Integral Holders for Face Grooving and Turning, Dmin. 12 mm



Designation	h	b	W	Tmax-a	h4	f	D1 min(1)	D1 max(2)	l1	l2	H2	A1		
HGHR/L 1010-12-3T6	10.0	10.0	3.00	6.00	2.0	9.5	12.0	16.0	120.00	19.0	19.0	13.70	SR 76-1400	T-20/3
HGHR 1010-16-3T6	10.0	10.0	3.00	6.00	2.0	9.5	16.0	25.0	120.00	19.0	19.0	12.80	SR 76-1400	T-20/3
HGHR/L 1212-12-3T6	12.0	12.0	3.00	6.00	-	11.0	12.0	16.0	120.00	19.0	19.0	15.70	SR 76-1400	T-20/3
HGHR 1212-16-3T6	12.0	12.0	3.00	6.00	-	11.0	16.0	25.0	120.00	19.0	19.0	14.80	SR 76-1400	T-20/3
HGHR/L 1616-12-3T6	16.0	16.0	3.00	6.00	-	15.0	12.0	16.0	120.00	19.0	21.0	19.70	SR 76-1400	T-20/3
HGHR/L 1616-16-3T6	16.0	16.0	3.00	6.00	-	15.0	16.0	25.0	120.00	19.0	21.0	18.80	SR 76-1400	T-20/3
HGHR/L 2020-12-3T6	20.0	20.0	3.00	6.00	-	20.0	12.0	16.0	120.00	19.0	25.0	24.00	SR 76-1400	T-20/3
HGHR/L 2020-16-3T6	20.0	20.0	3.00	6.00	-	20.0	16.0	25.0	120.00	19.0	25.0	24.00	SR 76-1400	T-20/3
HGHR/L 2525-12-3T6	25.0	25.0	3.00	6.00	-	25.0	12.0	16.0	120.00	19.0	30.0	29.00	SR 76-1400	T-20/3
HGHR/L 2525-16-3T6	25.0	25.0	3.00	6.00	-	25.0	16.0	25.0	120.00	19.0	30.0	29.00	SR 76-1400	T-20/3

• HGN & GRIP inserts can be used only with right-hand toolholders, HGPL inserts only with left-hand toolholders. • For user guide, see pages 460-470

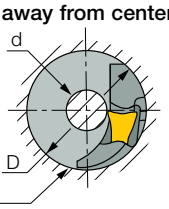
(1) Minimum penetration diameter

(2) Maximum penetration diameter

For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • HGN-C (386) • HGN-J (386) • HGN-UT (387) • HGPL (449)

No limitation for widening groove toward or away from center, except for the following tools:

Limitation of widening toward center depends on the major diameter (D) as per chart.



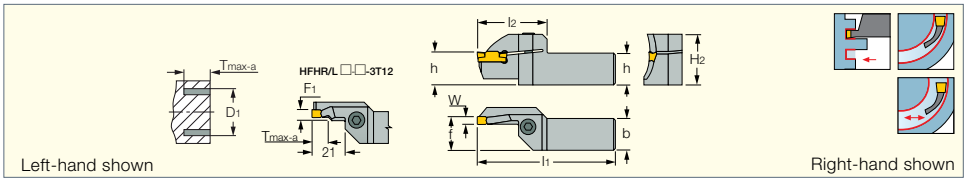
HGHR/L...-12-3T6

D	d
12.0	4.0
13.0	1.0
13.5	0

HELIFACE

HFHR/L-3T

Integral Holders for Facing, Dmin. 25 mm



Designation	W	Tmax-a	h	b	l1	f	F1	D1 min(2)	D1 max(3)	l2	H2		
HFHR/L 20-25-3T12	3.00	12.00	20.0	20.0	140.00	20.5	5.3	25.0	30.0	38.0	28.0	SR M6X16 DIN912	HW 5.0
HFHR/L 20-30-3T12	3.00	12.00	20.0	20.0	140.00	20.5	5.3	30.0	38.0	38.0	29.0	SR M6X16 DIN912	HW 5.0
HFHR/L 20-38-3T12	3.00	12.00	20.0	20.0	140.00	20.5	5.3	38.0	48.0	38.0	30.0	SR M6X16 DIN912	HW 5.0
HFHR/L 20-48-3T12	3.00	12.00	20.0	20.0	140.00	20.5	5.3	48.0	60.0	38.0	30.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-25-3T12	3.00	12.00	25.0	25.0	150.00	25.5	5.3	25.0	30.0	38.0	33.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-30-3T12	3.00	12.00	25.0	25.0	150.00	25.5	5.3	30.0	38.0	38.0	34.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-38-3T12	3.00	12.00	25.0	25.0	150.00	25.5	5.3	38.0	48.0	38.0	35.0	SR M6X16 DIN912	HW 5.0
HFHR/L 20-60-3T22 (1)	3.00	22.00	20.0	20.0	140.00	20.5	-	60.0	75.0	40.0	31.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-48-3T22 (1)	3.00	22.00	25.0	25.0	150.00	25.5	-	48.0	60.0	40.0	36.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-60-3T22 (1)	3.00	22.00	25.0	25.0	150.00	25.5	-	60.0	75.0	40.0	36.0	SR M6X16 DIN912	HW 5.0
HFHR/L 20-75-3T25 (1)	3.00	25.00	20.0	20.0	140.00	20.5	-	75.0	100.0	43.0	31.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-75-3T25 (1)	3.00	25.00	25.0	25.0	150.00	25.5	-	75.0	100.0	43.0	36.0	SR M6X16 DIN912	HW 5.0

• For user guide, see pages 460-47

(1) For deep face grooving only.

(2) Minimum penetration diameter

(3) Maximum penetration diameter

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448)

No limitation for widening groove toward or away from center, except for the following tools:

HFHR/L-:-25-3T12

D	d
25	5
26	2
≥27	0

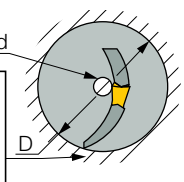
HFHR/L-:-25-4T12

D	d
25	1
≥26	0

HFHR/L-:-29-4T12

D	d
29	1
≥46	0

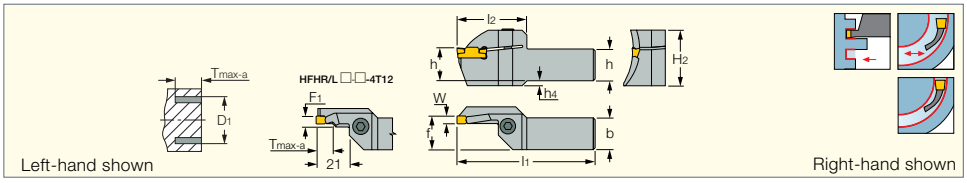
Limitation of widening toward center (d) depends on the major diameter (D) as per chart.



HELIFACE

HFHR/L-4T

Integral Holders for Facing,
Dmin. 25 mm



Designation	W	Tmax-a	h	b	l1	f	D1 min(1)	D1 max(2)	l2	H2	h4		
HFHR/L 20-25-4T12	4.00	12.00	20.0	20.0	140.00	20.6	25.0	29.0	39.0	29.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-29-4T12	4.00	12.00	20.0	20.0	140.00	20.6	29.0	34.0	39.0	30.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-25-4T12	4.00	12.00	25.0	25.0	150.00	25.6	25.0	29.0	39.0	34.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-29-4T12	4.00	12.00	25.0	25.0	150.00	25.6	29.0	34.0	39.0	35.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-34-4T20	4.00	20.00	20.0	20.0	140.00	20.6	34.0	40.0	39.0	30.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-34-4T20	4.00	20.00	25.0	25.0	150.00	25.6	34.0	40.0	39.0	35.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-40-4T25	4.00	25.00	20.0	20.0	140.00	20.6	40.0	48.0	44.0	31.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-48-4T25	4.00	25.00	20.0	20.0	140.00	20.6	48.0	60.0	44.0	32.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-60-4T25	4.00	25.00	20.0	20.0	140.00	20.6	60.0	75.0	44.0	32.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-75-4T25	4.00	25.00	20.0	20.0	140.00	20.6	75.0	100.0	44.0	34.0	2.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-100-4T25	4.00	25.00	25.0	25.0	150.00	25.6	100.0	140.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-140-4T25	4.00	25.00	25.0	25.0	150.00	25.6	140.0	240.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-240-4T25	4.00	25.00	25.0	25.0	150.00	25.6	240.0	800.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-40-4T25	4.00	25.00	25.0	25.0	150.00	25.6	40.0	48.0	44.0	36.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-48-4T25	4.00	25.00	25.0	25.0	150.00	25.6	48.0	60.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-60-4T25	4.00	25.00	25.0	25.0	150.00	25.6	60.0	75.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-75-4T25	4.00	25.00	25.0	25.0	150.00	25.6	75.0	100.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 4 mm inserts can be used only with right-hand tools, HGPL 4 mm with left-hand tools. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

Penetration Range

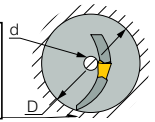
HFHR/L-:-25-4T12

D	d
25	1
≥26	0

HFHR/L-:-29-4T12

D	d
29	1
≥46	0

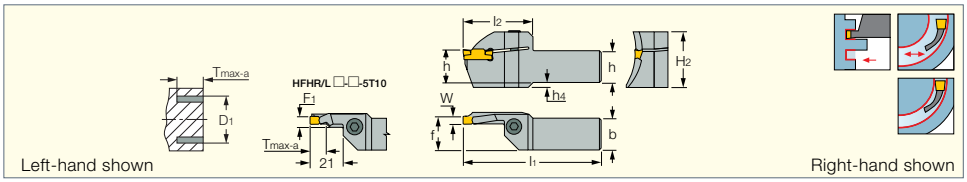
Limitation of widening toward center (d depends on the major diameter (D) as per chart



HELIFACE

HFHR/L-5T

Integral Holders for Facing,
Dmin. 25 mm



Designation	W	Tmax-a	h	b	l1	F1	f	D1 min(1)	D1 max(2)	l2	H2	h4		
HFHR/L 20-25-5T10	5.00	10.00	20.0	20.0	140.00	7.1	21.0	25.0	30.0	38.0	28.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-25-5T10	5.00	10.00	25.0	25.0	150.00	7.1	26.0	25.0	30.0	38.0	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-110-5T14	5.00	14.00	25.0	25.0	150.00	-	23.5	110.0	200.0	32.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-52-5T14	5.00	14.00	25.0	25.0	150.00	-	23.5	52.0	75.0	32.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-75-5T14	5.00	14.00	25.0	25.0	150.00	-	23.5	75.0	110.0	32.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-28-5T15	5.00	17.00	20.0	20.0	140.00	-	21.0	28.0	31.0	34.0	30.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-31-5T15	5.00	17.00	20.0	20.0	140.00	-	21.0	31.0	35.0	34.0	30.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-28-5T15	5.00	17.00	25.0	25.0	150.00	-	26.0	28.0	31.0	34.0	35.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-31-5T15	5.00	17.00	25.0	25.0	150.00	-	26.0	31.0	35.0	34.0	35.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-35-5T20	5.00	20.00	20.0	20.0	140.00	-	21.0	35.0	40.0	39.0	31.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-40-5T20	5.00	20.00	20.0	20.0	140.00	-	21.0	40.0	45.0	39.0	31.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-200-5T20	5.00	20.00	25.0	25.0	150.00	-	23.5	200.0	800.0	32.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-35-5T20	5.00	20.00	25.0	25.0	150.00	-	26.0	35.0	40.0	39.0	36.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-40-5T20	5.00	20.00	25.0	25.0	140.00	-	26.0	40.0	45.0	39.0	36.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-45-5T25	5.00	25.00	20.0	20.0	140.00	-	21.0	45.0	55.0	44.0	32.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-55-5T25	5.00	25.00	20.0	20.0	140.00	-	21.0	55.0	70.0	44.0	35.0	3.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-45-5T25	5.00	25.00	25.0	25.0	150.00	-	26.0	45.0	55.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-55-5T25	5.00	25.00	25.0	25.0	150.00	-	26.0	55.0	70.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-70-5T28	5.00	28.00	20.0	20.0	140.00	-	21.0	70.0	95.0	47.0	35.0	3.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-130-5T32	5.00	32.00	25.0	25.0	150.00	-	26.0	130.0	180.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-180-5T32	5.00	32.00	25.0	25.0	150.00	-	26.0	180.0	800.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-70-5T32	5.00	32.00	25.0	25.0	150.00	-	26.0	70.0	95.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-95-5T32	5.00	32.00	25.0	25.0	150.00	-	26.0	95.0	130.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 5.. inserts can be used only with right-hand tools, HGPL 5.. inserts with left-hand tools. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

No limitation for widening groove toward or away from center, except for the following tools:

HFHR/L-31-5-□T15

D	d
31	15
32	10
33	7
34	4
35	2
≥36	0

HFHR/L-30-6-□T10

D	d
30	7
31	4
32	1
≥33	0

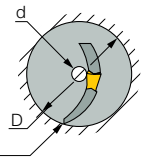
HFHR/L-25-5-□T10

D	d
25	4
26	1
≥27	0

HFHR/L-28-5-□T15

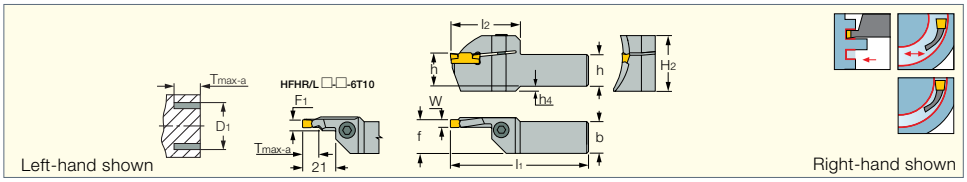
D	d
28	13
29	8
30	5
31	3
32	1
≥33	0

Limitation of widening toward center (d) depends on the major diameter (D) as per chart



HELIFACE

HFHR/L-6T
Integral Holders for Facing,
Dmin. 26 mm



Designation	W	Tmax-a	h	b	l1	F1	f	D1 min(1)	D1 max(2)	l2	H2	h4		
HFHL 20-26-6T10	6.00	10.00	20.0	20.0	140.00	7.9	21.4	26.0	30.0	39.0	29.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-30-6T15	6.00	17.00	20.0	20.0	140.00	-	21.4	30.0	38.0	36.0	30.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-30-6T15	6.00	17.00	25.0	25.0	150.00	-	26.4	30.0	38.0	36.0	35.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-38-6T20	6.00	20.00	20.0	20.0	140.00	-	21.4	38.0	50.0	39.0	31.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-100-6T20	6.00	20.00	25.0	25.0	150.00	-	26.0	100.0	200.0	40.0	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-200-6T20	6.00	20.00	25.0	25.0	150.00	-	23.0	200.0	3000.0	37.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-38-6T20	6.00	20.00	25.0	25.0	150.00	-	26.4	38.0	50.0	39.0	36.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-50-6T20	6.00	20.00	25.0	25.0	150.00	-	23.0	50.0	65.0	37.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-65-6T20	6.00	20.00	25.0	25.0	150.00	-	23.0	65.0	100.0	37.5	33.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 20-50-6T25	6.00	25.00	20.0	20.0	140.00	-	21.4	50.0	70.0	44.0	32.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-50-6T25	6.00	25.00	25.0	25.0	150.00	-	26.4	50.0	70.0	44.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-100-6T32	6.00	32.00	25.0	25.0	150.00	-	26.4	100.0	180.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25-180-6T32	6.00	32.00	25.0	25.0	150.00	-	26.4	180.0	400.0	51.0	40.0	3.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-400-6T32	6.00	32.00	25.0	25.0	150.00	-	26.4	400.0	3000.0	51.0	40.0	3.0	SR M6X16 DIN912	HW 5.0
HFHR/L 25-70-6T32	6.00	32.00	25.0	25.0	150.00	-	26.4	70.0	100.0	51.0	37.0	-	SR M6X16 DIN912	HW 5.0

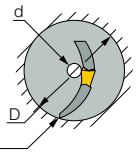
• DGN & GRIP 6.. inserts can be used only with right-hand tools, HGPL 6.. inserts with left-hand tools. • For user guide, see pages 460-470
(1) Minimum penetration diameter
(2) Maximum penetration diameter
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

No limitation for widening groove toward or away from center, except for the following tools:

HFHR/L-□-30-6T10

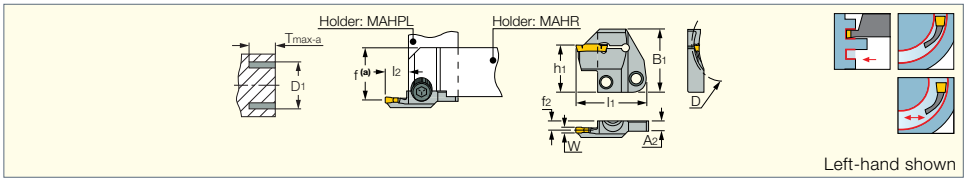
D	d
30	7
31	4
32	1
≥33	0

Limitation of widening toward center (d) depends on the major diameter (D) as per chart



MODULAR-GRIP

HFPAD-3
Adapters for Face Machining



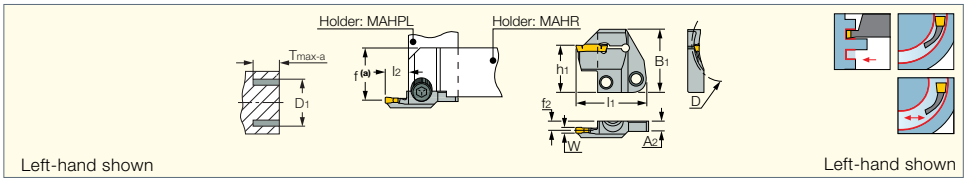
Designation	D1 min(1)	D1 max(2)	W	Tmax-a	l2	f2	A2	l1
HFPAD 3R/L-25-T10	25.0	30.0	3.00	10.00	15.0	4.80	5.8	39.50
HFPAD 3R/L-30-T10	30.0	40.0	3.00	10.00	15.0	4.80	5.8	39.50
HFPAD 3R/L-40-T10	40.0	65.0	3.00	10.00	15.0	4.80	5.8	39.50
HFPAD 3R/L-65-T18	65.0	115.0	3.00	18.00	19.0	4.80	5.8	43.50
HFPAD 3R/L-115-T18	115.0	400.0	3.00	18.00	19.0	4.80	5.8	43.50

• f(a)=f1(shank) + f2(adapter) • HGN & GRIP 3.. inserts can be used only with right-hand adapters, HGPL 3.. inserts with left-hand adapters. • For user guide, see pages 460-470
(1) Minimum penetration diameter
(2) Maximum penetration diameter
For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • HGN-C (386) • HGN-J (386) • HGN-UT (387) • HGPL (449)
For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

MODULAR GRIP

HFPAD-5

Adapters for Face Machining



Designation	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	W	T_{max-a}	l_2	f_2	A_2	l_1	h_1	B_1
HFPAD 5R/L-40-T14	40.0	50.0	5.00	14.00	16.0	4.50	6.3	40.50	24.0	32.0
HFPAD 5R/L-50-T14	50.0	75.0	5.00	14.00	16.0	4.50	6.3	40.50	24.0	32.0
HFPAD 5R/L-75-T14	75.0	110.0	5.00	14.00	16.0	4.50	6.3	40.50	24.0	32.0
HFPAD 5R/L-110-T14	110.0	200.0	5.00	14.00	16.0	4.50	6.3	40.50	24.0	32.0
HFPAD 5R/L-200-T20	200.0	800.0	5.00	20.00	21.0	4.50	6.6	45.50	24.0	32.0

• $f^{(a)}$=f1(shank) + f2(adapter) • DGN & GRIP 5.. inserts can be used only with right-hand adapters, HGPL 5.. inserts with left-hand adapters. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

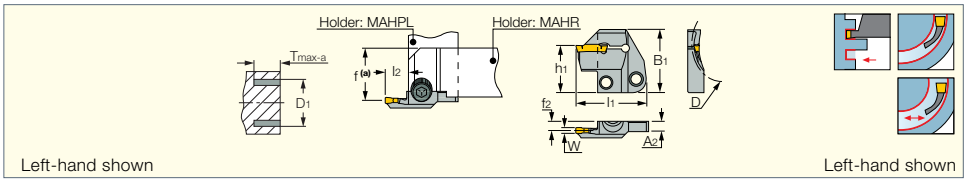
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHDOR (478) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

MODULAR GRIP

HFPAD-6

Adapters for Face Machining



Designation	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	W	T_{max-a}	l_2	f_2	A_2	l_1	h_1	B_1
HFPAD 6R/L-60-T14	60.0	100.0	6.00	14.00	16.0	4.50	6.8	40.50	24.0	32.0
HFPAD 6R/L-100-T20	100.0	200.0	6.00	20.00	21.0	4.50	6.8	45.50	24.0	32.0
HFPAD 6R/L-200-T20	200.0	3000.0	6.00	20.00	21.0	4.50	7.1	45.50	24.0	32.0

• $f^{(a)}$=f1(shank) + f2(adapter) • DGN & GRIP 6.. inserts can be used only with right-hand adapters, HGPL 6.. inserts with left-hand adapters. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

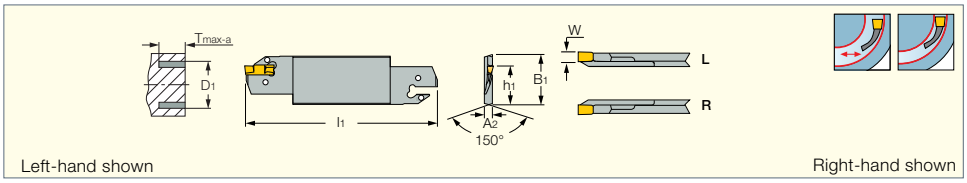
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

HELIFACE

HFFR/L-T

Blades for Face Machining



Designation	W	$D_{1\ min}$ (2)	$D_{1\ max}$ (3)	T_{max-a}	l_1	B_1	A_2	
HFFR/L 48-4T25 (1)	4.00	48.0	60.0	25.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 60-4T25	4.00	60.0	75.0	25.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 75-4T30	4.00	75.0	140.0	30.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 140-4T30	4.00	140.0	1500.0	30.00	150.00	32.0	3.2	EDG 33B*
HFFR/L 70-5T32	5.00	70.0	95.0	32.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 95-5T35	5.00	95.0	130.0	35.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 130-5T38	5.00	130.0	180.0	38.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 180-5T38	5.00	180.0	1500.0	38.00	150.00	32.0	4.0	EDG 33B*
HFFR/L 90-6T32	6.00	90.0	180.0	32.00	150.00	32.0	5.2	EDG 33B*
HFFR/L 180-6T38	6.00	180.0	400.0	38.00	150.00	32.0	5.2	EDG 33B*

• After initial groove, no limitation to widening groove outward or toward center. • DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades. • For user guide, see pages 460-470

(1) HGPL 4...Y with LH blade.

(2) Minimum penetration diameter

(3) Maximum penetration diameter

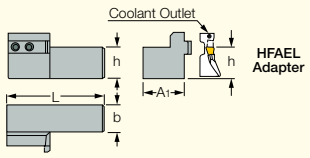
* Optional, should be ordered separately

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

For holders, see pages: SGTBF (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

HELiFACE

HAR/L
Face Machining Adapter Holders



Right-hand shown

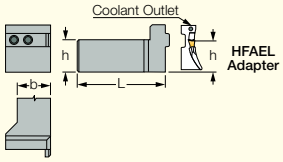
Designation	L	b	h	A_1	W		
HAR/L 25C	110.00	25.0	25.0	39.00	0.00	SR 14-519	T-20/3
HAR/L 32C	130.00	32.0	32.0	46.00	0.00	SR 14-519	T-20/3

• Holders for adapters HFAER/L & HGAER/L, HFAIR/L & HGAIR/L.

For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

HELiFACE

HAPR/L
Face Machining Perpendicular Holders for Adapters



Left-hand shown

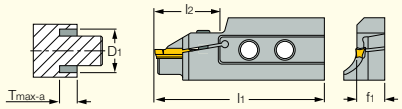
Designation	L	h	b		
HAPR/L 25C	124.00	25.0	25.0	SR 14-519	T-20/3
HAPR/L 32C	139.00	32.0	32.0	SR 14-519	T-20/3

• Holders for adapters HFAER/L & HGAER/L, HFAIR/L & HGAIR/L.

For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

HELiFACE

HGAER/L-3
Adapters for External Facing Along Shafts



Right-hand shown

Designation	T_{max-a}	W	$D_{1\ min}$(1)	$D_{1\ max}$(2)	l_2	f_1	l_1		
HGAER/L 12-3M	2.00	3.00	12.0	500.0	21.0	10.2	55.00	SR 16-236 P	T-15/5
HGAER/L 12-3T6	6.00	3.00	12.0	15.0	21.0	10.2	55.00	SR 16-236 P	T-15/5
HGAER/L 14-3T7	7.00	3.00	14.0	17.0	21.0	10.2	55.00	SR 16-236 P	T-15/5
HGAER/L 17-3T8	8.00	3.00	17.0	21.0	21.0	10.2	55.00	SR 16-236 P	T-15/5
HGAER/L 21-3T9	9.00	3.00	21.0	25.0	21.0	10.2	55.00	SR 16-236 P	T-15/3

• GRIP 3... inserts can be used with right-hand adapters only, HGPL 3 with left-hand adapters. • For user guide, see pages 460-470

(1) Minimum penetration diameter

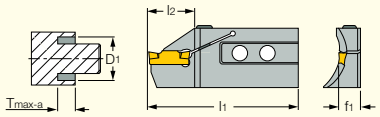
(2) Maximum penetration diameter

For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • HGPL (449)

For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)

HELiFACE

HFAER/L-4
Adapters for External Facing Along Shafts



Left-hand shown

Right-hand shown

Designation	T_{max-a}	W	$D_{1\ min}$(1)	$D_{1\ max}$(2)	l_1	l_2	f_1		
HFAER/L 40-4T20	20.00	4.00	40.0	48.0	68.50	21.0	11.6	SR M5X16 DIN912	HW 4.0
HFAER/L 48-4T20	20.00	4.00	48.0	60.0	68.50	21.0	11.6	SR M5X16 DIN912	HW 4.0
HFAER/L 60-4T25	25.00	4.00	60.0	75.0	68.50	26.0	11.6	SR M5X16 DIN912	HW 4.0
HFAER/L 75-4T25	25.00	4.00	75.0	100.0	68.50	26.0	11.6	SR M5X16 DIN912	HW 4.0

• DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

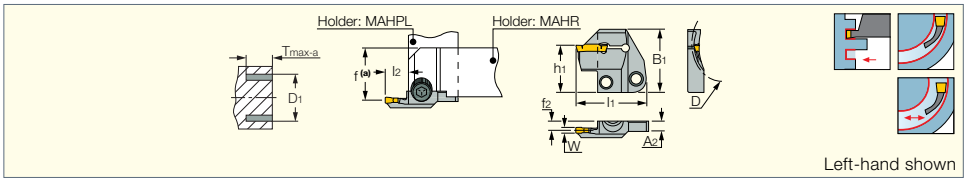
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)

MODULAR GRIP

HFPAD-4

Adapters for Face Machining



Designation	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	W	T_{max-a}	l_2	f_2	A_2	l_1
HFPAD 4R/L-25-T10	25.0	31.0	4.00	10.00	16.0	4.50	5.8	40.50
HFPAD 4R/L-31-T10	31.0	44.0	4.00	10.00	16.0	4.50	5.8	40.50
HFPAD 4R/L-44-T14	44.0	58.0	4.00	14.00	16.0	4.50	5.8	40.50
HFPAD 4R/L-58-T14	58.0	88.0	4.00	14.00	16.0	4.50	5.8	40.50
HFPAD 4R/L-88-T14	88.0	175.0	4.00	14.00	16.0	4.50	5.8	40.50
HFPAD 4R/L-175-T20	175.0	800.0	4.00	20.00	21.0	4.50	6.5	45.50

• $f^{(a)}$=f1(shank) + f2(adapter) • DGN & GRIP 4.. inserts can be used only with right-hand adapters, HGPL 4.. inserts with left-hand adapters. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

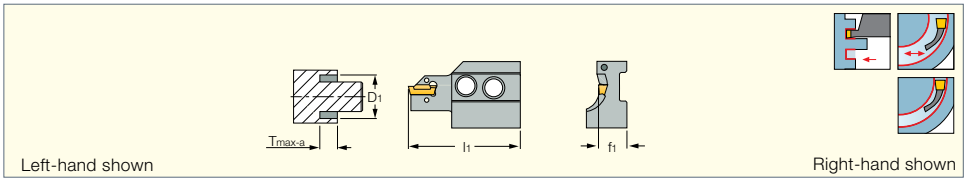
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

For holders, see pages: C#-MAHD-JHP (479) • C#-MAHPD-JHP (480) • MAHR/L-JHP-MC (236) • MAHPR/L-JHP (237) • MAHR/L-JHP (236) • MAHR/L (235) • MAHPR/L (237) • C#-MAHD (479) • C#-MAHPD (480) • C#-MAHUR/L (479) • C#-MAHDR-45 (478) • C#-MAHDOR (478) • HSK A63WH-MAHUR/L (482) • HSK A63WH-MAHDR-45 (481) • HSK A63WH-MAHDOR (482) • IM-MAHD (483) • IM-MAHPD (483)

HELIFACE

HFAER/L-5T, 6T

Adapters for External Facing Along Shafts



Designation	W	T_{max-a}	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	l_1	f_1	
HFAER/L 70C-5T25	5.00	25.00	70.0	95.0	66.00	12.2	EDG 33B*
HFAER/L 95C-5T25	5.00	25.00	95.0	130.0	66.00	12.2	EDG 33B*
HFAER/L 70C-6T28	6.00	28.00	70.0	100.0	69.00	12.3	EDG 33B*
HFAER/L 100C-6T32	6.00	32.00	100.0	180.0	73.00	12.3	EDG 33B*
HFAER/L 180C-6T32	6.00	32.00	180.0	400.0	73.00	12.3	EDG 33B*

• After initial groove, no limitation to widening groove outward from or toward center. • Adapters can be mounted on standard HAR/L, HAPR/L, HAI holders for external machining. • DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

* Optional, should be ordered separately

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

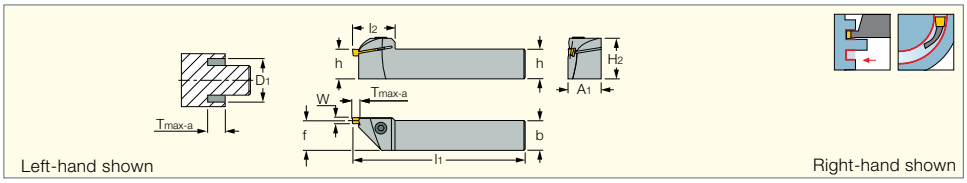
For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)



HELIFACE

HFHR/L-M

Toolholders for Shallow Face Grooving



Designation	W min	W max	Tmax-a	f	h	b	l1	D1 min(1)	D1 max(2)	H2	A1		
HFHR/L 20M	3.00	6.00	5.30	20.0	20.0	20.0	130.00	20.0	2000.0	29.0	22.50	SR M6X16 DIN912	HW 5.0
HFHR/L 25M	3.00	6.00	5.30	25.0	25.0	25.0	150.00	20.0	2000.0	34.0	27.50	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 4.. - 6.. inserts can be used only with right-hand tools, HGPL 4.. - 6.. inserts with left-hand tools. • After initial groove, no limitation to widening groove outward or toward center. • For user guide, see pages 460-470

(1) Minimum penetration diameter

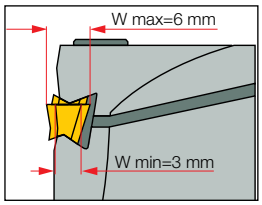
(2) Maximum penetration diameter

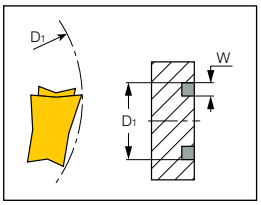
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448)

HFHR/L-☐M & HFHPR/L-☐M

Integral Toolholders

For shallow machining up to max. 5 mm depth of groove.
One toolholder can be mounted with inserts in 3-6 mm widths.
The initial major diameter groove is limited by the insert geometry in each size.
After initial groove, face recessing outward or toward center is not limited by insert geometry.





Insert initial face grooving range

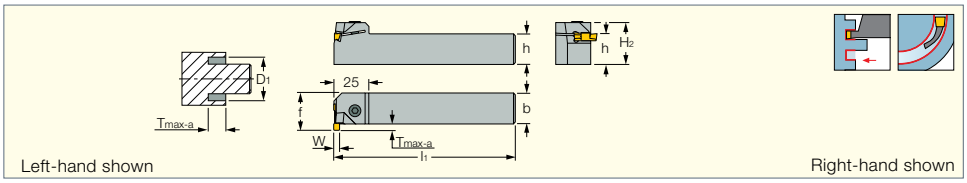
W	D1 Min.	D1 Max.
3	25.6	51.5
4	24.1	73.7
5	22.1	170
6	20.8	∞



HELIFACE

HFHPR/L-M

Perpendicular Toolholders for Shallow Face Grooving



Designation	W min	W max	Tmax-a	f	h	b	l1	D1 min(1)	D1 max(2)	H2		
HFHPR/L 20M	3.00	6.00	5.00	25.3	20.0	20.0	130.00	20.0	2000.0	29.0	SR M6X16 DIN912	HW 5.0
HFHPR/L 25M	3.00	6.00	5.00	30.3	25.0	25.0	150.00	20.0	2000.0	34.0	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 4.. - 6.. inserts can be used only with right-hand tools, HGPL 4.. - 6.. inserts with left-hand tools. • After initial groove, no limitation to widening groove outward or toward center. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448)

Boring Bars for Adapters

HGAIR/L & HFAIR/L Adapters and HAI Holders

Adapter clamped on **HAI** round shank holders can machine deep internal boring and grooving applications. The tool can bore down to the bottom, and is supplied with internal coolant for better performance.



HFAIR/L & HGAIR/L

Exchangeable adapters, see pages **B268, B270**.

HAI Holders

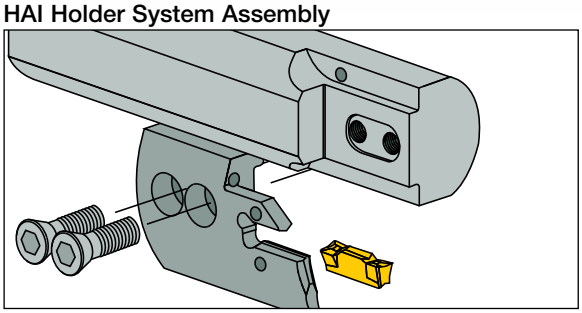
for adapters, see page **B269**.

HFAIR/L HGAIR/L	- ☐	C	- ☐	T - ☐
HELIFACE	Min. initial	Internal	Insert	Max. depth
Internal adapters right or left	groove diameter	coolant	width	of groove

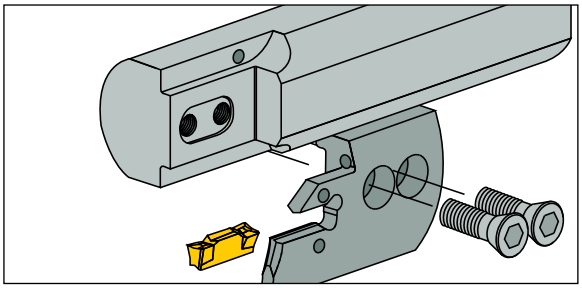




HAI Holder System Assembly



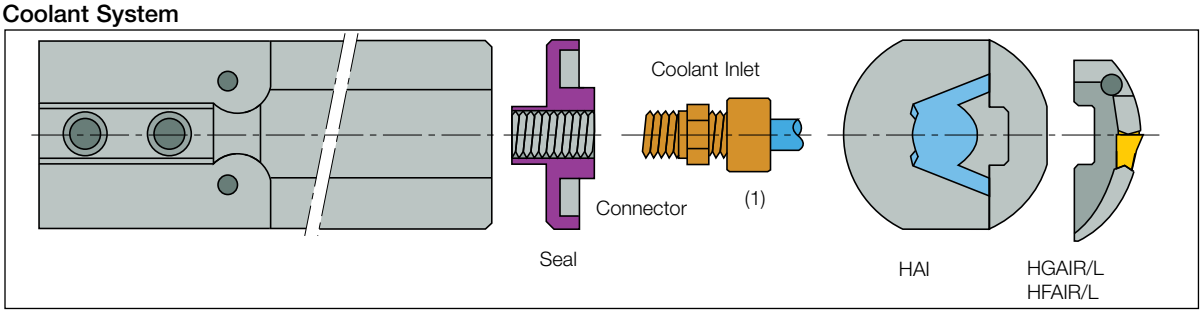
HFAIL & HGAIL
Left-hand Adapters

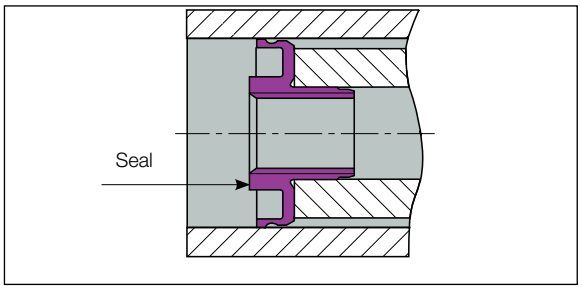


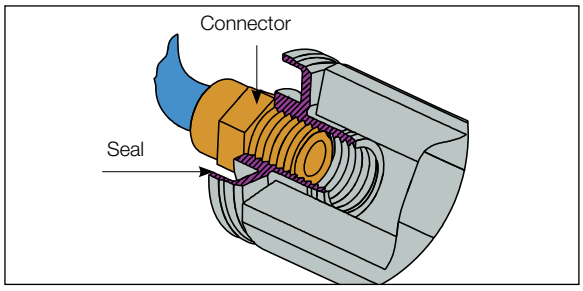
HFAIR & HGAIR
Right-hand Adapters

The same **HAI** boring bar can be used with right- and left-hand adapters in a wide range of face machining applications. The two screws and the central guiding slot on the adapter correspond to the key and holes on the holder ensuring strong, safe, and accurate clamping.

Coolant System





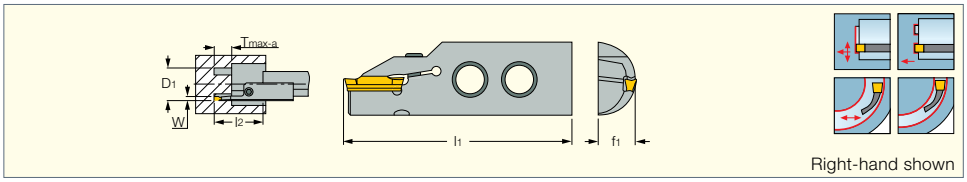


(1) Connector for coolant inlet BSP 1/8 thread. For PL-20, use M6 thread. Connector not supplied with tools.

HELIFACE

HGAIR/L-3

Adapters for Internal Face Grooving and Turning



Designation	Tmax-a	D1 min(1)	D1 max(2)	W	l1	f1	l2		
HGAIR/L 12-3M	2.00	12.0	500.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 12-3T6	6.00	12.0	15.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 14-3T7	7.00	14.0	17.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 17-3T8	8.00	17.0	21.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 21-3T9	9.00	21.0	25.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 25-3T9	9.00	25.0	34.0	3.00	55.00	10.2	21.0	SR 16-236 P	T-15/3
HGAIR/L 35-3T10	10.00	35.0	45.0	3.00	56.00	10.3	22.0	SR 16-236 P	T-15/3
HGAIR/L 45-3T10	10.00	45.0	65.0	3.00	56.00	10.3	22.0	SR 16-236 P	T-15/3
HGAIR/L 65-3T18	18.00	65.0	115.0	3.00	64.00	11.3	30.0	SR 16-236 P	T-15/3
HGAIR/L 115-3T18	18.00	115.0	400.0	3.00	64.00	11.3	30.0	SR 16-236 P	T-15/3

• HGN & GRIP 3.. inserts can be used only with right-hand adapters, HGPL 3.. inserts with left-hand adapters. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

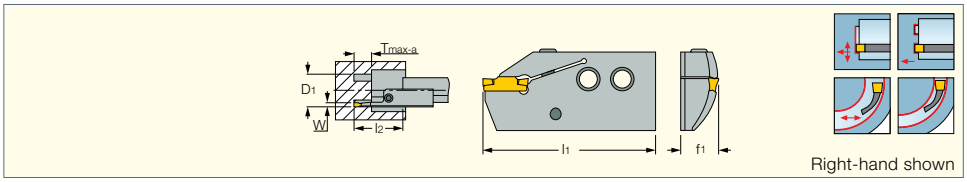
For inserts, see pages: GRIP (229) • GRIP (full radius) (230) • HGN-C (386) • HGN-J (386) • HGN-UT (387) • HGPL (449)

For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAI-C (445) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)

HELIFACE

HFAIR/L-4

Adapters for Internal Face Grooving and Turning



Designation	Tmax-a	W	D1 min(1)	D1 max(2)	l1	f1	l2		
HFAIR/L 34-4T18	18.00	4.00	34.0	40.0	67.00	15.3	33.0	SR M5X16 DIN912	HW 4.0
HFAIR/L 40-4T20	20.00	4.00	40.0	48.0	67.00	15.3	33.0	SR M5X16 DIN912	HW 4.0
HFAIR/L 48-4T20	20.00	4.00	48.0	60.0	67.00	15.3	33.0	SR M5X16 DIN912	HW 4.0
HFAIR/L 60-4T25	25.00	4.00	60.0	75.0	67.00	15.3	33.0	SR M5X16 DIN912	HW 4.0

• DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades. • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

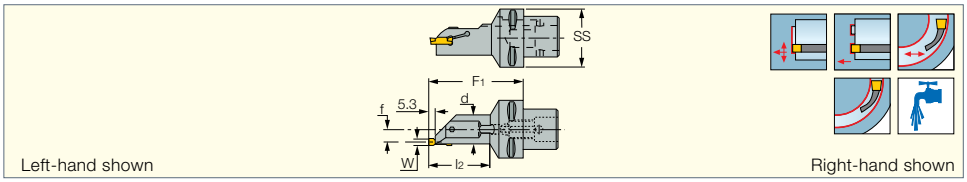
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • HGPL (449)

For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAI-C (445) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)

CAMFIX

C#-HFIR/L-MC

Boring Bars for Internal Grooving and Turning with CAMFIX Exchangeable Shanks



Designation	W min	W max	SS	f	l2	F1	d			
C4 HFIR/L-MC	3.00	6.00	40	11.3	52.0	80.0	25.00	SR M5X16 DIN912	HW 4.0	EZ 83
C5 HFIR/L-MC	3.00	6.00	50	11.3	52.0	80.0	25.00	SR M5X16 DIN912	HW 4.0	EZ 83

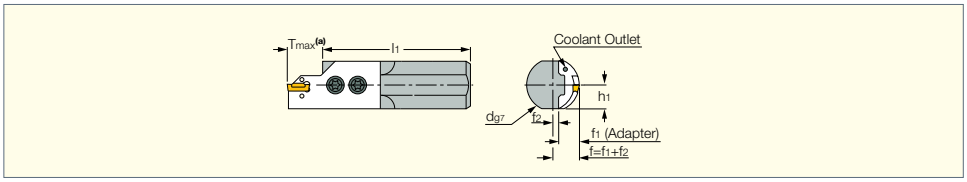
• DGN & GRIP 4.. - 6.. inserts can be used only with right-hand tools, HGPL 4.. - 6.. inserts with left-hand tools. • After initial groove, no limitation to widening groove outward or toward center. • For user guide, see pages 460-470

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

HELIFACE

HAI-C

Boring Bars with Coolant Holes for Internal Grooving and Turning Adapters



Designation	d	l_1	h_1	f_2				
HAI 20	20.00	130.00	9.0	0.50	N	SR 14-519	T-20/3	
HAI 25C	25.00	150.00	11.5	3.00	Y	SR 14-519	T-20/3	PL 25
HAI 32C	32.00	200.00	14.5	6.50	Y	SR 14-519	T-20/3	PL 32
HAI 40C	40.00	250.00	18.0	10.50	Y	SR 14-519	T-20/3	PL 40

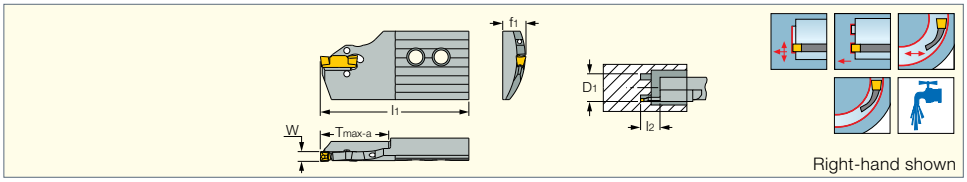
• The HAI boring bars can be used with right and left-hand adapters. • (a) Tmax - see corresponding adapters.

For tools, see pages: HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAIR/L-3 (444)

HELIFACE

HFAIR/L-DG

Adapters for Internal Face Grooving and Turning



Designation	W	$D_{1\ min}$(1)	$D_{1\ max}$(2)	$T_{max\text{-}a}$	f_1	l_2	l_1	
HFAIR/L 75C-4T30DG	4.00	75.0	140.0	30.00	10.9	34.5	68.50	EDG 33B*
HFAIR/L 140C-4T30DG	4.00	140.0	-	30.00	10.9	34.5	68.50	EDG 33B*
HFAIR/L 55C-5T25DG	5.00	55.0	70.0	25.00	11.9	32.0	66.00	EDG 33B*
HFAIR/L 70C-5T25DG	5.00	70.0	95.0	25.00	11.9	32.0	66.00	EDG 33B*
HFAIR/L 95C-5T35DG	5.00	95.0	130.0	35.00	11.9	39.5	73.50	EDG 33B*
HFAIR/L 130C-5T38DG	5.00	130.0	180.0	38.00	11.9	42.5	76.50	EDG 33B*
HFAIR/L 180C-5T38DG	5.00	180.0	-	38.00	11.9	42.5	76.50	EDG 33B*
HFAIR/L 70C-6T28DG	6.00	70.0	100.0	28.00	12.0	35.0	69.00	EDG 33B*
HFAIR/L 100C-6T32DG	6.00	100.0	180.0	32.00	12.0	39.0	73.00	EDG 33B*
HFAIR/L 180C-6T38DG	6.00	180.0	400.0	38.00	12.4	42.5	76.50	EDG 33B*

• After initial groove, no limitation to widening groove outward or toward center • DGN inserts can be used on right- and left-hand tools, GRIP inserts only on right-hand tools, HFPR/L right-hand inserts on right-hand tools (same for left-hand), and HGPL inserts only on left-hand tools.

(1) Minimum penetration diameter

(2) Maximum penetration diameter

* Optional, should be ordered separately

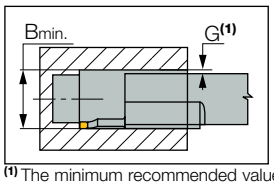
For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

For holders, see pages: C#-HAD (480) • C#-HAPR/L (480) • HAI-C (445) • HAPR/L (440) • HAR/L (440) • IM-HAD (484) • IM-HAPR/L (484)

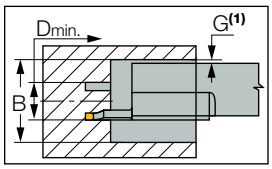
Adapters can be used for internal machining along bore. Adapters can be mounted on standard HAI boring bars for internal machining and on HAR/L, HAPR/L holders for external machining

Boring, Face Grooving & Face Recessing Capacity

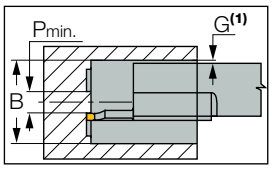
Boring
B Min. =F+G+d/2



Face Grooving
D Min. =2F-B+2G+d



Face Recessing
P Min. =2F-B-2W+2G+d



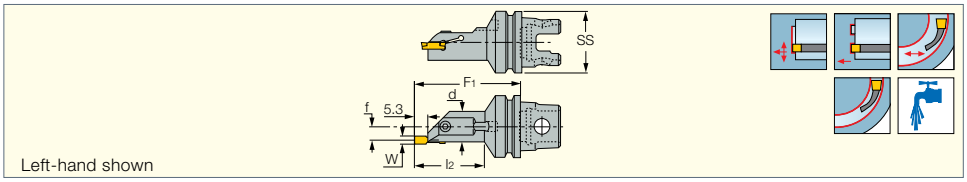
(1) The minimum recommended value for clearance (G) is 0.5 mm

ISO 26622-1 XMZ

HELiFACE

IM-HFIR-MC

Tools for Internal Grooving and Turning with ISO 26622-1(*) Tapered Shank



Designation	SS	F1	d	f	l2	W min	W max			
IM40 HFIR-MC	40	80.0	25.00	11.3	52.0	3.00	6.00	SR M5X16 DIN912	HW 4.0	EZ 83
IM50 HFIR-MC	50	80.0	25.00	11.3	52.0	3.00	6.00	SR M5X16 DIN912	HW 4.0	EZ 83

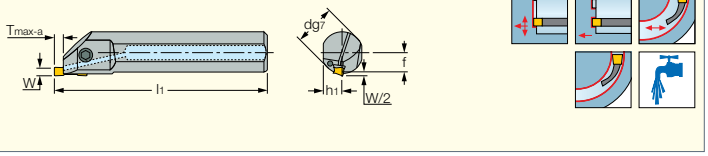
• (*) Tools with orientation holes in the flange groove can be supplied on request • DGN & GRIP 4.. - 6.. inserts can be used only with right-hand tools, HGPL 4.. - 6.. inserts with left-hand tools. • After initial groove, no limitation to widening groove outward or toward center. • For user guide, see pages 460-470

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381)

HELiFACE

HFIR/L-MC

Boring Bars for Internal Grooving and Turning

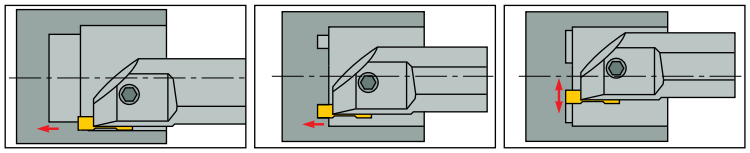


Designation	d	W min	W max	l1	f±0.10	h1	Tmax-a			
HFIR 16MC	16.00	3.00	6.00	150.00	11.14	7.5	5.00	SR M5X16 DIN912	HW 4.0	PL 16
HFIR 20MC	20.00	3.00	6.00	170.00	11.14	9.0	5.00	SR M5X16 DIN912	HW 4.0	PL 20
HFIR/L 25MC	25.00	3.00	6.00	200.00	11.14	11.5	5.00	SR M5X16 DIN912	HW 4.0	PL 25
HFIR/L 32MC	32.00	3.00	6.00	250.00	14.68	14.5	5.00	SR M6X20 DIN912	HW 5.0	PL 32
HFIR/L 40MC	40.00	3.00	6.00	300.00	18.70	18.0	5.00	SR M6X20 DIN912	HW 5.0	PL 40

• DGN & GRIP 4.. - 6.. inserts can be used only with right-hand tools, HGPL 4.. - 6.. inserts with left-hand tools. • After initial groove, no limitation to widening groove outward or toward center. • For user guide, see pages 460-470

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381) • HGPL (449)

Boring | **Internal Face Grooving** | **Internal Face Recessing**

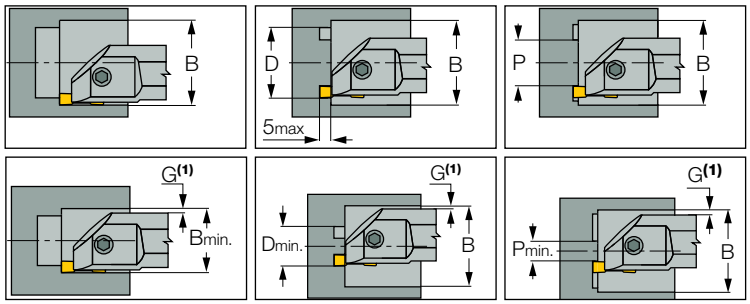


Boring, Face Grooving & Face Recessing Capacity

Boring
B Min.=F+d/2+W/2+2G

Face Grooving
D Min.=2F+d+W-B+2G

Face Recessing
P Min.=2F+d-W-B+2G



(1) The minimum recommended value for clearance (G) is 0.5 mm

HFIR/L-: MC Integral Boring bars

For shallow, internal face machining to max. 5 mm depth of groove. One boring bar can be mounted with inserts in 4-6 mm widths.

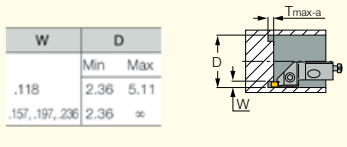
The initial major diameter groove is limited by the insert's geometry in each size.
After the initial groove, face recessing outward or toward center is not limited by the insert's geometry.

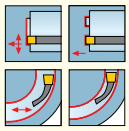
Insert Initial Face Grooving Range

W	D Min.	D Max.
4	23	90
5	21	300
6	20	∞

HELIFACE

CR HFIR-M
Cartridges for Face Grooving and Turning





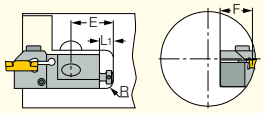
Right-hand shown

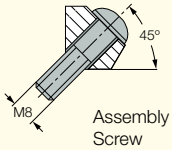
Designation	W min	W max	h1	b	h	l1	f	Tmax-a
CR HFIR-16M	3.00	6.00	16.0	16.0	20.0	67.00	20.0	5.00
CR HFIR-20M	3.00	6.00	20.0	20.0	24.0	72.00	24.0	5.00

• Used for shallow internal face machining to max. 5 mm depth of groove • Inserts in 3-6 mm widths can be mounted on the cartridges • Only DGN & GRIP 4.. - 6.. inserts can be used with the right-hand tools

For inserts, see pages: HFPR/L (447) • HFPR/L (full radius) (448) • GRIP (229) • GRIP (full radius) (230) • DGN/DGNC/DGNM-C (380) • DGN/DGNM-J/JS/JT (381) • DGN-W (381)

CR-HFIR/L-M
Assembly Dimensions





Designation	E	L1(1)	F(2)	Rmax.	Assembly Screw(3)
CR HFIR/L-16M	25	8	20	6	M8X30
CR HFIR/L-20M	30	10	24	6	M8X30

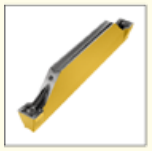
(1) L adjustment ± 1
(2) F adjustment $^{+0.3}_{-0}$
(3) Assembly screws ISO 7380 are recommended

Spare Parts

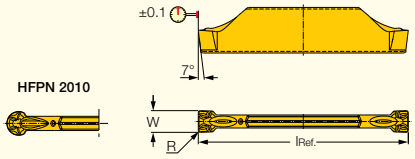
Designation					
CR HFIR-16M	SR M5X20DIN912	HW 4.0	SR 76-1401	SR M4X10 DIN916	HW 2.0
CR HFIR-20M	SR M5X20DIN912	HW 4.0	SR 76-1401	SR M4X10 DIN913	HW 2.0

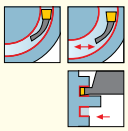
HELIFACE

HFPN
Utility Double-Ended Face Machining Inserts



HFPN 2010





Designation	Dimensions W±0.04	R	l Ref.	IC808	Recommended Machining Data f groove (mm/rev)
HFPN 2002	2.00	0.20	19.40	•	0.03-0.10
HFPN 2010	2.00	1.00	19.40	•	0.03-0.10

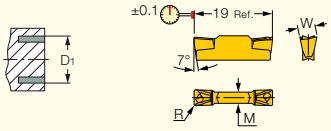
• For cutting speed recommendations and user guide, see pages 460-470

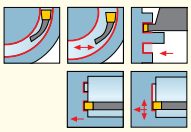
For tools, see pages: HFFA (435) • HFFH (435)

HELIFACE

HFPR/L
Utility Double-Ended Face Machining Inserts







No depth penetration limit

Designation	Dimensions W±0.05	R±0.05	M	D1 min	D1 max	Tough ↔ Hard IC328	IC830	IC354	IC8250	IC808	IC9015	IC20	IC5010	IC428	Recommended Machining Data ap (mm)	f face-groove (mm/rev)	f face-turn (mm/rev)
HFPR/L 3003	3.00	0.30	2.10	25.6	51.5		•	•	•	•	•	•	•	•	0.30-1.50	0.08-0.20	0.10-0.20
HFPR/L 4004	4.00	0.40	2.80	24.1	73.7	•	•	•	•	•	•	•	•	•	0.40-2.00	0.10-0.24	0.15-0.25
HFPR/L 5004	5.00	0.40	3.40	22.1	170.0		•	•	•	•	•	•	•	•	0.50-2.50	0.12-0.24	0.15-0.35
HFPR/L 6004	6.00	0.40	4.00	20.8	-		•	•	•	•	•	•	•	•	0.40-3.00	0.12-0.28	0.15-0.40

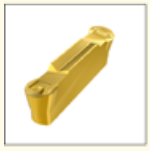
• For cutting speed recommendations and user guide, see pages 460-470

For tools, see pages: C#-HFIR/L-MC (444) • CR HFIR-M (447) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHPR/L-M (442) • HFHR/L-3T (436) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFHR/L-M (442) • HFIR/L-MC (446) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • IM-HFIR-MC (446)

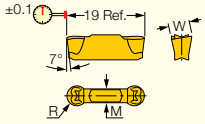
HELIFACE

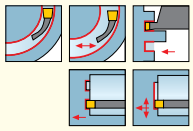
HFPR/L (full radius)

Utility Double-Ended Full Radius Face Machining Inserts









No depth penetration limit.

Designation	Dimensions W±0.05	R±0.05	M	D1 min	D1 max	Tough ↔ Hard IC830	IC354	IC8250	IC808	IC9015	IC20	IC5010	IC428	Recommended Machining Data ap (mm)	f face-groove (mm/rev)	f face-turn (mm/rev)
HFPR/L 3015	3.00	1.50	2.10	25.6	51.5	●	●	●	●	●	●	●	●	0.00-1.50	0.08-0.20	0.12-0.20
HFPR/L 4020	4.00	2.00	2.80	24.1	73.7	●	●	●	●	●	●	●	●	0.00-2.00	0.10-0.24	0.15-0.25
HFPR/L 5025	5.00	2.50	3.40	22.1	170.0	●	●	●	●	●	●	●	●	0.00-2.50	0.12-0.24	0.15-0.35
HFPR/L 6030	6.00	3.00	4.00	20.8	-	●	●	●	●	●	●	●	●	0.00-3.00	0.12-0.28	0.20-0.40

• For cutting speed recommendations and user guide, see pages 460-470

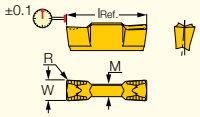
For tools, see pages: C#-HFIR/L-MC (444) • CR HFIR-M (447) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHPR/L-M (442) • HFHR/L-3T (436) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFHR/L-M (442) • HFIR/L-MC (446) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • IM-HFIR-MC (446)

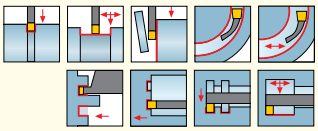
HELIGRIP

GRIP

Utility Double-Ended Inserts for External, Internal and Face Machining







No depth penetration limit

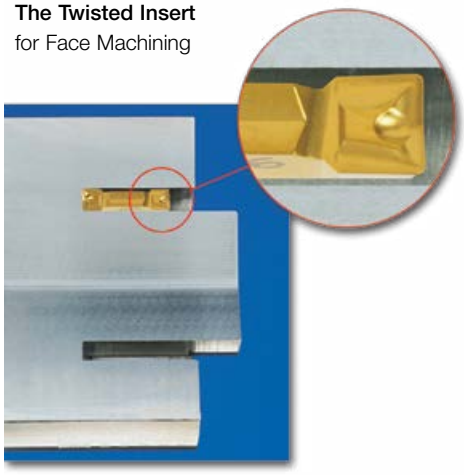
Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3002Y	3.00	0.20	16.00	2.30	●	●	●	●	●			●	0.25-1.80	0.14-0.18	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 3003Y	3.00	0.30	16.00	2.30	●	●	●	●		●	●		0.40-1.80	0.15-0.19	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 318-040Y	3.18	0.40	16.00	2.30	●	●		●	●	●			0.50-1.90	0.17-0.22	0.07-0.12	0.08-0.20	0.10-0.20
GRIP 4002Y	4.00	0.20	19.00	2.80	●	●	●	●	●			●	0.25-2.40	0.16-0.21	0.09-0.14	0.10-0.24	0.15-0.30
GRIP 4004Y	4.00	0.40	19.00	2.80	●	●	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15	0.10-0.24	0.15-0.30
GRIP 476-080Y	4.76	0.80	19.00	3.10	●	●		●	●	●			1.00-2.80	0.21-0.33	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5005Y	5.00	0.50	19.00	3.30	●	●	●	●	●	●	●	●	0.60-3.00	0.20-0.30	0.11-0.20	0.12-0.24	0.15-0.35
GRIP 5008Y	5.00	0.80	19.00	3.40	●	●		●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6005Y	6.00	0.50	19.00	4.20	●	●		●	●	●	●	●	0.60-3.60	0.22-0.36	0.13-0.23	0.12-0.28	0.15-0.40
GRIP 6008Y	6.00	0.80	19.00	4.20	●	●		●	●	●	●	●	1.00-3.60	0.24-0.42	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-080Y	6.35	0.80	19.00	4.20	●	●		●	●	●			1.00-3.80	0.25-0.44	0.14-0.27	0.12-0.28	0.15-0.40

• For cutting speed recommendations and user guide, see pages 460-470

For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFS (372) • DGPAD-XL-JHP (379) • DGTR/L (376) • HELIIR/L (301) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFIR/L-MC (446) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGAER/L-3 (440) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

The Twisted Insert

for Face Machining



The double-ended, twisted insert body makes it possible to machine deeper than the inserts' length. A unique chipformer for controlled chip flow in axial and radial directions.
The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface as the tool penetrates deeply into the workpiece.

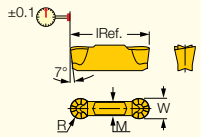


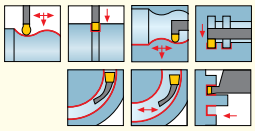
HELIGRIP

GRIP (full radius)

Utility Double-Ended Full Radius Inserts for External, Internal and Face Machining







No depth penetration limit

Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC807	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3015Y	3.00	1.50	15.80	2.10	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 318-159Y	3.18	1.59	16.00	2.30				●	●				0.00-1.50	0.19-0.28	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 4020Y	4.00	2.00	19.00	2.80	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17	0.10-0.24	0.15-0.30
GRIP 476-238Y	4.76	2.38	19.00	3.20				●	●	●			0.00-2.30	0.21-0.40	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5025Y	5.00	2.50	19.00	3.40	●	●		●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6030Y	6.00	3.00	19.00	4.20	●	●	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-318Y	6.35	3.18	19.00	4.00				●	●				0.00-3.10	0.25-0.53	0.14-0.27	0.12-0.28	0.15-0.40

• For cutting speed recommendations and user guide, see pages 460-470

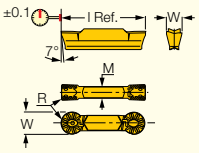
For tools, see pages: C#-HELIR/L (225) • C#-HFIR/L-MC (444) • CR HFIR-M (447) • DGAD/HGAD (378) • DGFH (228) • DGFH-JHP (229) • DGFS (372) • DGTR/L (376) • HELIIR/L (301) • HELIR/L (226) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFIR/L-MC (446) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGAER/L-3 (440) • HGAIR/L-3 (444) • HGFH (227) • HGHR/L-3 (436) • HGPAD (227) • HGPAD-JHP (227) • IM-HFIR-MC (446)

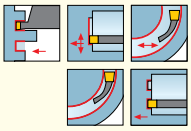
HELIFACE

HGPL

Utility Double-Ended Inserts for Face Machining







Designation	Dimensions W±0.03	M	R±0.05	l	Tough ↔ Hard IC328	IC354	IC08	IC808	IC908	Recommended Machining Data ap (mm)	f face-groove (mm/rev)	f face-turn (mm/rev)
HGPL 3015Y	3.00	2.10	1.50	16.00				●	●	0.00-1.50	0.08-0.20	0.12-0.23
HGPL 3002Y	3.00	2.30	0.20	16.00		●	●	●	●	0.24-1.80	0.08-0.20	0.12-0.23
HGPL 3003Y	3.00	2.30	0.30	16.00	●	●	●	●	●	0.36-1.80	0.08-0.20	0.12-0.23
HGPL 4002Y	4.00	2.80	0.20	19.00		●	●	●	●	0.24-2.40	0.10-0.24	0.16-0.30
HGPL 4004Y	4.00	2.80	0.40	19.00		●	●	●	●	0.48-2.40	0.10-0.24	0.16-0.30
HGPL 4020Y	4.00	2.80	2.00	19.00			●	●	●	0.00-2.00	0.10-0.24	0.16-0.30
HGPL 5005Y	5.00	3.30	0.50	19.00		●		●	●	0.60-3.00	0.12-0.24	0.20-0.38
HGPL 5025Y	5.00	3.30	2.50	19.00			●	●	●	0.00-2.50	0.12-0.24	0.20-0.38
HGPL 6005Y	6.00	4.20	0.50	19.00		●		●	●	0.60-3.60	0.12-0.28	0.24-0.45
HGPL 6005Y *	6.00	4.20	0.50	19.00			●			0.60-3.60	0.12-0.28	0.24-0.45
HGPL 6030Y	6.00	4.20	3.00	19.00			●	●	●	0.00-3.00	0.12-0.28	0.24-0.45

• No depth penetration limit • For cutting speed recommendations and user guide, see pages 460-470

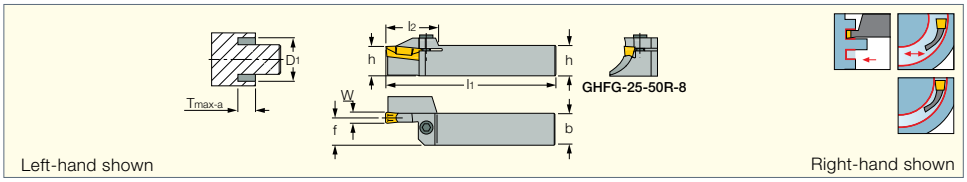
For tools, see pages: C#-HFIR/L-MC (444) • HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HFFR/L-T (439) • HFHR/L-4T (437) • HFHR/L-5T (437) • HFHR/L-6T (438) • HFIR/L-MC (446) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGAER/L-3 (440) • HGAIR/L-3 (444) • HGHR/L-3 (436)



CUTGRIP

GHFG-R/L-8

Holders for Face Grooving and Turning Along Shafts



Designation	Tmax-a	D1 min(1)	D1 max(2)	h	b	l1	l2	f		
GHFG 25-50R/L-8	25.00	50.0	64.0	25.0	25.0	150.00	41.0	22.0	SR M6X20 DIN912	HW 5.0
GHFG 25-63R/L-8	25.00	63.0	82.0	25.0	25.0	150.00	41.0	22.0	SR M6X20 DIN912	HW 5.0
GHFG 32-63R-8	25.00	63.0	82.0	32.0	32.0	170.00	41.0	30.0	SR M6X20 DIN912	HW 5.0

• For user guide, see pages 460-470

(1) Minimum penetration diameter

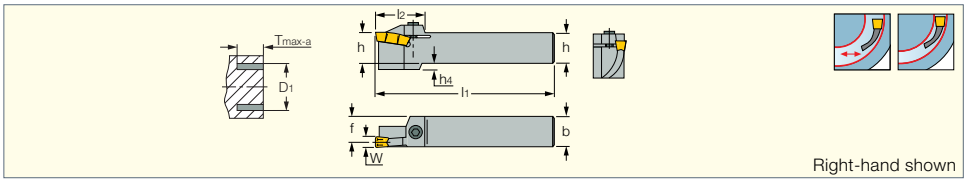
(2) Maximum penetration diameter

For inserts, see pages: GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIFG-E (W=8) (452)

CUTGRIP

GHFGR/L-8

Holders for Face Grooving and Turning



Designation	D1 min(1)	D1 max(2)	h	b	l1	l2	f	h4		
GHFGR/L 25-80-8	80.0	115.0	25.0	25.0	150.00	43.5	21.3	6.0	SR M6X20 DIN912	HW 5.0
GHFGR/L 32-80-8	80.0	115.0	32.0	32.0	170.00	43.5	28.3	-	SR M6X20 DIN912	HW 5.0
GHFGR/L 25-105-8	105.0	160.0	25.0	25.0	150.00	43.5	21.3	6.0	SR M6X20 DIN912	HW 5.0
GHFGR/L 32-105-8	105.0	160.0	32.0	32.0	170.00	43.5	28.3	-	SR M6X20 DIN912	HW 5.0
GHFGR/L 25-155-8	155.0	510.0	25.0	25.0	150.00	43.5	21.3	6.0	SR M6X20 DIN912	HW 5.0
GHFGR/L 32-155-8	155.0	510.0	32.0	32.0	170.00	43.5	28.3	-	SR M6X20 DIN912	HW 5.0

• No limitation to widening the groove either way after initial grooving • Tmax depends on the penetration diameter and the insert

• For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

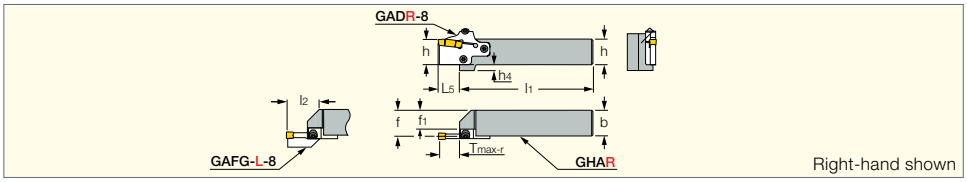
For inserts, see pages: GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIFG-E (W=8) (452) • GIPA/GIDA 8 (full radius) (257)

	Tmax for GHFGR/L (25/32)-80-8						
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
80	16	23	23	20	24	16	24
82	17	23	23	20	24	17	24
84	18	23	23	21	24	18	24
86	19	23	23	21	24	19	24
88	20	23	23	22	24	20	24
90	20	23	23	22	24	20	24
96	20	23	23	22	24	20	24
104	20	23	23	22	24	20	24
115	22	23	23	22	24	22	24
	Tmax for GHFGR/L (25/32)-105-8						
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
105	21	23	23	23	24	21	24
114	22	23	23	23	24	22	24
126	23	23	24	23	24	23	24
140-160	24	24	24	23	24	24	24
	Tmax for GHFGR/L (25/32)-155-8						
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
155	24	24	24	23	24	24	24
180	24	24	24	23	24	24	24
210-510	24	24	24	23	24	24	24

CUTGRIP

GHAR/L-8

External Holders for Grooving and Turning Adapters



Designation	h	b	f_1	l_1	l_2	L_5	h_4	T_G	T_{max-r} (1)	F_G	T_{max-a} (1)				
GHAR/L 25-8	25.0	25.0	16.0	124.50	45.0	25.50	14.0	GADR/L 8	25.50	GAFG...R/L-8	25.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0
GHAR/L 32-8	32.0	32.0	23.0	144.50	45.0	25.50	7.0	GADR/L 8	25.50	GAFG...R/L-8	25.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

• Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving (to be ordered separately)

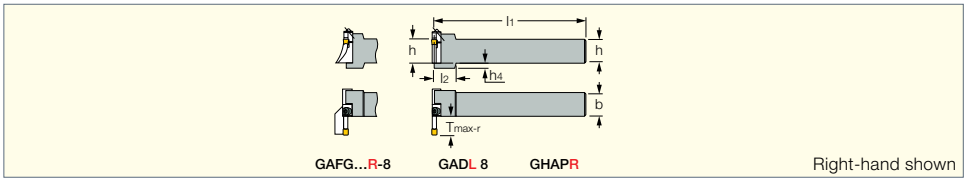
(1) See specific adapter dimensions

For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

CUTGRIP

GHAPR/L-8

External Holders for Grooving and Turning Perpendicularly Oriented Adapters



Designation	h	b	l_1	l_2	h_4	T_G	T_{max-r} (1)	F_G	T_{max-a} (1)				
GHAPR/L 32-8	32.0	32.0	155.00	30.0	7.0	GADR/L 8	25.50	GAFG...R/L-8	26.00	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

• Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving (to be ordered separately)

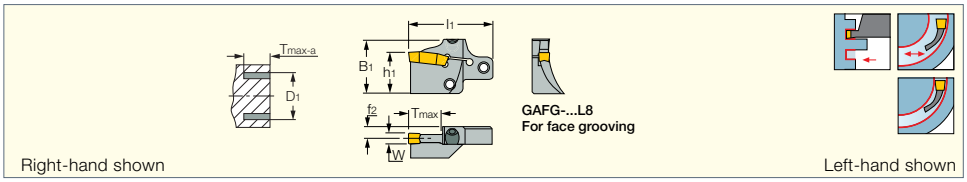
(1) See specific adapter dimensions

For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

CUTGRIP

GAFG-R/L-8

Adapters for Face Machining



Designation	W	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	T_{max-a} (3)	f_2	h_1	B_1	l_1
GAFG 80R/L-8	8.00	80.0	115.0	23.00	9.00	32.0	42.0	63.50
GAFG 105R/L-8	8.00	105.0	160.0	25.00	9.00	32.0	42.0	63.50
GAFG 155R/L-8	8.00	155.0	510.0	25.00	9.00	32.0	42.0	63.50

• No limitation for widening the groove either way after initial grooving • For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

(3) For GIFG-8 & GDMY-8 Tmax=25 mm for D range

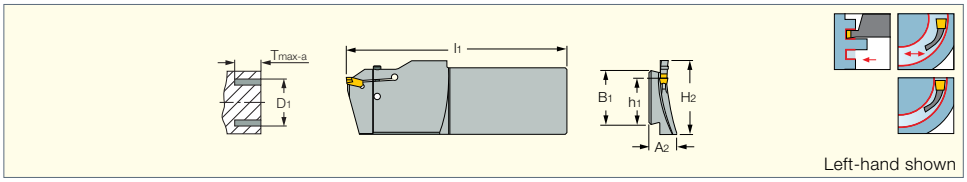
For inserts, see pages: GDMA (256) • GDMF (244) • GDMM-CC (454) • GDMN (246) • GDMU (246) • GDMY (245) • GDMY (full radius) (247) • GDMY-F (248) • GIA-K (long pocket) (254) • GIF (long pocket) (253) • GIF-E (W=8,10 full radius) (250) • GIF-E (W=8,10) (248) • GIFG-E (W=8) (452) • GIPA/GIDA 8 (full radius) (257)

For holders, see pages: C#-GHAD-8 (241) • C#-GHAPR/L-8 (242) • GHAPR/L-8 (243) • GHAR/L-8 (242) • IM-GHAD-8 (484) • IM-GHAPR/L-8 (484)

CUTGRIP

CGFG 51-P8

Blades for Face Machining
Carrying 8 mm Inserts



Left-hand shown

Designation	W	$D_{1\ min}$[1]	$D_{1\ max}$[2]	T_{max-a}	B_1	h_1	l_1	H_2	A_2		
CGFG 51-180R/L-P8	8.00	180.0	240.0	70.00	52.6	45.0	200.00	60.0	27.5	SR M4-2052	HW 3.0
CGFG 51-240R/L-P8	8.00	240.0	320.0	80.00	52.6	45.0	210.00	70.0	26.0	SR M4-2052	HW 3.0
CGFG 51-320R/L-P8	8.00	320.0	440.0	90.00	52.6	45.0	220.00	80.0	24.5	SR M4-2052	HW 3.0
CGFG 51-440R/L-P8	8.00	440.0	700.0	100.00	52.6	45.0	230.00	90.0	22.5	SR M4-2052	HW 3.0
CGFG 51-700R/L-P8	8.00	700.0	1500.0	120.00	52.6	45.0	250.00	100.0	20.0	SR M4-2052	HW 3.0

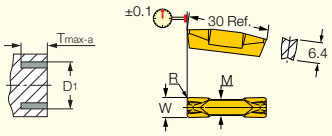
• For user guide, see pages 460-470
[1] Minimum penetration diameter
[2] Maximum penetration diameter
For inserts, see pages: GIMF (244) • GIMM 8CC (454) • GIMY (245) • GIMY (full radius) (246) • GIMY-F (247) • GIPY (255)
For holders, see pages: SGTBK (473) • SGTBU/SGTBN (472)

CUTGRIP

GIFG-E (W=8)

Inserts for Deep Face
Grooving and Turning





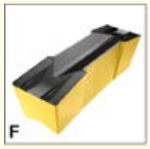
Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	$W^{\pm 0.02}$	$R^{\pm 0.05}$	$D_{1\ min}$	T_{max-a}	M	IC635	IC20	f face-groove (mm/rev)
GIFG 8.00E-0.80	8.00	0.80	50.0	25.00	6.00	•	•	0.15-0.25
GIFG 8.00E-1.20	8.00	1.20	50.0	25.00	6.00	•		0.15-0.25

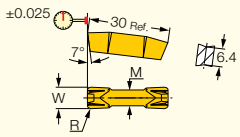
• For cutting speed recommendations, see pages 464-465
For tools, see pages: GAFG-R/L-8 (451) • GHFG-R/L-8 (450) • GHFGR/L-8 (450)

CUTGRIP

GIF-E (W=8,10)

Precision Double-Ended Inserts
for Grooving and Turning





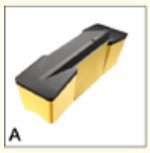
Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data		
	$W^{\pm 0.02}$	R	$R^{\pm toler}$	M	T_{max-r}	IC830	IC8250	IC808	IC20	IC5010	IC428	IC806	IC807	a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-0.40	8.00	0.40	0.030	6.00	27.00		•	•						0.50-4.80	0.29-0.48	0.18-0.31
GIF 8.00E-0.80	8.00	0.80	0.050	6.00	27.00	•	•	•	•	•	•	•	•	1.00-4.80	0.32-0.56	0.18-0.34
GIF 8.00E-1.20	8.00	1.20	0.050	6.00	27.00	•	•	•	•	•	•			1.45-4.80	0.32-0.62	0.18-0.34
GIF 10.00E-0.80	10.00	0.80	0.050	8.00	27.00	•	•	•	•	•	•		•	1.00-6.00	0.35-0.65	0.22-0.40
GIF 10.00E-1.20	10.00	1.20	0.050	8.00	27.00	•	•	•	•			•		1.45-6.00	0.35-0.72	0.22-0.40

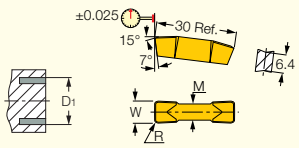
• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 460-470
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

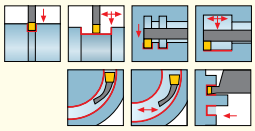
CUTGRIP

GIA-K (long pocket)

Flat Top Precision Double-Ended Inserts with T-Land for Machining Cast Iron







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	D1 min	Tough ↔ Hard IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIA 8.00K-0.80	8.00	0.80	6.00	25.00	160.0	●	●	1.00-4.80	0.36-0.64	0.18-0.38
GIA 8.00K-1.20	8.00	1.20	6.00	25.00	160.0	●	●	1.45-4.80	0.36-0.70	0.18-0.38

• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 460-470

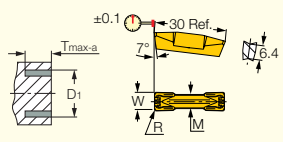
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

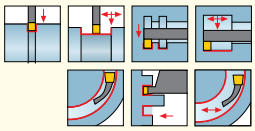
CUTGRIP

GDMY

Utility Double-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.05	R±0.05	M	D1 min	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 808	8.00	0.80	6.00	50.0	27.00	●	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

• Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 460-470

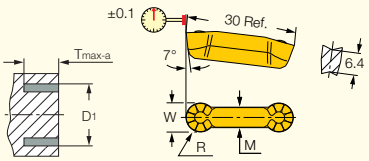
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

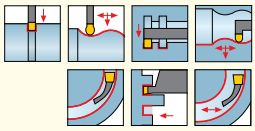
CUTGRIP

GDMY (full radius)

Utility Double-Ended Full Radius Inserts for Grooving and Profiling







Designation	Dimensions W±0.05	R±0.05	M	D1 min	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	IC806	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840	8.00	4.00	5.60	50.0	25.00	●	●	●	●	●	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• Can cut arcs to 250° • Dmin for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 460-470

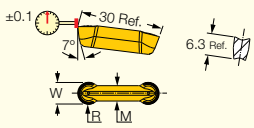
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDKR/L (358) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

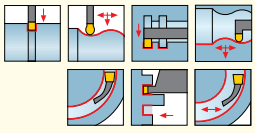
CUTGRIP

GDMY-F

Utility Double-Ended Inserts for Grooving and Profiling Ductile Materials







Designation	Dimensions W±0.05	R±0.05	M	Tmax-r	Tough ↔ Hard IC808	IC908	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840F	8.00	4.00	5.60	25.00	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• Dmin for internal applications = 65 mm • For cutting speed recommendations and user guide, see pages 460-470

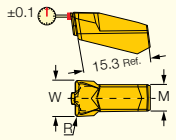
For tools, see pages: C#-GHDR/L (233) • CGHN-8-10D (244) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

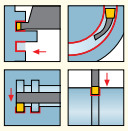
CUTGRIP

GIMM 8CC

Single-Ended Utility Insert with a Frontal Chip Splitter for External Rough Grooving and Side Turning







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC808	IC908	Recommended Machining Data f face-groove (mm/rev)
GIMM 8CC	8.00	0.80	5.80	•	•	0.30-0.45

• For cutting speed recommendations, see pages 464-465

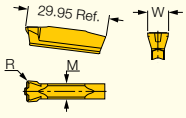
For tools, see pages: CGFG 51-P8 (452) • CGHN-P8 (240) • CGHR/L-P8DG (240) • CGPAD (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235)

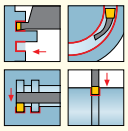
CUTGRIP

GDMM-CC

Single-Ended Utility Insert for External Rough Grooving and Side Turning with a Frontal Chip Splitter







Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC354	IC808	IC907	Recommended Machining Data f face-groove (mm/rev)
GDMM 7CC	7.00	0.80	6.00		•			0.30-0.45
GDMM 8CC	8.00	0.80	5.60	•		•	•	0.30-0.45

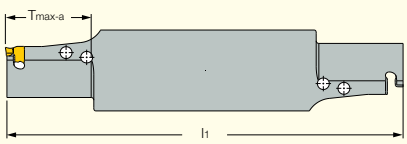
• For cutting speed recommendations, see pages 464-465

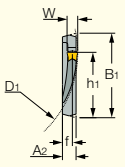
For tools, see pages: C#-GHDR/L (233) • GADR/L-8 (243) • GADR/L-JHP (243) • GAFG-R/L-8 (451) • GHDR/L (long pocket) (240) • GHDR/L-JHP (long pocket) (241) • GHFG-R/L-8 (450) • GHFGR/L-8 (450) • GHIR/L (W=7.0-8.3) (301)

TANGGRIP FACE MACHINING LINE

TNFFH-IQ

Face Grooving Blades







Right-hand shown

Designation	W	D1 min(1)	D1 max(2)	Tmax-a	h1	B1	f	A2	l1	Insert	
TNFFH 65R/L-3IQ	3.00	65.0	90.0	18.00	24.8	32.0	4.1	5.2	150.00	TNF 3...	ETF 3-6*
TNFFH 90R/L-3IQ	3.00	90.0	120.0	18.00	24.8	32.0	4.1	5.2	150.00	TNF 3...	ETF 3-6*
TNFFH 120R/L-3IQ	3.00	120.0	160.0	24.00	24.8	32.0	4.1	5.2	150.00	TNF 3...	ETF 3-6*
TNFFH 80R/L-4IQ	4.00	80.0	150.0	32.00	24.8	32.0	3.8	5.2	150.00	TNF 4...	ETF 3-6*
TNFFH 150R/L-4IQ	4.00	150.0	500.0	32.00	24.8	32.0	3.8	5.2	150.00	TNF 4...	ETF 3-6*
TNFFH 80R/L-5IQ	5.00	80.0	150.0	30.00	24.8	32.0	3.5	5.2	150.00	TNF 5...	ETF 3-6*
TNFFH 150R/L-5IQ	5.00	150.0	500.0	35.00	24.8	32.0	3.5	5.2	150.00	TNF 5...	ETF 3-6*
TNFFH 80R/L-6IQ	6.00	80.0	150.0	30.00	24.8	32.0	3.3	5.2	150.00	TNF 6...	ETF 3-6*
TNFFH 150R/L-6IQ	6.00	150.0	700.0	35.00	24.8	32.0	3.3	5.2	150.00	TNF 6...	ETF 3-6*

• B1 dimension links blades and blocks

(1) Minimum penetration diameter

(2) Maximum penetration diameter

* Optional, should be ordered separately

For inserts, see pages: TNF-M-IQ (455) • TNF-P-IQ (455)

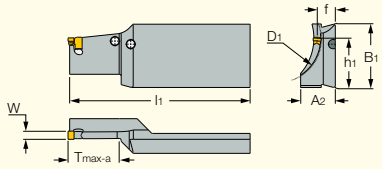


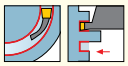
ETF 3-6 extractor (to be ordered separately).

TANG-GRIP FACE MACHINING LINE

TNFFA-IQ

Reinforced Face Grooving Blades





Right-hand shown

Designation	W	$D_{1\ min}$ (1)	$D_{1\ max}$ (2)	T_{max-a}	B_1	f	h_1	l_1	A_2	Insert	
TNFFA 30R/L-3IQ	3.00	30.0	35.0	19.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 35R/L-3IQ	3.00	35.0	40.0	19.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 40R/L-3IQ	3.00	40.0	46.0	23.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 46R/L-3IQ	3.00	46.0	54.0	25.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 54R/L-3IQ	3.00	54.0	65.0	26.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 65R/L-3IQ	3.00	65.0	80.0	27.00	32.0	9.5	24.8	90.00	18.5	TNF 3...	ETF 3-6*
TNFFA 80R/L-3IQ	3.00	80.0	100.0	27.00	32.0	9.5	24.8	90.00	16.7	TNF 3...	ETF 3-6*
TNFFA 35R/L-4IQ	4.00	35.0	45.0	25.00	32.0	9.0	24.8	90.00	18.1	TNF 4...	ETF 3-6*
TNFFA 45R/L-4IQ	4.00	45.0	60.0	25.00	32.0	9.0	24.8	90.00	17.3	TNF 4...	ETF 3-6*
TNFFA 60R/L-4IQ	4.00	60.0	80.0	27.00	32.0	9.0	24.8	90.00	18.0	TNF 4...	ETF 3-6*
TNFFA 80R/L-4IQ	4.00	80.0	130.0	27.00	32.0	9.0	24.8	90.00	14.8	TNF 4...	ETF 3-6*
TNFFA 40R/L-5IQ	5.00	45.0	50.0	25.00	32.0	9.7	24.8	90.00	18.0	TNF 5...	ETF 3-6*
TNFFA 50R/L-5IQ	5.00	60.0	70.0	28.00	32.0	9.7	24.8	90.00	18.0	TNF 5...	ETF 3-6*
TNFFA 70R/L-5IQ	5.00	80.0	100.0	30.00	32.0	9.7	24.8	90.00	18.0	TNF 5...	ETF 3-6*
TNFFA 100R/L-5IQ	5.00	100.0	180.0	35.00	32.0	9.7	24.8	90.00	18.0	TNF 5...	ETF 3-6*
TNFFA 45R/L-6IQ	6.00	45.0	60.0	25.00	32.0	10.2	24.8	90.00	18.0	TNF 6...	ETF 3-6*
TNFFA 60R/L-6IQ	6.00	60.0	80.0	28.00	32.0	10.2	24.8	90.00	18.0	TNF 6...	ETF 3-6*
TNFFA 80R/L-6IQ	6.00	75.0	110.0	30.00	32.0	10.2	24.8	90.00	18.0	TNF 6...	ETF 3-6*
TNFFA 110R/L-6IQ	6.00	100.0	300.0	35.00	32.0	10.2	24.8	90.00	14.8	TNF 6...	ETF 3-6*

• For user guide, see pages 460-470

(1) Minimum penetration diameter

(2) Maximum penetration diameter

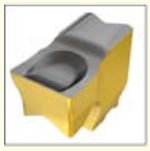
* Optional, should be ordered separately

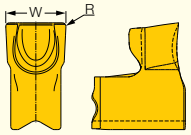
For inserts, see pages: TNF-M-IQ (455) • TNF-P-IQ (455)

TANG-GRIP FACE MACHINING LINE

TNF-P-IQ

Face Grooving Single-Ended Inserts for Machining Steel







Designation	Dimensions W±0.05	Dimensions R	IC808	Recommended Machining Data f face-groove (mm/rev)
TNF 3P-IQ	3.00	0.30	•	0.10-0.15
TNF 4P-IQ	4.00	0.25	•	0.10-0.15
TNF 5P-IQ	5.00	0.35	•	0.12-0.20
TNF 6P-IQ	6.00	0.35	•	0.12-0.20

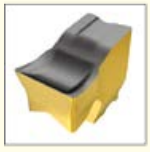
• For user guide, see pages 460-470

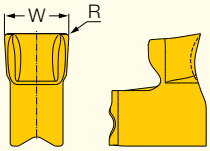
For tools, see pages: TNFFA-IQ (455) • TNFFH-IQ (454)

TANG-GRIP FACE MACHINING LINE

TNF-M-IQ

Face Grooving Single-Ended Inserts for Machining Stainless Steel and High Temperature Alloys







Designation	Dimensions W±0.05	Dimensions R	IC808	Recommended Machining Data f face-groove (mm/rev)
TNF 3M-IQ	3.00	0.30	•	0.08-0.10
TNF 4M-IQ	4.00	0.25	•	0.08-0.12
TNF 5M-IQ	5.00	0.35	•	0.12-0.20
TNF 6M-IQ	6.00	0.35	•	0.12-0.20

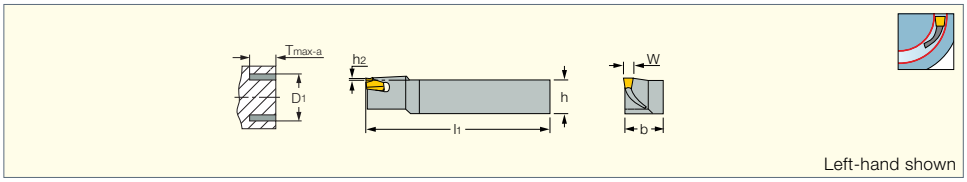
• For user guide, see pages 460-470

For tools, see pages: TNFFA-IQ (455) • TNFFH-IQ (454)

SELF-GRIP

SGFFR/L

Face Grooving Integral Shank Tools



Left-hand shown

Designation	W	h	b	Tmax-a	D1 min(1)	D1 max(2)	h2	l1	Insert	
SGFFR/L 20-25-2	2.10	20.0	20.0	13.00	25.0	30.0	0.0	120.00	GFF 2R/L	ESG 0.5
SGFFR/L 20-30-2	2.10	20.0	20.0	14.00	29.0	36.0	0.0	120.00	GFF 2R/L	ESG 0.5
SGFFR/L 20-35-2	2.10	20.0	20.0	16.00	35.0	46.0	0.8	120.00	GFF 2N	ESG 0.5
SGFFR/L 20-45-2	2.10	20.0	20.0	20.00	45.0	61.0	0.8	120.00	GFF 2N	ESG 0.5
SGFFR/L 20-60-2	2.10	20.0	20.0	20.00	60.0	80.0	0.8	120.00	GFF 2N	ESG 0.5
SGFFR/L 25-35-2	2.10	25.0	25.0	16.00	35.0	46.0	0.8	130.00	GFF 2N	ESG 0.5
SGFFR/L 25-45-2	2.10	25.0	25.0	20.00	45.0	61.0	0.8	130.00	GFF 2N	ESG 0.5
SGFFR/L 25-60-2	2.10	25.0	25.0	20.00	60.0	80.0	0.8	130.00	GFF 2N	ESG 0.5
SGFFR 25-25-2	2.10	25.0	25.0	13.00	25.0	30.0	0.0	130.00	GFF 2N	ESG 0.5
SGFFR 25-30-2	2.10	25.0	25.0	14.00	29.0	36.0	0.0	130.00	GFF 2N	ESG 0.5
SGFFR/L 20-30-3	3.00	20.0	20.0	16.00	30.0	35.0	0.0	120.00	GFF 3R/L	ESG 0.5
SGFFR/L 20-35-3	3.00	20.0	20.0	18.00	34.4	40.6	0.0	120.00	GFF 3R/L	ESG 0.5
SGFFR/L 20-40-3	3.00	20.0	20.0	20.00	40.0	47.0	0.0	120.00	GFF 3R/L	ESG 0.5
SGFFR/L 20-46-3	3.00	20.0	20.0	22.00	46.0	55.0	0.0	120.00	GFF 3R/L	ESG 0.5
SGFFR 20-55-3	3.00	20.0	20.0	22.00	54.0	65.0	1.2	120.00	GFF 3N	ESG 0.5
SGFFR 20-65-3	3.00	20.0	20.0	23.00	64.0	80.0	1.0	120.00	GFF 3N	ESG 0.5
SGFFR 20-80-3	3.00	20.0	20.0	24.00	79.0	100.0	0.7	120.00	GFF 3N	ESG 0.5
SGFFR/L 25-35-3	3.00	25.0	25.0	18.00	34.4	40.6	0.0	130.00	GFF 3R/L	ESG 0.5
SGFFR/L 25-40-3	3.00	25.0	25.0	20.00	40.0	47.0	0.0	130.00	GFF 3R/L	ESG 0.5
SGFFR/L 25-55-3	3.00	25.0	25.0	24.00	54.0	65.0	1.2	130.00	GFF 3N	ESG 0.5
SGFFR 25-30-3	3.00	25.0	25.0	16.00	30.0	35.0	0.0	130.00	GFF 3R/L	ESG 0.5
SGFFR 25-46-3	3.00	25.0	25.0	22.00	46.0	55.0	0.0	130.00	GFF 3R/L	ESG 0.5
SGFFR 25-65-3	3.00	25.0	25.0	25.00	64.0	80.0	1.0	130.00	GFF 3N	ESG 0.5
SGFFR 25-80-3	3.00	25.0	25.0	26.00	79.0	100.0	0.7	130.00	GFF 3N	ESG 0.5
SGFFR/L 20-35-4	4.00	20.0	20.0	20.00	35.0	45.0	0.0	120.00	GFF 4N	ESG 0.5
SGFFR/L 20-45-4	4.00	20.0	20.0	25.00	44.0	58.0	0.0	120.00	GFF 4N	ESG 0.5
SGFFR 20-60-4	4.00	20.0	20.0	25.00	57.0	80.0	0.0	120.00	GFF 4N	ESG 0.5
SGFFR 20-80-4	4.00	20.0	20.0	25.00	79.0	130.0	0.0	120.00	GFF 4N	ESG 0.5
SGFFR/L 25-45-4	4.00	25.0	25.0	25.00	44.0	58.0	0.0	150.00	GFF 4N	ESG 0.5
SGFFR/L 25-60-4	4.00	25.0	25.0	26.00	57.0	80.0	0.0	150.00	GFF 4N	ESG 0.5
SGFFR/L 25-80-4	4.00	25.0	25.0	26.00	79.0	130.0	0.0	150.00	GFF 4N	ESG 0.5
SGFFR 25-35-4	4.00	25.0	25.0	20.00	35.0	45.0	0.0	150.00	GFF 4N	ESG 0.5
SGFFR/L 20-50-5	5.00	20.0	20.0	25.00	50.0	75.0	0.0	120.00	GFF 5N	ESG 0.5
SGFFR 20-75-5	5.00	20.0	20.0	26.00	74.0	130.0	0.0	120.00	GFF 5N	ESG 0.5
SGFFR/L 25-100-5	5.00	25.0	25.0	30.00	100.0	180.0	0.0	150.00	GFF 5N	ESG 0.5
SGFFR/L 25-50-5	5.00	25.0	25.0	26.00	50.0	71.0	0.0	150.00	GFF 5N	ESG 0.5
SGFFR 25-40-5	5.00	25.0	25.0	22.00	40.0	52.0	0.0	150.00	GFF 5N	ESG 0.5
SGFFR 25-70-5	5.00	25.0	25.0	28.00	69.0	102.0	0.0	150.00	GFF 5N	ESG 0.5
SGFFR 20-60-6	6.00	20.0	20.0	25.00	57.0	60.0	0.0	120.00	GFF 6N	ESG 0.5
SGFFR/L 25-100-6	6.00	25.0	25.0	30.00	100.0	180.0	0.0	150.00	GFF 6N	ESG 0.5
SGFFR/L 25-60-6	6.00	25.0	25.0	30.00	57.0	77.0	0.0	150.00	GFF 6N	ESG 0.5
SGFFR/L 25-75-6	6.00	25.0	25.0	30.00	75.0	102.0	0.0	150.00	GFF 6N	ESG 0.5

• **Important:** Apply R.H. insert on R.H. tool and L.H. insert on L.H. tool. Neutral insert only as indicated.

(1) Minimum penetration diameter

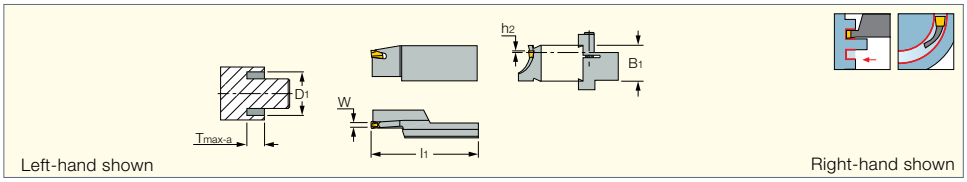
(2) Maximum penetration diameter

For inserts, see pages: GFF-N (458) • GFF-R/L (458)

SELF-GRIP

SGFFA

Reinforced Face Grooving Blades
for Standard Tool Blocks



Designation	W	Tmax-a	D1 min(1)	D1 max(2)	B1	h2	l1	
SGFFA 25-R/L-2	2.10	13.00	25.0	30.0	32.0	0.0	80.00	ESG 0.5
SGFFA 30-R/L-2	2.10	14.00	29.0	36.0	32.0	0.0	80.00	ESG 0.5
SGFFA 35-R/L-2	2.10	16.00	35.0	46.0	32.0	0.8	80.00	ESG 0.5
SGFFA 45-R/L-2	2.10	20.00	45.0	61.0	32.0	0.8	80.00	ESG 0.5
SGFFA 60-R/L-2	2.10	20.00	60.0	80.0	32.0	0.8	80.00	ESG 0.5
SGFFA 80-R/L-2	2.10	20.00	79.0	102.0	32.0	0.8	80.00	ESG 0.5
SGFFA 30-R/L-3	3.00	19.00	30.0	35.0	32.0	0.0	90.00	ESG 0.5
SGFFA 35-R/L-3	3.00	20.00	34.4	40.6	32.0	0.0	90.00	ESG 0.5
SGFFA 40-R/L-3	3.00	22.00	40.0	47.0	32.0	0.0	90.00	ESG 0.5
SGFFA 46-R/L-3	3.00	24.00	46.0	55.0	32.0	0.0	90.00	ESG 0.5
SGFFA 55-R/L-3	3.00	25.00	54.0	65.0	32.0	1.2	90.00	ESG 0.5
SGFFA 65-R/L-3	3.00	26.00	64.0	80.0	32.0	1.0	90.00	ESG 0.5
SGFFA 80-R/L-3	3.00	28.00	79.0	100.0	32.0	0.7	95.00	ESG 0.5
SGFFA 35-R/L-4	4.00	25.00	35.0	45.0	32.0	0.0	90.00	ESG 0.5
SGFFA 45-R/L-4	4.00	25.00	44.0	58.0	32.0	0.0	90.00	ESG 0.5
SGFFA 60-R/L-4	4.00	28.00	57.0	80.0	32.0	0.0	95.00	ESG 0.5
SGFFA 80-R/L-4	4.00	30.00	79.0	130.0	32.0	0.0	95.00	ESG 0.5
SGFFA 40-R/L-5	5.00	25.00	40.0	52.0	32.0	0.0	90.00	ESG 0.5
SGFFA 50-R/L-5	5.00	28.00	50.0	71.0	32.0	0.0	95.00	ESG 0.5
SGFFA 70-R/L-5	5.00	30.00	69.0	102.0	32.0	0.0	95.00	ESG 0.5
SGFFA 100-R/L-5	5.00	35.00	100.0	180.0	32.0	0.0	100.00	ESG 0.5
SGFFA 45-R/L-6	6.00	25.00	44.0	58.0	32.0	0.0	90.00	ESG 0.5
SGFFA 60-R/L-6	6.00	30.00	57.0	77.0	32.0	0.0	95.00	ESG 0.5
SGFFA 75-R/L-6	6.00	35.00	75.0	102.0	32.0	0.0	100.00	ESG 0.5
SGFFA 100-R/L-6	6.00	40.00	100.0	150.0	32.0	0.0	105.00	ESG 0.5
SGFFA 150-R/L-6	6.00	40.00	149.0	250.0	32.0	0.0	105.00	ESG 0.5

• **Important:** Apply R.H. insert on R.H. tool and L.H. insert on L.H. tool. Neutral insert only as indicated. • B1 dimension links blades and blocks

(1) Minimum penetration diameter

(2) Maximum penetration diameter

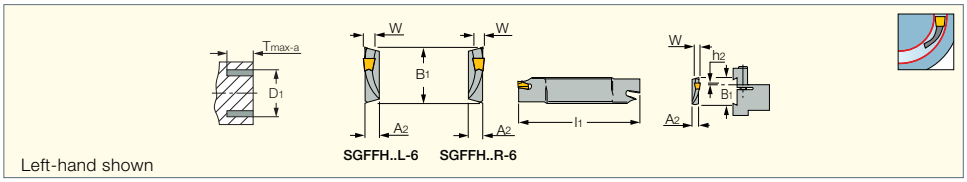
For inserts, see pages: GFF-N (458) • GFF-R/L (458)

For holders, see pages: SGTBF (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

SELF-GRIP

SGFFH

Face Grooving Blades



Designation	W	Tmax-a	D1 min(1)	D1 max(2)	h2	B1	A2	l1	
SGFFH 35-R/L-2	2.10	20.00	35.0	46.0	0.8	32.0	5.2	150.00	ESG 0.5
SGFFH 45-R/L-2	2.10	20.00	45.0	61.0	0.8	32.0	5.2	150.00	ESG 0.5
SGFFH 60-R/L-2	2.10	20.00	60.0	80.0	0.8	32.0	5.2	150.00	ESG 0.5
SGFFH 80-R/L-2	2.10	20.00	79.0	102.0	0.8	32.0	4.0	150.00	ESG 0.5
SGFFH 100-R/L-2	2.10	20.00	101.0	132.0	0.0	32.0	4.0	150.00	ESG 0.5
SGFFH 75-R/L-3	3.00	20.00	65.0	92.0	1.0	32.0	5.2	150.00	ESG 0.5
SGFFH 90-R/L-3	3.00	20.00	90.0	122.0	0.2	32.0	5.2	150.00	ESG 0.5
SGFFH 120-R/L-3	3.00	25.00	120.0	160.0	0.0	32.0	5.2	150.00	ESG 0.5
SGFFH 80-R/L-4	4.00	30.00	80.0	155.0	2.5	32.0	5.2	150.00	ESG 0.5
SGFFH 150-R/L-4	4.00	30.00	150.0	500.0	2.5	32.0	5.2	150.00	ESG 0.5
SGFFH 80-R/L-5	5.00	32.00	80.0	162.0	0.0	32.0	5.2	150.00	ESG 0.5
SGFFH 150-R/L-5	5.00	35.00	150.0	600.0	0.0	32.0	5.2	150.00	ESG 0.5
SGFFH 90-R/L-6	6.00	32.00	90.0	150.0	0.0	32.0	8.0	150.00	ESG 0.5
SGFFH 150-R/L-6	6.00	35.00	148.0	700.0	0.0	32.0	5.2	150.00	ESG 0.5

• **Important:** Apply R.H. insert on R.H. tool and L.H. insert on L.H. tool. Neutral insert only as indicated. • B1 dimension links blades and blocks

(1) Minimum penetration diameter

(2) Maximum penetration diameter

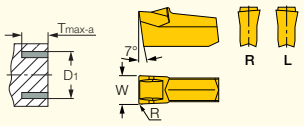
For inserts, see pages: GFF-N (458)

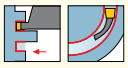
For holders, see pages: SGTBF (473) • SGTBK (473) • SGTBU/SGTBN (472) • UBHCR/L (473)

SELFGRIP

GFF-R/L
Face Grooving Inserts







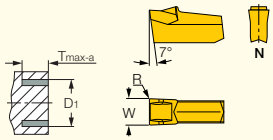
Designation	Dimensions W±0.10	R±0.05	D1 min	D1 max	Tough ↔ Hard IC656	IC635	IC354	IC20	Recommended Machining Data f face-groove (mm/rev)
GFF 2R/L	2.10	0.20	25.0	36.0	●	●	●	●	0.03-0.13
GFF 3R/L	3.00	0.30	30.0	55.0	●	●	●	●	0.03-0.15

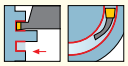
For tools, see pages: SGFFA (457) • SGFFR/L (456)

SELFGRIP

GFF-N
Face Grooving Inserts







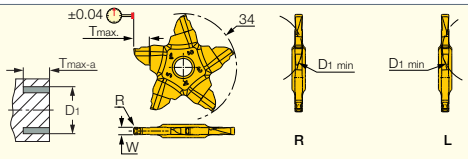
Designation	Dimensions W±0.10	R±0.05	D1 min	Tough ↔ Hard IC656	IC635	IC354	IC20	Recommended Machining Data f face-groove (mm/rev)
GFF 2N	2.10	0.20	35.0	●	●	●	●	0.03-0.13
GFF 3N	3.00	0.30	54.0	●	●	●	●	0.03-0.15
GFF 4N	4.00	0.25	35.0	●	●	●	●	0.04-0.18
GFF 5N	5.00	0.25	40.0	●		●	●	0.05-0.18
GFF 6N	6.00	0.25	44.0	●	●	●	●	0.05-0.20

For tools, see pages: SGFFA (457) • SGFFH (457) • SGFFR/L (456)

PENTACUT

PENTA 34F-R/L
Pentagonal Inserts for Face Grooving and Recessing







Designation	Dimensions W	R	Tmax-a	D1 min	IC908	Recommended Machining Data f face-groove (mm/rev)
PENTA 34F239-0.15-22R/L	2.39	0.15	5.00	22.0	●	0.08-0.12
PENTA 34F247-0.20-22R/L	2.47	0.20	5.00	22.0	●	0.08-0.12
PENTA 34F300-0.40-22R/L	3.00	0.40	5.00	22.0	●	0.08-0.15
PENTA 34F400-0.40-22R/L	4.00	0.40	5.00	22.0	●	0.08-0.15

• For cutting speed recommendations, see pages 460-470

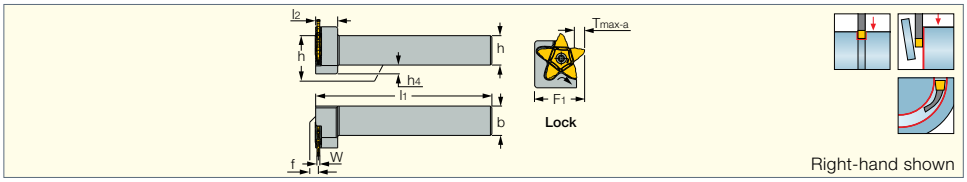
For tools, see pages: PCADR/L (268) • PCADR/L 34N-RE (269) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-34 (267) • PCHR/L-34-JHP (267)



PENTACUT

PCHPR/L

Perpendicular Holders Carrying Inserts with 5 Cutting Edges for Facing, Grooving, Parting and Recessing



Designation	h	b	W min	W max	f	F1	l1	l2	h4	Tmax-a(1)		
PCHPR/L 16-24	16.0	16.0	0.50	3.20 (2)	1.5 (3)	23.5	120.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 20-24	20.0	20.0	0.50	3.20 (2)	1.5 (3)	28.0	120.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 25-24	25.0	25.0	0.50	3.20 (2)	1.5 (3)	33.0	135.00	11.5	-	6.50	SR 16-212-01397	T-20/5
PCHPR/L 20-34	20.0	20.0	1.40	4.00	1.9	34.0	120.00	15.0	6.0	10.00	SR 16-212-01397	T-20/5
PCHPR/L 25-34	25.0	25.0	1.40	4.00	1.9	34.0	135.00	15.0	-	10.00	SR 16-212-01397	T-20/5

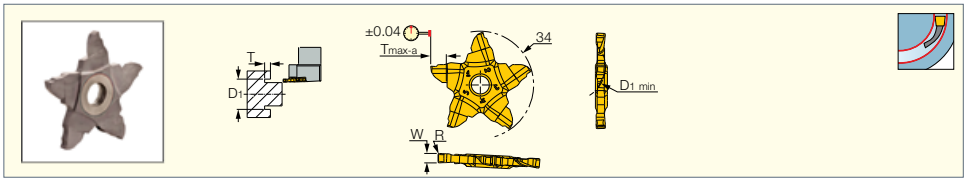
(1) For specific information, refer to insert data.
(2) Up to 6.2 mm width may be ordered on request.
(3) Valid for inserts with W<3.2 mm

For inserts, see pages: PENTA 24-BSPT (275) • PENTA 24-ISO (274) • PENTA 24-MT (276) • PENTA 24-NPT (511) • PENTA 24-UN (275) • PENTA 24-W (275) • PENTA 24-WT (276) • PENTA 24N-C (271) • PENTA 24N-C (full radius) (272) • PENTA 24N-J (270) • PENTA 24N-J (full radius) (271) • PENTA 24N-PF/P (272) • PENTA 24N-Z (273) • PENTA 24R-C (410) • PENTA 24R-P (412) • PENTA 24R/L-J (409) • PENTA 24R/L-Z (411) • PENTA 34F-R/L (458) • PENTA 34N-C (277) • PENTA 34N-J (278) • PENTA 34N-PB (276) • PENTA 34R/L-C (413) • PENTA 34R/L-J (414) • PENTA 34R/L-PB (414)

PENTACUT

PENTA 34F-RS/LS

Pentagonal Inserts for Face Grooving and Recessing Along Shafts up to 5 mm Depth of Cut at a Minimum of 22 mm Diameter



Designation	Dimensions W	R	Tmax-a	D1 min	IC908	Recommended Machining Data f face-groove (mm/rev)
PENTA 34F239-0.15-22R/LS	2.39	0.15	5.00	22.0	•	0.08-0.12
PENTA 34F247-0.20-22R/LS	2.47	0.20	5.00	22.0	•	0.08-0.12
PENTA 34F300-0.40-22R/LS	3.00	0.40	5.00	22.0	•	0.08-0.15
PENTA 34F400-0.40-22R/LS	4.00	0.40	5.00	22.0	•	0.08-0.15

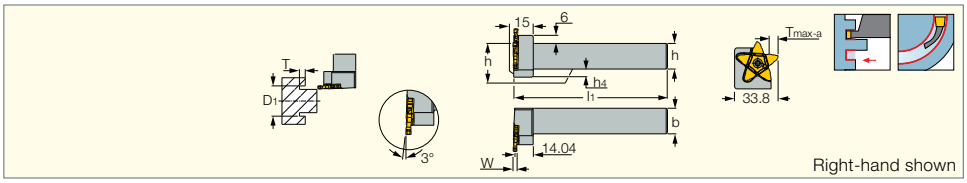
• For cutting speed recommendations, see pages 460-470

For tools, see pages: PCHPRS/LS (459)

PENTACUT

PCHPRS/LS

Perpendicular Shank Tools Carrying Pentagonal Inserts for Machining Next to Long Central Shafts



Designation	h	b	W min	W max	l1	h4	Tmax-a(1)		
PCHPR/LS 20-34	20.0	20.0	2.39	4.00	120.00	6.0	5.00	SR 16-212-01397RS	T-20/5
PCHPR/LS 25-34	25.0	25.0	2.39	4.00	135.00	-	5.00	SR 16-212-01397RS	T-20/5

(1) Insert limit

For inserts, see pages: PENTA 34F-RS/LS (459)

Machining Data for Face Machining

ISO	Material		Condition	Tensile Strength [N/mm²]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
	Stainless steel and cast steel		Ferritic/martensitic	680	200	12
			Martensitic	820	240	13
M	Stainless steel		Austenitic	600	180	14
K	Cast iron nodular (GGG)		Ferritic/pearlitic		180	15
			Pearlitic		260	16
	Grey cast iron (GG)		Ferritic		160	17
			Pearlitic		250	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum-wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium Ti alloys			RM 400		36
			Alpha+beta alloys cured	RM 1050		37
H	Hardened steel		Hardened		55 HRC	38
			Hardened		60 HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron		Hardened		55 HRC	41

Material No.	IC228/528	IC830	IC354	IC908	IC808	IC8250
1	85 - 125	90 - 135	95 - 145	120 - 180	125 - 190	180 - 270
2	75 - 110	80 - 115	90 - 125	110 - 155	115 - 165	165 - 230
3	60 - 85	65 - 95	70 - 100	85 - 125	90 - 130	125 - 185
4	65 - 100	70 - 110	75 - 115	95 - 145	100 - 150	140 - 215
5	50 - 85	55 - 90	60 - 95	75 - 120	80 - 125	110 - 180
6	65 - 100	70 - 110	75 - 115	95 - 145	100 - 150	140 - 215
7	50 - 85	55 - 95	60 - 100	75 - 125	80 - 130	110 - 185
8	50 - 85	55 - 90	60 - 95	75 - 120	80 - 125	110 - 180
9	50 - 75	50 - 80	55 - 90	70 - 110	75 - 115	105 - 165
10	75 - 110	80 - 115	90 - 125	110 - 155	115 - 165	165 - 230
11	50 - 75	50 - 80	55 - 90	70 - 110	75 - 115	105 - 165
	IC806	**IC808**	**IC354**	**IC830**	**IC20**	
12	110 - 200	100 - 180	80 - 145	75 - 135	50 - 90	
13	100 - 185	90 - 170	70 - 135	65 - 125	45 - 85	
	IC806	**IC808**	**IC354**	**IC830**	**IC20**	
14	90 - 170	80 - 155	65 - 125	60 - 115	40 - 75	
	IC5010	**IC428**	**IC8250**	**IC808**	**IC20**	
15	135 - 255	125 - 230	110 - 205	85 - 160	60 - 115	
16	120 - 180	110 - 160	100 - 145	75 - 110	55 - 80	
17	130 - 215	120 - 195	110 - 175	85 - 135	60 - 95	
18	105 - 170	95 - 155	85 - 140	65 - 110	45 - 75	
19	160 - 265	145 - 240	130 - 215	100 - 170	70 - 120	
20	130 - 215	120 - 195	110 - 175	85 - 135	60 - 95	
	IC808	**IC20**				
21	330 - 990	300 - 900				
22	250 - 825	225 - 750				
23	250 - 825	225 - 750				
24	165 - 495	150 - 450				
25	165 - 330	150 - 300				
26	165 - 330	150 - 300				
27	120 - 250	110 - 225				
28	80 - 165	75 - 150				
29	40 - 165	35 - 150				
30						
	IC806	**IC908**	**IC808**	**IC830**	**IC20**	
31	45 - 70	35 - 55	35 - 60	25 - 40	25 - 40	
32	30 - 50	25 - 40	25 - 40	20 - 30	15 - 30	
33	30 - 50	25 - 40	25 - 40	20 - 30	15 - 30	
34	25 - 45	20 - 35	20 - 35	15 - 25	15 - 25	
35	20 - 30	15 - 25	15 - 25	10 - 20	10 - 15	
36	105 - 180	85 - 145	90 - 150	65 - 110	60 - 100	
37	40 - 50	30 - 40	30 - 40	25 - 35	35 - 45	
	IC808	**IC20**				
38	25-30	20-30				
39	20-30	15-25				
40	30-45	30-40				
41	25-30	25-30				

Machining Data for Face Machining

ISO	Material		Condition	Tensile Strength [N/mm²]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
	Stainless steel and cast steel		Ferritic/martensitic	680	200	12
			Martensitic	820	240	13
M	Stainless steel		Austenitic	600	180	14
K	Cast iron nodular (GGG)		Ferritic/pearlitic		180	15
			Pearlitic		260	16
	Grey cast iron (GG)		Ferritic		160	17
			Pearlitic		250	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum-wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium Ti alloys			RM 400		36
			Alpha+beta alloys cured	RM 1050		37
H	Hardened steel		Hardened		55 HRC	38
			Hardened		60 HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron		Hardened		55 HRC	41

Cutting Speed (m/min	GFQR IC528 Feed (mm/rev)	PICCO IC228 Feed (mm/rev)	MIFR/MEFL 8 IC908 Feed (mm/rev)	MIFR 10 IC908 Feed (mm/rev)	MIFR 15 IC908 Feed (mm/rev)
80-180	0.02-0.08	0.015-0.05	0.015-0.08	0.03-0.10	0.03-0.08
80-130	0.02-0.06	0.015-0.04			
80-120	0.02-0.06	0.015-0.04			
80-140	0.02-0.08	0.015-0.04			
80-140	0.02-0.08	0.015-0.04			
80-120	0.02-0.06	0.015-0.03			
80-120	0.02-0.05	0.015-0.03			
80-140	0.02-0.08	0.015-0.04			
80-120	0.02-0.08	0.015-0.03			
40-120	0.02-0.08	0.015-0.04	0.015-0.07	0.03-0.08	0.02-0.05
40-120	0.02-0.07	0.015-0.04	0.015-0.07	0.03-0.08	0.02-0.05
40-100	0.02-0.06	0.015-0.03	0.015-0.07	0.03-0.08	0.02-0.05
80-140	0.02-0.08	0.015-0.05	0.02-0.10	0.05-0.12	0.04-0.10
80-120	0.02-0.07	0.015-0.04			
80-140	0.02-0.08	0.015-0.04			
80-120	0.02-0.07	0.015-0.04			
80-140	0.02-0.06	0.015-0.04			
80-120	0.02-0.07	0.015-0.04			
150-320	0.02-0.08	0.015-005	0.02-0.10	0.05-0.15	0.05-0.12
100-250	0.02-0.08	0.015-005			
150-300	0.02-0.08	0.015-005			
150-300	0.02-0.08	0.015-005			
100-150	0.02-0.08	0.015-005			
80-230	0.02-0.08	0.015-005			
70-200	0.02-0.08	0.015-005			
50-180	0.02-0.08	0.015-005			
20-40	0.02-0.06	0.015-0.04	0.015-0.7	0.02-0.08	0.02-0.05
15-30	0.02-0.06	0.015-0.04			
15-20	0.02-0.06	0.015-0.04			
15-20	0.02-0.06	0.015-0.04			
15-20	0.02-0.06	0.015-0.04			
40-120	0.02-0.06	0.015-0.04			
20-50	0.02-0.06	0.015-0.04			

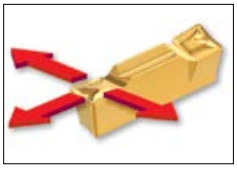
Clamping the Insert

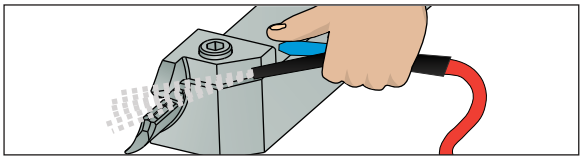
Clamping an insert correctly into the holder is necessary for stable machining.

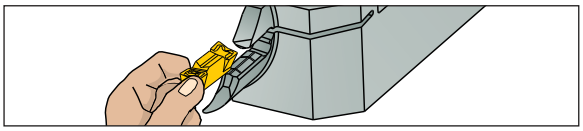
- Be sure that the seat is clean of dirt and swarf.
- At the first stage of clamping, ease the insert gently into place. Make sure that the prismatic surfaces match.

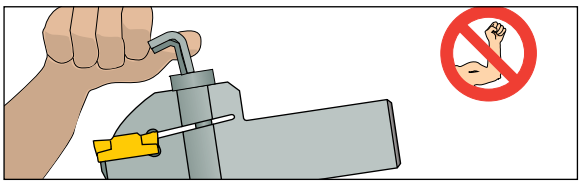
- Screw Clamping Torque

Insert Width	Nxm
3	4-5
4	5-6
5	6-7
6/8	7-9
CGFG 51...	4-6









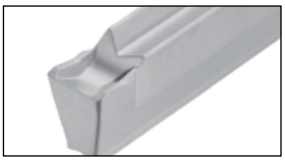
The unique chipformer is designed for deep grooving and face turning both toward and away from center, with excellent chip formation.



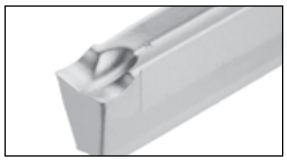
HELIFACE
HFPR/L & HGPL Type
For general use in turning & grooving on all types of materials. Use for deep grooving in low-to-medium feeds 0.04-0.15 mm/rev. Min grooving dia. 12 mm.



HELI-GRIP
GRIP...Y Type
The “all in one” insert for parting, external grooving and turning, internal grooving and turning, face grooving and turning.



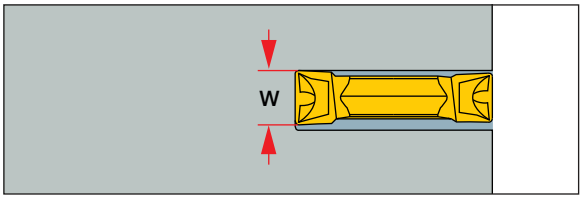
DO-GRIP
DGN...C Type
For grooving operations only. Strong cutting edge for hard materials and tough applications in feeds 0.1-0.2 mm/rev.



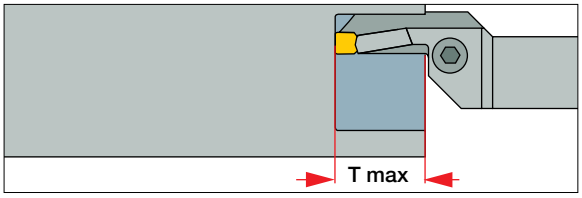
DO-GRIP
DGN...J Type
For grooving operations only. Positive rake, for soft materials in low-to-medium feeds 0.05-0.15 mm/rev.

Face Machining Guide

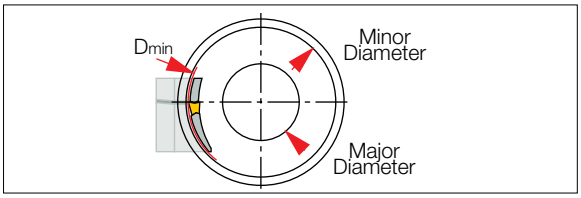
Tool Selection - Follow these recommendations to choose the right tool for high peformance



Choose the widest possible insert and tool, according to the cutting width and geometry to be machined.



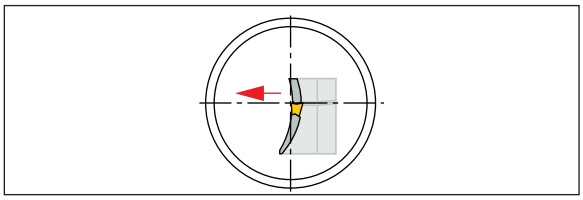
Choose the shortest tool blade overhang, according to the maximum depth required.



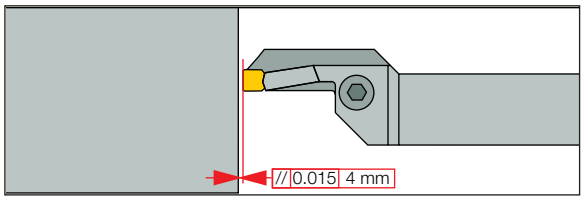
Choose the tool range with the largest diameter, depending on the initial grooving diameter required in the application.

Remark: On integral shank tools the given range refers to the holder capacity.

Tool Adjustment - Prior to machining, check and adjust the following tool positions.



Check the cutting edge height at center line, machine in light turning down to center and check for burr.

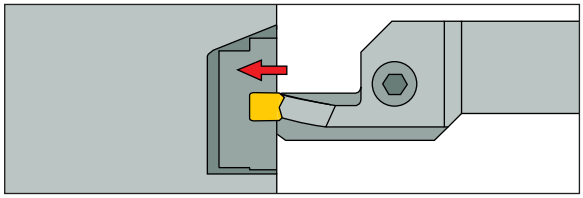


Check parallelism of the cutting edge and machined surface. Correct position can guarantee good surface quality when face turning in both directions.

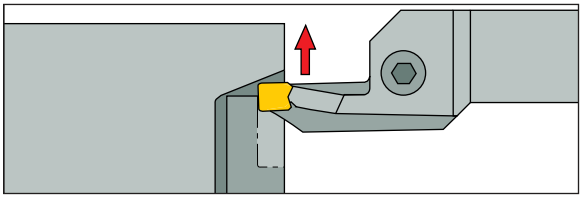
Face Machining Guide

Recommended machining sequence in roughing operation using multifunction HELIFACE tools

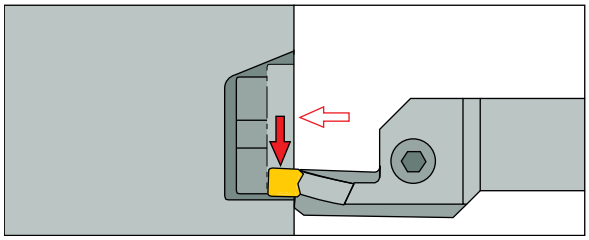
1 Groove at the initial diameter up to the depth of cut selected for next step in face turning.



2 Continue with face turning away from center.



3 After rapid positioning back into initial groove, continue with face turning to center.

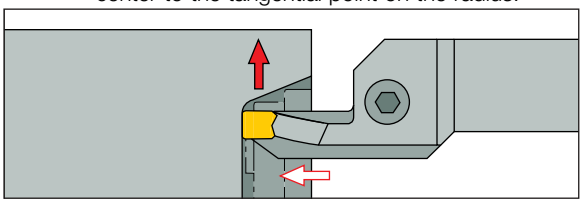


Note: When face grooving, reduce the speed by 40% in relation to that used in face turning.

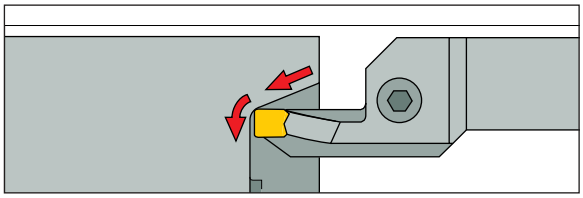
Optimizing the Machining Sequence

Recommended machining sequence using multifunction tools

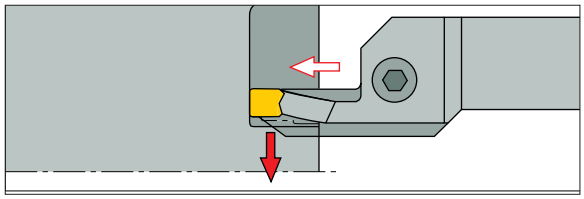
1 Groove at the initial diameter to the final depth of groove and continue face turning away from center to the tangential point on the radius.



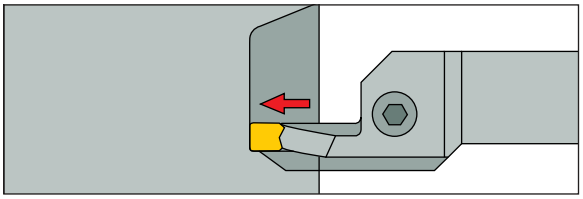
2 Finish major diameter toward the bottom and generate the radius.



3 Position the tool in rapid movement in the initial groove, continue face turning to center, without touching the machined roughing steps on the wall.



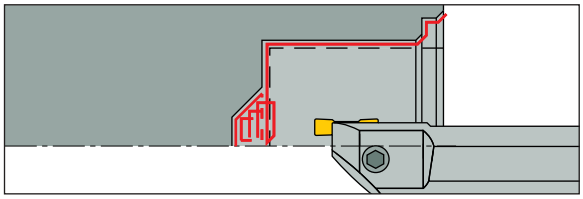
4 Finish boring the minor diameter to the bottom, up to final depth.



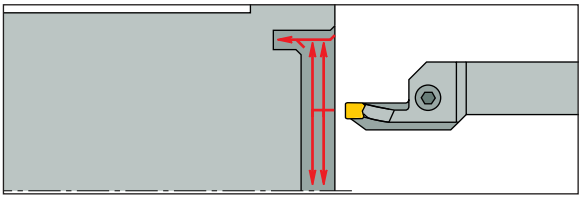
Note: When face grooving, reduce the speed by 40% in relation to that used in face turning.

The Multifunction Advantage

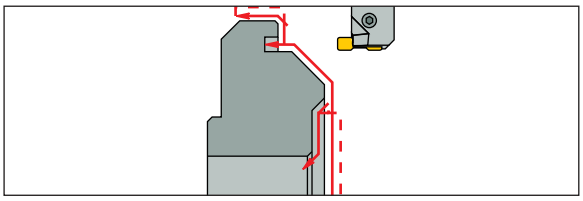
1 The **HELIFACE** internal boring bar **HFIR/L MC** type with internal coolant can replace the three different **ISO** tools and shorten machining time by 20%.



2 A single multifunction tool machines the whole part: grooving, face turning and chamfering, replacing three **ISO** tools and reducing machining time by 40%.



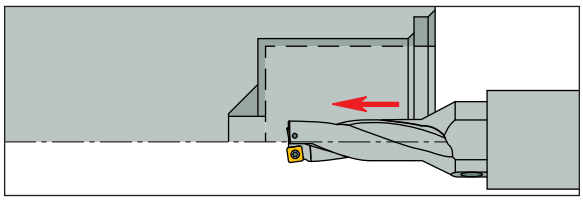
3 A single integral **HELIFACE** tool **HFHPL-M** replaces three **ISO** tools and reduces machining time by 50%.



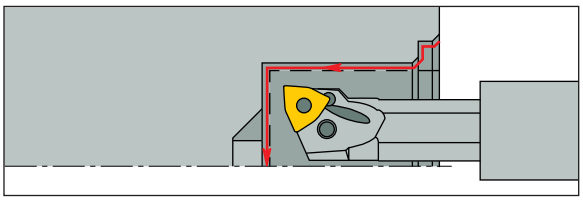
The Multifunction Advantage

This workpiece was machined using three different conventional tools.

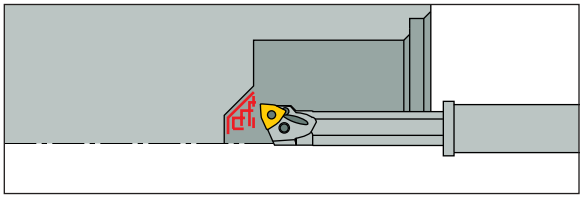
1 An indexable drill for bottom drilling.



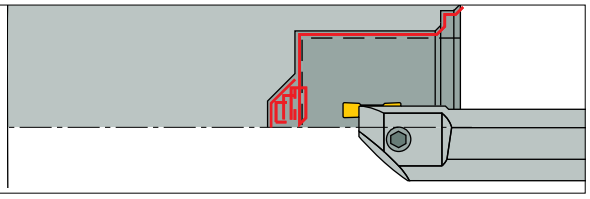
2 A standard internal boring bar with trigon insert for roughing and finishing.



3 A standard internal boring bar with trigon insert for bottom machining.
This operation requires a small diameter shank and long overhang.

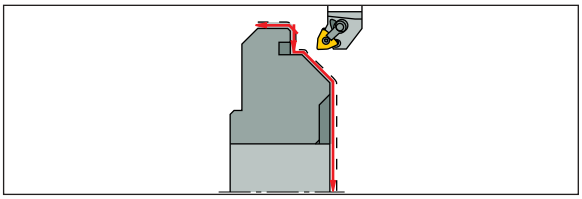


The HELIFACE Solution
The **HELIFACE** internal boring bar **HFIR/L MC** type with internal coolant can replace the three different **ISO** tools and shorten machining time by 20%.

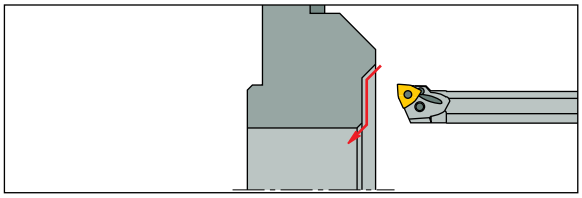


The Multifunction Advantage
This part was machined using three different conventional tools.

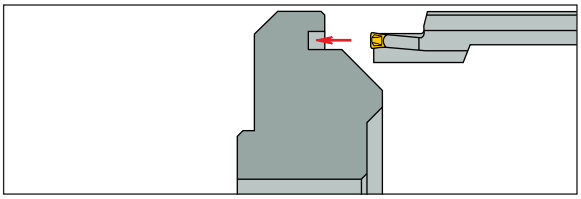
1 A standad **ISO** tool for external turning.



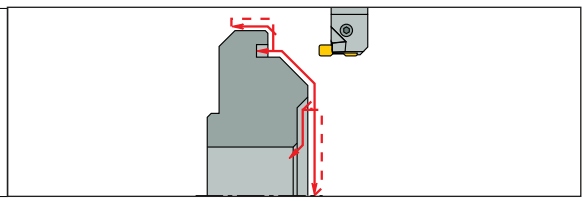
2 A boring bar for face turning and chamfering.



3 A face grooving tool for grooving, recessing and chamfering.



The HELIFACE Solution
A single integral **HELIFACE** tool **HFHPL-M** replaces three **ISO** tools and reduces machining time by 50%.

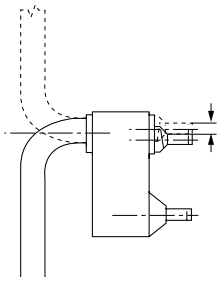


Insert Replacement

EDG 33B



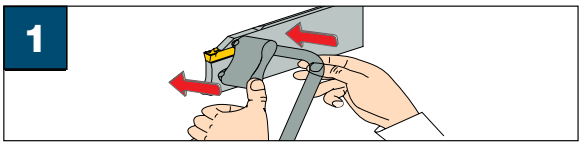
The New Eccentric Extractor



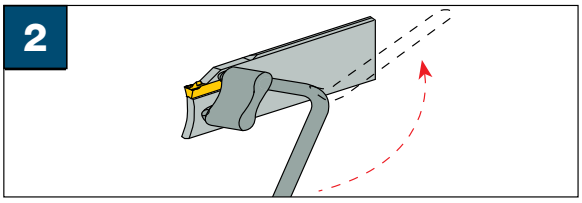
Simple to operate; controlled rotation requires low force; guarantees limited upper jaw movement and secures maximum load on blade.
Two extractor pins are placed in the two holes in the holder blades.

Indexing
Place the **EDG** extractor in the holes
1. Hold the extractor against the tool.
2. Rotate the eccentric handle to lift the upper jaw.

1

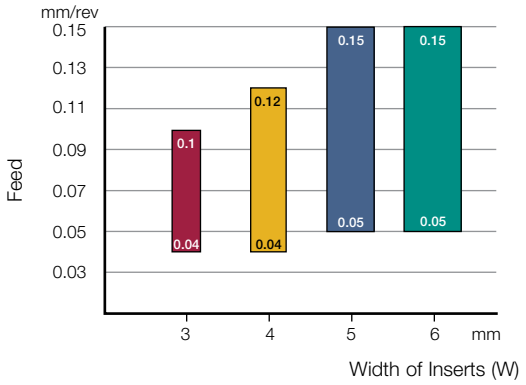


2

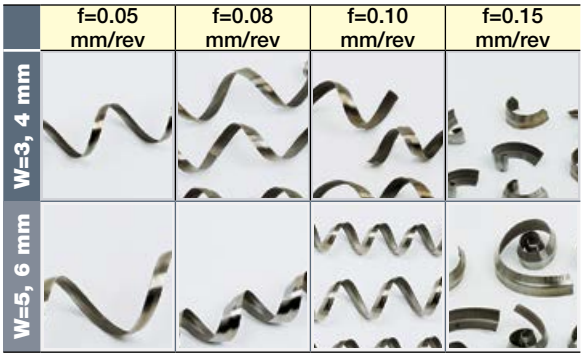


Machining Conditions in Face Grooving

Recommended feed range for grooving with **HFPR/L** inserts in various widths.

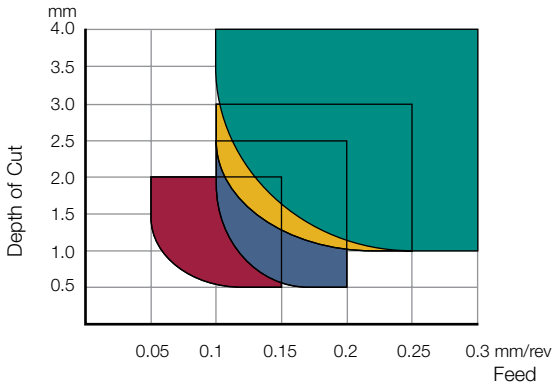


Chip shapes for grooving, according to width of insert and feed, using **HFHR/L** toolholders.



Note: In face grooving, narrowed and deformed chips are preferred. Curled and long chips can flow out more easily from deep grooves.

Recommended depth of cut and feed range for face turning using **HFHR/L** toolholders carrying **HFPR/L** inserts in various widths.



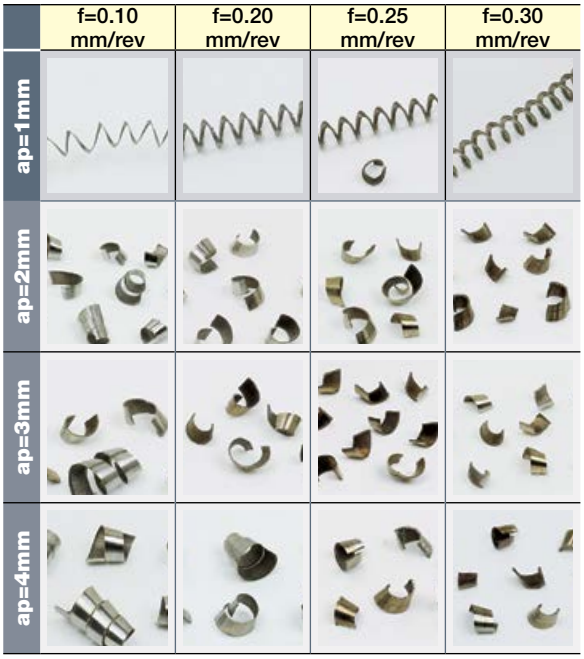
HFPR/L 3003
GRIP/HGPL 300Y

HFPR/L 4004
GRIP/HGPL 400Y

HFPR/L 5004
GRIP/HGPL 500Y

HFPR/L 6004
GRIP/HGPL 600Y

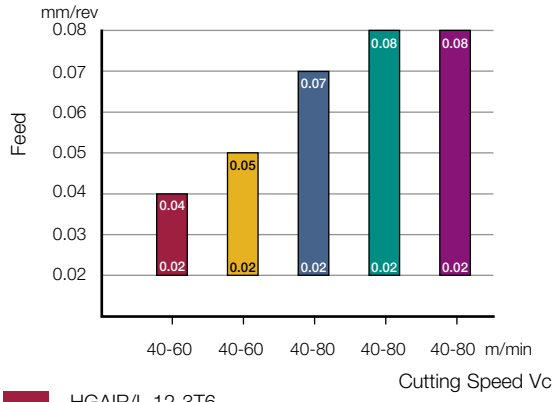
Chip shapes in face turning with inserts **HFPR/L**-5004 **& HFPR/L** 6004 and **HFHR/L** toolholders.



Note: In roughing, increase feed at small depth of cut and reduce feed at large depth of cut.

Face Grooving and Turning Recommendations Using Adapters for 3 mm Inserts

Recommended feed range for grooving with Grip 3... and **HGPL** 3... inserts and **HGAIR/L** and **HGAER/L** adapters. Feed range changes according to adapter type.



HGAIR/L 12-3T6
HGAER/L 12-3T6

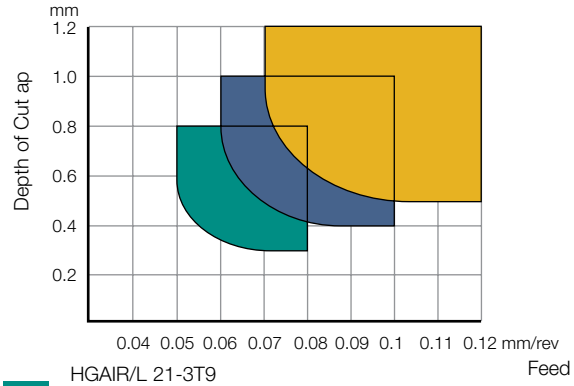
HGAIR/L 14-3T7
HGAER/L 14-3T7

HGAIR/L 17-3T8
HGAER/L 17-3T8

HGAIR/L 21-3T9
HGAER/L 21-3T9

HGAIR/L 25-3T9

Recommended depth of cut and feed range for turning with **HGPL 3...** inserts with **HGAIR/L** and **HGAER/L** adapters. Feed range changes according to adapter type.



HGAIR/L 21-3T9
HGAER/L 21-3T9
HGAIR/L 25-3T9

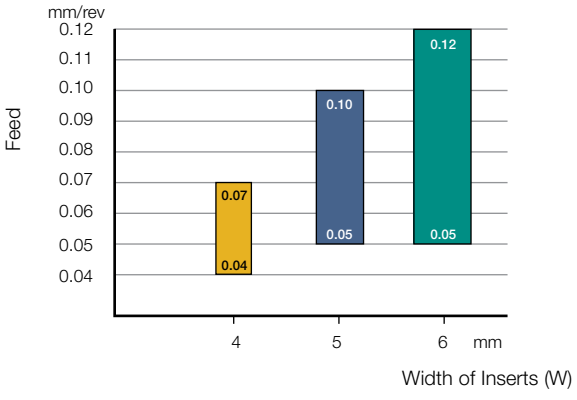
HGAIR/L 14-3T7
HGAER/L 14-3T7
HGAIR/L 17-3T8
HGAER/L 17-3T8

HGAIR/L 12-3T6
HGAER/L 12-3T6

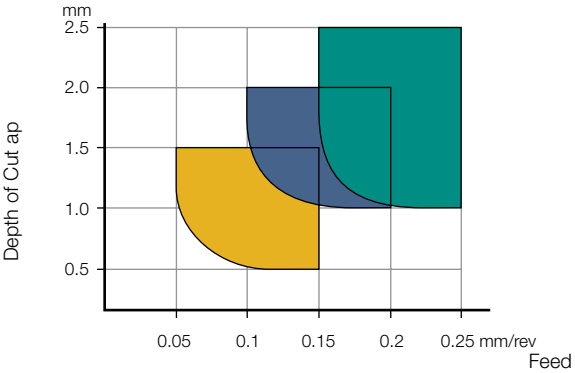
Note: In roughing, increase feed at small depth of cut, and reduce feed at large depth of cut.

Face Grooving and Turning Recommendations Using Adapters for 4-6 mm Inserts

Recommended feed range in grooving with **HFPR/L** inserts and **HFAIR/L & HFAER/L** adapters.



Recommended depth of cut and feed range in turning with **HFPR/L** inserts and **HFAIR/L & HFAER/L** adapters. Feed range changes according to adapter type.



HFAIR/L- ...4
HFAER/L- ...4

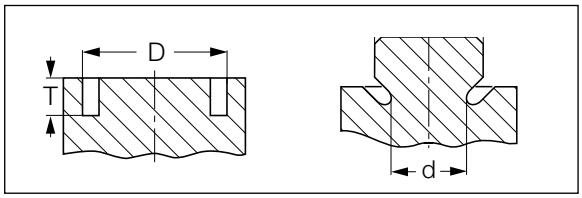
HFAIR/L- ...5
HFAER/L- ...5

HFAIR/L- ...6
HFAER/L- ...6

Note: In roughing, reduce feed when depth of cut is increased, ad increase feed at small depth of cut.

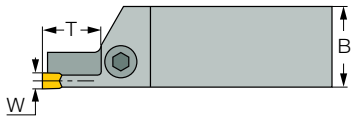
Specially Tailored

Semi-Standard Face Grooving and Undercutting Tools

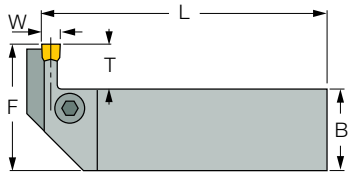


The following drawings show typical semi-standard face grooving tools that can be ordered. Please specify all relevant dimensions and attach workpiece material geometric details.

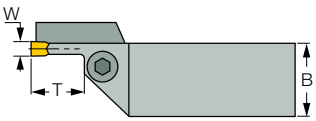
1



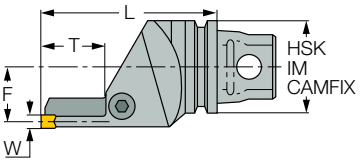
2



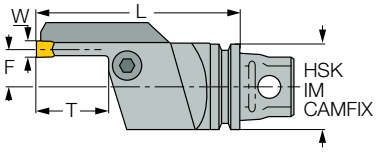
3



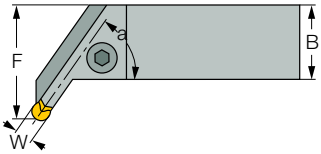
4



5



6



Grade Selection for Facing Applications

Material groups		ISO P 1-11 Steel	ISO P 12-13 Stainless Steel Ferritic & Martensitic	ISO M 14 Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	ISO K 15-20 Cast Iron	ISO N 21-28 Non-ferrous	ISO S 31-37 High Temperature Alloys	ISO H 38-41 Hard Steel & Cast Iron
FACING	Harder	IC808	IC808	IC808	IC5010			IC808
		IC8250	IC8250	IC8250		IC20	IC20	
		IC830	IC830					IC908
	Tougher				IC428	IC08	IC808	

■ First choice

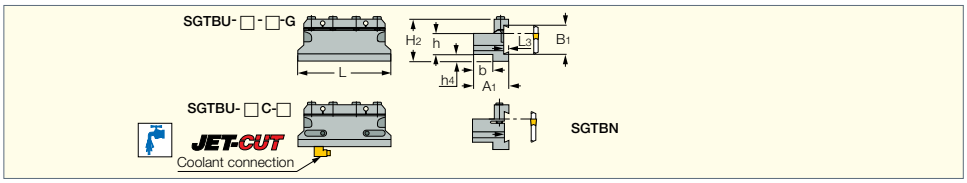
TOOL BLOCKS



TOOL BLOCKS

SGTBU/SGTBN

Blocks for Various Parting and Grooving Blades



Designation	h	b	B_1	A_1	H_2	h_4	L_3	L
SGTBN 16-2	16.0	16.0	19.0	26.00	30.0	4.0	2.00	76.00
SGTBU 16-5G	16.0	17.0	26.0	34.00	43.0	13.0	4.00	86.00
SGTBU 20-5G	20.0	21.0	26.0	38.00	43.0	9.0	4.00	86.00
SGTBU 20-6G	20.0	19.0	32.0	38.00	50.0	13.0	5.30	100.00
SGTBU 25-5G	25.0	23.0	26.0	42.00	45.0	5.0	4.00	110.00
SGTBU 25-6G	25.0	23.0	32.0	42.00	50.0	8.0	5.30	110.00
SGTBU 25-8M	25.0	23.0	45.0	42.00	70.0	27.0	5.30	110.00
SGTBU 25C-6 (1)	25.0	23.0	32.0	42.00	50.0	8.0	5.30	110.00
SGTBU 32-25-6G	32.0	25.0	32.0	44.00	54.0	5.0	5.30	110.00
SGTBU 32-6G	32.0	29.0	32.0	48.00	54.0	5.0	5.30	110.00
SGTBU 32-8M	32.0	29.0	45.0	48.00	70.0	20.0	5.30	110.00
SGTBU 40-6G	40.0	-	32.0	60.00	57.0	-	5.30	114.00
SGTBU 40-9	40.0	41.0	52.6	66.00	81.0	22.0	8.00	130.00
SGTBU 50-9	50.0	41.0	52.6	66.00	83.0	14.0	8.00	135.00
SGTBU 100-9-12	50.0	50.0	100.0	108.00	155.0	73.5	15.00	225.00
SGTBU 150-9-12	50.0	50.0	150.0	111.00	209.0	127.5	15.00	306.00

• Choose blade by B1 dimension

(1) Elbow-style connector unit supplied with each JET-CUT tool block

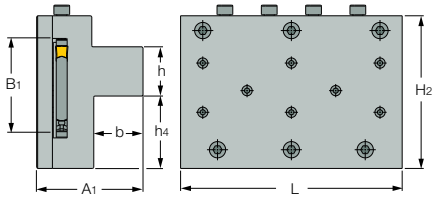
For tools, see pages: CGFG 51-P8 (452) • CGHN-8-10D (244) • CGHN-D (239) • CGHN-DG (239) • CGHN-P8 (240) • CGHR/L-12-14D (284) • CGHR/L-P8DG (240) • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HFFA (435) • HFFH (435) • HFFR/L-T (439) • HGFH (227) • PCHBR/L (269) • SGFFA (457) • SGFFH (457) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGHN-D (231) • TNFFA-IQ (455) • TNFFH-IQ (454)

Spare Parts

Designation							
SGTBN 16-2		SR M5X25DIN912	HW 4.0				
SGTBU 16-5G	BKU 86	SR M6X30 DIN912	HW 5.0				
SGTBU 20-5G	BKU 86	SR M6X30 DIN912	HW 5.0				
SGTBU 20-6G	BKU 100	SR M6X30 DIN912	HW 5.0				
SGTBU 25-5G	BKU 105	SR M6X30 DIN912	HW 5.0				
SGTBU 25-6G	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 25-8M	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 25C-6	BKU 110	SR M6X30 DIN912	HW 5.0	SGCU-344	CF 343*	CGF 343*	CGM 343*
SGTBU 32-25-6G	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 32-6G	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 32-8M	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 40-6G	BKU 110	SR M6X30 DIN912	HW 5.0				
SGTBU 40-9	BK 509	SR M8X30DIN912	HW 6.0				
SGTBU 50-9	BK 509	SR M8X30DIN912	HW 6.0				
SGTBU 100-9-12		SR M10X25 DIN912	HW 8.0				
SGTBU 150-9-12		SR M10X25 DIN912	HW 8.0				

* Optional, should be ordered separately

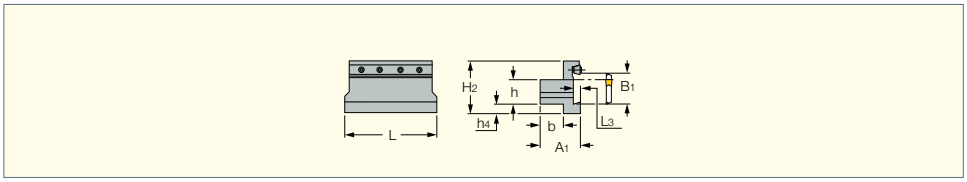
SGTBU 100/150-9-12





TOOL BLOCKS

SGTBK
Blocks for Heavy Duty Parting and Grooving Blades



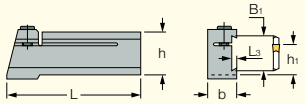
Designation	h	b	L_3	B_1	A_1	H_2	h_4	L			
SGTBK 32-9	32.0	28.0	8.50	32.0	48.00	62.0	3.0	120.00	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0
SGTBK 38-9	38.0	35.0	8.50	52.6	60.00	90.0	25.0	135.00	BK 40-9	SR M6X20 DIN912	HW 5.0
SGTBK 40-9	40.0	35.0	8.50	52.6	60.00	90.0	23.0	135.00	BK 40-9	SR M6X20 DIN912	HW 5.0
SGTBK 50-9	50.0	40.0	8.50	52.6	65.00	90.0	15.0	135.00	BK 40-9	SR M6X20 DIN912	HW 5.0

• Choose blade by B1 dimension

For tools, see pages: CGFG 51-P8 (452) • CGHN-8-10D (244) • CGHN-P8 (240) • CGHR/L-12-14D (284) • CGHR/L-P8DG (240) • DGFH (228) • HFFH (435) • PCHBR/L (269) • SGFFH (457) • TGFH/R/L (283) • TGFHR/L (391) • TNFFH-IQ (454)

TOOL BLOCKS

SGTBR/L
Blocks for Parting and Grooving Blades for Conventional Lathes



Right-hand shown

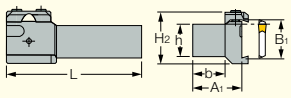
Designation	h	h_1	B_1	b	L	L_3		
SGTBR 19-2	25.0	19.0	19.0	19.0	100.00	2.00	SR M6X25 DIN912	HW 5.0
SGTBR/L 25-6	32.0	25.0	26.0	20.0	120.00	5.00	SR M6X25 DIN912	HW 5.0

• Choose blade by B1 dimension

For tools, see pages: • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HGFH (227) • PCHBR/L (269) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391)

TOOL BLOCKS

UBHCR/L
Holders for Grooving, Turning and Parting Blades



Right-hand shown

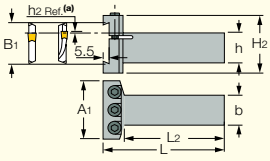
Designation	h	B_1	b	H_2	A_1	L				
UBHCR/L 20-26	20.0	26.0	20.0	42.0	35.60	100.00	BKU 176 307	SR M6X16 DIN912	HW 5.0	SPRING PLUNGER M6X14X3.5
UBHCR/L 25-32	25.0	32.0	25.0	46.0	40.00	130.00	BKU 176 307	SR M6X16 DIN912	HW 5.0	SPRING PLUNGER M6X14X3.5
UBHCR/L 32-32	32.0	32.0	32.0	46.0	47.00	130.00	BKU 176 307	SR M6X16 DIN912	HW 5.0	SPRING PLUNGER M6X14X3.5

• Choose blade by B1 dimension

For tools, see pages: CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGHR/L-P8DG (240)) • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HFFA (435) • HFFH (435) • HFFR/L-T (439) • HGFH (227) • SGFFA (457) • SGFFH (457) • TGFH/R/L (283) • TGFHL-TR (398) • TGFHR/L (391) • TGHN-D (231) • TGHN-S (231) • TNFFA-IQ (455) • TNFFH-IQ (454)

TOOL BLOCKS

SGTBF
Perpendicular Blocks for Parting and Grooving Blades



Designation	h	b	B_1	L	L_2	A_1	H_2	L_3		
SGTBF 25-A	25.0	25.0	32.0	102.00	80.00	48.00	48.0	5.50	SR M6X40 DIN912	HW 5.0
SGTBF 32-A	32.0	32.0	32.0	116.00	100.00	48.00	48.0	5.50	SR M6X40 DIN912	HW 5.0

• (a) h2 Ref. as defined for SELF-GRIP face grooving blades • Choose blade by B1 dimension

For tools, see pages: • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HFFH (435) • HFFR/L-T (439) • HGFH (227) • SGFFA (457) • SGFFH (457) • TGFH/R/L (283) • TGFHR/L (391) • TNFFA-IQ (455) • TNFFH-IQ (454)

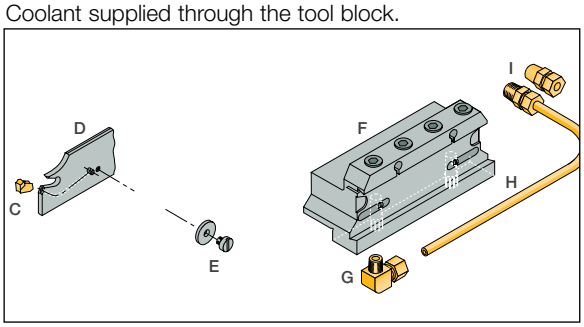
JET-CUT Assembly

SELF-GRIP

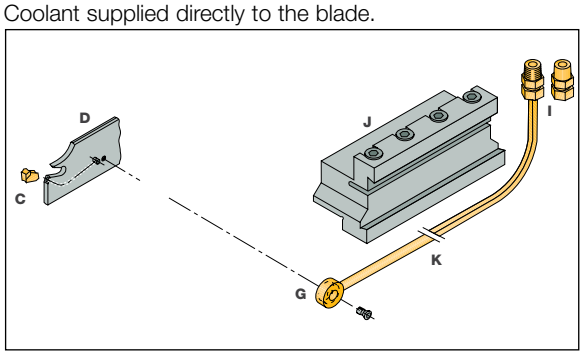
C Insert GF☐
D Blade SGFH☐K-☐

E Cap **SGC 340** supplied with blade; to be used with Option 1 only.
F Tool block **SGTBU☐C-☐**
G Elbow-style connector unit supplied with each tool block; **SGCU**-344
H 3/16" copper Tube 343 (length 250 mm)
I Choice of connector sets:
CGM-343 (**G** 1/8 external thread)
CGF-343 (**G** 1/8 internal thread)
CF-343 (**NPT** 1/8 internal thread)
J Standard current tool block
SGTBN, SGTBU, SGTBF
K Coolant connection unit; **SGCU**-341
M Integral shank holder
SGTFR/L☐K-☐

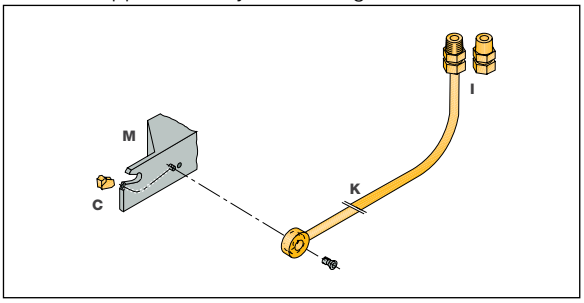
Option 1:
Coolant supplied through the tool block.



Option 2:
Coolant supplied directly to the blade.



Option 3:
Coolant supplied directly to the integral shank tool.

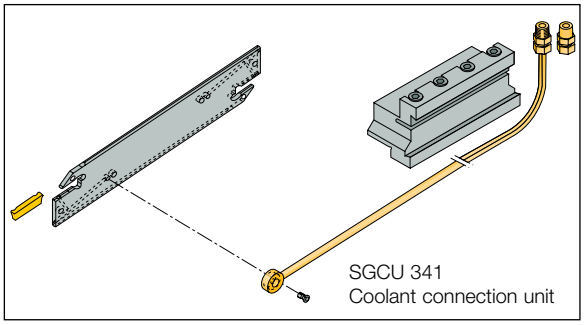


DO-GRIP
500 STRAIGHT LINE

The coolant supply tube can be attached directly to the **DGTR...C** integral tool, **DGFH-C** blades used on the regular blocks or to the **SGTBU-C** blocks which have coolant passages and connecting ports.

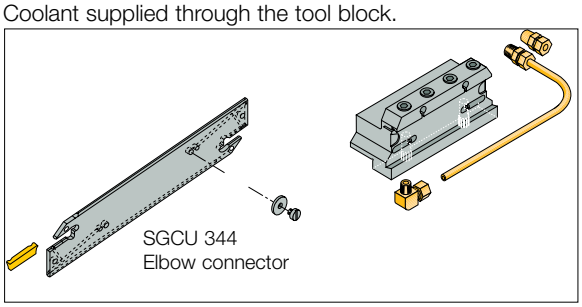
The Right Connection for Your Application

Option 1:
Coolant supplied directly to the blade.



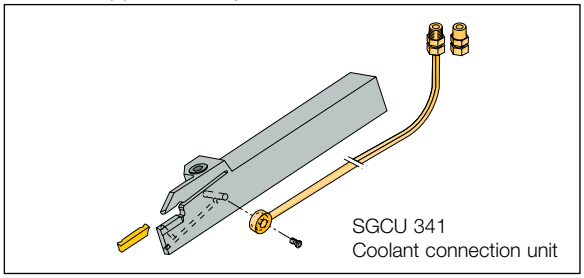
Connectors:
CGM 343 (**G1**/8 external thread)
CGF 343 (**G1**/8 internal thread)
CF 343 (**NPT1**/8 internal thread)

Option 2:
Coolant supplied through the tool block.



TUBE 343
3/16" copper tube (length 250 mm)
(**G1**/8 external thread) (**G1**/8 internal thread) (**NPT1**/8 external thread) (**NPT1**/8 internal thread)

Option 3:
Coolant supplied directly to the tool.



Connectors:
CGM 343 (**G1**/8 external thread)
CGF 343 (**G1**/8 internal thread)
CF 343 (**NPT1**/8 internal thread)

EXCHANGEABLE HEADS



TABLE OF CONTENTS

CAMFIX (ISO 26623-1) 477

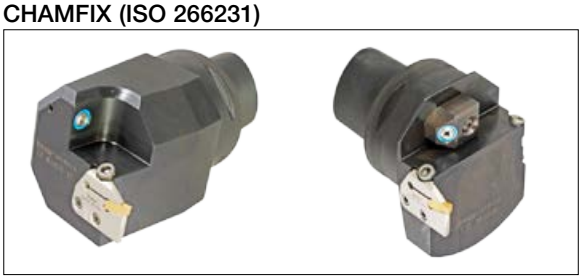
HSK-T (ISO 12164-3 T Type and ICTM Standard) 481

IM (ISO 26622-1 and Mazak XMZ Standard)..... 482

ISCAR offers a wide range of tools for three types of Quick-Change systems:

1. **CAMFIX** (**ISO** 26623-1)
2. **HSK-T** (**ISO** 12164-3 **T** Type and **ICTM** Standards)
3. **IM** (**ISO** 26622-1 and Mazak **XMZ** Standards)

CHAMFIX (ISO 266231)



HSK-T (ISO 1264-3 T Type and ICTM Standard)

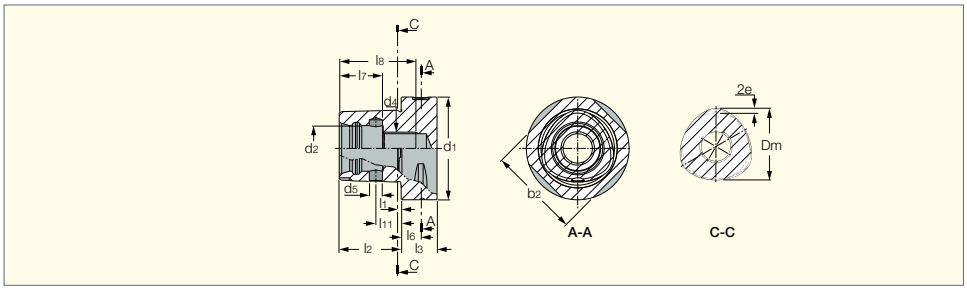




Quick Change tools are expensive compared to standard shank tools. ISCAR offers economical solutions by using adapters, blades or regular tools and boring bars on the Quick Change adaptations.

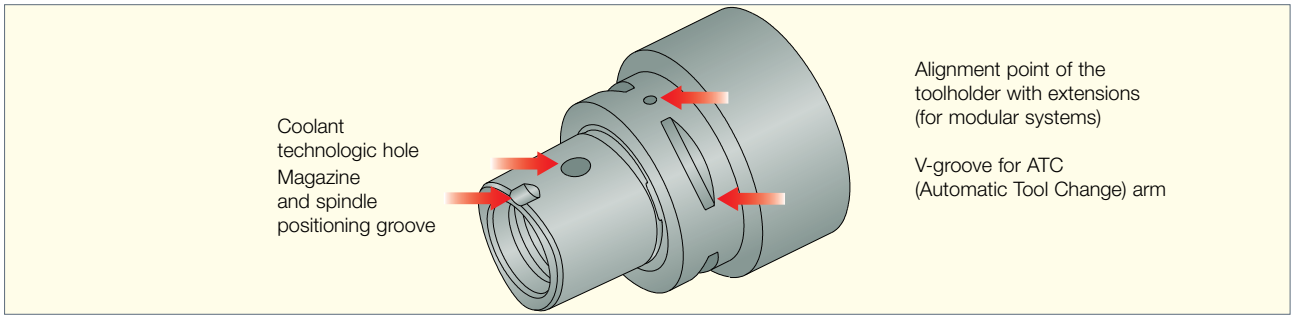
CAMFIX

CAMFIX ISO 26623-1
Toolholder Standard



CAMFIX	b_2	d_1 ±0.1	d_2	d_4	d_5 ±0.1	D_m	e	l_1	l_2 ±0.1	l_3 min	l_6 ±0.15	l_7 ±0.15	l_8 min	l_{11} ±0.1
C3	28,3	32	15	M12x1.5	3,6	22	0,7	2,5	19	15	6	13	25	8
C4	35,3	40	18	M14x1.5	4,6	28	0,9	2,5	24	20	8	15	30	11,5
C5	44,4	50	21	M16x1.5	6,1	35	1,12	3	30	20	10	20	37	14
C6	55,8	63	28	M20x2	8,1	44	1,4	3	38	22	12	27	47	15,5
C8	71,1	80	32	M20x2	9,1	55	2	3	48	30	12	28	48	25
C8X	88,7	100	32	M20x2	9,1	55	2	3	48	32	16	28	48	25
C10	88,3	100	43	M24x2	12	72	2,8	3	60	36	16	40	70	26,5

CAMFIX - ISO 26623-1 Standard Quick Change Shanks



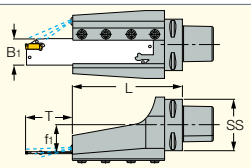
Features

- **Symmetrical design:** Due to the symmetrical design, the torque load is distributed on the polygon, providing a self-centering effect.
- **Rigidity:** The CAMFIX clamping mechanism is extremely rigid against bending forces.
- **Accuracy:** The taper and face contact ensure high repeatability within 2 microns when operated with an automatic tool changer.

TOOL BLOCKS

CAMFIX

C#-TBK-R/L
Blocks with CAMFIX
Exchangeable Shanks for
Parting and Grooving Blades



Right-hand shown • T= See specific blade dimensions

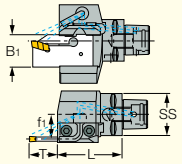
Designation	SS	f_1	L	B_1				
C6 TBK-32R/L	63	32.0	138.00	32.0	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0	EZ 125
C8 TBK-32R	80	40.5	147.00	32.0	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0	EZ 125
C8 TBK-52R	80	40.5	161.00	52.0	BK 40-9	SR M6X16 DIN912	HW 5.0	EZ 125

For tools, see pages: CGHN-DG (239) • CGHR/L-P8DG (240) • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HFFH (435) • HGFH (227) • PCHBR/L (269) • TGFH/R/L (283) • TGFHR/L (391) • TNFFH-IQ (454)

TOOL BLOCKS

CAMFIX

C#-TBU
Blocks with CAMFIX Exchangeable
Tapered Shanks for Parting
and Grooving Blades



Right-hand shown • T= See specific blade dimensions

Designation	SS	f_1	L	B_1						
C4 TBU-32R/L	40	21.0	60.00	32.0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X8 DIN916	EZP 5	EZ 125
C5 TBU-32R/L	50	30.0	64.00	32.0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X8 DIN916	EZP 5	EZ 125

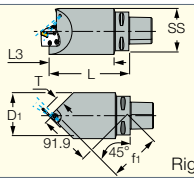
For tools, see pages: CGHN-S (239) • TGHN-S (231)

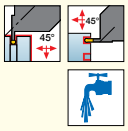
MODULAR-GRIP

CAMFIX

C#-MAHDR-45

Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters





Right-hand shown • T= See specific adapter dimensions

Designation	SS	L	L_1	f_1	D_1	L_3
C6 MAHDR-45	63	130.00	91.9	89.0	75.00	105.78
C8 MAHDR-45	80	130.00	91.9	89.0	80.00	-

• For mill-turn machines.

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)



Spare Parts

Designation								
C6 MAHDR-45	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20DIN7984	HW 4.0	SR M6X6DIN551 14H/22H(c)	SR M5X4 DIN913	EZ 83
C8 MAHDR-45	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	SR M5X6 DIN913	EZ 83

[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

[b] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

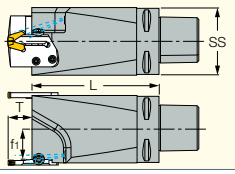
[c] Used to prevent chips from entering the upper locking screw hole

MODULAR-GRIP

CAMFIX

C#-MAHDOR

Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters





Right-hand shown • T= See specific adapter dimensions

Designation	SS	f_1	L							
C8 MAHDOR	80	37.5	130.00	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125
C6 MAHDOR	63	29.0	130.00	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125

[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

[b] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

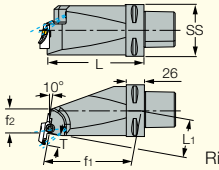
[c] Used to prevent chips from entering the upper locking screw hole

For tools, see pages: DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62)

CAMFIX

C#-MAHUR/L

Holders with CAMFIX Shanks for 10° Mounting on Mill-Turn Machines for Parting, Grooving, Turning and Facing Adapters



Right-hand shown • T= See specific adapter dimensions

Designation	SS	f_1	f_2	L	L_1
C6 MAHUR/L-10	63	113.1	29.00	123.00	49.4
C8 MAHUR-10 *	80	113.1	29.00	123.00	49.4

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation							
C#-MAHUR/L	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125

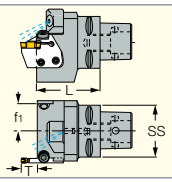
[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag
[b] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools
[c] Used to prevent chips from entering the upper locking screw hole

MODULAR-GRIP

CAMFIX

C#-MAHD

Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters



Right-hand shown • T - See specific adapter dimensions

Designation	SS	L	f_1
C3 MAHD	32	50.00	18.5
C4 MAHD	40	46.50	22.1
C5 MAHD	50	47.00	23.0
C6 MAHD	63	50.00	29.0
C8 MAHD	80	60.00	37.5

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation									
C3 MAHD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	EZA 125	SR 76-1022
C4 MAHD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	EZA 125	SR 76-1022
C5 MAHD	SR M5-04451		SR 14-519(a)	SR M6X20-XT(b)		SR M6X6DIN551 14H/22H(c)	EZ 125	EZA 125	SR 76-1022
C6 MAHD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	EZA 125	SR 76-1022
C8 MAHD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	EZA 125	SR 76-1022

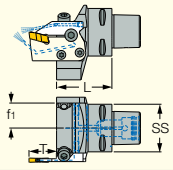
[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag
[b] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools
[c] Used to prevent chips from entering the upper locking screw hole

MODULAR-GRIP

JETCUT CAMFIX

C#-MAHD-JHP

Holders with CAMFIX Exchangeable Shanks and High Pressure Coolant Channels for MODULAR-GRIP Adapters

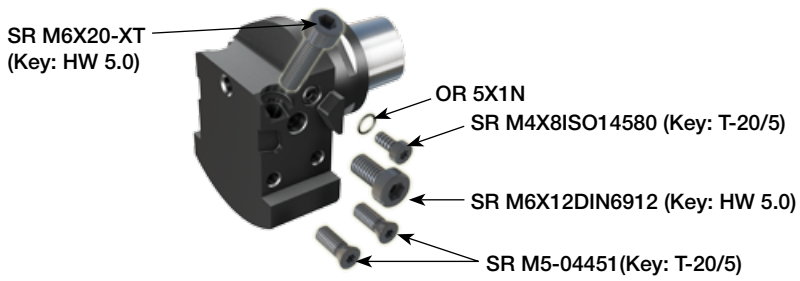


340 Bar Max

Right-hand shown
• T - See specific adapter dimensions
• f=f1(shank)+f2(adapter)

Designation	SS	L	f_1							
C3 MAHD-JHP	32	45.00	18.5	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C4 MAHD-JHP	40	46.50	21.0	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C5 MAHD-JHP	50	47.00	26.0	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C6 MAHD-JHP	63	50.00	32.5	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK

For tools, see pages: CGPAD (238) • CGPAD-JHP (238) • DGAD-B-D (379) • DGAD/HGAD (378) • DGPAD-JHP (379) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • HGPAD-JHP (227) • PCADR/L (268) • PCADR/L-JHP (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TAGPAD-JHP (394) • TGAD (393) • TGPAD (230)

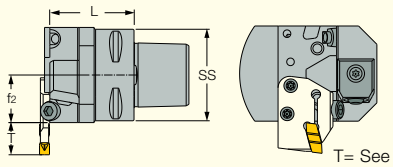


MODULAR GRIP

CAMFIX

C#-MAHPD

Perpendicular Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters



T= See specific adapter dimensions

Designation	SS	L	f2
C4 MAHPD	40	46.00	25.00
C5 MAHPD	50	46.00	26.00
C6 MAHPD	63	47.00	33.00
C8 MAHPD	80	56.00	42.00

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation										
C4 MAHPD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	SR 76-1022	EZA-21414	
C5 MAHPD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	SR 76-1022	EZA-21414	
C6 MAHPD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125	SR 76-1022	EZA-21414	
C8 MAHPD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125			EZP 5

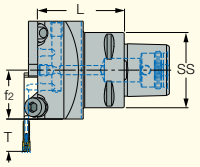
[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag
[b] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools
[c] Used to prevent chips from entering the upper locking screw hole

MODULAR GRIP

JETCUT CAMFIX

C#-MAHPD-JHP

Perpendicular Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters



340 Bar Max

T= See specific adapter dimensions

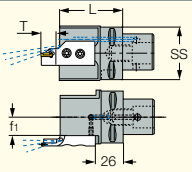
Designation	SS	L	f2							
C3 MAHPD-JHP	32	40.00	26.00	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C4 MAHPD-JHP	40	46.00	26.00	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C5 MAHPD-JHP	50	46.00	26.00	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C6 MAHPD-JHP	63	46.00	33.00	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK

For tools, see pages: CGPAD (238) • CGPAD-JHP (238) • DGAD-B-D (379) • DGAD/HGAD (378) • DGPAD-JHP (379) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • HGPAD-JHP (227) • PCADR/L (268) • PCADR/L-JHP (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TAGPAD-JHP (394) • TGAD (393) • TGPAD (230)

CAMFIX

C#-HAD

Holders with CAMFIX Exchangeable Tapered Shanks for Internal Facing Adapters



T-See specific adapter dimensions.

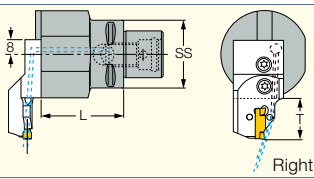
Designation	SS	L	f1				
C4 HAD	40	60.00	18.0	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0
C5 HAD	50	60.00	18.0	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0
C6 HAD	63	60.00	22.0	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0

For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

CAMFIX

C#-HAPR/L

Perpendicular Holders with CAMFIX Exchangeable Shanks for Internal Facing Adapters

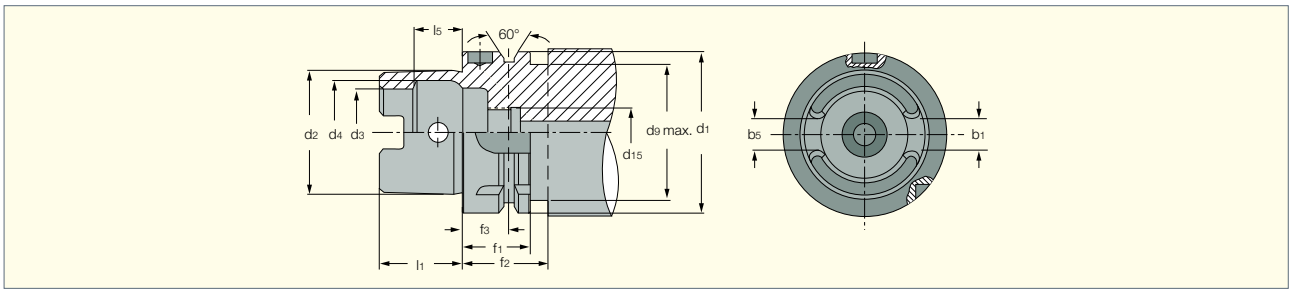


Right-hand shown • T= See specific blade dimensions

Designation	SS	L		
C4 HAPR/L	40	50.00	SR 14-519	T-20/3
C6 HAPR/L	63	50.00	SR 14-519	T-20/3

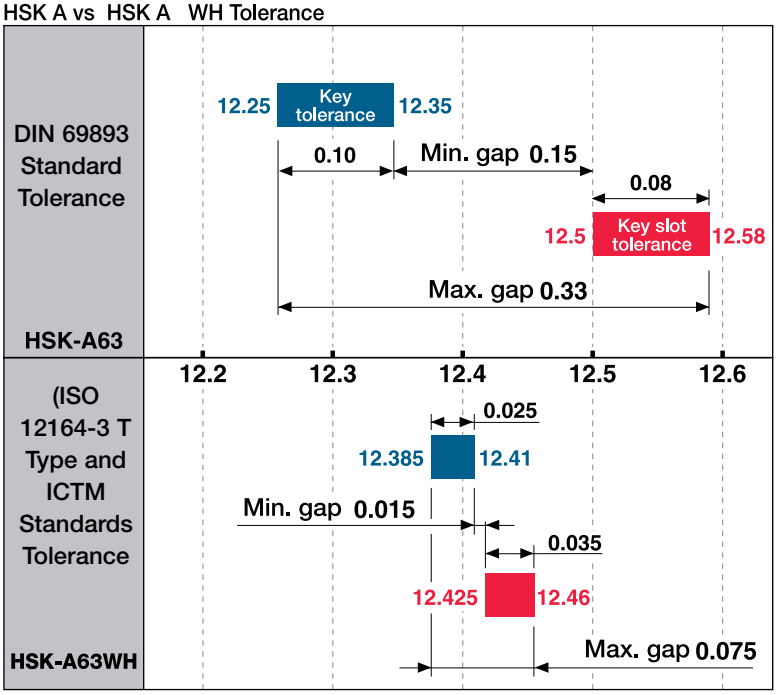
For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

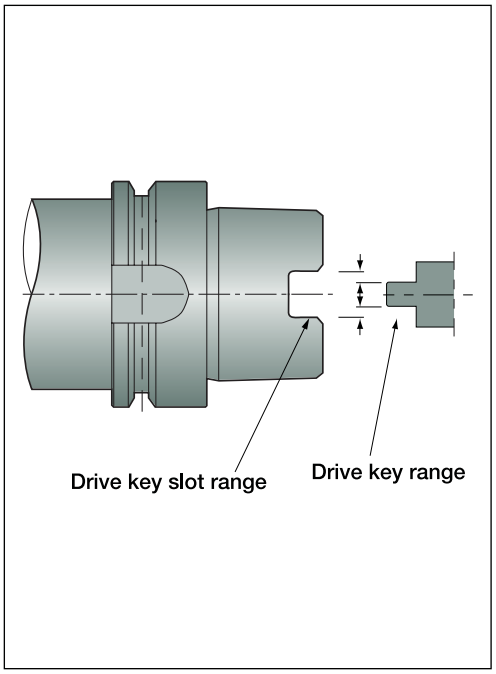
HSK-T (ISO 12164-3 T Type and ICTM Standards)



HSK-A WH	d_1 h10	d_2	d_3 H10	d_4 H11	d_9 max	d_{15}	$l_{1-0.2}$	l_5 Js10	$b_1^{\pm 0.04}$	$b_5^{\pm 0.035}$	f_1 -0.1	f_2 min	f_3 ±0.1
63	63	48	34	40	62	M18X1	32	18.13	12.54	12.425	26	30	18
100	100	75	53	63	99	M24X1.5	50	28.56	20.02	19.91	29	34	20

HSK A vs HSK A WH Tolerance

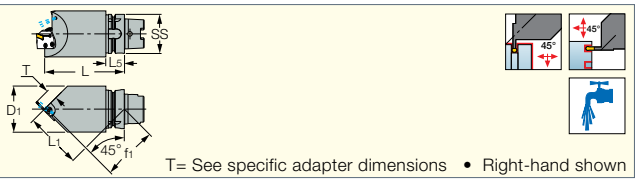




MODULAR-GRIP HSK

HSK A63WH-MAHDR-45

Holders with HSK Tapered Shanks for MODULAR-GRIP, Parting, Grooving and Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L	L_1	f_1	D_1
HSK A63WH-MAHDR-45	63	130.00	91.9	89.0	75.00

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with the ICTM and HSK-T standards

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)



Spare Parts

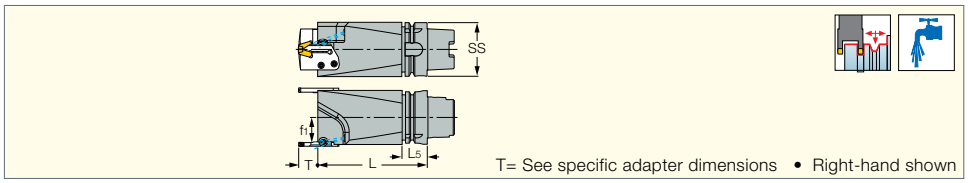
Designation							
HSK A63WH-MAHDR-45	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT	HW 5.0	SR M6X6DIN551 14H/22H(b)	SATZ-M8X1-M3

[a] For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

[b] Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

MODULARGRIP HSK

HSK A63WH-MAHDOR
Holders with HSK Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters

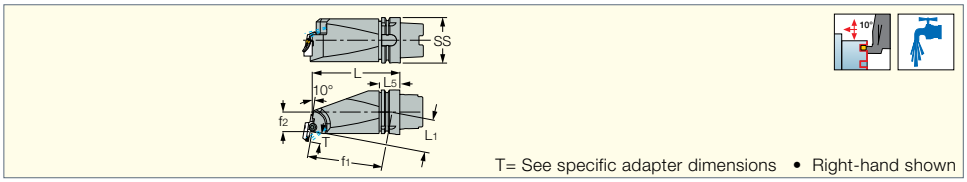


Designation	SS	f1	L							
HSK A63WH-MAHDOR	63	29.0	130.00	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with the ICTM and HSK-T standards
(a) For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag
(b) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools
(c) Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag
For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

MODULARGRIP HSK

HSK A63WH-MAHUR/L
Holders with HSK-T Shanks for 10° Mounting on Mill-Turn Machines for Parting, Grooving, Turning and Facing Adapters



Designation	SS	f1	f2	L	L1
HSK A63WH-MAHUR/L-10	63	113.1	29.00	130.00	49.4

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with the ICTM and HSK-T standards
For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

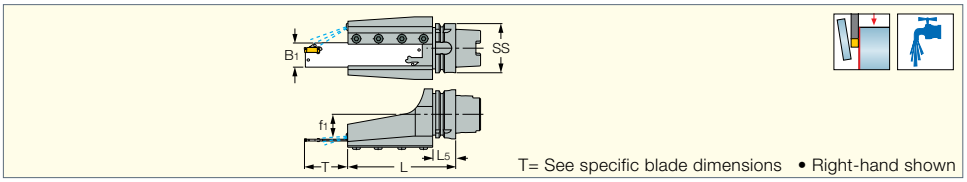
Spare Parts

Designation							
HSK A63WH-MAHUR/L-10	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZ 125

(a) For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag
(b) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools
(c) Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

TOOL BLOCKS HSK

HSK A-WH-TBK-R/L
Blocks with HSK Exchangeable Tapered Shanks for Parting and Grooving Blades

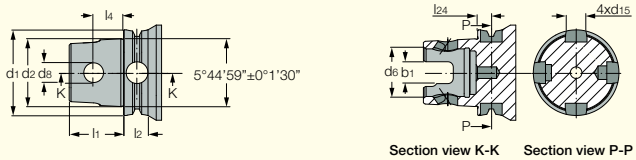


Designation	SS	L	f1	B1(1)				
HSK A100WH-TBK-32L	100	150.00	50.0	32.0	BK 32-9	WEDG	SR M6X16 DIN912	HW 5.0	SATZ-M12X1-M6
HSK A63WH-TBK-32R/L	63	138.00	32.0	32.0	BK 32-9	WEDG	SR M6X16 DIN912	HW 5.0	EZ 125

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with the ICTM and HSK-T standards
(1) Blade size B1 has to fit this dimension
For tools, see pages: CGHN-DG (239) • CGHR/L-P8DG (240) • DGFH (228) • DGFHR/L (371) • DGFHR/L-B-D..(R/L) (372) • HFFH (435) • HGFH (227) • PCHBR/L (269) • TGFH/R/L (283) • TGFHR/L (391) • TNFFH-IQ (454)

EXCHANGEABLEHEADS IM (ISO 26622-1 and Mazak XMZ Standards)

IM ISO 26622-1 Standard

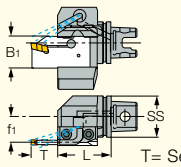


IM UT	d1 -0.1	d2 ±0.0075	d6	d8	d15 H11	l1 -0.1	l2 min	l4	l24	b1
32	32	23.9975	17.65 +0.1	7.5	-	20	10	10.8	-	8.9
40	40	29.9975	21 +0.1	9.5	9	25	12	13.6	5.95	10
50	50	39.9975	28.2 +0.15	12.5	12	32	18	17.2	8.95	14
63	63	49.9975	35.2 +0.15	14.5	16	40	20	22.4	9.95	16
80	80	63.9975	48 +0.15	18.5	16	45	22	24.9	10.95	20

ISO 26622-1 XMZ

ISCAR GRIP

IM-TBU
Blocks with an ISO 26622-1(*) Tapered Shank for Parting and Grooving Blades



T= See specific blade dimensions. • Right-hand shown

Designation	SS	B_1	L	f_1						
IM40 TBU-32R	40	32.0	51.00	23.0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125
IM50 TBU-32R/L	50	32.0	61.00	30.0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125
IM63 TBU-32L	63	32.0	63.00	38.0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125

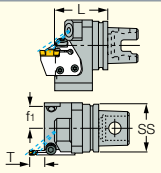
• (*) Tools with orientation holes in the flange groove can be supplied on request

For tools, see pages: CGHN-S (239) • TGHN-S (231)

MODULAR GRIP

ISO 26622-1 XMZ

IM-MAHD
Holders with an ISO 26622-1(*) Tapered Shank for Parting, Grooving, Turning and Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L	f_1
IM40 MAHD	40	43.00	18.0
IM50 MAHD	50	47.00	23.0
IM63 MAHD	63	52.00	29.0

• (*) Tools with orientation holes in the flange groove can be supplied on request

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation									
IM-MAHD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	SR 76-1022	EZA 125	EZ 125

(a) For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

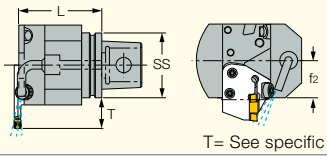
(b) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

(c) Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

MODULAR GRIP

ISO 26622-1 XMZ

IM-MAHPD
Perpendicular Holders with an ISO 26622-1(*) Tapered Shank for Parting, Grooving, Turning and Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L	f_2
IM40 MAHPD	40	44.00	25.00
IM50 MAHPD	50	45.00	26.00
IM63 MAHPD	63	45.00	33.00

• (*) Tools with orientation holes in the flange groove can be supplied on request

For tools, see pages: CGPAD (238) • DGAD-B-D (379) • DGAD/HGAD (378) • HFPAD-3 (438) • HFPAD-4 (441) • HFPAD-5 (439) • HFPAD-6 (439) • HGPAD (227) • PCADR/L (268) • SCLCR-PAD (47) • SDJCR-PAD (51) • SVJCR-PAD (56) • SWAPR-PAD (62) • TGAD (393) • TGPAD (230)

Spare Parts

Designation								
IM-MAHPD	SR M5-04451	T-20/5	SR 14-519(a)	SR M6X20-XT(b)	HW 5.0	SR M6X6DIN551 14H/22H(c)	EZP 5	EZ 125

(a) For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

(b) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

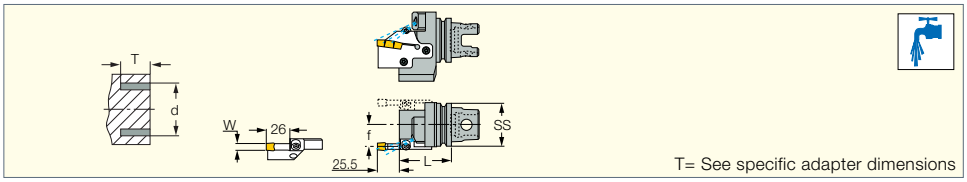
(c) Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

ISO 26622-1 XMZ

ISCAR GRIP

IM-GHAD-8

Holders with an ISO 26622-1(*) Tapered Shank for Grooving, Turning and Facing Adapters



T= See specific adapter dimensions

Designation	SS	L	f	W	d Range	T Range
IM50 GHAD-8	50	60.00	26.00	8.00	80-510	15-25
IM63 GHAD-8	63	60.00	32.50	8.00	80-510	15-25

• (*) Tools with orientation holes in the flange groove can be supplied on request

For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

Spare Parts

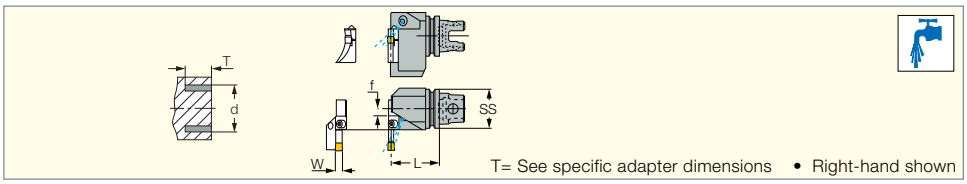
Designation							
IM-GHAD-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	SR 76-1022	EZA 125	EZ 125

ISO 26622-1 XMZ

ISCAR GRIP

IM-GHAPR/L-8

Perpendicular Holders with an ISO 26622-1(*) Tapered Shank for Grooving, Turning and Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L	f	W	d Range	T Range					
IM50 GHAPR/L-8	50	60.00	26.00	8.00	80-510	15-25	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	EZ 125
IM63 GHAPL-8	63	75.00	33.00	8.00	80-510	15-25	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	EZ 125

• (*) Tools with orientation holes in the flange groove can be supplied on request

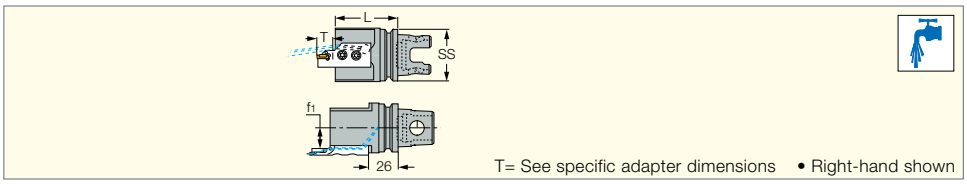
For tools, see pages: GADR/L-8 (243) • GAFG-R/L-8 (451) • PCADR/L 34N-RE (269)

ISO 26622-1 XMZ

ISCAR GRIP

IM-HAD

Holders with an ISO 26622-1(*) Tapered Shank for Internal Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L	f_1					
IM40 HAD	40	60.00	18.0	SR 14-519	T-20/3	SR M5X8 DIN913	HW 3.0	SR M4X6DIN912
IM50 HAD	50	60.00	18.0	SR 14-519	T-20/3		HW 3.0	SR M4X6DIN912

• (*) Tools with orientation holes in the flange groove can be supplied on request

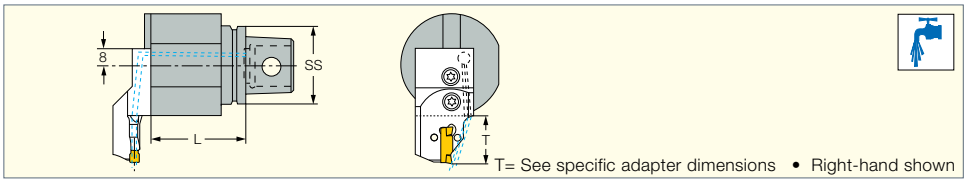
For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

ISO 26622-1 XMZ

ISCAR GRIP

IM-HAPR/L

Perpendicular Holders with an ISO 26622-1(*) Tapered Shank for Internal Facing Adapters



T= See specific adapter dimensions • Right-hand shown

Designation	SS	L		
IM40 HAPR/L	40	50.00	SR 14-519	T-20/3
IM50 HAPR/L	50	50.00	SR 14-519	T-20/3

• (*) Tools with orientation holes in the flange groove can be supplied on request

For tools, see pages: HFAER/L-4 (440) • HFAER/L-5T, 6T (441) • HFAIR/L-4 (444) • HFAIR/L-DG (445) • HGAER/L-3 (440) • HGAIR/L-3 (444)

Complete Machining Solutions
THREADING TOOLS & INSERTS



Member IMC Group

ISCAR

TABLE OF CONTENTS

Threading Inserts **487**

Selection Guide **488**

Insert Identification System 489

55° Partial Profile 490

60° Partial Profile 493

ISO Metric Full Profile 497

American UN Full Profile 502

Whitworth Full Profile 507

NPT/NPTF Full Profile 510

BSPT 512

Round DIN 405 523

STUB ACME 514

ACME 515

UNJ 516

MJ ISO 5855 517

Trapeze DIN 103 518

SAGE DIN 513 519

American Buttress 520

API Oil Threads 521

Tools for Threading **525**

Toolholder Identification System 526

External Holders 528

Threading Bars 531

User Guide **536**

THREADING INSERTS



Main Types of Laydown Inserts


B/M-TYPE


U-TYPE


REGULAR TYPE


MULTI-TOOTH

Additional Threading Systems
External

CUT-GRIP



Partial Profile (TIP)


Full Profile (TIP)

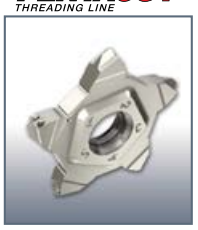
SWISSCUT



DECAIQTHREAD

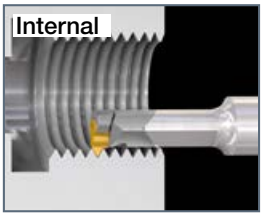


PENTACUT THREADING LINE



Internal

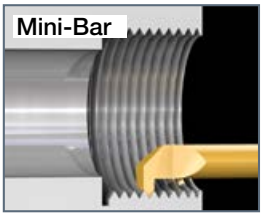
MINICHAM





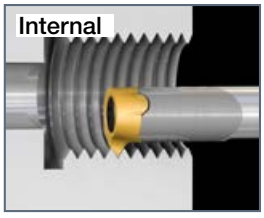
UMGR - Partial Profile 55°/60°
Minimum bore dia. 5.2 mm

PICCOCUT



Minimum bore dia. 2.4 mm

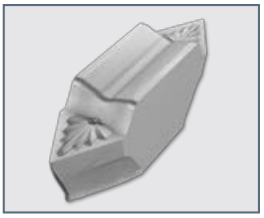
CHAMGROOVE

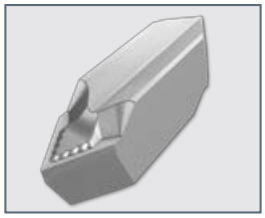




GIQR/L - Partial Profile 55°/60°
Minimum bore dia. 8.0 mm

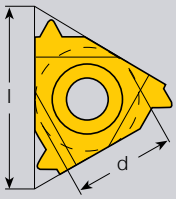
CUT-GRIP


GEPI-Partial Profile
Minimum bore dia. 12.5 mm


TIPI-Partial Profile
Minimum bore dia. 20 mm

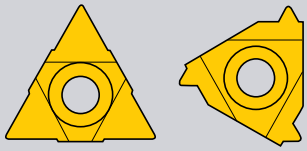
1. Insert Size

l (mm)	d
06	5/32"
08	3/16"
11	1/4"
16	3/8"
22	1/2"
27	5/8"



2. Application

E — External
I — Internal
UE — U-type, External
UI — U-type, Internal
UEI — U-type, External and Internal



U-type Regular Type

3. Hand of Tool

R — Right-hand
L — Left-hand
RL — Right- and Left-hand

4. Type

B — Peripherally ground & chipformer
M — Press to size with a chipformer
□ — No indication regular type

16	E	R	M	1.50	ISO	2M	IC808
1	2	3	4	5	6	7	8

5. Pitch

Full Profile
(value by number)

0.35-9.0	**mm**
72-2	**TPI**

Partial Profile
(Range by letter)

	mm	TPI
A	0.5-1.5	48-16
AG	0.5-3.0	48-8
G	1.75-3.0	14-8
N	3.5-5.0	7-5
Q	5.5-6.0	4.5-4
U	5.5-9.0	4.5-2.75

6. Thread Standard

60	—	Partial Profile 60°
55	—	Partial Profile 55°
ISO	—	**ISO** Metric
UN	—	American **UN**
W	—	Whitworth
BSPT	—	British **BSPT**
RND	—	Round **DIN** 405
TR	—	Trapeze **DIN** 103
ACME	—	**ACME**
STACME	—	Stub **ACME**
ABUT	—	American Buttress
UNJ	—	**UNJ**
NPT	—	**NPT**
API RD	—	**API** Round
BUT	—	**API** Buttress Casing
API	—	**API**
H90	—	**H**-90
EL	—	Extreme Line Casing
MJ	—	**ISO** 5855

7. No. of Teeth (Optional)

2M	—	2 teeth
3M	—	3 teeth

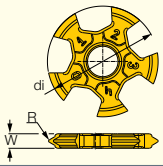
8. Grade

IC1007
IC908
IC808
IC508
IC250
IC228
IC50M

DECAIQTHREAD

TTG-16E-A55
External Inserts with 10 Threading Corners and a 55° Partial Profile for the General Industry



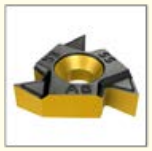


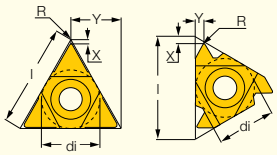
Designation	Dimensions					IC908
	TPI max	TPI min	R	W	di	
TTG-16E-A55	48	16	0.05	2.10	16.00	•

• For detailed cutting data, see pages 536-546
For tools, see pages: SER/L-TT (528)

ISCARTHREAD

ER/L-55°
External Laydown Threading Inserts with a 55 ° Partial Profile for the General Industry

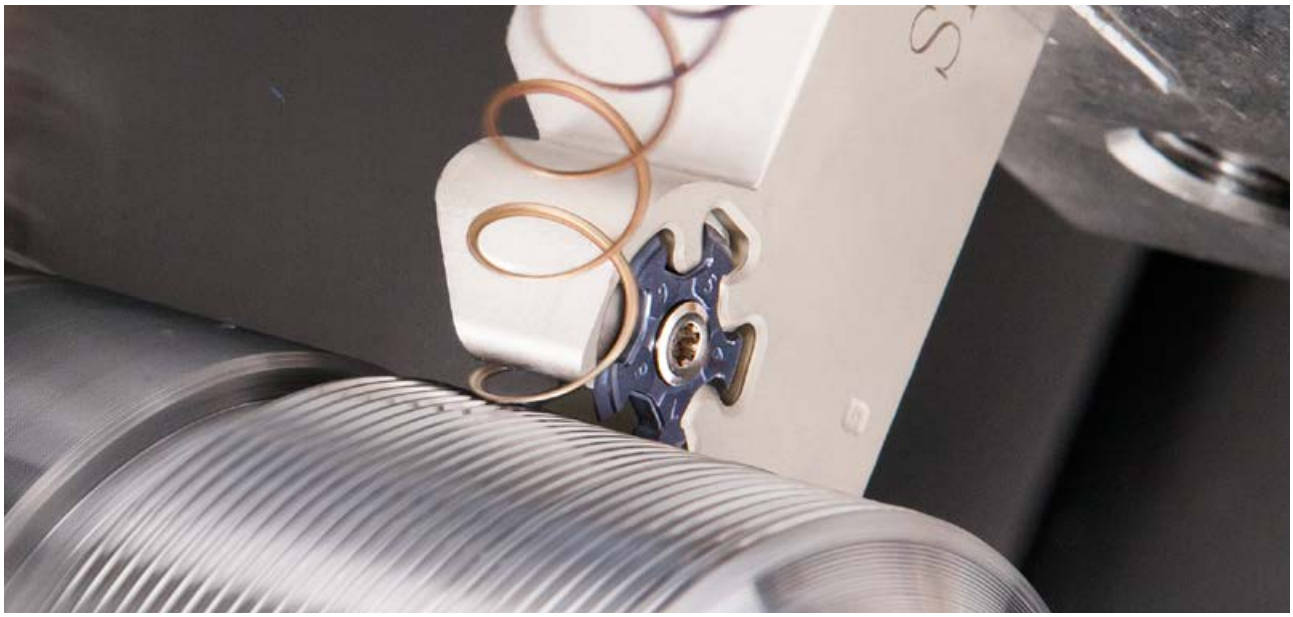




External right-hand shown

Designation	Dimensions									Tough ↔ Hard						
	di	Pmin	Pmax	TPI max	TPI min	l	R	X	Y	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
11ER/L A 55	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		•	•			•	
16ER/L A 55	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		•	•			•	
16ER/L AG 55	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	•	•	•	•		•	•
16ERB AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7						•	
16ERM AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.07	1.2	1.7		•	•		•	•	•
16ER/L G 55	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7		•	•			•	
16ERB G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7						•	
16ERM G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.23	1.2	1.7			•		•	•	
22ER/L N 55	12.70	3.50	5.00	7	5	22.00	0.42	1.7	2.5		•	•			•	
22UEIRL U 55	12.70	5.50	8.00	4.5	3.25	22.00	0.60	0.9	11.0		•	•				
27ER Q 55	15.88	5.50	6.00	4.5	4	27.00	0.60	2.0	2.9			•			•	
27UEIRL U 55	15.88	6.50	9.00	4	2.75	27.00	0.81	1.2	13.7			•				

• For insert identification system, see pages 489 • For threading between walls use GRIP-type inserts TIP-WT, GEPI-WT, TIPI-WT. • For detailed cutting data, see pages 536-546
(1) With pressed chipformer
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

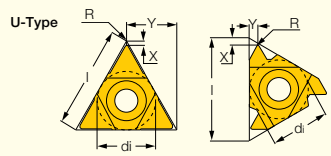


ISCARTHREAD

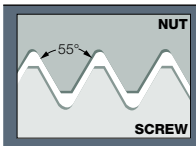
IR/L-55°

Internal Laydown Threading Inserts with a 55 ° Partial Profile for General Industry





Internal left-hand shown



Designation	Dimensions									Tough ↔ Hard							
	di	P_{min}	P_{max}	TPI max	TPI min	l	R	X	Y	IC228	IC928	IC50M	IC250	IC508	IC808	IC908	IC1007
06IR/L A 55	3.97	0.50	1.25	48	20	6.00	0.05	0.5	0.6	●							
08IR/L A 55	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7	●	●					●	
08UIRL U 55	4.76	1.75	2.00	14	11	8.00	0.10	0.9	4.0	●							
11IR/L A 55	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9	●		●	●			●	●
16IR A 55	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9			●	●			●	
16IR/L AG 55	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	●		●	●	●		●	
16IRB AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16IRM AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7			●	●		●	●	●
16IR/L G 55	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7			●	●	●		●	
16IRB G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7							●	
16IRM G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7				●		●	●	
22IR N 55	12.70	3.50	5.00	7	5	22.00	0.42	1.7	2.5			●	●			●	
27IR Q 55	15.88	5.50	6.00	4.5	4	27.00	0.60	2.0	2.9			●	●			●	

• For insert identification system, see pages 489. • For threading between walls use GRIP-type inserts TIP-WT, GEPI-WT, TIPI-WT. • For detailed cutting data, see pages 536-546

(1) With pressed chipformer

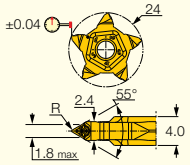
For tools, see pages: MGSIR/L (534) • SIR/L (531)

PENTACUT THREADING LINE

PENTA 24-WT

Precision Ground Pentagonal External Threading Inserts with a Whitworth 55° Partial Profile and Chipformer





Designation	Dimensions			IC908
	TPI max	TPI min	R	
PENTA 24-WT-0.05	48	14	0.05	●
PENTA 24A-WT-0.05 (1)	48	14	0.05	●

• TPImin=6.4/D(inch) D-nominal thread diameter (inch)

(1) Flat rake (without a chipformer)

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

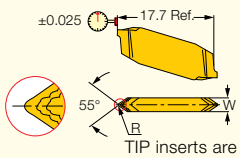
ISCARTHREAD

CUTGRIP

TIP-WT

Precision Ground Double-Ended Threading Inserts with a 55° Partial Profile and Chipformer





TIP inserts are 1.6 mm longer than GIP in the same pocket

Designation	Dimensions				Tough ↔ Hard	
	W	$R^{\pm 0.03}$	TPI max	TPI min(1)	IC08	IC908
TIP 2WT-0.05	2.40	0.05	54	D/6.4	●	●
TIP 4WT-0.15	4.00	0.15	19	D/6.4	●	●
TIP 5WT-0.25	5.50	0.25	12	D/6.4		●

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.187xD

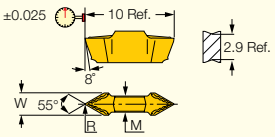
(1) D-Diameter of thread (inch)

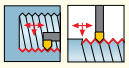
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD

GEPI-WT
Precision Ground Double-Ended Threading Inserts with a 55° Partial Profile and Chipformer for 11.5 mm Bore Diameter





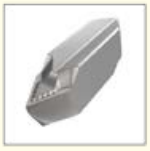


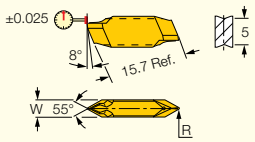
Designation	Dimensions W	R±0.03	M	TPI max	Pmin	Tough ↔ Hard IC08	IC908
GEPI 2.5-WT0.05	2.50	0.05	1.80	54	0.47	●	●

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.167xD, TPI min D/6.0
For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIMR/L (287) • GEHIMR/L-SC (287) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

ISCARTHREAD

TIPI-WT
Double-Ended Internal Threading Inserts with a 55° Partial Profile and Chipformer for 20 mm Min. Bore Diameter







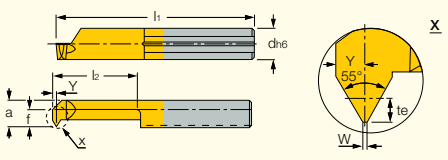
Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIPI 3.4WT-0.10	3.40	0.10	0.95	27	●	●
TIPI 5.4WT-0.20	5.40	0.20	1.67	15		●

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.187xD, TPI min D/5.25 D=Diameter of thread (pitch max<=W)
• For detailed cutting data, see pages 536-546.
For tools, see pages: GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

ISCARTHREAD
PICCOCUT

PICCO-55°-Thread
Inserts for 55° Internal Threading Profile







Right-hand shown

Designation	Dimensions d	TPI max	TPI min	te	w	Y	f	a	l2	l1	D min	IC228
PICCO R 005.5548-15	5.00	48	24	0.40	0.06	0.5	1.9	4.40	15.0	30.00	4.80	●
PICCO R 006.5548-15	6.00	48	24	0.40	0.06	0.5	2.3	5.30	15.0	30.00	6.00	●
PICCO R 006.5524-15	6.00	24	16	0.81	0.12	0.8	2.3	5.30	15.0	30.00	6.00	●
PICCO R 007.5524-15	7.00	24	16	0.81	0.12	0.8	2.8	6.30	15.0	30.00	7.00	●

• All mini-bars have sharp corners • For detailed cutting data, see pages 536-546

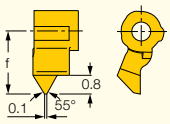
ISCARTHREAD

MINICHAM

UMGR-A55

Mini Indexable Inserts with Whitworth Partial Profile for Threading in 5.2 mm and Larger Holes





Right-hand shown

Designation	Dimensions						IC508
	f	TPI max	TPI min	Pmin	Pmax	D min	
UMGR 4.0-A55	2.7	48	18	0.50	1.40	5.20	•

For tools, see pages: MGUHR (327)

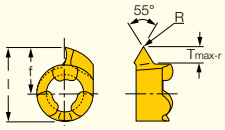
ISCARTHREAD

CHAMGROOVE

GIQR/L-WT

Internal Inserts with Whitworth Partial Profile for Threading in 8 mm and Larger Holes





Left-hand shown

Designation	Dimensions							IC528
	l	R±0.03	Tmax-r	f	D min	Pmin	TPI max	
GIQR/L 8-WT-0.05	7.78	0.05	1.50	4.8	8.00	0.50	50	•
GIQR/L 11-WT-0.05	10.68	0.05	2.00	6.7	11.00	0.50	50	•

• Can be used for thread milling by circular interpolation. • TPI min D/5.9 • D-diameter of thread (pitch max<=W) • For cutting speed recommendations, see pages 536-546

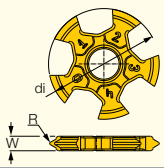
For tools, see pages: MG (330) • MGCH (330)

DECAIQTHREAD

TTG-16E-A60

External Inserts with 10 Threading Corners and 60° Partial Profile for General Industry





Designation	Dimensions							IC908
	Pmin	Pmax	TPI max	TPI min	R	W	di	
TTG-16E-A60	0.50	1.50	48	16	0.05	2.10	16.00	•

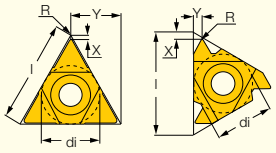
• For detailed cutting data, see pages 536-546

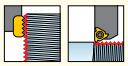
For tools, see pages: SER/L-TT (528)

ISCARTHREAD

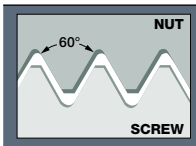
ER/L-60°
External Laydown Threading Inserts with a 60° Partial Profile for General Industries







External right-hand shown



Designation	Dimensions di	Pmin	Pmax	TPI max	TPI min	l	R	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
11ER/L A 60	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		●	●				●	
16ER/L A 60	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9	●	●	●	●	●		●	●
16ERB A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9				●			●	
16ERM A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		●	●			●	●	●
16ER/L AG 60	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	●	●	●	●	●		●	●
16ERB AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16ERM AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.06	1.2	1.7		●	●		●	●	●	●
16ER/L G 60	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7	●	●	●		●		●	●
16ERB G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7							●	
16ERM G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7		●	●			●	●	●
22ER/L N 60	12.70	3.50	5.00	7	5	22.00	0.32	1.7	2.5	●	●	●				●	●
22ERM N 60 (1)	12.70	3.50	5.00	7	5	22.00	0.32	1.7	2.5		●	●			●	●	●
22UEIRL U 60	12.70	5.50	8.00	4.5	3.25	22.00	0.28	0.6	11.0		●	●				●	
27ER/L Q 60	15.88	5.50	6.00	4.5	4	27.00	0.63	2.1	3.1	●	●	●				●	
27UEIRL U 60	15.88	6.50	9.00	4	2.75	27.00	0.28	1.0	13.7		●	●					

• For Insert Identification System, see page 489 • For threading between walls use GRIP-type inserts SCIR/L B/F -MTR/L, TIP-MT, GEPI-MT, TIPI-MT. • For technical information and detailed cutting data, see pages 536-546

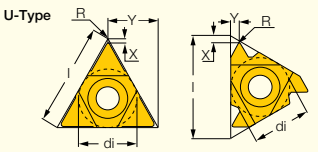
(1) With pressed chipformer.

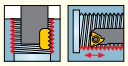
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

ISCARTHREAD

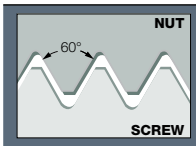
IR/L-60°
Internal Laydown Threading Inserts with a 60° Partial Profile for General Industry







Internal left-hand shown



Designation	Dimensions di	Pmin	Pmax	TPI max	TPI min	l	R	X	Y	Tough ↔ Hard IC28	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
06IR/L A 60	3.97	0.50	1.25	48	20	6.00	0.05	0.6	0.6	●	●						
06IRM A 60 (1)	3.97	0.50	1.25	48	20	6.00	0.05	0.5	0.6		●						
08IR/L A 60	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7		●						
08IRM A 60 (1)	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7		●				●	●	●
08UIRL U 60	4.76	1.75	2.00	14	11	8.00	0.10	0.8	4.0		●						
11IR/L A 60	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		●	●	●			●	●
11IRM A 60 (1)	6.35	0.50	1.50	48	16	11.00	0.05	0.7	0.9				●		●	●	●
16IL A 60	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		●	●	●	●		●	●
16IRB A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9							●	
16IRM A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9				●		●	●	●
16IR/L AG 60	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7		●	●	●	●		●	●
16IRB AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16IRM AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7			●	●	●	●	●	●
16IR/L G 60	9.52	1.75	3.00	14	8	16.00	0.12	1.2	1.7		●	●	●	●		●	●
16IRB G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.12	1.2	1.7							●	
16IRM G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.10	1.2	1.7			●	●		●	●	●
22IR/L N 60	12.70	3.50	5.00	7	5	22.00	0.22	1.7	2.5		●	●	●			●	
22IRM N 60 (1)	12.70	3.50	5.00	7	5	22.00	0.19	1.7	2.5			●	●		●	●	●
27IR/L Q 60	15.88	5.50	6.00	4.5	4	27.00	0.31	2.1	3.1			●	●			●	

• For Insert Identification System, see page 489. • For technical information and detailed cutting data, see pages 536-546

(1) With a pressed chipformer

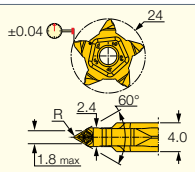
For tools, see pages: MGSIR/L (534) • SIR/L (531)

PENTACUT THREADING LINE

PENTA 24-MT

Precision Ground Pentagonal External Threading Inserts with a 60° Partial Profile





Designation	Dimensions			IC908
	P_{min}	P_{max}	R	
PENTA 24-MT-0.05	0.50	1.75	0.05	●
PENTA 24A-MT-0.05 (1)	0.50	1.75	0.05	●

• Pmax=0.175xD

(1) Flat rake (without a chipformer)

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

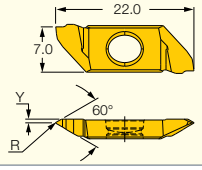
ISCARTHREAD

SWISSCUT INNOVAL LINE

SCIR/L-22-MTR/MTL

Threading Inserts with a 60° Partial Profile





Left-hand shown

Designation	Dimensions						IC1008
	R	Y	P_{min}	P_{max}	TPI max	TPI min	
SCIL 22-MTL003	0.03	0.4	0.30	0.90	83	28	●
SCIR 22-MTR003	0.03	0.4	0.30	0.90	83	28	●
SCIL 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIR 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIL 22-MTL010	0.10	0.8	0.90	1.70	28	15	●
SCIR 22-MTR010	0.10	0.8	0.90	1.70	28	15	●

• For detailed cutting data, see pages 536-546

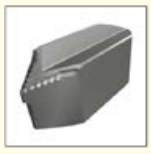
For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

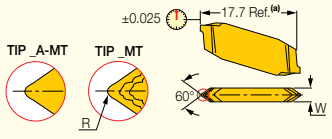
ISCARTHREAD

CUTGRIP

TIP-MT

Precision Ground Double-Ended Threading Inserts with a 60° Partial Profile and Chipformer





Designation	Dimensions				Tough ↔ Hard	
	W	$R^{\pm 0.03}$	P_{min}	TPI max	IC08	IC908
TIP 2A-MT-0.05 (1)	2.40	0.05	0.45	56		●
TIP 2MT-0.05	2.40	0.05	0.45	56	●	●
TIP 2MT-0.14	2.40	0.14	1.11	23	●	●
TIP 4A-MT-0.15 (1)	4.00	0.15	1.25	20		●
TIP 4MT-0.15	4.00	0.15	1.25	20		●
TIP 4MT-0.20	4.00	0.20	1.63	16	●	●
TIP 5MT-0.25	5.50	0.25	1.94	13	●	●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket • Toolholder seat needs to be modified according to insert profile to ensure clearance

(1) Without chipformer (flat rake)

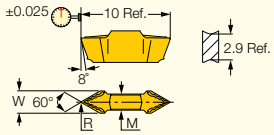
For tools, see pages: C#-GHDR/L (233) • CGHN 26-M (302) • CGHN 32-DGM (304) • CGHN 32-M (303) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

ISCARTHREAD

GEPI-MT

Precision Ground Internal Double-Ended Threading Inserts with a 60° Partial Profile for General Applications





Designation	Dimensions W	R±0.03	a°	M	Pmin	TPI max	Tough ↔ Hard IC08	IC908
GEPI 2.5-MT0.05	2.50	0.05	60	1.80	0.90	28	•	•

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • Pitch max 0.187xD, TPI min D/5.35 • D=Diameter of thread (pitch max<=W)

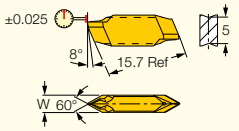
For tools, see pages: E-GEHIR / E-GHIR (289) • GEAIR/L (289) • GEHIMR/L (287) • GEHIMR/L-SC (287) • GEHIR/L (288) • GEHIR/L-SC (288) • GEHSR (311) • GEHSR/L-SL (311)

ISCARTHREAD

TIPI-MT

Precision Ground Double-Ended Internal Threading Inserts with 60° Partial Profile and Chipformer for 20mm Min. Bore Dia.





Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIPI 3.4MT-0.10	3.40	0.10	1.80	14	•	•
TIPI 5.4MT-0.20	5.40	0.20	3.19	8	•	•

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • Pitch max 0.205xD, TPI min D/4.8 • D=Diameter of thread (pitch max<=W)
• TIPI inserts are 1.6 mm longer than GIPI in the same pocket.

For tools, see pages: CGIN 26 (295) • GAIR/L (294) • GHIR/L (W=1.9-6.4) (293) • GHIR/L-C (W=4-6.4) (293) • GHIR/L-SC (W=2-4.8) (293)

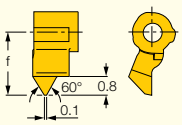
ISCARTHREAD

MINICHAM

UMGR-A60

Mini Indexable Inserts with a 60° Partial Profile for Threading in 5.2 mm and Larger Holes





Right-hand shown

Designation	Dimensions f	D min	Pmin	Pmax	IC508
UMGR 4.0-A60	2.7	5.20	0.50	1.25	•

• For detailed cutting data, see pages 536-546

For tools, see pages: MGUHR (327)

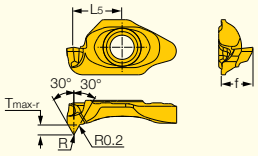
ISCARTHREAD

MINICUT MINI FACE LINE

MITR 8-MT

Internal ISO Metric Threading Inserts for Partial Profile





Designation	Dimensions Tmax-r	R±0.02	l	D min	Pmin	Pmax	IC908
MITR 8-MT2-0.1	1.17	0.10	5.75	10.00	1.50	2.00	•
MITR 8-MT1-0.05	1.23	0.05	5.75	10.00	0.75	1.25	•

For tools, see pages: MIFHR (329)

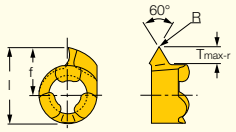
ISCARTHREAD

CHAMGROOVE

GIQR/L-MT

Internal Threading Inserts with a 60° Partial Profile for Threading in 8 mm and Larger Holes





Left-hand shown

Designation	Dimensions							IC528
	l	R±0.03	Tmax-r	f	D min	Pmin	TPI max	
GIQR/L 8-MT-0.05	7.78	0.05	1.50	4.8	8.00	0.90	28	●
GIQR/L 11-MT-0.05	10.68	0.05	2.00	6.7	11.00	0.90	28	●

• Can be used for thread milling by circular interpolation. • Pitch max 0.19xD. • D-diameter of thread • For cutting speed recommendations, see pages 536-546

For tools, see pages: MG (330) • MGCH (330)

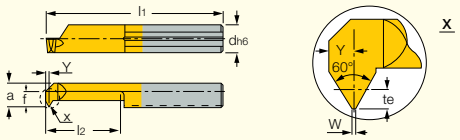
ISCARTHREAD

PICCOCUT

PICCO R/L-60°-Thread

Inserts with a 60° Internal Thread Profile for 2.4 mm Min. Bore Diameter





Right-hand shown

Designation	Dimensions										Tough ↔ Hard	
	d	Pitch	te	w	Y	f	a	l2	l1	D min	IC228	IC908
PICCO R 003.0105-8	4.00	0.50	0.27	0.04	0.3	0.3	2.30	8.0	22.00	2.40		●
PICCO R 004.0105-10	4.00	0.50	0.27	0.09	0.4	1.0	3.00	10.0	24.00	3.20		●
PICCO R/L 004.0205-15	4.00	0.50	0.27	0.06	0.4	1.5	3.50	15.0	30.00	4.00	●	
PICCO R/L 005.0205-15	5.00	0.50	0.27	0.06	0.4	1.9	4.40	15.0	30.00	5.00	●	
PICCO R/L 005.0407-15	5.00	0.75	0.40	0.09	0.5	1.9	4.40	15.0	30.00	5.00	●	●
PICCO R 005.0407-20	5.00	0.75	0.40	0.09	0.5	1.9	4.40	20.0	35.00	5.00		●
PICCO R/L 005.0510-15	5.00	1.00	0.55	0.12	0.6	1.9	4.40	15.0	30.00	4.80	●	
PICCO R 005.0510-20	5.00	1.00	0.55	0.12	0.6	1.9	4.40	20.0	35.00	4.80		●
PICCO R/L 006.0510-15	6.00	1.00	0.55	0.12	0.6	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0510-22	6.00	1.00	0.55	0.12	0.6	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 006.0612-15	6.00	1.25	0.68	0.15	0.7	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0612-22	6.00	1.25	0.68	0.15	0.7	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 006.0815-15	6.00	1.50	0.81	0.18	0.8	2.3	5.30	15.0	30.00	6.00	●	
PICCO R 006.0815-22	6.00	1.50	0.81	0.18	0.8	2.3	5.30	22.0	37.00	6.00		●
PICCO R/L 007.0815-15	7.00	1.50	0.81	0.18	0.8	2.7	6.30	15.0	30.00	7.00	●	

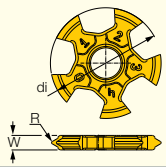
• For detailed cutting data, see pages 536-546

DECAIQTHREAD

TTG-16E-ISO

External ISO Metric (DIN13 12-1986 class: 6G) Threading Inserts with 10 Threading Corners for General Industry





Designation	Dimensions				IC908
	Pitch	R	W	di	
TTG-16E-0.50-ISO	0.50	0.06	2.10	16.00	●
TTG-16E-0.75-ISO	0.75	0.10	2.10	16.00	●
TTG-16E-1.00-ISO	1.00	0.13	2.10	16.00	●
TTG-16E-1.25-ISO	1.25	0.17	2.10	16.00	●
TTG-16E-1.50-ISO	1.50	0.20	2.10	16.00	●

• For detailed cutting data, see pages 536-546

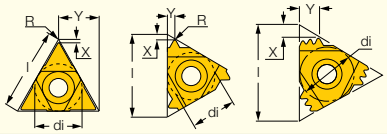
For tools, see pages: SER/L-TT (528)

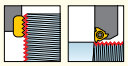
ISCARTHREAD

ER/L-ISO

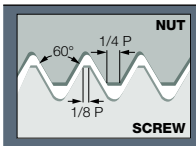
External ISO Metric (DIN13 12-1986 class: 6G) Laydown Threading Inserts for General Industry







External right-hand shown



Designation	Dimensions							Tough ↔ Hard								
	di	Pitch	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC950	IC08	IC508	IC808	IC908	IC1007
11ER/L 0.35 ISO	6.35	0.35	11.00	0.04	0.8	0.4	1		•						•	
11ER 0.40 ISO	6.35	0.40	11.00	0.04	0.7	0.4	1								•	
11ER 0.45 ISO	6.35	0.45	11.00	0.05	0.7	0.4	1	•								
11ER/L 0.50 ISO	6.35	0.50	11.00	0.05	0.6	0.6	1	•	•	•					•	
11ER 0.60 ISO	6.35	0.60	11.00	0.07	0.6	0.6	1		•						•	
11ER 0.70 ISO	6.35	0.70	11.00	0.07	0.6	0.6	1		•	•					•	
11ER/L 0.75 ISO	6.35	0.75	11.00	0.08	0.6	0.6	1		•						•	
11ER 0.80 ISO	6.35	0.80	11.00	0.09	0.6	0.6	1		•	•					•	
11ER/L 1.00 ISO	6.35	1.00	11.00	0.12	0.7	0.7	1		•	•			•		•	
11ER 1.25 ISO	6.35	1.25	11.00	0.15	0.8	0.9	1		•	•					•	
11ER/L 1.50 ISO	6.35	1.50	11.00	0.18	0.8	1.0	1		•	•		•			•	
11ER 1.75 ISO	6.35	1.75	11.00	0.21	0.8	1.1	1			•						
16ER/L 0.35 ISO	9.52	0.35	16.00	0.04	0.8	0.4	1			•					•	
16ER/L 0.40 ISO	9.52	0.40	16.00	0.04	0.7	0.4	1		•						•	
16ER 0.45 ISO	9.52	0.45	16.00	0.05	0.7	0.4	1			•					•	
16ER/L 0.50 ISO	9.52	0.50	16.00	0.04	0.6	0.6	1		•	•		•			•	•
16ER 0.60 ISO	9.52	0.60	16.00	0.07	0.6	0.6	1		•	•					•	
16ER/L 0.70 ISO	9.52	0.70	16.00	0.07	0.6	0.6	1		•	•					•	•
16ER/L 0.75 ISO	9.52	0.75	16.00	0.08	0.6	0.6	1		•	•		•			•	•
16ER 0.75 ISO 3M (1)	9.52	0.75	16.00	0.08	1.3	1.9	3								•	
16ERM 0.75 ISO (2)	9.52	0.75	16.00	0.08	0.6	0.6	1							•	•	•
16ER/L 0.80 ISO	9.52	0.80	16.00	0.09	0.6	0.6	1		•	•					•	•
16ERB 0.80 ISO (2)	9.52	0.80	16.00	0.09	0.6	0.6	1								•	
16ER/L 1.00 ISO	9.52	1.00	16.00	0.12	0.7	0.7	1	•	•	•		•			•	•
16ER 1.00 ISO 3M (1)	9.52	1.00	16.00	0.12	1.7	2.5	3								•	
16ERB 1.00 ISO (2)	9.52	1.00	16.00	0.12	0.7	0.7	1								•	
16ERM 1.00 ISO (2)	9.52	1.00	16.00	0.11	0.7	0.7	1		•	•			•	•	•	•
16ER/L 1.25 ISO	9.52	1.25	16.00	0.15	0.8	0.9	1		•	•		•	•		•	
16ERB 1.25 ISO (2)	9.52	1.25	16.00	0.15	0.8	0.9	1								•	
16ERM 1.25 ISO (2)	9.52	1.25	16.00	0.14	0.8	0.9	1			•				•	•	•
16ER/L 1.50 ISO	9.52	1.50	16.00	0.18	0.8	1.0	1	•	•	•		•			•	•
16ER 1.50 ISO 2M (1)	9.52	1.50	16.00	0.18	1.5	2.3	2								•	•
16ERB 1.50 ISO (2)	9.52	1.50	16.00	0.19	0.8	1.0	1								•	
16ERM 1.50 ISO (2)	9.52	1.50	16.00	0.19	0.8	1.0	1		•	•			•	•	•	•
16ER/L 1.75 ISO	9.52	1.75	16.00	0.21	0.9	1.2	1	•	•	•		•			•	
16ERB 1.75 ISO (2)	9.52	1.75	16.00	0.21	0.9	1.2	1								•	
16ERM 1.75 ISO (2)	9.52	1.75	16.00	0.20	0.9	1.2	1			•				•	•	•
16ER/L 2.00 ISO	9.52	2.00	16.00	0.25	1.0	1.3	1	•	•	•					•	•
16ER 2.00 ISO 2M (1)	9.52	2.00	16.00	0.25	2.0	3.0	2				•				•	
16ER 2.00 ISO 2M (1)	9.52	2.00	16.00	0.25	2.0	3.0	2	•								
16ERM 2.00 ISO (2)	9.52	2.00	16.00	0.24	1.0	1.3	1			•			•	•	•	•
16ER/L 2.50 ISO	9.52	2.50	16.00	0.31	1.1	1.5	1		•	•			•		•	•
16ERM 2.50 ISO (2)	9.52	2.50	16.00	0.30	1.1	1.5	1		•	•				•	•	•
16ER/L 3.00 ISO	9.52	3.00	16.00	0.38	1.2	1.6	1	•	•	•			•		•	•
16ERB 3.00 ISO (2)	9.52	3.00	16.00	0.38	1.2	1.6	1								•	
16ERM 3.00 ISO (2)	9.52	3.00	16.00	0.38	1.2	1.6	1		•	•			•	•	•	•
22ER 1.50 ISO 3M (1)	12.70	1.50	22.00	0.18	2.3	3.7	3			•					•	
22ER 2.00 ISO 2M (1)	12.70	2.00	22.00	0.25	2.0	3.0	2								•	
22ER 2.00 ISO 3M (1)	12.70	2.00	22.00	0.25	3.1	5.0	3			•					•	
22ER/L 3.50 ISO	12.70	3.50	22.00	0.44	1.6	2.3	1	•	•	•					•	
22ERM 3.50 ISO (2)	12.70	3.50	22.00	0.48	1.6	2.3	1							•	•	•
22ER/L 4.00 ISO	12.70	4.00	22.00	0.52	1.6	2.3	1		•	•					•	•
22ERM 4.00 ISO (2)	12.70	4.00	22.00	0.52	1.6	2.3	1							•	•	•
22ER/L 4.50 ISO	12.70	4.50	22.00	0.58	1.7	2.4	1		•	•		•			•	
22ER/L 5.00 ISO	12.70	5.00	22.00	0.64	1.7	2.5	1		•	•					•	
22UERL 5.50 ISO	12.70	5.50	22.00	0.70	2.3	11.0	1	•		•						
22EL 6.00 ISO	12.70	6.00	22.00	0.78	2.0	2.7	1			•						
22UERL 6.00 ISO	12.70	6.00	22.00	0.78	2.6	11.0	1	•	•	•						
27ER 3.00 ISO 2M (1)	15.88	3.00	27.00	0.38	2.9	4.6	2								•	
27ER/L 5.50 ISO	15.88	5.50	27.00	0.70	1.9	2.7	1			•					•	
27ER/L 6.00 ISO	15.88	6.00	27.00	0.78	2.0	2.9	1	•	•	•					•	
27UERL 8.00 ISO	15.88	8.00	27.00	1.08	2.4	13.7	1			•					•	

• For Insert Identification System, see page 489 • For threading between walls use GRIP-type inserts TIP-ISO class: 6G • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544

(1) Multi-tooth

(2) With pressed chipformer

(3) Number of teeth per corner.

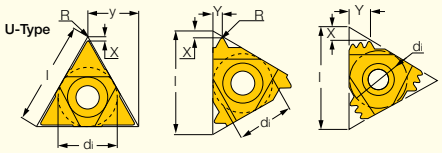
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

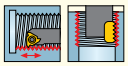
ISCARTHREAD

IR/L-ISO

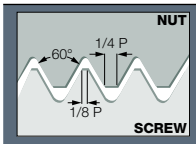
Internal ISO Metric (DIN13 12-1986 class 6H) Laydown Threading Inserts for General Industry







Internal left-hand shown



Designation	Dimensions							Tough ↔ Hard								
	di	Pitch	l	R	X	Y	Z	IC28	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR/L 0.50 ISO	3.97	0.50	6.00	0.03	0.9	0.5	1		•							
06IR/L 0.75 ISO	3.97	0.75	6.00	0.04	0.8	0.5	1		•							
06IR/L 1.00 ISO	3.97	1.00	6.00	0.05	0.7	0.6	1		•							
06IR/L 1.25 ISO	3.97	1.25	6.00	0.07	0.6	0.6	1		•							
08IR/L 0.50 ISO	4.76	0.50	8.00	0.05	0.6	0.5	1		•							
08IR 0.75 ISO	4.76	0.75	8.00	0.04	0.6	0.5	1		•							
08IR/L 1.00 ISO	4.76	1.00	8.00	0.05	0.6	0.6	1		•						•	
08IR/L 1.25 ISO	4.76	1.25	8.00	0.07	0.6	0.7	1		•							
08IR/L 1.50 ISO	4.76	1.50	8.00	0.08	0.6	0.7	1	•	•							
08IR/L 1.75 ISO	4.76	1.75	8.00	0.10	0.6	0.8	1		•							
08UIRL 2.00 ISO	4.76	2.00	8.00	0.12	0.9	4.0	1		•							
11IR/L 0.35 ISO	6.35	0.35	11.00	0.02	0.8	0.3	1					•			•	
11IR 0.40 ISO	6.35	0.40	11.00	0.02	0.8	0.4	1								•	
11IR/L 0.50 ISO	6.35	0.50	11.00	0.03	0.6	0.6	1			•	•	•			•	
11IRB 0.50 ISO	6.35	0.50	11.00	0.03	0.6	0.6	1								•	
11IR 0.70 ISO	6.35	0.70	11.00	0.04	0.6	0.6	1								•	
11IR/L 0.75 ISO	6.35	0.75	11.00	0.08	0.6	0.6	1			•	•				•	
11IRB 0.75 ISO	6.35	0.75	11.00	0.08	0.6	0.6	1								•	
11IR 0.80 ISO	6.35	0.80	11.00	0.04	0.6	0.6	1			•	•					
11IRB 0.80 ISO	6.35	0.80	11.00	0.04	0.6	0.6	1								•	
11IR/L 1.00 ISO	6.35	1.00	11.00	0.05	0.6	0.7	1		•	•	•	•			•	
11IRB 1.00 ISO	6.35	1.00	11.00	0.05	0.6	0.6	1								•	
11IRM 1.00 ISO (1)	6.35	1.00	11.00	0.05	0.6	0.7	1							•	•	•
11IR/L 1.25 ISO	6.35	1.25	11.00	0.07	0.8	0.8	1			•	•				•	
11IRB 1.25 ISO	6.35	1.25	11.00	0.07	0.8	0.9	1								•	
11IR/L 1.50 ISO	6.35	1.50	11.00	0.08	0.8	1.0	1		•	•	•				•	•
11IRB 1.50 ISO	6.35	1.50	11.00	0.08	0.8	0.9	1								•	
11IRM 1.50 ISO (1)	6.35	1.50	11.00	0.08	0.8	1.0	1				•				•	•
11IR/L 1.75 ISO	6.35	1.75	11.00	0.10	0.8	1.1	1			•	•				•	
11IRB 1.75 ISO	6.35	1.75	11.00	0.10	0.8	0.9	1								•	
11IR/L 2.00 ISO	6.35	2.00	11.00	0.12	0.8	0.9	1		•		•		•		•	
16IR 0.35 ISO	9.52	0.35	16.00	0.02	0.8	0.3	1								•	
16IR/L 0.40 ISO	9.52	0.40	16.00	0.02	0.8	0.4	1								•	
16IL 0.45 ISO	9.52	0.45	16.00	0.02	0.8	0.4	1								•	
16IL 0.50 ISO	9.52	0.50	16.00	0.03	0.6	0.6	1			•	•	•			•	
16IR/L 0.60 ISO	9.52	0.60	16.00	0.03	0.6	0.6	1			•					•	
16IR/L 0.70 ISO	9.52	0.70	16.00	0.04	0.6	0.6	1			•	•				•	
16IL 0.75 ISO	9.52	0.75	16.00	0.04	0.6	0.6	1		•	•	•	•			•	
16IR/L 0.80 ISO	9.52	0.80	16.00	0.04	0.6	0.6	1			•	•					
16IL 1.00 ISO	9.52	1.00	16.00	0.05	0.6	0.7	1			•	•	•	•		•	
16IR 1.00 ISO 3M (2)	9.52	1.00	16.00	0.05	1.7	2.5	3								•	
16IRB 1.00 ISO (1)	9.52	1.00	16.00	0.05	0.6	0.7	1								•	
16IRM 1.00 ISO (1)	9.52	1.00	16.00	0.05	0.6	0.7	1			•	•		•	•	•	•
16IL 1.25 ISO	9.52	1.25	16.00	0.07	0.8	0.9	1		•	•	•	•	•		•	
16IRB 1.25 ISO (1)	9.52	1.25	16.00	0.07	0.8	0.9	1								•	
16IRM 1.25 ISO (1)	9.52	1.25	16.00	0.06	0.8	0.9	1				•				•	•
16IR/L 1.50 ISO	9.52	1.50	16.00	0.08	0.8	1.0	1		•	•	•	•			•	•
16IR 1.50 ISO 2M (2)	9.52	1.50	16.00	0.08	1.5	2.3	2				•				•	
16IRB 1.50 ISO (1)	9.52	1.50	16.00	0.08	0.8	1.0	1								•	
16IRM 1.50 ISO (1)	9.52	1.50	16.00	0.08	0.8	1.0	1			•	•		•	•	•	•
16IR/L 1.75 ISO	9.52	1.75	16.00	0.10	0.9	1.2	1			•	•	•			•	
16IRB 1.75 ISO (1)	9.52	1.75	16.00	0.10	0.9	1.2	1								•	
16IRM 1.75 ISO (1)	9.52	1.75	16.00	0.10	0.9	1.2	1				•			•	•	•
16IR/L 2.00 ISO	9.52	2.00	16.00	0.12	1.0	1.3	1		•	•	•		•		•	
16IR 2.00 ISO 2M (2)	9.52	2.00	16.00	0.12	2.0	3.0	2								•	

• For Insert Identification System, see page 489. • Tolerance: Class 6H. • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer

(2) Multi-tooth

(3) Number of teeth per corner.

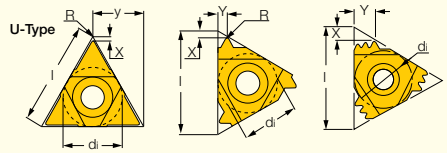
For tools, see pages: MGSIR/L (534) • SIR/L (531)

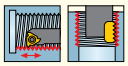
ISCARTHREAD

IR/L-ISO (continued)

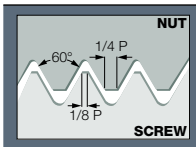
Internal ISO Metric (DIN13 12-1986 class 6H) Laydown Threading Inserts for General Industry







Internal left-hand shown



Designation	Dimensions							Tough ↔ Hard								
	di	Pitch	l	R	X	Y	Z	IC28	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
16IRB 2.00 ISO (1)	9.52	2.00	16.00	0.12	1.0	1.3	1								●	
16IRM 2.00 ISO (1)	9.52	2.00	16.00	0.11	1.0	1.3	1			●	●		●	●	●	●
16IR/L 2.50 ISO	9.52	2.50	16.00	0.15	1.1	1.5	1		●	●	●		●		●	●
16IRM 2.50 ISO (1)	9.52	2.50	16.00	0.14	1.1	1.5	1				●			●	●	●
16IR/L 3.00 ISO	9.52	3.00	16.00	0.18	1.1	1.5	1		●	●	●				●	●
16IRB 3.00 ISO (1)	9.52	3.00	16.00	0.18	1.1	1.5	1								●	
16IRM 3.00 ISO (1)	9.52	3.00	16.00	0.17	1.1	1.5	1			●	●		●	●	●	●
22IR 1.50 ISO 3M (2)	12.70	1.50	22.00	0.08	2.3	3.7	3				●				●	
22IR 2.00 ISO 2M (2)	12.70	2.00	22.00	0.08	2.0	3.0	2								●	
22IR 2.00 ISO 3M (2)	12.70	2.00	22.00	0.08	3.1	5.0	3				●				●	
22IL 3.00 ISO	12.70	3.00	16.00	0.17	1.1	1.5	1		●							
22IR/L 3.50 ISO	12.70	3.50	22.00	0.22	1.6	2.3	1			●	●				●	●
22IR/L 4.00 ISO	12.70	4.00	22.00	0.25	1.6	2.3	1			●	●				●	●
22IR/L 4.50 ISO	12.70	4.50	22.00	0.29	1.6	2.4	1			●	●				●	
22IR/L 5.00 ISO	12.70	5.00	22.00	0.32	1.6	2.3	1			●	●				●	
22IR 6.00 ISO	12.70	6.00	22.00	0.40	1.6	2.4	1								●	
22UIRL 5.50 ISO	12.70	5.50	22.00	0.35	2.4	11.0	1			●	●					
22UIRL 6.00 ISO	12.70	6.00	22.00	0.39	2.1	11.0	1			●	●					
27IR 3.00 ISO 2M (2)	15.88	3.00	27.00	0.18	2.9	4.6	2								●	
27IR/L 5.50 ISO	15.88	5.50	27.00	0.35	1.6	2.3	1		●	●	●				●	
27IR/L 6.00 ISO	15.88	6.00	22.00	0.39	1.8	2.5	1			●	●				●	

• For Insert Identification System, see page 489 • Tolerance: Class 6H. • For technical information and detailed cutting data, see pages 536-546
• For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer

(2) Multi-tooth

(3) Number of teeth per corner.

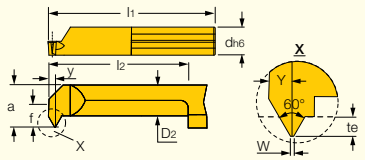
For tools, see pages: MGSIR/L (534) • SIR/L (531)

PICCOCUT

PICCO ISO Full Profile

Inserts for ISO Standard Full Profile Thread







Right-hand shown

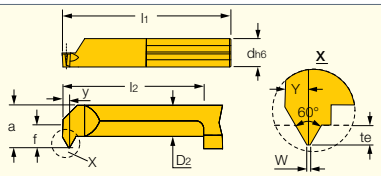
Designation	Dimensions											IC908
	Pitch	d	f	a	l_1	l_2	D_2	Y	t_e	w	D min	
PICCO R/L 105.0510-15	1.00	5.00	1.9	4.40	30.00	15.0	3.30	0.6	0.54	0.12	4.80	●
PICCO R/L 106.0612-15	1.25	6.00	2.3	5.30	30.00	15.0	3.40	0.7	0.67	0.15	6.00	●
PICCO R/L 106.0815-15	1.50	6.00	2.3	5.30	30.00	15.0	3.40	0.8	0.81	0.18	6.00	●
PICCO R/L 107.0815-15	1.50	7.00	2.8	6.30	30.00	15.0	3.80	0.8	0.81	0.18	7.00	●

PICCOCUT

PICCO ISO Full Profile Fine

Inserts for ISO Fine Pitch
Full Profile Thread





Right-hand shown

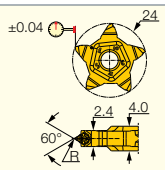
Designation	Dimensions											IC908
	Pitch	d	f	a	l_1	l_2	D_2	Y	t_e	w	D min	
PICCO R/L 104.0205-15	0.50	5.00	1.5	3.50	30.00	15.0	2.40	0.4	0.27	0.06	4.00	•
PICCO R/L 105.0205-15	0.50	5.00	1.9	4.40	30.00	15.0	3.30	0.4	0.27	0.06	5.00	•
PICCO R/L 105.0407-15	0.75	5.00	1.9	4.40	30.00	15.0	3.30	0.5	0.40	0.09	5.00	•
PICCO R/L 106.0510-15	1.00	6.00	2.3	5.30	30.00	15.0	3.40	0.6	0.54	0.12	6.00	•

PENTACUT THREADING LINE

PENTA 24-ISO

Precision Ground ISO Metric Full Profile Pentagonal External Threading Inserts with a Chipformer





Designation	Dimensions		IC908
	Pitch	R	
PENTA 24-0.5-ISO	0.50	0.08	•
PENTA 24-0.75-ISO	0.75	0.11	•
PENTA 24-0.8-ISO	0.80	0.12	•
PENTA 24-1.0-ISO	1.00	0.14	•
PENTA 24-1.25-ISO	1.25	0.18	•
PENTA 24-1.5-ISO	1.50	0.22	•
PENTA 24-1.75-ISO	1.75	0.25	•
PENTA 24-2.0-ISO	2.00	0.28	•

• Dmin(mm)=5.435xP

For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

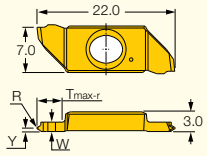
ISCARTHREAD

SWISSCUT INNOVAL LINE

SCIR-22-MTR-ISO

Precision Ground ISO Metric Full Profile Threading Inserts





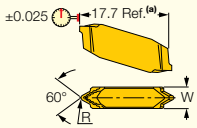
Designation	Dimensions					IC1008
	Pitch	W	T_{max-r}	R	Y	
SCIR 22-MTR-0.3ISO	0.30	1.00	3.00	0.03	0.2	•
SCIR 22-MTR-0.4ISO	0.40	1.00	3.00	0.04	0.2	•
SCIR 22-MTR-0.5ISO	0.50	1.00	3.00	0.06	0.3	•
SCIR 22-MTR-0.75ISO	0.75	1.00	3.00	0.10	0.4	•
SCIR 22-MTR-1.0ISO	1.00	1.50	4.00	0.14	0.6	•
SCIR 22-MTR-1.5ISO	1.50	2.00	4.00	0.20	0.8	•

For tools, see pages: SCHR/L-BF (306) • SCHR/L-BF-JHP (306)

ISCARTHREAD CUTGRIP

TIP-P-ISO
Precision Ground ISO Metric Full Profile Double-Ended External Threading Inserts with a Chipformer







Designation	Dimensions				Tough ↔ Hard	
	Pitch	W	R	R±toler	IC08	IC908
TIP 2P0.5-ISO	0.50	2.40	0.08	0.030	●	●
TIP 2P0.75-ISO	0.75	2.40	0.11	0.030	●	●
TIP 2P0.8-ISO	0.80	2.40	0.12	0.030	●	●
TIP 2P1.0-ISO	1.00	2.40	0.14	0.030	●	●
TIP 2P1.25-ISO	1.25	2.40	0.18	0.030	●	●
TIP 2P1.5-ISO	1.50	2.40	0.22	0.030	●	●
TIP 2P1.75-ISO	1.75	2.40	0.25	0.030	●	●
TIP 4P2.0-ISO	2.00	4.00	0.28	0.030	●	●
TIP 4P2.5-ISO	2.50	4.00	0.35	0.050	●	●
TIP 4P3.0-ISO	3.00	4.00	0.42	0.050		●
TIP 4P3.5-ISO	3.50	4.00	0.48	0.050		●
TIP 5P4.0-ISO	4.00	5.50	0.55	0.050		●
TIP 5P5.0-ISO	5.00	5.50	0.68	0.050		●

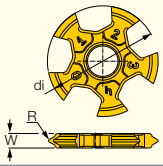
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

DECAIQTHREAD

TTG-16E-UN
External American UN Full Profile (UN, UNC, UNF, UNEF) Threading Inserts with 10 Threading Corners for General Industry







Designation	Dimensions				
	TPI	R	W	di	IC908
TTG-16E-32-UN	32.0	0.08	2.10	16.00	●
TTG-16E-28-UN	28.0	0.10	2.10	16.00	●
TTG-16E-24-UN	24.0	0.11	2.10	16.00	●
TTG-16E-20-UN	20.0	0.14	2.10	16.00	●
TTG-16E-18-UN	18.0	0.15	2.10	16.00	●
TTG-16E-16-UN	16.0	0.19	2.10	16.00	●

• For detailed cutting data, see pages 536-546

For tools, see pages: SER/L-TT (528)

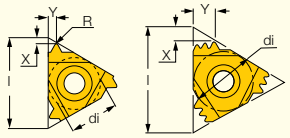


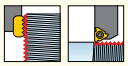
ISCARTHREAD

ER/L-UN

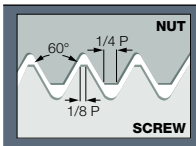
External American UN Full Profile (UN, UNC, UNF, UNEF) Laydown Threading Inserts for General Industry







External right-hand shown



Designation	Dimensions							Tough ↔ Hard							
	di	TPI	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
11ER 44 UN	6.35	44.0	11.00	0.05	0.6	0.6	1							•	
11ER 36 UN	6.35	36.0	11.00	0.07	0.6	0.6	1							•	
11ER 32 UN	6.35	32.0	11.00	0.09	0.6	0.6	1							•	
11ER/L 28 UN	6.35	28.0	11.00	0.10	0.6	0.7	1		•					•	
11ER/L 24 UN	6.35	24.0	11.00	0.12	0.7	0.8	1							•	
11ER/L 20 UN	6.35	20.0	11.00	0.15	0.8	0.9	1			•				•	
11ER 18 UN	6.35	18.0	11.00	0.17	0.8	1.0	1							•	
11ER 16 UN	6.35	16.0	11.00	0.18	0.9	1.1	1		•	•				•	
16ER 72 UN	9.52	72.0	16.00	0.04	0.8	0.4	1							•	
16ER 56 UN	9.52	56.0	16.00	0.04	0.7	0.4	1					•		•	
16ER 48 UN	9.52	48.0	16.00	0.05	0.6	0.6	1		•					•	
16ER 40 UN	9.52	40.0	16.00	0.06	0.6	0.6	1	•				•		•	
16ER/L 36 UN	9.52	36.0	16.00	0.07	0.6	0.6	1		•			•		•	
16ER/L 32 UN	9.52	32.0	16.00	0.09	0.6	0.6	1		•	•	•	•		•	
16ER/L 28 UN	9.52	28.0	16.00	0.10	0.6	0.7	1		•	•	•			•	•
16ER 27 UN	9.52	27.0	16.00	0.10	0.7	0.8	1		•						
16ER/L 24 UN	9.52	24.0	16.00	0.12	0.7	0.8	1		•	•	•			•	•
16ERB 24 UN (1)	9.52	24.0	16.00	0.12	0.7	0.8	1							•	
16ERM 24 UN (1)	9.52	24.0	16.00	0.11	0.7	0.8	1		•	•				•	•
16ER/L 20 UN	9.52	20.0	16.00	0.15	0.8	0.9	1		•	•	•			•	•
16ERB 20 UN (1)	9.52	20.0	16.00	0.15	0.8	0.9	1							•	
16ERM 20 UN (1)	9.52	20.0	16.00	0.14	0.8	0.9	1		•	•			•	•	•
16ER/L 18 UN	9.52	18.0	16.00	0.17	0.8	1.0	1		•	•				•	•
16ERB 18 UN (1)	9.52	18.0	16.00	0.17	0.8	1.0	1							•	
16ERM 18 UN (1)	9.52	18.0	16.00	0.15	0.8	1.0	1			•			•	•	•
16ER/L 16 UN	9.52	16.0	16.00	0.18	0.9	1.1	1	•	•	•				•	•
16ER 16 UN 2M (2)	9.52	16.0	16.00	0.18	1.5	2.3	2							•	
16ERB 16 UN (1)	9.52	16.0	16.00	0.18	0.9	1.1	1							•	
16ERM 16 UN (1)	9.52	16.0	16.00	0.19	0.9	1.1	1			•			•	•	•
16ER/L 14 UN	9.52	14.0	16.00	0.22	1.0	1.2	1		•	•		•		•	•
16ER 14 UN 2M (2)	9.52	14.0	16.00	0.22	1.5	2.3	2							•	
16ERB 14 UN (1)	9.52	14.0	16.00	0.22	1.0	1.2	1							•	
16ERM 14 UN (1)	9.52	14.0	16.00	0.22	1.0	1.2	1			•			•	•	•
16ER/L 13 UN	9.52	13.0	16.00	0.24	1.0	1.3	1		•	•				•	
16ERB 13 UN (1)	9.52	13.0	16.00	0.24	1.0	1.3	1							•	
16ERM 13 UN (1)	9.52	13.0	16.00	0.24	1.0	1.3	1							•	
16ER/L 12 UN	9.52	12.0	16.00	0.26	1.1	1.4	1		•	•	•			•	•
16ER 12 UN 2M (2)	9.52	12.0	16.00	0.26	2.2	3.4	2							•	
16ERB 12 UN (1)	9.52	12.0	16.00	0.26	1.1	1.4	1							•	
16ERM 12 UN (1)	9.52	12.0	16.00	0.25	1.1	1.4	1		•	•			•	•	•
16ER 11.5 UN	9.52	11.5	16.00	0.27	1.1	1.5	1			•				•	
16ER/L 11 UN	9.52	11.0	16.00	0.28	1.1	1.5	1		•	•				•	
16ERB 11 UN (1)	9.52	11.0	16.00	0.28	1.1	1.5	1							•	
16ER/L 10 UN	9.52	10.0	16.00	0.32	1.1	1.5	1		•	•		•		•	•
16ERB 10 UN (1)	9.52	10.0	16.00	0.32	1.1	1.5	1							•	
16ER/L 9 UN	9.52	9.0	16.00	0.36	1.2	1.7	1		•					•	
16ERB 9 UN (1)	9.52	9.0	16.00	0.36	1.2	1.7	1							•	
16ER/L 8 UN	9.52	8.0	16.00	0.41	1.2	1.6	1		•	•				•	•
16ERB 8 UN (1)	9.52	8.0	16.00	0.41	1.2	1.6	1							•	
16ERM 8 UN (1)	9.52	8.0	16.00	0.41	1.2	1.6	1			•				•	•
22ER 16 UN 3M (2)	12.70	16.0	22.00	0.18	2.5	4.0	3							•	
22ER 12 UN 2M (2)	12.70	12.0	22.00	0.25	2.2	3.4	2							•	
22ER 12 UN 3M (2)	12.70	12.0	22.00	0.25	3.3	5.3	3		•					•	
22ER 7 UN	12.70	7.0	22.00	0.47	1.6	2.3	1		•	•				•	
22ER/L 6 UN	12.70	6.0	22.00	0.67	1.6	2.3	1		•					•	
22ER 5 UN	12.70	5.0	22.00	0.67	1.7	2.5	1		•	•				•	
27ER 8 UN 2M (2)	15.88	8.0	27.00	0.41	3.1	4.9	2							•	
27ER 4.5 UN	15.88	4.5	27.00	0.75	1.9	2.7	1		•					•	
27ER/L 4 UN	15.88	4.0	27.00	0.85	2.1	3.0	1		•	•				•	

• For Insert Identification System, see page 489 • Tolerance: Class 2A • For threading between walls use GRIP-type insert TIP-UN • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer.

(2) Multi-tooth

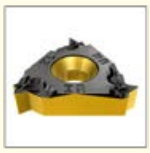
(3) Number of teeth per corner.

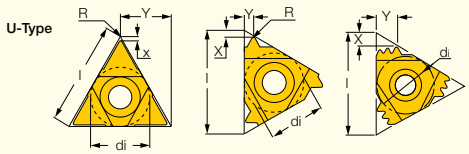
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

ISCARTHREAD

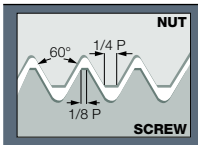
IR/L-UN

Internal American UN Full Profile
(UN, UNC, UNF, UNEF) Laydown
Threading Inserts for General Industry





Internal left-hand shown



Designation	Dimensions							Tough ↔ Hard								
	di	TPI	I	R	X	Y	Z(3)	IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR 32 UN	3.97	32.0	6.00	0.04	0.8	0.5	1	●								
06IL 28 UN	3.97	28.0	6.00	0.04	0.8	0.6	1	●								
06IR/L 24 UN	3.97	24.0	6.00	0.05	0.7	0.6	1	●								
06IR/L 20 UN	3.97	20.0	6.00	0.06	0.6	0.6	1	●								
06IR/L 18 UN	3.97	18.0	6.00	0.07	0.6	0.7	1	●								
08IR 32 UN	4.76	32.0	8.00	0.04	0.6	0.5	1	●								
08IR/L 28 UN	4.76	28.0	8.00	0.04	0.6	0.6	1	●								
08IR/L 24 UN	4.76	24.0	8.00	0.05	0.6	0.6	1	●								
08IR/L 20 UN	4.76	20.0	8.00	0.06	0.6	0.7	1	●								
08IR 18 UN	4.76	18.0	8.00	0.07	0.6	0.7	1	●								
08IR/L 16 UN	4.76	16.0	8.00	0.09	0.6	0.7	1	●								
08IR 14 UN	4.76	14.0	8.00	0.10	0.6	0.8	1	●							●	
08UIRL 13 UN	4.76	13.0	8.00	0.10	1.0	4.0	1								●	
08UIRL 12 UN	4.76	12.0	8.00	0.10	0.9	4.0	1		●							
08UIRL 11 UN	4.76	11.0	8.00	0.10	0.9	4.0	1	●								
11IR 64 UN	6.35	64.0	11.00	0.02	0.8	0.4	1								●	
11IR 36 UN	6.35	36.0	11.00	0.04	0.6	0.6	1								●	
11IR/L 32 UN	6.35	32.0	11.00	0.04	0.6	0.6	1			●					●	
11IRB 32 UN	6.35	32.0	11.00	0.04	0.6	0.6	1								●	
11IR/L 28 UN	6.35	28.0	11.00	0.04	0.6	0.7	1					●			●	
11IRB 28 UN	6.35	28.0	11.00	0.04	0.6	0.6	1								●	
11IR/L 24 UN	6.35	24.0	11.00	0.05	0.7	0.8	1			●					●	
11IRB 24 UN	6.35	24.0	11.00	0.05	0.6	0.6	1								●	
11IR/L 20 UN	6.35	20.0	11.00	0.06	0.8	0.9	1			●		●			●	●
11IRB 20 UN	6.35	20.0	11.00	0.06	0.8	0.9	1								●	
11IR/L 18 UN	6.35	18.0	11.00	0.07	0.8	1.0	1			●	●				●	●
11IRB 18 UN	6.35	18.0	11.00	0.07	0.8	0.9	1								●	
11IR/L 16 UN	6.35	16.0	11.00	0.09	0.9	1.1	1	●		●	●				●	●
11IRB 16 UN	6.35	16.0	11.00	0.09	0.8	0.9	1								●	
11IR/L 14 UN	6.35	14.0	11.00	0.10	0.9	1.1	1			●	●				●	
11IRB 14 UN	6.35	14.0	11.00	0.10	0.8	0.9	1								●	
11IR 12 UN	6.35	12.0	11.00	0.12	0.9	1.1	1				●					
11IRB 12 UN	6.35	12.0	11.00	0.12	0.8	0.9	1								●	
11IR 11 UN	6.35	11.0	11.00	0.14	0.8	1.1	1				●				●	
16IR 32 UN	9.52	32.0	16.00	0.04	0.6	0.6	1			●	●				●	
16IR/L 28 UN	9.52	28.0	16.00	0.04	0.6	0.7	1			●					●	
16IR 27 UN	9.52	27.0	16.00	0.04	0.7	0.8	1			●						
16IR 24 UN	9.52	24.0	16.00	0.05	0.7	0.8	1			●	●	●			●	
16IRB 24 UN (1)	9.52	24.0	16.00	0.05	0.7	0.8	1								●	
16IL 20 UN	9.52	20.0	16.00	0.06	0.8	0.9	1			●	●	●	●		●	●
16IRB 20 UN (1)	9.52	20.0	16.00	0.06	0.8	0.9	1								●	
16IRM 20 UN (1)	9.52	20.0	16.00	0.06	0.8	0.9	1								●	●
16IL 18 UN	9.52	18.0	16.00	0.07	0.8	1.0	1			●	●				●	
16IR 18 UN *	9.52	18.0	16.00	0.07	0.8	1.0	1						●			
16IRB 18 UN (1)	9.52	18.0	16.00	0.07	0.8	1.0	1								●	
16IRM 18 UN (1)	9.52	18.0	16.00	0.08	0.8	1.0	1							●	●	
16IR/L 16 UN	9.52	16.0	16.00	0.09	0.9	1.1	1			●	●		●		●	
16IR 16 UN-2M (2)	9.52	16.0	16.00	0.09	1.5	2.3	2						●			
16IRB 16 UN (1)	9.52	16.0	16.00	0.09	0.9	1.1	1								●	
16IRM 16 UN (1)	9.52	16.0	16.00	0.09	0.9	1.1	1				●				●	●
16IR/L 14 UN	9.52	14.0	16.00	0.10	0.9	1.2	1			●	●		●		●	
16IRB 14 UN (1)	9.52	14.0	16.00	0.10	0.9	1.2	1								●	
16IRM 14 UN (1)	9.52	14.0	16.00	0.11	0.9	1.2	1				●			●	●	●
16IR/L 13 UN	9.52	13.0	16.00	0.11	1.0	1.3	1			●					●	
16IR/L 12 UN	9.52	12.0	16.00	0.12	1.1	1.4	1	●		●	●	●			●	●

• For Insert Identification System, see page 489. • Tolerance: class 2B,ANSI B1, 3M-1986. • For technical information and detailed cutting data, see pages 536-546
• For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer.

(2) Multi-tooth

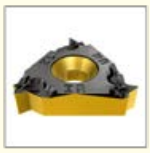
(3) Number of teeth per corner.

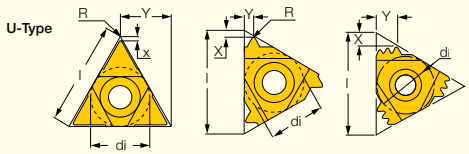
For tools, see pages: MGSIR/L (534) • SIR/L (531)

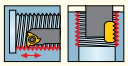
ISCARTHREAD

IR/L-UN (continued)

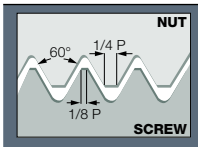
Internal American UN Full Profile (UN, UNC, UNF, UNEF) Laydown Threading Inserts for General Industry







Internal left-hand shown



Designation	Dimensions							Tough ↔ Hard								
	di	TPI	I	R	X	Y	Z(3)	IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
16IRB 12 UN (1)	9.53	12.0	16.00	0.12	1.1	1.4	1								●	
16IRM 12 UN (1)	9.52	12.0	16.00	0.12	1.1	1.4	1				●			●	●	●
16IR 11.5 UN	9.52	11.5	16.00	0.13	1.1	1.5	1								●	
16IR 11 UN	9.52	11.0	16.00	0.14	1.1	1.5	1			●	●				●	
16IR/L 10 UN	9.52	10.0	16.00	0.15	1.1	1.5	1			●	●				●	
16IRB 10 UN (1)	9.52	10.0	16.00	0.15	1.1	1.5	1								●	
16IR 9 UN	9.52	9.0	16.00	0.17	1.2	1.7	1								●	
16IR/L 8 UN	9.52	8.0	16.00	0.19	1.1	1.5	1			●	●		●		●	●
16IRB 8 UN (1)	9.52	8.0	16.00	0.19	1.1	1.5	1								●	
16IRM 8 UN (1)	9.52	8.0	16.00	0.20	1.1	1.5	1				●			●	●	●
22IR 16 UN 3M (2)	12.70	16.0	22.00	0.09	2.5	4.0	3								●	
22IR 12 UN 2M (2)	12.70	12.0	22.00	0.12	2.2	3.4	2								●	
22IR 12 UN 3M (2)	12.70	12.0	22.00	0.12	3.3	5.3	3								●	
22IR/L 7 UN	12.70	7.0	22.00	0.22	1.6	2.3	1	●			●				●	
22IR 6 UN	12.70	6.0	22.00	0.26	1.6	2.3	1			●	●				●	
22IR 5 UN	12.70	5.0	22.00	0.32	1.6	2.3	1			●	●				●	
22UIRL 4.5 UN	12.70	4.5	22.00	0.36	2.4	11.0	1				●					
22UIRL 4 UN	15.88	4.0	22.00	0.36	2.4	11.0	1								●	
27IR 8 UN 2M (2)	15.88	8.0	27.00	0.19	3.1	4.9	2								●	
27IR 4.5 UN	15.88	4.5	27.00	0.36	1.7	2.4	1				●					
27IR/L 4 UN	15.88	4.0	27.00	0.41	1.8	2.7	1			●	●				●	

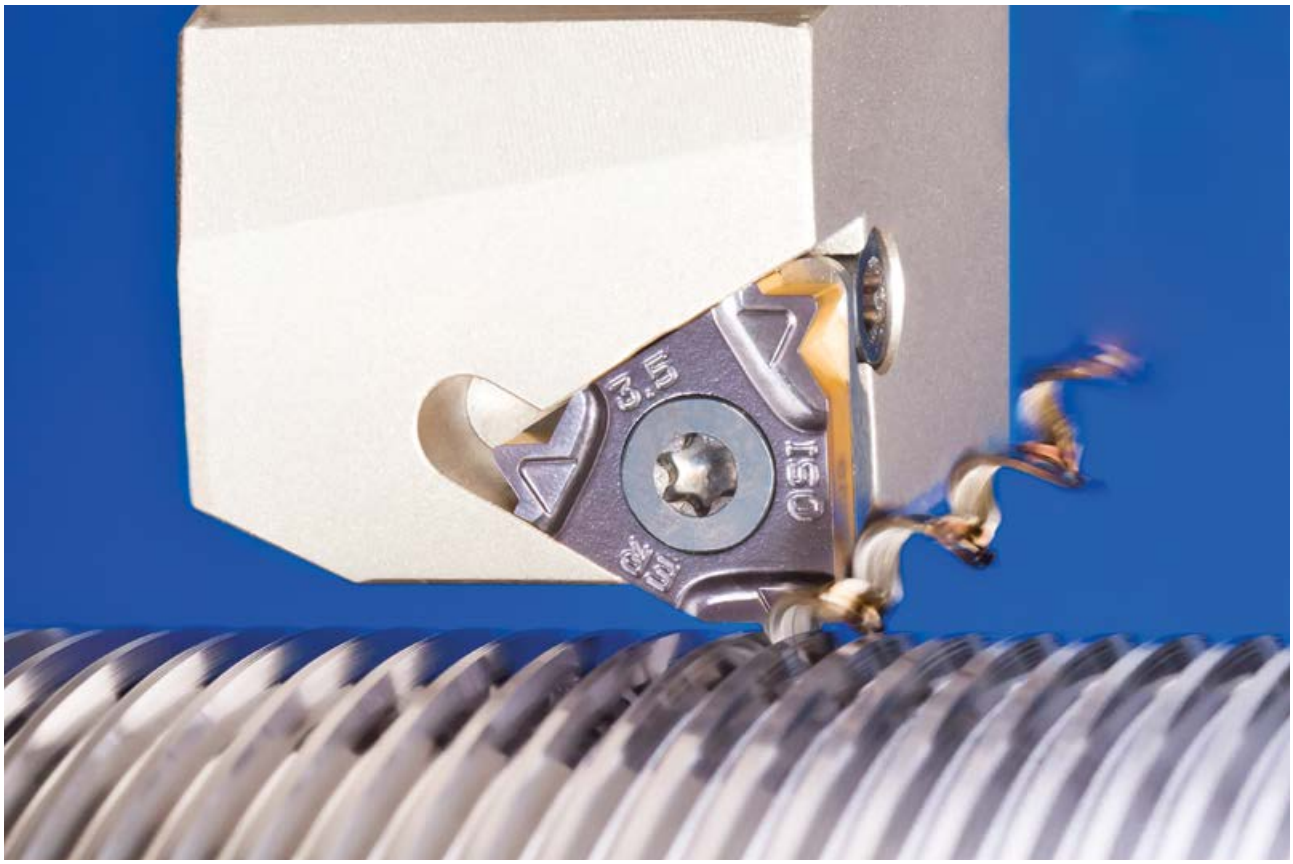
• For Insert Identification System, see page 489 • Tolerance: class 2B,ANSI B1, 3M-1986. • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer.

(2) Multi-tooth

(3) Number of teeth per corner.

For tools, see pages: MGSIR/L (534) • SIR/L (531)

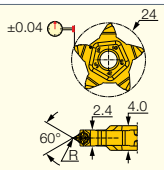


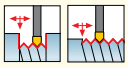
PENTACUT THREADING LINE

PENTA 24-UN

American UN (UNC, UNF, UNEF) Precision Ground Full Profile Pentagonal External Inserts with a Chipformer







Designation	Dimensions TPI	R	IC908
PENTA 24-24-UN	24.0	0.13	●
PENTA 24-20-UN	20.0	0.16	●
PENTA 24-18-UN	18.0	0.18	●
PENTA 24-16-UN	16.0	0.21	●
PENTA 24-14-UN	14.0	0.23	●

• **Dmin(inch)=5.435/TPI** • **Tolerance:** Class 2A.

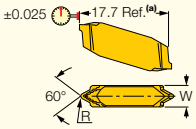
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

ISCARTHREAD

TIP-P-UN

American UN (UNC,UNF,UNEF) Precision Ground External Double-Ended Full Profile Threading Inserts with a Chipformer







Designation	Dimensions W	R	R±toler	TPI	Tough ↔ Hard IC08	IC808	IC908
TIP 2P32-UN	2.40	0.10	0.030	32.0	●		●
TIP 2P28-UN	2.40	0.11	0.030	28.0	●		●
TIP 2P24-UN	2.40	0.13	0.030	24.0	●		●
TIP 2P20-UN	2.40	0.16	0.030	20.0	●		●
TIP 2P18-UN	2.40	0.18	0.030	18.0	●		●
TIP 2P16-UN	2.40	0.20	0.030	16.0	●		●
TIP 2P14-UN	2.40	0.23	0.030	14.0	●		●
TIP 2P13-UN	2.40	0.25	0.030	13.0	●		●
TIP 2P12-UN	2.40	0.27	0.030	12.0	●		●
TIP 4P11-UN	4.00	0.30	0.030	11.0			●
TIP 4P10-UN	4.00	0.33	0.050	10.0		●	●
TIP 4P08-UN	4.00	0.41	0.050	8.0			●

• [a] TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance. • For detailed cutting data, see pages 536-546

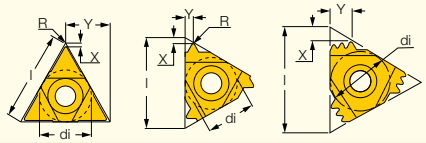
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

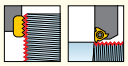
ISCARTHREAD

ER/L-W

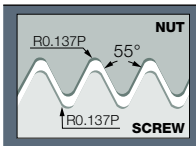
External Whitworth (BSW, BSF, BSP)
B.S.84-1956 DIN 259 Medium Class
Full Profile Laydown Threading Inserts







External right-hand shown



Designation	Dimensions							Tough ↔ Hard						
	di	TPI	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
11ER 36 W	6.35	36.0	11.00	0.07	0.6	0.6	1						•	
11ER 20 W	6.35	20.0	11.00	0.14	8.0	0.9	1		•					
11ER/L 19 W	6.35	19.0	11.00	0.15	0.8	1.0	1						•	
11ER 18 W	6.35	18.0	11.00	0.16	0.8	1.0	1			•				
11ER 16 W	6.35	16.0	11.00	0.18	0.9	1.1	1		•					
11ER 14 W	6.35	14.0	11.00	0.21	0.9	1.1	1		•	•			•	
16ER 40 W	9.52	40.0	16.00	0.06	0.6	0.6	1				•			
16ER 32 W	9.52	32.0	16.00	0.09	0.6	0.6	1		•					
16ER/L 28 W	9.52	28.0	16.00	0.09	0.6	0.7	1		•	•			•	•
16ER 26 W	9.52	26.0	16.00	0.10	0.7	0.7	1		•	•			•	
16ER/L 24 W	9.52	24.0	16.00	0.11	0.7	0.8	1		•	•			•	
16ER/L 22 W	9.52	22.0	16.00	0.13	0.8	0.9	1		•	•			•	
16ER 20 W	9.52	20.0	16.00	0.14	0.8	0.9	1		•	•	•		•	
16ER/L 19 W	9.52	19.0	16.00	0.15	0.8	1.0	1	•	•	•			•	•
16ERB 19 W (1)	9.52	19.0	16.00	0.15	0.8	1.0	1						•	
16ERM 19 W (1)	9.52	19.0	16.00	0.16	0.8	1.0	1		•	•		•	•	•
16ER/L 18 W	9.52	18.0	16.00	0.16	0.8	1.0	1		•	•			•	
16ER 16 W	9.52	16.0	16.00	0.18	0.9	1.1	1		•	•			•	
16ERB 16 W (1)	9.52	16.0	16.00	0.18	0.9	1.1	1						•	
16ERM 16 W (1)	9.52	16.0	16.00	0.20	0.9	1.1	1			•		•	•	•
16ER/L 14 W	9.52	14.0	16.00	0.21	1.0	1.2	1	•	•	•	•		•	
16ER 14 W 2M (2)	9.52	14.0	16.00	0.21	1.7	2.7	2						•	
16ERB 14 W (1)	9.52	14.0	16.00	0.21	1.0	1.2	1						•	
16ERM 14 W (1)	9.52	14.0	16.00	0.24	1.0	1.2	1		•	•		•	•	•
16ER/L 12 W	9.52	12.0	16.00	0.25	1.1	1.4	1		•	•	•		•	
16ER/L 11 W	9.52	11.0	16.00	0.27	1.1	1.5	1	•	•	•	•		•	•
16ERB 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1						•	
16ERM 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1			•	•	•	•	•
16ER/L 10 W	9.52	10.0	16.00	0.31	1.1	1.5	1		•	•			•	
16ERB 10 W (1)	9.52	10.0	16.00	0.31	1.1	1.5	1						•	
16ER 9 W	9.52	9.0	16.00	0.34	1.2	1.7	1		•	•				
16ER/L 8 W	9.52	8.0	16.00	0.39	1.2	1.5	1		•	•			•	
22ER 14 W 3M (2)	12.70	14.0	22.00	0.21	2.8	4.5	3						•	
22ER 11 W 2M (2)	12.70	11.0	22.00	0.27	2.3	3.4	2						•	
22ER 7 W	12.70	7.0	22.00	0.45	1.6	2.3	1		•				•	
22ER 6 W	12.70	6.0	22.00	0.52	1.6	2.3	1		•	•			•	
22ER 5 W	12.70	5.0	22.00	0.65	1.7	2.4	1		•	•				
22UEIRL 4.5 W	12.70	4.5	22.00	0.73	2.3	11.0	1		•					
22UEIRL 4 W	12.70	4.0	22.00	0.87	1.8	11.0	1		•					
27ER 4.5 W	15.88	4.5	27.00	0.73	1.8	2.6	1		•					
27ER 4 W	15.88	4.0	27.00	0.73	2.0	2.9	1		•				•	
27UEIRL 3.5 W	15.88	3.5	27.00	0.95	2.1	13.7	1						•	
27UEIRL 3 W	15.88	3.0	27.00	1.12	2.3	13.7	1			•				

• For Insert Identification System, see page 489 • For threading between walls use GRIP-type insert TIP-BSW • Tolerance: medium class • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer.

(2) Multi-tooth

(3) Number of teeth per corner.

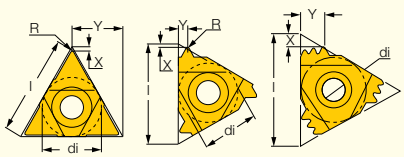
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

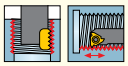
ISCARTHREAD

IR/L-W

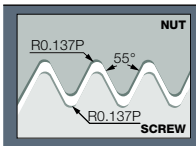
Internal Whitworth (BSW, BSF, BSP)
B.S.84-1956 DIN 259 Medium Class
Full Profile Laydown Threading Inserts







Internal left-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Z(3)	Tough ↔ Hard IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR 26 W	3.97	26.0	6.00	0.10	0.7	0.6	1	●								
06IR 20 W	3.97	20.0	6.00	0.14	0.6	0.7	1	●								
08IR 28 W	4.76	28.0	8.00	0.09	0.6	0.6	1	●								
08IR 24 W	4.76	24.0	8.00	0.11	0.6	0.6	1	●								
08IR/L 19 W	4.76	19.0	8.00	0.15	0.6	0.7	1	●	●							
08IR 18 W	4.76	18.0	8.00	0.16	0.6	0.7	1	●								
08IR 16 W	4.76	16.0	8.00	0.18	0.6	0.7	1	●								
08UIRL 12 W	4.76	12.0	8.00	0.25	0.9	4.0	1	●								
11IR 36 W	6.35	36.0	11.00	0.07	0.6	0.6	1					●				
11IR 28 W	6.35	28.0	11.00	0.10	0.6	0.7	1				●					
11IRB 28 W	6.35	28.0	11.00	0.10	0.6	0.6	1								●	
11IR 26 W	6.35	26.0	11.00	0.10	0.7	0.7	1	●								
11IR/L 24 W	6.35	24.0	11.00	0.11	0.7	0.8	1				●				●	
11IRB 24 W	6.35	24.0	11.00	0.11	0.6	0.6	1								●	
11IR 20 W	6.35	20.0	11.00	0.14	0.8	0.9	1			●	●				●	
11IRB 20 W	6.35	20.0	11.00	0.14	0.8	0.9	1								●	
11IR 19 W	6.35	19.0	11.00	0.15	0.8	1.0	1			●	●				●	●
11IRB 19 W	6.35	19.0	11.00	0.14	0.8	0.9	1								●	
11IR/L 18 W	6.35	18.0	11.00	0.16	0.8	1.0	1			●	●				●	
11IRB 18 W	6.35	18.0	11.00	0.16	0.8	0.9	1								●	
11IR 16 W	6.35	16.0	11.00	0.18	0.9	1.1	1			●	●					
11IRB 16 W	6.35	16.0	11.00	0.18	0.8	0.9	1								●	
11IR/L 14 W	6.35	14.0	11.00	0.21	0.9	1.1	1	●		●	●	●	●		●	●
11IRB 14 W	6.35	14.0	11.00	0.21	0.8	0.9	1								●	
11IL 12 W	6.35	12.0	11.00	0.27	1.0	1.1	1								●	
16IR 40 W	9.52	40.0	16.00	0.06	0.6	0.6	1			●						
16IR/L 32 W	9.52	32.0	16.00	0.09	0.6	0.6	1			●						
16IR/L 28 W	9.52	28.0	16.00	0.09	0.6	0.7	1			●	●					
16IR 26 W	9.52	26.0	16.00	0.10	0.7	0.7	1			●	●				●	
16IR/L 24 W	9.52	24.0	16.00	0.11	0.7	0.8	1			●	●				●	
16IR/L 22 W	9.52	22.0	16.00	0.13	0.8	0.9	1			●	●				●	
16IR/L 20 W	9.52	20.0	16.00	0.14	0.8	0.9	1			●	●		●		●	
16IRM 20 W (1)	9.52	20.0	16.00	0.14	0.8	0.9	1								●	
16IR/L 19 W	9.52	19.0	16.00	0.15	0.8	1.0	1			●	●		●		●	
16IRB 19 W (1)	9.52	19.0	16.00	0.15	0.8	1.0	1								●	
16IRM 19 W (1)	9.52	19.0	16.00	0.15	0.8	1.0	1				●					
16IR/L 18 W	9.52	18.0	16.00	0.16	0.8	1.0	1			●	●				●	
16IR/L 16 W	9.52	16.0	16.00	0.18	0.9	1.1	1			●						
16IRB 16 W (1)	9.52	16.0	16.00	0.18	0.9	1.1	1								●	
16IRM 16 W (1)	9.52	16.0	16.00	0.18	0.9	1.1	1				●				●	
16IR/L 14 W	9.52	14.0	16.00	0.21	1.0	1.2	1	●		●	●		●		●	●
16IR 14 W 2M (2)	9.52	14.0	16.00	0.23	1.7	2.7	2								●	●
16IRB 14 W (1)	9.52	14.0	16.00	0.21	1.0	1.2	1								●	
16IRM 14 W (1)	9.52	14.0	16.00	0.21	1.0	1.2	1				●			●	●	●
16IR/L 12 W	9.52	12.0	16.00	0.25	1.1	1.4	1			●	●				●	
16IR/L 11 W	9.52	11.0	16.00	0.27	1.1	1.5	1	●		●	●	●	●		●	
16IRB 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1								●	
16IRM 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1				●		●	●	●	●
16IR/L 10 W	9.52	10.0	16.00	0.31	1.1	1.5	1			●	●				●	
16IRB 10 W (1)	9.52	10.0	16.00	0.31	1.1	1.5	1								●	
16IR/L 9 W	9.52	9.0	16.00	0.34	1.2	1.7	1			●	●					
16IR/L 8 W	9.52	8.0	16.00	0.39	1.2	1.5	1			●	●				●	
22IR 14 W 3M (2)	12.70	14.0	22.00	0.21	2.8	4.5	3								●	
22IR 11 W 2M (2)	12.70	11.0	22.00	0.27	2.3	3.4	2								●	
22IR 7 W	12.70	7.0	22.00	0.45	1.6	2.3	1			●					●	
22IR 6 W	12.70	6.0	22.00	0.52	1.6	2.3	1			●	●					
22IR/L 5 W	12.70	5.0	22.00	0.65	1.7	2.4	1			●	●					
27IR 4.5 W	15.88	4.5	27.00	0.73	1.8	2.6	1				●					
27IR 4 W	15.88	4.0	27.00	0.82	2.0	2.9	1								●	

• For Insert Identification System, see page 489 • Tolerance: medium class. • For technical information and detailed cutting data, see pages 536-546
• For recommended number of passes for multi-tooth inserts see page 544

(1) With pressed chipformer.

(2) Multi-tooth

(3) Number of teeth per corner.

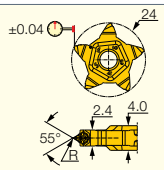
For tools, see pages: MGSIR/L (534) • SIR/L (531)

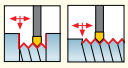
PENTACUT THREADING LINE

PENTA 24-W

Whitworth (BSW, BSF, BSP)
B.S.84-1956 DIN 259 Pentagonal
Full Profile External Threading
Inserts with a Chipformer







Designation	Dimensions TPI	R	IC908
PENTA 24-28-W	28.0	0.09	●
PENTA 24-19-W	19.0	0.15	●
PENTA 24-14-W	14.0	0.21	●

• Dmin(inch)=5.435/TPI

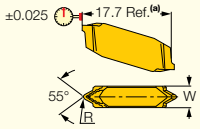
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

ISCARTHREAD

TIP-P-BSW

American (BSW, BSF, BSP) Precision
Ground External Double-Ended Full
Profile Threading Inserts with
a Chipformer







Designation	Dimensions W	R	TPI	Tough ↔ Hard IC08	IC908
TIP 2P28-BSW	2.40	0.11	28.0	●	●
TIP 2P26-BSW	2.40	0.12	26.0	●	●
TIP 2P-24BSW	2.40	0.12	24.0		●
TIP 2P24-BSW	2.40	0.12	24.0	●	
TIP 2P-20BSW	2.40	0.16	20.0		●
TIP 2P20-BSW	2.40	0.16	20.0	●	
TIP 2P19-BSW	2.40	0.16	19.0	●	●
TIP 2P-18BSW	2.40	0.17	18.0		●
TIP 2P18-BSW	2.40	0.17	18.0	●	
TIP 2P-16BSW	2.40	0.19	16.0		●
TIP 2P16-BSW	2.40	0.19	16.0	●	
TIP 2P14-BSW	2.40	0.22	14.0	●	●
TIP 4P12-BSW	4.00	0.25	12.0		●
TIP 4P11-BSW	4.00	0.28	11.0	●	●
TIP 4P10-BSW	4.00	0.31	10.0		●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

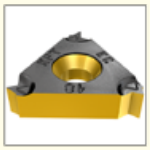
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

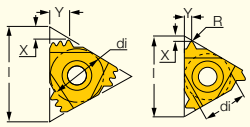


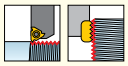
ISCARTHREAD

ER/L-NPT

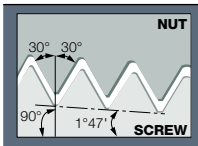
External NPT (National Pipe Threads)
Full Profile Laydown Threading Inserts
for Steam, Gas and Water Pipes







External right-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Z(3)	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
16ER 27 NPT	9.52	27.0	16.00	0.04	0.7	0.8	1		●	●			●	
16ER 18 NPT	9.52	18.0	16.00	0.06	0.8	1.0	1		●	●			●	
16ERB 18 NPT (1)	9.52	18.0	16.00	0.06	0.8	1.0	1						●	
16ERM 18 NPT (1)	9.52	18.0	16.00	0.05	0.8	1.0	1			●		●	●	●
16ER/L 14 NPT	9.52	14.0	16.00	0.07	0.9	1.2	1	●	●	●	●		●	●
16ERB 14 NPT (1)	9.52	14.0	16.00	0.07	0.9	1.2	1						●	
16ERM 14 NPT (1)	9.52	14.0	16.00	0.05	0.9	1.2	1		●	●		●	●	●
16ER/L 11.5 NPT	9.52	11.5	16.00	0.09	1.1	1.5	1		●	●	●		●	●
16ERB 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5	1						●	
16ERM 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5	1			●			●	●
16ER 8 NPT	9.52	8.0	16.00	0.12	1.3	1.8	1		●	●			●	
16ERB 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8	1						●	
16ERM 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8	1			●		●	●	●
22ER 11.5 NPT 2M (2)	12.70	11.5	22.00	0.09	2.3	3.5	2						●	
27ER 11.5 NPT 3M (2)	15.88	11.5	27.00	0.09	3.3	5.5	3						●	
27ER 8 NPT 2M (2)	15.88	8.0	27.00	0.15	3.1	5.0	2						●	

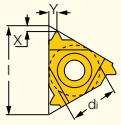
• For Insert Identification System, see page 489 • For threading between walls use GRIP-type insert TIP-NPT. • National Pipe Threads ANSI/ASME B1.20.1-1983
• For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544
(1) With pressed chipformer.
(2) Multi-tooth
(3) Number of teeth per corner.
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

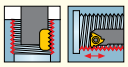
ISCARTHREAD

IR/L-NPT

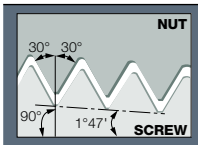
Internal NPT (National Pipe Threads)
Full Profile Laydown Threading Inserts
for Steam, Gas and Water Pipes







Internal left-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Z(3)	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
06IR 27 NPT	3.97	27.0	6.00	0.04	0.6	0.6	1	●						
08IR 18 NPT	4.76	18.0	8.00	0.06	0.6	0.6	1	●					●	
11IR 27 NPT	6.35	27.0	11.00	0.04	0.7	0.8	1			●				
11IR/L 18 NPT	6.35	18.0	11.00	0.06	0.8	1.0	1	●		●			●	●
11IRB 18 NPT	6.35	18.0	11.00	0.00	0.8	0.9	1						●	
11IR/L 14 NPT	6.35	14.0	11.00	0.07	0.8	1.0	1			●			●	●
16IR 27 NPT	9.52	27.0	16.00	0.04	0.7	0.8	1		●				●	
16IR 18 NPT	9.52	18.0	16.00	0.06	0.8	1.0	1		●				●	
16IRM 14 NPT (1)	9.52	14.0	16.00	0.05	0.9	1.2	1			●		●	●	●
16IRB 14 NPT (1)	9.52	14.0	16.00	0.07	0.9	1.2	1						●	
16IR/L 14 NPT	9.52	14.0	16.00	0.07	0.9	1.2	1	●	●	●	●		●	
16IRM 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5	1				●	●	●	●
16IRB 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5	1						●	
16IR/L 11.5 NPT	9.52	11.5	16.00	0.09	1.1	1.5	1	●	●	●	●		●	●
16IRM 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8	1					●	●	●
16IRB 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8	1						●	
16IR/L 8 NPT	9.52	8.0	16.00	0.12	1.3	1.8	1		●	●			●	
22IR 11.5 NPT 2M (2)	12.70	11.5	22.00	0.09	2.3	3.5	2						●	
27IR 11.5 NPT 3M (2)	15.88	11.5	27.00	0.09	3.3	5.5	3						●	
27IR 8 NPT 2M (2)	15.88	8.0	27.00	0.12	3.1	5.0	2						●	

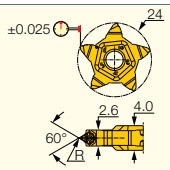
• For Insert Identification System, see page 489 • National Pipe Threads ANSI/ASME B1.20.1-1983. • For technical information and detailed cutting data, see pages 536-546 • For recommended number of passes for multi-tooth inserts see page 544
(1) With pressed chipformer.
(2) Multi-tooth
(3) Number of teeth per corner.
For tools, see pages: MGSIR/L (534) • SIR/L (531)

PENTACUT THREADING LINE

PENTA 24-NPT

NPT (National Pipe Threads) Precision Ground Pentagonal External Full Profile Threading Inserts with a Chipformer





Designation	Dimensions		IC908
	TPI	R	
PENTA 24-18-NPT	18.0	0.07	●
PENTA 24-14-NPT	14.0	0.09	●

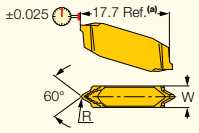
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

ISCARTHREAD

TIP-P-NPT

NPT (National Pipe Threads) Precision Ground Double-Ended External Full Profile Threading Inserts with a Chipformer

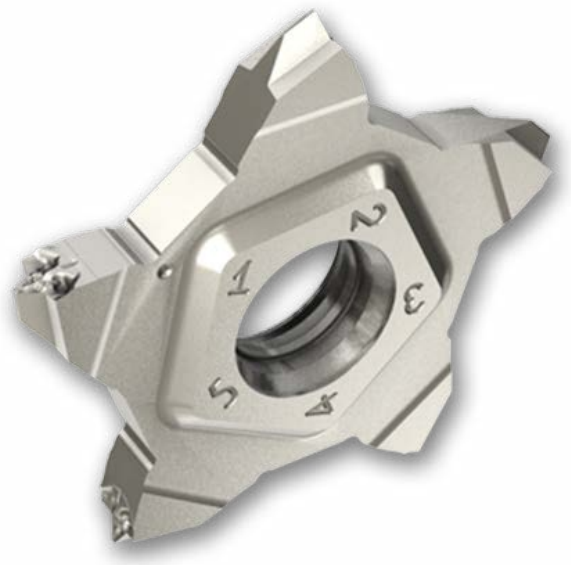




Designation	Dimensions			Tough ↔ Hard	
	W	R±0.03	TPI	IC08	IC908
TIP 2P27-NPT	2.40	0.05	27.0	●	●
TIP 2P18-NPT	2.40	0.07	18.0	●	●
TIP 2P14-NPT	2.40	0.09	14.0		●
TIP 4P11.5-NPT	4.00	0.10	11.5	●	●
TIP 4P8-NPT	4.00	0.13	8.0	●	●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

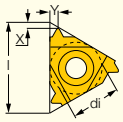


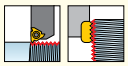
ISCARTHREAD

ER-NPTF

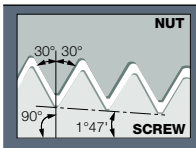
External NPTF (National Pipe Threads) Full Profile Laydown Threading Inserts for Steam, Gas and Water Pipes







External right-hand shown



Designation	Dimensions di	TPI	l	X	Y	Z	Tough ↔ Hard IC50M	IC250	IC908
11ER 18 NPTF	6.35	18.0	11.00	0.8	1.0	1		•	
11ER 14 NPTF	6.35	14.0	11.00	0.8	1.0	1			•
16ER 27 NPTF	9.52	27.0	16.00	0.7	0.7	1	•		•
16ER 18 NPTF	9.52	18.0	16.00	0.8	1.0	1			•
16ER 14 NPTF	9.52	14.0	16.00	0.9	1.2	1	•	•	•
16ER 11.5 NPTF	9.52	11.5	16.00	1.1	1.5	1	•		•

• For Insert Identification System, see page 489. • (National Pipe Threads-Dry Seal) ANSI/ASME B1.20.1-1976 full profile. • For technical information and detailed cutting data, see pages 536-546

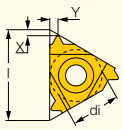
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

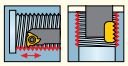
ISCARTHREAD

IR/L-NPTF

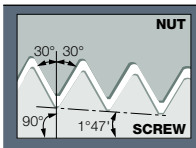
Internal NPTF (National Pipe Threads) Full Profile Laydown Threading Inserts for Steam, Gas and Water Pipes







Internal left-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC228	IC250	IC908
06IR 27 NPTF	3.97	27.0	6.00	0.04	0.7	0.6	•		
08IR 27 NPTF	4.76	27.0	8.00	0.04	0.6	0.6	•		
08IR 18 NPTF	4.76	18.0	8.00	0.06	0.6	0.6	•		
11IR 18 NPTF	6.35	18.0	11.00	0.06	0.8	1.0			•
11IRB 18 NPTF	6.35	18.0	11.00	0.06	0.8	0.9			•
11IR 14 NPTF	6.35	14.0	16.00	0.07	0.8	1.0			•
16IR 18 NPTF	9.52	18.0	16.00	0.06	0.8	1.0			•
16IR/L 14 NPTF	9.52	14.0	16.00	0.07	0.9	1.2		•	•
16IR 11.5 NPTF	9.52	11.5	16.00	0.09	1.1	1.5		•	•

• For Insert Identification System, see page 489 • (National Pipe Threads-Dry seal) ANSI/ASME B1.20.1-1976. • For technical information and detailed cutting data, see pages 536-546

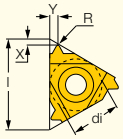
For tools, see pages: MGSIR/L (534) • SIR/L (531)

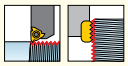
ISCARTHREAD

ER/L-BSPT

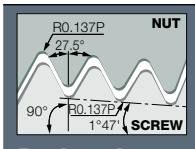
External BSPT (British Standard Pipe) B.S.21-1957 Full Profile Laydown Threading Inserts







External right-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC50M	IC250	IC508	IC808	IC908	IC1007
16ER 28 BSPT	9.52	28.0	16.00	0.11	0.6	0.6		•			•	
16ER/L 19 BSPT	9.52	19.0	16.00	0.16	0.8	0.9	•	•			•	•
16ER/L 14 BSPT	9.52	14.0	16.00	0.21	1.0	1.2	•	•	•		•	•
16ERB 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2					•	
16ERM 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2				•	•	•
16ER/L 11 BSPT	9.52	11.0	16.00	0.28	1.1	1.5	•	•			•	
16ERB 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5					•	
16ERM 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5					•	•

• For Insert Identification System, see page 489 • For threading between walls use insert TIP-BSPT. • For technical information and detailed cutting data, see pages 536-546

(1) With pressed chipformer.

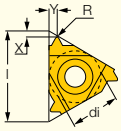
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

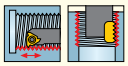
ISCARTHREAD

IR/L-BSPT

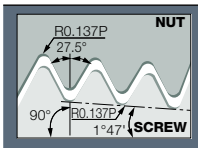
Internal BSPT (British Standard Pipe) B.S.21-1957 Full Profile Laydown Threading Inserts







Internal left-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC808	IC908	IC1007
06IR 28 BSPT	3.97	28.0	6.00	0.11	0.7	0.6	•					
08IR 28 BSPT	4.76	28.0	8.00	0.11	0.6	0.6	•					
08IR 19 BSPT	4.76	19.0	8.00	0.16	0.6	0.6	•					
11IR 19 BSPT	6.35	19.0	11.00	0.16	0.8	0.9			•		•	•
11IRB 19 BSPT	6.35	19.0	11.00	0.16	0.8	0.9					•	
11IR/L 14 BSPT	6.35	14.0	11.00	0.21	0.9	1.0			•		•	
16IR 28 BSPT	9.52	28.0	16.00	0.11	0.6	0.6			•			
16IR 19 BSPT	9.52	19.0	16.00	0.16	0.8	0.9		•	•			
16IRB 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2					•	
16IRM 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2				•	•	•
16IR/L 14 BSPT	9.52	14.0	16.00	0.21	1.0	1.2		•	•		•	
16IRM 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5				•	•	•
16IRB 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5					•	
16IR/L 11 BSPT	9.52	11.0	16.00	0.28	1.1	1.5	•	•	•		•	

• For Insert Identification System, see page 489. • For technical information and detailed cutting data, see pages 536-546

(1) With pressed chipformer.

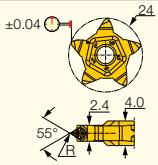
For tools, see pages: MGSIR/L (534) • SIR/L (531)

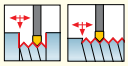
PENTACUT THREADING LINE

PENTA 24-BSPT

BSPT (British Standard Pipe) Precision Ground External Pentagonal Full Profile Threading Inserts with a Chipformer







Designation	Dimensions TPI	R	Tough ↔ Hard IC908
PENTA 24-19-BSPT	19.0	0.16	•
PENTA 24-14-BSPT	14.0	0.22	•

• Dmin(inch)=5.435/TPI

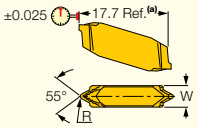
For tools, see pages: PCADR/L (268) • PCADR/L-JHP (268) • PCHBR/L (269) • PCHPR/L (268) • PCHR/L-24 (265) • PCHR/L-24-JHP (266)

ISCARTHREAD

TIP-P-BSPT

Precision Ground BSPT (British Standard Pipe) External Double-Ended Full Profile Threading Inserts with a Chipformer







Designation	Dimensions W	R±0.03	TPI	Tough ↔ Hard IC08	IC908
TIP 2P28-BSPT	2.40	0.11	28.0	•	•
TIP 2P19-BSPT	2.40	0.16	19.0	•	•
TIP 2P14-BSPT	2.40	0.22	14.0	•	•
TIP 4P11-BSPT	4.00	0.28	11.0	•	•

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

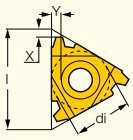
For tools, see pages: C#-GHDR/L (233) • CGHN-D (239) • CGHN-DG (239) • CGHN-S (239) • CGPAD (238) • CGPAD-JHP (238) • GHDR/L (short pocket) (233) • GHDR/L-JHP (short pocket) (234) • GHGR/L (235) • GHMPR/L (232) • GHMR/L (232) • GHSR/L (312) • GHSR/L-JHP-SL (313)

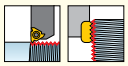
ISCARTHREAD

ER/L-STACME

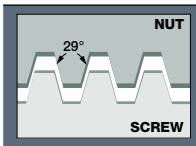
External STUB ACME Laydown Threading Inserts with a Shallow ACME Profile for Control Valves







External right-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC908
16ER/L 16 STACME	9.52	16.0	16.00	1.0	1.0		●	●	●
16ER/L 14 STACME	9.52	14.0	16.00	1.1	1.1		●		
16ER/L 12 STACME	9.52	12.0	16.00	1.2	1.2		●	●	●
16ER/L 10 STACME	9.52	10.0	16.00	1.3	1.3		●		●
16ER/L 8 STACME	9.52	8.0	16.00	1.5	1.5		●	●	●
16ER/L 6 STACME	9.52	6.0	16.00	1.8	1.8			●	●
22ER/L 5 STACME	12.70	5.0	22.00	2.0	2.3		●	●	●
27ER/L 4 STACME	15.88	4.0	27.00	2.3	2.4		●	●	●
27EL 3 STACME	15.88	3.0	27.00	2.8	2.9	●		●	●

• For Insert Identification System, see page 489 • STUB ACME ASME/ANSI B1.8-1988 Class 2G • For technical information and detailed cutting data, see pages 536-546

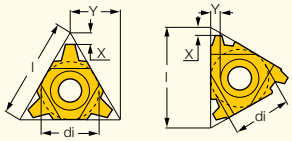
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

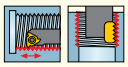
ISCARTHREAD

IR/L-STACME

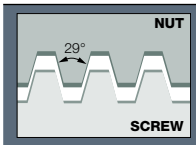
Internal STUB ACME Laydown Threading Inserts with a Shallow ACME Profile for Control Valves







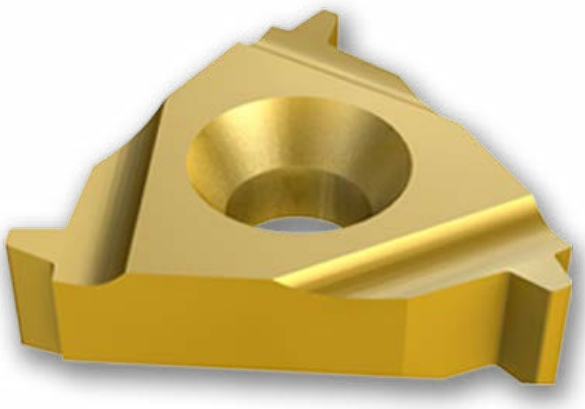
Internal left-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC50M	IC250	IC908
16IR/L 16 STACME	9.52	16.0	16.00	1.0	1.0	●		
16IR/L 14 STACME	9.52	14.0	16.00	1.1	1.1	●		
16IR/L 12 STACME	9.52	12.0	16.00	1.2	1.2	●	●	●
16IR/L 10 STACME	9.52	10.0	16.00	1.3	1.3	●		
16IR/L 8 STACME	9.52	8.0	16.00	1.5	1.5	●		
16IR 6 STACME	9.52	6.0	16.00	1.8	1.8		●	●
22IR/L 5 STACME	12.70	5.0	22.00	2.0	2.3	●	●	
22UIR 3 STACME	12.70	3.0	22.00	3.3	11.0		●	
27IR/L 4 STACME	15.88	4.0	27.00	2.3	2.4	●	●	●
27IR/L 3 STACME	15.88	3.0	27.00	2.8	2.9		●	

• For Insert Identification System, see page 489 • Tolerance: Class 2G. • For technical information and detailed cutting data, see pages 536-546

For tools, see pages: SIR/L (531)

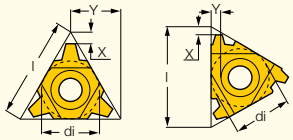


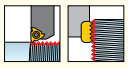
ISCARTHREAD

ER/L-ACME

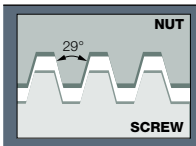
External ACME Profile Laydown
Threading Inserts for Feed Screws







External right-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC908
11ER 16 ACME	6.35	16.0	11.00	0.9	1.0				●
16ER/L 16 ACME	9.52	16.0	16.00	0.9	1.0		●		●
16ER/L 14 ACME	9.52	14.0	16.00	1.0	1.2		●		
16ER/L 12 ACME	9.52	12.0	16.00	1.1	1.2		●	●	●
16ER/L 10 ACME	9.52	10.0	16.00	1.3	1.3		●	●	●
16ER/L 8 ACME	9.52	8.0	16.00	1.5	1.5		●	●	●
22ER/L 6 ACME	12.70	6.0	22.00	1.8	2.1		●	●	●
22ER/L 5 ACME	12.70	5.0	22.00	2.0	2.3			●	●
22ER/L 4 ACME	12.70	4.0	22.00	2.1	2.2				●
22UERL 4 ACME	12.70	4.0	22.00	2.3	11.0		●		●
27ER/L 4 ACME	15.88	4.0	27.00	2.3	2.7	●	●	●	●
27UERL 3 ACME	15.88	3.0	27.00	2.8	13.7			●	●

• For Insert Identification System, see page 489 • ACME ASME/ANSI B1.5-1988 Class 3G • For technical information and detailed cutting data, see pages 536-546

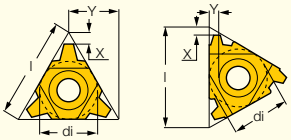
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

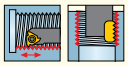
ISCARTHREAD

IR/L-ACME

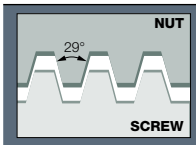
Internal ACME Profile Laydown
Threading Inserts for Feed Screws







Internal left-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC08	IC508	IC908
16IR/L 16 ACME	9.52	16.0	16.00	0.9	1.0		●	●			
16IR/L 14 ACME	9.52	14.0	16.00	1.0	1.2		●				
16IR/L 12 ACME	9.52	12.0	16.00	1.1	1.2		●	●			●
16IR/L 10 ACME	9.52	10.0	16.00	1.3	1.3		●	●			
16IR/L 8 ACME	9.52	8.0	16.00	1.5	1.5		●	●		●	●
22IR/L 6 ACME	12.70	6.0	22.00	1.8	2.1		●	●			●
22IR/L 5 ACME	12.70	5.0	22.00	2.0	2.3		●	●		●	●
22IR 4 ACME	12.70	4.0	22.00	2.1	2.2						●
22UIRL 4 ACME	12.70	4.0	22.00	2.3	11.0		●		●		
27IR/L 4 ACME	15.88	4.0	27.00	2.3	2.7	●	●	●			●
27UIRL 3 ACME	15.88	3.0	27.00	2.8	13.7			●	●		●

• For Insert Identification System, see page 489 • ACME ASME/ANSI B1.5-1988 Class 3G. • For technical information and detailed cutting data, see pages 536-546

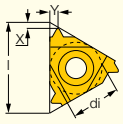
For tools, see pages: SIR/L (531)

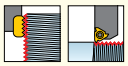
ISCARTHREAD

ER/L-UNJ

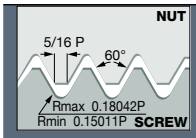
External UNJ Profile Laydown Threading Inserts for the Aviation and Aerospace Industry







External right-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC50M	IC250	IC08	IC508	IC908	IC806	IC1007
11ER 28 UNJ	6.35	28.0	11.00	0.14	0.6	0.6					•		
11ER 24 UNJ	6.35	24.0	11.00	0.16	0.7	0.8					•		
11ER/L 20 UNJ	6.35	20.0	11.00	0.19	0.8	0.9					•		
11EL 18 UNJ	6.35	18.0	11.00	0.21	0.8	1.0					•		
16ER 48 UNJ	9.52	48.0	16.00	0.08	0.6	0.6					•		
16ER 44 UNJ	9.52	44.0	16.00	0.09	0.6	0.6					•		
16ER 40 UNJ	9.52	40.0	16.00	0.10	0.6	0.6					•		
16ER 36 UNJ	9.52	36.0	16.00	0.11	0.6	0.6					•		
16ER 32 UNJ	9.52	32.0	16.00	0.12	0.6	0.6	•				•	•	
16ER 28 UNJ	9.52	28.0	16.00	0.14	0.6	0.6	•	•			•	•	
16ER/L 24 UNJ	9.52	24.0	16.00	0.16	0.7	0.8	•	•			•	•	
16ER/L 20 UNJ	9.52	20.0	16.00	0.19	0.8	0.9	•	•		•	•	•	•
16ER/L 18 UNJ	9.52	18.0	16.00	0.21	0.8	1.0	•	•	•		•	•	•
16ER/L 16 UNJ	9.52	16.0	16.00	0.24	0.8	1.0	•				•	•	•
16ER/L 14 UNJ	9.52	14.0	16.00	0.27	1.0	1.2	•	•			•	•	
16ER 13 UNJ	9.52	13.0	16.00	0.29	1.1	1.3					•		
16ER/L 12 UNJ	9.52	12.0	16.00	0.32	1.1	1.4	•	•			•	•	
16ER 11 UNJ	9.52	11.0	16.00	0.32	1.1	1.5					•		
16ER 10 UNJ	9.52	10.0	16.00	0.38	1.1	1.5	•				•		
16ER/L 8 UNJ	9.52	8.0	16.00	0.48	1.2	1.6	•	•			•		

• For Insert Identification System, see page 489 • UNJ MIL-S-8879C 9-1992 Class 3A • For technical information and detailed cutting data, see pages 536-546

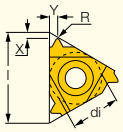
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

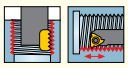
ISCARTHREAD

IR/L-UNJ

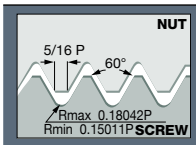
Internal Thread Profile Inserts for the Aircraft and Aerospace Industry







Internal left-hand shown



Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC908	IC806
08IR 20 UNJ	4.76	20.0	8.00	0.06	0.8	0.9	•				
08IR 18 UNJ	4.76	18.0	8.00	0.07	0.8	1.0	•				
11IR 32 UNJ	6.35	32.0	11.00	0.04	0.6	0.6				•	
11IRB 32 UNJ	6.35	32.0	11.00	0.04	0.6	0.6				•	
11IR 28 UNJ	6.35	28.0	11.00	0.04	0.6	0.6				•	
11IRB 28 UNJ	6.35	28.0	11.00	0.04	0.6	0.6				•	
11IR 24 UNJ	6.35	24.0	11.00	0.05	0.7	0.8				•	
11IRB 24 UNJ	6.35	24.0	11.00	0.05	0.6	0.6				•	
11IR 20 UNJ	6.35	20.0	11.00	0.06	0.8	0.9				•	
11IRB 20 UNJ	6.35	20.0	11.00	0.06	0.8	0.9				•	
11IR 18 UNJ	6.35	18.0	11.00	0.07	0.8	1.0				•	•
11IRB 18 UNJ	6.35	18.0	11.00	0.07	0.8	0.9				•	
11IR 16 UNJ	6.35	16.0	11.00	0.09	0.8	1.0				•	
11IRB 16 UNJ	6.35	16.0	11.00	0.09	0.8	0.9				•	
11IRB 14 UNJ	6.35	14.0	11.00	0.10	0.8	0.9				•	
16IR 28 UNJ	9.52	28.0	16.00	0.04	0.6	0.6		•			
16IR 24 UNJ	9.52	24.0	16.00	0.05	0.7	0.8		•			
16IR 20 UNJ	9.52	20.0	16.00	0.06	0.8	0.9				•	
16IR 18 UNJ	9.52	18.0	16.00	0.07	0.8	1.0		•			
16IR/L 16 UNJ	9.52	16.0	16.00	0.09	0.8	1.0		•	•	•	•
16IR 14 UNJ	9.52	14.0	16.00	0.10	1.0	1.2		•		•	
16IR/L 12 UNJ	9.52	12.0	16.00	0.12	1.1	1.4		•	•	•	•
16IR/L 8 UNJ	9.52	8.0	16.00	0.19	1.2	1.6				•	

• For Insert Identification System, see page 489 • For technical information and detailed cutting data, see pages 536-546

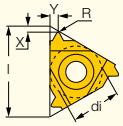
For tools, see pages: SIR/L (531)

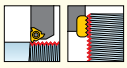
ISCAR THREAD

ER-MJ

External MJ ISO 5855 Metric Full Profile Laydown Threading Inserts for the Aviation and Aerospace Industry

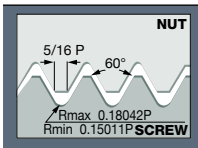






External right-hand shown

Designation	di	Pitch	l	R	X	Y	Tough ↔ Hard IC250	IC908
16ER 1.00 MJ	9.52	1.00	16.00	0.16	0.7	0.8		●
16ER 1.25 MJ	9.52	1.25	16.00	0.20	0.8	0.9		●
16ER 1.50 MJ	9.52	1.50	16.00	0.23	0.8	1.0	●	●
16ER 2.00 MJ	9.52	2.00	16.00	0.32	1.0	1.3		●



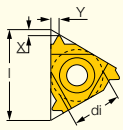
• For Insert Identification System, see page 489 • For technical information and detailed cutting data, see pages 536-546
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

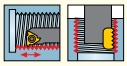
ISCAR THREAD

IR-MJ

Internal MJ ISO 5855 Metric Full Profile Laydown Threading Inserts for the Aviation and Aerospace Industry







Internal left-hand shown

Designation	di	Pitch	l	R	X	Y	IC908
11IR 1.00 MJ	6.35	1.00	11.00	0.05	0.7	0.8	●
11IRB 1.00 MJ	6.35	1.00	11.00	0.05	0.6	0.6	●
11IR 1.25 MJ	6.35	1.25	11.00	0.07	0.8	0.9	●
11IR 1.50 MJ	6.35	1.50	11.00	0.08	0.8	1.0	●
11IRB 1.50 MJ	6.35	1.50	11.00	0.08	0.8	0.9	●
11IR 2.00 MJ	6.35	2.00	11.00	0.12	0.9	1.0	●
16IR 1.00 MJ	9.52	1.00	16.00	0.05	0.7	0.8	●
16IR 1.25 MJ	9.52	1.25	16.00	0.07	0.8	0.9	●
16IR 1.50 MJ	9.52	1.50	16.00	0.08	0.8	1.0	●



• For Insert Identification System, see page 489 • For technical information and detailed cutting data, see pages 536-546
For tools, see pages: SIR/L (531)

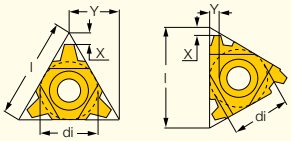


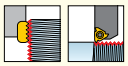
ISCARTHREAD

ER/L-TR

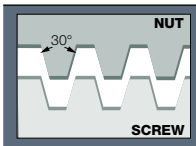
External Trapeze Shaped
DIN 103 Laydown Threading
Inserts for Feed Screws







External right-hand shown



Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC908	IC1007
16ER/L 1.5 TR	9.52	1.50	16.00	1.0	1.1		●	●		●	
16ER/L 2 TR	9.52	2.00	16.00	1.0	1.3		●	●		●	
16ER/L 3 TR	9.52	3.00	16.00	1.3	1.5	●	●	●	●	●	●
22ER/L 4 TR	12.70	4.00	22.00	1.8	1.9		●	●		●	
22ER/L 5 TR	12.70	5.00	22.00	2.0	2.4	●	●	●		●	
22ER 6 TR	12.70	6.00	22.00	2.0	2.4					●	
22UERL 6 TR	12.70	6.00	22.00	2.0	11.0	●	●	●		●	
22UERL 7 TR	12.70	7.00	22.00	2.3	11.0		●	●			
22UERL 8 TR	12.70	8.00	22.00	2.5	11.0			●			
27ER/L 6 TR	15.88	6.00	27.00	2.3	2.7			●		●	
27ER/L 7 TR	15.88	7.00	27.00	2.2	2.6			●			
27UERL 8 TR	15.88	8.00	27.00	2.5	13.7	●		●		●	
27UERL 9 TR	15.88	9.00	27.00	3.0	13.7			●		●	
27UERL 10 TR (1)	15.88	10.00	27.00	3.2	13.7			●		●	

• For Insert Identification System, see page 489 • DIN 103 04/1977,1502901/1977 Class 7e. • For technical information and detailed cutting data, see pages 536-546

(1) One cutting edge only

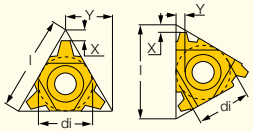
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

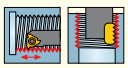
ISCARTHREAD

IR/L-TR

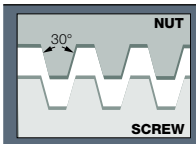
Internal Trapeze Shaped DIN 103
Laydown Threading Inserts for
Feed Screws







Internal left-hand shown



Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC908
08IR 1.5 TR (1)	4.76	1.50	8.00	0.6	0.6	●				
08UIRL 2 TR	4.76	2.00	8.00	0.9	4.0	●				
16IR 1.5 TR	9.52	1.50	16.00	1.0	1.1			●		
16IR/L 2 TR	9.52	2.00	16.00	1.0	1.3		●	●		●
16IR/L 3 TR	9.52	3.00	16.00	1.3	1.5	●	●	●	●	●
22IR/L 4 TR	12.70	4.00	22.00	1.8	1.9		●	●		●
22IR/L 5 TR	12.70	5.00	22.00	2.0	2.4	●		●		●
22IR/L 6 TR	12.70	6.00	22.00	2.0	2.4	●	●	●		●
22UIRL 6 TR	12.70	6.00	22.00	2.0	11.0		●	●		●
22UIRL 7 TR	12.70	7.00	22.00	2.3	11.0		●	●		
27IR/L 6 TR	15.88	6.00	27.00	2.3	2.7			●		●
27IL 7 TR	15.88	7.00	27.00	2.2	2.6			●		
27UIRL 8 TR	15.88	8.00	27.00	2.5	13.7	●	●	●		●
27UIRL 9 TR	15.88	9.00	27.00	3.0	13.7			●		●
27UIRL 10 TR (2)	15.88	10.00	27.00	3.2	13.7					●

• For Insert Identification System, see page 489 • Tolerance: Class 7H • For technical information and detailed cutting data, see pages 536-546

(1) Single threading corner

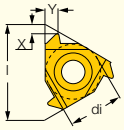
(2) One cutting edge only

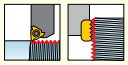
For tools, see pages: SIR/L (531)

ISCARTHREAD

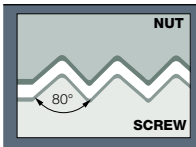
ER-PG
External Threading Inserts
for the Electrical Industry







External right-hand shown



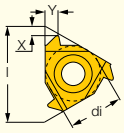
Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC08	IC908
16ER 16 PG	9.52	16.00	16.00	0.8	1.0		•
16ER 18 PG	9.52	18.00	16.00	0.8	0.9		•
16ER 20 PG	9.52	20.00	16.00	0.7	0.8	•	•

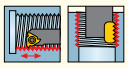
• For Insert Identification System, see page 489
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

ISCARTHREAD

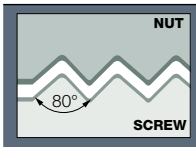
IR/L-PG
Internal Thread Profile Inserts
for the Electrical Industry







Internal left-hand shown



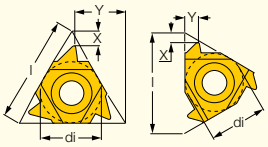
Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC50M	IC250	IC908
11IR 18 PG	6.35	18.00	11.00	0.8	0.9		•	•
16IR/L 16 PG	9.52	16.00	16.00	0.8	1.0	•		•
16IR 18 PG	9.52	18.00	16.00	0.8	0.9			•
16IL 20 PG	9.52	20.00	16.00	0.8	1.0			•

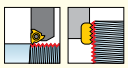
• For Insert Identification System, see page 489
For tools, see pages: SIR/L (531)

ISCARTHREAD

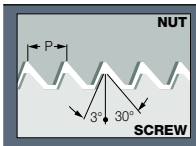
ER/L-SAGE
External Sagengenwinde
Thread Application for High
Force in One Direction







External right-hand shown



Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC250	IC908
16ER/L 2 SAGE	9.52	2.00	16.00	1.1	1.6		•
22ER 3 SAGE	12.70	3.00	22.00	1.5	2.4		•
22ER/L 4 SAGE	12.70	4.00	22.00	1.9	3.1	•	•
22UER/L 5 SAGE (1)	12.70	5.00	22.00	1.2	11.6	•	•
22UER/L 6 SAGE (1)	12.70	6.00	22.00	1.2	11.7		•

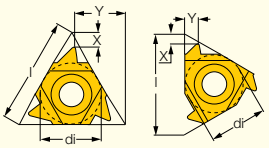
• For Insert Identification System, see page 489 • Sagengenwinde (DIN 513) • For technical information and detailed cutting data, see pages 536-546
(1) Requires special anvil
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

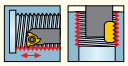
ISCARTHREAD

IR/L-SAGE

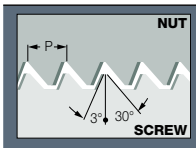
Internal Sagengenwinde (DIN 513) Thread Application for High Force in One Direction







Internal left-hand shown



Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC250	IC08	IC908
16IR/L 2 SAGE	9.52	2.00	16.00	1.2	1.7			●
22IR/L 3 SAGE	12.70	3.00	22.00	1.9	2.9	●	●	●
22IR 4 SAGE	12.70	4.00	22.00	2.3	3.5			●
22UIR 5 SAGE (1)	12.70	5.00	22.00	1.9	11.7	●		●
22UIR 6 SAGE (1)	12.70	6.00	22.00	2.1	11.9			●

• For Insert Identification System, see page 489. • For technical information and detailed cutting data, see pages 536-546

(1) Requires special anvil

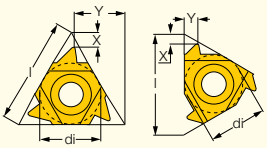
For tools, see pages: SIR/L (531)

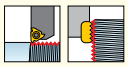
ISCARTHREAD

ER/L-ABUT

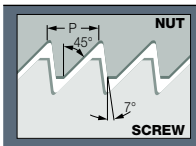
External American Buttress Laydown Threading Inserts for High Force Transmission in One Direction







External right-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC50M	IC250	IC08	IC908
11ER 20 ABUT	6.35	20.0	11.00	1.0	1.3		●	●	●
11ER 16 ABUT	6.35	16.0	11.00	1.0	1.5			●	
16ER 20 ABUT	9.52	20.0	16.00	1.0	1.3				●
16ER/L 16 ABUT	9.52	16.0	16.00	1.1	1.5		●		●
16ER/L 12 ABUT	9.52	12.0	16.00	1.4	2.0	●	●		●
16ER/L 10 ABUT	9.52	10.0	16.00	1.5	2.3				●
22ER 8 ABUT	12.70	8.0	22.00	2.1	3.3		●		●
22ER 6 ABUT	12.70	6.0	22.00	2.1	3.4				●
22UER 4 ABUT	12.70	4.0	22.00	2.3	9.5	●	●		
27UER/L 3 ABUT	15.88	3.0	27.00	3.1	11.7		●		●

• For Insert Identification System, see page 489 • ANSI B1.9-1973 Class 2 • For technical information and detailed cutting data, see pages 536-546

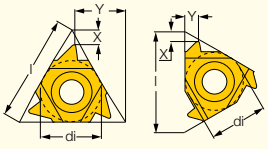
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

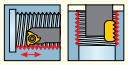
ISCARTHREAD

IR/L-ABUT

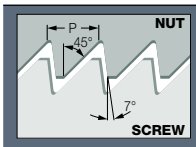
Internal American Buttress Laydown Threading Inserts for High Force Transmission in One Direction







Internal left-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC908
11IR 20 ABUT	6.35	20.0	11.00	1.0	1.3				●
11IR/L 16 ABUT	6.35	16.0	11.00	1.0	1.5	●		●	●
16IR 20 ABUT	9.52	20.0	16.00	1.0	1.3			●	●
16IR/L 16 ABUT	9.52	16.0	16.00	1.0	1.5			●	●
16IR/L 12 ABUT	9.52	12.0	16.00	1.4	2.0		●	●	●
16IR/L 10 ABUT	9.52	10.0	16.00	1.5	2.3		●	●	●
22IR 8 ABUT	12.70	8.0	22.00	2.1	3.3				●
22IR/L 6 ABUT	12.70	6.0	22.00	2.1	3.4		●		●
22UIR 4 ABUT	12.70	4.0	22.00	2.3	9.5		●	●	
27UIR/L 3 ABUT	15.88	3.0	27.00	3.1	11.7				●

• For Insert Identification System, see page 489 • ANSI B1.9-1973 Class 2. • For technical information and detailed cutting data, see pages 536-546

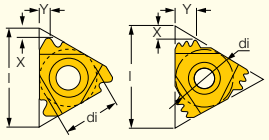
For tools, see pages: SIR/L (531)

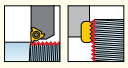
ISCARTHREAD

ER/L-API RD

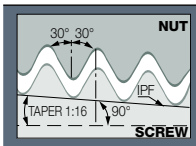
External API - Oil Thread Round Profile Laydown Threading Inserts







External right-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Z(2)	Tough ↔ Hard IC50M	IC250	IC508	IC908
16ER 10 API RD	9.52	10.0	16.00	0.75	1.5	1.4	1	●	●		●
16ER/L 8 API RD	9.52	8.0	16.00	0.75	1.3	1.6	1	●	●	●	●
22ER 10 API RD 2M (1)	12.70	10.0	22.00	0.75	2.4	3.7	2				●
27ER 10 API RD 3M (1)	15.88	10.0	27.00	0.75	3.8	6.2	3				●
27ER 8 API RD 2M (1)	15.88	8.0	27.00	0.75	3.0	4.5	2				●

• For Insert Identification System, see page 489 • API Spec 5B8-1996. • For technical information and detailed cutting data, see pages 536-546

• For recommended number of passes for multi-tooth inserts, see page 544

(1) Multi-tooth

(2) Number of teeth per corner.

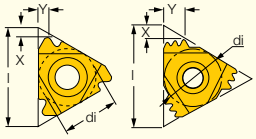
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

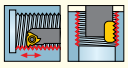
ISCARTHREAD

IR/L-API RD

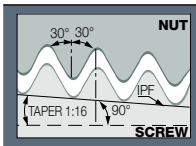
Internal API - Oil Thread Round Profile Laydown Threading Inserts







Internal left-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Z(2)	Tough ↔ Hard IC228	IC50M	IC250	IC908
16IR/L 10 API RD	9.52	10.0	16.00	0.75	1.5	1.4	1	●	●	●	●
16IR/L 8 API RD	9.52	8.0	16.00	0.75	1.3	1.6	1		●	●	
22IR 10 API RD 2M (1)	12.70	10.0	22.00	0.75	2.4	3.7	2				●
27IR 10 API RD 3M (1)	15.88	10.0	27.00	0.75	3.8	6.2	3				●
27IR 8 API RD 2M (1)	15.88	8.0	27.00	0.75	3.0	4.5	2				●

• For Insert Identification System, see page 489 • API Spec 5B8-1996. • For technical information and detailed cutting data, see pages 536-546

• For recommended number of passes for multi-tooth inserts see page 544

(1) Multi-tooth

(2) Number of teeth per corner.

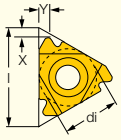
For tools, see pages: SIR/L (531)

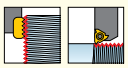
ISCARTHREAD

ER/L-API

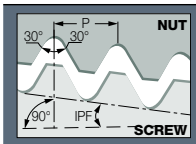
External API - Oil Thread Profile Laydown Threading Inserts







External right-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(4)	Tough ↔ Hard IC50M	IC250	IC908
22ER/L 5 API 403 (1)	12.70	5.0	22.00	3	1.8	2.5	2.375"-4.5"REG	●	●	●
27ER/L 4 API 382 (2)	15.88	4.0	27.00	2	2.1	2.8	NC23-NC50		●	●
27ER 4 API 383 (2)	15.88	4.0	27.00	3	2.1	2.8	NC56-NC77		●	●
27ER/L 4 API 502 (3)	15.88	4.0	27.00	2	2.0	3.0	6-5/8" REG	●	●	●
27ER 4 API 503 (3)	15.88	4.0	27.00	3	2.0	3.0	5-1/2,7-5/8,8-5/8REG	●	●	●

• For Insert Identification System, see page 489 • For technical information and detailed cutting data, see pages 536-546

(1) V-0.040

(2) V-0.038R

(3) V-0.050

(4) Connection no. or size

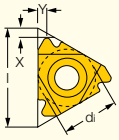
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

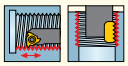
ISCARTHREAD

IR/L-API

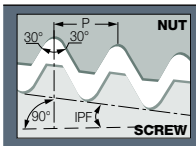
Internal API - Oil Thread Profile Laydown Threading Inserts







Internal left-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(4)	Tough ↔ Hard IC50M	IC250	IC908
22IR/L 5 API 403 (1)	12.70	5.0	22.00	3	1.8	2.5	2.375"-4.5"REG	●	●	●
27IR/L 4 API 382 (2)	15.88	4.0	27.00	2	2.1	2.8	NC23-NC50	●	●	●
27IR 4 API 383 (2)	15.88	4.0	27.00	3	2.1	2.8	NC56-NC77			●
27IR/L 4 API 502 (3)	15.88	4.0	27.00	2	2.0	3.0	6-5/8" REG	●	●	
27IR/L 4 API 503 (3)	15.88	4.0	27.00	3	2.0	3.0	5-1/2,7-5/8,8-5/8REG	●	●	

• For Insert Identification System, see page 489 • 0.050, API Spec 74-1994. • For technical information and detailed cutting data, see pages 536-546

(1) V-0.040

(2) V-0.038R

(3) V-0.050

(4) Connection no. or size

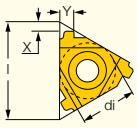
For tools, see pages: SIR/L (531)

ISCARTHREAD

ER-BUT

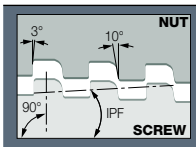
External BUT - Oil Thread Profile Laydown Threading Inserts for Buttress Casing







External right-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(1)	Tough ↔ Hard IC50M	IC250	IC908
22ER 5 BUT 0.75	12.70	5.0	22.00	0.75	2.2	2.4	4-1/2" - 13-3/8"	●	●	●
22ER 5 BUT-1.00	12.70	5.0	22.00	1.0	2.3	2.4	16" - 20"		●	

• For Insert Identification System, see page 489 • ANSI B1.9.1973 Class 2 • For technical information and detailed cutting data, see pages 536-546

(1) Connection no. or size

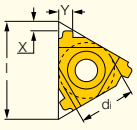
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

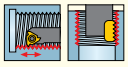
ISCARTHREAD

IR-BUT

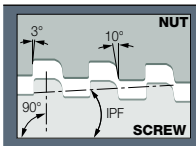
Internal BUT - Oil Thread Profile Laydown Threading Inserts for Buttress Casing







Internal left-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(1)	Tough ↔ Hard IC50M	IC250	IC908
22IR 5 BUT 0.75	12.70	5.0	22.00	0.75	2.2	2.4	4-1/2" - 13-3/8"	●	●	●
22IR 5 BUT 1.00	12.70	5.0	22.00	1.00	2.3	2.4	16" - 20"		●	

• For Insert Identification System, see page 489. • ANSI B1.9.1973 Class 2. • For technical information and detailed cutting data, see pages 536-546

(1) Connection no. or size

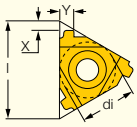
For tools, see pages: SIR/L (531)

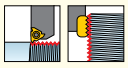
ISCARTHREAD

ER-EL

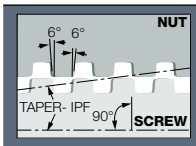
External EL - Extreme Line Oil Thread Profile Laydown Threading Inserts







External right-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(1)	Tough ↔ Hard IC250	IC908
22ER 6 EL 1.5	12.70	6.0	22.00	1.5	1.9	1.9	5" - 7-5/8"	●	●
22ER 5 EL 1.25	12.70	5.0	22.00	1.25	2.4	2.3	8-5/8" - 10-3/4"	●	●

• For Insert Identification System, see page 489 • ANSI B1.9.1973 Class 2

(1) Connection no. or size

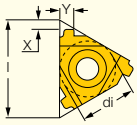
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

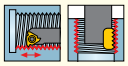
ISCARTHREAD

IR-EL

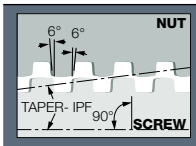
Internal EL - Extreme Line Oil Thread Profile Laydown Threading Inserts







Internal left-hand shown



Designation	Dimensions di	TPI	l	IPF	X	Y	Size(1)	Tough ↔ Hard IC250	IC908
22IR 6 EL 1.5	12.70	6.0	22.00	1.5	1.9	1.9	5" - 7-5/8"		●
22IR 5 EL 1.25	12.70	5.0	22.00	1.25	2.4	2.3	8-5/8" - 10-3/4"	●	

• For Insert Identification System, see page 489 • ANSI B1.9.1973 Class 2.

(1) Connection no. or size

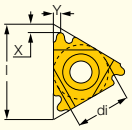
For tools, see pages: SIR/L (531)

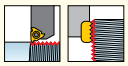
ISCARTHREAD

ER/L-RND

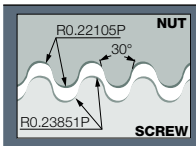
External DIN 405 Round Laydown Threading Inserts for Fire Fighting and Food Industry Pipe Couplings







External right-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC908
16ER/L 10 RND	9.52	10.0	16.00	1.1	1.2		●	●		●
16ER/L 8 RND	9.52	8.0	16.00	1.4	1.3		●	●		●
16ERM 8 RND (1)	9.52	8.0	16.00	1.4	1.3					●
16ER/L 6 RND	9.52	6.0	16.00	1.5	1.7		●	●		●
16ERM 6 RND (1)	9.52	6.0	16.00	1.5	1.7				●	●
22ER/L 6 RND	12.70	6.0	22.00	1.5	1.7	●	●	●		●
22ER/L 4 RND	12.70	4.0	22.00	2.2	2.3		●	●		●
27ER 4 RND	15.88	4.0	27.00	2.2	2.3		●	●		

• For Insert Identification System, see page 489 • Tolerance: Class 7H. • For technical information and detailed cutting data, see pages 536-546

(1) With pressed chipformer

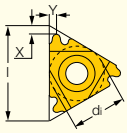
For tools, see pages: C#-SER/L (530) • SER-D (530) • SER/L (529)

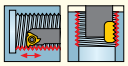
ISCARTHREAD

IR/L-RND

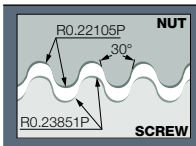
Internal DIN 405 Round Laydown Threading Inserts for Fire Fighting and Food Industry Pipe Couplings







Internal left-hand shown



Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC908
16IR 10 RND	9.52	10.0	16.00	1.1	1.2		●	●	●
16IR/L 8 RND	9.52	8.0	16.00	1.4	1.4		●	●	●
16IRM 8 RND (1)	9.52	8.0	16.00	1.4	1.4				●
16IR/L 6 RND	9.52	6.0	16.00	1.4	1.5	●		●	●
16IRM 6 RND (1)	9.52	6.0	16.00	1.4	1.5				●
22IR 6 RND	12.70	6.0	22.00	1.5	1.7		●		●
22IR/L 4 RND	12.70	4.0	22.00	2.2	2.3		●	●	●
27IR/L 4 RND	15.88	4.0	27.00	2.2	2.3		●	●	●

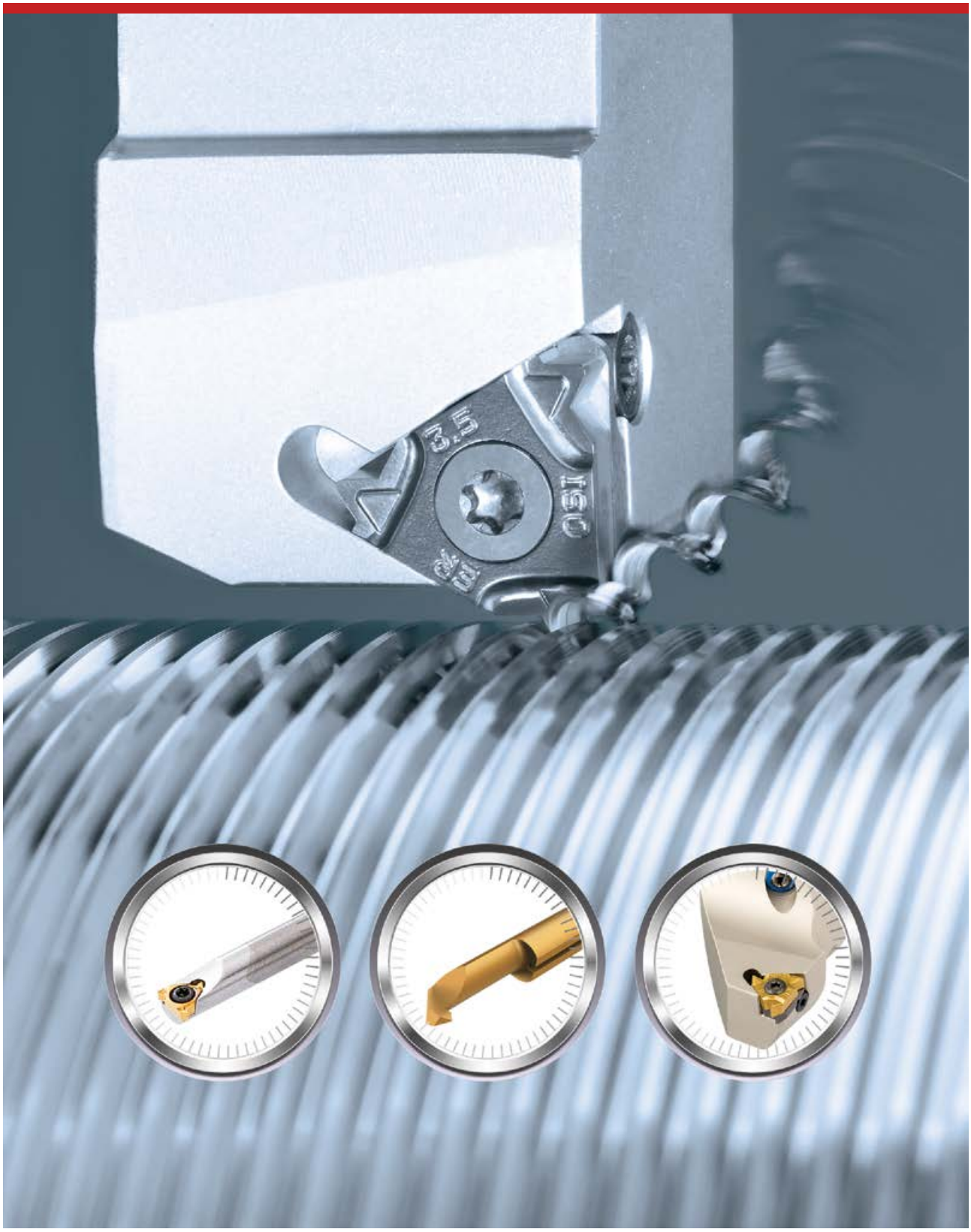
• For Insert Identification System, see page 489 • Tolerance: Class 7H. • For technical information and detailed cutting data, see pages 536-546

(1) With pressed chipformer.

For tools, see pages: SIR/L (531)



THREADING TOOLS



Toolholder Identification System

1. Clamping System

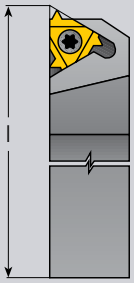
S — Screw Clamping

2. Application

E — External
I — Internal

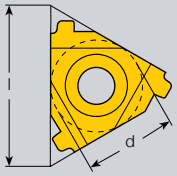
5. Tool Length

	mm
D —	60
F —	80
H —	100
K —	125
L —	140
M —	150
P —	170
R —	200
S —	250
T —	300
U —	350
V —	400



6. Insert Size

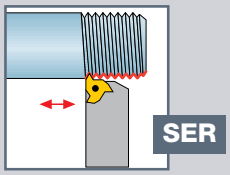
l (mm)	d
06	5/32"
08	3/16"
08U	3/16"
11	1/4"
16	3/8"
22	1/2"
22U	1/2"
27	5/8"
27U	5/8"

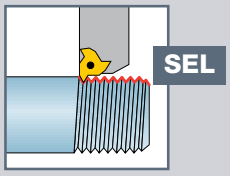


S	E	R	2020	K	16	□
1	2	3	4	5	6	7

3. Hand of Tool

R — Right-hand
L — Left-hand





External Toolholders
Shank: hxb
2020 - 20x20 mm

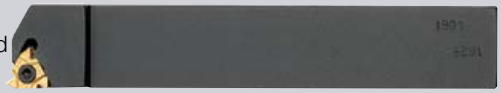
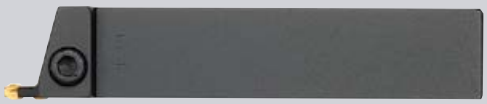
7. Optional Specifications

U - For U-type inserts
B - Bore for coolant
C - Carbide shank
O - Offset style
D - Drop head
G - Gang tool
SP - Special

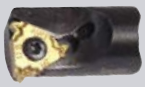
* Optional Prefix

C
HSK
KM] Exchangeable Adaptation System

Tool Types

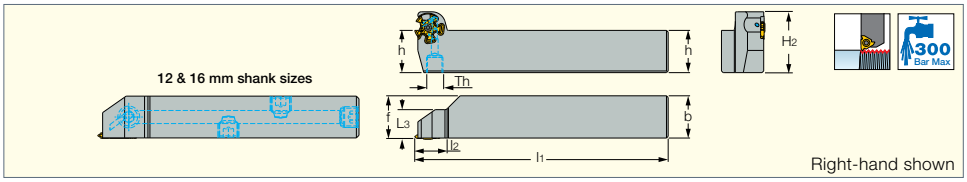
C#-SER/L HSK-SEL		Standard 
		U-Type 
ISCAR GROOVE-TURN TOOLS		
DECAIQTHREAD Carrying Insert with 10 Threading Corners		
PENTACUT carrying with 5 Threading corners Inserts For tool information, refer to the Groove-Turn chatpter		

Boring Bars

E-SIR-HEAD		Standard 
		U-Type 
GROOVE-TURN Boring Bars		
CHAMGROOVE Holder and Carbide Bar		
CHAMGROOVE Integral		
PICCOCUT Holders and Carbide Bars		

DECAIQTHREAD
JETCUT

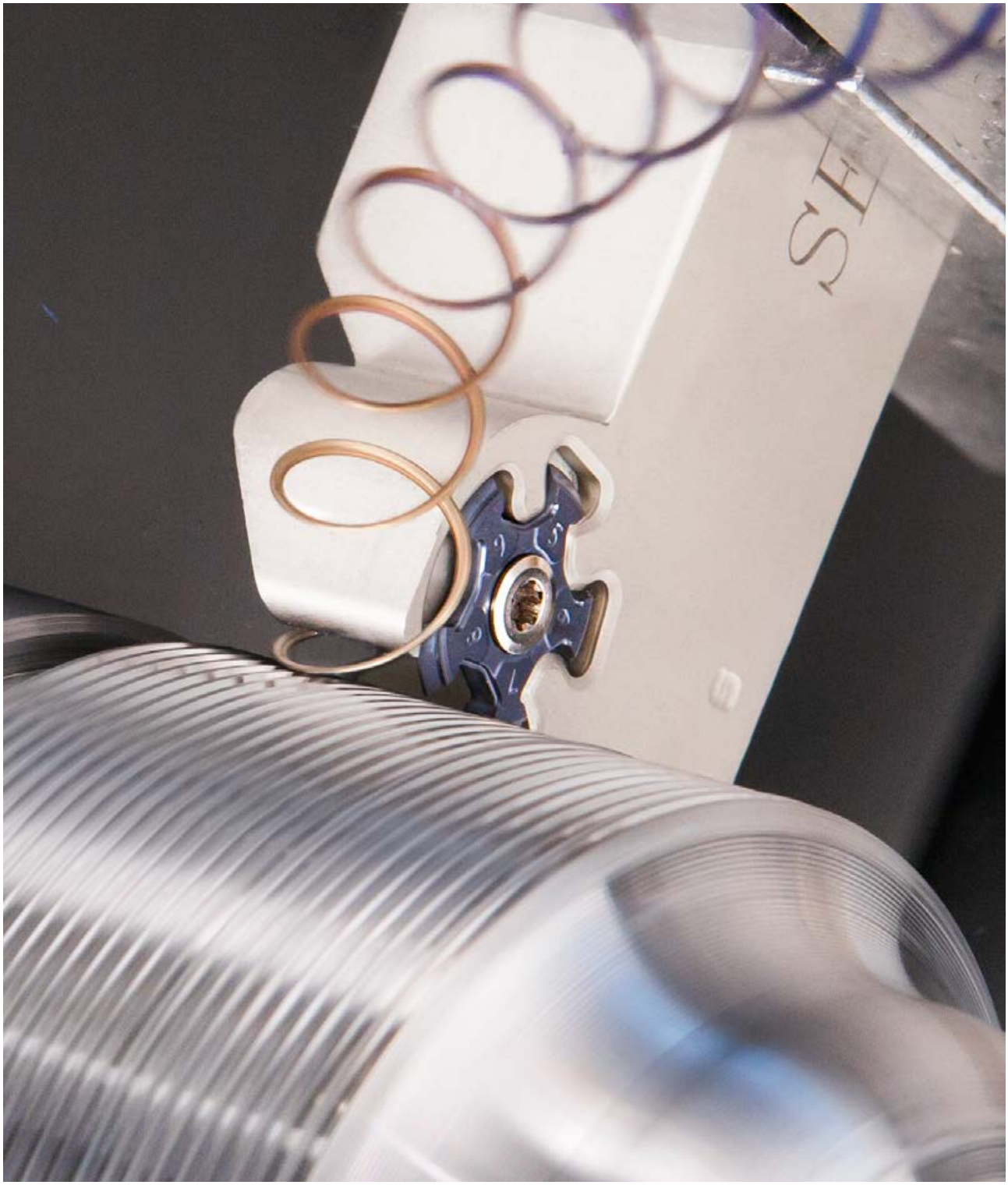
SER/L-TT
External Threading Tools Carrying Inserts with 10 Threading Corners



Designation	h	b	f	L_3	l_2	l_1	H_2	T_h			
SER/L 1212 F16TT-JHP	12.0	12.0	12.2	-	20.0	80.00	23.0	UNF 5/16-24	SR M4X0.7-L10 IP10X2	IP-10/5	SR 5/16UNF TL360
SER 1616 H16TT-JHP	16.0	16.0	16.2	-	20.0	100.00	27.0	UNF 5/16-24	SR M4X0.7-L10 IP10X2	IP-10/5	SR 5/16UNF TL360
SER/L 2020 K16TT-JHP	20.0	20.0	20.2	-	20.0	125.00	31.0	G 1/8-28	SR M4X0.7-L10 IP10X2	IP-10/5	
SER/L 2525 M16TT-JHP	25.0	25.0	25.2	17.00	20.0	150.00	36.0	G 1/8-28	SR M4X0.7-L10 IP10X2	IP-10/5	

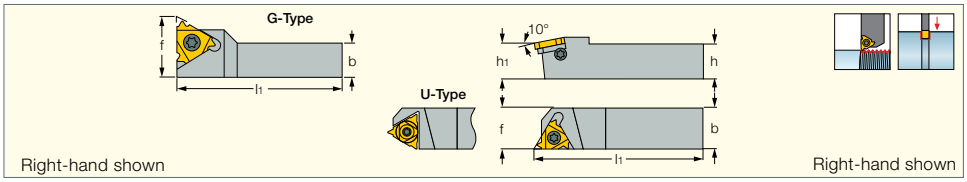
• **IMPORTANT:** Applying coolant through the tool is mandatory.

For inserts, see pages: TTG-16E-A55 (490) • TTG-16E-A60 (493) • TTG-16E-ISO (497) • TTG-16E-UN (502)



ISCARTHREAD

SER/L
External Threading Toolholders



Designation	h	b	l_1	f	Insert[2]
SER 0808 H11 [1]	8.0	8.0	100.00	11.0	11 ER..
SER/L 1010 H11 [1]	10.0	10.0	100.00	11.0	11 ER/L..
SER/L 1212 F16	12.0	12.0	80.00	16.0	16 ER/L..
SER/L 1616 H16	16.0	16.0	100.00	16.0	16 ER/L..
SER 1616 K16G	16.0	16.0	125.00	21.7	16 ER..
SER/L 2020-16-AD	20.0	20.0	67.00	20.0	16 ER/L..
SER/L 2020 K16	20.0	20.0	125.00	20.0	16 ER/L..
SER/L 2525 M16	25.0	25.0	150.00	25.0	16 ER/L..
SER/L 3232 P16	32.0	32.0	170.00	32.0	16 ER/L..
SER/L 2525 M22	25.0	25.0	150.00	25.0	22 ER/L..
SER/L 3232 P22	32.0	32.0	170.00	32.0	22 ER/L..
SER/L 2525 M22U	25.0	25.0	150.00	28.0	22 UER/L..
SER/L 3232 P22U	32.0	32.0	170.00	32.0	22 UER/L..
SER/L 4040 R22U	40.0	40.0	200.00	40.0	22 UER/L..
SER/L 2525 M27	25.0	25.0	150.00	25.0	27 ER/L..
SER/L 3232 P27	32.0	32.0	170.00	32.0	27 ER/L..
SER/L 2525 M27U	25.0	25.0	150.00	32.0	27 UER/L..
SER/L 3232 P27U	32.0	32.0	170.00	32.0	27 UER/L..
SER/L 4040 R27U	40.0	40.0	200.00	40.0	27 UER/L..

• All tools are made for 1.5 helix angle • For multi-tooth inserts use anvils AE16M / AI16M; AE22M / AI22M; AE27M / AI27M • For GTGA inserts, use anvil AE 16-0

[1] Toolholder without anvil

[2] Right-hand inserts (ER) for right-hand tools (SER)

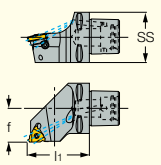
Spare Parts

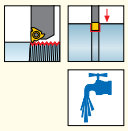
Designation					
SER 0808 H11	SR M2.6-L6.7-S11				T-8/5
SER/L 1010 H11	SR M2.6-L6.7-S11				T-8/5
SEL 1212 F16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 1212 F16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 1616 H16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 1616 H16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SER 1616 K16G	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 2020-16-AD	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 2020-16-AD	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 2020 K16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 2020 K16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 2525 M16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 2525 M16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 3232 P16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16		AI16	T-10/5
SER 3232 P16	SR 5-40-L12.2-S16	SR 5-40-L6.8-A16	AE16		T-10/5
SEL 2525 M22	SR 8-32-L15-S22	SR 8-32-L5.8-A22		AI22	T-20/5
SER 2525 M22	SR 8-32-L15-S22	SR 8-32-L5.8-A22	AE22		T-20/5
SEL 3232 P22	SR 8-32-L15-S22	SR 8-32-L5.8-A22		AI22	T-20/5
SER 3232 P22	SR 8-32-L15-S22	SR 8-32-L5.8-A22	AE22		T-20/5
SER 4040 R22	SR 8-32-L15-S22	SR 8-32-L5.8-A22	AE22		T-20/5
SEL 2525 M22U	SR 8-32-L15-S22	SR 8-32-L5.8-A22		AI22U	T-20/5
SER 2525 M22U	SR 8-32-L15-S22	SR 8-32-L5.8-A22	AE22U		T-20/5
SEL 3232 P22U	SR 8-32-L15-S22	SR 8-32-L5.8-A22		AI22U	T-20/5
SER 3232 P22U	SR 8-32-L15-S22	SR 8-32-L5.8-A22	AE22U		T-20/5
SEL 4040 R22U	SR 8-32-L15-S22	SR 8-32-L5.8-A22		AI22U	T-20/5
SEL 2525 M27	SR M5-L22-S40	SR M5-L5.8-A27		AI27	T-25/3
SER 2525 M27	SR M5-L22-S40	SR M5-L5.8-A27	AE27		T-25/3
SEL 3232 P27	SR M5-L22-S40	SR M5-L5.8-A27		AI27	K40
SER 3232 P27	SR M5-L22-S40	SR M5-L5.8-A27	AE27		K40
SER 4040 R27	SR M5-L22-S40	SR M5-L5.8-A27	AE27		K40
SEL 2525 M27U	SR M5-L22-S40	SR M5-L5.8-A27		AI27U	K40
SER 2525 M27U	SR M5-L22-S40	SR M5-L5.8-A27	AE27U		K40
SEL 3232 P27U	SR M5-L22-S40	SR M5-L5.8-A27		AI27U	K40
SER 3232 P27U	SR M5-L22-S40	SR M5-L5.8-A27	AE27U		K40
SEL 4040 R27U				AI27U	
SER/L 4040 R27U	SR M5-L22-S40	SR M5-L5.8-A27			K40
SER 4040 R27U			AE27U		

ISCARTHREAD

CAMFIX

C#-SER/L
External Threading Tools with
CAMFIX Exchangeable Shanks





Right-hand shown

Designation	SS	f	l_1	Insert(1)
C4 SER/L-27050-16	40	27.0	50.00	16ER/L...
C5 SER/L-35060-16	50	35.0	60.00	16ER/L...
C6 SER/L-45065-16	63	45.0	65.00	16ER/L...
C4 SER/L-27050-22	40	27.0	50.00	22ER/L...
C5 SER/L-35060-22	50	35.0	60.00	22ER/L...
C6 SER/L-45065-22	63	45.0	65.00	22ER/L...
C8 SER/L-55080-22	80	55.0	80.00	22ER/L...

(1) Right-hand inserts for right-hand tools and vice versa.

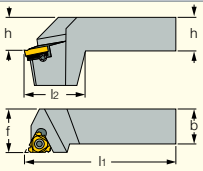
For inserts, see pages: ER-BUT (522) • ER-EL (523) • ER-MJ (517) • ER-NPTF (512) • ER-PG (519) • ER/L-55° (490) • ER/L-60° (494) • ER/L-ABUT (520) • ER/L-ACME (515) • ER/L-API (521) • ER/L-API RD (521) • ER/L-BSPT (512) • ER/L-ISO (498) • ER/L-NPT (510) • ER/L-RND (523) • ER/L-SAGE (519) • ER/L-STACME (514) • ER/L-TR (518) • ER/L-UN (503) • ER/L-UNJ (516) • ER/L-W (507) • GTGA (278) • GTMA (278)

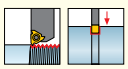
Spare Parts

Designation					
C4 SEL-27050-16	AI16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
C4 SER-27050-16	AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	EZ 83
C5 SEL-35060-16	AI16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	EZ 104
C5 SER-35060-16	AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	EZ 104
C6 SEL-45065-16	AI16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
C6 SER-45065-16	AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
C4 SEL-27050-22	AI22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C4 SER-27050-22	AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C5 SEL-35060-22	AI22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C5 SER-35060-22	AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C6 SEL-45065-22	AI22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C6 SER-45065-22	AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C8 SEL-55080-22	AI22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
C8 SER-55080-22	AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	

ISCARTHREAD

SER-D
External Threading
Drophead Toolholders





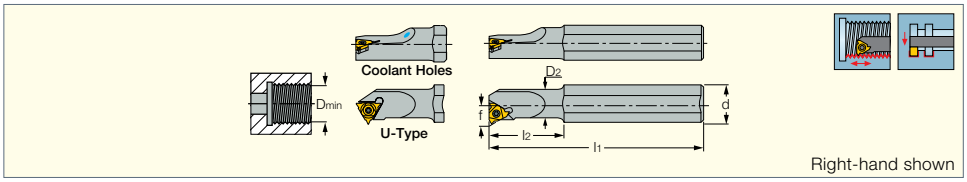
Right-hand shown

Designation	h	b	l_1	f	l_2	Insert				
SER 2525 M16D	25.0	25.0	150.00	32.0	38.0	16 ER..	SR 5-40-L12.2-S16	T-10/5	AE16	SR 5-40-L6.8-A16
SER 2525 M22D	25.0	25.0	150.00	32.0	38.0	22 ER..	SR 8-32-L15-S22	T-20/5	AE22	SR 8-32-L5.8-A22

• All toolholders are made for 1.5 helix angle. • For GTGA inserts, use anvil AE 16-0

ISCARTHREAD

SIR/L
Internal Threading Bars



Designation	d	D_2	l_1	l_2	D min	f		Shank m.[4]	Insert[5]
SIR/L 0005 H06 [1]	12.00	5.10	100.00	12.0	6.40	4.3	N	S	06 IR/IL..
SIR/L 0005 H06CB [2]	6.00	5.10	100.00	25.0	6.40	4.3	Y	C	06 IR/IL..
SIR 0005 H06-W [3]	12.00	5.10	100.00	12.0	6.40	4.3	N	S	06 IR/IL..
SIR/L 0007 K08 [1]	16.00	6.60	125.00	18.0	7.80	5.3	N	S	08 IR/IL..
SIR/L 0007 K08CB [2]	8.00	6.60	125.00	30.0	7.80	5.3	Y	C	08 IR/IL..
SIR/L 0008 K08U [1]	16.00	7.30	125.00	21.0	9.00	6.6	N	S	08 UIRL..
SIR 0008 K08UCB [2]	8.00	7.30	125.00	35.0	9.00	6.4	Y	C	08 UIRL..
SIR/L 0010 H11 [1]	10.00	10.00	100.00	-	12.00	7.4	N	S	11 IR/IL..
SIR 0010 H11B [1]	10.00	10.00	100.00	-	12.00	7.4	Y	S	11 IR/IL..
SIR/L 0010 K11 [1]	16.00	10.00	125.00	25.0	12.00	6.5	N	S	11 IR/IL..
SIR/L 0010 K11B [1]	16.00	10.00	125.00	25.0	12.00	7.4	Y	S	11 IR/IL..
SIR/L 0010 M11CB [2]	10.00	10.00	150.00	-	12.00	7.4	Y	C	11 IR/IL..
SIR/L 0012 P11CB [2]	12.00	12.00	170.00	-	15.00	8.4	Y	C	11 IR/IL..
SIR/L 0013 L11 [1]	16.00	13.00	140.00	32.0	15.00	8.9	N	S	11 IR/IL..
SIR/L 0013 M16 [1]	16.00	13.00	150.00	32.0	16.00	10.0	N	S	16 IR/L..
SIR/L 0013 M16B [1]	16.00	13.00	150.00	32.0	16.00	10.2	Y	S	16 IR/L..
SIR/L 0016 P16 [1]	20.00	16.00	170.00	40.0	19.00	11.4	N	S	16 IR/L..
SIR/L 0016 P16B [1]	20.00	16.00	170.00	40.0	19.00	11.7	Y	S	16 IR/L..
SIR 0016 R16CB [2]	16.00	16.00	200.00	-	19.00	11.7	Y	C	16 IR/IL..
SIR/L 0020-16-AD	20.00	20.00	80.00	-	24.00	13.7	N	S	16 IR/L..
SIR/L 0020 P16	20.00	20.00	170.00	-	24.00	13.7	N	S	16 IR/L..
SIR/L 0020 P16B	20.00	20.00	170.00	-	24.00	13.7	Y	S	16 IR/L..
SIR 0020 S16CB	20.00	20.00	250.00	-	28.00	13.7	Y	C	16 IR/L..
SIR/L 0025-16-AD	25.00	25.00	100.00	-	29.00	16.3	N	S	16 IR/L..
SIR/L 0025 R16	25.00	25.00	200.00	-	29.00	16.3	N	S	16 IR/L..
SIR/L 0025 R16B	25.00	25.00	200.00	-	29.00	16.2	Y	S	16 IR/L..
SIR 0025 S16CB	25.00	25.00	250.00	-	28.00	16.2	Y	C	16 IR/L..
SIR/L 0032 S16	32.00	32.00	250.00	-	36.00	19.7	N	S	16 IR/L..
SIR/L 0040 T16	40.00	40.00	300.00	-	44.00	23.7	N	S	16 IR/L..
SIR/L 0050 U16	50.00	50.00	350.00	-	54.00	28.7	N	S	16 IR/L..
SIR/L 0020 P22 [1]	20.00	20.00	170.00	-	24.00	15.6	N	S	22 IR/L..
SIR/L 0025 R22	25.00	25.00	200.00	-	29.00	17.2	N	S	22 IR/L..
SIR/L 0025 R22B	25.00	25.00	200.00	-	29.00	18.1	Y	S	22 IR/L..
SIR/L 0032 S22	32.00	32.00	250.00	-	38.00	21.5	N	S	22 IR/L..
SIR/L 0040 T22	40.00	40.00	300.00	-	46.00	25.8	N	S	22 IR/L..
SIR/L 0050 U22	50.00	50.00	350.00	-	56.00	30.6	N	S	22 IR/L..
SIR/L 0032 S22U	32.00	32.00	250.00	-	38.00	25.5	N	S	22 UIRL..
SIR 0040 T22U	40.00	40.00	300.00	-	46.00	29.5	N	S	22 UIRL..
SIR/L 0032 S27	32.00	32.00	250.00	-	40.00	22.4	N	S	27 IR/L
SIR 0040 T27	40.00	40.00	300.00	-	48.00	26.6	N	S	27 IR/L..
SIR/L 0050 U27	50.00	50.00	350.00	-	58.00	31.6	N	S	27 IR/L..
SIR/L 0060 V27	60.00	60.00	400.00	-	68.00	36.6	N	S	27 IR/L..
SIR/L 0032 S27U	32.00	32.00	250.00	-	40.00	24.7	N	S	27 UIRL..
SIR 0040 T27U	40.00	40.00	300.00	-	48.00	29.4	N	S	27 UIRL..
SIR/L 0050 U27U	50.00	50.00	350.00	-	58.00	34.3	N	S	27 UIRL..
SIR/L 0060 V27U	60.00	60.00	400.00	-	68.00	39.3	N	S	27 UIRL..

• B-steel shank with coolant hole, C-carbide shank without coolant hole, CB-carbide shank with coolant hole • All toolholders are made for 1.5 helix angle • For GTGA inserts, use anvil AL 16-0

[1] Toolholder without anvil

[2] Carbide shank without anvil

[3] Toolholder without anvil • WBMT 060102 R/L for internal turning

[4] C-carbide,S-steel

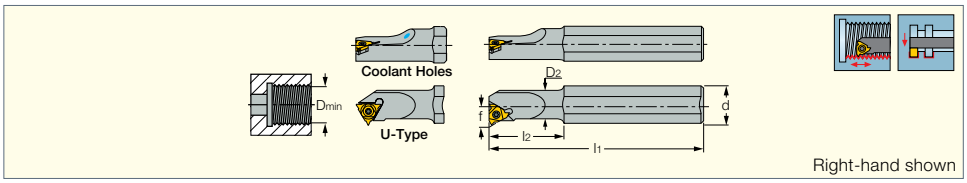
[5] Right-hand inserts (IR) for right-hand tools (SIR)

Spare Parts

Designation						
SIR/L 0005 H06				SR 14-552	T-6/5	
SIR/L 0005 H06CB				SR 14-552	T-6/5	
SIR 0005 H06-W				SR 14-552	T-6/5	
SIR/L 0007 K08				SR 14-558	T-6/5	
SIR/L 0007 K08CB				SR 14-558	T-6/5	
SIR/L 0008 K08U				SR 14-558	T-6/5	
SIR 0008 K08UCB				SR 14-558	T-6/5	

ISCARTHREAD

SIR/L (continued)
Internal Threading Bars



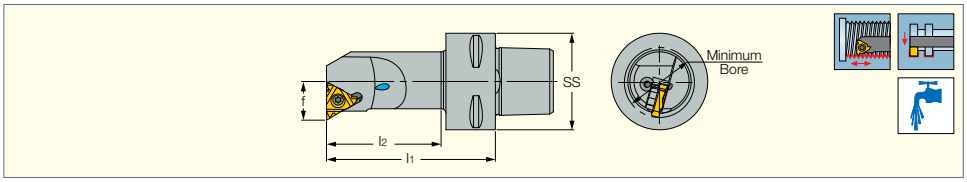
Spare Parts

Designation						
SIR/L 0010 H11				SR M2.6-L6.7-S11	T-8/5	
SIR 0010 H11B				SR M2.6-L6.7-S11	T-8/5	
SIR/L 0010 K11				SR M2.6-L6.7-S11	T-8/5	
SIR/L 0010 K11B				SR M2.6-L6.7-S11	T-8/5	PL 16
SIR/L 0010 M11CB				SR M2.6-L6.7-S11	T-8/5	
SIR/L 0012 P11CB				SR M2.6-L6.7-S11	T-8/5	
SIR/L 0013 L11				SR M2.6-L6.7-S11	T-8/5	
SIR/L 0013 M16				SR 5-40-L9.7-S16S	T-10/5	
SIR/L 0013 M16B				SR 5-40-L9.7-S16S	T-10/5	PL 16
SIR/L 0016 P16				SR 5-40-L9.7-S16S	T-10/5	
SIR/L 0016 P16B				SR 5-40-L9.7-S16S	T-10/5	PL 20
SIR 0016 R16CB				SR 5-40-L9.7-S16S	T-10/5	
SIL 0020-16-AD		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0020-16-AD	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0020 P16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0020 P16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0020 P16B		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	PL 20
SIR 0020 P16B	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	PL 20
SIR 0020 S16CB	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0025-16-AD		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0025-16-AD	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0025 R16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0025 R16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0025 R16B	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	PL 25
SIL 0025 R16B		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	PL 25
SIR/L 0025 R16B			SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	PL 25
SIR 0025 S16CB	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0032 S16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0032 S16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0040 T16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0040 T16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIL 0050 U16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR 0050 U16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5	
SIR/L 0020 P22				SR 8-32-L12-S22S	T-20/5	
SIL 0025 R22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0025 R22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIL 0025 R22B		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	PL 25
SIR 0025 R22B	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	PL 25
SIL 0032 S22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0032 S22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIL 0040 T22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0040 T22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIL 0050 U22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0050 U22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIL 0032 S22U		AE22U	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0032 S22U	AI22U		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIR 0040 T22U	AI22U		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5	
SIL 0032 S27		AE27	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0032 S27	AI27		SR M5-L5.8-A27	SR M5-L22-S40	T-25/3	
SIR 0040 T27	AI27		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIL 0050 U27		AE27	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0050 U27	AI27		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIL 0060 V27		AE27	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0060 V27	AI27		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIL 0032 S27U		AE27U	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0032 S27U	AI27U		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0040 T27U	AI27U		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIL 0050 U27U		AE27U	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0050 U27U	AI27U		SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIL 0060 V27U		AE27U	SR M5-L5.8-A27	SR M5-L22-S40	K40	
SIR 0060 V27U	AI27U		SR M5-L5.8-A27	SR M5-L22-S40	K40	

ISCARTHREAD

CAMFIX

C#-SIR/L
Internal Threading Bars with
CAMFIX Exchangeable Shanks



Designation	SS	f	l_2	l_1	D min	Insert
C4 SIR/L-12060-16	40	11.7	37.0	60.00	20.00	16 IR/L..
C4 SIR/L-14060-16	40	13.5	38.0	60.00	25.00	16 IR/L..
C4 SIR/L-17070-16	40	16.0	48.0	70.00	29.00	16 IR/L..
C4 SIR/L-22090-16	40	19.5	69.0	90.00	36.00	16 IR/L..
C4 SIR/L-27080-16	40	23.5	60.0	80.00	44.00	16 IR/L..
C5 SIR/L-12060-16	50	11.7	35.0	60.00	20.00	16 IR/L..
C5 SIR/L-14060-16	50	13.5	36.0	60.00	25.00	16 IR/L..
C5 SIR/L-17070-16	50	16.0	47.0	70.00	29.00	16 IR/L..
C5 SIR/L-22090-16	50	19.5	68.0	90.00	36.00	16 IR/L..
C5 SIR/L-27105-16	50	23.5	84.0	105.00	44.00	16 IR/L..
C6 SIR/L-14070-16	63	13.5	42.0	70.00	25.00	16 IR/L..
C6 SIR/L-17075-16	63	16.0	48.0	75.00	29.00	16 IR/L..
C6 SIR/L-22090-16	63	19.5	64.0	90.00	36.00	16 IR/L..
C6 SIR/L-27105-16	63	23.5	80.0	105.00	44.00	16 IR/L..
C4 SIR-15065-22	40	15.4	42.0	65.00	25.00	22 IR/L..
C4 SIR/L-19070-22	40	17.9	48.0	70.00	29.00	22 IR/L..
C4 SIR/L-22090-22	40	21.4	69.0	90.00	38.00	22 IR/L..
C4 SIR/L-27080-22	40	25.4	60.0	80.00	46.00	22 IR/L..
C5 SIR/L-15065-22	50	15.4	41.0	65.00	25.00	22 IR/L..
C5 SIR/L-19070-22	50	17.9	47.0	70.00	29.00	22 IR/L..
C5 SIR/L-22090-22	50	21.4	68.0	90.00	38.00	22 IR/L..
C5 SIR/L-27105-22	50	25.4	84.0	105.00	46.00	22 IR/L..
C6 SIR/L-19075-22	63	17.9	48.0	75.00	29.00	22 IR/L..
C6 SIR/L-22090-22	63	21.4	64.0	90.00	38.00	22 IR/L..
C6 SIR/L-27105-22	63	25.4	80.0	105.00	46.00	22 IR/L..

For inserts, see pages: GTGA (278) • GTMA (278) • IR-BUT (522) • IR-EL (523) • IR-MJ (517) • IR/L-55° (491) • IR/L-60° (494) • IR/L-ABUT (520) • IR/L-ACME (515) • IR/L-API (522) • IR/L-API RD (521) • IR/L-BSPT (513) • IR/L-ISO (499) • IR/L-NPT (510) • IR/L-NPTF (512) • IR/L-PG (519) • IR/L-RND (524) • IR/L-SAGE (520) • IR/L-STACME (514) • IR/L-TR (518) • IR/L-UN (504) • IR/L-UNJ (516) • IR/L-W (508)

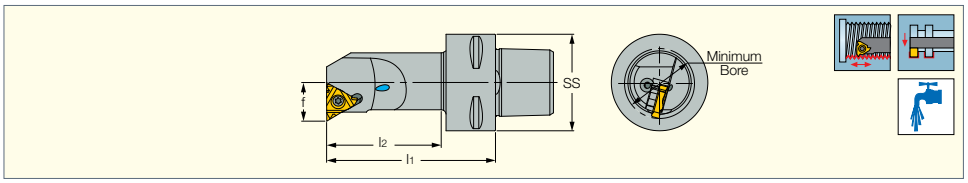
Spare Parts

Designation					
C4 SIL-12060-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-12060-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIL-14060-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-14060-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIL-17070-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-17070-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIL-22090-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-22090-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIL-27080-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-27080-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIL-12060-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIR-12060-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIL-14060-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIR-14060-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIL-17070-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIR-17070-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIL-22090-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIR-22090-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIL-27105-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C5 SIR-27105-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIL-14070-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIR-14070-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIL-17075-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIR-17075-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIL-22090-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIR-22090-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIL-27105-16		AE16	SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C6 SIR-27105-16	AI16		SR 5-40-L6.8-A16	SR 5-40-L12.2-S16	T-10/5
C4 SIR-15065-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIL-19070-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIR-19070-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIL-22090-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIR-22090-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIL-27080-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C4 SIR-27080-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5

ISCARTHREAD

CAMFIX

C#-SIR/L (continued)
Internal Threading Bars with CAMFIX Exchangeable Shanks



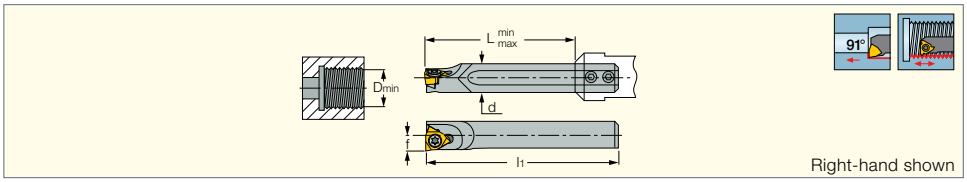
Spare Parts

Designation					
C5 SIL-15065-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIR-15065-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIL-19070-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIR-19070-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIL-22090-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIR-22090-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIL-27105-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C5 SIR-27105-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIL-19075-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIR-19075-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIL-22090-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIR-22090-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIL-27105-22		AE22	SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5
C6 SIR-27105-22	AI22		SR 8-32-L5.8-A22	SR 8-32-L15-S22	T-20/5

ISOTURN

ISCARTHREAD

MGSIR/L
Solid Carbide Bars for Internal Turning and Threading



Designation	d	l_1	L min(3)	L max(3)	f	D min		
MGSIR/L 06-06W (1)	6.00	59.00	16.0	42.0	3.9	7.00	SR 14-552	T-6/5
MGSIR/L 08-06W (2)	8.00	72.00	20.0	56.0	5.0	9.20	SR 14-552	T-6/5

• 91° for shoulder depth up to 2 mm • Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools. • In order to maintain high machining reliability we strongly recommend replacing the clamping screw every 10 insert indexes.

(1) For WBMT 060102 Dmin=6.6 mm f=4.13 mm

(2) For WBMT 060102 Dmin=8.8 mm f=5.20 mm

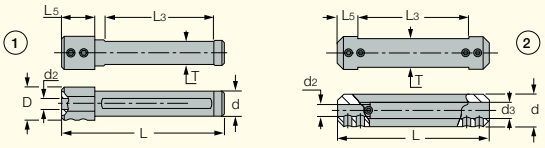
(3) Adjustment range

For inserts, see pages: IR/L-55° (491) • IR/L-60° (494) • IR/L-BSPT (513) • IR/L-ISO (499) • IR/L-NPT (510) • IR/L-NPTF (512) • IR/L-UN (504) • IR/L-W (508) • WBGT (171) • WBMT (171)

PICCOCUT

PICCO/MG PCO (holder)

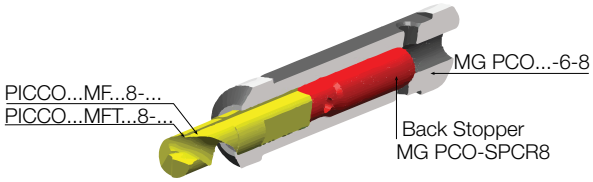
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d2	d3	L	L5	L3	T	D	Fig.				
PICCO 12-4-5	12.00	4.00	5.00	75.00	10.00	55.00	10.3	-	2	SR M5X4-PF	HW 2.5		
PICCO 16-4-5	16.00	4.00	5.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-4-5	20.00	4.00	5.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-4-5 (1)	22.00	4.00	5.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 16-6-7	16.00	6.00	7.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-6-7	20.00	6.00	7.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-6-7 (1)	22.00	6.00	7.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
MG PCO-12-6	12.00	6.00	-	75.00	15.00	50.80	11.0	18.00	1	SR M5X6-PF	HW 2.5		
MG PCO-16-6-8	16.00	6.00	8.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-20-6-8	20.00	6.00	8.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-22-6-8 (1)	22.00	6.00	8.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25-6-8	25.00	6.00	8.00	90.00	10.00	70.00	23.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	16.00	9.00	-	75.00	15.00	53.00	15.0	20.00	1	SR M5X6-PF	HW 2.5	PL 16	

• Holders are suitable for right- and left-hand inserts, and boring bars.

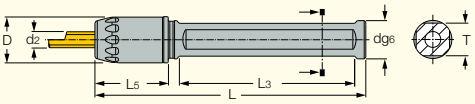
(1) Tools for Swiss-type CNC



PICCOACE

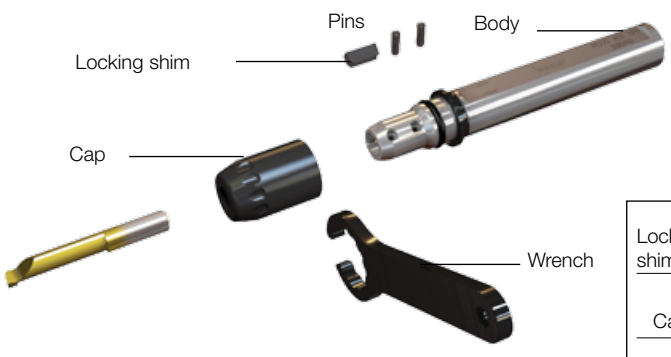
PICCO ACE

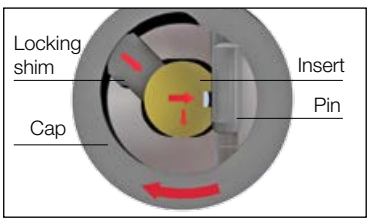
Holders for PICCOCUT Inserts

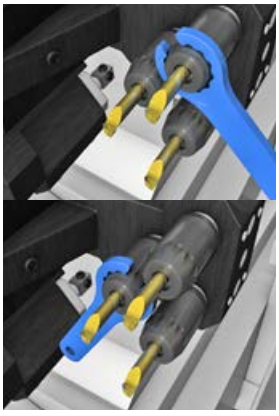


Designation	d	d2	D	L	L5	L3	T		
PICCO ACE 12-4	12.00	4.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 12-5	12.00	5.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-4	16.00	4.00	14.50	85.00	21.50	53.50	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-5	16.00	5.00	14.50	85.00	21.50	53.00	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-6	16.00	6.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 16-7	16.00	7.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-4	20.00	4.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-5	20.00	5.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-6	20.00	6.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-7	20.00	7.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-4	22.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-5	22.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-6	22.00	6.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-7	22.00	7.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-4	25.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-5	25.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-6	25.00	6.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-7	25.00	7.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7

• Holders are suitable for right- and left-hand PICCO inserts







Machining Data for Threading

ISO	Material		Condition	Tensile Strength [N/mm^2]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
	Stainless steel and cast steel		Ferritic/martensitic	680	200	12
			Martensitic	820	240	13
M	Stainless steel		Austenitic	600	180	14
K	Cast iron nodular (GGG)		Ferritic/pearlitic		180	15
			Pearlitic		260	16
	Grey cast iron (GG)		Ferritic		160	17
			Pearlitic		250	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum-wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium Ti alloys			RM 400		36
			Alpha+beta alloys cured	RM 1050		37
H	Hardened steel		Hardened		55 HRC	38
			Hardened		60 HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron		Hardened		55 HRC	41

Coated			
IC228	IC908	IC808	IC1007
Cutting Speed (m/min)			
60-100	115-190	125 - 205	135-230
60-95	110-180	120 - 195	130-220
50-90	100-175	105 - 185	120-210
45-85	90-165	95 - 175	110-200
45-85	90-165	95 - 175	110-200
50-95	100-180	105 - 195	120-215
40-75	75-140	80 - 150	90-170
35-70	70-135	75 - 145	85-160
35-70	70-135	75 - 145	85-160
40-65	80-120	85 - 130	95-145
25-50	50-100	55 - 105	60-120
35-70	70-130	75 - 140	85-155
45-60	85-110	90 - 120	100-130
45-75	90-140	95 - 150	110-170
65-85	125-160	135 - 170	150-190
45-65	90-120	95 - 130	110-145
35-70	70-130	75 - 140	85-155
30-60	60-115	65 - 125	70-140
30-35	60-70	65 - 75	70-85
30-75	60-145	65 - 155	70-175
50-195	100-365	105 - 390	120-440
40-115	80-220	85 - 235	95-265
105-215	200-400	215 - 430	240-480
105-150	200-280	215 - 300	240-335
105-150	200-280	215 - 300	240-335
40-135	80-255	85 - 275	95-305
40-135	80-255	85 - 275	95-305
40-130	80-255	85 - 275	95-305
40-130	80-250	85 - 265	95-300
40-130	80-250	85 - 265	95-300
25-30	45-60	50 - 65	55-70
15-25	35-50	35 - 55	40-60
10-15	20-30	20 - 30	25-35
5-10	15-25	15 - 25	18-30
5-10	15-25	15 - 25	18-30
75-90	140-170	150 - 180	170-205
25-35	50-70	55 - 75	60-85
25-30	45-60	50 - 65	55-70
25-30	45-60	50 - 65	55-70
25-30	45-60	50 - 65	55-70
25-30	45-60	50 - 65	55-70

Types and Profiles of Threading Inserts



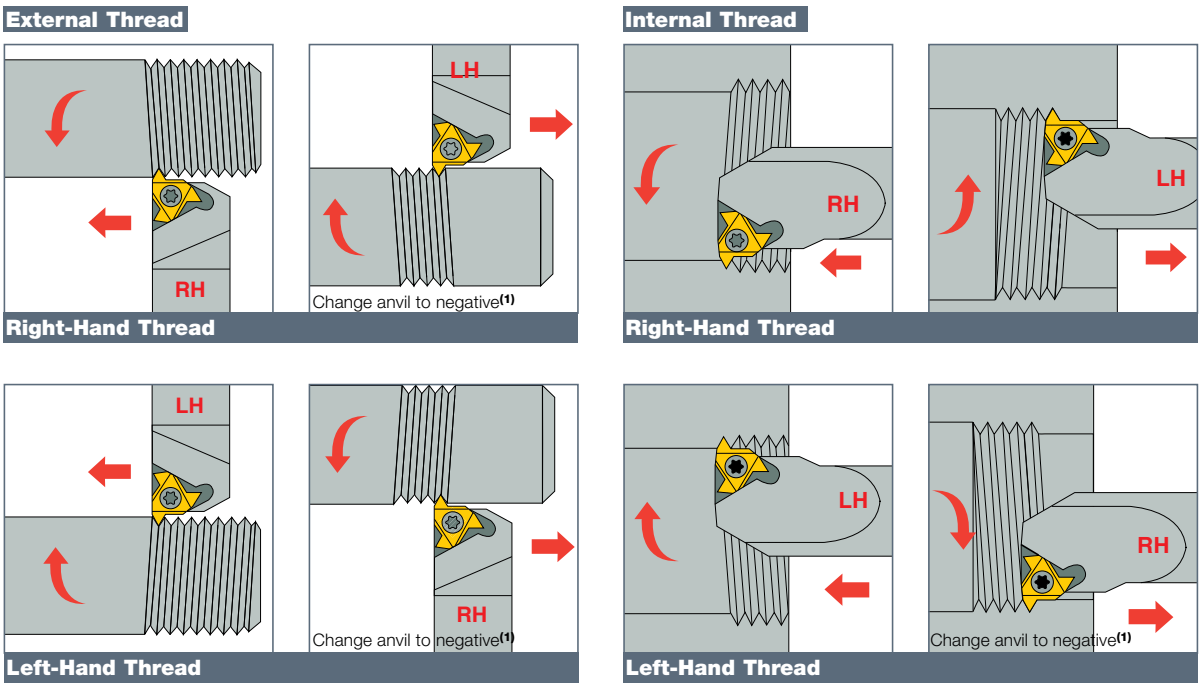
Partial Profile

- Performs different thread standards and is suitable for a wide range of pitches that have a common angle (60° or 55°)
- Inserts with a small root-corner radius suitable for the smallest pitch of the range
- Additional operations to complete the outer/internal diameter is necessary
- Not recommended for mass production
- Eliminates the need for different inserts

Full Profile

- Performs complete thread profile
- Root corner radius is only suitable for the relevant pitch
- Recommended for mass production
- Suitable for one profile only

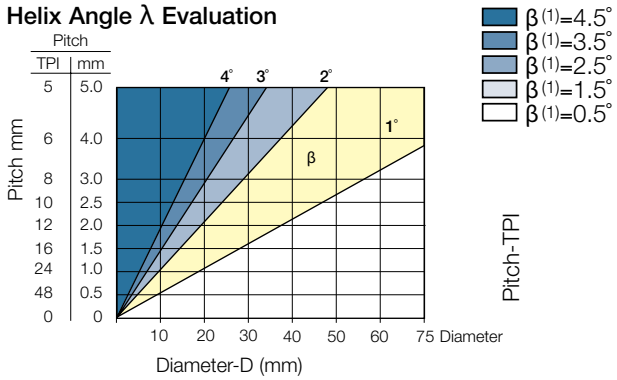
Thread Turning Methods



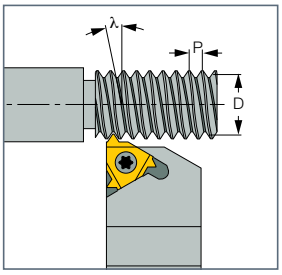
(1) See pages 539-540

Thread Helix Angle and Anvil Selection

Helix Angle λ Evaluation



(1) β - Effective inclination angle

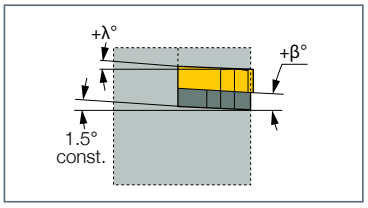


$$tg\,\lambda = \frac{P}{3.14 \cdot D} \qquad \lambda° \approx \frac{20 \cdot P}{D}$$

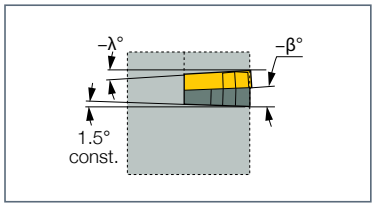
P - Pitch in mm
D - Effective diameter of thread in mm
λ - Angle of inclination

Anvil Selection According to Thread Helix Angle λ

		Standard						
Thread Helix Angle λ		>4°	3°-4°	2°-3°	1°-2°	0°-1°	Negative Anvils	
	Inclination Angle β	4.5°	3.5°	2.5°	1.5°	0.5°	-0.5°	-1.5°
I (d)	Toolholder	Anvil Designation						
16	EX RH OR IN LH	AE16+4.5	AE16+3.5	AE16+2.5	AE16	AE16+0.5	AE16-0.5	AE16-1.5
(3/8)	EX LH OR IN RH	AI16+4.5	AI16+3.5	AI16+2.5	AI16	AI16+0.5	AI16-0.5	AI16-1.5
22	EX RH OR IN LH	AE22+4.5	AE22+3.5	AE22+2.5	AE22	AE22+0.5	AE22-0.5	AE22-1.5
(1/2)	EX LH OR IN RH	AI22+4.5	AI22+3.5	AI22+2.5	AI22	AI22+0.5	AI22-0.5	AI22-1.5
27	EX RH OR IN LH	AE27+4.5	AE27+3.5	AE27+2.5	AE27	AE27+0.5	AE27-0.5	AE27-1.5
(5/8)	EX LH OR IN RH	AI27+4.5	AI27+3.5	AI27+2.5	AI27	AI27+0.5	AI27-0.5	AI27-1.5
22U	EX RH OR IN LH	AE22U+4.5	AE22U+3.5	AE22U+2.5	AE22U	AE22U+0.5	AE22U-0.5	AE22U-1.5
(1/2U)	EX LH OR IN RH	AI22U+4.5	AI22U+3.5	AI22U+2.5	AI22U	AI22U+0.5	AI22U-0.5	AI22U-1.5
27U	EX RH OR IN LH	AE27U+4.5	AE27U+3.5	AE27U+2.5	AE27U	AE27U+0.5	AE27U-0.5	AE27U-1.5
(5/8U)	EX LH OR IN RH	AI27U+4.5	AI27U+3.5	AI27U+2.5	AI27U	AI27U+0.5	AI27U-0.5	AI27U-1.5

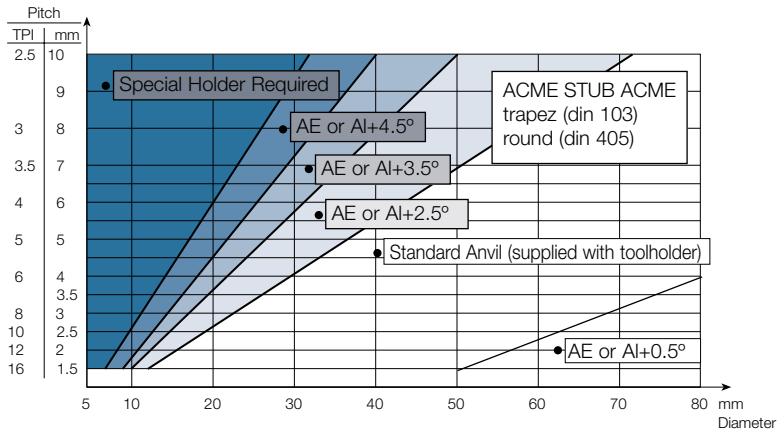


Anvils for positive inclination angle applicable when turning **RH** thread with **RH** holders or **LH** thread with **LH** toolholders.

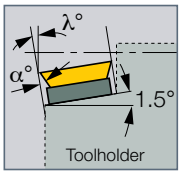


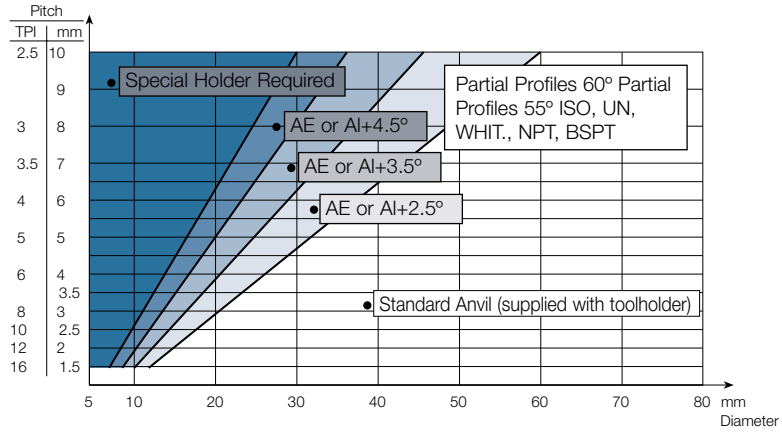
Anvils for negative inclination used when turning **RH** thread with **LH** holder or **LH** thread with **RH** toolholder.

Thread Helix Angle and Anvil Selection

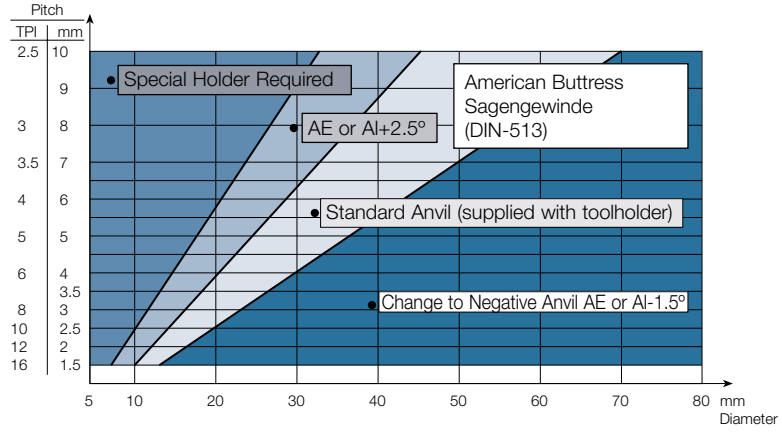


Use **AE** Anvils for **EX**-**RH** and **IN**-**LH** Toolholders.
Use AI Anvils for **IN**-**RH** and **EX**-**LH** Toolholders.

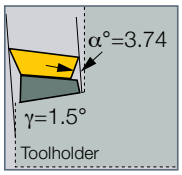




Use **AE** Anvils for **EX**-**RH** and **IN**-**LH** Toolholders.
Use AI Anvils for **IN**-**RH** and **EX**-**LH** Toolholders.

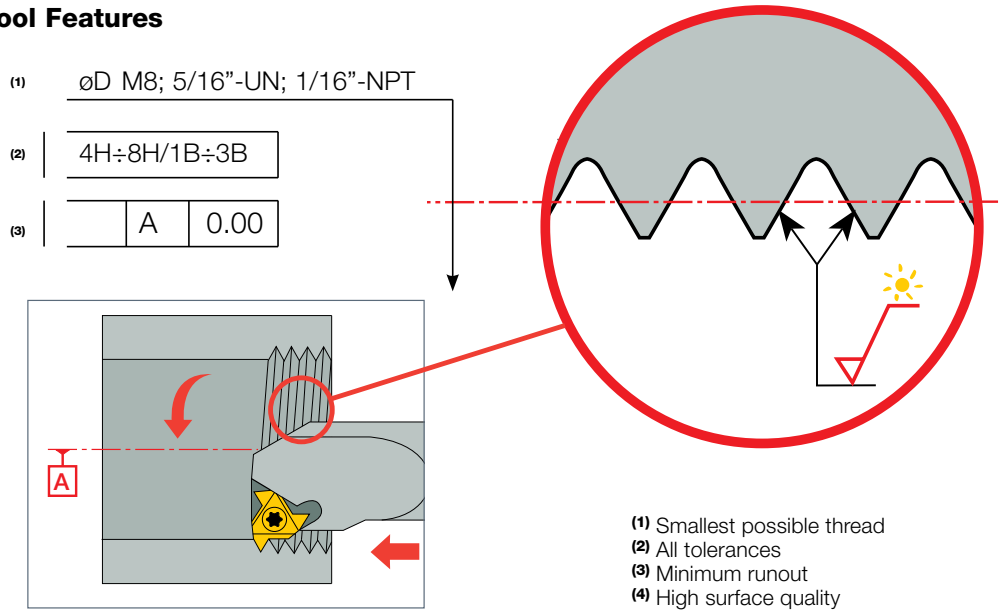


Use **AE** Anvils for **EX**-**RH** and **IN**-**LH** Toolholders.
Use AI Anvils for **IN**-**RH** and **EX**-**LH** Toolholders.



Replacing the standard anvil with a negative angle anvil will eliminate side rubbing

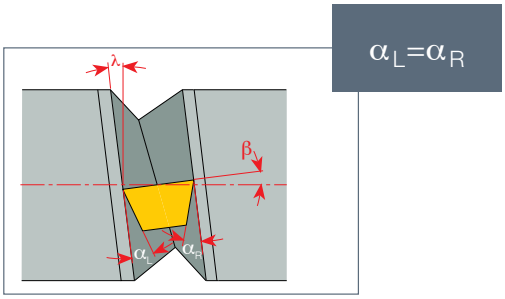
Mini-Tool Features

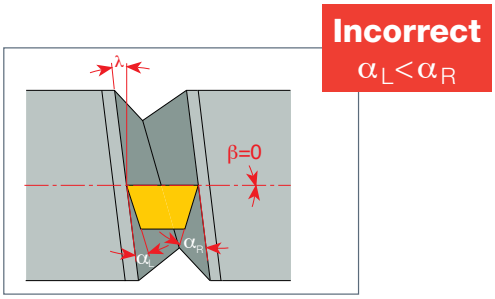


(1) Smallest possible thread
(2) All tolerances
(3) Minimum runout
(4) High surface quality

Flank Clearance and Effective Inclination Angle

Inclination angle β of the cutting edges corresponds to a specific thread helix angle l and ensures an equal clearance angle on both sides of the insert.

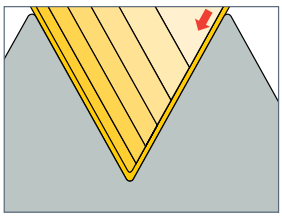




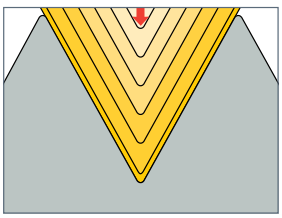
α - Flank clearance angle
λ - Helix angle
β - Effective inclination angle is achieved by selecting the suitable anvil

Infeed Methods for Threading Operations

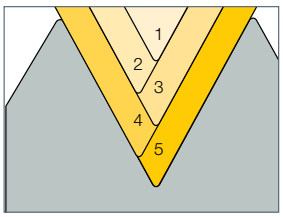
Flank Infeed



Radial Infeed

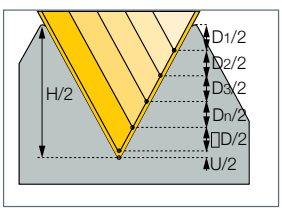


Alternating Flanks Infeed



Flank Equal

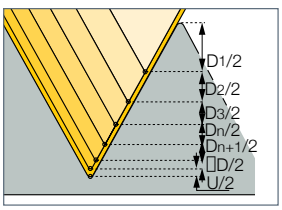
Equal depth of cut for each pass



$$\frac{D_1}{2}=\frac{D_2}{2}=\frac{D_3}{2}=\frac{D_n}{2}$$

Flank Diminishing

Diminished depth of cut for each pass



$$\frac{D_1}{2}>\frac{D_2}{2}>\frac{D_3}{2}>\frac{D_n}{2}>\frac{D_{n+1}}{2}$$

H - Depth of thread profile (on ø)
D - Depth of pass (on ø)
U - Depth of finishing pass (on ø)

Number of Cutting Passes for Regular Type Inserts

TPI Pitch mm	0.5 48	1.0 24	1.5 16	2.0 12	2.5 10	3.0 8	4.0 6	6.0 4
Number of Passes	4-6	5-9	5-12	6-14	7-15	8-17	10-20	11-22

For mini-tools (**06IR** or **08IR**) add 1-3 passes. Increase for hard materials.

Maximum Depth of First Cut for CNC Control
External Threading - M-Type Inserts

Full Profile	Pitch	TPI	Insert Designation	No. of Passes		Max. Depth for First Pass (D1) mm									
						Low Carbon Steel		High Carbon Steel		Alloy Steel		Stainless Steel		Nonferrous Aluminium	
				Min.	Max.	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)
ISO Metric	1.00		16 ER/L 1.00 ISO	5	9	0.34	0.51	0.31	0.46	0.27	0.41	0.22	0.33	0.48	0.71
	1.25		16 ER/L 1.25 ISO	6	11	0.42	0.63	0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
	1.50		16 ER/L 1.50 ISO	6	12	0.46	0.69	0.41	0.62	0.37	0.55	0.30	0.45	0.64	0.97
	1.75		16 ER/L 1.75 ISO	8	13	0.48	0.72	0.43	0.65	0.38	0.58	0.31	0.47	0.67	1.01
	2.00		16 ER/L 2.00 ISO	8	14	0.50	0.75	0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
	2.50		16 ER/L 2.50 ISO	10	15	0.53	0.80	0.48	0.72	0.42	0.64	0.34	0.52	0.74	1.12
	3.00		16 ER/L 3.00 ISO	12	17	0.56	0.84	0.50	0.76	0.45	0.67	0.36	0.55	0.78	1.18
American UN		24	16 ER/L 24 UN	5	9	0.34	0.51	0.31	0.46	0.27	0.41	0.22	0.33	0.48	0.71
		20	16 ER/L 20 UN	6	10	0.42	0.63	0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
		18	16 ER/L 18 UN	6	11	0.46	0.69	0.41	0.62	0.37	0.55	0.30	0.45	0.64	0.97
		16	16 ER/L 16 UN	7	12	0.47	0.71	0.42	0.64	0.38	0.57	0.31	0.46	0.66	0.99
		14	16 ER/L 14 UN	6	13	0.46	0.69	0.41	0.62	0.37	0.55	0.28	0.41	0.64	0.97
		12	16 ER/L 12 UN	8	14	0.50	0.75	0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
		8	16 ER/L 8 UN	12	17	0.56	0.84	0.50	0.76	0.45	0.67	0.36	0.55	0.78	1.18
British BSW		19	16 ER/L 19 W	6	11	0.35	0.52	0.32	0.47	0.28	0.42	0.21	0.31	0.49	0.73
		16	16 ER/L 16 W	7	12	0.47	0.71	0.42	0.64	0.38	0.57	0.31	0.46	0.66	0.99
		14	16 ER/L 14 W	8	13	0.50	0.75	0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
		11	16 ER/L 11 W	9	14	0.44	0.66	0.40	0.59	0.35	0.53	0.29	0.43	0.62	0.92
NPT		18	16 ER/L 18 NPT	10	20	0.24	0.36	0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
		14	16 ER/L 14 NPT	13	26	0.24	0.36	0.22	0.32	0.19	0.29	0.14	0.22	0.34	0.50
		11.5	16 ER/L 11.5 NPT	15	24	0.27	0.40	0.24	0.36	0.22	0.32	0.18	0.26	0.38	0.56
		8	16 ER/L 8 NPT	17	30	0.31	0.46	0.28	0.41	0.25	0.37	0.20	0.30	0.43	0.64
Round		6	16 ER/L 6 Rnd	9	20	0.42	0.63	0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
Partial Profile 60°	0.50-1.50	48-16	16 ER/L A60		(1)	0.22	0.33	0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
	1.75-3.00	14-8	16 ER/L G60			0.50	0.75	0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
	0.50-3.00	48-8	16 ER/L AG60			0.24	0.36	0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
	3.50-5.00	7-5	22 ER/L N60			0.41	0.62	0.37	0.56	0.33	0.50	0.27	0.40	0.57	0.87
Partial Profile 55°	1.75-3.00	14-8	16 ER/L G55			0.50	0.75	0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
	0.50-3.00	48-8	16 ER/L AG55			0.22	0.33	0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46

(1) Per the number of passes for the relevant pitch
(2) Equal depth of cut method
(3) Diminished depth of cut for each pass method

Cutting Data

Maximum Depth of First Cut for CNC Control
Internal Threading - M-Type Inserts

Full Profile	Pitch	TPI	Insert Designation	No. of Passes		Max. Depth for First Pass (D1) mm									
						Low Carbon Steel		High Carbon Steel		Alloy Steel		Stainless Steel		Nonferrous Aluminium	
				Min.	Max.	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)	Eq.(2)	Dim.(3)
ISO Metric	1.50		11 IRM 1.50 ISO	10	20	0.20	0.30	0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
	1.00		16 IRM 1.00 ISO	9	16	0.14	0.20	0.13	0.18	0.11	0.16	0.09	0.13	0.20	0.28
	1.25		16 IRM 1.25 ISO	9	16	0.19	0.28	0.17	0.25	0.15	0.22	0.12	0.18	0.27	0.39
	1.50		16 IRM 1.50 ISO	10	20	0.20	0.30	0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
	1.75		16 IRM 1.75 ISO	11	18	0.21	0.32	0.19	0.29	0.17	0.26	0.14	0.21	0.29	0.45
	2.00		16 IRM 2.00 ISO	12	21	0.22	0.33	0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
	2.50		16 IRM 2.50 ISO	14	21	0.23	0.34	0.21	0.31	0.18	v0.27	0.15	0.22	0.32	0.48
	3.00		16 IRM 3.00 ISO	16	22	0.24	0.35	0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
American UN 16		20	16 IRM 20UN	7	13	0.20	0.30	0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
		18	16 IRM 18UN	8	15	0.20	0.30	0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
			16 IRM 16 UN	11	19	0.20	0.30	0.18	0.27	0.16	0.24	0.13	0.20	0.28	0.42
		14	16 IRM 14 UN	11	20	0.21	0.31	0.19	0.28	0.17	0.25	0.13	0.19	0.29	0.43
		12	16 IRM 12 UN	12	21	0.23	0.34	0.21	0.31	0.18	0.27	0.15	0.22	0.32	0.48
		8	16 IRM 8 UN	14	20	0.24	0.36	0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
British BSW		19	16 IRM 19 W	7	12	0.28	0.42	0.25	0.38	0.22	0.34	0.17	0.25	0.39	0.59
		16	16 IRM 16 W	9	14	0.26	0.39	0.23	0.35	0.21	0.31	0.17	0.25	0.36	0.55
		14	16 IRM 14 W	10	16	0.27	0.41	0.24	0.37	0.22	0.33	0.18	0.27	0.38	0.57
		11	16 IRM 11 W	12	19	0.31	0.46	0.28	0.41	0.25	0.37	0.20	0.30	0.43	0.64
NPT		14	16 IRM 14 NPT	21	35	0.13	0.20	0.12	0.18	0.10	0.16	0.08	0.12	0.18	0.28
		11.5	16 IRM 11.5 NPT	21	33	0.17	0.25	0.15	0.23	0.14	0.20	0.11	0.16	0.24	0.35
		8	16 IRM 8 NPT	20	34	0.23	0.34	0.21	0.31	0.18	0.27	0.14	0.20	0.32	0.48
Round		6	16 IRM 6 RND	12	24	0.30	0.46	0.27	0.41	0.24	0.37	0.20	0.30	0.42	0.64
Partial Profile 60°	0.50-1.25	48-16	06 IRM A60			0.22	0.33	0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
	0.50-1.50	48-16	08 IRM A60		(1)	0.13	0.20	0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
	0.50-1.50	48-16	11 IRM A60			0.13	0.20	0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
	0.50-1.50	48-16	16 IRM A60			0.13	0.20	0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
	1.75-3.00	14-8	16 IRM G60			0.22	0.33	0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
	0.50-3.00	48-8	16 IRM AG60			0.14	0.21	0.13	0.19	0.11	0.17	0.09	0.14	0.20	0.29
	3.50-5.00	7-5	22 IRM N60			0.23	0.34	0.21	0.31	0.18	0.27	0.15	0.22	0.32	0.48
Partial Profile 55°	1.75-3.00	14-8	16 IRM G55			0.34	0.50	0.31	0.45	0.27	0.40	0.22	0.33	0.48	0.70
	0.50-3.00	48-8	16 IRM AG55			0.14	0.20	0.13	0.18	0.11	0.16	0.09	0.13	0.20	0.28

(1) Per the number of passes for the relevant pitch
(2) Equal depth of cut method
(3) Diminished depth of cut for each pass method

Recommended Number of Passes for Multi-Tooth Insert

ISO - (Metric)

External

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 ER 1.0 ISO 3M	2	0.39	0.24	–	–
16 ER 1.5 ISO 2M	3	0.40	0.31	0.21	–
22 ER 1.5 ISO 3M	2	0.54	0.38	–	–
22 ER 2.0 ISO 2M	3	0.56	0.42	0.27	–
22 ER 2.0 ISO 3M	2	0.75	0.50	–	–
27 ER 3.0 ISO 2M	4	0.60	0.52	0.44	0.30

Internal

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 IR 1.0 ISO 3M	2	0.32	0.26	–	–
16 IR 1.5 ISO 2M	3	0.36	0.29	0.22	–
22 IR 1.5 ISO 3M	2	0.49	0.38	–	–
22 IR 2.0 ISO 2M	3	0.50	0.40	0.25	–
22 IR 2.0 ISO 3M	2	0.72	0.43	–	–
27 IR 3.0 ISO 2M	4	0.57	0.45	0.38	0.33

UN

External

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 ER 16 UN 2M	3	0.45	0.32	0.20	–
22 ER 16 UN 3M	2	0.60	0.37	–	–
22 ER 12 UN 2M	3	0.60	0.39	0.31	–
22 ER 12 UN 3M	2	0.80	0.50	–	–
27 ER 8 UN 2M	4	0.63	0.55	0.42	0.36

Internal

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 IR 16 UN 2M	3	0.40	0.29	0.23	–
22 IR 16 UN 3M	2	0.57	0.35	–	–
22 IR 12 UN 2M	3	0.55	0.39	0.28	–
22 IR 12 UN 3M	2	0.75	0.47	–	–
27 IR 8 UN 2M	4	0.65	0.49	0.42	0.27

NPT

External

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
22 ER 11.5 NPT 2M	4	0.55	0.46	0.35	0.32
27 ER 11.5 NPT 3M	3	0.75	0.57	0.36	–
27 ER 8 NPT 2M	4	0.80	0.62	0.54	045

Internal

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
22 IR 11.5 NPT 2M	4	0.55	0.46	0.35	0.32
27 IR 11.5 NPT 3M	3	0.75	0.57	0.36	–
27 IR 8 NPT 2M	4	0.80	0.62	0.54	045

WHITWORTH

External

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 ER 14 W 2M	3	0.51	0.39	0.26	–
22 ER 14 W 3M	2	0.72	0.44	–	–
22 ER 11 W 2M	3	0.65	0.46	0.37	–

Internal

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
16 IR 14 W 2M	3	0.51	0.39	0.26	–
22 IR 14 W 3M	2	0.72	0.44	–	–
22 IR 11 W 2M	3	0.65	0.46	0.37	–

API-ROUND

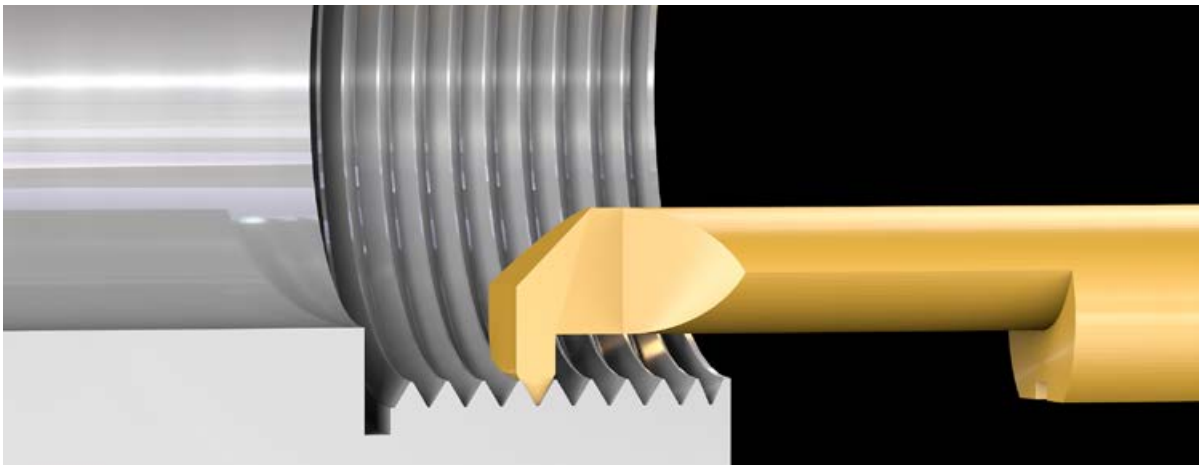
External

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
22 ER 10 API RD 2M	3	0.58	0.53	0.30	–
27 ER 10 API RD 3M	2	0.98	0.43	–	–
27 ER 8 API RD 2M	3	0.82	0.59	0.40	–

Internal

Insert Description	No. of Passes	1st Pass	2nd Pass	3rd Pass	4th Pass
22 IR 10 API RD 2M	3	0.58	0.53	0.30	–
27 IR 10 API RD 3M	2	0.98	0.43	–	–
27 IR 8 API RD 2M	3	0.82	0.59	0.40	–

Cutting Data



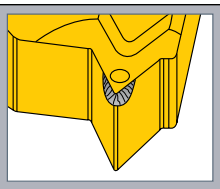
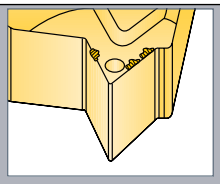
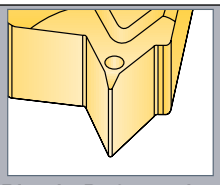
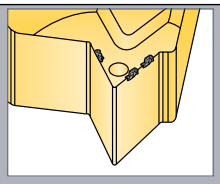
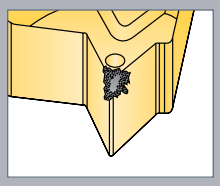
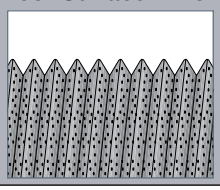
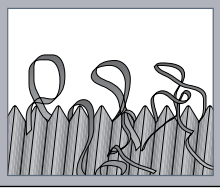
Carbide Grade		Steel (N/mm Tensile Strength)					Stainless Steel	Cast Iron	Non-ferrous
		400-500	500-700	700-850	850-1150	>1150			
Cutting Speed Vc m/min.	IC228	160	140	120	90	70	90	100	300
	IC908	185	160	140	105	80	105	115	350
Pitch (p) mm	TPI	No. of Passes							
0.5	48	6	6	7	7	8	8	7	6
0.75	32	8	8	9	9	10	10	9	8
1.0	24	10	10	12	12	12	12	12	10
1.25	20-19	12	12	14	14	15	15	14	12
1.5	16	15	15	17	17	18	18	17	15

For internal threading of small diameters, the PVD coated grade IC228 is recommended.

Material groups		ISO P		ISO M	ISO K	ISO N	ISO S	ISO H
		1-11 Steel	12-13 Stainless Steel Ferritic & Martensitic	14 Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	15-20 Cast Iron	21-28 Non-ferrous	31-37 High Temperature Alloys	38-41 Hard Steel & Cast Iron
THREADING	Harder	IC1007	IC1007	IC1007	IC1007	IC08	IC806	IC1007
		IC808 (IC908)			IC808 (IC908)		IC1007	
		IC250 (IC950)	IC808 (IC908)	IC808 (IC908)	IC250 (IC950)	IC228	IC808 (IC908)	IC808 (IC908)
	Tougher	IC228	IC228	IC228	IC228	IC28		

First choice

Troubleshooting

Problem	Cause	Solution
 Premature Wear	• Cutting speed too high	• Reduce **RPM**
	• Infeed depth too small	• Modify flank infeed • Increase depth of cut
	• Highly abrasive material	• Use coated grade
	• Inadequate coolant supply	• Apply coolant
	• Wrong inclination anvil	• Reselect anvil
	• Wrong turned dia. prior to threading	• Check turned dia.
	• Insert is above center line	• Check center height
 Chipped Edge	• Cutting speed too high	• Reduce **RPM**
	• Depth of cut large	• Reduce depth of cut
	• Wrong grade	• Use coated grade • Use tougher grade
	• Poor chip control	• Modify flank infeed
	• Inadequate coolant supply	• Apply coolant
	• Center height incorrect	• Adjust center height
 Plastic Deformation	• Excessive heat in cutting zone	• Reduce **RPM** • Reduce depth of cut • Check turned dia.
	• Wrong grade	• Use coated grade • Use harder grade
	• Inadequate coolant supply	• Apply coolant
 Built-Up Edge	• Cutting edge too cold	• Increase **RPM** • Increase depth of cut
	• Wrong grade	• Use coated grade
	• Inadequate coolant supply	• Apply coolant
 Broken Nose During 1st Pass	• Cutting edge too cold	• Increase **RPM**
	• Depth of cut too large	• Reduce depth of cut • Increase number of infeed passes
	• Wrong grade	• Use tougher grade
	• Wrong turned dia. prior to threading	• Check turned dia.
	• Corner height incorrect	• Adjust center height
	• Infeed depth too shallow	• Modify flank infeed
	• Wrong inclination anvil	• Re-select anvil
	• Tool overhang too long	• Reduce tool overhang
Poor Surface Finish 	• Wrong cutting speed	• Increase **RPM** • Reduce **RPM**
	• Excessive heat in cutting zone	• Reduce depth of cut
	• Poor chip control	• Modify flank infeed
	• Inadequate coolant supply	• Apply coolant
	• Wrong inclination anvil	• Reselect anvil
	• Tool overhang too long	• Reduce tool overhang
	• Center height incorrect	• Check center height
Poor Chip Control 	• Excessive heat in cutting zone	• Reduce **RPM** • Change depth of cut • Check turned dia.
	• Wrong grade	• Use coated grade • Check turned dia. • Use M-type insert
	• Inadequate coolant supply	• Apply coolant
	• Wrong turned dia. prior to threading	• Check turned dia.

Complete Machining Solutions
NON-ROTATING TOOL HOLDERS



Member IMC Group

Tool Holders for Square and Round Shank Tools **548**
CAMFIX Shanks 548
HSK Shanks 551

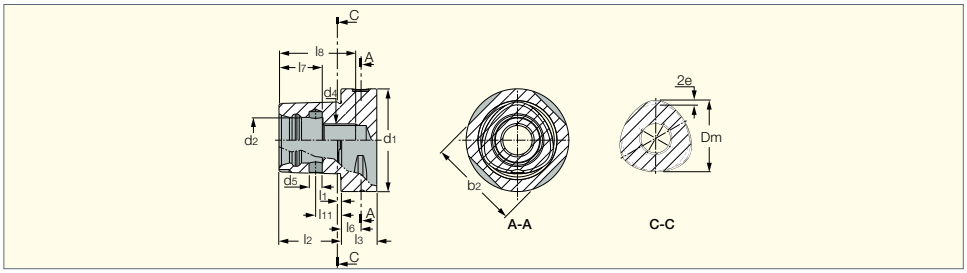
Tool Blocks for Parting Blades **471**

Exchangeable Heads for Grooving and Parting Blades and Adapters **475**

Modular Grip Adaptations **415**

CAMFIX

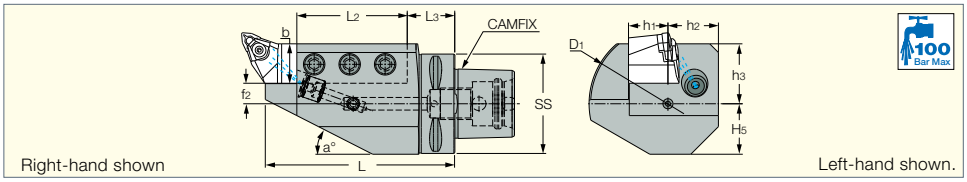
CAMFIX (ISO 26623-1)
CAMFIX ISO 26623-1
Toolholder Standard



CAMFIX	b_2	d_1 ±0.1	d_2	d_4	d_5 ±0.1	D_m	e	l_1	l_2 ±0.1	l_3 min	l_6 ±0.15	l_7 ±0.15	l_8 min	l_{11} ±0.1
C3	28,3	32	15	M12x1.5	3,6	22	0,7	2,5	19	15	6	13	25	8
C4	35,3	40	18	M14x1.5	4,6	28	0,9	2,5	24	20	8	15	30	11,5
C5	44,4	50	21	M16x1.5	6,1	35	1,12	3	30	20	10	20	37	14
C6	55,8	63	28	M20x2	8,1	44	1,4	3	38	22	12	27	47	15,5
C8	71,1	80	32	M20x2	9,1	55	2	3	48	30	12	28	48	25
C8X	88,7	100	32	M20x2	9,1	55	2	3	48	32	16	28	48	25
C10	88,3	100	43	M24x2	12	72	2,8	3	60	36	16	40	70	26,5

CAMFIX

C#-ASHR/L
Holders with CAMFIX
Exchangeable Shanks for
External Square-Shank Tools



Designation	SS	L	L_2	L_3	f_2	h_1	b	h_2	h_3	H_5	D_1	a°
C4 ASHR/L 16 1	40	104.00	70.00	34.00	7.00	16.0	16.0	20.0	23.0	20.50	60.00	30
C5 ASHR/L 20 1	50	98.00	63.50	24.50	10.00	20.0	20.0	33.0	30.0	29.00	90.00	30
C6 ASHR/L 20-1	63	100.00	63.50	26.50	10.00	20.0	20.0	33.0	30.0	29.00	90.00	30
C6 ASHR/L 25 1	63	120.00	70.00	30.00	13.00	25.0	25.0	32.0	38.0	32.00	100.00	27
C8 ASHR/L 32-1	80	140.00	95.00	35.00	8.00	32.0	32.0	32.0	40.0	40.00	110.00	27

Spare Parts

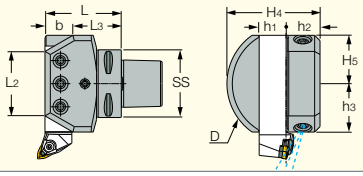
Designation				
C4 ASHR/L 16 1	SR M8X16 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C5 ASHR/L 20 1	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHR/L 20-1	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHR/L 25 1	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C8 ASHR/L 32-1	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

* Optional, should be ordered separately

CAMFIX

C#-ASHA

Perpendicular Holders with CAMFIX Shanks for External Square-Shank Tools



100 Bar Max

Designation	SS	h_1	b	L	L_2	L_3	h_3	H_5	h_2	H_4	D
C5 ASHA 20	50	20.0	20.0	58.00	46.00	38.00	38.0	38.00	31.5	76.5	90.00
C6 ASHA 20	63	20.0	20.0	60.00	46.00	40.00	38.0	38.00	31.5	76.5	90.00
C6 ASHA 25	63	25.0	25.0	71.00	61.00	46.00	45.0	45.00	31.6	86.6	110.00
C8 ASHA 32	80	32.0	32.0	85.00	80.00	53.00	55.0	55.00	30.0	95.0	142.00

Spare Parts

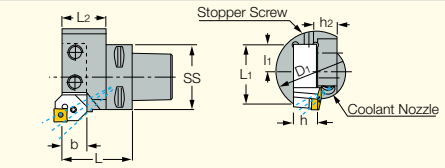
Designation				
C5 ASHA 20	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHA 20	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHA 25	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C8 ASHA 32	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

* Optional, should be ordered separately

CAMFIX

C#-ADE

Holders with CAMFIX Exchangeable Shanks for External Square-Shank Tools



Left-hand shown

Designation	SS	L	L_2	b	D_1	L_1	l_1	h	h_2
C3 ADE 16R/L	32	45.00	28.10	16.0	65.00	45.0	20.00	16.0	20.0
C4 ADE-20R/L	40	49.20	29.10	20.0	87.00	57.0	32.00	20.0	26.0
C5 ADE-20R/L	50	55.20	35.10	20.0	87.00	57.0	32.00	20.0	26.0

• Use the tools with AD suffix • Regular tools should be shortened

Spare Parts

Designation					
C3 ADE 16R/L	SR M10X20 DIN915	HW 3.0*	SR M6X8 DIN916(a)	HW 5.0*	SATZ-M8X1-M3
C4 ADE-20R/L	SR M10X20DIN912	HW 4.0	SR M8X10 DIN913(a)	HW 8.0*	EZ 125
C5 ADE-20R/L	SR M10X16	HW 4.0	SR M8X10 DIN916(a)	HW 8.0*	EZ 125

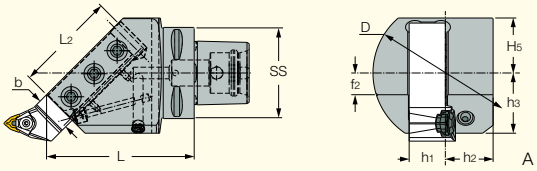
* Optional, should be ordered separately

[a] Stopper screw

CAMFIX

C#-ASHR/L-45

Holders with CAMFIX Exchangeable Shanks Carrying Square Shank Tools for 45° Mounting on Turn-Mill Machines



100 Bar Max

A left-hand tool in a right-hand adapter are shown

Designation	SS	h_1	b	L_2	L	h_2	h_3	H_5	f_2	D
C5 ASHR/L 20-45	50	20.0	20.0	-	127.00	26.0	36.0	31.50	15.00	72.00
C6 ASHR/L 20-45	63	20.0	20.0	-	102.00	33.0	41.6	38.00	15.00	72.00
C6 ASHR/L 25-45	63	25.0	25.0	70.00	102.00	33.0	41.6	38.00	15.00	100.00
C8 ASHR/L 32-45	80	32.0	32.0	100.00	140.00	40.0	50.0	60.00	17.00	140.00

Spare Parts

Designation				
C5 ASHR/L 20-45	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHR/L 20-45	SR M10X25 DIN915	HW 5.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C6 ASHR/L 25-45	SR M12X30 DIN915	HW 6.0*	SATZ-M10X1-M5	WRENCH NOZZLE HP M10*
C8 ASHR/L 32-45	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

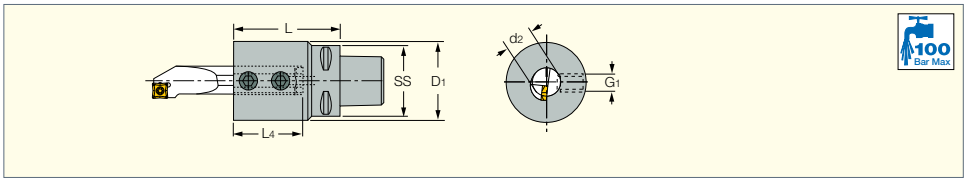
* Optional, should be ordered separately



CAMFIX

C#-ADI

Holders with CAMFIX Exchangeable Shanks for Boring Bars



Designation	SS	L	L_4	d_2	D_1	G_1		
C3 ADI 10	32	50.00	20.0	10.00	36.00	M6	SR M6X10 DIN1835B	HW 3.0*
C3 ADI 12	32	50.00	21.5	12.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C3 ADI 16	32	50.00	29.5	16.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C4 ADI 10	40	50.00	20.0	10.00	36.00	M6	SR M6X10 DIN1835B	HW 3.0*
C4 ADI 12	40	50.00	24.0	12.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C4 ADI 16	40	50.00	32.0	16.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C4 ADI 20	40	60.00	40.0	20.00	36.00	M10	SR M10X12 DIN1835-B	HW 5.0*
C4 ADI 25	40	70.00	45.0	25.00	54.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C5 ADI 10	50	60.00	26.0	10.00	36.00	M6	SR M6X10 DIN1835B	HW 3.0*
C5 ADI 12	50	60.00	26.0	12.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C5 ADI 16	50	60.00	32.0	16.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C5 ADI 25	50	70.00	50.0	25.00	54.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C5 ADI 20	50	75.00	49.0	20.00	40.00	M10	SR M10X12 DIN1835-B	HW 5.0*
C5 ADI 32	50	100.00	76.0	32.00	68.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C6 ADI 12	60	65.00	36.0	12.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C6 ADI 16	60	65.00	36.0	16.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C6 ADI 20	60	65.00	40.0	20.00	36.00	M10	SR M10X12 DIN1835-B	HW 5.0*
C6 ADI 25	60	76.00	51.0	25.00	54.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C6 ADI 32	60	100.00	76.0	32.00	68.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C6 ADI 40	60	100.00	76.0	40.00	98.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C6 ADI 50	60	115.00	76.0	50.00	98.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C8 ADI 12	80	70.00	36.0	12.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C8 ADI 16	80	70.00	36.0	16.00	36.00	M8	SR M8X10 DIN1835-B	HW 4.0*
C8 ADI 20	80	70.00	40.0	20.00	36.00	M10	SR M10X12 DIN1835-B	HW 5.0*
C8 ADI 25	80	80.00	51.0	25.00	54.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C8 ADI 32	80	110.00	86.0	32.00	68.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C8 ADI 40	80	115.00	86.0	40.00	98.00	M12	SR M12X16 DIN1835-B	HW 6.0*
C8 ADI 50	80	115.00	86.0	50.00	98.00	M12	SR M12X16 DIN1835-B	HW 6.0*

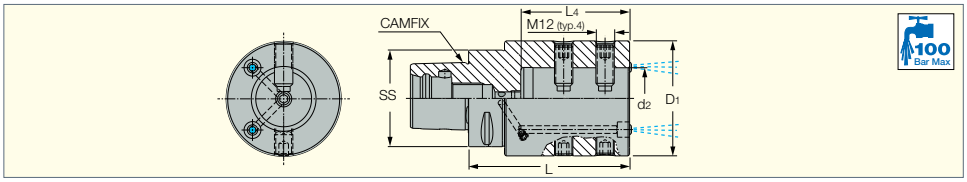
• Use the tools with "AD" suffix • Regular tools should be shortened

* Optional, should be ordered separately

CAMFIX

C#-ABB

Adapters with CAMFIX Exchangeable Shanks for Boring Bars with Reduction Sleeves



Designation	SS	d_2	D_1	L	L_4
C4 ABB 25-60	40	25.00	63.00	100.00	60.0
C5 ABB-25-60	50	25.00	63.00	100.00	60.0
C6 ABB-25-60	63	25.00	63.00	100.00	60.0
C6 ABB-40-70	63	40.00	75.00	105.00	71.0
C8 ABB 25-60	80	25.00	63.00	100.00	60.0
C8 ABB 40-72	80	40.00	75.00	105.00	71.0

• For SC reduction sleeves, see page 552

Spare Parts

Designation						
C4 ABB 25-60	SR M10X12 DIN1835-B(a)	SR M10X20 DIN915(b)	SR M10X6DIN913(c)	HW 5.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C5 ABB-25-60	SR M10X12 DIN1835-B(a)	SR M10X20 DIN915(b)	SR M10X6DIN913(c)	HW 5.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C6 ABB-25-60	SR M10X12 DIN1835-B(a)	SR M10X20 DIN915(b)	SR M10X6DIN913(c)	HW 5.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C6 ABB-40-70	SR M12X16 DIN1835-B(a)	SR M12X30 DIN915(b)	SR M10X6DIN913(c)	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C8 ABB 25-60	SR M10X12 DIN1835-B(a)	SR M10X20 DIN915(b)	SR M10X6DIN913(c)	HW 5.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*
C8 ABB 40-72	SR M12X16 DIN1835-B(a)	SR M12X30 DIN915(b)	SR M10X6DIN913(c)	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

* Optional, should be ordered separately

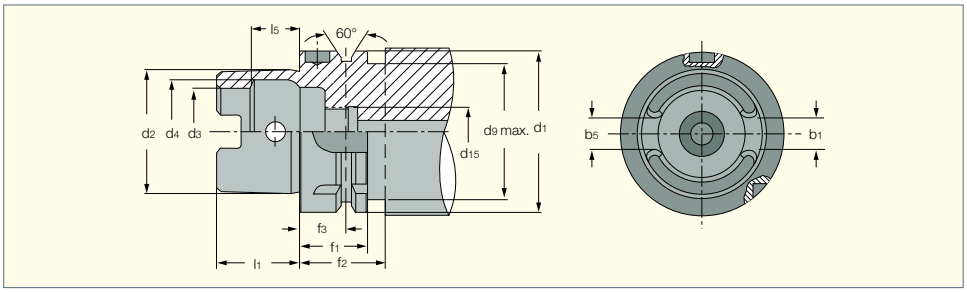
(a) Used on A-type sleeves

(b) Used on B-type sleeves

(c) Rear stopper screw

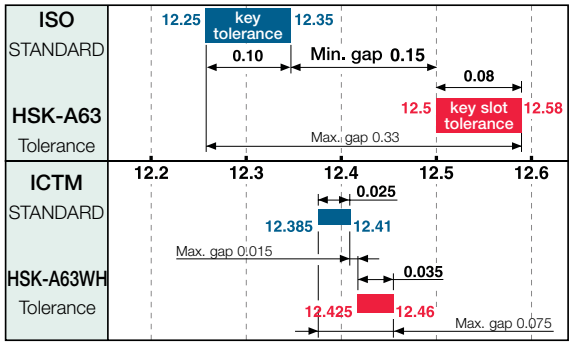
HSK DIN 69893 Standard

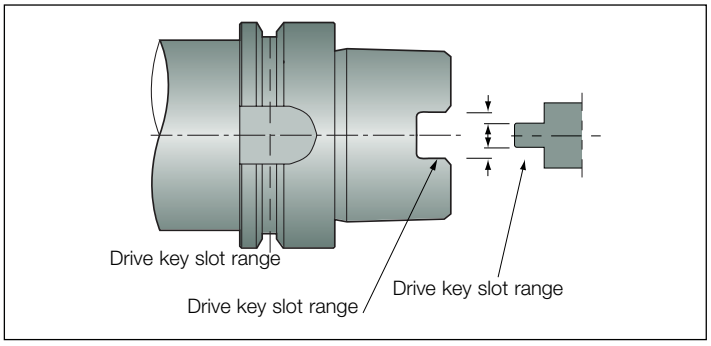
DIN 69893 Form A WH



HSK-A WH	d_1 h10	d_2	d_3 H10	d_4 H11	d_9 max	d_{15}	$l_{1-0.2}$	l_5 Js10	$b_1^{\pm 0.04}$	$b_5^{\pm 0.035}$	f_1 -0.1	f_2 min	f_3 ±0.1
63	63	48	34	40	62	M18X1	32	18.13	12.54	12.425	26	30	18
100	100	75	53	63	99	M24X1.5	50	28.56	20.02	19.91	29	34	20

HSK A vs. HSK A...WH Tolerance

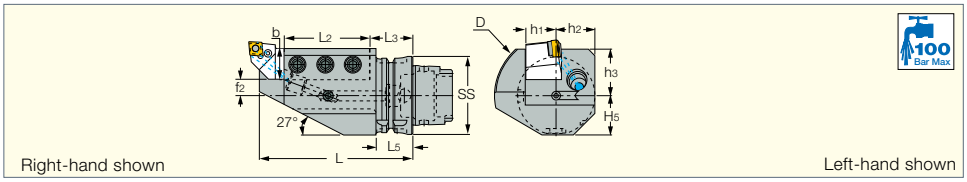




HSK

HSK A-WH-ASHR/L-1

Square Shank Tool Adapters with HSK Exchangeable Shanks for Turn-Mill Machines



Designation	SS	h_1	b	f_2	L	L_5	L_2	L_3	h_2	h_3	H_5	D
HSK A63WH-ASHR/L-25-1	63	25.0	25.0	13.00	125.00	30.00	70.00	35.00	32.0	38.0	32.00	100.00
HSK A100WH-ASHR/L-32-1	100	32.0	32.0	8.00	145.00	34.00	90.00	45.00	35.0	40.0	44.00	100.00

- Complies with the HSK-T (ISO 12164-3) and ICTM standards
- A cooling tube must be used with all coolant through HSK spindles (should be ordered separately)

Spare Parts

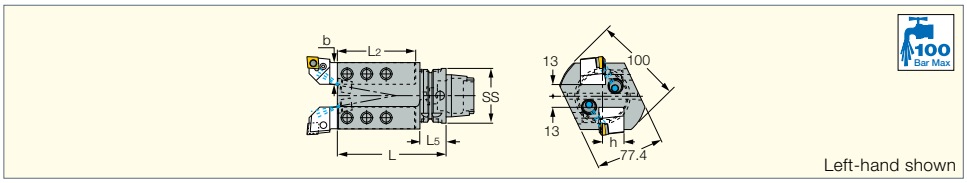
Designation				
HSK A-WH-ASHR/L-1	SR M12X30 DIN915	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

* Optional, should be ordered separately

HSK

HSK A63WH-ASHR/L-2

Twin Square Shank Tool Adapters with HSK Exchangeable Shanks for Turn-Mill Machines



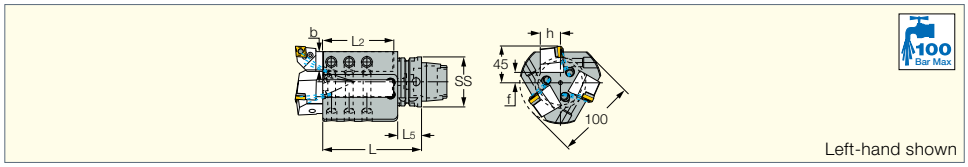
Designation	SS	L	l_1	L_2	h	b		
HSK A63WH-ASHR/L-25-2	63	125.00	160.00	95.00	25.0	25.0	SR M12X30 DIN915	SATZ-M12X1-M6

- Complies with the HSK-T and ICTM standards
- A cooling tube must be used with all coolant through HSK spindles (should be ordered separately)

HSK

HSK A63WH-ASHR/L-3

Triple Square Shank Tool Adapters with HSK Exchangeable Shanks for 45° Mounting on Turn-Mill Machines



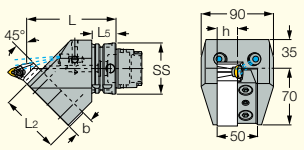
Designation	SS	L	L_2	F	h	b		
HSK A63WH-ASHR/L-25-3	63	125.00	90.00	45.0	25.0	25.0	SR M12X30 DIN915	EZ 83

- Complies with the HSK-T and ICTM standards
- A cooling tube must be used with all coolant through HSK spindles (should be ordered separately)

HSK

HSK A63WH-ASHN-45

Square Shank Tool Adapters with HSK Exchangeable Shanks for 45° Mounting on Turn-Mill Machines



Rigth-hand shown

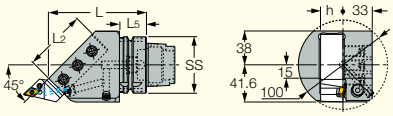
Designation	SS	L	L2	h	b			
HSK A63WH-ASHN-25-45	63	110.00	72.00	25.0	25.0	SR M10X25 DIN912	SR M8X20 DIN916	SATZ-M12X1-M6

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • For using left-hand toolholder, the position of the clamping spacer must be changed • Complies with the HSK-T and ICTM standards

HSK

HSK A63WH-ASHR/L-45

Square Shank Tool Adapters with HSK-T Exchangeable Shanks for 45° Mounting on Turn-Mill Machines



A left-hand tool in a right-hand adapter are shown

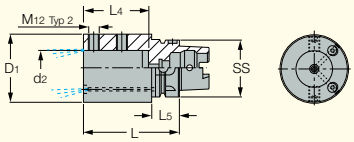
Designation	SS	L	L2	L3	h		
HSK A63WH-ASHR/L-25-45	63	110.00	70.00	30.00	25.0	SR M12X30 DIN915	EZ 104

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with the HSK-T and ICTM standards

HSK

HSK A-WH ABB

Adapters with HSK Exchangeable Shanks for Boring Bars with Reduction Sleeves



Designation	SS	d2	L	D1	L4
HSK A63WH-ABB-40	63	40.00	105.00	75.00	71.0
HSK A100WH-ABB-40	100	40.00	115.00	82.00	71.0
HSK A100WH-ABB-50	100	50.00	125.00	92.00	83.0

• Complies with the HSK-T (ISO 12164-3) and ICTM standards. • A cooling tube must be used with all coolant through HSK spindles (should be ordered separately)
• For SC reduction sleeves, see page 552

Spare Parts

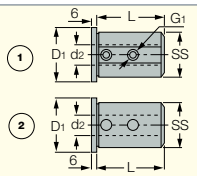
Designation						
HSK A-WH ABB	SR M12X16 DIN1835-B(a)	SR M12X30 DIN915(b)	SR M10X6DIN913(c)	HW 6.0*	SATZ-M12X1-M6	WRENCH NOZZLE HP M12*

* Optional, should be ordered separately
(a) Used on A-type sleeves
(b) Used on B type sleeves
(c) Rear stopper screw

Accessories

SC-T (sleeves)

Reduction Sleeves for Holders with Exchangeable Adaptation



Designation	SS	d2	D1	L	G1	Fig.		
SC 25T6A	25.00	6.00	31.00	56.00	M6	1	SR M6X6 DIN916	HW 3.0*
SC 25T8A	25.00	8.00	31.00	56.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 25T10A	25.00	10.00	31.00	56.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 25T12A	25.00	12.00	31.00	56.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 25T16B	25.00	16.00	31.00	56.00	-	2		
SC 25T20B	25.00	20.00	31.00	56.00	-	2		
SC 40T6A	40.00	6.00	46.00	60.00	M6	1	SR M6X10 DIN1835B	HW 3.0*
SC 40T8A	40.00	8.00	46.00	60.00	M6	1	SR M8X10 DIN1835-B	HW 4.0*
SC 40T10A	40.00	10.00	46.00	60.00	M8	1	SR M8X10 DIN1835-B	HW 4.0*
SC 40T12A	40.00	12.00	46.00	60.00	M8	1	SR M8X10 DIN1835-B	HW 4.0*
SC 40T16B	40.00	16.00	46.00	60.00	-	2		
SC 40T20B	40.00	20.00	46.00	60.00	-	2		
SC 40T25B	40.00	25.00	46.00	60.00	-	2		
SC 40T32B	40.00	32.00	46.00	60.00	-	2		
SC 50T6A	50.00	6.00	56.00	70.00	M6	1	SR M6X6 DIN916	HW 3.0*
SC 50T8A	50.00	8.00	56.00	70.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 50T10A	50.00	10.00	56.00	70.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 50T12A	50.00	12.00	56.00	70.00	M8	1	SR M8X6 DIN916	HW 4.0*
SC 50T16B	50.00	16.00	56.00	80.00	-	2		
SC 50T20B	50.00	20.00	56.00	80.00	-	2		
SC 50T25B	50.00	25.00	56.00	80.00	-	2		
SC 50T32B	50.00	32.00	56.00	80.00	-	2		

* Optional, should be ordered separately

Complete Machining Solutions
MATERIALS AND GRADES



Member IMC Group

MATERIAL GROUPS

According to DIN / ISO 513 and VDI 3323

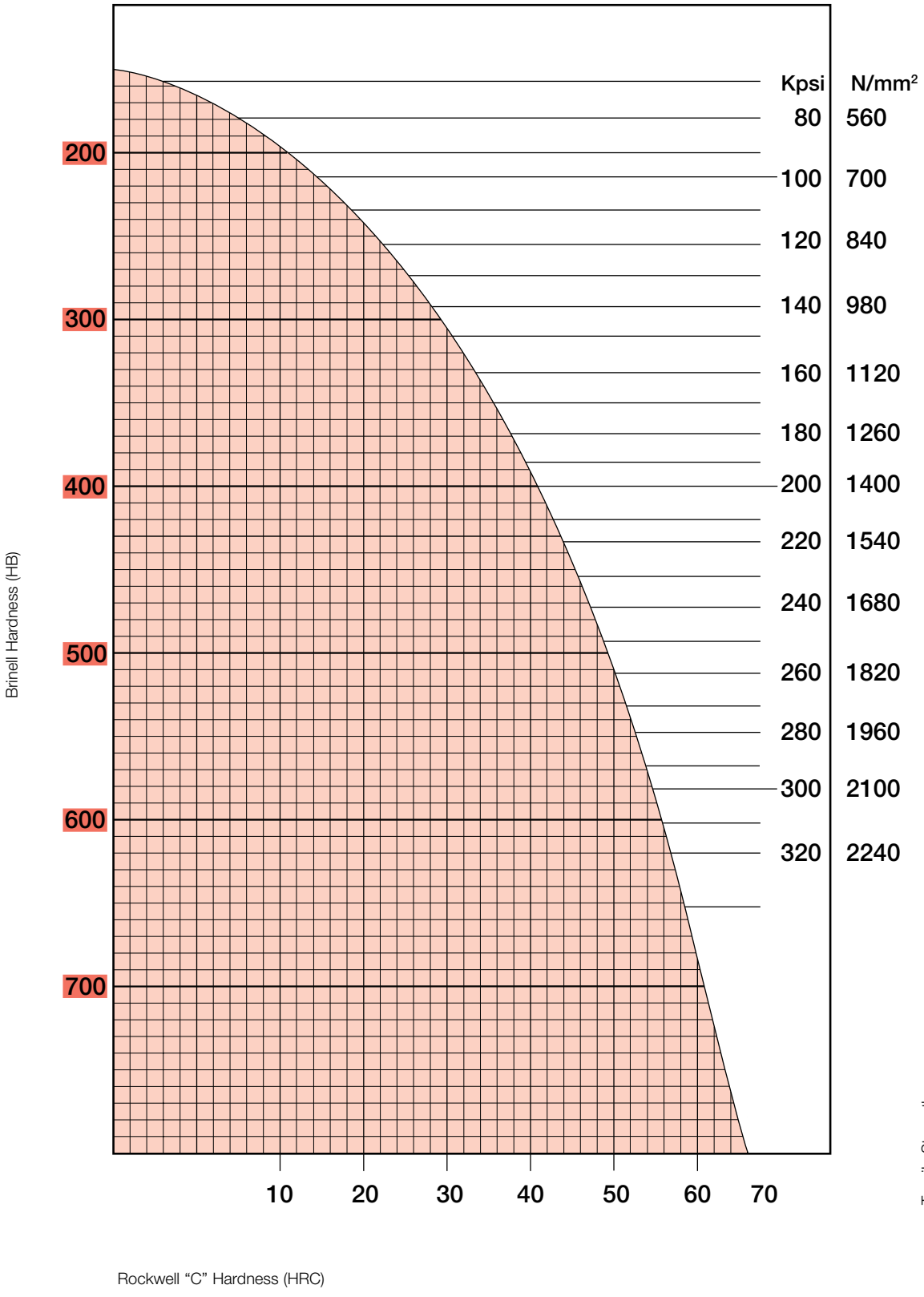
ISO	Material		Condition	Tensile Strength [N/mm²]	Kc1[1] [N/mm2]	mc[2]	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	1350	0.21	125	1
		>= 0.25 %C	Annealed	650	1500	0.22	190	2
		< 0.55 %C	Quenched and tempered	850	1675	0.24	250	3
		>= 0.55 %C	Annealed	750	1700	0.24	220	4
			Quenched and tempered	1000	1900	0.24	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	1775	0.24	200	6
			Quenched and tempered	930	1675	0.24	275	7
				1000	1725	0.24	300	8
				1200	1800	0.24	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	2450	0.23	200	10
			Quenched and tempered	1100	2500	0.23	325	11
	Stainless steel and cast steel		Ferritic/martensitic.	680	1875	0.21	200	12
			Martensitic	820	1875	0.21	240	13
M	Stainless steel		Austenitic	600	2150	0.20	180	14
K	Cast iron nodular (GGG)		Ferritic/pearlitic		1150	0.20	180	15
			Pearlitic		1350	0.28	260	16
	Grey cast iron (GG)		Ferritic		1225	0.25	160	17
			Pearlitic		1350	0.28	250	18
	Malleable cast iron		Ferritic		1225	0.25	130	19
			Pearlitic		1420	0.3	230	20
N	Aluminum-wrought alloy		Not cureable		700	0.25	60	21
			Cured		800	0.25	100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		700	0.25	75	23
			Cured		700	0.25	90	24
		>12% Si	High temperature		750	0.25	130	25
	Copper alloys	>1% Pb	Free cutting		700	0.27	110	26
			Brass		700	0.27	90	27
			Electrolitic copper		700	0.27	100	28
	Non metallic		Duroplastics, fiber plastics					29
			Hard rubber					30
S	High temp. alloys	Fe based	Annealed		2600	0.24	200	31
			Cured		3100	0.24	280	32
		Ni or Co based	Annealed		3300	0.24	250	33
			Cured		3300	0.24	350	34
			Cast		3300	0.24	320	35
	Titanium Ti alloys			RM 400	1700	0.23		36
			Alpha+beta alloys cured	RM 1050	2110	0.22		37
H	Hardened steel		Hardened		4600		55 HRc	38
			Hardened		4700		60 HRc	39
	Chilled cast iron		Cast		4600		400	40
	Cast iron		Hardened		4500		55 HRc	41

Steel | Stainless Steel | Cast Iron

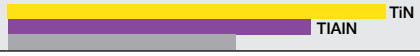
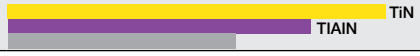
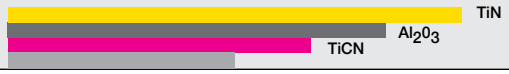
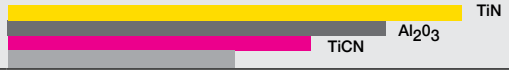
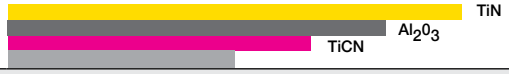
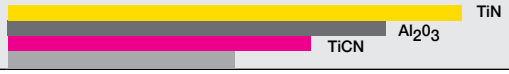
Nonferrous | High Temp. Alloys | Hardened Steel

[1] Specific cutting force for 1 mm² chip section
[2] Chip thickness factor.

Hardness Conversion Table



ISCAR Turning Grades Chart

Grades	ISO	Coating Layers
IC228	P25-P50 S25-S30 K20-K50 M30-M40	
IC520N PVD COATED CERMET	P05-P25 M05-M15	
IC530N PVD COATED CERMET	P10-P30 M10-M20	
S.T. IC806	S15-S25	
S.T. IC807 IC907	P10-P30 M05-M20 S05-S20 H05-H15	
S.T. IC808 IC908	P15-P30 M20-M30 K20-K40 S05-S20 H05-H15	
IC1007	P10-P30 M05-M20 K20-K40 S05-S20 H05-H15	
S.T. IC5005	K05-K20 P05-P15 H15-H25	
S.T. IC5010	K10-K25	
S.T. IC6015	M05-M25	
S.T. IC6025	M15-M35	
S.T. IC8150	P01-P30 K05-K15 M05-M15	
S.T. IC8250	P10-P35 M05-M20	
S.T. IC8350	P20-P45 M15-M30	

S.T. SUMO TEC ■ PVD COATED ■ CVD COATED

Recommended Applications
A TiN **PVD** coated tough grade. Used for grooving and threading a wide range of workpiece materials at low cutting speeds.
A cermet TiCN/TiN **PVD** coated grade. Used for grooving and turning applications. Recommended for semi-finishing and finishing operations when excellent surface finish is required. Wear resistant, prevents built-up edge.
A cermet TiCN/TiN **PVD** coated grade. Provides excellent resistance to wear and plastic deformation even at high cutting speeds and medium feeds. Useful for turning semi-finishing and finishing applications.
A tough submicron substrate, TiAlN **PVD** coated grade followed by a special **SUMO TEC** surface treatment. Suitable for turning inconel at low to medium cutting speeds.
A tough submicron substrate, TiAlN **PVD** coated grade. Suitable for turning heat resistant alloys, austenitic stainless steel and hard steel at low to medium cutting speeds.
A tough submicron substrate, TiAlN **PVD** coated grade. Suitable for turning heat resistant alloys, austenitic stainless steel and hard steel at low to medium cutting speeds.
A hard submicron grain size substrate featuring very high deformation resistance with **PVD** coating and special post coating treatment. For threading steel and stainless steel at moderate to high cutting speeds at stable conditions
A TiC/Al2O3 multilayer, **CVD** coated grade. Used for grooving and turning grey and nodular cast iron at medium to high cutting speeds.
A Tic/Al2O3 multilayer, **CVD** coated grade. Used for grooving and turning grey and nodular cast iron at medium to high cutting speeds. Can be used for interrupted cuts and heavy machining.
A very hard substrate with a cobalt enriched outer layer and alpha Al2O3 coating. Used for finishing and medium turning of stainless steel at high cutting speed. Features long tool life and excellent repeatability.
A tough substrate with **MTCVD** Al2O3 and TiCN coating. Recommended for machining stainless steel at high feeds and unfavorable conditions at medium cutting speed.
A very hard substrate with a cobalt enriched layer, **MTCVD** TiCN and a thick Al2O3 **CVD** coating. Features excellent thermal stability and resistance to chipping and plastic deformation. Recommended for high speed machining of steel at stable or slightly unstable conditions.
A tough substrate with a cobalt enriched layer combined with **MTCVD** TiCN and a thick alpha Al2O3 **CVD** coating. Recommended for general use machining of steel in a wide range of conditions, featuring high toughness and wear resistance.
A very tough substrate with a cobalt enriched layer combined with a **MTCVD** TiCN and Al2O3 **CVD** coating. Provides excellent toughness and good wear resistance on steel for interrupted and unstable cutting conditions.

ISCAR Turning Grades Chart

Grades	ISO	Coating Layers
IC20N	P05-P25 M05-M15	
IC30N	P10-P30 M10-M20 H10-H25	
IC08	M10-M30 N10-N25 S10-S30	
IC20	M10-M25 K10-K20 N05-N25 S05- S20 H05-H15	
IB05S	S05	
IB10H	H10	
IB10HC	H10	TiN
IB10S	S10	
IB20H	H20	
IB25HA	H25	
IB25HC	H25	TiN
IB50	K01-K10 H01-H10	
IB55	K05-K15 H10-H25	
IB85	K01-K15	
IB90	K05-K15 S01-S10	
ID5	N01-N10	

CERMET UNCOATED CBN PCD

Recommended Applications
A cermet grade, used for grooving and turning applications. Recommended for semi-finishing and finishing operations when excellent surface finish is required. Wear resistant, prevents built-up edge.
A cermet grade. Provides excellent resistance to wear and plastic deformation even at high cutting speeds and medium feeds. Useful for turning and milling of semi-finishing and finishing applications.
An uncoated, fine grain carbide grade. Used for stainless steel and high temperature alloys at low to medium cutting speeds.
An uncoated carbide grade. Used for semi-finishing, finishing and semi-roughing of aluminum, cast iron and stainless steel. Used at low to medium speeds and feeds.
Super fine grain **PCBN** with a very high **CBN** content for machining ferrous sintered metals.
Extra fine grain **PCBN**, enables grinding a very sharp edge used for finish turning of hardened steel, providing excellent surface finish.
TiN **PVD** coated, fine grain **PCBN** substrate. Used for high speed, continuous turning of hardened steel, providing excellent surface finish.
Fine grain, very hard **PCBN** grade for machining valve seats, sintered metals and Ti alloys.
A combination of coarse and fine grain **PCBN**, used for general and interrupted cutting of hardened steel.
Ti (**C,N,O) PVD** coated, very tough **PCBN**, used for general cutting of hardened steel.
Ti (**C,N,O) PVD** coated, medium grain size **PCBN** substrate. Used for medium and light interrupted cut turning of hardened steel.
A 50**% CBN** brazed tip, used for finishing hardened steel (45-65 HRc) and nodular cast iron in continuous cutting.
A 55**% CBN** brazed tip, used for finishing hardened steel (45-65 HRc) in continuous cutting.
An 85**% CBN** brazed tip, used for high speed turning of cast iron, cemented tungsten carbide, sintered metals and heavy alloys. Excellent for interrupted cutting of hardened steel.
A 90**% CBN** brazed tip, used for high speed cutting of cast iron, cemented tungsten carbide, sintered metals and heavy alloys. Excellent for interrupted cutting of hardened steel.
A PCD brazed tip, suitable for machining aluminum (Si < 12%) and copper alloys and general cutting of nonferrous materials.

ISCAR Turning Grades Chart

Grades	ISO	Coating Layers
IN11 WHITE CERAMICS	K01-K10 S01-S10	
IN22 BLACK CERAMICS	H05-H25 K05-K10	
IN23 BLACK CERAMICS	K05-K15 H10-H30	
IS6 SILICON NITRIDE	K01-K10	
IS8 SILICON NITRIDE	K01-K20	
IS9 SILICON NITRIDE	S20-S30	
IS80 SILICON NITRIDE	K01-K20	TiN
IN420 BLACK CERAMICS	K05-K10 H05-H25	TiN
IW7 WHISKER CERAMICS	S20-S30 H05-H25	

CERAMICS

Recommended Applications
White ceramic, features high toughness and wear resistance. Used for high speed turning of cast iron.
Black ceramic (Al2O3/TiCN), used for high speed, light roughing and finishing of hardened steel and chilled cast iron.
Black ceramic (Al2O3/TiC), used for machining grey and nodular cast iron at medium to finishing conditions.
SiAlON based ceramic grade for high speed machining of cast iron. Used for roughing and finishing at both wet and dry conditions of automotive parts like brake drum, brake disk etc. Provides high productivity also in roughing of mill rolls made of High-Cr Steel and **HSS**.
A silicon nitride grade, used for medium turning and milling applications. Can be used for interrupted cuts. Cutting speed range: 100-1500 m/min, feed range: 0.1-1.0 mm/rev.
A silicon nitride ceramic grade, recommended for high speed machining and interrupted cut for nickel based, heat resistant alloys such as inconel, Waspaloy and Rene.
A CVD coated Si3N4 ceramic grade. Used for rough turning and milling of grey and nodular cast iron.
Black ceramic (Al2O3/TiCN) TiN **PVD** coated, used for light roughing and finishing for high speed machining of hardened steel, chilled cast iron, high chromium steel, etc.
Whisker reinforced ceramic grade for machining high nickel alloys and hardened steel.

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	GERMANY DIN	Great Britain BS	Great Britain EN
1		1.0028	Ust 34-2 (S250G1T)		
1		1.0034	RSt 34-2 (S250G2T)	1449 34/20HR; 1449 34/20HS; 1449 34/20CR; 1449 34/20CS	
1		1.0035	St185 (Fe 310-0); St 33	Fe 310-0; 1449 15HR; 1449 15HS	
1	A 570 Gr. 33; A 570 Gr. 36	1.0036	S235JRG1; (Fe 360 B); Ust 37-2	Fe 360 B; 4360-40 B	
1		1.0037	S235JR (Fe 360 B); St 37-2	Fe 360 B; 4360-40 B	
1	A 570 Gr. 40	1.0044	S275JR (Fe 430 B); St44-2	Fe 430 B FN; 1449 43/25 HR; 1449 43/25HS; 4360-43 B	
1		1.0045	S355JR	4360-50 B	
1	A 570 Gr.50; A 572 Gr.50	1.0050	E295 (Fe 490-2); St 50-2	Fe 490-2 FN; 4360-50 B	
1	A 572 Gr. 65	1.0060	E335 (Fe 590-2); St 60-2	Fe 60-2; 4360-55 E; 4360-55 C	
1		1.0112	P235S	1501-164-360B LT20	
1		1.0114	S235JU; St 37-3 U	4360-40C	
1		1.0130	P265S	1501-164-400B LT 20	
1		1.0143	S275J0; St 44-3 U	4360-43C	
1	A 573 Gr. 70; A 611 Gr.D	1.0144	S275J2G3 (Fe 430 D 1); St 44-3	Fe 430 D1 FF; 4360-43 C; 4360-43 D	
1		1.0149	S275JOH; RoSt 44-2	4360-43C	
1		1.0226	DX51D; St 02 Z	Z2	
1	M 1010	1.0301	C10	040 A 10; 045 M 10; 1449 10 CS	
1	A 621 (1008)	1.0330	DC 01; St 2; St 12	1449 4 CR; 1449 3 CS	
1	A 619 (1008)	1.0333	Ust 3 (DC03G1); Ust 13	1449 2 CR;1449 3 CR	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
A 34-2		Fe 330; Fe 330 B FU		SS 330	
A 34-2 NE		Fe 330 B FN			St2sp; St2ps
A 33	1300	Fe 320	Fe 310-0		St0
	1311; 1312	FE37BFU	AE 235 B; Fe 360 B		16D; 18Kp; St3Kp
E 24-2	1311	Fe 360 B; 1449 37/23 HR	AE 235 B; Fe 360 B	STKM 12 A; STKM 12 AC	
E 28-2	1412	Fe 430 B; Fe 430 B FN	AE 275 B; Fe 430 B FN	SM 400 A; SM 400 B; SM 400 C	St4ps; St4sp
E 36-2	2172	Fe 510 B	AE 355 B		
A 50-2	1550; 2172	Fe 490	a 490-2; Fe 490-2 FN	SS 490	ST5ps; ST5sp
A 60-2	1650	Fe 60-2; Fe 590	A 590-2; Fe 590-2 FN	SM 570	St6ps; St6sp
A37AP		Fe 360 C	AE 235 C		
E 24-3		Fe 360 C	AE 235 C		
A 42 AP			SPH 265		
E 28-3	1414-01	Fe 430 D	AE 275 D		
E 28-3; E 28-4	1411; 1412; 1414	Fe 430 B; Fe 430 C (FN); Fe 430 D (FF)	AE 275 D; Fe 430 D1 FF	SM 400 A; SM 400 B; SM 400 C	St4kp; St4ps; St4sp
	1412-04	Fe 430 C	Fe 430 C		
GC	1151 10	FeP 02 G	FeP 02 G		
AF 34 C 10; XC 10		C 10; 1 C 10	F.1511; F.151.A	S 10C	10
TC	1142	FeP 00; FeP 01	AP 11	SPHD	15 kp
E		FeP 02	AP 02	SPCD	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
1	A 621 (1008)	1.0334	UStW 23 (DD12G1)		
1	A 622 (1008)	1.0335	DD13; StW 24	1449 1 HR	
1	A 620 (1008)	1.0338	DC04; St 4; St 14	1449 1 CR; 1449 2 CR	
1	A 516 Gr. 65; 55 A 515 Gr. 65; 55 A 414 Gr. C; A 442 Gr.55	1.0345	P235GH/H I	1501 Gr. 141-360; 1501 Gr. 161-360; 151-360 1501 Gr. 161-400; 154-360 1501 Gr. 164-360; 161-360	
1	(M) 1020; M 1023	1.0402	C22	055 M 15; 070 M 20; 1499 22 HS; 1499 22 CS	2C/2D
1	1020	1.0402	C22	050A20	2C/2D
1	1020; 1023	1.0402	C22	055 M 15; 070 M 20	2C
1		1.0425	P265GH/H II	1501 Gr. 161-400; 151-400 1501 Gr. 164-360; 161-400 1501 Gr. 164-400; 154-400	
1	A27 65-35	1.0443	GS-45	A1	
1		1.0539	S355NH;StE 335		
1		1.0545	S355N; StE 355	4360-50E	
1		1.0546	S355NL;TStE 355	4360-50EE	
1		1.0547	S355JOH	4360-50C	
1		1.0549	S355 NLH;TStE 355		
1		1.0553	S355JO;St 52-3U	4360-50C	
1	A 633 Gr.C; A 588	1.0562	P355N; StE 355	1501 Gr.225-490A LT 20	
1		1.0565	P355NH; WStE 355	1501-225-490B LT 20	
1		1.0566	P355NL1; TStE 355	1501-225-490A LT 50	
1	1	1.0570	S355J2G3; St 52-3	Fe 510 D1 FF; 1449 50/35 HR›HS; 4360-50 D	
1	1213	1.0715	9 SMn 28 (1SMn30)	230 M 07	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
S C		FeP 12	AP 12	SPHE	10kp
3 C		FeP 13	AP 13	SPHE	08kp
ES	1147	FeP 04	AP 04	SPCE	08jU; JUA
A 37 CP; A 37 AP	1331; 1330	FeE235; Fe 360 1 KW; Fe 360 1KG; Fe 360 2 KW; Fe 360 2 KG	A 37 RC I; RA II	SGV 410; SGV 450; SGV 480; SPV 450; SPV 480	
AF 42 C 20; XC 25; 1 C 22	1450	C 20; C 21; C 25	1 C 22; F.112	S20C	20
CC20	1450	C20; C21	F.112	S22 C	20
AF 42 C 20; XC 25; 1 C 22	1450	C 20;C 21;C 25	1 C 22F.112	S 20 C; S 22 C	
A 42 CP; A 42 AP	1431; 1430; 1432	Fe 410 1KW; Fe 410 1KG; Fe 410 1KT; Fe 410 2KW; Fe 410 2KG	A 42 RC I; A 42 RC II	SPV 315; SPV 355; SG 295; SGV 410; SGV 450; SGV 480	16K; 20K
E 23-45 M	1305				
TSE 355-4	2134-04	Fe 510 B	Fe 355 KGN		
E 355 R	2334-01	FeE 355 KG	AE 355 KG		
E 355 FP	2135-01	FeE 355 KT	AE 355 KT		
TSE 355-3	2172-04	Fe 510 C	Fe 510 C		
	2135	Fe 510 D	FeE 355 KTM		
E 36-3		Fe 510 C			
FeE 355 KG N; E 355 R/FP; A 510 AP	2106	FeE 355 KG; FeE 355 KW	AEE 355 KG; AEE 355 DD	SM 490 A; SM 490 B; SM 490 C; SM 490 YA; SM 490YB	15GF
A 510 AP	2106	FeE 355-2			
A 510 FP	2107-01	FeE 355-3			
E 36-3; E 36-4	2132; 2133; 2134; 2174	17GS; 17G1S	AE 355 D; Fe 510 D1 FF	SM 490 A; SM 490 B; SM 490 C; SM 490 YA; SM 490YB	17GS; 17G1S
S 250	1912	CF SMn 28	F.2111 - 11 SMn 28	SUM 22	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
1	1213	1.0715	9 SMn 28	230 M 07	
1	12 L 13	1.0718	9 SMnPb 28 (11SMnPb30)		
1	1108; 1109	1.0721	10 S 20	10S20	
1	11 L 08	1.0722	10 SPb 20		
1	11 L 08	1.0722	10 SPb 20		
1	1215	1.0736	9 SMn 36 11SMn37)		
1	12 L 14	1.0737	9 SMnPb 36 (11SMnPb37)		
1		1.0972	S315MC; QStE 300 TM	1501-40F30	
1		1.0976	S355MC; QStE 360 TM	1501-43F35	
1		1.0982	S460MC; QStE 460 TM	1501-50F45	
1		1.0984	S500MC; QStE 500 TM		
1		1.0986	S500MC; QStE 500 TM	1501 - 60F55	
1	1010	1.1121	CK 10; (C10E)	040 A 10	
1		1.1121	St 37-1	4360 40 A	
1	1015	1.1141	CK 15; (C15E)	040 A 15; 080 M 15	32C
1	1020; 1023	1.1151	C22E; CK 22	055 M 15; (070 M 20)	
1		1.2083			
1	A572-60	1.8900	StE 380	4360 55 E	
1	A36		St 44-2	4360 43 A	
1			StE 320-3Z	1 501 160	
2	(M) 1025	1.0406	C 25	070 M 26	
2		1.0416	GS-38		
2	A 537 Cl.1; A 414 Gr. G; A 612	1.0473	P355GH; 19 Mn 6		
2	1035	1.0501	C35	080 A 32; 080 A 35; 080 M 36; 1449 40 CS	
2	1045	1.0503	CF 45; (C45G)	060 A 47; 080 M 46	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
S 250	1912	CF 9 SMn 28	11 SMn 28	SUM 22	
S 250 Pb	1914	CF 9 SMnPb 28	F.2112-11 SMnPb 28	SUM 22 L; SUM 23 L; SUM 24 L	
10S20; 10 F 2		CF 10 S 20	F. 2121 - 10 S 20		
10PbF 2		CF 10 SPb 20	F.2122-10 SPb 20		
10 PbF 2		CF 10 SPb 20	10 SPb 20		
S 300		CF 9 Mn 36	F.2113 - 12 SMn 35	SUM 25	
S 300 Pb	1926	CF 9 SMnPb 36	F.2114- 12 SMnPb 35		
E 315 D					
E 355 D	2642	FeE 355TM			
E 490 D	2662	FeE 490 TM			
E 560 D		FeE 560 TM			
XC 10	1265	C 10; 2 C 10; 2 C 15	F-1510-C 10 K	S 9 CK; S 10 C	08;10
	1300				
XC 12; XC 15; XC 18	1370	C 15; C 16	F.1110-C 15 K; F.1511-C 16 K	S 15; S 15 CK	15
2 C 22; XC 18; XC 25	1450	C 20; C 25	F.1120-C 25 K	S 20 C; S 20 CK; S 22 C	20
	2314				
	2145	FeE390KG		S25C	
NFA 35-501 E 28	1411				
	1421				
1 C 25		C 25; 1 C 25			
20-400 M	1306				
A 52 CP	2101; 2102	Fe E 355-2	A 52 RC I, RA II	SGV 410; SGV 450; SGV 480	
1 C 35; AF 55 C 35; XC 38	1572; 1550	C 35; 1 C 35	F.113	S 35 C	35
XC 42 H 1 TS	1672	C 43; C 46		S 45 C	45

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
2	1040	1.0511	C40	080 M 40	
2		1.0540	C 50		
2	A27 70-36	1.0551	GS-52	A2	
2	A148 80-40	1.0553	GS-60	A3	
2	A738	1.0577	S355J2G4 (Fe 510 D 2)	Fe 510 D2 FF; 1501 Gr.224-460; 1501 Gr. 224-490	
2	1140	1.0726	35 S 20	212 M 36	8M
2	1146	1.0727	45 S 20 (46S20)		
2	1035; 1041	1.1157	40Mn4	150 M 36	15
2	1025	1.1158	C25E; CK 25	(070 M 25)	
2	1536	1.1166	34Mn5		
2	1330	1.1170	28Mn6	(150 M 28); (150 M 18)	14A
2		1.1178	C30E; CK 30	080M30	
2	1035	1.1180	C35R; Cm 35	080 A 35	
2	1035; 1038	1.1181	C35E; CK 35	080 A 35; (080 M 36)	
2	1035	1.1181	C35E; CK 35	080 A 35; (080 M 36)	
2	1035	1.1183	Cf 35 (C35G)	080 A 35	
2	1042	1.1191	GS- Ck 45	080 A 46	
2	1049; 1050	1.1206	C50E; CK 50	080 M 50	
2	1050; 1055	1.1213	Cf 53; (C53G)	070 M 55	
2	4520	1.5423	22Mo4	1503-245-420	
3	A 516 Gr.70; A 515 Gr. 70; A 414 Gr.F; A 414 Gr.G	1.0481	P295GH; 17 Mn 4	1501 Gr. 224	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
1 C 40; AF 60 C 40		C40; 1 C 40	F.114.A		
	1674	C 50	1 C 50		
280-480 M	1505				
320-560 M	1606				
A 52 FP	2107		A 52 RB II; AE 355 D		
35MF 6	1957		F.210.G		
45 MF 4	1973				
35 M 5; 40 M 5					40G
2 C 25; XC 25		C25	F.1120 - C 25 K	S 25 C; S 28 C	25
			TO.B	SMn 433 H	
20 M 5; 28 Mn 6		C 28 Mn	28 Mn 6	SCMn 1	30G
XC 32		C 30	2 C 30		
3 C 35; XC 32	1572		F.1135-C 35 K-1		
2 C 35; XC 32; XC 38 H 1	1550; 1572	C 35	F.1130-C 35 K	S 35 C	35
XC 38	1572	C36		S35C	
XC 38 H 1 TS	1572	C 36; C 38		S 35 C	35
XC 45	1660	C45	F-1140		
2 C 50; XC 48 H 1; XC 50 H1	1674	C 50			50
XC 48 H TS	1674	C 53		S 50 C	50
		16 Mo 5 KG; 16 Mo 5 KW	F.2602- 16 Mo 5	SB 450 M; SB 480 M	
A 48 CP; A 48 AP		Fe 510 KG; Fe 510 KT; Fe 510 KW; Fe 510-2 KG; Fe 510-2KT; Fe 510-2KW; FeE 295	A 47 RC I; RA II	SG 365; SGV 410; SGV 450; SGV 480	14G2

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
3	1043	1.0503	C35	060 A 47; 080 M 46; 1449 50 HS, 1449 50 CS	
3	1074	1.0614	C 76 D; D 75-2		
3	1086	1.0616	C 86 D; D 85-2		
3	1095	1.0618	C 92 D; D 95-2		
3	1036; 1330	1.1165	30Mn5	120 M 36; (150 M 28)	
3	1335	1.1167	36Mn5	150 M 36	
3	1040	1.1186	C40E; CK 40	060 A 40; 080 A 40; 080 M 40	
3	1045	1.1191	C45E; CK 45	080 M 46; 060 A 47	
3	1049	1.1201	C45R; Cm 45	080 M 46	
3		1.7242	18 CrMo 4		
3	A 387 Gr. 12 Cl	1.7337	16 CrMo 4 4		
3		1.7362	12 CrMo 19 5	3606-625	
3	A572-60		17 MnV 6	436055 E	
4	1055	1.0535	C55	070 M 55	
4	1060	1.0601	C60	060 A 62; 1449 HS; 1449 CS	43D
4	107	1.0603	C67	080 A 67; 1449 70 HS	
4	1074; 1075	1.0605	C75	1449 80 HS	
4	1055	1.1203	C55E; CK 55	060 A 57; 070 M 55	
4	1055	1.1209	C55R; Cm 55	070 M 55	
4	1060; 1064	1.1221	C60E; CK 60	060 A 62	43D
4	1070	1.1231	Ck 67; (C67E)	060 A 67	
4	1074; 1075; 1078	1.1248	CK 75; (C75E)	060 A 78	
4	1086	1.1269	CK 85 (C85E)		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
1 C 45; AF 65 C 45	1672; 1650	C 45; 1 C 45	F.114	S 45 C	45
XC 75					
XC 80		C 85			
XC 90					
35 M 5			F.8211-30 Mn 5; f.8311-AM 30 Mn 5	SMn 433 H; SCMn 2	27ChGSNMDTL 30GSL
40 M 5	2120		F. 1203-36 Mn 6; F. 8212-36 Mn 5	ssmN 438 (H); SCMn 3	35G2; 35GL
2 C 40; XC 42 H 1		C 40		S 40 C	
2 C 45; XC 42 H 1; XC 45; XC 48 H 1	1672	C 45; C 46	F.1140-C 45 K; F.1142-C48 K	S 45 C; S 48 C	45
3 C 45; XC 42 H 1; XC 48 H 1	1660	C 45	F.1145-C 45K-1; F.1147C 48 K-1	S 50 C	
		A 18 CrMo 4 5 KW			15ChM
Z 10 CD 5.05		16 CrMo 20 5			
NFA 35-501 E 36	2142				
1 C 55; AF 70 C 55	1655	C 55; 1 C 55		S 55 C	55
1 C 60; AF 70 C 55		C 60; 1 C 60		S 58 C	60(G)
XC 65		C 67			
		C 75			75
2 C 55; XC 55 H 1	1655	C 55	F.1150-C 55 K	S 55 C	55
3 C 55; XC 55 H 1		C 55	F.1155-C 55K-1		
2 C 60; XC 60 H 1	1665; 1678	C 60		S 58 C	60; 60G; 60GA
XC 68	1770	C70			65GA; 68GA; 70
XC 75	1774	C 75			75(A)
XC 90		C 90			85(A)

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
4	1095	1.1274	Ck 101 (C101E)		
4	W 112	1.1663	C 125 W		
4					
5		1.0070	E360 (Fe 690-2); St 70-2	Fe 690-2 FN	
5		1.7238	49 CrMo 4		
5		1.7701	51 CrMoV 4		
6	A 284 Gr.D; A 573 Gr.58; A 570 Gr 36; A 570 Gr C; A 611 Gr. C	1.0116	S235J2G3 (Fe 360 D 1); St 37-3	Fe 360 D1 FF; 1449 37/23 CR; 4360-40 D	
6	5120	1.0841	St 52-3	150 M 19	
6	9255	1.0904	55 Si 7	250A53	45
6	9254	1.0904	55 Si 7	250 A 53	
6	9262	1.0961	60SiCr7		
6	L3	1.2067	100Cr6	BL3	
6	L1	1.2108	90 CrSi 5		
6	L2	1.2210	115CrV3		
6		1.2241	51CrV4		
6		1.2311	40 CrMnMo 7		
6	4135	1.2330	35 CrMo 4	708 A 37	
6		1.2419	105WCr6	105WC 13	
6	0 1	1.2510	100 MnCrW 4	BO1	
6	S1	1.2542	45 WCrV7	BS1	
6	S1	1.2550	60WCrV7		
6	L6	1.2713	55NiCrMoV6		
6	L 6	1.2721	50NiCr13		
6	O2	1.2842	90MnCrV8	BO2	
6	E 50100	1.3501	100 Cr 2		
6	52100	1.3505	100Cr6	2 S 135; 535 A 99	31
6		1.5024	46Si7		
6	9255	1.5025	51Si7		
6	9255	1.5026	55Si7	251 a 58	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
XC 100	1870	C 100	F-5117	SUP 4	
Y2 120					
	2223				
A 70-2	1655	Fe 70-2; Fe 690	A 690-2; Fe 690-2 FN		
		51 CrMoV 4			
E 24-3; E 24-4	1312; 1313	Fe 360 D1 FF; Fe 360 C FN; Fe 360 D FF; Fe 37-2	AE 235 D; Fe 360 D1 FF		St3kp; St3ps; St3sp; 16D
20 MC 5	2172	Fe 52	F-431		
55S7	2085	55Si8	56Si7		
55 S 7	2090				
60SC6		60SiCr8	60SiCr8		
Y100C6			100Cr6		
	2092	105WCR 5			
100C3		107CrV3KU			
		35 cRmO 8 KU			
34 CD 4	2234	35CrMo4	34CrMo4	SCM435TK	
105WC13	2140	10WCr6	105WCr5		ChWG
8 MO 8	2140	10WCr6	105WCr5	SKS31	
	2710	45 WCrV8 KU	45WCrSi8		5ChW25F
55WC20	2710	58WCr9KU			
55NCDV7			F.520.S	SKT4	5ChNM
55 NCV 6	2550		f-528		
90 MV8					
100 C 6	2258	100Cr6	F.1310 - 100 Cr 6	SUJ2	SchCh 15
45 S 7; Y 46 7; 46 SI 7			F. 1451 - 46 SI 7		
51 S 7; 51 Si 7	2090	48 Si 7; 50 Si 7	F.1450-50 Si 7		
55 S 7	2085; 2090	55 Si 7	F.1440 - 56 Si 7		55S2

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
6	9260	1.5027	60Si7	251 A 60; 251 H 60	
6	9260 H	1.5028	65Si7		
6		1.5120	38 MnSi 4		
6	A 204 Gr.A; 4017	1.5415	16Mo3; 15 Mo 3	1503-243 B	
6	4419	1.5419	20Mo4	1503-243-430	
6	A 350-LF 5	1.5622	14Ni6		
6	3415	1.5732	1 NilCr10		
6	3310; 3314	1.5752	14NilCr14	655M13	36A
6		1.6587	17CrNiMo6	820A16	
6		1.6657	14NiCrMo134		
6	5015	1.7015	15 Cr 3	523 M 15	
6	5132	1.7033	34Cr4	530A32	18B
6	5140	1.7035	41C r4	530M40	18
6	5140	1.7045	42Cr41	530 A 40	
6	5115	1.7131	16MnCr5	527 M 17	
6		1.7139	16MnCr5		
6	5155	1.7176	55Cr3	527 A 60	48
6	4135; 4137	1.7220	34CrMo4	708 Aa 37	
6	4142	1.7223	41CrMo4		
6	4140	1.7225	42CrMo4	708 M 0	
6		1.7228	55NiCrMoV6G	823M30	33
6		1.7262	15CrMo5		
6		1.7321	20 mOcR 4		
6	ASTM A182 F12	1.7335	13CrMo4 4	1501-620Gr27	
6	A 182-F11; A 182-F12	1.7335	13 CrMo 4 4	1 501 620 Gr. 27	
6	ASTM A 182 F22	1.7380	10CrMo9 10	1501-622gR31; 1501-622gR45	
6	A182 F22	1.7380	10 CrMo 9 10	1501-622	
6		1.7715	14MoV6 3	1503-660-440	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
60 S 7		60 Si 7	F. 1441 - 60 Si 7		60S2
60 S 7				50 P 7; SUP 6	
15 D 3	2912	16Mo3 KG; 16Mo3KW	F. 2601 - 16 Mo 3		
	2512	G 20 Mo 5; G 22 Mo5		SCPH 11	
16N6		14 Ni 6 KG; 14 Ni 6 KT	F.2641 - 15 Ni 6		
14 NC 11		16NiCr11	15NiCr11	SNC415(H)	
12NC15				SNC815(H)	
18NCD6			14NiCrMo13		
			14NiCrMo131		
12 C 3				SCr415(H)	15Ch
32C4		34Cr4(KB)	35Cr4	SCr430(H)	35Ch
42C4		41Cr4	42Cr4	SCr440(H)	
42 C 4 TS	2245	41Cr4	42Cr4	SCr440	
16 MC 5	2511	16MnCr5	16MnCr5		
	2127				
55 C 3	2253			SUP9(A)	50ChGA
35 CD 4	2234				35ChM
		41CrMo4	42CrMo4	SNB 22-1	40ChFA
42 CD 4	2244				
	2512	653M31			
12 CD 4	2216		12CrMo4		
	2625				
		14CrMo4 5	14CrMo45		
15 CD 4.5	2216		12CrMo4	SCM415(H)	12ChM; 15ChM
12 CD 9.10	2218	12CrMo9, 12CrMo10	TU.H		
			13MoCrV6		

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
6	A355A	1.8509	41CrAlMo 7	905 M 39	41B
7	A570.36	1.0038	S235JRG2 (Fe 360 B); RSt 37-2	Fe 360 B FU; 1449 27/23 CR; 4360-40 B	
7	3135	1.5710	36NiCr6	640A35	111A
7		1.5755	31 NiCr 14	653 M 31	
7	8620	1.6523	2 NiCrMo2	805M20	362
7	8740	1.6546	40 NiCrMo 22	311-Tyre 7	
7	4340	1.6565	40NiCrMo6	817 M 40	24
7	4130	1.7218	25CrMo4	CDS 110	
7		1.7733	24 CrMoV 5 5		
7		1.7755	GS-45 CrMOV 10 4		
7		1.8070	21 CrMoV 5 11		
8	C 45 W	1.173	C 45 W3		
8	4142	1.2332	47 CrMo 4	708 M 40	19A
8	A128 (A)	1.3401	G-X120 Mn 12		
8	3435	1.5736	36 NiCr 10		
8	9840	1.6511	36CrNiMo4	816M40	110
8		1.7361	32 CeMo12	722 M 24	40B
8	6150	1.8159	50 CrV 4	735 A 50	47
8		1.8161	58 CrV 4		
8		1.8515	32 CrMo 12	722 M 24	40B
8		1.8523	39CrMoV13 9	897M39	40C
9		1.4882	X 50 CrMnNiNbN 21 9		
9		1.5864	35 niCr 18		
9			31 NiCrMo 13 4	830 m 31	
10	A 619	1.0347	DCO3; RRSt; RRSt 13	1449 3 CR; 1449 2 CR	
10	M 1015; M 1016; M 1017	1.0401	C15	080 M 15; 080 M 15; 1449 17 CS	
10		1.0723	15 S22; 15 S 20	210 A 15; 210 M 15	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
40 CAD 6.12	2940	41CrAlMo7	41CrAlMo7		
E 24-2NE	1312	Fe 360 B FN	AE 235 B FN; AE 235 B FU; Fe 360 B FN; Fe 360 B FU		St3ps; St3sp
35NC6				SNC236	
18 NC 13					
20 NCD 2	2506	20NiCrMo2	20NiCrMo2	SNCM220(H)	20ChGNM
		40NiCrMo2(KB)	40NiCrMo2	SNCM240	38ChGNM
35 NCD 6	2541	35NiCrMo6(KB)		SNCM 447	38Ch2N2MA
25 CD 4	2225	25CrMo4(KB)	55Cr3	SCM420; SCM430	20ChM; 30ChM
20 CDV 6		21 CrMoV 5 11			
		35 NiCr 9			
XC 48					
42 CD 4	2244	42CrMo4	42CrMo4	SCM (440)	
Z 120 M 12	2183	GX120Mn12	F. 8251-AM-X120Mn12	SCMnH 1; SCMn H 11	110G13L
30 NC 11					
40NCD3		36nIcRmO4(KB)	35NiCrMo4	SUP10	40ChN2MA
30 CD 12	2240	30CrMo12	F.124.A		
50CrV4	2230	50CrV4	51CrV4		50ChGFA
30 CD 12	2240	32CrMo12	F.124.A		
		36CrMoV12			
Z 50 CMNNb 21.09					
	2534		f-1270		
E		Fep 02	AP 02		08JU
AF 37 C12; XC 18	1350	C15; C16; 1 C 15	F.111	S 15 C	
	1922		F.210.F	SUM 32	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
10	D 3	1.2080	X 210 Cr 12	BD 3	
10	420	1.2083	X 42 Cr 13		
10		1.2085	X 33 CrS 16		
10		1.2162	21 MnCr 5		
10	L2	1.2210	115 Cr V3		
10		1.2311	40 CrMnMo7		
10	P20+S	1.2312	40CrMnMoS 8.6		
10		1.2316	X36CrMo17		X38CrMo16
10	H 11	1.2343	x 38 CrMoV 5 1	BH 11	
10		1.234	X 38 CrMoV 5 1		
10	H 13	1.2344	X 40 CrMoV 5 1	BH 13	
10	A 2	1.2363	X100 CrMoV 5 1	BA 2	
10		1.236	X 100 CrMo V5-1		
10	D 2	1.2379	X 155 CrVMo 12 1	BD2	
10		1.238	X 155 CrVMo 12 1		
10	HNV3	1.2379	X210Cr12G	BD2	
10	D 4 (D 6)	1.2436	X 210 CrW 12	BD6	
10		1.244	X 210 CrW 12		
10	O1	1.251	100 MnCrW 4	B0 1	
10	H 21	1.2581	X 30 WCrV 9 3	BH 21	
10		1.2601	X 165 CrMoV 12		
10	H 12	1.2606	X 37 CrMoW 5 1	BH 12	
10		1.277	X 45 NiCrMo 4		
10	O2	1.284	90 MnCrV 8	B0 2	
10	D3	1.3343	S 6-5-2	BM2	
10	ASTM A353	1.5662	X8Ni9	1501-509; 1501-510	
10	ASM A353	1.5662	X8Ni9	502-650	
10	2517	1.568	12Ni19	12Ni19	
10	2515	1.5680	12 Ni 19		
10		1.713	16 MnCr 5		
10		1.276	X 19 NiCrMo 4		
11		1.3202	S 12-1-4-5	BT 15	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z 200 C 12					
Z40 C14	2314			SUS 420 J 2	
Z35V CD 17.S					
20 MC 5					
100 C3		107 CrV3 KU	F.520 L		
40 CMD 8		35 cRmO 8 KU			
40CMD8S					
Z 38 CDV 5		X 37 CrMoV 5 1 KU			4Ch5MFS
Z 38 CDV 5		X 37 CrMoV 51 KU			
Z 40 CDV 5	2242	X40CrMoV511KU	F-5318	SKD61	4Ch5MF1S
Z 100 CDV 5	2260	X100CrMoV51KU	F-5227	SKD12	
Z 160 CDV 12	2310	X165CrMoW12KU	X160CrMoW12KU	SKD11	
Z 160 CDV 12		X 155 CrVMo 12 1 KU			
Z160CDV12	2736				
Z 200 CD 12	2312	X215CrW 12 1 KU	F-5213		
90 MnWRrV5		95MnWCr 5 KU	95 MnCrW 5		
Z 30 WCV 9		X30WCrV 9 3 KU	F-526	SKD5	3Ch2W8F
	2310				
Z 35 CWDV 5		X 35 CrMoW 05 KU	F.537		5ChNM
45 NCD 16		40 NiCrMoV 8 KU			
90 MV 8		90 MnVCr 8 KU			
Z200C12	2715	X210Cr13KU	X210Cr12	SUH3	R6M5
		14 Ni 6 KG; 14 Ni 6 KT	XBNiO9		
9 Ni		X10Ni9	F-2645	SL9N60[53]	
Z18N5					
Z 18 N 5					
16 MC 5					
		HS 12-1-5-5	12-1-5-5		

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
11		1.3207	S 10-4-3-10	BT42	
11	T 15	1.3243	S 6-5-2-5		
11		1.3246	S 7-4-2-5		
11		1.3247	S 2-10-1-8	BM 42	
11	M 42	1.3249	S 2-9-2-8	BM 34	
11	T 4	1.3255	S 18-1-2-5	BT 4	
11	M 2	1.3343	S6-5-2	BM2	
11	M 7	1.3348	S2-9-2		
11	T 1	1.3355	S 18-0-1	BT 1	
11	HNV 3	1.4718	X45CrSi 9 3	401S45	52
11	422	1.4935	x20 CrMoWV 12 1		
12	403	1.4000	X6Cr13	403 S 17	
12		1.4001	X6Cr14		
12	(410S)	1.4001	X7 Cr 13	(403 S 7)	
12	405	1.4002	X6CrA12	405S17	
12	405	1.4002	X6 CrAl 13	405 S 17	
12	416	1.4005	X12CrS 13	416 S 21	
12	410; CA-15	1.4006	(G-)X10 Cr 13	410S21	56A
12	430	1.4016	X8Cr17	Z8C17	
12	430	1.4016	X6 Cr 17	430 S 15	60
12		1.4027	G-X20Cr14	420C29	
12	420	1.4028	X30 Cr 13	420 S 45	
12		1.4086	G-X120Cr29	452C11	
12	430 F	1.4104	X12CrMoS17	420 S 37	
12	440B	1.4112	X90 CrMoV 18		
12	434	1.4113	X6CrMo 17	434 S 17	
12		1.4340	G-X40CrNi27 4		
12	S31500	1.4417	X2CrNiM0Si19 5		
12	S31500	1.4417	X2 CrNoMoSi 18 5 3		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z130WKCDV					
KCV 06-05-05-04-02	2723	HS 6-5-2-5	6-5-2-5	SKH55	R6M5K5
Z110 WKCDV 07-05-04	7-4-2-5	HS 7-4-2-5	M 35		
Z110 DKCWV 09-08-04	2-10-1-8	HS 2-9-1-8	M 41		
			2-9-2-8		R6M5
Z 80 WKCV 18-05-04-0					
Z 85 WDCV	2722	HS 6 5 2	F-5604	SKH 51	
Z 100 DCWV 09-04-02-	2782	HS 2 9 2	F-5607		
Z 80 WCV 18-4-01					R18
Z45CS9		X45CrSi8	F322	SUH1	40Ch9S2
Z 6 C 13	2301	X6Cr13	F.3110	SUS403	08Ch13
			F8401		08Ch13
Z 8 C 13	2301				08Ch13
Z8CA12		X6CrAl13			
Z6CA13	2302	X6CrAl13			
Z11 CF 13	2380	X12 CrSC13	F-3411	SUS 416	
Z10 C 13	2302	X12Cr13	F.3401	SUS410	12Ch13
430S15	2320	X8Cr17	F.3113		12Ch17
Z 8 C 17	2320	X8Cr17	F3113	SUS430	12Ch17
Z20C13M					20Ch13L
Z 30 C 13	2304				20Ch13
Z 10 CF 17	2383	X10CrS17	F.3117	SUS430F	
Z 8 CD 17.01	2325	X8CrMo17		SUS434	
	2376				
	2376				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
12		1.4418	X4 CrNiMo16 5		
12	XM 8; 430 Ti; 439	1.4510			
12	430tl	1.4510	X6 CrTi 17		
12		1.4511	X 6 CrNb 17		
12	409	1.4512	X 6 CrTi 12; (X2CrTi12)	LW 19; 409 S 19	
12		1.4720	X20CrMo13		
12	405	1.4724	X10CrA113	403S17	
12	430	1.4742	X10CrA118	439S15	60
12	HNV6	1.4747	X80CrNiSi20	443S65	59
12	446	1.4749	x18 cRn 28		
12	446	1.4762	X10CrA124		
12	EV 8	1.4871	X 53 CrMnNiN 21 9	349 S 54	
12	302		x12 CrNi 18 9	302 S 31	
12	429		X10 CrNi 15		
13	420	1.4021	X20Cr13	420S37	
13	420	1.4031	X40 Cr 13		
13		1.4034	X46Cr13	420 S 45	
13	431	1.4057	X20CrNi172	431 S 29	57
13	CA6-NM	1.4313	G-X4 CrNi 13 4	425 C 11	
13		1.4544		S. 524; S. 526	
13	348	1.4546	X5CrNiNb 18-10	347 S 31; 2 S. 130; 2 S. 143; 2 S. 144; 2 S. 145; S.525; S.527	
13		1.4922	x20cRmV12-1		
13		1.4923	X22 CrMoV12 1		
14	304	1.4301	X 5 CrNi 18 9	304 S 15	
14	303	1.4305	X10 CrNiS 18 9	303 S 21	58M
14	304L	1.4306	X2CrNi18 9	304S12	
14	304L	1.4306	X2 CrNi 18 10	304 S 11	
14	CF-8	1.4308	X6 CrNi 18 9	304 C 15	58E
14	301	1.4310	X12CrN i17 7	301 S 21	
14	304 LN	1.4311	X2 CrNiN 18 10	304 S 62	
14		1.4312	G-X10CrNi18 8	302C25	
14	305	1.4312	X8 CrNi 18 12	305 s 19	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z6CND16-04-01	2387				
Z 4 CT 17		X 6 CrTi 17	F.3115 -X 5 CrTi 17	SUS 430 LX	08 Ch17T
Z 4 CT 17					08Ch17T
Z 4 CNb 17		X 6 CrNb 17	F.3122-X 5 CrNb 17	SUS 430 LK	
Z 3 CT 12		X 6 CrTi 12		SUH 409	
Z10C13		X10CrA112	F.311		10Ch13SJu
Z10CAS18		X8Cr17	F.3113	SUS430	15Ch13SJu
Z80CSN20.02		X80CrSiNi20	F.320B	SUH4	
Z10CAS24	2322	X16Cr26		SUH446	
Z 52 CMN 21.09		X53CrMnNiN21 9		SUH35, SUH36	55Ch20G9AN4
Z 10 CN 18-09	2330				
Z 20 C 13	2303	14210			20Ch13
Z 40 C 14	-2304				40Ch13
Z40 C 14		X40Cr14	F.3405	SUS420J2	
Z 15 CN 16.02	2321	X16CrNi16	F.3427	SUS431	20Ch17N2
Z 4 CND 13-04 M	2385	(G)X6CrNi304		SCS5	
		X 6 CrNiTi 18 11			08Ch 18N12T
		X 6 CrNiNb 18 11			
	2317	x20cRmOnl 12 01			
Z 5 CN 18.09	2332; 2333				08Ch18N10
Z 8 CNF 18-09	2346	X10CrNiS18.09	F.3508	SUS303	30Ch18N11
Z2CrNi18 10	2352	x2cRnl18 11	F.3503	SCS19	
Z 3 CN 19-11	2352	X2CrNi18 11			
Z 6 CN 18-10 M	2333			SUS304L	
Z 12 CN 17.07	2331	X2CrNi18 07	F.3517		
Z 2 CN18.10	2371	X2CrNiN18 10		SUS304LN	
Z10CN18.9M					10Ch18N9L
					10Ch18N9L

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
14	304	1.4350	X5CrNi18 9	304S15	58E
14	S32304	1.4362	X2 CrNiN 23 4		
14	202	1.4371	X3 CrMnNiN 188 8 7	284 S 16	
14	316	1.4401	X 5 CrNiMo 17 12 2; (X4 CrNiMo 17 -12-2)	316 S 13; 316 S 17; 316 S 19; 316 S 31; 316 S 33	
14	316L	1.4404	X2 CrNiMo 17 13 2; (X2 CrNiMo 17-12-2); GX 2 CrNiMoN 18-10	316 S 11; 316 S 13; 316 S 14; 316 S 31; 316 S 42; S.537; 316 C 12; T.75; S. 161	
14	316LN	1.4406	X2 CrNiMoN 17 12 2; (X2CrNiMoN 18-10)	316 S 61; 316 S 63	
14	CF-8M	1.4408	GX 5 CrNiMoN 7 12 2; G-X 6 CrNiMo 18 10	316 C 16 (LT 196); ANC 4 B	
14		1.4410	G-X10CrNiMo18 9		
14	316 Ln	1.4429	X2 CrNiMo 17 -13-3	316 S 62	
14	316L	1.4435	X2 CrNiMo18 14 3	316 S 11; 316 S 13; 316 S 14; 316 S 31; LW 22; LWCF 22	
14	316	1.4436	X 5 CrNiMo 17 13 3; (X4CRNIMO 17-13-3	316 S 19; 316 S 31; 316 S 33; LW 23; LWCF 23	
14	317L	1.4438	X2 CrNiMo 18 16 4; (X2CrNiMo 18-15-4)	317 S 12	
14	(s31726)	1.4439	X2 CrNiMoN 17 13 5		
14		1.444	X 2 CrNiMo 18 13		
14	317	1.4449	X5 CrNiMo 17 13 3	317 S 16	
14	329	1.4460	X 4 CrNiMo 27 5 2; (X3CrNiMo27-5-2)		
14	329	1.4460	X8CrNiMo27 5		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z6CN18.09	2332	X5CrNi18 10	F.3551	SUS304	
Z 2 CN 23-04 AZ	2327				
Z 8 CMN 18- 08-05					
Z 3 CND 17 -11-01; Z 6 CND 17-11; Z 6 CND 17-11-02; Z 7 CND 17-11-02; Z 7 CND 17-12-02	2347	X 5 CrNiMo 17 12	F.3534-X 5 CrNiMo 17 12 2	SUS 316	
Z 2 CND 17-12; Z 2 CND 18-13; Z 3 CND 17-11-02; Z 3 CND 17-12-02 FF; Z 3 CND 18-12-03; Z 3 CND 19.10 M	2348	X 2 CrNiMo 17 12; G-X 2 CrNiMo 19 11	F.3533 - X 2 CrNiMo 17 13 2; F.3537 - X 2 CrNiMo 17 13 3	SUS 316 L	
Z2 CND 17-12 AZ		X 2 CrNiMoN 17 12	F.3542-X 2 CrNiMoN 17 12 2	SUS316LN	07 Ch 18N
	2343		F.8414-AM-X 7 CrNiMo 20 10	SCS 14	10G2S2MSL
Z5CND20.12M	2328				
Z 2 CND 17-13 Az	2375	X 2 CrNiMoN 17 13	F.3543-X 2 CrNiMoN 17 13 3	SUS 316 LN	
Z 3 CND 17-12-03; Z 3 CND 18-14-03	2375	X2CrNiMoN 17 13	F.3533-X 2 CrNiMo 17 13 2	SUS 316 L	O3 Ch 17N14M3
Z 6 CND 18-12-03; Z 7 CND 18-12-03	2343	X 5 CrNiMo 117 13; X 8 cRnImO 17 13	F.3543-X 5 CrNiMo 17 12 2 F.3538-X 5 CrNiMo 17 13 3	SUS 316	
Z 2 CND 19-15-04; z 3 cnd 19-15-04	2367	X2CrNiMo18 16	f.3539-x 2 cRnImO 18 16 4	SUS317L	
Z 3 CND 18-14-06 AZ					
		X 5 CrNiMo 18 15		SUS 317	
(Z 3 CND 25-07 Az); Z 5 CND 27-05 Az	2324		F.3309-X 8 CrNiMo 17 12 2; F.3552-X 8 CrNiMo 18 16 4	SUS 329 J 1	
	2324				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
14		1.4462	X2CrNiMoN22 5 3	318 S 13	
14		1.4500	G-X7NiCrMoCuNb25 20		
14	17-7PH	1.4504		316S111	
14	443 444	1.4521	X2CrMoTi18-2		
14	UNS N 08904	1.4539	X1NiCrMoCuN25-20-5		
14	CN-7M	1.4539	(G-)X1 NiCrMoCu 25 20 5		
14	321	1.4541	Z 6 CrNiTi 18-10	321 S 31; 321 S 51 (1010; 1105); LW 24; LWCF 24	
14	630	1.4542	X5 CrNiCuNb 17 4; (X5 CrNiChNb 16-4)		
14	15-5PH	1.4545	Z7 CNU15.05		
14	S31254	1.4547	X1 CrNiMoN 20 18 7		
14	347	1.4550	X6 CrNiNb 18 10	347 S 17	58F
14		1.4552	G-X7CrNiNb18 9		
14	17-7PH	1.4568		316S111	
14	316tTi	1.4571	X6 CrNiMoTi 17 12 2	320 S 31	
14	316 Ti	1.4571	x 6 CrNiMoTi 17 12 2	320 S 31	58J
14		1.4581	G-X 5 CrNiMoNb	318 C 17	
14	318	1.4583	X 10CrNiMoNb 18 12	303 S 21	
14		1.4585	G-X7CrNiMoCuNb18 18		
14		1.4821	X20CrNiSi25 4		
14		1.4823	G-X40CrNiSi27 4		
14	309	1.4828	X15CrNiSi20 12	309 S 24	58C
14	309S	1.4833	X6 CrNi 22 13	309 S 13	
14	310 S	1.4845	X12 CrNi 25 21	310S24	
14	321	1.4878	X6 CrNiTi 18 9	32 1 S 20	58B

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z 3 CND 22-05 Az; (Z 2 CND 24 -08 Az); (Z 3 CND 25-06-03 Az)	2377			SUS 329 J3L	
23NCDU25.20M					
		Z8CNA17-07	X2CrNiMo1712		
	2326		F.3123-X 2 CrMoTiNb 18 2	SUS 444	
Z 2 NCDU 25-20	2562				
Z1 NCDU 25-02 M	2564				
Z 6 CNT 18-10	2337	X 6 CrNiTi 18 11	F.3523 - X 6 CrNiTi 18 10	SUS 321	06Ch18N10T; 08Ch18N10T; 09Ch18N10T; 12Ch18N10T
Z 7 CNU 15-05; Z 7 CNU 17-04				SCS 24; SUS 630	
	2378				
Z 6 CNNb 18.10	2338	X6CrNiNb18 11	F.3552	SUS347	08Ch18N12B
Z4CNNb19.10M					
		Z8CNA17-07	X2CrNiMo1712		09Ch17NJu1
Z 6 CNDT 17-12002	2350				10Ch17N13M2T
Z 6 NDT 17.12	2350	X6CrNiMoTi17 12	F.3535		10Ch17N13M2T
Z 4 CNDNb 18.12 M					
Z15CNS20.12		x15cRnIsl2 12 X6CrNiMoTi17 12			
Z20CNS25.04					
Z15CNS20.12			F.8414	SCS17	20Ch20N14S2
Z 15 CN 24-13					
Z 12 CN 25-20	2361	X6CrNi25 20	F.331	SUH310	20Ch23N18
Z 6 CNT 18-12 (B)	2337	X6CrNiTi18 11	F.3553	SUS321	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
14	Ss30415	1.4891	X5 CrNiNb 18 10		
14	S30815	1.4893	X8 CrNiNb 11		
14	304H	1.4948	X6 CrNi 18 11	304 S 51	
14	660	1.4980	X5 NiCrTi 25 15		
14			X5 NiCrN 35 25		
14	S31753		X2 CrNiMoN 18 13 4		
14			X2 CrNiMoN 25 22 7		
15	CLASS20	0.6010	GG10		
15	A48-20B	0.6010	GG-10		
15	NO 25 B	0.6015	GG 15	Grade 150	
15	CLASS25	0.6015	GG15	GRADE150	
15	A48 25 B	0.6015	GG 15	Grade 150	
15	A48-30B	0.6020	GG-20	Grade 220	
15	NO 30 B	0.6020	GG 20	Grade 220	
15	A436 Type 2	0.6660	GGL-NiCr202	L-NiCuCr202	
15	60-40-18	0.7040	GGG 40	SNG 420/12	
15	No 20 B		GG 10		
16	CLASS30	0.6020	GG20	GRADE220	
16	A48-40 B	0.6025	EN- GJL-250 (GG25)	Grade260	
16	CLASS45	0.6030	GG30	GRADE300	
16	A48-45 B	0.6030		Grade 300	
16	A48-50	0.6035	GG-35	GRADE 350	
16	A48-60 B	0.6040	GG40	GRADE400	
16		1.4829	X 12 CrNi 22 12		
16					
16					
17		0.7033	GGG-35.3	350/22 L 40	
17	60/40/18	0.7043	GGG-40.3	370/7	
17	80-55-06	0.7050	EN- GJS-800-7 (GGG50)	SNG500/7	
17	65-45-12	0.7050	GGG-50	SNG 500/7	
17		0.7652	GGG-NiMn 13 7	S-NiMn 137	
17	A43D2	0.7660	GGG-NiCr 20 2	Grade S6	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
	2372				
	2368				
Z 5 CN 18-09	2333				
Zz 8 nctv 25-15 b ff	2570				
Ft10D	110	G10			SCh10
FT 10 D	0110-00				SCh10
FT 15 D	0115-00	G 15	FG 15	FC150	SCh15
Ft15D	115	G 15	FG 15		SCh15
Ft 15 D	01 15-00	G14	FG15		SCh15
Ft 20 D	0120-00				SCh20
Ft 20 D	120	G 20		FC200	SCh20
L-NC 202	0523-00				
FCS 400-12	0717-02	GS 370-17	FGE 38-17	FCD400	VCh42-12
Ft 10 D	110			FC100	
Ft20D	120	G 20	FG 20		
Ft 25 D	125	G 25	FG 25	FC250	VCh60-2
Ft30D	130	G 30	FG 30	FC300	SCh20
Ft 30 D	01 30-00				SCh30
Ft35D	135	G 35	FG 35	FC350	SCh30
Ft 40 D	140				SCh40
					SCh25
FGS 370/17	0717-15				VCh42-12
FGS 370/17	0717-15				VCh50-2
FGS 500/7	0727-02	GGG 50		FCD500	VCh50-2
FGS 500-7	0727-02				
S-Mn 137	0772-00				
S-NC 202	0776-00				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
17			GGG 40.3	SNG 370/17	
18		0.7060	GGG60	SNG600/3	
18	80/55/06	0.7060	GGG-60	600/3	
18	100/70/03	0.7070	GGG-70	SNG700/2	
18	A48 40 B				
19		0.8055	GTW55		
19	32510	0.8135	GTS-35-10	B 340/12	
19	A47-32510	0.8135	GTS-35-10	B 340/2	
19	A220-40010	0.8145	GTS-45-06	P 440/7	
19			GTS-35	B 340/12	
19				8 290/6	
19	32510		GTS-35	B340/12	
20		0.8035	GTM-35	W340/3	
20		0.8040	GTW-40	W410/4	
20		0.8045			
20		0.8065	GTMW-65		
20	A220-50005	0.8155	GTS-55-04	P 510/4	
20	50005	0.8155	GTS-55-04	P510/4	
20	70003	0.8165	GTS-65-02	P 570/3	
20	90001	0.8170	GTS-70-02	P 690/2	
20	A220-90001	0.8170	GTS-70-02		
20	1022; 1518	1.1133	20Mn5	120 M 19	
20	400 10		GTS-45	P440/7	
20	70003		GTS-65	P 570/3	
21	Al99	3.0205			
21	1000	3.0255	Al99.5	L31; L34; L36	
21		3.3315	AlMg1		
22		3.1325	AlCuMg 1		
22		3.1655	AlCuSiPb		
22		3.2315	AlMgSi1		
22	7050	3.4345	AlZnMgCuO,5	L 86	
22		3.437	AlZnMgCu 1,5		
23		3.2381	G-AlSi 10 Mg		
23		3.2382	GD-AlSi10Mg		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
FGS 370-17	0717-12			FC250	
FGS600-3	07 32-03	GGG 60	GGG 60		
FGS 600/3	0727-03			FCD600	
FGS 700-2	07 37-01	GGG 70	GGG 70	FCD700	
			GTW 55		
MN35-10	810		GTS 35		KCh35-10
Mn 35-10	0815-00				KCh35-10
Mn 450-6	0852-00	GMN 45		FCMW370	
	0810-00				
MN 32-8	814			AC4A	
MN 35-10	08 15			FCMW330	
MB35-7	852		GTM 35		
MB40-10		GMB40	GTM 40		
		GMB45	GTM 45		KCh55-4
			GTW 65		KCh55-4
Mn 550-4	0854-00				KCh60-3
MP 50-5	854	GMN 55		FCMP490	KCh70-2
Mn 650-3	0856-00	GMN 65		FCMP590	KCh70-2
Mn 700-2	0862-00	GMN 70		FCMP690	KCh70-2
Mn 700-2	0864-00				20G
20 M 5	2132	G 22 Mn 3; 20 Mn 7	F.1515-20 Mn 6	SMnC 420	
	08 52				
MP 60-3	858			FCMP540	AD0
A59050C					D1
					AD35
					AK9
AZ 4 GU/9051		811-04			
					AK12

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
23	A360.2	3.2383	G-AlSi0Mg(Cu)	LM9	
23		3.2581	G-AlSi12		
23		3.3561	G-AlMg 5		
23	ZE 41	3.5101	G-MgZn4sE1Zr1	MAG 5	
23	EZ 33	3.5103	MgSE3Zn27r1	MAG 6	
23	AZ 81	3.5812	G-MgAl8Zn1	NMAG 1	
23	AZ 91	3.5912	G-MgAl9Zn1	MAG 7	
23	A356-72			2789; 1973	
23	356,1			LM25	
23	A413.2		G-AlSi12	LM 6	
23	A413.1		G-AlSi 12 (Cu)	LM 20	
23	A413.0		GD-AlSi12		
23	A380.1		GD-AlSi8Cu3	LM24	
24		2.1871	G-AlCu 4 TiMg		
24		3.1754	G-AlCu5Ni1,5		
24		3.2163	G-AlSi9Cu3		
24	4218 B	3.2371	G-AlSi 7 Mg		
24	SC64D	3.2373	G-AlSI9MGWA		
24		3.2373	G-AlSi 9 Mg		
24	QE 22	3.5106	G-MgAg3SE2Zr1	mag 12	
24	GD-AlSI12		G-ALMG5	LM5	
26	C93200	2.1090	G-CuSn 7 5 pb		
26	c 83600	2.1096	G-CuSn5ZnPb	LG 2	
26	C 83600	2.1098	G-CuSn 2 Znpb		
26	C23000	2.1182	G-CuPb15Sn	LB1	
26	C 93800	2.1182	G-CuPb15Sn		
27		2.0240	CuZn 15		
27	C27200	2.0321	CuZn 37	cz 108	
27	C27700	2.0321	CuZn 37	cz 108	
27		2.0590	G-CuZn40Fe		
27	C 86500	2.0592	G-CuZn 35 Al 1	U-Z 36 N 3	
27	C 86200	2.0596	G-CuZn 34 Al 2	HTB 1	
27	C 18200	2.1293	CuCrZr	CC 102	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
	4253				
G-TR3Z2					
NF A32-201					
	4244			A5052	AK7
	4261				
	4260			ADC12	AK12
	4247			A6061	
	4250			A7075	
					VAL 8
					AK8
A-S7G	4251			C4BS	AK9
A-SU12	4252				
U-E 7 Z 5 pb 4					
U-pb 15 E 8					
Uu-PB 15e 8					
CuZn 36, CuZn 37		C 2700			L 63
CuZn 36, CuZn 37		C2720			L 63
HTB 1					
U-Z 36 N 3					LTs23AD; ZMts
U-Cr 0.8 Zr					

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
28		2.0060	E-Cu57		
28		2.0375	CuZn36Pb3		
28	C 63000	2.0966	CuAl 10 Ni 5 Fe 4	Ca 104	
28	B-148-52	2.0975	G-CuAl 10 Ni		
28	c 90700	2.1050	G-CuSn 10	CT1	
28	C 90800	2.1052	G-CuSn 12	pb 2	
28	C 81500	2.1292	G-CuCrF 35	CC1-FF	
28		2.4764	CoCr20W15Ni		
31	N 08800	1.4558	X 2 NiCrAlTi 32 20	NA 15	
31	N 08031	1.4562	X 1 NiCrMoCu 32 28 7		
31	N 08028	1.4563	X 1 NiCrMoCuN 31 27 4		
31	N 08330	1.4864	X 12 NiCrSi 36 16	NA 17	
31	330	1.4864	X12 NiCrSi 36 16	NA 17	
31		1.4865	G-X40NiCrSi38 18	330 C 40	
31		1.4958	X 5 NiCrAlTi 31 20		
31	AMS 5544	LW2.4668	NiCr19NbMo		
32		1.4977	X 40 CoCrNi 20 20		
33	Monel 400	2.4360	NiCu30Fe	NA 13	
33	5390A	2.4603			
33	Hastelloy C-4	2.4610	NiMo16cR16Ti		
33	Nimonic 75	2.4630	NiCr20Ti	HR 5,203-4	
33		2.4630	NiCr20Ti	HR5,203-4	
33	Inconel 690	2.4642	NiC29Fe		
33	Inconel 625	2.4856	NiCr22Mo9Nb	NA 21	
33	5666	2.4856	NiCr22Mo9Nb		
33	Incoloy 825	2.4858	NiCr21Mo	NA 16	
34	Monel k-500	2.4375	NiCu30 Al	NA 18	
34	4676	2.4375	NiCu30Al	3072-76	
34		2.4631	NiCr20TiAl	Hr40; 601	
34	Inconel 718	2.4668	NiCr19FeNbMo		
34	Inconel 751	2.4694	NiCr16fE7TiAl		
34		2.4955	NiFe25Cr20NbTi		
34	5383	LM2.4668	NiCr19Fe19NbMo	HR8	
34	5391	LW2 4670	S-NiCr13A16MoNb	3146-3	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
					LS60-2
U-A 10 N					BrAD; N10-4-4
UE 12 P					
Z1NCDU31-27-03	2584				EK 77
Z 12 NCS 35.16					
Z 12 NCS 37.18				SUH330	
		XG50NiCr39 19		SCH15	
NC20K14					
Z 42 CNKDWNb					
NU 30					
NC22FeD					
NC 20 T					
NC20T					
Nnc 30 Fe					
NC 22 FeDNb					
Inconel 625					
NC 21 Fe DU					KhN38VT
NU 30 AT					
NC20TA					KhN77TYuR
NC 19 Fe Nb					
NC19eNB					
NC12AD					

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

Mtl. No.	USA AISI/SAE	GERMANY Werkstoff	DIN	Great Britain BS	EN
34	5660	LW2.4662	NiFe35Cr14MoTi		
34	5537C	LW2.4964	CoCr20W15Ni		
34	AMS 5772		C0Cr22W14Ni		
35	Inconel X-750	2.4669	NiCr15Fe7TiAl		
35	Hastelloy B	2.4685	G-NiMo28		
35	Hastelloy C	2.4810	G-NiMo30		
35	AMS 5399	2.4973	NiCr19Co11MoTi		
35		3.7115	TiAl5Sn2		
36	R 50250	3.7025	Ti 1	2 TA 1	
36	R 52250	3.7225	Ti 1 pd	TP 1	
36	AMS 5397	LW2.4674	NiCo15Cr10MoAlTi		
37		3.7124	TiCu2	2 TA 21-24	
37	R 54620	3.7145	TiAl6Sn2Zr4Mo2Si		
37		3.7165	TiAl6V4	TA 10-13; TA 28	
37		3.7185	TiAl4Mo4Sn2	TA 45-51; TA 57	
37		3.7195	TiAl 3 V 2.5		
37			TiAl4Mo4Sn4Si0.5		
37	AMS R54520		TiAl5Sn2.5	TA14/17	
37	AMS R56400		TiAl6V4	TA10-13/TA28	
37	AMS R56401		TiAl6V4ELI	TA11	
38	W 1	1.1545	C 105 W1	BW 1A	
38	W210	1.1545	C105W1	BW2	
38		1.2762	75 CrMoNiW 6 7		
38	440C	1.4125	X105 CrMo 17		
38		1.6746	32 nlcRmO 14 5	832 M 31	
40	Ni- Hard 2	0.9620	G-X 260 NiCr 4 2	Grade 2 A	
40	Ni- Hard 1	0.9625	G-X 330 Ni Cr 4 2	Grade 2 B	
40	Ni-Hard 4	0.9630	G-X 300 CrNiSi 9 5 2		
40		0.9640	G-X 300 CrMoNi 15 2 1		
40	A 532 III A 25% Cr	0.9650	G-X 260 Cr 27	Grade 3 D	
40	A 532 III A 25% Cr	0.9655	G-X 300 CrNMo 27 1	Grade 3 E	
40	310	1.4841	X15 CrNiSi 25 20	314 S31	
41		0.9635	G-X 300 CrMo 15 3		
41		0.9645	G-X 260 CrMoNi 20 2 1		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
ZSNCDT42					
KC20WN					
KC22WN					
NC 15 TNb A					
NC19KDT					VT5-1
					VT1-00
T-A 6 V					VT6
T-A5E					
T-A6V					
Y1 105	1880	C 100 KU	F-5118	SK 3	
Y120	2900	C120KU	CF.515	SUP4	U10A
Z 100 CD 17		X 105 CrMo 17			95Ch18
35 NCD 14					
	0512-00				
	0513-00				
	0466-00				ChWG
					20Ch25N20S2
Z 15 CNS 25-20					

Alphabetical Index

A	A/E-SDXNR/L-07	87
	A/E-SDZNR/L-07	87
	A/E-SEXPR/L-03	92
	A/E/S-SCLCR/L	91
	A/E/S-SDUCR/L	92
	A/E/S-STFPR/L	97
	A/E-STFPR-X	97
	A/E-SWLNR/L-04	83
	A/E-SWUCR	99
	A-PSKNR/L-09	96
	A-PTFNR/L-X/G	88
	A-PWLNR/L-X/G	84
	A-SDUCR/L-13-SL	92
	A/S-MWLNR/L-W	83
	A/S-PCLNR/L	81
	A/S-PCLNR/L-X/G	82
	A/S-PDUNR/L	86
	A/S-PWLNR/L	84
	A/S-STLPR/L	98
	A/S-SVLBCR/L	94
	A/S-SVLFCR/L; A-SVUCR/L	93
	A/S-SVQCR/L	93
	A-SVUNR/L	87
	A-SXFOR-DR	100
	A-SXFOR/L	99
B	BHDN	338
C	C#-ABB	550
	C#-ADE	549
	C#-ADI	550
	CAMFIX ISO 26623-1 Standard	477, 548
	C#-ASHA	549
	C#-ASHR/L	548
	C#-ASHR/L-45	549
	CC95MT-SM	153

C

CCET-WF	156
CCGT-AF	174
CCGT-AS	174
CCGT-F1P	154
CCGW/CCMW-2 (CBN)	189
CCLNR/L	73
CCMT-14	155
CCMT (CBN)	189
CCMT/CCGT	156
CCMT/CCGT-SM	155
CCMT (PCD)	184
CCMT-PF	155
CCMT-WG	156
C#-DDJNR/L	33
C#-DTGNR/L	42
CGFG 51-P8	452
C#-GHAD-8	241
C#-GHAD-JHP	242
C#-GHAPR/L-8	242
C#-GHDR/L	233
CGHN-8-10D	244
CGHN 26-M	302
CGHN 32-DGM	304
CGHN 32-M	303
CGHN-D	239
CGHN-DG	239
CGHN-P8	240
CGHN-S	239
CGHR/L-12-14D	284
CGHR/L-P8DG	240
CGIN 26	295
CGPAD	238
CGPAD-JHP	238
C#-HAD	480
C#-HAPR/L	480
C#-HELIR/L	225
C#-HFIR/L-MC	444
CKJNR/L	34
CKNNR/L	34
C#-MAHD	479
C#-MAHD-JHP	479

C

C#-MAHDOR	478
C#-MAHDR-45	478
C#-MAHPD	480
C#-MAHPD-JHP	480
C#-MAHUR/L	479
C#-MULNR/L-MW	19
CNGA-2 (CBN)	188
CNGA-4 (CBN)	188
CNGA-Ceramic	179
CNGG-M4HF/M4HM (CBN)	188
CNGN-Ceramic	178
CNGX-Ceramic	179
CNMA	125
CNMA-MW4 (CBN)	187
CNMA (PCD)	184
CNMA-T/M1/WG (CBN)	187
CNMG-Ceramic	178
CNMG/CNGG-PP	125
CNMG/CNGG-SF	123
CNMG/CNGG-TF	126
CNMG-F3M	122
CNMG-F3P	119
CNMG-GN	126
CNMG-M3M	122
CNMG-M3P	120
CNMG-MR	127
CNMG-NF	124
CNMG-NR	127
CNMG-R3M	123
CNMG-VL	123
CNMG-WF	124
CNMG-WG/NRW	124
CNMM-M4PW	128
CNMM-NR	129
CNMM-R3P	120
CNMS-12	176
CNMX-M3/4MW	128
CNMX-M3/4PW	128
COMG-R3P-IQ	121
COMM-R3P-IQ	121
C#-PCLNR/L-12-JHP	24

C

C#-PCLNR/L-X	27
C#-PCLNR/L-X-JHP	27
C#-PCLOR/L-IQ	30
C#-PDJNR	31
C#-PDJNR/L-JHP	32
CPGT-SM	157
CPMT-PF	157
C#-PSROR/L-IQ	41
C#-PWLNR/L-08-JHP	13
C#-PWLNR/L-X	16
C#-PWLNR/L-X-JHP	17
C#-PWLOR/L-IQ	22
CRDNN	76
CRGCR/L-CEB	76
CRGNR/L	76
CR HFIR-M	447
CR THDN-IQ	281
C#-SCLCR/L-JHP	47
C#-SDJCR-JHP	51
C#-SDJCR/L	50
C#-SDJCR/L-13-SL-JHP	50
C#-SDNCN	54
C#-SDNCN-13-SL-JHP	53
CSDNN-CE/CEA	74
CSDPN	63
C#-SER/L	530
C#-SIR/L	533
CSKNR/L	75
C#-SLANR/L-TANG	8
C#-SRGCR-12-JHP	61
C#-SRGCR/L	60
CSRNR/L	74
CSSNR/L-CE	75
CSSPR/L	62
C#-SVJCR/L	55
C#-SVJCR/L-JHP	56
C#-SVJNR/L-F	35
C#-SVVCN	58
C#-TBK-R/L	477
C#-TBU	477
CTFPR/L	63

C	CTGPR/L	63
	CTJNR/L	75
D	DCBNR/L	28
	DCET-WF	162
	DCGT-AF	175
	DCGT-AS	174
	DCGW/DCMW-2 (CBN)	191
	DCLNR/L	28
	DCMT-14	162
	DCMT (CBN)	191
	DCMT/DCGT	161
	DCMT/DCGT-SM	161
	DCMT-F3P	158
	DCMT-F3P-SL	158
	DCMT-M3M-SL	159
	DCMT (PCD)	184
	DCMT-PF	160
	DCMT-PF-SL	159
	DCMT-SM-SL	160
	DDJNR/L	32
	DGAD-B-D	379
	DGAD/HGAD	378
	DGFH	228, 370
	DGFH-JHP	229, 371
	DGFHL-26B-TR-D	373
	DGFHR/L	371
	DGFHR/L-BC-JHP	371
	DGFHR/L-B-D..(R/L)	372
	DGFS	372
	DGHAL-DECO	377
	DGN-C-XL	387
	DGN/DGNC/DGNM-C	380
	DGN/DGNM-J/JS/JT	381
	DGN-J-XL	388
	DGN-LF/LFT	383
	DGN-MF	383
	DGN-P	384
	DGN-UT/UA	384
	DGN-W	381
	DGN-WP	385
	DGN-Z	383

D

DGPAD-JHP	379
DGPAD-XL-JHP	379
DGR/L-C DGRC/LC-C	380
DGR/L-C-XL	388
DGR/L-J/JS	382
DGR/L-J-XL	388
DGR-P	385
DGR-WP	385
DGR-Z/ZS	384
DGTR/L	376
DGTR/L-B/BC-D	375
DGTR/L-BC-T	376
DGTR/L-B-D-JHP-SL	374
DGTR/L-B-D-SH	373
DGTR/L-B-D-TR	376
DGTR/L-B-T-SH	375
DGTR/L-XL	377
DNGA-2 (CBN)	190
DNGA-4 (CBN)	190
DNGA-Ceramic	180
DNGG-M4HF/M4HM (CBN)	191
DNGP-F2M	130
DNGP-F2P	129
DNGX-Ceramic	181
DNMA	134
DNMA (CBN)	190
DNMG/DNGG-PP	132
DNMG/DNGG-SF	131
DNMG/DNGG-TF	133
DNMG-F3M	130
DNMG-F3P	129
DNMG-GN	133
DNMG-M3M	132
DNMG-M3P	130
DNMG-NF	131
DNMG-NR	135
DNMG-PF	132
DNMG-VL	133
DNMG-WG	131
DNMM-NM	134
DNMM-R3P	134

D	DNMS-12	176
	DNMX-M3P	135
	DSBNR/L	37
	DSDNN	36
	DSKNR/L	37
	DSSNR/L	37
	DTGNR/L	42
	DWLNR/L	13
E	E-GEHIR / E-GHIR	289
	EPGT-F1P	157
	E-PWLNR/L-HEAD	85
	ER-BUT	522
	ER-EL	523
	ER/L-55°	490
	ER/L-60°	494
	ER/L-ABUT	520
	ER/L-ACME	515
	ER/L-API	521
	ER/L-API RD	521
	ER/L-BSPT	512
	ER/L-ISO	498
	ER/L-NPT	510
	ER/L-RND	523
	ER/L-SAGE	519
	ER/L-STACME	514
	ER/L-TR	518
	ER/L-UN	503
	ER/L-UNJ	516
	ER/L-W	507
	ER-MJ	517
	ER-NPTF	512
	ER-PG	519
	E-SCLCR/L-HEAD	90
	E-SDUCR/L-HEAD	93
	E-SHANK	78
	E/S-SWUBR/L	98
	E-STFCR-HEAD	95
	E-STFPR/L-HEAD	97
F	FGHDUR	362
	FGPAM	362
	FSHDR	361

F

FSHIUR	360
FSP/MA	362
FTB	336
FTHN	336

G

GADR/L-8	243
GADR/L-JHP	243
GAFG-R/L-8	451
GAIR/L	294
GDK	259
GDMA	256, 360
GDMF	244
GDMM-CC	454
GDMN	246
GDMU	246
GDMW 2.4	265
GDMW 2.4	404
GDMY	245, 453
GDMY-F	248, 453
GDMY (full radius)	247, 453
GDP	260
GDPY	249
GEAIR/L	289
GEHIMR/L	287
GEHIMR/L-SC	287
GEHIR/L	288
GEHIR/L-SC	288
GEHIUR/L	288
GEHSR	311
GEHSR/L-SL	311
GEMI	290
GEMI (full radius)	290
GEPI	291
GEPI (full radius)	291
GEPI-MT	292, 496
GEPI-RX/LX	292
GEPI-UN/UR/UL	292
GEPI (W<M)	290
GEPI-WT	293, 492
GFF-N	458
GFF-R/L	458
GFQR	433

G

GHAIR/L-GE	289
GHAIR/L-GI	294
GHAIR/L-SC-GE	289
GHAPR/L-8	243, 451
GHAR/L-8	242, 451
GHAR/L-JHP	243
GHDKR/L	358
GHDR/L-8A	358
GHDR/L-JHP (long pocket)	241
GHDR/L-JHP (short pocket)	234
GHDR/L (long pocket)	240
GHDR/L/N 12/14	284
GHDR/L (short pocket)	233
GHFG-R/L-8	450
GHFGR/L-8	450
GHGR/L	235
GHIC-50	294
GHIC-70	301
GHIC-85	301
GHIFR/L-A	357
GHIR/L-C (W=4-6.4)	293
GHIR/L-SC (W=2-4.8)	293
GHIR/L (W=1.9-6.4)	293
GHIR/L (W=7.0-8.3)	301
GHIUR/L	294
GHIUR/L-C-22.5A-8V	357
GHIUR/L-C-A(15° & 27.5°)Bars	357
GHIUR/L-UC	357
GHMPR/L	232
GHMR/L	232
GHMUR/L	258
GHPCOR	316
GHSR/L	312
GHSR/L-JHP-SL	313
GHVR/L	358
GIA-K (long pocket)	254, 453
GIA-K (W=3-6)	254
GIF	253
GIF-E (W=4-6)	248
GIF-E (W=4-6 full radius)	250
GIF-E (W=8,10)	248, 452

G

GIF-E (W=8,10 full radius)	250
GIF (full radius)	254
GIFG-E (W=8)	452
GIFI	298
GIFI-E	296
GIFI-E (full radius)	296
GIF (long pocket)	253
GIG	252
GIM-C	402
GIMF	244
GIMIY	295
GIM-J	403
GIM-J-RA/LA	403
GIMM 8CC	454
GIMN	245
GIM-UT	404
GIM-UT-RA/LA	404
GIM-W	403
GIM-W-RA/LA	404
GIMY	245
GIMY 1260	247
GIMY-F	247
GIMY (full radius)	246
GIMY-UN	258
GINI-E	297
GIP	252
GIPA 8-35V (V-shape)	360
GIPA (full radius W=3-6)	257, 359
GIPA/GIDA 8 (full radius)	257, 359
GIPA (W=3-6)	256
GIP-E	249
GIP-E (full radius)	250
GIP (flat top W<M)	251
GIP (full radius)	253
GIP (full radius W<M)	251
GIPI	297
GIPI-E	296
GIPI (full radius)	298
GIPI (full radius W<M)	298
GIPI-RX/LX	299
GIPI-UR/UL	299

G

GIPI (W<M)	297
GIPM-A46 / GIP-1250	313
GIP-RX/LX	258
GIP-UN	259
GIPY	255
GIQR/L 8	331
GIQR/L 8-R	331
GIQR/L 11	332
GIQR/L 11-15	333
GIQR/L 11-15-R	333
GIQR/L 11-R	332
GIQR/L-A18	333
GIQR/L-B18	334
GIQR/L-MT	334, 497
GIQR/L-WT	334, 493
GITM	255
GITM (full radius)	255
GPV	259
GRIP	229, 448
GRIP (full radius)	230, 449
GTGA	278
GTMA	278

H

HAI-C	445
HAPR/L	440
HAR/L	440
HELIIR/L	301
HELIR/L	226
HFAER/L-4	440
HFAER/L-5T, 6T	441
HFAIR/L-4	444
HFAIR/L-DG	445
HFFA	435
HFFH	435
HFFR/L-T	439
HFHPR/L-M	442
HFHR/L-3T	436
HFHR/L-4T	437
HFHR/L-5T	437
HFHR/L-6T	438
HFHR/L-M	442
HFIR/L-MC	446

H

HFPAD-3	438
HFPAD-4	441
HFPAD-5	439
HFPAD-6	439
HFPN	447
HFPR/L	447
HFPR/L (full radius)	448
HGAER/L-3	440
HGAIR/L-3	444
HGFH	227
HGHR/L-3	436
HGN-C	386
HGN-J	386
HGN-UT	387
HGPAD	227
HGPAD-JHP	227
HGPL	449
HGR/L-C	386
HGR/L-J/JS	387
HLPGR/L	260
HMSN-New Britain	378
HSK A63WH-ASHN-45	551
HSK A63WH-ASHR/L-2	551
HSK A63WH-ASHR/L-3	552
HSK A63WH-ASHR/L-45	552
HSK A63WH-DDJNR/L	33
HSK A63WH-DDNNN	33
HSK A63WH-MAHDOR	482
HSK A63WH-MAHDR-45	481
HSK A63WH-MAHUR/L	482
HSK A63WH-MULNR-J12MWX2	20
HSK A63WH-MULNR/L-MW	19
HSK A63WH-MUMNN-MW	20
HSK A63WH-SVJCR/L	56
HSK A63WH-SVVNN-F	36
HSK A-WH ABB	552
HSK A-WH-ASHR/L-1	551
HSK A-WH-TBK-R/L	482
HSK DIN 69893 Standard	551

I

IM-GHAD-8	484
IM-GHAPR/L-8	484

I	IM-HAD	484
	IM-HAPR/L	484
	IM-HFIR-MC	446
	IM ISO 26622-1 Standard	482
	IM-MAHD	483
	IM-MAHPD	483
	IM-SDNCN	54
	IM-TBU	483
	IR-BUT	522
	IR-EL	523
	IR/L-55°	491
	IR/L-60°	494
	IR/L-ABUT	520
	IR/L-ACME	515
	IR/L-API	522
	IR/L-API RD	521
	IR/L-BSPT	513
	IR/L-ISO	499
	IR/L-NPT	510
	IR/L-NPTF	512
	IR/L-PG	519
	IR/L-RND	524
	IR/L-SAGE	520
	IR/L-STACME	514
	IR/L-TR	518
	IR/L-UN	504
	IR/L-UNJ	516
	IR/L-W	508
	IR-MJ	517
J	JHP CONNECTOR	71, 355
	JHP COPPER SEAL	71, 355
	JHP HOSE	71, 355
	JHP NIPPLE	71, 355
K	KIT MINCUT	435
	KIT PICCO Face	433
	KIT PICCO SET	325
	KNMX	135
	KNUX	136
L	LNMX 19/30	153
	LNMX-HF	153
	LNMX-HM	152

L	LNMX-HT	152
	LNMX-WG	152
	LOMX-H6P	151
	LPGIR/L	260
M	MAHPR/L	237
	MAHPR/L-JHP	237
	MAHR/L	235
	MAHR/L-JHP	236
	MAHR/L-JHP-MC	236
	MAHR/L-MG-XL-JHP	394
	MAHR/L-MG-XL-JHP-MC	395
	MCLNR/L	24
	MEFL	435
	MFHR-JHP	434
	MG	330
	MGCH	330
	MGCH-C (face)	433
	MGSIR/L	98, 534
	MG STFPR-X	97
	MG-SWUBR/L	99
	MG-SWUCR	99
	MGUHR	327
	MIFHR	329, 434
	MIFR	434
	MIGR 8	329
	MITR 8-MT	330, 496
	MIUR 8	329
	MTENN-W	45
	MTJNR/L-W	45
	MULNR/L-12MW	18
	MVJNR/L	35
	MVVNN	36
	MWLNR/L-13W	21
	MWLNR/L-CA-W	101
	MWLNR/L-W	21
P	PADR/L	264
	PCADR/L	268
	PCADR/L 34N-RE	269
	PCADR/L-JHP	268
	PCBNR/L	25
	PCBOR/L-IQ	30

P

PCHBR/L	269
PCHPR/L	268, 459
PCHPRS/LS	459
PCHR/L-24	265
PCHR/L-24-JHP	266
PCHR/L-34	267
PCHR/L-34-JHP	267
PCHR/L-D-IQ	405
PCHR/L-D-JHP	406
PCHRS/LS	267, 409
PCLCR/L-JHP-MC	48
PCLCR/L-S	48
PCLCR/L-S-JHP	49
PCLNR/L	23
PCLNR/L-12-JHP	24
PCLNR/L-CA	101
PCLNR/L-X	25
PCLNR/L-X-JHP	26
PCLNR/L-X-JHP-MC	26
PCLOR/L-IQ	29
PDACR/L-JHP	52
PDACR/L-JHP-MC	53
PDACR/L-S	49
PDJNR/L	31
PDJNR/L-JHP	31
PDJNR/L-S	30
PENTA 24-BSPT	275, 513
PENTA 24-ISO	274, 501
PENTA 24-MT	276, 495
PENTA 24N-C	271, 410
PENTA 24N-C (full radius)	272
PENTA 24N-J	270, 408
PENTA 24N-J (full radius)	271
PENTA 24N-J-RS	273
PENTA 24N-PF/P	272
PENTA 24N-PF/P	410
PENTA 24-NPT	511
PENTA 24N-RS/LS	274, 409
PENTA 24N-Z	273, 411
PENTA 24R-C	410
PENTA 24R/L-J	409

P

PENTA 24R/L-Z	411
PENTA 24R-P	412
PENTA 24-UN	275, 506
PENTA 24-W	275, 509
PENTA 24-WT	276, 491
PENTA 34F-R/L	458
PENTA 34F-RS/LS	459
PENTA 34N-C	277, 412
PENTA 34N-J	278, 413
PENTA 34N-PB	276, 414
PENTA 34R/L-C	413
PENTA 34R/L-J	414
PENTA 34R/L-PB	414
PENTA D-N-C	407
PENTA D-N-J	406
PENTA D-N-PB	407
PENTA D-R/L-C	407
PENTA D-R/L-J	407
PENTA D-R/L-PB	408
PHAR/L	264
PHGR/L	264
PHSR/L	312
PICCO-010/610 (face grooving)	431
PICCO-010 (round face groove)	431
PICCO-015 (face grooving)	432
PICCO-016/020 (face grooving)	432
PICCO-55°-Thread	327, 492
PICCO-620 (groove along shaft)	432
PICCO ACE	314, 535
PICCO ACE-BH	316
PICCO ISO Full Profile	326, 500
PICCO ISO Full Profile Fine	326, 501
PICCO/MG PCO (holder)	315, 535
PICCO R 050.20	320
PICCO R 050 (CBN)	321
PICCO R/L 002-007	323
PICCO R/L 004-007 (radius)	324
PICCO R/L 047	325
PICCO R/L 050, 053, 055	317
PICCO R/L 050-C	319
PICCO R/L 060	324

P

PICCO R/L-60°-Thread	326, 497
PICCO R/L 070	325
PICCO R/L 080	322
PICCO R/L 090	322
PICCO R/L 520	324
PICCO R/LHD 050	321
PICCO R/LM	320
PICCO R/LX050	321
PLANR/L-TANG	6
PLBOR/L	10
PQFNR/L	11
PQLCR/L	46
PQLCR/L-S	46
PQLNR/L	11
PQSNR/L	12
PRDCN	61
PRGCR/L	61
PRWR/L	10
PRWR/L 175-CA	10
PRWR/L 177-CA	11
PSANR/L	45
PSBNR/L	41
PSBOR/L-IQ	40
PSDNN	38
PSDNN-JHP	39
PSDON-IQ	38
PSKNR/L	39
PSKNR/L-CA	101
PSSNR/L	39
PSSNR/L-CA	102
PSSNR/L-JHP	40
PTFNR-CA	102
PTFNR/L	44
PTGNR/L	42
PTGNR/L-X	43
PTGNR/L-X-JHP	43
PTGNR/L-X-JHP-MC	44
PVACR/L-JHP	57
PVACR/L-JHP-MC	57
PVACR/L-S	54
PWLNR/L	12

P	PWLNR/L-08-JHP	13
	PWLNR/L-S	12
	PWLNR/L-X	14
	PWLNR/L-X-JHP	15
	PWLNR/L-X-JHP-MC	16
	PWLOR/L-IQ	22
	PWXOR/L-TF-IQ	23
Q	QCMT-PF	162
	QCMT-SM	162
	QNMG-GN	110
	QNMG-NF	109
	QNMG-PP	109
	QNMG-TF	109
R	RCGT-AS	175
	RCGX (CBN)	196
	RCGX-Ceramic	183
	RCMT-14	167
	RCMT-SR	166
	RCMX	167
	RCMX-NR	167
	RNGN-Ceramic	183
	RNMG	144
	RPGN-Ceramic	182
	RPGX-Ceramic	183
S	S/A-SQLCR/L	90
	S/A-SVJCR/L	94
	SBB	100
	SC45MT-SM	154
	SCACR/L-S	48
	SCB	339
	SCB (light fit)	339
	SCB (tight fit)	339
	SCGT-AS	172
	SCHR/L-BF	306
	SCHR/L-BF-JHP	306
	SCIR-22-MTR-ISO	310, 501
	SCIR/L-22-AD	309
	SCIR/L-22-AR/AL	309
	SCIR/L-22-BR/BL	307
	SCIR/L-22-ER/EL	308
	SCIR/L-22-MTR/MTL	310, 495

S

SCIR/L-22-N/L/R	307
SCIR/L-22-NP	309
SCIR/L-22-NX	310
SCLCR/L	47
SCLCR-PAD	47
SCMT-14	165
SCMT-19	165
SCMT-SM	164
S-CSKPR	96
S-CTFPR/L	96
SC-T (sleeves)	552
SDACR/L	51
SDACR/L-13S-SL-JHP	52
S-DCLNR/L	79
S-DDUNR/L	86
SDHCR/L	51
SDJCR/L	50
SDJCR/L-13-SL	49
SDJCR-PAD	51
SDNCN	54
SDNCN-13-SL	53
S-DWLNR/L	78
SER-D	530
SER/L	529
SER/L-TT	528
SGBHR/L	390
SGFFA	457
SGFFH	457
SGFFR/L	456
SGTBF	473
SGTBK	473
SGTBR/L	473
SGTBU/SGTBN	472
SIR/L	531
SKJNR/L	34
SLANR/L-15-TANG-JHP	8
SLANR/L-TANG	7
SLBNR/L-TANG	9
SLFNR/L-TANG	9
S-MTLCR/L-W	95
S-MTLNR/L-W	89

S

S-MULNR-MW	85
SNGA-Ceramic	180
SNGN-Ceramic	179
SNGX-Ceramic	180
SNMA	149
SNMA (CBN)	196
SNMG-EM-M	148
SNMG-EM-R	150
SNMG-F3M	145
SNMG-F3P	144
SNMG-GN	149
SNMG-M3M	145
SNMG-M3P	144
SNMG-NF	146
SNMG-NR	149
SNMG-PP	147
SNMG-R3M	146
SNMG-TF	147
SNMG-VL	146
SNMM-NM	151
SNMM-NR	151
SNMM-R3P	150
SNMX 150608R	177
SOMG-R3P-IQ	145
S-PLANR-TANG	79
SPMR	168
S-PQFNR/L	80
S-PQLNR/L	80
S-PTFNR/L	88
SRDCN	61
SRGCR-12-JHP	60
SRGCR/L	60
SSBCR/L	59
S-SLANR/L-TANG	79
SSSCR/L	59
S-STFCR/L	95
S-STLCR/L	95
S-SUXCR/L-CM	89
STFCR/L	59
STGCR/L	59
SUXCR/L-CM	46

S	SVACR/L	57
	SVJCR/L	55
	SVJCR/L-16-JHP	55
	SVJCR-PAD	56
	SVJNR/L-F	34
	SVPCR/L	58
	SVVCN	58
	SVVNN-F	35
	SVXCR/L	58
	SWAPR/L	62
	SWAPR-PAD	62
	SWDPR/L	62
	SXCIB	337
	SXCIR	335
	SXCNN	335
T	TAGB/TAGBA	284
	TAG N-A	402
	TAG N-C/W/M	399
	TAG N-J/JS/JT	400
	TAG N-LF	401
	TAG N-MF	400
	TAG N-UT	402
	TAGPAD-JHP	394
	TAGPAD-XL-JHP	394
	TAG R/L-C	399
	TAG R/L-J/JS	401
	TCBNR/L-CH	73
	TCGT-AS	173
	TCKNR/L-CH	73
	TCLNR/L-CH	73
	TCMT (CBN)	195
	TCMT-F3P	165
	TCMT (PCD)	186
	TCMT-PF	166
	TCMT-SM	166
	TDJNR/L-CH	76
	TDNNN-CH	76
	TGAD	393
	TGBHR/L	282
	TGBHR/L-JHP	283
	TGDR/L	230

T

TGFH-JHP	390
TGFHL-TR	398
TGFH-MB	393
TGFH/R/L	283, 389
TGFHR/L	391
TGFHR/L-JHP	391
TGFH-S	390
TGFS	395
TGHN 26-M	300
TGHN-D	231
TGHN-S	231
TGIR/L-C	300
TGMF (full radius)	232
TGMF/P	231
TGPAD	230
TGSU	392
TGTBU	392
TGTBU-JHP	393
TGTR/L-2T..SH-L120	397
TGTR/L-D	398
TGTR/L-IQ	396
TGTR/L-IQ-2Z	396
TGTR/L-JHP	397
THBR/L/N-IQ	280
THDR/L-IQ	280
THDR/L/N	285
TIGER	285
TIGER-IQ	281
TIGERV	285
TIPI-MT	299, 496
TIPI-WT	299, 492
TIP-MT	261, 495
TIP-P-BSPT	264, 513
TIP-P-BSW	263, 509
TIP-P-ISO	262, 502
TIP-P-NPT	263, 511
TIP-P-UN	262, 506
TIP-WT	261, 491
TNFFA-IQ	455
TNFFH-IQ	454
TNF-M-IQ	455

T

TNF-P-IQ	455
TNGA-Ceramic	182
TNGA-M3 (CBN)	194
TNGA-MC/M6 (CBN)	194
TNGG-M6HF/M6HM (CBN)	194
TNGN-Ceramic	181
TNMA	143
TNMA (CBN)	193
TNMG-F3M	140
TNMG-F3P	139
TNMG-GN	143
TNMG-M3M	140
TNMG-M3P	139
TNMG-NF	142
TNMG-PF	141
TNMG-SF	141
TNMG-TF	141
TNMG/TNGG-PP	142
TNMG-VL	142
TNMM-NR	143
TNMS-12	175
TNMX-M3/4MW	140
TNMX-M3/4PW	139
TPGB	170
TPGB-XL	170
TPGH-R/L	170
TPGH-XL	170
TPGN-Ceramic	182
TPGT-SP	169
TPGW-M3 (CBN)	195
TPGX	171
TPGX (CBN)	195
TPGX (PCD)	186
TPMR	168
TPMR-PF	168
TPMT	169
TPMT-PF	169
TSDNN-CH	74
TSRNR/L-CH	74
TSSNR/L-CH	75
TTG-16E-A55	490

T	TTG-16E-A60	493
	TTG-16E-ISO	497
	TTG-16E-UN	502
U	UBHCR/L	473
	UMGR	328
	UMGR-A55	328, 493
	UMGR-A60	328, 496
V	VBGW/VBMW-2 (CBN)	193
	VBMT (CBN)	192
	VCET-WF	163
	VCGT 1303..-PF	163
	VCGT-AF	173
	VCGT-AS	173
	VCGT-DW (PCD)	185
	VCGT (PCD)	185
	VCGW-2 (CBN)	193
	VCMT-14	164
	VCMT (CBN)	185
	VCMT-SM	163
	VCMW	164
	VNGA-2 (CBN)	192
	VNGA-4 (CBN)	192
	VNGA-Ceramic	181
	VNGG-M4HM (CBN)	192
	VNMG-F3M	136
	VNMG-F3P	136
	VNMG-M3M	137
	VNMG-SF	137
	VNMG-TF	138
	VNMG/VNGG-NF	137
	VNMM-PP	138
	VNMS-12	176
W	WBGT	171
	WBMT	171
	WCGT	172
	WNGA-Ceramic	178
	WNGA-M3 (CBN)	186
	WNGA-MC/M6 (CBN)	187
	WNGP-F2M	112
	WNGP-F2P	110
	WNMA/WNMA-WG	118

W	WNMG-F3M	112
	WNMG-F3P	110
	WNMG-GN	117
	WNMG-M3M	113
	WNMG-M3P	111
	WNMG-NF	114
	WNMG-NR	117
	WNMG-PP	116
	WNMG-SF	113
	WNMG-TF	116
	WNMG-TNM	118
	WNMG-VL	114
	WNMG-WF	115
	WNMG-WG	115
	WNMM-NM	117
	WNMX-M3/4MW	119
	WNMX-M3/4PW	119
	WOMG-10-T3P-IQ	111
	WOMG-13-R3P-IQ	112
	WPEX	172
X	XNUW	336
	XNUWB	337
	XNUWB (light fit)	338
	XNUWB (tight fit)	338
	XOMT-DT	165
Y	YNMG-F3P	138

ISCAR LTD.
Israel
Headquarters
Tel +972 (0)4 997 0311
Fax+972 (0)4 987 3741
www.iscar.com
headquarter@iscar.co.il

Argentina
ISCAR TOOLS ARGENTINA SA
Tel +54 114 912 2200
Fax+54 114 912 4411
admin@iscararg.com.ar
www.iscararg.com.ar

Australia
ISCAR AUSTRALIA PTY. LTD
Tel +61 (0) 2 8848 3500
Fax+61 (0) 2 8848 3511
iscaraus@iscar.com.au
www.iscar.com.au

Austria
ISCAR AUSTRIA GmbH
Tel +43 7252 71200-0
Fax+43 7252 71200-999
office@iscar.at
www.iscar.at

Belarus
JV ALC "TWING-M"
Tel +375 17 506-32-38
+375 17 506-33-31/65
Tel/Fax +375 17 506-32-37
info@twing.by
www.twing.by, www.iscar.by

Belgium
n.v. ISCAR BENELUX s.a.
Tel +32 (0) 2 464 2020
Fax+32 (0) 2 522 5121
info@iscar.be
www.iscar.be

Bosnia
(Representative Office)
Tel +387 32 201 100
Fax+387 32 201 101
info@iscar.ba

Brazil
ISCAR DO BRASIL COML. LTDA.
Tel +55 19 3826-7100
Fax+55 19 3826-7171
DDG 0800 701 8877
iscar@iscarbrasil.com.br
www.iscar.com.br

Bulgaria
ISCAR BULGARIA
Tel/Fax +359 431 62557
aa_iscar@infotel.bg
www.iscar.bg

Canada
ISCAR TOOLS INC.
Tel +1 905 829 9000
Fax+1 905 829 9100
admin@iscar.ca
www.iscar.ca

Chile
SANDE SA
Tel +56 2 695 1700
Fax +56 2 697 0332
logistica@sande.cl

China
ISCAR CHINA
Tel +86 10 6561 0261/2/3
Fax+86 10 6561 0264
iscar@iscar.com.cn
www.iscar.com.cn

Colombia
RACSI S.A.
Tel +57 (1) 4102800
Fax +57 (1) 2638988
gerencia@racsi.com

Croatia
ISCAR ALATI d.o.o.
Tel +385 (0) 1 33 23 301
Fax +385 (0) 1 33 76 145
iscar@zg.t-com.hr
www.iscar.hr

Cyprus
WAMET (Demetriades) Ltd.
Tel +357 (0) 2 336660/5498
Fax +357 (0) 2 333386
wamet@cytanet.com.cy

Czech Republic
ISCAR CR s.r.o.
Tel +420 377 420 625
Fax +420 377 420 630
iscar@iscar.cz
www.iscar.cz

Denmark
KJ VAERKTOEJ AS/ISCAR DENMARK
Tel +45 70 11 22 44
Fax++45 46 98 67 10
kj@kj.dk
www.iscar.dk

Estonia
KATOMSK AS
Tel +372 6775 671
Fax +372 6720 266
aleksei@katomsk.ee

Finland
ISCAR FINLAND OY
Tel +358-(0)9-439 1420
Fax +358-(0)9-466 328
info@iscar.fi
www.iscar.fi

France
ISCAR FRANCE SAS
Tel +33 (0)1 30 12 92 92
Fax+33 (0)1 30 12 95 82
info@iscar.fr
www.iscar.fr

Germany
ISCAR GERMANY GmbH
Tel +49 (0) 72 43 9908-0
Fax+49 (0) 72 43 9908-93
gmbh@iscar.de
www.iscar.de

Greece
INTERNATIONAL TOOLS
K.-X. GEORGOPOULOS & SIA O.E
Tel +30 210 346 0133
Fax +30 210 342 5621
info@internationaltools.gr

VIMA
V. MAZLOUMIAN & SONS
Tel +30 2310 517-117 / 544-521
Fax +30 2310 529-107
vimaco@otenet.gr
http://www.vimaco.gr

Hong Kong
MTC TOOLING SYSTEMS LTD
Tel +85-2-23054838
Fax +85-2-27988789
yoongkamsing@hotmail.com

Hungary
ISCAR HUNGARY KFT.
Tel +36 28 887 700
Fax +36 28 887 710
iscar@iscar.hu
www.iscar.hu

India
LARSEN & TOUBRO Ltd.
Tel +91 22 6705 1039 /3371
Fax +91 22 6705 1358
ask-inp@powai.ltindia.com

Indonesia
CV MULTI TEKNIK
Tel. +62-21-29206242/44/45/59
Fax. +62-21-29206243
contact@multi-teknik.co.id

Ireland
HARDMETAL MACHINE TOOLS
Tel +353 (0) 1 286 2466
Fax +353 (0) 1 286 1514
phannigan@hardmetal.ie

Italy
ISCAR ITALIA srl
Tel +39 02 93 528 1
Fax +39 02 93 528 213
marketing@iscaritalia.it
www.iscaritalia.it

Japan
ISCAR JAPAN LTD.
Tel +81 6 6835 5471
Fax +81 6 6835 5472
iscar@iscar.co.jp
www.iscar.co.jp

Latvia
SIA EKL/LS
Tel +371 6 733 11 54
Fax +371 6 780 56 48
ekllpstools@isr.lv

Lithuania
MECHA, UB
Tel +370 37 407 230
Fax +370 37 407 231
sigitas@mecha.lt

Macedonia
(Representative Office)
Tel +389 2 309 02 52
Fax +389 2 309 02 54
info@iscar.com.mk

Mexico
ISCAR DE MÉXICO,
Tel +52 (442) 214 5505
Fax+52 (442) 214 5510
iscarmex@iscar.com.mx
www.iscar.com.mx

The Netherlands
ISCAR NEDERLAND B.V.
Tel +31 (0) 182 535523
Fax+31 (0) 182 572777
info@iscar.nl
www.iscar.nl

New Zealand
ISCAR PACIFIC LTD.
Tel +64 (0) 9 573 1280
Fax+64 (0) 9 573 0781
iscar@iscarpac.co.nz

Norway
SVEA MASKINER AS
Tel +47 32277750
Fax +47 32277751
per.martin.bakken@svea.no

Philippines
MESCO
Tel +63 2631 1775
Fax +63 2635 0276
mesco@mesco.com.ph

Poland
ISCAR POLAND Sp. z o.o.
Tel +48 32 735 7700
Fax+48 32 735 7701
iscar@iscar.pl
www.iscar.pl

Portugal
ISCAR PORTUGAL, SA
Tel +351 256 579950
Fax+351 256 586764
info@iscarportugal.pt
www.iscarportugal.pt

Romania
ISCAR TOOLS SRL
Tel +40 (0)312 286 614
Fax+40 (0)312 286 615
iscar-romania@iscar.com

Russia
Moscow
ISCAR RUSSIA CIS
Tel/fax +7 495 660 91 25/31
iscar@iscar.ru
www.iscar.ru

Chelyabinsk
ISCAR RF EAST LTD
Tel/fax +7 351 2450432
rfe@iscar.com
www.iscar.ru

Serbia
ISCAR TOOLS d.o.o.
Tel +381 11 314 90 38
Fax +381 11 314 91 47
info@iscartools.rs

Singapore
SINO TOOLING SYSTEM
Tel +65 6566 7668
Fax +65 6567 7336
sinotool@singnet.com.sg

Slovakia
ISCAR SR, s.r.o.
Tel +421 (0) 41 5074301
Fax +421 (0) 41 5074311
info@iscar.sk
www.iscar.sk

Slovenia
ISCAR SLOVENIJA d.o.o.
Tel +386 1 580 92 30
Fax+386 1 562 21 84
info@iscar.si
www.iscar.si

South Africa
ISCAR SOUTH AFRICA (PTY) LTD.
ShareCall 08600-47227
Tel +27 11 997 2700
Fax +27 11 388 9750
iscar@iscarsa.co.za
www.iscar.co.za

South Korea
ISCAR KOREA
Tel +82 53 760 7590
Fax+82 53 767 7203
koss@taegutec.co.kr
www.iscarkorea.co.kr

Spain
ISCAR IBERICA SA
Tel +34 93 594 6484
Fax +34 93 582 4458
iscar@iscarib.es
www.iscarib.es

Sweden
ISCAR SVERIGE AB
Tel +46 (0) 18 66 90 60
Fax +46 (0) 18 122 920
info@iscar.se
www.iscar.se

Switzerland
ISCAR HARTMETALL AG
Tel +41 (0) 52 728 0850
Fax +41 (0) 52 728 0855
office@iscar.ch
www.iscar.ch

Taiwan
ISCAR TAIWAN LTD.
Tel +886 (0)4-24731573
Fax +886 (0)4-24731530
iscar.taiwan@msa.hinet.net
www.iscar.org.tw

Thailand
ISCAR THAILAND LTD.
Tel +66 (2) 7136633-8
Fax+66 (2) 7136632
iscar@iscarthailand.com
www.iscarthailand.com

Turkey
ISCAR KESICI TAKIM
TIC. VE. IML. LTD
Tel +90 (262) 751 04 84 (Pbx)
Fax+90 (262) 751 04 85
iscar@iscar.com.tr
www.iscar.com.tr

Ukraine
ISCAR UKRAINE LLC
Tel/fax +38 (044) 503-07-08
iscar_ua@iscar.com
www.iscar.com.ua

United Kingdom
ISCAR TOOLS LTD.
Tel +44 (0) 121 422 8585
Fax+44 (0) 121 423 2789
sales@iscar.co.uk
www.iscar.co.uk

United States
ISCAR METALS INC.
Tel +1 817 258 3200
Tech Tel 1-877-BY-ISCAR
Fax+1 817 258 3221
info@iscarmetals.com
www.iscarmetals.com

Venezuela
FERREINDUSTRIAL ISO-DIN C.A.
Tel +58 2 632 8211/633 4657
Fax +58 2 632 5277
iso-din@cantv.net

Vietnam
ISCAR VIETNAM
(Representative Office)
Tel +84 8 38 123 519/20
Fax +84 8 38 123 521
iscarvn@hcm.fpt.vn
www.iscarvn.com

"© 2013 Iscar Ltd. This document, as well as all information and other data contained herein and/or derived therefrom, including but not limited to, all trademarks, logos, trade-names, concepts, pictures, designs and/or devices, as well as any data from which any proprietary and/or intellectual property right may emanate ("Information"), is the sole and exclusive property of Iscar Ltd. and is protected by copyright and other applicable laws. No part of any Information may be used or otherwise disseminated for any purpose whatsoever without the express prior written consent of Iscar Ltd."

06/2017
3332306 G

Complete Machining Solutions
Non-Rotating Tool Lines

Turning • Grooving • Threading • Parting

Metric Version Catalog 2017



Member IMC Group

ISCAR

www.iscar.com