



SUMITOMO

CARBIDE - CBN - DIAMOND

C-F

2018-2019 Turning Tools

Inserts // External Holders // Boring Bars // Grooving Holders // Threading Holders

SUMITOMO
ELECTRIC
GROUP

Indexable Inserts for Turning

Negative / Positive Inserts

C1 ~ C86



Inserts

C

D

K

R

S

T

V

W

ISO	Inserts Identification Table.....	C2 - 3
Chipbreaker for Low Carbon and General Steel Turning	NFE / NFB ^{New}	C4
Chipbreaker for Hardened Steel Turning	NGH ^{New}	C5
Chipbreaker for Exotic Alloys and Stainless Steel Turning	NEG / NEF	C6 - 7
Chipbreaker for Stainless Steel Turning	NEM	C8
Positive M Class Chipbreaker	NFB / NLB	C9
Chipbreaker for Steel Turning	(M) NSI	C10
Comparison Chart	Chipbreaker	C11
Selection	Chipbreaker Application Table	C12 -17

Negative Inserts	C / 80° Diamond Type (With Hole)	C18-24
	D / 55° Diamond Type (With Hole)	C25-32
	S / Square Type (With Hole)	C33-39
	S / Square Type (Without Hole)	C39
	T / Triangle Type (With Hole)	C40-48
	T-REX Insert	C46
	V / 35° Diamond Type (With Hole)	C49-51
	W / Polygon Type (With Hole)	C52-56

Positive Inserts	C / 80° Diamond Type (With Hole)	C57-62
	D / 55° Diamond Type (With Hole)	C63-65
	R / Round Type (With Hole)	C66
	S / Square Type (With Hole)	C67-68
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	T / Triangle Type (Without Hole)	C78-79
	V / 35° Diamond Type (With Hole)	C80-83
	W / Polygon Type (With Hole)	C84-85

Stock marking chart

- : Eurostock item
- : Japanstock item
- ▲ : To be replaced by new item

☐ : We cannot produce

Note:

Stocking policy may change without prior notice, please consult our sales representative for actual stock situation.

Inserts Identification Table

C N M G

①

②

③

④

Insert Shape
Chart 1

Tolerance
Chart 3

Relief Angle
Chart 2

Insert Type
Chart 4

Chart 1: Insert Shape

Symbol	Insert Shape	Angle
C		80°
D		55°
E		75°
F		50°
V		35°
R		Round
S		Square
T		Triangle
W		Trigon
A		85°
B		82°
K		55°
H		Hexagonal
O		Octagonal
P		Pentagonal
L		Rectangular
M		Rhombic

Chart 2: Relief Angle

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P*	11°
O	Others

* Inserts with a 10° relief angle are sometimes considered as "P"

Chart 3: Tolerance (mm)

Symbol	Nose Height	Inscribed Circle	Thickness
A	± 0,005	± 0,025	± 0,025
F	± 0,005	± 0,013	± 0,025
C	± 0,013	± 0,025	± 0,025
H	± 0,013	± 0,013	± 0,025
E	± 0,025	± 0,025	± 0,025
G	± 0,025	± 0,025	± 0,13
J*	± 0,005	± 0,05~± 0,15	± 0,025
K*	± 0,013	± 0,05~± 0,15	± 0,025
L*	± 0,025	± 0,05~± 0,15	± 0,025
M*	± 0,08~± 0,2	± 0,05~± 0,15	± 0,13
N*	± 0,08~± 0,2	± 0,05~± 0,15	± 0,025
U*	± 0,13~± 0,38	± 0,08~± 0,25	± 0,13

The height "m" on sharp corner.

Chart 4: Insert Hole or Breaker

Symbol	Hole	Hole Style	Chip Breaker	Shape	Symbol	Hole	Hole Style	Chip Breaker	Shape
N	No Hole	—	Nil		A	With Hole	Straight Hole	Nil	
R			One Face		M			One Face	
F			Both Faces		G			Both Faces	
W	With Hole	Straight hole with top end counter-sink (40°~60°)	Nil		B	With Hole	Straight hole with top end counter-sink (70°~90°)	Nil	
T			One Face		H			One Face	
Q	With Hole	Straight hole with top end counter-sink (40°~60°)	Nil		C	With Hole	Straight hole with top end counter-sink (70°~90°)	Nil	
U			Both Faces		J			Both Faces	
					X	—	—	—	Special

● Tolerance of Nose Height (M-Class)

Inscribed Circle	Triangle	Square	80° Diamond	55° Diamond	35° Diamond	Round
6,35	± 0,08	± 0,08	± 0,08	± 0,11	—	—
9,525	± 0,08	± 0,08	± 0,08	± 0,11	± 0,16	—
12,70	± 0,13	± 0,13	± 0,13	± 0,15	—	—
15,875	± 0,15	± 0,15	± 0,15	± 0,18	—	—
19,05	± 0,15	± 0,15	± 0,15	± 0,18	—	—
25,40	± 0,18	± 0,18	± 0,18	—	—	—
31,75	—	± 0,20	—	—	—	—

● Tolerance of Inscribed Circle (M-Class)

Inscribed Circle	Triangle	Square	80° Diamond	55° Diamond	35° Diamond	Round
6,35	± 0,05	± 0,05	± 0,05	± 0,05	—	—
9,525	± 0,05	± 0,05	± 0,05	± 0,05	± 0,05	± 0,05
12,70	± 0,08	± 0,08	± 0,08	± 0,08	—	± 0,08
15,875	± 0,10	± 0,10	± 0,10	± 0,10	—	± 0,10
19,05	± 0,10	± 0,10	± 0,10	± 0,10	—	± 0,10
25,40	± 0,13	± 0,13	± 0,13	—	—	± 0,10
31,75	—	± 0,15	—	—	—	± 0,12

Inserts Identification Table

12 04 08 N - GE

⑤	⑥	⑦	⑧	⑨
Insert Size Chart 5		Corner Radius Chart 7		Chip Breaker Chart 9
	Thickness Chart 6		Feed Direction Chart 8	

Picture of insert shown as example
(ISO Cat, No.)



Inserts

Chart 5: Cutting Edge Length (mm)

Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge	Inscribed Circle
	03	3,55	3,50		07	7,7	6,35		03	3,8	5,56
	04	4,97	4,30		09	9,7	7,94		04	4,3	6,35
	06	6,4	6,35		11	11,6	9,525		05	5,4	7,94
	08	8,0	7,94		15	15,5	12,70		06	6,5	9,525
	09	9,7	9,525		19	19,4	15,875		08	8,7	12,70
	12	12,9	12,70		08	8,3	4,76		10	10,9	15,875
	16	16,1	15,875		09	9,7	5,56				
	19	19,3	19,05		11	11,1	6,35				
	25	25,8	25,4		16	16,6	9,525		08	8,0	8,0
					22	22,1	12,7		10	10,0	10,0
									12	12,0	12,0
									12	12,70	12,70
	06	6,35	6,35		06	6,9	3,97		15	15,875	15,875
	S7	7,14	7,14		08	8,2	4,76		16	16,0	16,0
	07	7,94	7,94		09	9,6	5,56		19	19,05	19,05
	09	9,525	9,525		11	11,0	6,35		20	20,0	20,0
	12	12,70	12,70		16	16,5	9,525		20	20,0	20,0
	15	15,875	15,875		22	22,0	12,70		24	24,0	24,0
	19	19,05	19,05		27	27,5	15,875		25	25,0	25,0
	25	25,40	25,40		33	33,0	19,05		25	25,40	25,40
	31	31,75	31,75						32	32,0	32,0

Chart 6: Thickness

Symbol	Thickness (mm)
X1	*
01	1,59
02	2,38
T2	2,78
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

(*):
CCET03X1 Insert thickness: 1,40
CCET04X1 Insert thickness: 1,80

Chart 7: Nose Radius

Symbol	Nose Radius (mm)
00	Sharp Point
003	0,03
008	0,08
01	0,1
015	0,15
018	0,18
02	0,2
0,35	0,35
04	0,4
08	0,8
10	1,0
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
M0	Round Insert (Metric)
00	Round Insert (Imperial)

An "M" after the nose radius indicates a negative tolerance
Example:
CCG T09T302 M NSI AC520U

Chart 8: Feed Direction

Symbol	Direction
R	Right-hand
L	Left-hand
N	Neutral

Chart 9: Chip Breaker

Symbol	Process	Bumpy Type	Standard	Handed
F	Fine Finishing to Finishing	FA, FL, FE, FB, FC FK, FP		FT, FX, FZ FY, FW
S L	Light Cut	SE, SEW, SI, SC, SF, SP, SU, SX LU, LUW, LB		SD SDW ST
G U	General	GE, GU, GUW UG, UP US, UX	GZ UZ	UM
M	Rough	MP, MU, MX, ME	MC	MM HM
H	Heavy	HG, HP, HF	HU HW	

Other specials

Wide Chipbreaker	W
For Countersink	C
For Round insert	RD, RP, RX, RH
For Exotic Alloy	EF, EG, EX
For Aluminium	AG, LD, GD
For Hardened Steel	FV, LV
For Carburized Layer Removal	SV
For Stainless Steel	EF, EG, EM

Chipbreaker NFE Type / NFB Type



Negative M Class Chipbreakers for Low Carbon and General Steel Turning



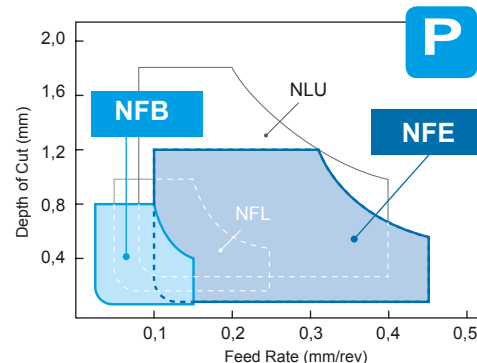
General Features

The high performance NFE type, which ensures stable chip control in a wide range of feed rate, has been added to the chipbreaker series for low carbon steel and general steel turning.

Extensive product lines are available to meet various machining requirements.

A positive insert execution of chipbreaker NFB is also available.

Application Range



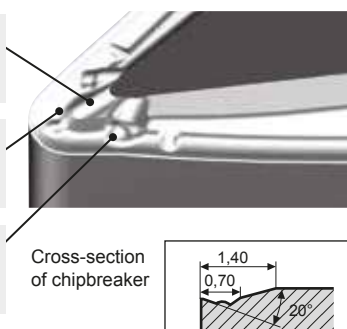
NFE Chipbreaker for Finishing

Supports general purpose machining to high speed machining.

The arc-shaped main breaker ensures stable chip control in a wide feed rate range.

The two step chipbreakers enable stable chip control at a low feed rate of $f = 0,1 \text{ mm/rev}$.

The sub-breaker controls cutting chips in profiling.



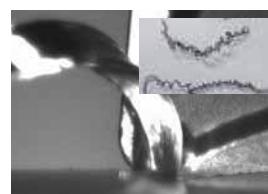
Performance

Work Material: Pipe steel (H240LA, 1.0480)
Insert: CNMG 120408 NFE (AC8025P)
Cutting Conditions: $v_c=200 \text{ m/min}$, $f=0,4 \text{ mm/rev}$, $a_p=0,2 \text{ mm}$, Dry

Excellent chip control under low depth of cut and high feed rate condition



NFE Type (AC8025P)

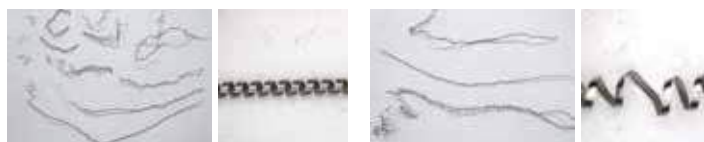


Conventional

Application Examples

Work Material: Deep-draw steel (SPHC440)
Facing Insert: CNMG 120408 NFE (AC8025P)
Cutting Conditions: $v_c=200 \text{ m/min}$, $f=0,15 \text{ mm/rev}$, $a_p=0,2-0,5 \text{ mm}$, Wet

Stable chip curling and breaking in facing of gummy steel.



NFE Type (AC8025P)

Competitor

Work Material: C53E, 1.1210, $\varnothing 20-100$
Exter. Turning+Facing Ins.: DNMG 150412 NFE (AC8025P)
Cutting Conditions: $v_c=180 \text{ m/min}$, $f=0,25 \text{ mm/rev}$ (radius), $0,45 \text{ mm/rev}$ (straight section), $a_p=0,3 \text{ mm}$, Wet

Stable chip control even at a variable feed rate in shallow cutting.



NFE Type (AC8025P)



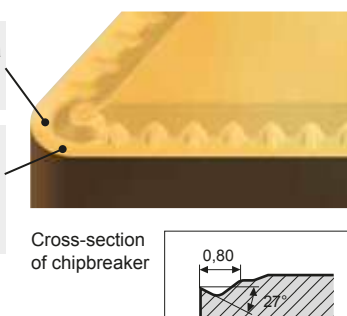
Conventional

NFB Chipbreaker for Low Feed Finishing

Supports low feed machining.

Smooth chipbreaker geometry with a high rake reduces cutting resistance.

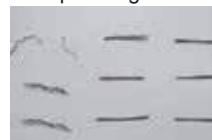
The variable rake angle in nose radius makes effective strain on chips and improves the breaking performance.



Application Example

Work Material: Pipe steel (STKM13C)
Internal Turning Insert: DNMG 150404 NFB (T3000Z)
Cutting Conditions: $v_c=352 \text{ m/min}$, $f=0,03-0,2 \text{ mm/rev}$, $a_p=0,7 \text{ mm}$, Wet

Small chip curling and control



NFB Type (T3000Z)



Competitor

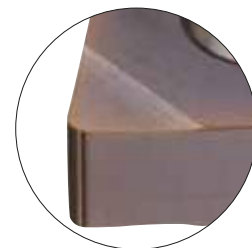


General Features

Enables medium roughing of hardened steel in combination with coating and grade AC503U.

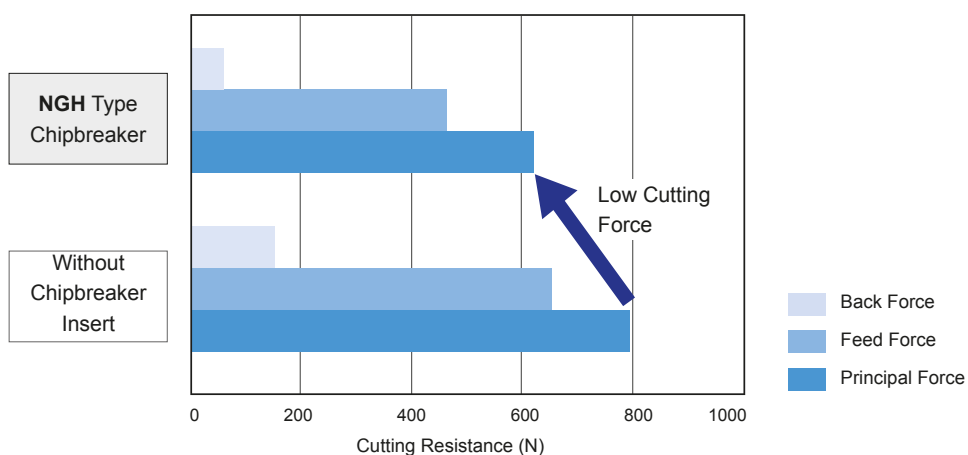
Reduces heat generation and enables deep cutting ($a_p = 1 \sim 3\text{mm}$) of hardened steel by using a wide neutral ground chipbreaker (rake angle: 4°) and sharp edge.

Discharges chips smoothly.

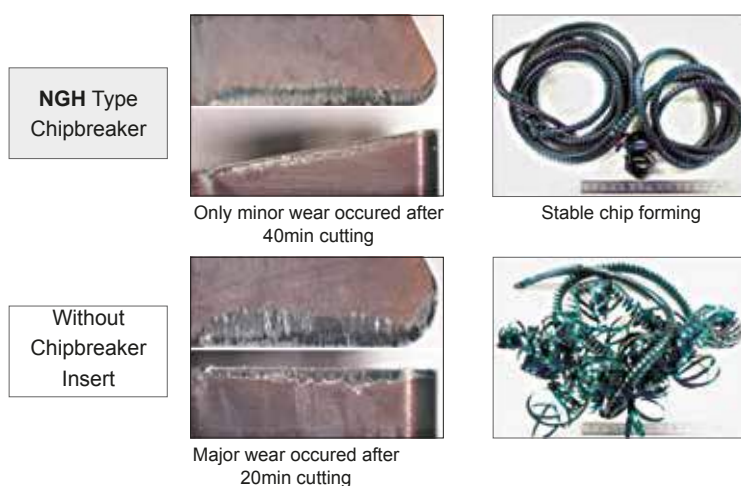


Negative Insert for Rough Cutting NGH Type Chipbreaker

Performance



Application Examples



Work Material: X155CrVMo12-1 (61HRC)
 Insert: TNGG 160404 NGH (AC503U)
 Cutting Conditions: $v_c=50\text{m/min}$, $f=0,05\text{mm/rev}$, $a_p=3,0\text{mm}$, Dry

Recommended Cutting Conditions

Application Range	Cutting Speed v_c (m/min)	Feed Rate f (mm/rev)	Depth of Cut a_p (mm)	Recommended Chipbreaker
Finishing	40 ~ 100	0,02 ~ 0,10	<1	Without chipbreaker insert
Medium Roughing	20 ~ 60	0,02 ~ 0,05	1 ~ 3	NGH Type

Work Material: Hardened steel (50 ~ 62HRC), X155CrVMo12-1, X40CrVMo5-1, S6-5-2, High-speed powder and high speed steel

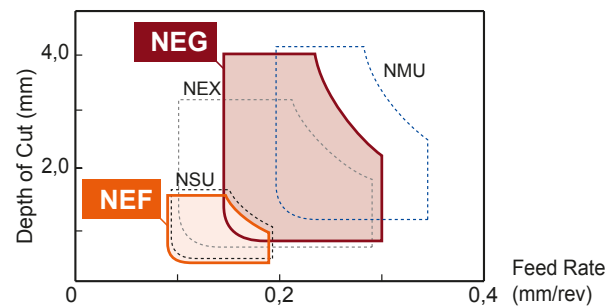
Chipbreaker NEG Type / NEF Type

For Exotic Alloys and Stainless Steel Turning

General Features

NEG/NEF type chipbreaker for exotic alloy machining can be used for Titanium alloys, heat-resistant alloys and a variety of other exotic alloys. They deliver excellent wear resistance and superior chip management. These chipbreakers can solve quality problems caused by the unstable tool life and poor chip control provided by conventional chipbreakers for exotic alloys.

Application Range

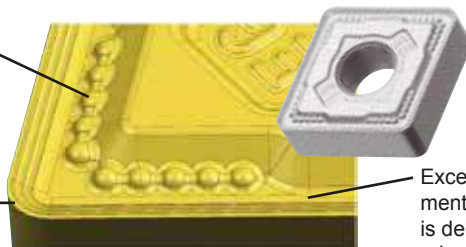


NEG Chipbreaker for Roughing

Provides excellent wear resistance and chip control from general-purpose machining to roughing applications. Reduces damage to insert and eliminates trouble from chips specific to exotic alloys. Also demonstrates very high versatility.

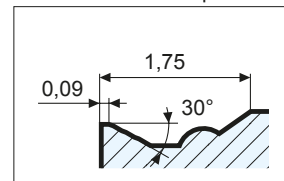
Crater wear advancement is prevented by the round bumps, whilst maintaining excellent control.

The cutting edge maintains the strength slowing the progress of crater wear.



Excellent chip management and wear prevention is delivered by the special rake face design.

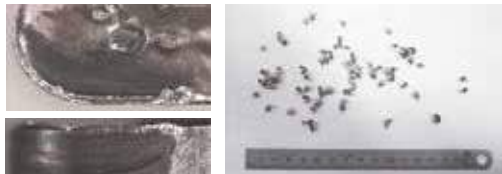
Cross Section of Chipbreaker



Cutting Performance – NEG Type

Heat Resistant Alloy

Chipbreaker type: NEG (AC510U)



Suppresses the chipping of peripheral cutting edge and notch wear. Excellent chip management.

Work Material: Inconel 718

Insert: CNMG120412

Cutting Data:
 $v_c = 40\text{m/min}$
 $d_{oc} = 2.5\text{mm}$
 $f = 0.2\text{mm/rev}$
Wet
 $T_c = 7\text{min}$

Conventional tool (S10)



Notch wear / poor chip control

Titanium Alloy

Chipbreaker type: NEG (AC510U)



Suppresses crater wear and flank wear. Excellent chip management.

Work Material: Ti-6Al-4V

Insert: CNMG120412

Cutting Data:
 $v_c = 65\text{m/min}$
 $d_{oc} = 2.5\text{mm}$
 $f = 0.2\text{mm/rev}$
Wet
 $T_c = 8\text{min}$

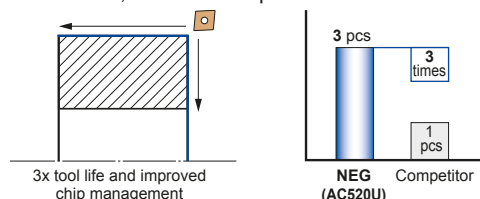
Conventional tool (S10)



Crater wear / flank wear / poor chip control

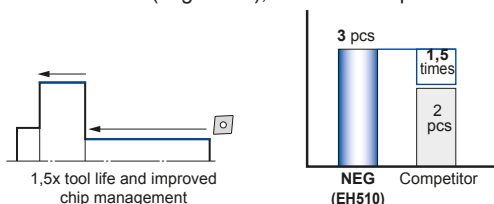
Application Example – NEG Type

Inconel 718, machine component



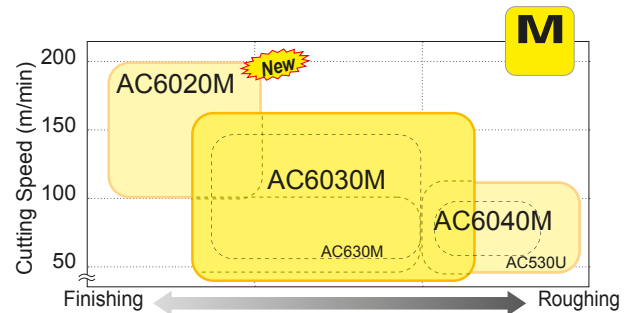
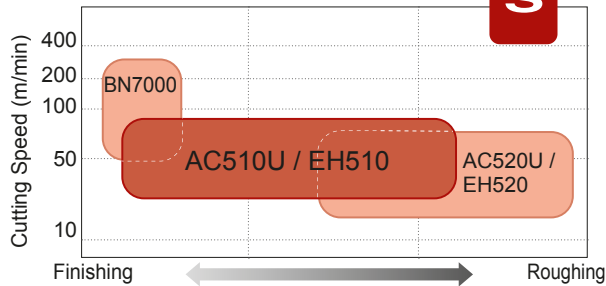
Insert: CNMG120408 NEG (AC520U)
Cutting Data: $v_c=50\text{m/min}$, $d_{oc}=1.5\text{mm}$, $f=0.3\text{mm/rev}$, Wet

Pure Titanium (Ti grade 3), machine component



Insert: CNMG120408 NEG (EH510)
Cutting Data: $v_c=80\sim 100\text{m/min}$, $d_{oc}=1.0\text{mm}$, $f=0.25\text{mm/rev}$, Wet

Material Application Range

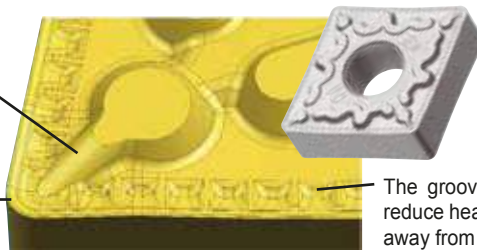


NEF Chipbreaker for Finishing

The NEF chipbreaker reduces chip curl diameter in finishing applications. Provides extremely good chip management not fluctuated by the material in use.

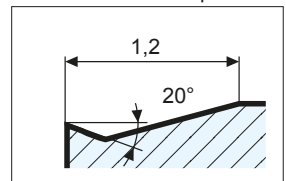
Main chipbreaker that enables good chip control even at low depths of cut.

Sharp edge with 20° rake angle reduces wear.



The grooves on the rake face reduce heat and assist chip flow away from the workpiece.

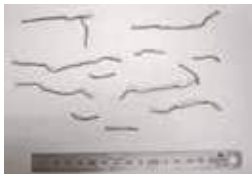
Cross Section of Chipbreaker



Cutting Performance – NEF Type

Heat Resistant Alloy

Chipbreaker type: NEF (AC510U)



Improvements in chip control and chip removal management based on small curled chips.

Work Material:
Inconel 718

Insert:
CNMG120408

Cutting Data:
 $v_c = 55\text{m/min}$
 $d_{oc} = 0,3\text{mm}$
 $f = 0,15\text{mm/rev}$
Wet
 $T_c = 8\text{min}$

Conventional tool (S10)



Competitor's product (S10)



There is a problem in the length and the diameter of chips.

Titanium Alloy

Chipbreaker type: NEF (AC510U)



Improvements in chip control and chip removal management based on small curled chips.

Work Material:
Ti-6Al-4V

Insert:
CNMG120408

Cutting Data:
 $v_c = 80\text{m/min}$
 $d_{oc} = 0,5\text{mm}$
 $f = 0,2\text{mm/rev}$
Wet
 $T_c = 25\text{min}$

Conventional tool (S10)



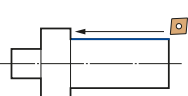
Competitor's product (S10)



There is a problem in the length and the diameter of chips.

Application Example – NEF Type

Inconel 718, shaft component



Great improvement in chip management. Keeps workpieces free of damage. It is possible to omit final polishing process.



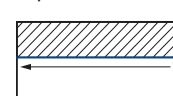
NEF (AC510U)



Conventional tool

Insert: CNMG120408 NEF (AC510U)
Cutting Data: $v_c=45\text{m/min}$, $d_{oc}=0,25\text{mm}$, $f=0,1\text{mm/rev}$, Wet

Duplex stainless steel cover



Improvements in chip management. Suppress damage to finished surface with no entanglement of chips.



NEF (AC510U)



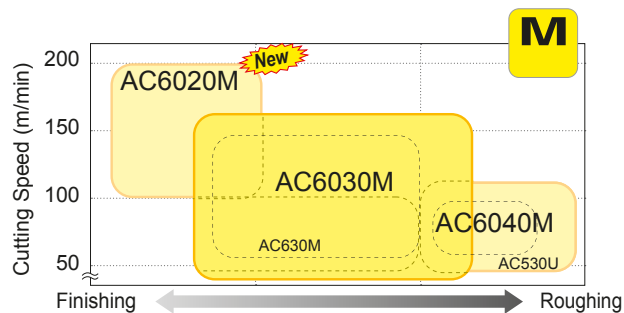
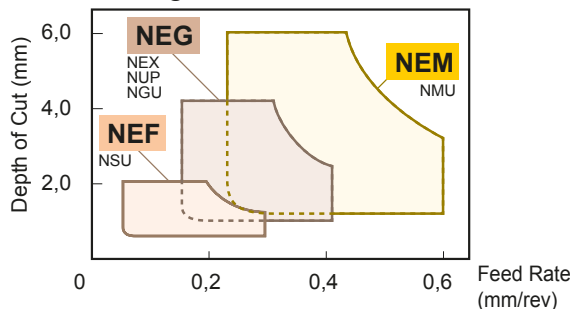
Conventional tool

Insert: CNMG120408 NEF (AC510U)
Cutting Data: $v_c=55\text{m/min}$, $d_{oc}=0,3\text{mm}$, $f=0,125\text{mm/rev}$, Wet

Chipbreaker NEM Type

Chipbreaker for Stainless Steel Turning

Application Range



NEM Chipbreaker for Rough Cutting

The NEM chipbreaker achieves excellent fracture and crater resistance and ensures extremely stable machining.

Large radius rake face design that reduces crater wear while maintaining the cutting edge strength.



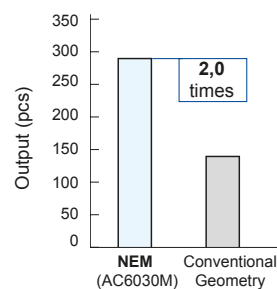
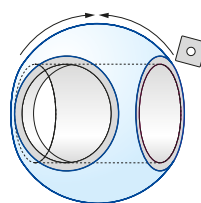
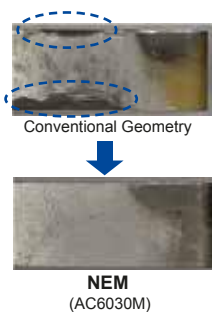
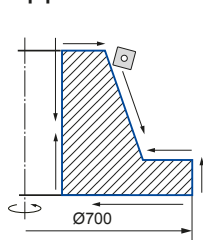
Bright colors for easy identification of used cutting edge.

Reduces boundary damage by eliminating changing points from the cutting edge.

Reduction of Damage

	Reduction of Boundary Damage		Reduction of Crater Wear	
	Cutting Edge	Boundary Wear Comparison	Cross Section	Crater Wear Comparison
Conventional Geometry				
NEM Type				
	The NEM chipbreaker has no changing points on the cutting edge, so boundary damage is reduced.		The NEM chipbreaker smoothly evacuates chips thanks to its large radius rake face design, so crater wear is reduced.	

Application Example



Reduces breakage out of the cutting edge and ensures stable machining.

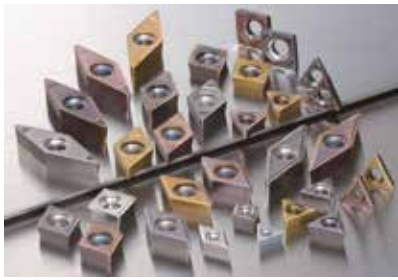
Reduces crater wear and provides long tool life.

Work Material: X5CrMo17 12 2
Insert: SNMG190616NEM (AC6030M)
Cutting Conditions: $v_c=70\text{m/min}$, $f=0.5\text{mm/rev}$, $a_p=3.0\sim 8.0\text{mm}$, Wet

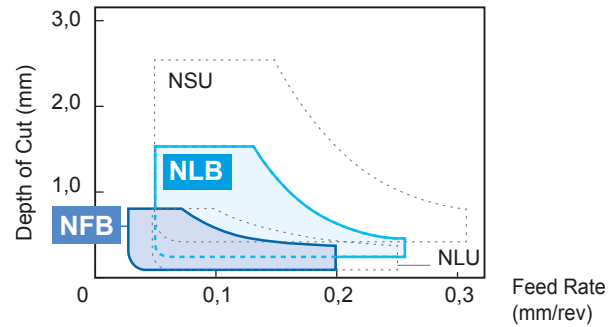
Work Material: X5CrNiS18 10
Insert: SNMG120408NEM (AC6030M)
Cutting Conditions: $v_c=100\text{m/min}$, $f=0.32\text{mm/rev}$, $a_p=2.0\sim 2.5\text{mm}$, Wet

Positive M Class Chipbreakers for Low Carbon and General Steel Turning

Chipbreaker NFB Type / NLB Type

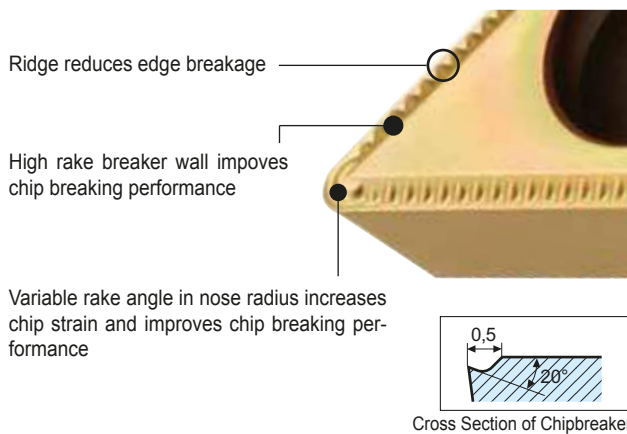


Application Range



NFB Chipbreaker for Finishing

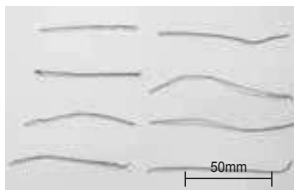
The NFB type for finishing and the NLB type for light cutting have been added to the chipbreaker series for low carbon and general steel machining in addition to the already present NLU type for finishing and NSU type for light cutting. The NFB and NLB type chipbreakers improve chip control in finishing of low carbon and general steel.



Performance

Chip Control

Achieves stable chip control at small cutting depth and low feed.



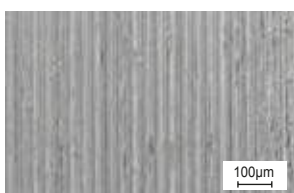
NFB Type Chipbreaker (T1500A)



Competitor's Product

Work Material: Pipe (H240LA), Ø30 Boring
Insert: TPMT 110304 NFB (T1500A)
Cutting Conditions: $v_c=100\text{m/min}$, $f=0.12\text{mm/rev}$, $a_p=0.1\text{mm}$, Wet

Comparison of Surface Roughness of Finished Surfaces



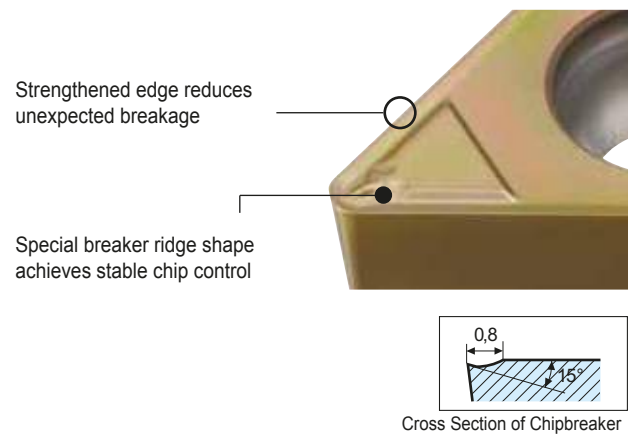
NFB Type Chipbreaker (T1500A)



Competitor's Product

Work Material: Pipe (H240LA), Ø100 Boring
Insert: TPMT 110304 NFB (T1500A)
Cutting Conditions: $v_c=200\text{m/min}$, $f=0.07\text{mm/rev}$, $a_p=0.1\text{mm}$, Wet

NLB Chipbreaker for Light Cutting



Performance

Chip Control ①

Achieves stable chip control in light cutting.



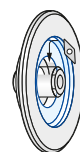
NLB Type Chipbreaker (T1500A)



Competitor's Product

Work Material: Pipe (H240LA), Ø30 Boring
Insert: TPMT 110304 NLB (T1500A)
Cutting Conditions: $v_c=200\text{m/min}$, $f=0.15\text{mm/rev}$, $a_p=0.5\text{mm}$, Wet

Chip Control ②



NLB Type Chipbreaker (T1500A)



Competitor's Product



Doubles the tool life by improving chip control and reducing blemishes on machined surfaces.

Work Material: Hub (C45)
Insert: VBMT 160408 NLB (T1500A)
Cutting Conditions: $v_c=240\text{m/min}$, $f=0.25\sim0.28\text{mm/rev}$, $a_p=0.6\text{mm}$, Wet

Inserts

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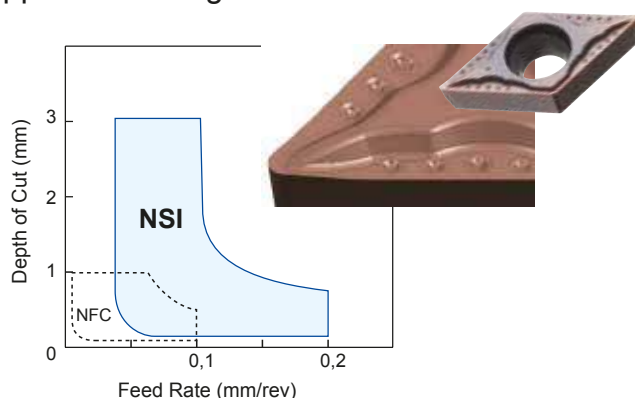
W

Chipbreaker for Steel Turning (M)NSI Type

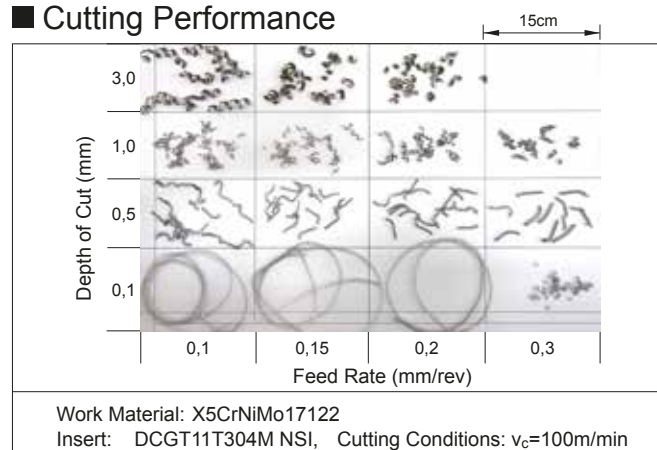
Nose radius with minus tolerance (M)

Example: DCGT 11T304M NSI

Application Range

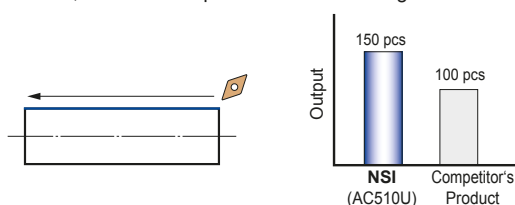


Cutting Performance



Application Examples

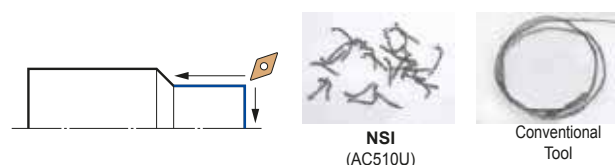
Inconel 718, machine component external turning



1,5 x higher tool life. Improved chip management.

Insert: DCGT11T302M NSI (AC510U)
Cutting Conditions: $v_c=35\text{m/min}$, $f=0,08\text{mm/rev}$, $d_{oc}=0,8\text{mm}$, Wet

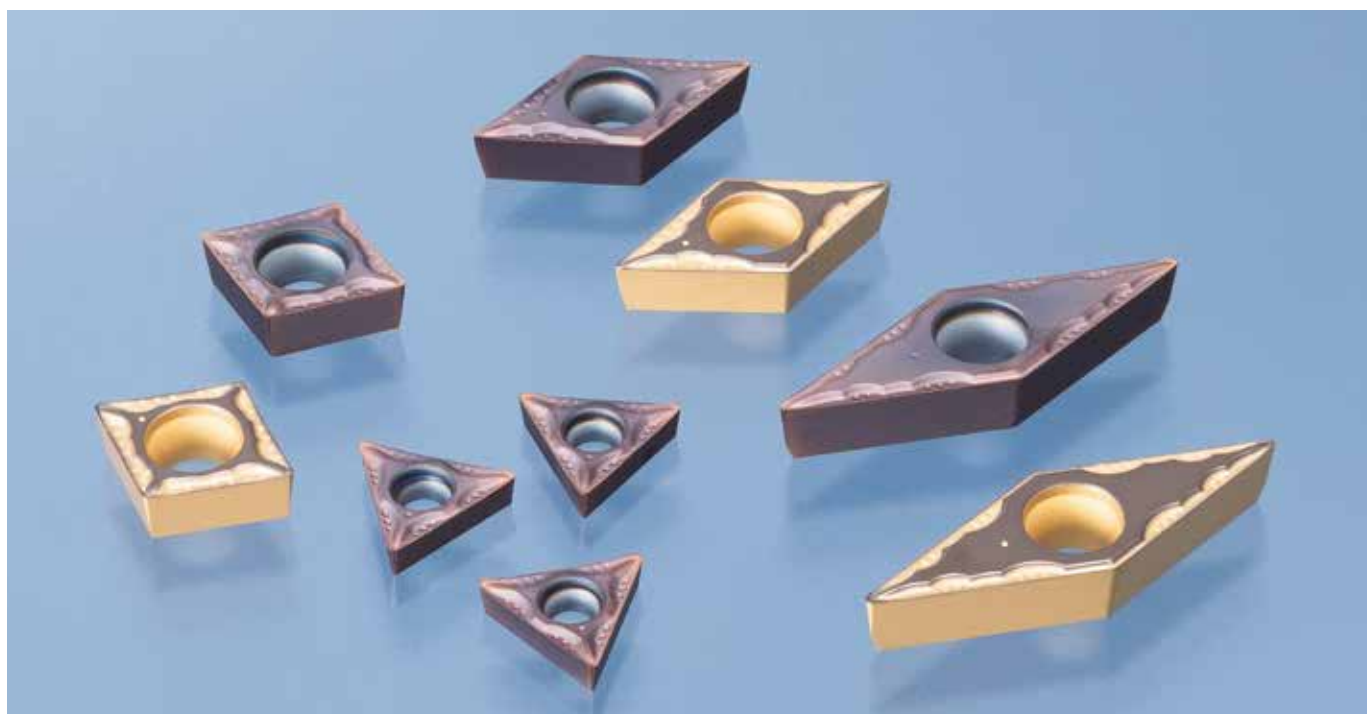
X5CrNi1810, Shaft component external turning & facing



Improved chip management. Suppressing cutting edge adhesion to ensure a stable, long tool life.

Insert: DCGT11T304M NSI (AC520U)
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,08\text{mm/rev}$, $d_{oc}=0,5\text{mm}$, Wet

- Sharp designed cutting edge with low-cutting force
- Better chip control in wide range DOC for bar feeder machine
- Combination of high rake edge design and G-class precision offers superior cutting performance
- Suitable for medical parts and high precision machining



Inserts

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Chipbreaker Comparison

■ Negative Type

Class	Application	Sumitomo Electric	Mitsubishi	Tungaloy	Kyocera	Mitsub.-Hitachi	Sandvik	Kennametal	SECO Tools	WALTER	ISCAR
P	Fine Finishing	FA	FH	TF	GP		QF	FF	FF1		SF
		FL, FB	FS,FY	NS,ZF	XP,XF,VF	FE			FF2	FP5	
	Finishing	LU, FE	SA,SY	NM, SS	XQ,CQ,PP	BE	LC	FN		NF3	
		SU	SH	TS,TSF,11	HQ	CE,B,BH	XF,MF	CT	MF2		NF,TF
	Wiper Edge	LUW		AFW, FW	WP		WL,WP		W-FF2		
		SEW	SW	ASW, SW	WQ		WF,WMX	FW	W-MF2	NF	WF
	Finishing to Light Cut	SE, SX	LP	AS,ZM,27	CJ,XS	AB,CT	PF,KF	LF, 33		MP3,NS6	F3P, TF
	Medium Cut	GU (UG)	MA,MV	TM	HS,PS	AH	XM,QM	P,MG	M3		GN, HT
		GE, UX	MH,MP	DM,AM	CS,GS,PQ,PT	AE,AY	PM,SM,KM	MN, MP1		MP5,NM4,NM6	RF, LF
	Wiper Edge	GUW	MW				WM	MW, RW	W-M3	NM	WG
	Roughing	MU, ME	GH, RP	TH, S	HT,GT,PH	RE,AR	PR,XMR,KR	RP	M5,MR7	NM7,NM9,RP5	M3P,NR
		MX	HAS,MT	CH				RN	MR6		
	Heavy Cut	HG	HA,HZ,HX,HBS	THS,TRS	PX,HX	TE,UE	QR	RM,MR	R4,R5,R6	NR6,NRF	NM
		HP	HH,HXD	65			HR,SR	RH	R7	NR8	TNM
		HU, HW	HV			H					
		HF	HCS	TUS		HX,HE	MR		RR9	NRR	R3P
M	Finishing	SU, EF	LM,SH	SS	MQ,GU	SE,MP	MF	FP,FS,LF	MF2	NF4	
	Light to Medium Cut	EX, EG	GM,MS	SF,SA	MS, MU	PV	23	MS	MF1,M1		TF,VL
		GU	MM	SM	HU	DE	MM, SMR	MP	MF3,M3	NM4	M3M,PP
	Roughing	HM	ES,1M,2M	S					MF4, MF5	NR4, RM5	
S		EM, MU	GH,RM	SH	TK		MR, MRR		M5,MR3		MR
	Finishing	EF	LS,FJ	HRF			SF, SGF			NFT	
	Medium Cut	EG, EX	MJ,MS	HMM,SA			SM, SMC			NMT	
K	Roughing	MU	GJ,RS				SMR			NRT	
	Light Cut	UZ	LK,MA,MK,SW	CM,CF	Standard	V,VA	KF	UN	M5	NM5	GN
H	Medium Cut	GZ (UX)	GH,Standard	Standard,CH,33	ZS,GC	Y,RE	KM,KR		MR7	RK5, RK7	
	Finishing	FV, GH									
	Light Cut	LV									
	Carburized Layer Removal	SV									

■ Positive Type

Class	Application	Sumitomo Electric	Mitsubishi	Tungaloy	Kyocera	Mitsub.-Hitachi	Sandvik	Kennametal	SECO Tools	WALTER	ISCAR
P	Finishing	FC	FJ,AM	01, JRP,JTS	CF,GF,VF		UM		GT-F1	FM4	
		FB, LU (FP, FK)	FP,FM,FV,SQ	PSF,PF,23	GP,XP,MP,PP	JQ,MP	PF,UF,MF,KF	11,UF,FP	FF1	PF4	PF
M	Wiper Edge	LUW	SW				WF	FW	W-F1	PF	WF
		SDW					WK,WM	MW	W-F2		WG
K	Finishing to Light Cut	SI	SMG	JS	CK						
	Light Cut	LB, SU (SK, SF)	LP,LM,SV,MQ	PSS,PS,24	HQ,XQ,GK	JE	PM,UM,MM,PM	LF	F1	MP4,MM4,FK6	SM,14
		SC			GQ,SK			MP	MF2		
N	Medium Cut	MU	MV,MM,MK	PM			PR,UR,MR,KR	MF	F2,M3,M5	PM5,RP4,RM4	19
	Finishing	AG	AZ	AL,PP	AH		AL	HP	AL	PM2	AS,AF
H	Finishing to Light Cut	LD, GD									
	Finishing	FV									
	Light Cut	LV									

Inserts

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Chipbreaker Application

Bumpy Breaker	Standard Breaker	Handed Breaker
Break Master (CBN/PCD)	For Chamfering	

Negative Type

Finishing to Medium Cutting

New

N-FB Better chipcontrol under low feed conditions with sharp edge shape.

 CNMG1204-0-NFB

N-FA Profile breaker perfect for fine finishing

 CNMG1204-0-NFA

N-FL Optimal breaker for chip management on iron sheeting

 CNMG1204-0-NFL

N-FE Good chipcontrol from low to high feed rate **New**

 CNMG1204-0-NFE

Breaker Code **N-GU** Work Material Characteristics
 Appearance Cross Section
 Relief angle $\alpha = 0^\circ$ Cross Section Cat. No.
 Stock Items

N-LU Effective chip management for fluctuating cut depths and copying

 CNMG1204-0-NLU

N-SP Shows excellent cutting performance in finishing to light cutting

 CNMG1204-0-NSP

N-SU Effective in high-speed fine finishing

 CNMG1204-0-NSU

N-SE Finishing breaker reduces tool wear on rake face. Effective even for high efficiency machining.

 CNMG1204-0-NSE

N-EF Chipbreaker for exotic alloy finishing with excellent chip management

 CNMG1204-0-NEF

NLU-W High performance finishing breaker with wiper edge

 CNMG1204-0-NLUW

NSE-W New high feed finishing breaker with wiper edge

 CNMG1204-0-NSEW

L/R-FX Parallel breaker with superior sharp edge

 TNGG1604-0-LRFX

L/R-FY Wide type breaker with sharp edge

 TNGG1604-0-LRFY

L/R-FT Arc-shaped ground type finishing breaker

 TNGG1103-0-LRFT

N-SJ Standard breaker with excellent cutting edge strength

 SNMG1204-0-NSJ

L/R-ST Arc-shaped ground type breaker for light cutting

 TNGG1603-0-LRST

N-EX Standard breaker designed especially for use with exotic alloys

 CNMG1204-0-NEX

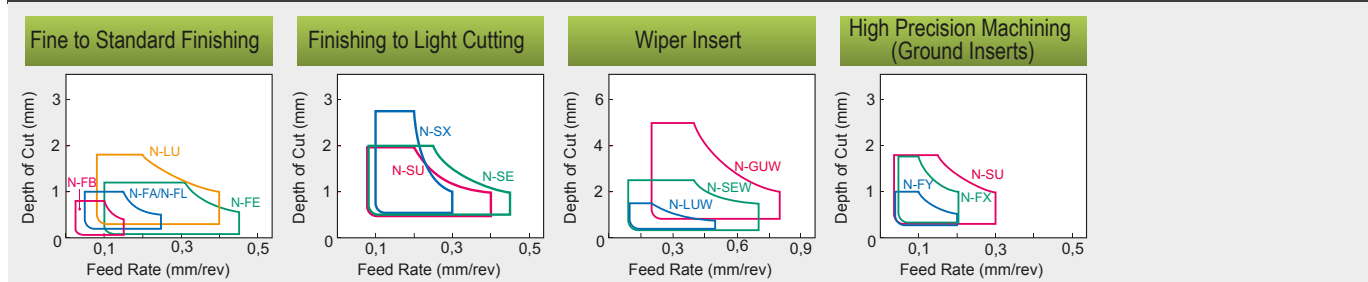
N-UP Double positive edge for optimal stainless steel cutting

 CNMG1204-0-NUP

N-SX Perform copying and raise steps

 CNMG1204-0-NSX

Chipbreaker Application Range (Insert IC up to Ø 12,7mm)



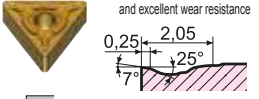
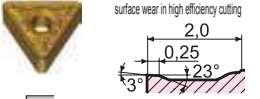
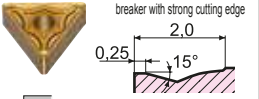
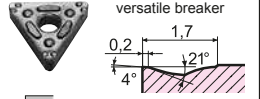
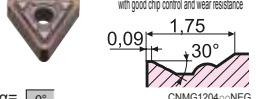
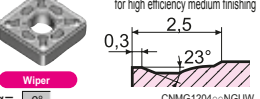
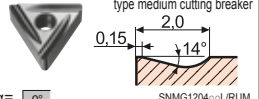
Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

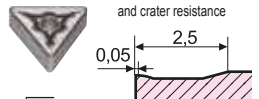
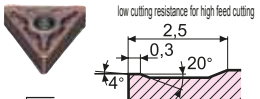
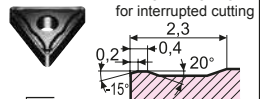
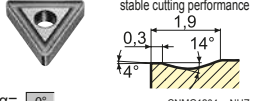
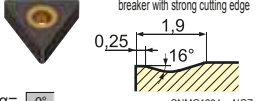
 Bumpy Breaker	 Standard Breaker	 Handed Breaker
 Break Master (CBN/PCD)	 For Chamfering	

Chipbreaker Application

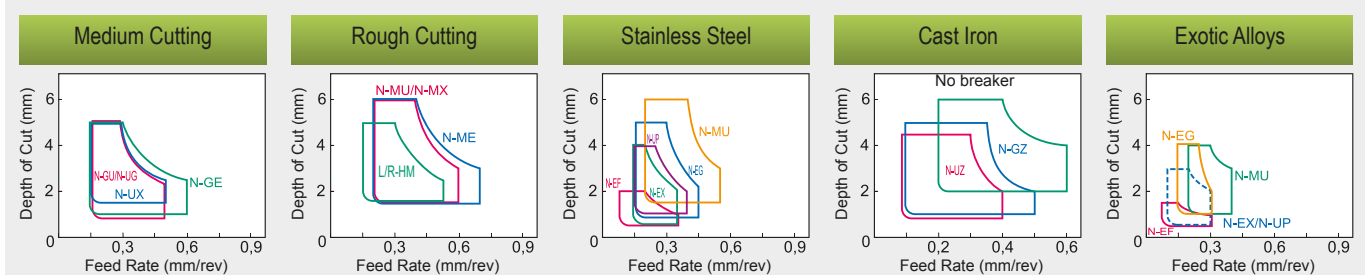
Negative Type

Medium to Rough Cutting

Medium	N-GU  Features low cutting resistance and excellent wear resistance.  $\alpha = 0^\circ$ 	N-GE  A versatile breaker with excellent rake surface wear in high efficiency cutting.  $\alpha = 0^\circ$ 	N-UX  Extremely reliable and versatile breaker with strong cutting edge.  $\alpha = 0^\circ$ 	N-UG  Popular and versatile breaker.  $\alpha = 0^\circ$ 
	N-EG  General-purpose chipbreaker for exotic alloys with good chip control and wear resistance.  $\alpha = 0^\circ$ 	NGU-W  Finishing breaker with wiper edge for high efficiency medium finishing.  $\alpha = 0^\circ$ 	L/R-UM  General-purpose ground type medium cutting breaker.  $\alpha = 0^\circ$ 	

Medium to Rough	N-EM  Achieves excellent fracture and crater resistance.  $\alpha = 0^\circ$ 	N-MU  Economical, double-sided breaker with low cutting resistance for high feed cutting.  $\alpha = 0^\circ$ 	N-ME  Chipbreaker for rough cutting that supports high-feed cutting with reduced rake face wear.  $\alpha = 0^\circ$ 	N-MX  Strong cutting edge for interrupted cutting.  $\alpha = 0^\circ$ 
	N-UZ  Standard breaker with stable cutting performance.  $\alpha = 0^\circ$ 	N-GZ  Extremely reliable standard breaker with strong cutting edge.  $\alpha = 0^\circ$ 	L/R-HM  Wide, M class, handed breaker with low cutting resistance for medium to rough cutting.  $\alpha = 0^\circ$ 	

Chipbreaker Application Range (Insert IC up to Ø 12,7mm)



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

Inserts

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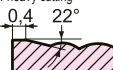
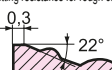
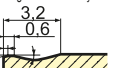
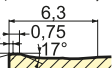
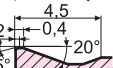
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Chipbreaker Application

 Bumpy Breaker	 Standard Breaker	 Handed Breaker
 SUMIBORON Break Master	 For Chamfering	

Negative Type

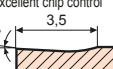
Rough Cutting

Rough to Heavy	N-HG  Excellent chip management for heavy cutting  $\alpha = 0^\circ$ CNMM1606--NHG	N-MP  Single-sided breaker with low cutting resistance for rough cutting  $\alpha = 0^\circ$ CNMM1606--NMP	N-HP  Strongest cutting edge for heavy cutting  $\alpha = 0^\circ$ CNMM1606--NHP
	N-HU  Strong edges and excellent chip management for heavy cutting  $\alpha = 0^\circ$ SNMM2507--NHU	N-HW  Two step breaker with excellent chip evacuation for heavy cutting  $\alpha = 0^\circ$ SNMM3109--NHW	N-HF  Strong edge chipbreaker for heavy cutting with excellent chip evacuation even in high-feed cutting  $\alpha = 0^\circ$ SNMM1906--NHF

Negative Type

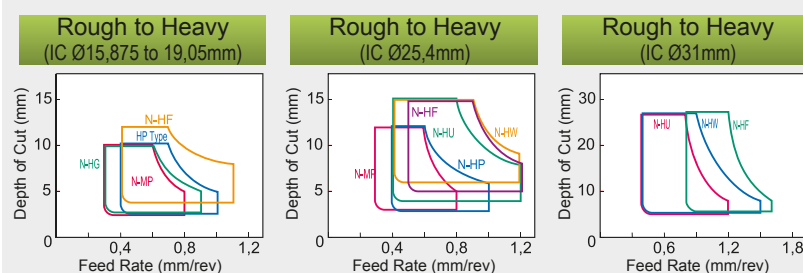
For Hardened Steel

Finishing

N-GH 
 For cutting hardened steel with low cutting force and excellent chip control

 $\alpha = 0^\circ$
 CNGG1204--NGH

New

Chipbreaker Application Range



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

	Bumpy Breaker		Standard Breaker		Handed Breaker
	Break Master (CBN/PCD)				

Chipbreaker Application

Positive Type Medium to Rough Cutting

Finish to Light	N-FB P M K N S H Finishing chipbreaker for soft steel providing excellent chip control and surface finish quality  0.5 20° $\alpha =$ 5° 7° 11° C D R S T V W CCMT09T300-NFB N-LU P M K N S H Chip management significantly improved in fine finishing  0.8 15° $\alpha =$ 5° 7° 11° C D R S T V W CCMT09T300-NLU NLU-W P M K N S H High performance finishing breaker with wiper edge  1.5 10° $\alpha =$ 7° 11° C D R S T V W CCMT09T300-NLUW N-FP P M K N S H Provides good chip control in fine finishing  1.40 10° $\alpha =$ 7° C D R S T V W CCMT09T300-NFP N-FK P M K N S H Finishing breaker with sharp edge and good chip control  1.1 $\alpha =$ 11° C D R S T V W TPMT160400-NFK	
	Light to Medium	N-LB P M K N S H Light-cutting breaker with sharp edge and good chip control  0.8 15° $\alpha =$ 5° 7° 11° C D R S T V W CCMT09T300-NLB N-SU P M K N S H General-purpose breaker with sharp edge  1.45 8° $\alpha =$ 7° 11° C D R S T V W TPMT110300-NSU N-US P M K N S H Breaker for small diameter boring bars  1.95 10° $\alpha =$ 11° C D R S T V W CPMH090300-NSU
		N-MU P M K N S H Long lifetime breaker with low cutting resistance  0.35 1.8 0.1 4° 20° $\alpha =$ 7° 11° C D R S T V W TPMT160400-NMU N-SF P M K N S H Very reliable breaker with sharp edge  0.2 1.6 14° $\alpha =$ 11° C D R S T V W TPMT160400-NSF

Positive Type G Class with Ground Chipbreaker

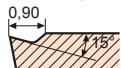
Finish to Light

L/R-FW

P M K N S H



Wide dimple breaker with sharp edge



$\alpha = 5^\circ \quad 11^\circ$

TPMT110200-LRFW

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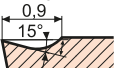
W

L/R-FX

P M K N S H



Parallel breaker with sharp edge



$\alpha = 5^\circ \quad 7^\circ \quad 11^\circ$

TPGT110300-LRFX

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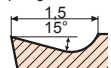
W

L/R-FY

P M K N S H



Wide breaker with sharp edge



$\alpha = 5^\circ \quad 7^\circ \quad 11^\circ$

TPGT110300-LRFY

C

D

R

S

T

V

W

L/R-FYS

P M K N S H



Breaker for fine cutting with sharp edge



$\alpha = 5^\circ \quad 7^\circ$

COGT04X100-LRFYS

C

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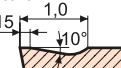
W

L/R-W

P M K N S H



Wide type finishing breaker



$\alpha = 5^\circ \quad 11^\circ$

TPGR110300-LRW

C

D

R

S

T

V

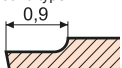
W

L/R-SD

P M K N S H



Stepped parallel ground type



$\alpha = 7^\circ \quad 11^\circ$

TPGT110300-LRNSD

C

D

R

S

T

V

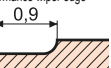
W

L/R-SDW

P M K N S H



Parallel ground type with high performance wiper edge



$\alpha = 11^\circ$

TPGX110300-LRSDW

C

D

R

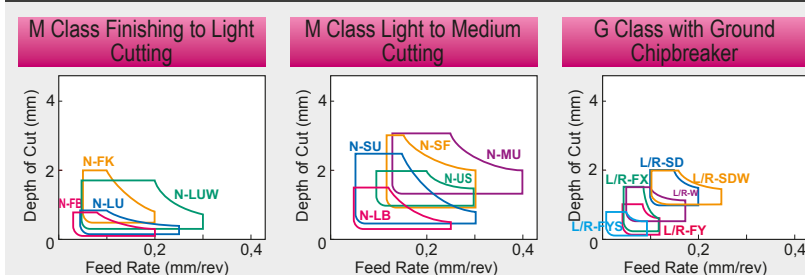
S

T

V

W

Chipbreaker Application Range



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

Inserts

C

D

K

R

S

T

V

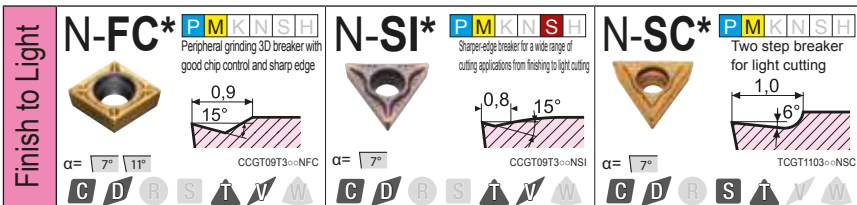
W

Chipbreaker Application

Bumpy Breaker
 Standard Breaker
 Handed Breaker
 SUMIBORON Break Master

Positive Type

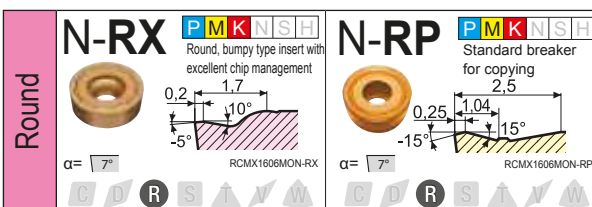
G Class



*Remarks:
N-FC, N-SI and N-SC have minus tolerance indicated by "M" after the nose radius.
Example:
DCGT 11T302 M NSI AC520U

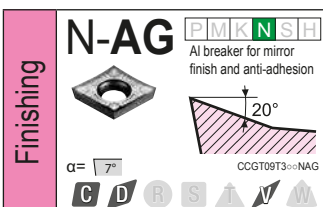
Positive Type

Round Inserts

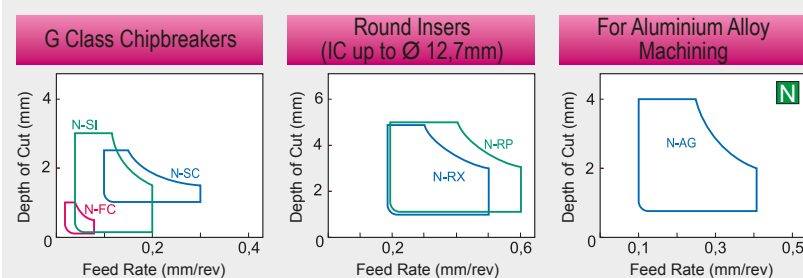


Positive Type

For Al - Alloy Machining

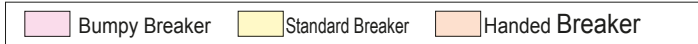


Chipbreaker Application Range

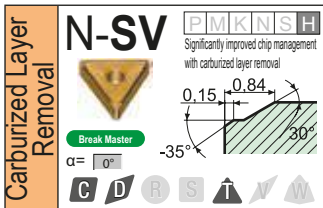
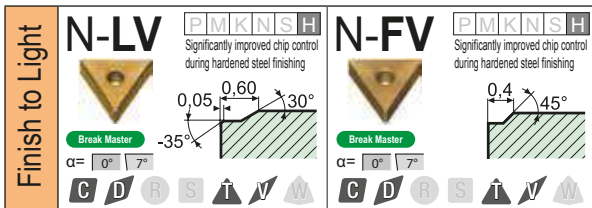


Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

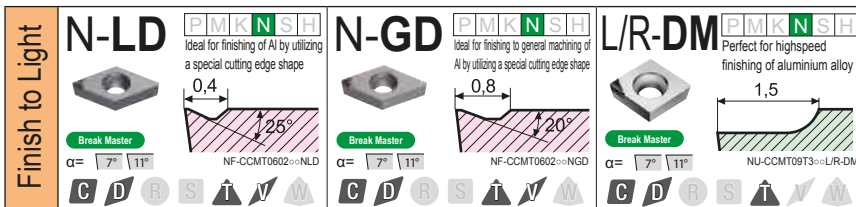
Chipbreaker Application



SUMIBORON Insert CBN



SUMIDIA Insert PCD



Inserts

C

D

K

R

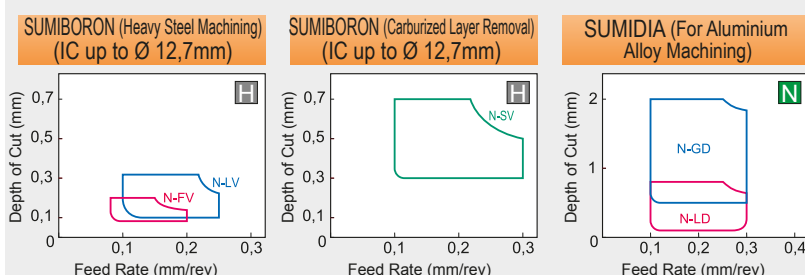
S

T

V

W

Chipbreaker Application Range



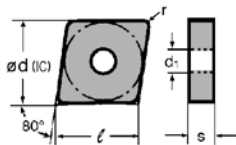
Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	l	∅d (IC)	s	d ₁
0903..	9,7	9,525	3,18	3,81
0904..	9,7	9,525	4,76	3,81
1204..	12,9	12,7	4,76	5,16



P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

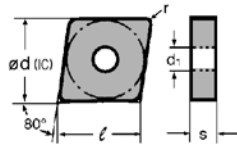
CNMG

● M-Class, Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H	
Fine Finishing	New Feed rate (mm/rev) NFB	CNMG 090304 NFB	0,4																											
		CNMG 090308 NFB	0,8																											
		CNMG 090404 NFB	0,4																											
		CNMG 090408 NFB	0,8																											
Fine Finishing	Feed rate (mm/rev) NFA	CNMG 120402 NFA	0,2																											
		CNMG 120404 NFA	0,4																											
		CNMG 120408 NFA	0,8																											
Fine Finishing	Feed rate (mm/rev) NFL	CNMG 090308 NFL	0,8																											
		CNMG 120404 NFL	0,4																											
		CNMG 120408 NFL	0,8																											
Fine Finishing	New Feed rate (mm/rev) NFE	CNMG 090304 NFE	0,4																											
		CNMG 090308 NFE	0,8																											
		CNMG 090404 NFE	0,4																											
		CNMG 090408 NFE	0,8																											
Fine Finishing	Feed rate (mm/rev) NFE	CNMG 120402 NFE	0,2																											
		CNMG 120404 NFE	0,4																											
		CNMG 120408 NFE	0,8																											
		CNMG 120412 NFE	1,2																											
Finishing	Feed rate (mm/rev) NLU	CNMG 090304 NLU	0,4																											
		CNMG 090308 NLU	0,8																											
		CNMG 120402 NLU	0,2																											
		CNMG 120404 NLU	0,4																											
Finishing	Feed rate (mm/rev) NLU-W	CNMG 120408 NLU	0,8																											
		CNMG 120412 NLU	1,2																											
		CNMG 120404 NLU-W	0,4																											
		CNMG 120408 NLU-W	0,8																											
Finishing	Feed rate (mm/rev) NLU-W	CNMG 120412 NLU-W	1,2																											
Finishing	Feed rate (mm/rev) NEF	CNMG 090404 NEF	0,4																											
		CNMG 090408 NEF	0,8																											
		CNMG 120404 NEF	0,4																											
		CNMG 120408 NEF	0,8																											
Finishing	Feed rate (mm/rev) NEF	CNMG 120412 NEF	1,2																											

● = Euro stock
○ = Stock item in Japan
▲ = To be replaced by new item

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	ℓ	∅d (IC)	s	d ₁
0903..	9,7	9,525	3,18	3,81
0904..	9,7	9,525	4,76	3,81
09T3..	9,7	9,525	3,97	3,81
1204..	12,9	12,7	4,46	5,16
1606..	16,1	15,875	6,35	6,35



⇒ D12, D18
D41

⇒ E8

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1	
Finishing	 NSU	CNMG 090304 NSU	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○					
		CNMG 090308 NSU	0,8	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○				
		CNMG 09T304 NSU	0,4			○														○	○	○	○				
		CNMG 09T308 NSU	0,8			○														○	○	○	○				
		CNMG 090404 NSU	0,4	○	○	○	○													○	○	○	○				
		CNMG 090408 NSU	0,8	○	○	○	○													○	○	○	○				
		CNMG 090412 NSU	1,2	○	○	○	○													○	○	○	○				
		CNMG 120402 NSU	0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○				
		CNMG 120404 NSU	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
		CNMG 120408 NSU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
CNMG 120412 NSU	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
Finishing	 NSE NSE-W	CNMG 120404 NSE	0,4	●	●	●	○												○	○	○	○					
		CNMG 120408 NSE	0,8	●	●	●	○													○	○	○	○				
		CNMG 120412 NSE	1,2	●	●	●	○													○	○	○	○				
		CNMG 090404 NSE-W	0,4	○	○	○	○													○	○	○	○				
		CNMG 090408 NSE-W	0,8	○	○	○	○													○	○	○	○				
		CNMG 120404 NSE-W	0,4	●	●	●	○													○	○	○	○				
		CNMG 120408 NSE-W	0,8	●	●	●	○													○	○	○	○				
		CNMG 120412 NSE-W	1,2	●	●	●	○													○	○	○	○				
		CNMG 120404 NSX	0,4			○														○	○	○	○				
		CNMG 120408 NSX	0,8			●														○	○	○	○				
CNMG 120412 NSX	1,2			○														○	○	○	○						
Medium Cut	 NGU NGU-W	CNMG 090304 NGU	0,4		●	●	○												○	○	○	○					
		CNMG 090308 NGU	0,8		●	●	○													○	○	○	○				
		CNMG 090404 NGU	0,4	○	○	○	○													○	○	○	○				
		CNMG 090408 NGU	0,8	○	○	○	○													○	○	○	○				
		CNMG 090412 NGU	1,2	○	○	○	○													○	○	○	○				
		CNMG 120404 NGU	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○				
		CNMG 120408 NGU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○				
		CNMG 120412 NGU	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○				
		CNMG 120416 NGU	1,6		●	●	●													○	○	○	○				
		CNMG 160608 NGU	0,8	●	●	●	●	●	○											○	○	○	○				
CNMG 160612 NGU	1,2	●	●	●	●	●	○											○	○	○	○						
CNMG 160616 NGU	1,6	●	●	●	●													○	○	○	○						
Medium Cut	 NGU-W	CNMG 120408 NGU-W	0,8	●	●	●		●											○	○	○	○					
		CNMG 120412 NGU-W	1,2	●	●	●		●											○	○	○	○					
		CNMG 160612 NGU-W	1,2			○														○	○	○	○				

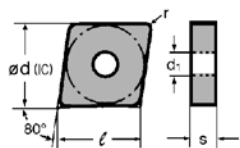
- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	l	ød (IC)	s	d1
0903..	9,7	9,525	3,18	3,81
0904..	9,7	9,525	4,76	3,81
09T3..	9,7	9,525	3,97	3,81
1204..	12,9	12,7	4,46	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

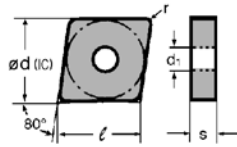
CNMG ○○○○■-■

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1
Medium Cut		CNMG 120404 NGE	0,4	●	●	●	●	●																
		CNMG 120408 NGE	0,8	●	●	●	●	●																
		CNMG 120412 NGE	1,2	●	●	●	●	●																
		CNMG 120416 NGE	1,6	●	●	●	●	●																
		CNMG 160608 NGE	0,8				○																	
		CNMG 160612 NGE	1,2		●	●	●	●																
		CNMG 160616 NGE	1,6		●	●	●	●																
		CNMG 190612 NGE	1,2		●		●																	
		CNMG 190616 NGE	1,6		●		●																	
		Medium Cut		CNMG 090304 NUG	0,4				○															
CNMG 090308 NUG	0,8						○																	
CNMG 090404 NUG	0,4						○																	
CNMG 090408 NUG	0,8						○																	
CNMG 09T304 NUG	0,4						○																	
CNMG 09T308 NUG	0,8						○																	
CNMG 120404 NUG	0,4						●																	
CNMG 120408 NUG	0,8						●																	
CNMG 120412 NUG	1,2						●																	
CNMG 120416 NUG	1,6						○																	
Medium Cut		CNMG 160616 NUG	1,6				○																	
		CNMG 190612 NUG	1,2				○																	
		CNMG 190616 NUG	1,6				○																	
		CNMG 090408 NEG	0,8						○	○	○													
		CNMG 090412 NEG	1,2						○	○	○													
		CNMG 120404 NEG	0,4				●		●	●	●		●				●	●				●	●	
		CNMG 120408 NEG	0,8				●		●	●	●		●				●	●				●	●	
		CNMG 120412 NEG	1,2				●		●	●	●		●				●	●				●	●	
		CNMG 160608 NEG	0,8				●		○															
		CNMG 160612 NEG	1,2				●		●	●		●					●	●				●	●	
Medium Cut		CNMG 160616 NEG	1,6				●		○															
		CNMG 190612 NEG	1,2				○		●	●														
		CNMG 190616 NEG	1,6				○		●	●														
		CNMG 120404 NEX	0,4						●	●	●	▲	●				●	●						
		CNMG 120408 NEX	0,8						●	●	●	▲	●				●	●						
		CNMG 120412 NEX	1,2						●	●	●	▲	●				●	●						
		CNMG 160612 NEX	1,2														●	●						
		CNMG 190612 NEX	1,2														●	●						

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

80° Diamond Type 0° Relief With Insert Hole



Dimensions (mm)				
CN	l	ød (IC)	s	d ₁
1204..	12,9	12,7	4,46	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94
2509..	25,8	25,4	9,52	9,2



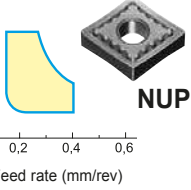
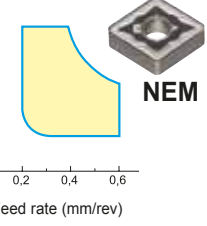
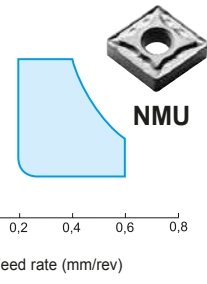
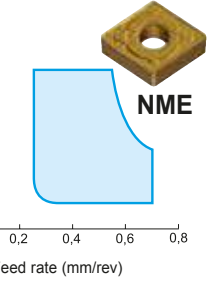
⇒ D12, D18
D41

⇒ E8

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	Carbide										Cermets		Carbide	
				Coated					ZX-Coated					Uncoated			
				P	M	P	K	H	K	M	S	P	K	S	N		
Medium Cut		CNMG 120404 NUP	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120408 NUP	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120412 NUP	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NUP	1,2		●	●											
Medium Cut		CNMG 120408 NEM	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120412 NEM	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120416 NEM	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160608 NEM	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NEM	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160616 NEM	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190612 NEM	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190616 NEM	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190624 NEM	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
		CNMG 250924 NEM	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing		CNMG 120408 NMU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120412 NMU	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120416 NMU	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160608 NMU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NMU	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160616 NMU	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190608 NMU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190612 NMU	1,2	○	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190616 NMU	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190624 NMU	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing		CNMG 120408 NME	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120412 NME	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120416 NME	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160608 NME	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NME	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160616 NME	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190612 NME	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190616 NME	1,6	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190624 NME	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
		CNMG 250924 NME	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg. Inserts

C

D

K

R

S

T

V

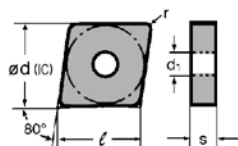
W

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	l	ød (IC)	s	d ₁
0904..	9,7	9,525	4,76	3,81
1204..	12,9	12,7	4,76	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94



⇒ D12, D18
D41

⇒ E8

P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

CNMG

● M-Class Double Sided Bumpy Chipbreaker

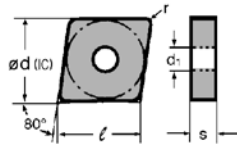
Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Roughing		CNMG 120404 NUX	0,4		●	●	●																								
		CNMG 120408 NUX	0,8			●	●	●																							
		CNMG 120412 NUX	1,2			●	●	●																							
		CNMG 120416 NUX	1,6			●	●	●																							
		CNMG 160608 NUX	0,8		●	●	○	●																							
		CNMG 160612 NUX	1,2		●	●	●	●											●												
		CNMG 160616 NUX	1,6		●	●	●	●											●												
		CNMG 190608 NUX	0,8					●																							
		CNMG 190612 NUX	1,2			●	○	●																							
		CNMG 190616 NUX	1,6			●	●	●																							
Roughing		CNMG 120408 NMX	0,8		●	●	●																								
		CNMG 120412 NMX	1,2			●	●	●																							
		CNMG 120416 NMX	1,6			●	●	●																							
		CNMG 160608 NMX	0,8		●	●																									
		CNMG 160612 NMX	1,2			●	●	●																							
		CNMG 160616 NMX	1,6		●	●	●																								
		CNMG 190612 NMX	1,2		●	●	●																								
		CNMG 190616 NMX	1,6		●	●	●																								
		Roughing		CNMG 090408 NGZ	0,8											○	○	○													
				CNMG 090412 NGZ	1,2												○	○	○												
CNMG 120404 NGZ	0,4														●	●															
CNMG 120408 NGZ	0,8														●	●	●														
CNMG 120412 NGZ	1,2														●	●	●														
CNMG 120416 NGZ	1,6														●	●	●														
CNMG 160612 NGZ	1,2														●	●															
CNMG 160616 NGZ	1,6														●	●															
CNMG 190612 NGZ	1,2														●	●															
CNMG 190616 NGZ	1,6														●	●															
Roughing		CNMG 120404 NUZ	0,4			○								●	●																
		CNMG 120408 NUZ	0,8			○									●	●	●														
		CNMG 120412 NUZ	1,2			○									●	●	●														
		CNMG 120416 NUZ	1,6			○									●	●	●														
		CNMG 160608 NUZ	0,8			○										●	●	●													
		CNMG 160612 NUZ	1,2			○									●	●	●														
		CNMG 160616 NUZ	1,6			○									●	●	●														
		CNMG 190608 NUZ	0,8			○										●	●	●													
		CNMG 190612 NUZ	1,2			○										●	●	●													
		CNMG 190616 NUZ	1,6			○										●	●	●													

● = Euro stock
○ = Stock item in Japan
▲ = To be replaced by new item

80° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
CN	ℓ	ød (IC)	s	d ₁
1204..	12,9	12,7	4,76	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94
2507..	25,8	25,4	7,94	9,2
2509..	25,8	25,4	9,52	9,2



⇒ D12, D18

⇒ E8

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1
Heavy Roughing	 NMP	CNMM 120408 NMP	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●								
		CNMM 120412 NMP	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
		CNMM 120416 NMP	1,6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○
		CNMM 160608 NMP	0,8		●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 160612 NMP	1,2	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 160616 NMP	1,6	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 160624 NMP	2,4		●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 190608 NMP	0,8		●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 190612 NMP	1,2	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 190616 NMP	1,6	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 190624 NMP	2,4	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CNMM 250724 NMP	2,4		○	○																				
CNMM 250924 NMP	2,4		○	○																				
Heavy Roughing	 NHG	CNMM 120408 NHG	0,8	●	●	●	●					▲	●											
		CNMM 120412 NHG	1,2	●	●	●	●					▲	●											
		CNMM 120416 NHG	1,6				○					▲	●											
		CNMM 160608 NHG	0,8	●								▲	●											
		CNMM 160612 NHG	1,2	●	●	●	●					▲	●											
		CNMM 160616 NHG	1,6	●	●	●	●					▲	●											
		CNMM 160624 NHG	2,4			●							●											
		CNMM 190612 NHG	1,2	●	●	●	●					▲	●											
		CNMM 190616 NHG	1,6	●	●	●	●					▲	●											
		CNMM 190624 NHG	2,4	○	●	●	●						●											
		Heavy Roughing	 NHP	CNMM 120408 NHP	0,8		●	●	●															
CNMM 120412 NHP	1,2				●	●	●																	
CNMM 120416 NHP	1,6						○																	
CNMM 160608 NHP	0,8						○	●																
CNMM 160612 NHP	1,2						○	●																
CNMM 160616 NHP	1,6						●	●																
CNMM 190608 NHP	0,8						○	●																
CNMM 190612 NHP	1,2				●	●	●	●																
CNMM 190616 NHP	1,6				●	●	●	●																
CNMM 190624 NHP	2,4				●	●	●	●																
Heavy Roughing	 NHW			CNMM 190616 NHU	1,6	●								●										
		CNMM 250924 NHU	2,4	●									●											
		CNMM 250924 NHW	2,4										●											
		Heavy Roughing	 NHF	CNMM 190616 NHF	1,6			○																
CNMM 190624 NHF	2,4					○																		
CNMM 250924 NHF	2,4					○																		
CNMM 250932 NHF	3,2					○																		

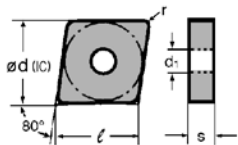
- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	ℓ	ød (IC)	s	d ₁
1204..	12,9	12,7	4,76	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94



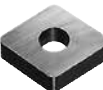
⇒ D12, D18

⇒ E8

P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

CNMA / CNGA / CNMX

● Flat and One Side Handed Inserts

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1
Roughing		CNMA 120404	0,4																									
		CNMA 120408	0,8																									
		CNMA 120412	1,2																									
		CNMA 120416	1,6																									
		CNMA 160612	1,2																									
		CNMA 160616	1,6																									
		CNMA 190612	1,2																									
		CNMA 190616	1,6																									
Medium Cut		CNGA 120402	0,2																									
		CNGA 120404	0,4																									
		CNGA 120408	0,8																									
Heavy Roughing		CNMX 120408 L	0,8			●		▲																				
		CNMX 120408 R	0,8			●		▲																				

CNGG

● G-Class Double Sided Bumpy Chipbreaker

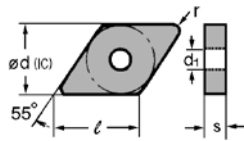
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1	
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NSU	CNGG 120402 NSU CNGG 120404 NSU CNGG 120408 NSU	0,2															○	○	○	○					
			0,4																○	○	○	○				
			0,8																○	○	○	○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NGH	CNGG 120402 NGH CNGG 120404 NGH CNGG 120408 NGH	0,2													○										
			0,4													○										
			0,8													○										

● = Euro stock
○ = Stock item in Japan
▲ = To be replaced by new item

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



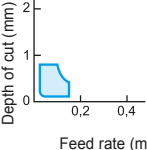
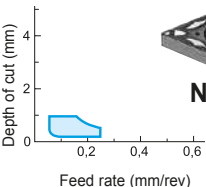
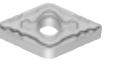
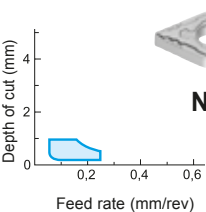
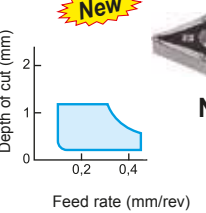
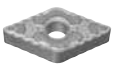
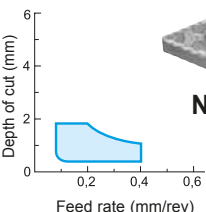
⇒ D13, D19
D41

⇒ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1		
Fine Finishing	New  NFB  Depth of cut (mm) Feed rate (mm/rev)	DNMG 110404 NFB	0,4																○	○		○					
		DNMG 110408 NFB	0,8																○	○		○					
		DNMG 150404 NFB	0,4																○	○	○	○					
		DNMG 150408 NFB	0,8																○	○	○	○					
		DNMG 150604 NFB	0,4															○	○	○	○						
		DNMG 150608 NFB	0,8															○	○	○	○						
Fine Finishing	 NFA  Depth of cut (mm) Feed rate (mm/rev)	DNMG 150404 NFA	0,4																○	○	○	○					
		DNMG 150408 NFA	0,8																○	○	○	○					
		DNMG 150604 NFA	0,4																●		●	●					
		DNMG 150608 NFA	0,8																●		●	●					
Fine Finishing	 NFL  Depth of cut (mm) Feed rate (mm/rev)	DNMG 150404 NFL	0,4		○	○							○						○	○	○	○					
		DNMG 150408 NFL	0,8		○	○								○						○	○	○	○				
		DNMG 150412 NFL	1,2			○															○	○					
		DNMG 150604 NFL	0,4		○														●	●							
		DNMG 150608 NFL	0,8		○													●	●								
Fine Finishing	New  NFE  Depth of cut (mm) Feed rate (mm/rev)	DNMG 110404 NFE	0,4	○		○	○				○	○							○	○		○					
		DNMG 110408 NFE	0,8	○		○	○				○	○	○						○	○	○		○				
		DNMG 110412 NFE	1,2	○		○	○				○	○	○						○	○		○					
		DNMG 150402 NFE	0,2	○		○	○				○	○	○						○	○	○	○					
		DNMG 150404 NFE	0,4	○		○	○				○	○	○						○	○	○	○					
		DNMG 150408 NFE	0,8	○		○	○				○	○	○						○	○	○	○					
		DNMG 150412 NFE	1,2	○		○	○				○	○	○						○	○	○	○					
		DNMG 150602 NFE	0,2	○		○	○				○	○	○						○	○	○	○					
		DNMG 150604 NFE	0,4	○		○	○				○	○	○						○	○	○	○					
		DNMG 150608 NFE	0,8	○		○	○				○	○	○						○	○	○	○					
DNMG 150612 NFE	1,2	○		○	○				○	○	○						○	○	○	○							
Finishing	 NLU  Depth of cut (mm) Feed rate (mm/rev)	DNMG 110404 NLU	0,4	●	●	●												●			○						
		DNMG 110408 NLU	0,8	●	●	○					○								●			○					
		DNMG 150402 NLU	0,2			○													○	○	○	○					
		DNMG 150404 NLU	0,4	○	○														○	○	○	○					
		DNMG 150408 NLU	0,8	○	○	○													○	○	○	○					
		DNMG 150412 NLU	1,2	○	○	○													○	○		○					
		DNMG 150604 NLU	0,4	●	●	●													●								
		DNMG 150608 NLU	0,8	●	●	●													●								
		DNMG 150612 NLU	1,2	●	●	●													●								
																			○	○		○					

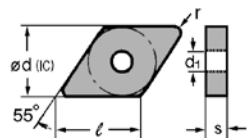
- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇒ D13, D19
D41

⇒ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMG ○○○○■-■

● M-Class Double Sided Bumpy Chipbreaker

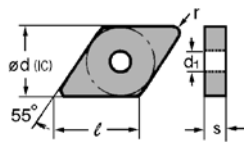
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC</
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- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇒ D13, D19
D41

⇒ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1
Medium Cut	 NGE	DNMG 110408 NGE DNMG 110412 NGE	0,8 1,2																							
		DNMG 150404 NGE DNMG 150408 NGE DNMG 150412 NGE DNMG 150416 NGE	0,4 0,8 1,2 1,6																							
		DNMG 150604 NGE DNMG 150608 NGE DNMG 150612 NGE DNMG 150616 NGE	0,4 0,8 1,2 1,6																							
Medium Cut	 NUG	DNMG 110404 NUG DNMG 110408 NUG	0,4 0,8																							
		DNMG 150408 NUG DNMG 150412 NUG	0,8 1,2																							
		DNMG 150604 NUG DNMG 150608 NUG DNMG 150612 NUG DNMG 150616 NUG	0,4 0,8 1,2 1,6																							
Medium Cut	 NEG	DNMG 110408 NEG DNMG 110412 NEG	0,8 1,2																							
		DNMG 150404 NEG DNMG 150408 NEG DNMG 150412 NEG	0,4 0,8 1,2																							
		DNMG 150604 NEG DNMG 150608 NEG DNMG 150612 NEG	0,4 0,8 1,2																							
Medium Cut	 NEX	DNMG 110404 NEX DNMG 110408 NEX	0,4 0,8																							
		DNMG 150404 NEX DNMG 150408 NEX DNMG 150412 NEX	0,4 0,8 1,2																							
		DNMG 150604 NEX DNMG 150608 NEX DNMG 150612 NEX	0,4 0,8 1,2																							

- = Euro stock
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Neg.
Inserts

C

D

K

R

S

T

V

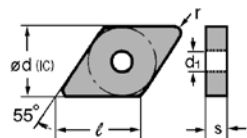
W

D DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇒ D13, D19
D41

⇒ E9

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- K** Cast Iron
- N** Non-Ferrous Metals
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- H** Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

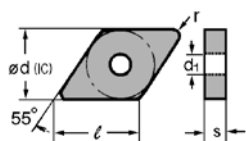
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Medium Cut	 NUP	DNMG 150404 NUP	0,4		○		○		○	○	○	▲	○						○	○							
		DNMG 150408 NUP	0,8		○		○		○	○	○	▲	○						○	○							
		DNMG 150412 NUP	1,2		○		○		○	○	○	▲	○						○	○							
Medium Cut	 L/RUM	DNMG 150604 NUP	0,4	●	●	●	●	●	●	●	▲	●						●	●								
		DNMG 150608 NUP	0,8	●	●	●	●	●	●	▲	●							●	●								
		DNMG 150612 NUP	1,2			●	●					▲	●					●	●								
Medium Cut	 L/RUM	DNMG 150404 LUM	0,4																	○							
		DNMG 150408 LUM	0,8																	○							
		DNMG 150404 RUM	0,4																	○							
Medium Cut	 L/RUM	DNMG 150408 RUM	0,8																○								
Roughing	 NMU	DNMG 150404 NMU	0,4	○								▲	○														
		DNMG 150408 NMU	0,8	○	○	○	○	○										○	○								
		DNMG 150412 NMU	1,2	○	○	○	○	○										○	○								
Roughing	 NMU	DNMG 150416 NMU	1,6															○	○								
		DNMG 150608 NMU	0,8	●	●	●	●	●	●	●	▲																
		DNMG 150612 NMU	1,2	●	●	●	●	●	●	●	▲																
Roughing	 NEM	DNMG 150408 NEM	0,8				○			○	○	○															
		DNMG 150412 NEM	1,2				○			○	○	○															
		DNMG 150416 NEM	1,6				○			○	○	○															
Roughing	 NEM	DNMG 150608 NEM	0,8			●			●	●	●																
		DNMG 150612 NEM	1,2			●			●	●	●																
		DNMG 150616 NEM	1,6			●			●	●	●																
Roughing	 NME	DNMG 150408 NME	0,8				○																				
		DNMG 150412 NME	1,2				○																				
		DNMG 150416 NME	1,6				○																				
Roughing	 NME	DNMG 150608 NME	0,8	●	●	●	●	●																			
		DNMG 150612 NME	1,2	●	●	●	●	●																			
		DNMG 150616 NME	1,6	●	●	●	●	●																			

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- = Stock item in Japan
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55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇒ D13, D19
D41

⇒ E9

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DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H
Roughing	 L/RHM	DNMG 150404 LHM DNMG 150408 LHM	0,4 0,8				○																						
		DNMG 150404 RHM DNMG 150408 RHM	0,4 0,8				○																						
Roughing	 NUX	DNMG 110408 NUX	0,8				○	○																					
		DNMG 150404 NUX DNMG 150408 NUX DNMG 150412 NUX	0,4 0,8 1,2	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○																						
		DNMG 150604 NUX DNMG 150608 NUX DNMG 150612 NUX DNMG 150616 NUX	0,4 0,8 1,2 1,6	○ ○ ○ ○	● ● ● ●	● ● ● ●	● ● ● ●																						
Roughing	 NMX	DNMG 150408 NMX DNMG 150412 NMX	0,8 1,2			○ ○	○ ○	○ ○																					
		DNMG 150608 NMX DNMG 150612 NMX	0,8 1,2			● ●	● ●																						
Roughing	 NGZ	DNMG 110408 NGZ DNMG 110412 NGZ	0,8 1,2												● ●	● ●	● ●												
		DNMG 150604 NGZ DNMG 150608 NGZ DNMG 150612 NGZ	0,4 0,8 1,2												● ● ●	● ● ●	● ● ●												
Roughing	 NUZ	DNMG 150404 NUZ DNMG 150408 NUZ DNMG 150412 NUZ	0,4 0,8 1,2				○ ○ ○																						
		DNMG 150608 NUZ DNMG 150612 NUZ	0,8 1,2				○ ○								● ●	● ●	● ●												

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

W

DIAMOND TYPE

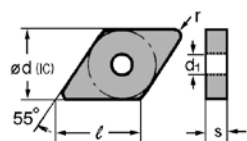
INSERTS FOR TURNING

Negative Inserts

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d1
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



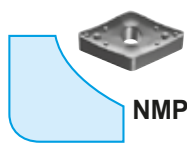
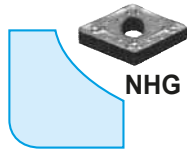
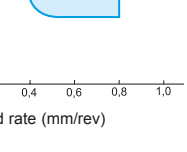
⇒ D13, D19

⇒ E9

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- S** Super Alloy
- H** Hardened Steel

DNMM ○○○○○○ ■-■

● M-Class One Sided Bumpy Chipbreaker

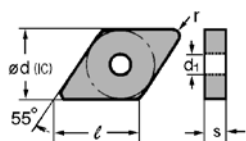
Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Heavy Roughing		DNMM 150404 NMP DNMM 150408 NMP DNMM 150412 NMP DNMM 150416 NMP	0,4			○	○	○	○																			
			0,8		○	○	○	○																				
			1,2		○	○	○	○																				
			1,6				○																					
Heavy Roughing		DNMM 150604 NMP DNMM 150608 NMP DNMM 150612 NMP DNMM 150616 NMP	0,4			●	●	●	●																			
			0,8		●	●	●	●					▲	●														
			1,2		●	●	●	●					▲	●														
			1,6		●	●	●	●					▲	●														
Heavy Roughing		DNMM 150404 NHP DNMM 150408 NHP DNMM 150412 NHP DNMM 150416 NHP	0,4				○	○																				
			0,8				○	○																				
			1,2				○	○																				
			1,6				○																					
Heavy Roughing		DNMM 150604 NHP DNMM 150608 NHP DNMM 150612 NHP DNMM 150616 NHP	0,4				○																					
			0,8			●	●	●																				
			1,2			●	○	●																				
			1,6				○																					

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇒ D13, D19

⇒ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMA / DNMX

Flat Inserts and One Side Handed Inserts

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
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DIAMOND TYPE

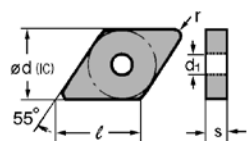
INSERTS FOR TURNING

Negative Inserts

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	l	ød (IC)	s	d ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16



⇒ D13, D19

⇒ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNGA

● G-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T3	T1	T15	G1	EH	EH	H1
Medium Cut		DNGA 150402 DNGA 150404 DNGA 150408	0,2																									
			0,4																									
			0,8																									

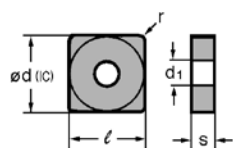
DNGG

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T35	T15	T15	G1	EH	EH	H1		
Finishing	 NSU	DNGG 150402 NSU DNGG 150404 NSU DNGG 150408 NSU	0,2																		○	○	○						
			0,4																			○	○	○					
			0,8																			○	○	○					
Medium Cut	 L/RUM	DNGG 110404 LUM DNGG 110408 LUM	0,4																		○		○	○					
			0,8																			○		○	○				
		DNGG 150404 LUM DNGG 150408 LUM	0,4																			○		○	○				
			0,8																				○		○	○			
		DNGG 110404 RUM DNGG 110408 RUM	0,4																				○		○	○			
			0,8																					○		○	○		
Finishing	 NGH	DNGG 150402 NGH DNGG 150404 NGH DNGG 150408 NGH	0,2																										
			0,4																										
			0,8																										

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

90° Square Type 0° Relief With Insert Hole



Dimensions (mm)				
SN	ℓ	∅d (IC)	s	d ₁
1204..	12,7	12,7	4,76	5,16



⇒ D14, D20~21
D41



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1	
Fine Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFB	SNMG 120404 NFB SNMG 120408 NFB	0,4 0,8															○	○	○	○					
																			○	○	○	○				
Fine Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFL	SNMG 120408 NFL	0,8				○											○	○		○					
Fine Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFE	SNMG 120404 NFE SNMG 120408 NFE SNMG 120412 NFE	0,4 0,8 1,2		○		○	○		○	○								○	○	○	○				
					○		○	○		○	○									○	○	○	○			
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NLU	SNMG 120408 NLU SNMG 120412 NLU	0,8 1,2		○	●	○		○			○							○	○		○				
					○	●	●		○											○	○		○			
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NSU	SNMG 120408 NSU SNMG 120412 NSU	0,8 1,2		●	●	○	●	●	●		○					●	●	○	○	○	○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NSE	SNMG 120408 NSE SNMG 120412 NSE	0,8 1,2		●	●	○	○																		
					●	●	○	○																		

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

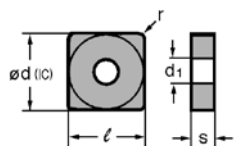
W

S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	l	∅d (IC)	s	d1
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,76	5,16
1506..	15,875	15,875	6,35	6,35



⇒ D14, D20~21
D41

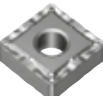
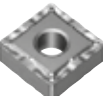


⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

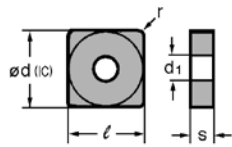
SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application		Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Finishing	Depth of cut (mm)	 NEF	SNMG 120404 NEF SNMG 120408 NEF	0,4				○		●																				
				0,8				○		●																				
Finishing	Depth of cut (mm)	 NSJ	SNMG 090304 NSJ SNMG 120404 NSJ	0,4																										
				0,4																								○		
Finishing	Depth of cut (mm)	 NSX	SNMG 120404 NSX SNMG 120408 NSX SNMG 120412 NSX	0,4				○																○	○					
				0,8				○																	○	○				
Finishing	Depth of cut (mm)	 NSX	SNMG 120404 NSX SNMG 120408 NSX SNMG 120412 NSX	1,2				○																○	○					
				1,2				○																	○	○				
Medium Cut	Depth of cut (mm)	 NGU	SNMG 090304 NGU SNMG 090308 NGU SNMG 120404 NGU SNMG 120408 NGU SNMG 120412 NGU SNMG 120416 NGU SNMG 150608 NGU SNMG 150612 NGU SNMG 150616 NGU	0,4			○	●																○		○				
				0,8			○	●	○																	○		○		
Medium Cut	Depth of cut (mm)	 NGU	SNMG 090304 NGU SNMG 090308 NGU SNMG 120404 NGU SNMG 120408 NGU SNMG 120412 NGU SNMG 120416 NGU SNMG 150608 NGU SNMG 150612 NGU SNMG 150616 NGU	0,4	●	●	●	●		○	●	●	▲	○									○		○		○			
				0,8	●	●	●	●		○	●	●	▲	○											○		○		○	
Medium Cut	Depth of cut (mm)	 NGU	SNMG 090304 NGU SNMG 090308 NGU SNMG 120404 NGU SNMG 120408 NGU SNMG 120412 NGU SNMG 120416 NGU SNMG 150608 NGU SNMG 150612 NGU SNMG 150616 NGU	1,2	●	●	●	●		○	●	●	▲	○									○		○		○			
				1,6	●	●	●	●		○	●	●	▲	○											○		○		○	
Medium Cut	Depth of cut (mm)	 NGE	SNMG 120408 NGE SNMG 120412 NGE SNMG 120416 NGE SNMG 150608 NGE SNMG 150612 NGE SNMG 150616 NGE	0,8			●	●	●																					
				1,2			●	●	●																					
Medium Cut	Depth of cut (mm)	 NGE	SNMG 120408 NGE SNMG 120412 NGE SNMG 120416 NGE SNMG 150608 NGE SNMG 150612 NGE SNMG 150616 NGE	1,6			●	●	●																					
				1,6			●	●	●																					
Medium Cut	Depth of cut (mm)	 NGE	SNMG 120408 NGE SNMG 120412 NGE SNMG 120416 NGE SNMG 150608 NGE SNMG 150612 NGE SNMG 150616 NGE	0,8				○																						
				1,2				○																						
Medium Cut	Depth of cut (mm)	 NGE	SNMG 120408 NGE SNMG 120412 NGE SNMG 120416 NGE SNMG 150608 NGE SNMG 150612 NGE SNMG 150616 NGE	1,6				○																						
				1,6				○																						

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

90° Square Type 0° Relief With Insert Hole



Dimensions (mm)				
SN	l	∅d (IC)	s	d ₁
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,76	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94



⇒ D14, D20~21
D41



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	G1	EH	EH	H1
Medium Cut	 NUG	SNMG 090308 NUG	0,8				○																			
		SNMG 120408 NUG	0,8				○																			
		SNMG 120412 NUG	1,2				○																			
Medium Cut	 L/RUM	SNMG 120404 LUM	0,4																							
		SNMG 120408 LUM	0,8																				○			
		SNMG 120412 LUM	1,2																				○			
Medium Cut		SNMG 120404 RUM	0,4																							
		SNMG 120408 RUM	0,8																					○		
		SNMG 120412 RUM	1,2																					○		
Medium Cut	 NEG	SNMG 120404 NEG	0,4			●		○																		
		SNMG 120408 NEG	0,8			●		○		○																
		SNMG 120412 NEG	1,2			●		○		○																
Medium Cut		SNMG 150608 NEG	0,8			○		○		○																
		SNMG 150612 NEG	1,2			○		○		○																
		SNMG 150616 NEG	1,6			○		○		○																
Medium Cut		SNMG 190612 NEG	1,2			○		○		○																
		SNMG 190616 NEG	1,6			○		○		○																
Medium Cut	 NEX	SNMG 120404 NEX	0,4																							
		SNMG 120408 NEX	0,8																							
		SNMG 120412 NEX	1,2																							
Medium Cut		SNMG 150608 NEX	0,8																							
		SNMG 150612 NEX	1,2																							
		SNMG 190612 NEX	1,2																							
Medium Cut	 NUP	SNMG 120404 NUP	0,4			●	●	●																		
		SNMG 120408 NUP	0,8			●	●	●																		
		SNMG 120412 NUP	1,2			●	●	●																		

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

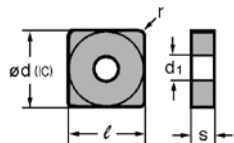
W

S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



SN	l	ød (IC)	s	d1
1204..	12,7	12,7	4,46	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94
2509..	25,4	25,4	9,52	9,2



⇒ D14, D20~21
D41



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SNMG

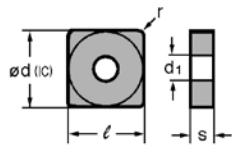
● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Roughing	 Depth of cut (mm) Feed rate (mm/rev) NUX	SNMG 120408 NUX	0,8	●	●	●	●																						
		SNMG 120412 NUX	1,2	●	●	●	●																						
		SNMG 120416 NUX	1,6	●	●	○	●																						
		SNMG 190612 NUX	1,2	○	●	○	●																						
		SNMG 190616 NUX	1,6	○	●	○	●																						
Roughing	 Depth of cut (mm) Feed rate (mm/rev) NMU	SNMG 120408 NMU	0,8	●	●	●	●	●	●	▲	●									●	●								
		SNMG 120412 NMU	1,2	●	●	●	●	●	●	▲	●									●	●								
		SNMG 120416 NMU	1,6	●	●	●	●	●	▲	●										●	●								
		SNMG 150608 NMU	0,8			○																							
		SNMG 150612 NMU	1,2	○	●	○	●	●	●	▲	●									●	●								
		SNMG 150616 NMU	1,6	○	●	●	●	●	▲	●										●	●								
		SNMG 190612 NMU	1,2	●	●	●	●	●	●	▲	●									●	●								
		SNMG 190616 NMU	1,6	●	●	●	●	●	▲	●										●	●								
		SNMG 190624 NMU	2,4			○																							
		SNMG 250924 NMU	2,4			○																							
Roughing	 Depth of cut (mm) Feed rate (mm/rev) NEM	SNMG 120408 NEM	0,8			●		●	●	●																			
		SNMG 120412 NEM	1,2			●		●	●	●																			
		SNMG 120416 NEM	1,6			●			●	●	●																		
		SNMG 150608 NEM	0,8			○		○		●	●	●																	
		SNMG 150612 NEM	1,2			●		●	●	●	●	●																	
		SNMG 150616 NEM	1,6			●		●	●	●	●	●																	
		SNMG 190612 NEM	1,2			●		●	●	●	●	●																	
		SNMG 190616 NEM	1,6			●		●	●	●	●	●																	
SNMG 190624 NEM	2,4			○		○																							
Roughing	 Depth of cut (mm) Feed rate (mm/rev) NME	SNMG 120408 NME	0,8	●	●	●	●																						
		SNMG 120412 NME	1,2	●	●	○	●																						
		SNMG 120416 NME	1,6			○																							
		SNMG 150608 NME	0,8			○																							
		SNMG 150612 NME	1,2			●																							
		SNMG 150616 NME	1,6			○																							
		SNMG 190612 NME	1,2			○																							
		SNMG 190616 NME	1,6	●	●	●	●																						
SNMG 190624 NME	2,4			○																									
SNMG 250924 NME	2,4			○																									

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

90° Square Type

0° Relief
With Insert Hole



Dimensions (mm)				
SN	l	ød (IC)	s	d1
1204..	12,7	12,7	4,46	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94



⇒ D14, D20~21
D41



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1
Roughing	 L/RHM	SNMG 120408 LHM	0,8				○		●																				
		SNMG 120408 RHM	0,8				○		●																				
Roughing	 NMX	SNMG 120408 NMX	0,8		●	○	●																						
		SNMG 120412 NMX	1,2		●	○	●																						
		SNMG 120416 NMX	1,6		●	○	●																						
		SNMG 150612 NMX	1,2		●	○	●																						
		SNMG 150616 NMX	1,6		●	○	●																						
		SNMG 190612 NMX	1,2		●	○	●																						
		SNMG 190616 NMX	1,6		●	○	●																						
Roughing	 NGZ	SNMG 120408 NGZ	0,8											●	●	●													
		SNMG 120412 NGZ	1,2												●	●	●												
		SNMG 120416 NGZ	1,6												●	●	●												
		SNMG 150612 NGZ	1,2												●	●	●												
		SNMG 150616 NGZ	1,6											●	●	●													
		SNMG 190612 NGZ	1,2												●	●	●												
		SNMG 190616 NGZ	1,6												●	●	●												
Roughing	 NUZ	SNMG 120408 NUZ	0,8			○								●	●	●													
		SNMG 120412 NUZ	1,2			○									●	●	●												
		SNMG 120416 NUZ	1,6			○									●	●	●												
		SNMG 150612 NUZ	1,2			○										●	●	●											
		SNMG 150616 NUZ	1,6			○									●	●	●												
		SNMG 190612 NUZ	1,2			○									●	●	●												
		SNMG 190616 NUZ	1,6			○									●	●	●												

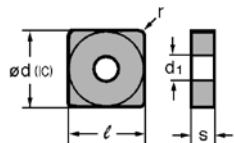
- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	l	ød (IC)	s	d1
1204..	12,7	12,7	4,46	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94
2507..	25,4	25,4	7,94	9,2
2509..	25,4	25,4	9,52	9,2
3109..	31,75	31,75	9,52	8,8



⇒ D14, D20~21



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

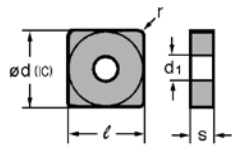
SNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC</
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90° Square Type

0° Relief
With Insert Hole



Dimensions (mm)				
SN	l	Ød (IC)	s	d1
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,76	5,16
1906..	19,05	19,05	6,35	7,94



⇒ D14, D20-21
D25



⇒ E10

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SN_A

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC</
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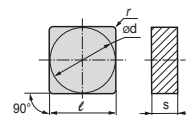
SNGG

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1	
Light Cutting	 L/RST	SNGG 090304 LST SNGG 090308 LST	0,4																	○	○					
			0,8																	○	○					
		0,4																		○	○					
		0,8																		○	○					
Medium Cut	 L/RUM	SNGG 120404 LUM SNGG 120408 LUM	0,4																	●	●					
			0,8																		●	●				
		0,4																			●	●				
		0,8																			●	●				
		SNGG 120404 RUM SNGG 120408 RUM SNGG 120412 RUM	0,4																	●	●					
			0,8																	●	●					
			1,2																	●	●					

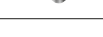
90° Square Type

0° Relief
Without Insert Hole



SN_N

● G/M-Class No Chipbreaker

Application		Shape	ISO Cat. No.		AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Medium Cut		SNGN 120408	0,8																		○		○	○				
Medium Cut		SNMN 120408	0,8																		○		○	○				

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

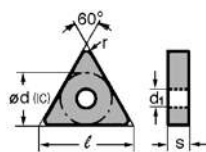
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1604..	16,5	9,525	4,76	3,81



⇒ D15, D22~23
D42

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

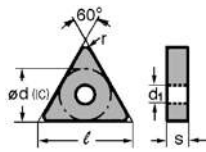
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H
Fine Finishing	 New NFB Depth of cut (mm) Feed rate (mm/rev)	TNMG 160402 NFB TNMG 160404 NFB TNMG 160408 NFB	0,2 0,4 0,8																										
Fine Finishing	 NFA Depth of cut (mm) Feed rate (mm/rev)	TNMG 160402 NFA TNMG 160404 NFA TNMG 160408 NFA	0,2 0,4 0,8																										
Fine Finishing	 NFL Depth of cut (mm) Feed rate (mm/rev)	TNMG 160404 NFL TNMG 160408 NFL	0,4 0,8																										
Fine Finishing	 New NFE Depth of cut (mm) Feed rate (mm/rev)	TNMG 160402 NFE TNMG 160404 NFE TNMG 160408 NFE TNMG 160412 NFE	0,2 0,4 0,8 1,2																										
Finishing	 NLU Depth of cut (mm) Feed rate (mm/rev)	TNMG 160402 NLU TNMG 160404 NLU TNMG 160408 NLU TNMG 160412 NLU	0,2 0,4 0,8 1,2																										
Finishing	 NEF Depth of cut (mm) Feed rate (mm/rev)	TNMG 160404 NEF TNMG 160408 NEF	0,4 0,8																										
Finishing	 NSU Depth of cut (mm) Feed rate (mm/rev)	TNMG 160402 NSU TNMG 160404 NSU TNMG 160408 NSU TNMG 160412 NSU	0,2 0,4 0,8 1,2																										

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



⇒ D15, D22~23
D42

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1	T3	T1	T1	G1	EH	EH	H1
Finishing	 NSE	TNMG 160404 NSE TNMG 160408 NSE TNMG 160412 NSE	0,4 0,8 1,2	● ● ●	● ● ●	● ● ●	○ ● ○	○ ○ ○												○ ○ ○	○ ○ ○	○ ○ ○					
		TNMG 220404 NSE TNMG 220408 NSE TNMG 220412 NSE	0,4 0,8 1,2	● ● ●	● ● ○	○ ○ ○																					
Finishing	 NSX	TNMG 160404 NSX TNMG 160408 NSX	0,4 0,8			○ ●														○ ○	○ ○	○ ○					
		TNMG 220404 NSX TNMG 220408 NSX TNMG 220412 NSX	0,4 0,8 1,2			○ ○ ○																					
Medium Cut	 NGU	TNMG 160404 NGU TNMG 160408 NGU TNMG 160412 NGU TNMG 160416 NGU	0,4 0,8 1,2 1,6	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●						○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○						
		TNMG 220404 NGU TNMG 220408 NGU TNMG 220412 NGU	0,4 0,8 1,2	● ● ●	○ ○ ○	○ ○ ○					● ● ●								○ ○ ○								
Medium Cut	 NGE	TNMG 160404 NGE TNMG 160408 NGE TNMG 160412 NGE	0,4 0,8 1,2	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●																			
		TNMG 220408 NGE TNMG 220412 NGE	0,8 1,2	● ●	● ○	● ○																					

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

T TRIANGLE TYPE

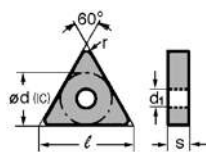
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



⇒ D15, D22~23
D42

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

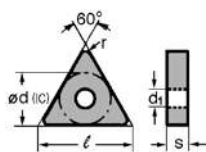
Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1
Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NUG	TNMG 160404 NUG TNMG 160408 NUG TNMG 160412 NUG TNMG 160416 NUG TNMG 220408 NUG TNMG 220412 NUG	0,4 0,8 1,2 1,6 0,8 1,2				○	●																		
Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) L/RUM	TNMG 160404 LUM TNMG 160408 LUM TNMG 220404 LUM TNMG 220408 LUM	0,4 0,8 0,4 0,8															○	○	○	○					
		TNMG 160404 RUM TNMG 160408 RUM TNMG 220404 RUM TNMG 220408 RUM	0,4 0,8 0,4 0,8																○	○	○	○				
Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NEG	TNMG 160404 NEG TNMG 160408 NEG TNMG 160412 NEG	0,4 0,8 1,2			●	●	○	●	●	●	●	●			●	●						●	●		
Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NEX	TNMG 160404 NEX TNMG 160408 NEX TNMG 160412 NEX	0,4 0,8 1,2					●	●	●	▲	●	●			●	●									
Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NUP	TNMG 160404 NUP TNMG 160408 NUP TNMG 160412 NUP TNMG 220408 NUP TNMG 220412 NUP	0,4 0,8 1,2 0,8 1,2		●	●	●	●	●	●	●	●	●			●	●									
						○	●	○																		

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16
2706..	27,5	15,875	6,35	6,35
3309..	33,0	19,05	9,52	7,93



⇒ D15, D22~23
D42

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T3	T1	T1	G1	EH	EH	H1
Roughing	 NUX	TNMG 160404 NUX TNMG 160408 NUX TNMG 160412 NUX	0,4 0,8 1,2	○	●	●	●	●																				
		TNMG 220408 NUX TNMG 220412 NUX	0,8 1,2	○	●	○	○	○																				
Roughing	 NMU	TNMG 160408 NMU TNMG 160412 NMU	0,8 1,2	●	●	●	●	●	●	▲	●																	
		TNMG 220408 NMU TNMG 220412 NMU TNMG 220416 NMU	0,8 1,2 1,6	○	●	●	●	●	●	▲	●																	
		TNMG 270612 NMU TNMG 270616 NMU	1,2 1,6	○	○	○																						
Roughing	 NEM	TNMG 160408 NEM TNMG 160412 NEM	0,8 1,2			●		●	●	●	●																	
		TNMG 330924 NEM	2,4			○																						
Roughing	 NME	TNMG 160408 NME TNMG 160412 NME	0,8 1,2	●	●	●	●	●	●																			
		TNMG 220408 NME TNMG 220412 NME TNMG 220416 NME	0,8 1,2 1,6			○		○	○																			
Roughing	 NMX	TNMG 160408 NMX TNMG 160412 NMX	0,8 1,2		●	○	●																					
		TNMG 220408 NMX TNMG 220412 NMX	0,8 1,2		○	○	○																					

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

T TRIANGLE TYPE

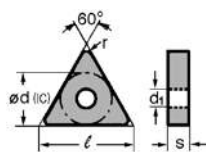
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d ₁
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16
2706..	27,5	15,875	6,35	6,35



⇒ D15, D22~23
D42

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

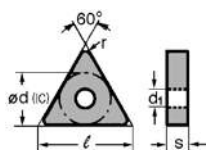
Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1	
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 NGZ	TNMG 160404 NGZ	0,4																										
			TNMG 160408 NGZ	0,8																										
			TNMG 160412 NGZ	1,2																										
			TNMG 220408 NGZ	0,8																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 L/RHM	TNMG 220412 NGZ	1,2																										
			TNMG 220416 NGZ	1,6																										
			TNMG 160404 LHM	0,4																										
			TNMG 160408 LHM	0,8																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 L/RHM	TNMG 220404 LHM	0,4																										
			TNMG 220408 LHM	0,8																										
			TNMG 160404 RHM	0,4																										
			TNMG 160408 RHM	0,8																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 L/RHM	TNMG 220404 RHM	0,4																										
			TNMG 220408 RHM	0,8																										
			TNMG 160404 NUZ	0,4																										
			TNMG 160408 NUZ	0,8																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 NUZ	TNMG 160412 NUZ	1,2																										
			TNMG 160416 NUZ	1,6																										
			TNMG 160420 NUZ	2,0																										
			TNMG 220408 NUZ	0,8																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 NUZ	TNMG 220412 NUZ	1,2																										
			TNMG 220416 NUZ	1,6																										
			TNMG 270608 NUZ	0,8																										
			TNMG 270612 NUZ	1,2																										
Roughing	 Depth of cut (mm) Feed rate (mm/rev)	 NUZ	TNMG 270616 NUZ	1,6																										

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

60° Triangle Type

0° Relief

With Insert Hole



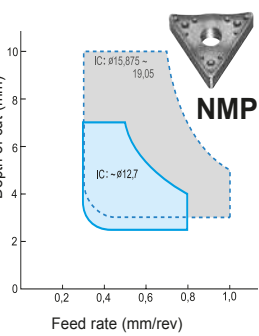
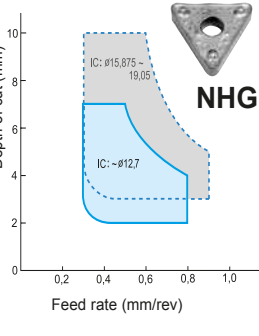
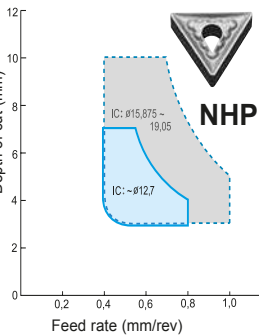
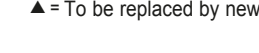
Dimensions (mm)				
TN	ℓ	∅d (IC)	s	d ₁
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16
2706..	27,5	15,875	6,35	6,35



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Heavy Roughing	 NMP	TNMM 160404 NMP	0,4																										
		TNMM 160408 NMP	0,8	●	●																								
		TNMM 160412 NMP	1,2	○	●	●	●																						
		TNMM 160416 NMP	1,6		●																								
Heavy Roughing	 NHG	TNMM 220408 NMP	0,8	○	●	●	●																						
		TNMM 220412 NMP	1,2	○	●	●	●																						
		TNMM 220416 NMP	1,6	○	●	●	●																						
		TNMM 270612 NMP	1,2				○																						
Heavy Roughing	 NHP	TNMM 270616 NMP	1,6				○																						
		TNMM 160408 NHG	0,8	●																									
		TNMM 160412 NHG	1,2	●																									
		TNMM 160416 NHG	1,6	●																									
Heavy Roughing	 NHP	TNMM 220408 NHG	0,8	○	●	○	●																						
		TNMM 220412 NHG	1,2	○	●	○	●																						
		TNMM 220416 NHG	1,6	○	●	○	●																						
		TNMM 270612 NHP	1,2				○																						
Heavy Roughing	 NHP	TNMM 270616 NHP	1,6				○																						
		TNMM 160408 NHP	0,8	○	●	○	●																						
		TNMM 160412 NHP	1,2	○	●	○	●																						
		TNMM 160416 NHP	1,6	○	●	○	●																						

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

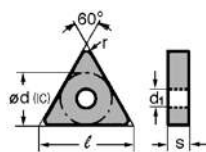
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



⇒ D15, D22~23

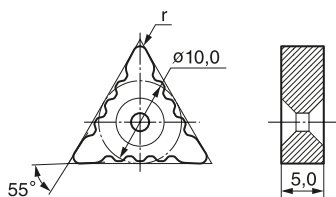
⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMA

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Roughing		TNMA 160404	0,4																										
		TNMA 160408	0,8																										
		TNMA 160412	1,2																										
		TNMA 160416	1,6																										
		TNMA 220408	0,8																										
		TNMA 220412	1,2																										
		TNMA 220416	1,6																										

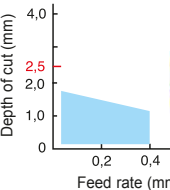
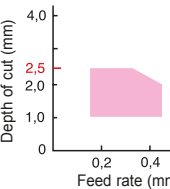


⇒ D11

⇒ E11

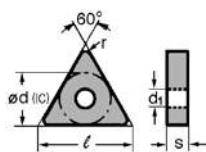
TRM

● M-Class Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Fine Finishing	 -FL	TRM 551704 -FL TRM 551708 -FL	0,4				○																						
			0,8				○																						
Finishing	 -LU  -SU 	TRM 551704 -LU TRM 551708 -LU TRM 551712 -LU	0,4	●	●	○																○							
		0,8	●	●	○																	○							
		1,2	●	●	○																	○							
Light Cut	 -GU 	TRM 551704 -GU TRM 551708 -GU TRM 551712 -GU	0,4	●	●	○	●					●																	
		0,8	●	●	○	●						●																	
		1,2	●	●	○	●						○																	

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

With Insert Hole



Dimensions (mm)				
TN	ℓ	$\varnothing d$ (IC)	s	d_1
1103..	11,0	6,35	3,18	2,26
1603..	16,5	9,525	3,18	3,81
1604..	16,5	9,525	4,76	3,81



⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNGG ○○○○○○ ■-■■

[illegible]

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

T TRIANGLE TYPE

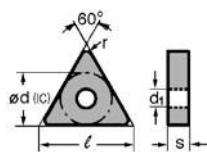
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)				
TN	l	ød (IC)	s	d1
1103..	11,0	6,35	3,18	2,26
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



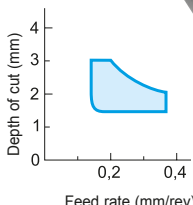
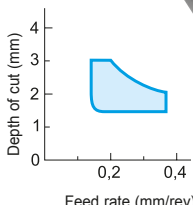
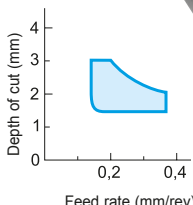
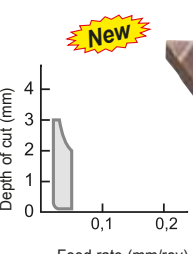
⇒ D15, D22~23

⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNGG

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G11	EH	EH	H1	
Medium Cut	 L/RUM 	TNGG 160402 LUM	0,2																		○	○	●	●					
		TNGG 160404 LUM	0,4																			○	○	●	●				
		TNGG 160408 LUM	0,8																			○	○	●	●				
		TNGG 160412 LUM	1,2																			○	○						
Medium Cut		TNGG 220404 LUM	0,4																				○	○					
		TNGG 220408 LUM	0,8																				○	○					
		TNGG 160402 RUM	0,2																			○	○	●	●				
		TNGG 160404 RUM	0,4																			○	○	●	●				
Medium Cut		TNGG 160408 RUM	0,8																		○	○	●	●					
		TNGG 160412 RUM	1,2																				○	○					
		TNGG 220404 RUM	0,4																					○	○				
		TNGG 220408 RUM	0,8																					○	○				
Finishing	 NGH 	TNGG 160402 NGH	0,2																		○	○							
		TNGG 160404 NGH	0,4																			○	○						
		TNGG 160408 NGH	0,8																			○	○						

TNGA

● G-Class No Chipbreaker

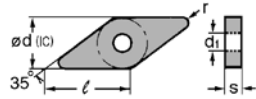
Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Medium Cut		TNGA 110308 TNGA 160402 TNGA 160404 TNGA 160408	0,8																										
			0,2																					○					
			0,4																					○					
			0,8																					○					

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

35° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
VN	l	ød (IC)	s	d1
1604..	16,6	9,525	4,76	3,81



⇒ D16

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VNMA

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r
Roughing		VNMA 160404 VNMA 160408 VNMA 160412	0,4 0,8 1,2

Carbide												Cermet		Carbide																
Coated								ZX-Coated				Uncoated																		
P				M		P M		K				H		K S		M S		P M				P		K		S		N		
AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1					
										●	●	●																		

VNMG

● G/M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r
Fine Finishing	 NFB	VNMG 160404 NFB VNMG 160408 NFB	0,4 0,8
Fine Finishing	 NFA	VNMG 160404 NFA VNMG 160408 NFA	0,4 0,8
Fine Finishing	 NFL	VNMG 160404 NFL VNMG 160408 NFL	0,4 0,8
Fine Finishing	 NFE	VNMG 160402 NFE VNMG 160404 NFE VNMG 160408 NFE VNMG 160412 NFE	0,2 0,4 0,8 1,2
Finishing	 NLU	VNMG 160402 NLU VNMG 160404 NLU VNMG 160408 NLU	0,2 0,4 0,8
Medium Cut	 NEF	VNMG 160402 NEF VNMG 160404 NEF VNMG 160408 NEF	0,2 0,4 0,8

Carbide												Cermet		Carbide											
Coated						ZX-Coated				Uncoated															
	P			M	P _M	K		H	K _S	N _S	P _M		P		K	S	N								
AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
							○ ○											○ ○	○ ○	○ ○	○ ○				
																		○ ○	○ ○	○ ○	○ ○				
		○ ○	○ ○	● ○														● ●	● ●	● ●	● ●				
	○ ○	○ ○	○ ○	○ ○		○ ○	○ ○											○ ○	○ ○	○ ○	○ ○				
	● ●	● ●	● ●			○ ○	○ ○		○ ○									● ●	● ●	● ●	● ●				
					● ●	● ●	● ●		● ●					● ●	● ●								● ●	● ●	
			○																						
			● ●											● ●	● ●								● ●	● ●	

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

W

DIAMOND TYPE

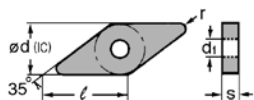
INSERTS FOR TURNING

Negative Inserts

35° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
VN	l	ød (IC)	s	d1
1604..	16,6	9,525	4,76	3,81



⇒ D16

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

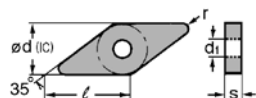
VNMG

● M-Class Double Sided Bumpy Chipbreaker

Application		Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Finishing	 NSU	VNMG 160402 NSU VNMG 160404 NSU VNMG 160408 NSU VNGG 160402 NSU VNGG 160404 NSU VNGG 160408 NSU	0,2							●	●		○						○	○			○	○	○	○					
			0,4	●	●	●	○	●	●	●	●									○	○			○	○	○	○				
			0,8	●	●	●	○	●	●	●	●	▲	●							○	○			○	○	○	○				
			0,2																					○	○	○	○				
Medium Cut	 NSE	VNMG 160404 NSE VNMG 160408 NSE	0,4	●	●	○	○																○		○	○					
			0,8	●	●	●	○																○		○	○					
Medium Cut	 NSX	VNMG 160404 NSX VNMG 160408 NSX	0,4			○																	○		○						
			0,8			○																	○		○						
Medium Cut	 NGU	VNMG 160404 NGU VNMG 160408 NGU VNMG 160412 NGU	0,4	●	●	●	○		●	●	●	▲	●						○	○			○		○						
			0,8	●	●	●	○		●	●	●	▲	●							○	○			○		○					
			1,2		●	●					●		●							○	○				○						
Medium Cut	 NGE	VNMG 160404 NGE VNMG 160408 NGE VNMG 160412 NGE	0,4		●	○																									
			0,8	●	●	●																									
			1,2			○																									
Medium Cut	 NUG	VNMG 160404 NUG VNMG 160408 NUG	0,4			○																									
			0,8			○																									
Medium Cut	 NEG	VNMG 160404 NEG VNMG 160408 NEG VNMG 160412 NEG	0,4		●					●																					
			0,8		●					●																					
			1,2		●					●																					

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

35° Diamond Type **0° Relief**
With Insert Hole



Dimensions (mm)				
VN	l	ød (IC)	s	d ₁
1604..	16,6	9,525	4,76	3,81



⇒ D16

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H	
Medium Cut	 NEX	VNMG 160404 NEX VNMG 160408 NEX	0,4 0,8						●	●	●		○					●	●							
Medium Cut	 NUP	VNMG 160404 NUP VNMG 160408 NUP	0,4 0,8		●	●	●	●	●	●			●	●				●	●							
Medium Cut	 NUX	VNMG 160404 NUX VNMG 160408 NUX VNMG 160412 NUX	0,4 0,8 1,2	○	●	○	●																			
Medium Cut	 NGZ	VNMG 160404 NGZ VNMG 160408 NGZ VNMG 160412 NGZ	0,4 0,8 1,2										●	●	●	●										
Medium Cut	 NUZ	VNMG 160404 NUZ VNMG 160408 NUZ VNMG 160412 NUZ	0,4 0,8 1,2			○							●	●	●	●										

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

Neg.
Inserts

C

D

K

R

S

T

V

W

W TRIGON TYPE

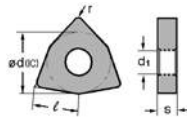
INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)				
WN	l	ød (IC)	s	d ₁
0604..	6,5	9,525	4,76	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

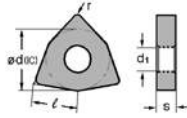
WNMG ○○○○○○ ■■■

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	H1
Fine Finishing	New NFB	WNMG 060404 NFB	0,4																								
		WNMG 060408 NFB	0,8																								
		WNMG 080402 NFB	0,2																								
		WNMG 080404 NFB	0,4																								
WNMG 080408 NFB	0,8																										
Fine Finishing	NFA	WNMG 080402 NFA	0,2																								
		WNMG 080404 NFA	0,4																								
		WNMG 080408 NFA	0,8																								
Fine Finishing	NFL	WNMG 080404 NFL	0,4																								
		WNMG 080408 NFL	0,8																								
Fine Finishing	New NFE	WNMG 060404 NFE	0,4																								
		WNMG 060408 NFE	0,8																								
		WNMG 080402 NFE	0,2																								
		WNMG 080404 NFE	0,4																								
		WNMG 080408 NFE	0,8																								
WNMG 080412 NFE	1,2																										
Finishing	"Standard" NLU	WNMG 060404 NLU	0,4																								
		WNMG 060408 NLU	0,8																								
		WNMG 060412 NLU	1,2																								
		WNMG 080404 NLU	0,4																								
WNMG 080408 NLU	0,8																										
WNMG 080412 NLU	1,2																										
Finishing	"Wiper" W type NLU-W	WNMG 060404 NLU-W	0,4																								
		WNMG 060408 NLU-W	0,8																								
		WNMG 080404 NLU-W	0,4																								
		WNMG 080408 NLU-W	0,8																								
WNMG 080412 NLU-W	1,2																										

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

80° Trigon Type **0° Relief**
With Insert Hole



Dimensions (mm)				
WN	ℓ	∅d (IC)	s	d ₁
0604..	6,5	9,525	4,76	3,81
06T3..	6,5	9,525	3,97	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WNMG ○○○○○○ ■-■

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated			Uncoated			P	K	S	N
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Finishing	 NEF	WNMG 060404 NEF	0,4																
		WNMG 060408 NEF	0,8																
Finishing	 NSU	WNMG 080404 NEF	0,4																
		WNMG 080408 NEF	0,8																
Finishing	 NSE	WNMG 060404 NSU	0,4	●	●	○	●	○	▲	●									
		WNMG 060408 NSU	0,8	●	●	○	●	○	▲	●									
Finishing	 NSE-W	WNMG 060412 NSU	1,2																
		WNMG 06T304 NSU	0,4			○													
Finishing	 NSE-W	WNMG 06T308 NSU	0,8			○													
		WNMG 080404 NSU	0,4	●	●	○	●	○	▲	●									
Finishing	 NSE-W	WNMG 080408 NSU	0,8	●	●	○	●	○	▲	●									
		WNMG 080412 NSU	1,2	●	●	○	●	○	▲	●									
Finishing	 NSX	WNMG 080404 NSE	0,4	●	●	○	●	○											
		WNMG 080408 NSE	0,8	●	●	○	●	○											
Finishing	 NSX	WNMG 080412 NSE	1,2	●	●	○	●	○											
		WNMG 060404 NSE-W	0,4			○													
Finishing	 NSX	WNMG 060408 NSE-W	0,8	●	●	○	●	○											
		WNMG 080404 NSX	0,4																
Finishing	 NSX	WNMG 080408 NSX	0,8																
		WNMG 080412 NSX	1,2																
Medium Cut	 NGU	WNMG 080404 NGU	0,4	●	●	○	●	○	▲	●									
		WNMG 080408 NGU	0,8	●	●	○	●	○	▲	●									
Medium Cut	 NGU-W	WNMG 060412 NGU	1,2																
		WNMG 080404 NGU	0,4	●	●	○	●	○	▲	●									
Medium Cut	 NGU-W	WNMG 080408 NGU	0,8	●	●	○	●	○	▲	●									
		WNMG 080412 NGU	1,2	●	●	○	●	○	▲	●									
Medium Cut	 NGU-W	WNMG 080408 NGU-W	0,8	●	●	○	●	○	▲	●									
		WNMG 080412 NGU-W	1,2	●	●	○	●	○	▲	●									

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

W TRIGON TYPE

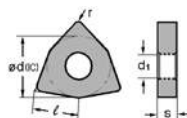
INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)				
WN	l	Ød (IC)	s	d1
0604..	6,5	9,525	4,76	3,81
06T3..	6,5	9,525	3,97	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WNMG

● M-Class Double Sided Bumpy Chipbreaker

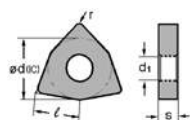
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1	
Medium Cut	 NGE	WNMG 060408 NGE WNMG 060412 NGE WNMG 080404 NGE WNMG 080408 NGE WNMG 080412 NGE WNMG 080416 NGE	0,8	●	●	●	○	●																		
			1,2	●	●	●	●	●																		
			0,4					●																		
			0,8	●	●	●	●	●																		
			1,2	●	●	●	●	●																		
Medium Cut	 NUG	WNMG 060404 NUG WNMG 060408 NUG WNMG 06T304 NUG WNMG 06T308 NUG WNMG 080404 NUG WNMG 080408 NUG WNMG 080412 NUG	0,4				○																			
			0,8				○																			
			0,4				○																			
			0,8				○																			
			1,2				●																			
Medium Cut	 NEG	WNMG 060408 NEG WNMG 060412 NEG WNMG 080404 NEG WNMG 080408 NEG WNMG 080412 NEG	0,8			●		○	○																	
			1,2			●		○	●																	
			0,4			●		●																		
			0,8			●		●	●		●													●	●	
			1,2			●		●	●		●													●	●	
Medium Cut	 NEX	WNMG 060404 NEX WNMG 060408 NEX WNMG 080404 NEX WNMG 080408 NEX WNMG 080412 NEX	0,4					●				▲	●													
			0,8					●				▲	●													
			0,4					●	●	●	▲	●														
			0,8					●	●	●	▲	●														
			1,2					●	●	●	▲	●														
Medium Cut	 NUP	WNMG 080408 NUP WNMG 080412 NUP	0,8		●	●	●	●	●	●	▲	●														
			1,2		●	●	●	●	●	●	▲	●														
Medium Cut	 NEM	WNMG 080408 NEM WNMG 080412 NEM	0,8			●		●	●	●																
			1,2			●		●	●	●																

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)				
WN	ℓ	∅d (IC)	s	d ₁
0604..	6,5	9,525	4,76	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WNMG

● M-Class Double Sided Bumpy Chipbreaker

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H	
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NUX WNMG 080404 NUX WNMG 080408 NUX WNMG 080412 NUX	0,4	○	●	●	●	●																			
				0,8		●	●	●	●																			
				1,2	●	●	●	●	●																			
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NMU WNMG 060408 NMU WNMG 060412 NMU WNMG 080408 NMU WNMG 080412 NMU WNMG 080416 NMU	0,8		●	●	○	●	●																		
				1,2	●	●	●	●	●																			
				1,6	●	●	●	●	●	●																		
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NME WNMG 060408 NME WNMG 060412 NME WNMG 080408 NME WNMG 080412 NME WNMG 080416 NME	0,8	●			○																				
				1,2	●	●	●	●	●																			
				1,6	●	●	●	●	●	●																		
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NMX WNMG 080408 NMX WNMG 080412 NMX	0,8		●		○	●																			
				1,2		●		○	●																			
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NGZ WNMG 060408 NGZ WNMG 060412 NGZ WNMG 080404 NGZ WNMG 080408 NGZ WNMG 080412 NGZ	0,8																								
				1,2																								
				0,4																								
Roughing	Depth of cut (mm)	 Feed rate (mm/rev)	 NUZ WNMG 080404 NUZ WNMG 080408 NUZ WNMG 080412 NUZ	0,4				○																				
				0,8				○																				
				1,2				○																				

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

W TRIGON TYPE

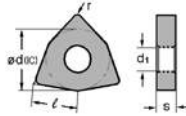
INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)					
WN	l	ød (IC)	s	d ₁	
0804..	8,7	12,7	4,76	5,16	



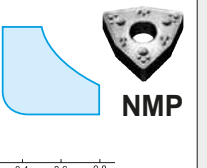
⇒ D17, D24

⇒ E13

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T11	T31	T11	T11	G1	EH	EH	H1
Heavy Roughing	 NMP	WNMM 080408 NMP WNMM 080412 NMP	0,8 1,2		●	●	●	●						●	●													
Heavy Roughing	 NHG	WNMM 080408 NHG WNMM 080412 NHG	0,8 1,2		●	●		●						●	●													

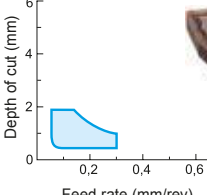
WNMA

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1	
Roughing		WNMA 080408 WNMA 080412 WNMA 080416	0,8																										
			1,2																										
			1,6																										

WNGG

● G-Class Double Sided Bumpy Chipbreaker

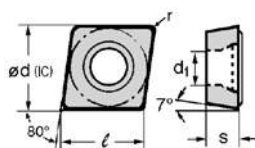
Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Finishing	  NSU	WNGG 080404 NSU	0,4																			○	○	○	○				

- = Euro stock
- = Stock item in Japan
- ▲ = To be replaced by new item

80° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
CC	l	ød (IC)	s	d ₁
03X1..	3,55	3,5	1,4	1,9
04X1..	4,37	4,3	1,8	2,3
0602..	6,4	6,35	2,38	2,8
09T3..	9,7	9,525	3,97	4,4



⇒ D31

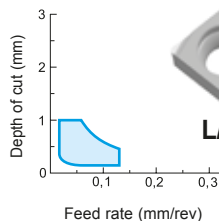
⇒ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCET

● E-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Finishing Depth of cut (mm)																								



L/RFY

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

C DIAMOND TYPE

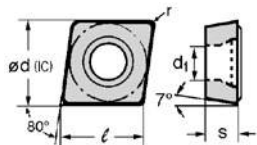
INSERTS FOR TURNING

7° Positive Inserts

80° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
CC	l	ød (IC)	s	d1
03X1..	3,55	3,5	1,4	1,9
04X1..	4,37	4,3	1,8	2,3
0602..	6,4	6,35	2,38	2,8
09T3..	9,7	9,525	3,97	4,4



⇒ D31

⇒ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCGT

● G-Class

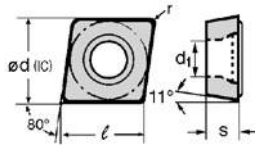
Application	Shape	ISO Cat. No.	r	Carbide										Cermets		Carbide	
				Coated					ZX-Coated					Uncoated			
				P	M	P/M	K	H	K/S	M/S	P/M	P	K	S	N		
Finishing	 NFC	CCGT 060201M NFC	<0,1														
		CCGT 060202M NFC	<0,2														
		CCGT 060204M NFC	<0,4														
		CCGT 09T301M NFC	<0,1														
Finishing	 L/RFX	CCGT 060203 LFX	0,03														
		CCGT 060201 LFX	0,1														
		CCGT 060202 LFX	0,2														
		CCGT 060204 LFX	0,4														
Finishing	 L/RFX	CCGT 09T3003 LFX	0,03														
		CCGT 09T301 LFX	0,1														
		CCGT 09T302 LFX	0,2														
		CCGT 09T304 LFX	0,4														
Finishing	 L/RFX	CCGT 09T308 LFX	0,8														
		CCGT 060203 RFX	0,03														
		CCGT 060201 RFX	0,1														
		CCGT 060202 RFX	0,2														
Finishing	 L/RFX	CCGT 060204 RFX	0,4														
		CCGT 09T3003 RFX	0,03														
		CCGT 09T301 RFX	0,1														
		CCGT 09T302 RFX	0,2														
Finishing	 L/RFX	CCGT 09T304 RFX	0,4														
		CCGT 09T308 RFX	0,8														
Finishing	 L/RFX	CCGT 03X1003 LFYS	0,03														
		CCGT 03X101 LFYS	0,1														
		CCGT 03X102 LFYS	0,2														
		CCGT 03X104 LFYS	0,4														
Finishing	 L/RFX	CCGT 04X1003 LFYS	0,03														
		CCGT 04X101 LFYS	0,1														
		CCGT 04X102 LFYS	0,2														
		CCGT 04X104 LFYS	0,4														
Finishing	 L/RFX	CCGT 03X1003 RFYS	0,03														
		CCGT 03X101 RFYS	0,1														
		CCGT 03X102 RFYS	0,2														
		CCGT 03X104 RFYS	0,4														
Finishing	 L/RFX	CCGT 04X1003 RFYS	0,03														
		CCGT 04X101 RFYS	0,1														
		CCGT 04X102 RFYS	0,2														
		CCGT 04X104 RFYS	0,4														

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

80° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
CC	ℓ	ød (IC)	s	d1
03X1..	3,55	3,5	1,4	1,9
04X1..	4,37	4,3	1,8	2,3
0602..	6,4	6,35	2,38	2,8
0903..	9,7	9,525	3,18	4,4
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇒ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCGT

G-Class

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide											
				Coated						ZX-Coated		Uncoated																	
				P	M	P	K	H	K	M	P	P	K	S	N														
				AC805P	AC810P	AC820P	AC825P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Finishing	 Depth of cut (mm) Feed rate (mm/rev)	CCGT 03X101 LFY CCGT 03X102 LFY CCGT 03X104 LFY	0,1 0,2 0,4																										
		CCGT 04X101 LFY CCGT 04X102 LFY CCGT 04X104 LFY	0,1 0,2 0,4																										
		CCGT 03X101 RFY CCGT 03X102 RFY CCGT 03X104 RFY	0,1 0,2 0,4																										
		CCGT 04X101 RFY CCGT 04X102 RFY CCGT 04X104 RFY	0,1 0,2 0,4																										
Light Cut	 Depth of cut (mm) Feed rate (mm/rev)	CCGT 060202 NAG CCGT 060204 NAG	0,2 0,4																										
		CCGT 09T302 NAG CCGT 09T304 NAG CCGT 09T308 NAG	0,2 0,4 0,8																										
		CCGT 120404 NAG CCGT 120408 NAG	0,4 0,8																										
Light cut	 Depth of cut (mm) Feed rate (mm/rev)	CCGT 09T301M NSI CCGT 09T302M NSI CCGT 09T304M NSI	<0,1 <0,2 <0,4																										
Light cut	 Depth of cut (mm) Feed rate (mm/rev)	CCGT 0602003 NSC	0,03																										
		CCGT 09T3003 NSC	0,03																										
		CCGT 060201M NSC CCGT 060202M NSC CCGT 060204M NSC	<0,1 <0,2 <0,4																										
		CCGT 080201M NSC CCGT 080202M NSC	<0,1 <0,2																										
Light cut		CCGT 090301M NSC CCGT 090302M NSC	<0,1 <0,2																										
		CCGT 09T301M NSC CCGT 09T302M NSC CCGT 09T304M NSC CCGT 09T308M NSC	<0,1 <0,2 <0,4 <0,8																										

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

C DIAMOND TYPE

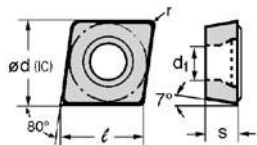
INSERTS FOR TURNING

7° Positive Inserts

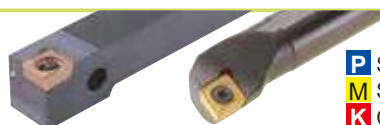
80° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
CC	l	ød (IC)	s	d1
0602..	6,4	6,35	2,38	2,8
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇒ D31

⇒ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCMT

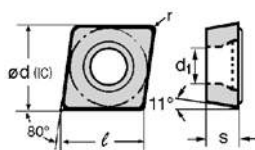


● M-Class

Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Finishing	 NFB Depth of cut (mm) Feed rate (mm/rev)	CCMT 060202 NFB CCMT 060204 NFB	0,2 0,4																			●	●	●	●				
		CCMT 09T304 NFB CCMT 09T308 NFB	0,4 0,8																			●	●	●	●				
Finishing ~ Light Cut	 NFP Depth of cut (mm) Feed rate (mm/rev)	CCMT 060202 NFP CCMT 060204 NFP CCMT 060208 NFP	0,2 0,4 0,8																			●	●	●	●				
		CCMT 09T302 NFP CCMT 09T304 NFP CCMT 09T308 NFP	0,2 0,4 0,8																			●	●	●	●				
Finishing	 NLU Depth of cut (mm) Feed rate (mm/rev)	CCMT 060202 NLU CCMT 060204 NLU	0,2 0,4	●	○	●			●	●	●	▲	●									●	○	●	○	○			
		CCMT 09T302 NLU CCMT 09T304 NLU CCMT 09T308 NLU	0,2 0,4 0,8	●	○	●			●	●	●	▲	●									●	○	●	○	○			
Finishing	 NLU-W Depth of cut (mm) Feed rate (mm/rev)	CCMT 09T304 NLU-W CCMT 09T308 NLU-W	0,4 0,8		●	●			●			▲	●	●	●							●	○	●	○				
					●	●			●			▲	●	●	●							●	○	●	○				
Light Cut	 NLB Depth of cut (mm) Feed rate (mm/rev)	CCMT 060202 NLB CCMT 060204 NLB CCMT 060208 NLB	0,2 0,4 0,8				○					○										●	●	●	●				
		CCMT 09T302 NLB CCMT 09T304 NLB CCMT 09T308 NLB	0,2 0,4 0,8				○					○										●	●	●	●				
Light Cut	 NSU Depth of cut (mm) Feed rate (mm/rev)	CCMT 060202 NSU CCMT 060204 NSU CCMT 060208 NSU	0,2 0,4 0,8	●	●	●	○		●	●	●	▲	●	●	●		●	●				●	●	●	●				
		CCMT 09T302 NSU CCMT 09T304 NSU CCMT 09T308 NSU	0,2 0,4 0,8	●	●	●	○		●	●	●	▲	●	●	●		●	●				●	●	●	●				
Light Cut		CCMT 120404 NSU CCMT 120408 NSU	0,4 0,8	●	●	●	○					▲	●	●	●							●							
				●	●	●	○					▲	●	●	●							●							

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

80° Diamond Type

7° / 11° Relief
With Insert Hole

Dimensions (mm)				
C	l	ød (IC)	s	d1
0602..	6,4	6,35	2,38	2,8
0802..	8,0	7,94	2,38	3,4
0803..	8,0	7,94	3,18	3,4
0903..	9,7	9,525	3,18	4,4
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇒ E15

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCMT

● M-Class

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated		Uncoated				P	K	S	N
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Light Cut	 NSC	CCMT 060204 NSC	0,4																
		CCMT 080304 NSC	0,4																
		CCMT 090304 NSC	0,4																
		CCMT 090308 NSC	0,8																
		CCMT 120408 NSC	0,8																
Light Cut	 NSK	CCMT 060204 NSK	0,4																
		CCMT 060208 NSK	0,8																
		CCMT 09T304 NSK	0,4																
		CCMT 09T308 NSK	0,8																
		CCMT 120404 NSK	0,4																
		CCMT 120408 NSK	0,8																
Roughing	 NMU	CCMT 09T304 NMU	0,4																
		CCMT 09T308 NMU	0,8																
Roughing	 CCMW	CCMW 09T304	0,4																
		CCMW 09T308	0,8																

CPGT

NSD

● G-Class

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated		Uncoated				P	K	S	N
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Finishing ~ Light Cut	 NSD	CPGT 080202 NSD	0,2																
		CPGT 080204 NSD	0,4																
		CPGT 080208 NSD	0,8																
		CPGT 090302 NSD	0,2																
		CPGT 090304 NSD	0,4																
		CPGT 090308 NSD	0,8																
		CPGT 120402 NSD	0,2																
		CPGT 120404 NSD	0,4																
		CPGT 120408 NSD	0,8																

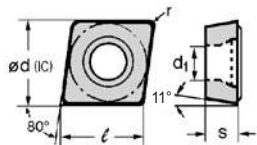
- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

C DIAMOND TYPE

INSERTS FOR TURNING

11° Positive Inserts

80° Diamond Type 11° Relief
With Insert Hole



Dimensions (mm)				
CP	l	ød (IC)	s	d1
0802...	8,0	7,94	2,38	3,4
0903...	9,7	9,525	3,18	4,4



⇒ E15

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CPMT

● M-Class

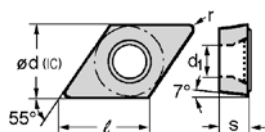
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H
Finishing	 NFB Depth of cut (mm) Feed rate (mm/rev)	CPMT 080204 NFB	0,4																		○	○	○	○				
		CPMT 090304 NFB	0,4																		○	○	○	○				
		CPMT 090308 NFB	0,8																		○	○	○	○				
Finishing	 NLU Depth of cut (mm) Feed rate (mm/rev)	CPMT 080204 NLU	0,4				○														○	○	○	○				
		CPMT 090304 NLU	0,4				○			○											○	○	○	○				
		CPMT 090308 NLU	0,8				○			○											○	○	○	○				
Finishing	 NLU-W Depth of cut (mm) Feed rate (mm/rev)	CPMT 090304 NLU-W	0,4				○														○	○		○				
		CPMT 090308 NLU-W	0,8				○														○	○		○				
Light Cut	 NLB Depth of cut (mm) Feed rate (mm/rev)	CPMT 080204 NLB	0,4				○		○	○	○										○	○						
		CPMT 090304 NLB	0,4				○		○	○											○	○		○				
		CPMT 090308 NLB	0,8				○		○	○											○	○		○				
Light Cut	 NSU Depth of cut (mm) Feed rate (mm/rev)	CPMT 080204 NSU	0,4			○	○														○	○	○	○				
		CPMT 080208 NSU	0,8			○	○														○	○	○	○				
		CPMT 090304 NSU	0,4			○	○		○	○											○	○	○	○				
		CPMT 090308 NSU	0,8			○	○	●	○	○											○	○	○	○				
Light -Medium Cut	 NMU Depth of cut (mm) Feed rate (mm/rev)	CPMT 080204 NMU	0,4				○																					
		CPMT 080208 NMU	0,8				○																					
		CPMT 090304 NMU	0,4				○																					
		CPMT 090308 NMU	0,8				○																					

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

55° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
DC	ℓ	ϕd (IC)	s	d ₁
0702..	7,7	6,35	2,38	2,8
11T3..	11,6	9,525	3,97	4,4



⇒ D32~33

⇒ E16~17

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Metals
S	Super Alloy
H	Hardened Steel

DCGT

● G-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
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- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

D DIAMOND TYPE

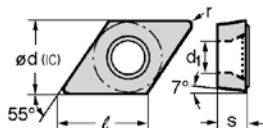
INSERTS FOR TURNING

7° Positive Inserts

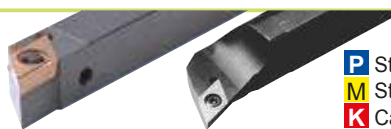
55° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
DC	l	ød (IC)	s	d1
0702..	7,7	6,35	2,38	2,8
0902..	9,7	7,94	2,38	3,4
1103..	11,6	9,525	3,18	4,4
11T3..	11,6	9,525	3,97	4,4



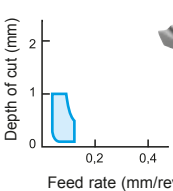
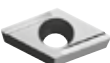
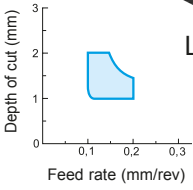
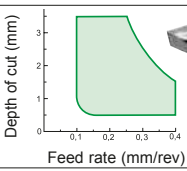
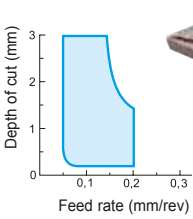
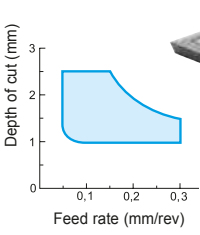
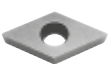
⇒ D32~33

⇒ E16~17

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DCG_

● G-Class

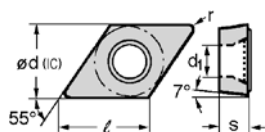
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H	
Finishing	 RFY 	DCGT 0702003 RFY	0,03																○								
		DCGT 070201 RFY	0,1																○								
		DCGT 070202 RFY	0,2																○								
		DCGT 070204 RFY	0,4																○								
		DCGT 11T3003 RFY	0,03																○								
		DCGT 11T301 RFY	0,1																○								
		DCGT 11T302 RFY	0,2																○								
		DCGT 11T304 RFY	0,4																○								
Finishing ~ Light Cut	 L/RSD 	DCGT 070202 LSD	0,2																○		○	○					
		DCGT 070204 LSD	0,4																	○		○	○				
		DCGT 11T304 LSD	0,4																	○		○	○				
		DCGT 11T308 LSD	0,8																	○		○	○				
		DCGT 070202 RSD	0,2																	○		○	○				
		DCGT 070204 RSD	0,4																	○		○	○				
		DCGT 11T304 RSD	0,4																	○		○	○				
		DCGT 11T308 RSD	0,8																	○		○	○				
Light Cut	 NAG 	DCGT 070202 NAG	0,2																							●	
		DCGT 070204 NAG	0,4																							●	
		DCGT 11T302 NAG	0,2																							●	
		DCGT 11T304 NAG	0,4																							●	
		DCGT 11T308 NAG	0,8																							●	
Light Cut	 NSI 	DCGT 070201M NSI	<0,1							▲	●							●	●	●	○		○	○			
		DCGT 070202M NSI	<0,2							▲	●							●	●	●	○		○	○			
		DCGT 070204M NSI	<0,4							▲	●							●	●	●	○		○	○			
		DCGT 11T301M NSI	<0,1							▲	●							●	●	●	○		○	○			
		DCGT 11T302M NSI	<0,2							▲	●							●	●	●	○		○	○			
		DCGT 11T304M NSI	<0,4							▲	●							●	●	●	○		○	○			
Light Cut	 NSC 	DCGT 0702003 NSC	0,03																○	○	○		○	○			
		DCGT 11T3003 NSC	0,03																○	○	●		○				
		DCGT 070201M NSC	<0,1																●	●	●		●	●			
		DCGT 070202M NSC	<0,2																●	●	●		●	●			
		DCGT 070204M NSC	<0,4																●	●	●		●	●			
		DCGT 090201M NSC	<0,1																				○	○			
		DCGT 090202M NSC	<0,2																				○	○			
		DCGT 110301M NSC	<0,1																				○	○			
		DCGT 110302M NSC	<0,2																				○	○			
		DCGT 11T301M NSC	<0,1																●	●	●		●	●			
		DCGT 11T302M NSC	<0,2																●	●	●		●	●			
		DCGT 11T304M NSC	<0,4																●	●	●		●	●			
Light Cut		DCGW 070202	0,2															○									
		DCGW 070204	0,4															○									
		DCGW 070208	0,8															○									
		DCGW 11T302	0,2															○									
		DCGW 11T304	0,4															○									
		DCGW 11T308	0,8															○									

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

55° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
DC	ℓ	ϕd (IC)	s	d ₁
0702..	7,7	6,35	2,38	2,8
11T3..	11,6	9,525	3,97	4,4



⇒ D32~33

⇒ E16~17

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DCM_

● M-Class

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H		
Finishing	Depth of cut (mm) Feed rate (mm/rev)	 NFB	DCMT 070202 NFB	0,2																		●	●	●	●						
			DCMT 070204 NFB	0,4																			●	●	●	●					
			DCMT 070208 NFB	0,8																			●	●	●	●					
			DCMT 11T302 NFB	0,2																			●	●	●	●					
			DCMT 11T304 NFB	0,4																			●	●	●	●					
DCMT 11T308 NFB	0,8																			●	●	●	●								
Finishing	Depth of cut (mm) Feed rate (mm/rev)	 NFP	DCMT 070202 NFP	0,2																		●	●	●	●						
			DCMT 070204 NFP	0,4																			●	●	●	●					
			DCMT 11T302 NFP	0,2																			●	●	●	●					
			DCMT 11T304 NFP	0,4																			●	●	●	●					
			DCMT 11T308 NFP	0,8																			●	●	●	●					
DCMT 11T312 NFP	1,2																			●	●	●	●								
Finishing	Depth of cut (mm) Feed rate (mm/rev)	 NLU	DCMT 070202 NLU	0,2		●	●	○			●	●	▲	●								●	○	●	○	○					
			DCMT 070204 NLU	0,4		●	●	○			●	●	▲	●									●	○	●	○	○				
			DCMT 11T302 NLU	0,2		●	●	○			●	●	▲	●									●	○	●	○	○				
			DCMT 11T304 NLU	0,4	●	●	●	○			●	●	▲	●									●	○	●	○	○				
			DCMT 11T308 NLU	0,8	●	●	●	○			●	●	▲	●									●	○	●	○	○				
Light Cut	Depth of cut (mm) Feed rate (mm/rev)	 NLB	DCMT 070202 NLB	0,2				○			○											●	●	●	●						
			DCMT 070204 NLB	0,4				○			○												●	●	●	●					
			DCMT 070208 NLB	0,8				○			○												●	●	●	●					
			DCMT 11T302 NLB	0,2				○			○												●	●	●	●					
			DCMT 11T304 NLB	0,4				○			○												●	●	●	●					
DCMT 11T308 NLB	0,8				○			○												●	●	●	●								
Light Cut	Depth of cut (mm) Feed rate (mm/rev)	 NSU	DCMT 070202 NSU	0,2		●	●	○		●	●	▲	●	●	●			●	●			●	●	●	●	●					
			DCMT 070204 NSU	0,4		●	●	○		●	●	▲	●	●	●	●			●	●			●	●	●	●	●				
			DCMT 070208 NSU	0,8		●	●	○		●	●	▲	●	●	●	●			●	●			●	○	○	○	○				
			DCMT 11T302 NSU	0,2		●	●	○		●	●	▲	●	●	●	●			●	●			●	○	○	○	○				
			DCMT 11T304 NSU	0,4	●	●	●	○		●	●	▲	●	●	●	●			●	●			●	○	○	○	○				
DCMT 11T308 NSU	0,8	●	●	●	○		●	●	▲	●	●	●	●			●	●			●	○	○	○	○							
Light Cut	Depth of cut (mm) Feed rate (mm/rev)	 NSK	DCMT 070204 NSK	0,4			●	●	●																						
			DCMT 070208 NSK	0,8			●	●	●																						
			DCMT 11T304 NSK	0,4			●	●	●																						
			DCMT 11T308 NSK	0,8			●	●	●																						
			DCMT 11T312 NSK	1,2			●	●	●																						
Roughing	Depth of cut (mm) Feed rate (mm/rev)	 NMU	DCMT 11T304 NMU	0,4		●	●	●	●	●		▲	●	●	●	●															
			DCMT 11T308 NMU	0,8		●	●	●	●	●		▲	●	●	●	●															
Roughing			DCMW 11T304	0,4											●	●															
			DCMW 11T308	0,8												●	●														
Finishing			DCMX 11T308 NLUW	0,8		●	●							●		●	●														

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

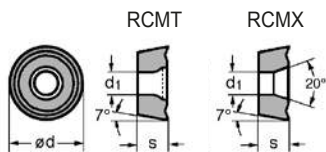
R ROUND TYPE

INSERTS FOR TURNING

7° Positive Inserts

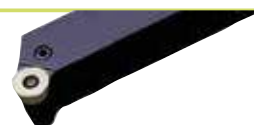
Round Type Inserts

7° Relief
With Insert Hole



RC...	ℓ	ød (IC)	s	d ₁
1003	—	10,0	3,18	3,6
10T3	—	10,0	3,97	3,6
12	—	12,0	4,76	4,2
16	—	16,0	6,35	5,2
20	—	20,0	6,35	6,5
25	—	25,0	7,94	7,2
32	—	32,0	9,52	9,5

(M0: IC is metric)



Lever lock holders for RCMX
⇒ D34~35

P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

RCMT M0

● M-Class Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Roughing	 NRX	RCMT 1003M0 NRX	—	●	●	●	●	●					●																
		RCMT 10T3M0 NRX	—	●	●	●	●	●					●																
		RCMT 1204M0 NRX	—	●	●	●	●	●					●																
		RCMT 1606M0 NRX	—	●	●	●	●	●					●																
		RCMT 2006M0 NRX	—	●	●	●	●	●					●																
		RCMT 2507M0 NRX	—	●	●	○	●	●					●																
Roughing	 NRH	RCMT 1204M0 NRH	—				○																						
		RCMT 1606M0 NRH	—				○																						
		RCMT 2006M0 NRH	—				○																						

RCMX M0

● M-Class Grooved Chipbreaker

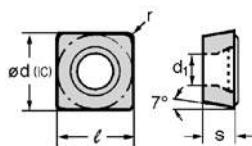
Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Roughing	 NRP	RCMX 1003M0 NRP	—	○	●	●	●	●																					
		RCMX 1204M0 NRP	—	○	●	●	●	●										○											
		RCMX 1606M0 NRP	—	○	●	●	●	●																					
		RCMX 2006M0 NRP	—	○	●	●	●	●										○											
		RCMX 2507M0 NRP	—	○	●	○	○	○																					
		RCMX 3209M0 NRP	—	○	○																								

● = Euro stock
○ = Japan stock
▲ = To be replaced by new item

90° Square Type

7° Relief

With Insert Hole



Dimensions (mm)				
SC	l	∅d (IC)	s	d1
0702..	7,94	7,94	2,38	3,4
0903..	9,525	9,525	3,18	4,4
09T3..	9,525	9,525	3,97	4,4
1204..	12,7	12,7	4,76	5,5



⇒ D36

"S ... SSKC" - Type
(⇒ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SC_T

● G/M-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFB	SCMT 09T304 NFB SCMT 09T308 NFB	0,4 0,8																	○ ○	○ ○	○ ○	○ ○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFP	SCMT 09T304 NFP SCMT 09T308 NFP SCMT 120404 NFP SCMT 120408 NFP	0,4 0,8 0,4 0,8																	● ●	● ●	● ●	● ●				
																							○ ○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NLU	SCMT 09T304 NLU SCMT 09T308 NLU SCMT 120412 NLU	0,4 0,8 1,2	● ●	○ ○			○ ○												○ ○	○ ○	○ ○	○ ○				
Light Cut	 Depth of cut (mm) Feed rate (mm/rev) NLB	SCMT 09T304 NLB SCMT 09T308 NLB	0,4 0,8		○ ○	○ ○		○ ○	○ ○												○ ○	○ ○	○ ○				
Light Cut	 Depth of cut (mm) Feed rate (mm/rev) NSU	SCMT 09T304 NSU SCMT 09T308 NSU SCMT 120404 NSU SCMT 120408 NSU	0,4 0,8 0,4 0,8	● ●	● ●	● ●	○ ○	● ●	● ●	○ ○	▲ ▲	● ●	● ●	● ●		● ●	● ●		● ●								
Light Cut	 Depth of cut (mm) Feed rate (mm/rev) NSK	SCMT 09T304 NSK SCMT 09T308 NSK SCMT 120404 NSK SCMT 120408 NSK SCMT 120412 NSK	0,4 0,8 0,4 0,8 1,2		● ●	● ●	● ●																				
Light-Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NMU	SCMT 09T308 NMU SCMT 120408 NMU SCMT 120412 NMU	0,8 0,8 1,2		● ●	● ●	○ ○	● ●			○ ○	● ●	● ●	● ●													
Finishing	 Depth of cut (mm) Feed rate (mm/rev) L/RFX	SCGT 09T302 LFX SCGT 09T304 LFX SCGT 120404 LFX SCGT 09T302 RFX SCGT 09T304 RFX SCGT 120404 RFX	0,2 0,4 0,4 0,2 0,4 0,4																○ ○ ○								
																				○ ○ ○							
Light Cut	 Depth of cut (mm) Feed rate (mm/rev) NSC	SCGT 070201M NSC SCGT 070202M NSC SCGT 090301M NSC SCGT 090302M NSC SCGT 09T301M NSC SCGT 09T302M NSC	<0,1 <0,2 <0,1 <0,2 <0,1 <0,2																○ ○			○ ○	○ ○				
																				○ ○			○ ○	○ ○			

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

S SQUARE TYPE

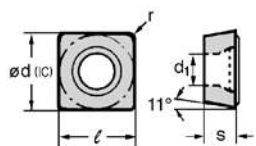
INSERTS FOR TURNING

11° Positive Inserts

90° Square Type

11° Relief

With Insert Hole



Dimensions (mm)				
SP	ℓ	∅d (IC)	s	d1
0903..	9,525	9,525	3,18	3,4



⇒ E18

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SPGW

● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1
Light Cut		SPGW 090304 T	0,4																						●				

SPGW / SPMT NFK / NSF

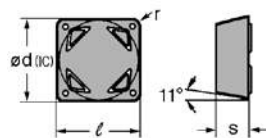
SP_T

● G/M-Class

Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFB	SPMT 090304 NFB SPMT 090308 NFB	0,4 0,8																			○ ○	○ ○	○ ○	○ ○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NLU	SPMT 090304 NLU SPMT 090308 NLU	0,4 0,8			○ ○		○ ○															○ ○	○ ○	○ ○				
Finishing	 Depth of cut (mm) Feed rate (mm/rev) NFK	SPMT 090304 NFK	0,4																						●				
Light - Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NLB	SPMT 090304 NLB SPMT 090308 NLB	0,4 0,8			○ ○		○ ○															○ ○	○ ○					
Light - Medium Cut	 Depth of cut (mm) Feed rate (mm/rev) NSF	SPMT 090304 NSF SPMT 090308 NSF	0,4 0,8		● ●	○ ○	● ●																						
Finishing - Light Cut	 Depth of cut (mm) Feed rate (mm/rev) L/RSD	SPGT 090302 LSD SPGT 090304 LSD SPGT 090308 LSD SPGT 090302 RSD SPGT 090304 RSD SPGT 090308 RSD	0,2 0,4 0,8 0,2 0,4 0,8																			○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○				

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

90° Square Type

 11° Relief
Without Insert Hole


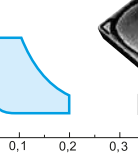
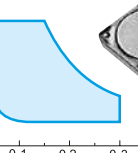
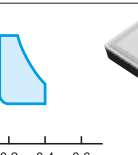
Dimensions (mm)				
SP	l	∅d (IC)	s	d ₁
0903..	9,525	9,525	3,18	-
1203..	12,7	12,7	3,18	-


 "S... CSKP...09/12" - Type
(⇒ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

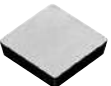
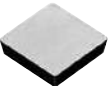
SPMR

● M-Class

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Finishing	Depth of cut (mm)	 NFK	SPMR 090304 NFK SPMR 090308 NFK	0,4 0,8																	○	○	○	●			
			SPMR 120304 NFK SPMR 120308 NFK	0,4 0,8																		○	○	○	○		
Light-Medium Cut	Depth of cut (mm)	 NSF	SPMR 090304 NSF SPMR 090308 NSF	0,4 0,8		○	○	○																			
			SPMR 120304 NSF SPMR 120308 NSF SPMR 120312 NSF	0,4 0,8 1,2		●	●	●																			
Light-Medium Cut	Depth of cut (mm)	 NUJ	SPMR 090304 NUJ SPMR 090308 NUJ	0,4 0,8			○																				
			SPMR 120304 NUJ SPMR 120308 NUJ	0,4 0,8			○																				

SP_N

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC805P	AC810P	AC820P	AC830P	AC840P	AC850P	AC860P	AC870P	AC880P	AC890P	AC900P	AC910P	AC920P	AC930P	AC940P	AC950P	AC960P	AC970P	AC980P	AC990P	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Medium Cut		SPGN 090304 SPGN 090308	0,4 0,8																							○	○	●			
		SPGN 120304 SPGN 120308	0,4 0,8																							○	○	○	○		
Medium Cut		SPMN 090304 SPMN 090308	0,4 0,8																							○	○	○			
		SPMN 120308 SPMN 120312	0,8 1,2																							○	○	○			

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

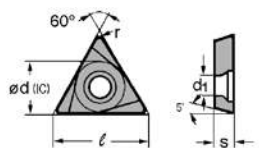
INSERTS FOR TURNING

5° Positive Inserts

60° Triangle Type

5° Relief

With Insert Hole



Dimensions (mm)				
TB	l	ød (IC)	s	d ₁
0601..	6,9	3,97	1,59	2,2



⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TBGT

● G-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T30	T10	T15	G1	EH	EH	H
Finishing	 L/RFW	TBGT 060102 LFW TBGT 060104 LFW	0,2 0,4															○		○				
		TBGT 060102 RFW TBGT 060104 RFW	0,2 0,4															○		○				
Finishing	 L/RFX	TBGT 060102 LFX TBGT 060104 LFX	0,2 0,4												○	●	○							
		TBGT 060102 RFX TBGT 060104 RFX	0,2 0,4												○	●	○							
Finishing	 L/RFY	TBGT 060101 LFY TBGT 060102 LFY TBGT 060104 LFY	0,1 0,2 0,4														○							
		TBGT 060101 RFY TBGT 060102 RFY TBGT 060104 RFY	0,1 0,2 0,4															○						
Finishing-Light Cut	 L/RW	TBGT 060102 LW TBGT 060104 LW	0,2 0,4														●	○	○	○				
		TBGT 060102 RW TBGT 060104 RW	0,2 0,4															●	○	○	○			

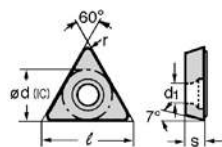
TBGW

● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T20	T30	T10	T15	G10	EH	EH	H1
Light Cut		TBGW 060102 TBGW 060104	0,2 0,4																							

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

60° Triangle Type

7° Relief
With Insert Hole

Dimensions (mm)				
TC	ℓ	∅d (IC)	s	d ₁
0802..	8,2	4,76	2,38	2,3
0902..	9,62	5,56	2,38	2,5
1102..	11,0	6,35	2,38	2,8
16T3..	16,5	9,525	3,97	4,3



⇒ D37

⇒ E19

P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

TCGT

● G-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H1	
Finishing	 L/RFX	TCGT 090201 LFX TCGT 090202 LFX	0,1 0,2																		○									
		TCGT 110201 LFX TCGT 110202 LFX	0,1 0,2																		○									
		TCGT 090201 RFX TCGT 090202 RFX	0,1 0,2																		○									
		TCGT 110201 RFX TCGT 110202 RFX	0,1 0,2																		○									
Finishing	 L/RFY	TCGT 090201 LFY TCGT 090202 LFY	0,1 0,2																		○									
		TCGT 110201 LFY TCGT 110202 LFY	0,1 0,2																		○									
		TCGT 090201 RFY TCGT 090202 RFY	0,1 0,2																		○									
		TCGT 110201 RFY TCGT 110202 RFY	0,1 0,2																		○									
Light cut	 NSI	TCGT 110204M NSI	<0,4							▲	●									●	●	●	●							
Light Cut	 NAG	TCGT 110202 NAG TCGT 110204 NAG	0,2 0,4																											●
		TCGT 16T304 NAG TCGT 16T308 NAG	0,4 0,8																											●
Light Cut	 NSC	TCGT 080201M NSC TCGT 080202M NSC	<0,1 <0,2																		○			○	○					
		TCGT 090201M NSC TCGT 090202M NSC	<0,1 <0,2																		○			○	○					
		TCGT 110201M NSC TCGT 110202M NSC TCGT 110204M NSC	<0,1 <0,2 <0,4																		○			○	○					
		TCGT 110301M NSC TCGT 110302M NSC	<0,1 <0,2																		●	●		●	●					

● = Euro stock
 ○ = Japan stock
 ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

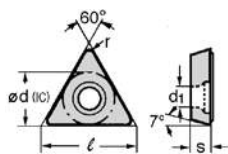
INSERTS FOR TURNING

7° Positive Inserts

60° Triangle Type

7° Relief

With Insert Hole



Dimensions (mm)				
TC	l	∅d (IC)	s	d1
0902...	9,6	5,56	2,38	2,5
1102...	11,0	6,35	2,38	2,8
16T3...	16,5	9,525	3,97	4,3



⇒ D37

⇒ E19

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TCMT/-W

● M-Class

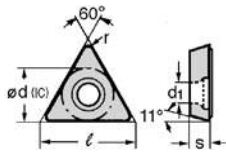
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H
Finishing	 NFB	TCMT 110204 NFB	0,4																			●	●	●	●				
		TCMT 110208 NFB	0,8																			●	●	●	●				
Finishing	 NFP	TCMT 090202 NFP	0,2																										
		TCMT 090204 NFP	0,4																										
		TCMT 090208 NFP	0,8																										
		TCMT 110202 NFP	0,2																			●	●	●	●				
Finishing	 NFP	TCMT 110204 NFP	0,4																			●	●	●	●				
		TCMT 110208 NFP	0,8																			●	●	●	●				
		TCMT 16T304 NFP	0,4																			●	●	●	●				
		TCMT 16T308 NFP	0,8																			●	●	●	●				
Finishing	 NLU	TCMT 110204 NLU	0,4	○	●	●			○												●	○	○	○	○				
		TCMT 110208 NLU	0,8	○	●	○			○													○	○	○	○				
Light Cut	 NLB	TCMT 110204 NLB	0,4			○			○	○	○											○	○						
		TCMT 110208 NLB	0,8			○			○	○	○											○	○						
Light Cut	 NSU	TCMT 110204 NSU	0,4	●	●	●	○	●	●	●	▲	●	●	●							●	●	●						
		TCMT 110208 NSU	0,8	●	●	●	○	●	●	●	▲	●	●	●							●	●	●						
		TCMT 16T304 NSU	0,4	●	●	●	○	●	●	○	▲	●	●	●							●								
		TCMT 16T308 NSU	0,8	●	●	●	○	●	●	○	▲	●	●	●							●								
Light Cut	 NSK	TCMT 110204 NSK	0,4		●	●	●																						
		TCMT 110208 NSK	0,8		●	●	●																						
		TCMT 16T304 NSK	0,4		●	●	●																						
		TCMT 16T308 NSK	0,8		●	●	●																						
Light Cut	 TCMW	TCMW 110204	0,4																										
		TCMW 110208	0,8																										
Light Cut	 TCMW	TCMW 16T304	0,4																										
		TCMW 16T308	0,8																										

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

60° Triangle Type

11° Relief

With Insert Hole



Dimensions (mm)				
TB	l	ød (IC)	s	d1
0802..	8,2	4,76	2,38	2,4
0902..	9,6	5,56	2,38	2,8
1103..	11,0	6,35	3,18	3,4
1603..	16,5	9,525	3,18	4,4



⇒ E20

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Metals
S	Super Alloy
H	Hardened Steel

TPGT

● G-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T3	T1	T15	G1	EH	EH	H1
Finishing	 NFC	TPGT 110302M NFC TPGT 110304M NFC	<0,2 <0,4																									
Finishing	 L/RFW	TPGT 080202 LFW TPGT 080204 LFW	0,2 0,4																									
		TPGT 110202 LFW TPGT 110204 LFW	0,2 0,4																									
		TPGT 080202 RFW TPGT 080204 RFW	0,2 0,4																									
		TPGT 110202 RFW TPGT 110204 RFW	0,2 0,4																									
Finishing	 L/RFX	TPGT 080202 LFX TPGT 080204 LFX	0,2 0,4																									
		TPGT 090204 LFX	0,4																									
		TPGT 110302 LFX TPGT 110304 LFX TPGT 110308 LFX	0,2 0,4 0,8																									
		TPGT 160304 LFX TPGT 160308 LFX	0,4 0,8																									
		TPGT 080202 RFX TPGT 080204 RFX	0,2 0,4																									
		TPGT 110302 RFX TPGT 110304 RFX TPGT 110308 RFX	0,2 0,4 0,8																									
		TPGT 160304 RFX TPGT 160308 RFX	0,4 0,8																									

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

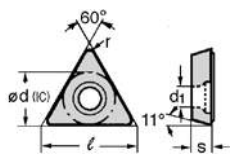
INSERTS FOR TURNING

11° Positive Inserts

60° Triangle Type

11° Relief

With Insert Hole



Dimensions (mm)				
TP	l	ød (IC)	s	d1
0802..	8,2	4,76	2,38	2,4
0902..	9,6	5,56	2,38	2,8
1102..	11,0	6,35	2,38	2,8
1103..	11,0	6,35	3,18	3,4
1603..	16,5	9,525	3,18	4,4

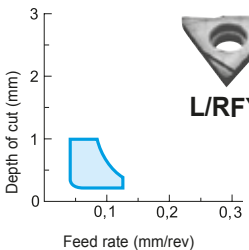


⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPGT/W

● G-Class

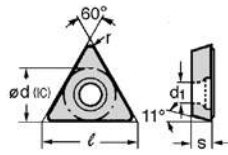
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H
Finishing   L/RFY	TPGT 0802003 LFY	0,03																							
	TPGT 080201 LFY	0,1																							
	TPGT 080202 LFY	0,2																							
	TPGT 080204 LFY	0,4																							
	TPGT 090201 LFY	0,1																							
	TPGT 090202 LFY	0,2																							
	TPGT 090204 LFY	0,4																							
	TPGT 110202 LFY	0,2																							
	TPGT 110204 LFY	0,4																							
	TPGT 110208 LFY	0,8																							
	TPGT 1103003 LFY	0,03																							
	TPGT 110301 LFY	0,1																							
	TPGT 110302 LFY	0,2																							
	TPGT 110304 LFY	0,4																							
	TGPT 110308 LFY	0,8																							
	TPGT 160302 LFY	0,2																							
	TPGT 160304 LFY	0,4																							
	TPGT 160308 LFY	0,8																							
	TPGT 0802003 RFY	0,03																							
	TPGT 080201 RFY	0,1																							
	TPGT 080202 RFY	0,2																							
	TPGT 080204 RFY	0,4																							
	TPGT 090201 RFY	0,1																							
	TPGT 090202 RFY	0,2																							
	TPGT 090204 RFY	0,4																							
	TPGT 110202 RFY	0,2																							
	TPGT 110204 RFY	0,4																							
	TPGT 110208 RFY	0,8																							
	TPGT 1103003 RFY	0,03																							
	TPGT 110301 RFY	0,1																							
	TPGT 110302 RFY	0,2																							
	TPGT 110304 RFY	0,4																							
	TPGT 110308 RFY	0,8																							
	TPGT 160302 RFY	0,2																							
	TPGT 160304 RFY	0,4																							
	TPGT 160308 RFY	0,8																							
Light Cut 	TPGW 080202	0,2																							
	TPGW 110302	0,2																							
	TPGW 110304	0,4																							
	TPGW 110308	0,8																							

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

60° Triangle Type

11° Relief

With Insert Hole



Dimensions (mm)				
TP	ℓ	∅d (IC)	s	d ₁
0802..	8,2	4,76	2,38	2,4
1103..	11,0	6,35	3,18	3,4
1604..	16,5	9,525	4,76	4,4



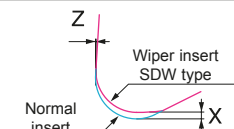
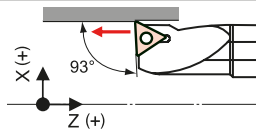
⇒ E20

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Metals
S	Super Alloy
H	Hardened Steel

TPG_

● G-Class Handed Chipbreaker

Application	Shape	ISO Cat. No.	r	Carbide												Cermet		Carbide	
				Coated						ZX-Coated		Uncoated				P	K	S	N
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Finishing-Light Cutting	 L/RW	TPGT 080202 LW TPGT 080204 LW	0,2 0,4																
		TPGT 110302 LW TPGT 110304 LW	0,2 0,4																
		TPGT 160402 LW TPGT 160404 LW	0,2 0,4																
		TPGT 080202 RW TPGT 080204 RW	0,2 0,4																
Finishing-Light Cutting	 L/RSD	TPGT 110302 LSD TPGT 110304 LSD TPGT 110308 LSD	0,2 0,4 0,8																
		TPGT 160402 LSD TPGT 160404 LSD TPGT 160408 LSD	0,2 0,4 0,8																
		TPGT 110302 RSD TPGT 110304 RSD TPGT 110308 RSD	0,2 0,4 0,8																
		TPGT 160402 RSD TPGT 160404 RSD TPGT 160408 RSD	0,2 0,4 0,8																
Finishing-Light Cutting	 L/RSDW	TPGX 110304 L-SDW TPGX 110308 L-SDW	0,4 0,8																
		TPGX 160404 L-SDW TPGX 160408 L-SDW	0,4 0,8																
		TPGX 110304 R-SDW TPGX 110308 R-SDW	0,4 0,8																
		TPGX 160404 R-SDW TPGX 160408 R-SDW	0,4 0,8																



(Note) The cutting point position of the SDW type does not follow the ISO standard.

Wenn using on a boring holder with a 93° approach angle, there is a need to revise the cutting point position (refer to right table) relative to using standard inserts.

r	Compensation (mm)	
	X (Diam. change)	Z
0,4	+0,12 (∅: +0,24)	-0,02
0,8	+0,12 (∅: +0,24)	-0,02

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

T TRIANGLE TYPE

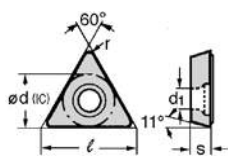
INSERTS FOR TURNING

11° Positive Inserts

60° Triangle Type

11° Relief

With Insert Hole



Dimensions (mm)				
TP	l	ød (IC)	s	d1
0802..	8,2	4,76	2,38	2,4
0902..	9,6	5,56	2,38	2,8
1103..	11,0	6,35	3,18	3,4
1603..	16,5	9,525	3,18	4,4
1604..	16,5	9,525	4,76	4,4



⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPMT

● M-Class

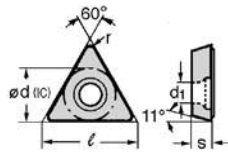
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Finishing	 NFB	TPMT 080202 NFB	0,2																		○	○	○	○				
		TPMT 080204 NFB	0,4																		○	○	○	○				
		TPMT 090202 NFB	0,2																		○	○	○	○				
		TPMT 090204 NFB	0,4																		○	○	○	○				
		TPMT 110302 NFB	0,2																		○	○	○	○				
		TPMT 110304 NFB	0,4																		○	○	○	○				
Light Cut	 NLB	TPMT 110308 NFB	0,8																		○	○	○	○				
		TPMT 160304 NFB	0,4																		○	○	○	○				
		TPMT 160404 NFB	0,4																		○	○	○	○				
		TPMT 160408 NFB	0,8																		○	○	○	○				
		TPMT 080202 NLB	0,2				○			○	○	○										○	○					
		TPMT 080204 NLB	0,4				○			○	○	○										○	○					
Finishing	 NFK	TPMT 090202 NLB	0,2				○			○	○	○									○	○						
		TPMT 090204 NLB	0,4				○			○	○	○										○	○					
		TPMT 110302 NLB	0,2				○			○	○	○										○	○					
		TPMT 110304 NLB	0,4				○			○	○	○										○	○					
		TPMT 110308 NLB	0,8				○			○	○	○										○	○					
		TPMT 160304 NLB	0,4				○			○	○	○										○	○					
Finishing	 NLU	TPMT 160308 NLB	0,8				○			○	○	○									○	○						
		TPMT 160404 NFK	0,4																			●	●					
		TPMT 110304 NFK	0,8																			●	●					
		TPMT 160404 NFK	0,4																			●	●					
		TPMT 160408 NFK	0,8																			●	●					
		TPMT 080202 NLU	0,2							●	●	●											○	○				
Finishing	 NLU	TPMT 080204 NLU	0,4							●	●	●	▲									●	○	○				
		TPMT 090202 NLU	0,2									○										○	○	○	○			
		TPMT 090204 NLU	0,4									○										○	○	○	○			
		TPMT 110302 NLU	0,2											●								○	○	○	○			
		TPMT 110304 NLU	0,4											●	●	▲						○	●	○	○			
		TPMT 110308 NLU	0,8											●	●	▲						○	●	○	○			

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

60° Triangle Type

11° Relief

With Insert Hole



Dimensions (mm)					
TP	l	ød (IC)	s	d1	
0802..	8,2	4,76	2,38	2,4	
1103..	11,0	6,35	3,18	3,4	
1604..	16,5	9,525	4,76	4,4	



⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPMT

● M-Class

Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T3	T1	T15	G1	EH	EH	H1
Light Cut	 Depth of cut (mm) Feed rate (mm/rev)	 NSU	TPMT 080202 NSU	0,2																										
			TPMT 080204 NSU	0,4																										
			TPMT 110302 NSU	0,2																										
			TPMT 110304 NSU	0,4																										
Light -Medium Cut	 Depth of cut (mm) Feed rate (mm/rev)	 NMU	TPMT 110308 NSU	0,8																										
			TPMT 160404 NSU	0,4																										
			TPMT 160408 NSU	0,8																										
Light -Medium Cut	 Depth of cut (mm) Feed rate (mm/rev)	 NSF	TPMT 110304 NMU	0,4																										
			TPMT 110308 NMU	0,8																										
			TPMT 160404 NMU	0,4																										
			TPMT 160408 NMU	0,8																										
Light -Medium Cut	 Depth of cut (mm) Feed rate (mm/rev)	 NSF	TPMT 160404 NSF	0,4																										
			TPMT 160408 NSF	0,8																										

TPMT/-H NSF

● M-Class

Application		Shape	ISO Cat. No.	r	Carbide Coated ZX-Coated Cermet Carbide Uncoated																									
					AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Light -Medium Cut		 NSF	TPMH 110304 NSF	0,4				●	●	●																				
			TPMH 110308 NSF	0,8				●	●	●																				
			TPMT 160404 NSF	0,4				●	○	●																				
			TPMT 160408 NSF	0,8				●	●	●																				

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

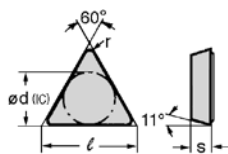
T TRIANGLE TYPE

INSERTS FOR TURNING

11° Positive Inserts

60° Triangle Type

5°/11° Relief
Without Insert Hole



Dimensions (mm)				
TP/TB	l	∅d (IC)	s	d ₁
0601..	6,9	3,97	1,59	-
0902..	9,6	5,56	2,38	-
1103..	11,0	6,35	3,18	-
1603..	16,5	9,525	3,18	-



P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

TPGR

● G-Class Handed Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T30	T10	T15	G1	EH	EH	H1
Finishing-Light Cut	 L-W	TPGR 090202 LW	0,2																		○				
		TPGR 090204 LW	0,4																		○				
		TPGR 090208 LW	0,8																		○				
		TPGR 110302 LW	0,2																○	○	○				
		TPGR 110304 LW	0,4																○	○	●				
		TPGR 110308 LW	0,8																○	○	○				
		TPGR 160302 LW	0,2																○	○	○				
		TPGR 160304 LW	0,4																○	○	●				
		TPGR 160308 LW	0,8																○	○	●				
Finishing-Light Cut	 R-W	TPGR 090202 RW	0,2																		○				
		TPGR 090204 RW	0,4																		○				
		TPGR 090208 RW	0,8																		○				
		TPGR 110302 RW	0,2																○	○	○				
		TPGR 110304 RW	0,4																○	○	●				
		TPGR 160302 RW	0,2																○	○	○				
		TPGR 160304 RW	0,4																○	○	●				
		TPGR 160308 RW	0,8																○	○	●				

TBG

● G-Class No Chipbreaker/ Handed Chipbreaker

Fin-Light-C. Light Cut	Application	Shape	ISO Cat. No.	r	Carbide												Cermet		Carbide											
					Coated						ZX-Coated						Uncoated													
					P	M	P/M	K	H	K _S	M _S	P _M	P	K	S	N														
			TBGN 060104	0,4	AC805P	AC810P	AC820P	AC8025P	AC830P	AC6020M	AC6030M	AC6040M	AC610M	AC630M	AC405K	AC415K	AC420K	AC503U	AC510U	AC520U	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
			TBGR 060104 LW	0,4																										

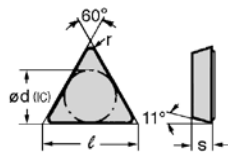
TPGN

● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H1
Light Cut		TPGN 090202	0,2																									
		TPGN 090204	0,4																									
		TPGN 090208	0,8																									
		TPGN 110302	0,2																									
		TPGN 110304	0,4																									
		TPGN 110308	0,8																									
		TPGN 160302	0,2																									
		TPGN 160304	0,4																									
		TPGN 160308	0,8																									

● = Euro stock
○ = Japan stock
▲ = To be replaced by new item

60° Triangle Type

 11°/20° Relief
Without Insert Hole


Dimensions (mm)				
TP	l	ød (IC)	s	d1
0902..	9,6	5,56	2,38	-
1103..	11,0	6,35	3,18	-
1603..	16,5	9,525	3,18	-
2204..	22,0	12,7	4,76	-



P Steel
M Stainless Steel
K Cast Iron
N Non-Ferrous Metals
S Super Alloy
H Hardened Steel

TPMR

● M-Class

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated						Uncoated			
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Finishing	 NFK	TPMR 090204 NFK	0,4																
		TPMR 110302 NFK	0,2																
		TPMR 110304 NFK	0,4																
Light-Medium Cut	 NSF	TPMR 110308 NFK	0,8																
		TPMR 160304 NFK	0,2																
		TPMR 160308 NFK	0,4																
Light-Medium Cut	 NUJ	TPMR 160312 NFK	1,2																
		TPMR 110304 NSF	0,4																
		TPMR 110308 NSF	0,8																
Light-Medium Cut	 NUJ	TPMR 160304 NSF	0,4																
		TPMR 160308 NSF	0,8																
		TPMR 160312 NSF	1,2																
Light-Medium Cut	 NUJ	TPMR 110304 NUJ	0,4																
		TPMR 110308 NUJ	0,8																
		TPMR 160304 NUJ	0,4																
		TPMR 160308 NUJ	0,8																

TPMN

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated						Uncoated			
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Medium Cut		TPMN 160308	0,8																
		TPMN 220408	0,8																

TEGN

● E-Class No Chipbreaker

Application	Shape	ISO Cat. No.	r	Carbide												Cermets		Carbide	
				Coated						ZX-Coated						Uncoated			
				P	M	P _M	K	H	K _S	M _S	P _M	P	K	S	N				
Light-Medium Cut		TEGN 160308	0,8																

● = Euro stock
 ○ = Japan stock
 ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

V DIAMOND TYPE

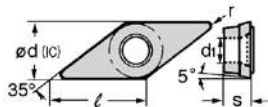
INSERTS FOR TURNING

5° Positive Inserts

35° Diamond Type

5° Relief

With Insert Hole



Dimensions (mm)				
VB	l	ød (IC)	s	d ₁
1102..	11,0	6,35	2,38	2,38
1103..	11,1	6,35	3,18	2,8
1604..	16,6	9,525	4,76	4,4



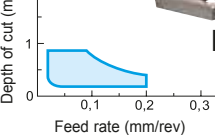
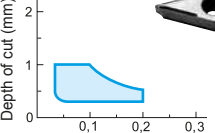
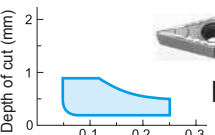
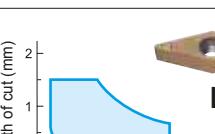
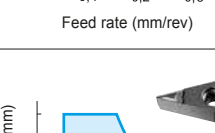
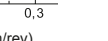
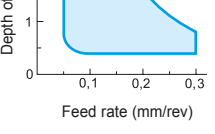
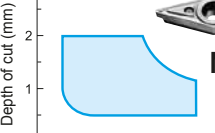
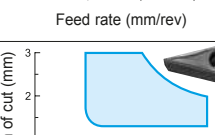
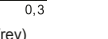
⇒ D38

⇒ E21~22

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VBMT/-W

● M-Class

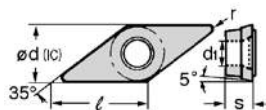
Application		Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T3	T10	T15	G1	EH	EH	H	
Finishing	Depth of cut (mm)  Feed rate (mm/rev)	 NFB	VBMT 110302 NFB VBMT 110304 NFB VBMT 110308 NFB	0,2 0,4 0,8															○	○	○	○					
			VBMT 160404 NFB VBMT 160408 NFB	0,4 0,8																●	●	●	●				
Finishing	Depth of cut (mm)  Feed rate (mm/rev)	 NFP	VBMT 110202 NFP VBMT 110204 NFP	0,2 0,4																●	●	●	●				
			VBMT 160404 NFP VBMT 160408 NFP	0,4 0,8																●	●	●	●				
Finishing	Depth of cut (mm)  Feed rate (mm/rev)	 NLU	VBMT 110302 NLU VBMT 110304 NLU VBMT 110308 NLU	0,2 0,4 0,8		○	○	●	●	○	●	●							○	○	○	○					
			VBMT 160404 NLU VBMT 160408 NLU	0,4 0,8	●	●	○	○	●	○	●									●	○	○	○	○			
Light Cut	Depth of cut (mm)  Feed rate (mm/rev)	 NLB	VBMT 110302 NLB VBMT 110304 NLB VBMT 110308 NLB	0,2 0,4 0,8			○	○	○	○	○	○							○	○							
			VBMT 160404 NLB VBMT 160408 NLB VBMT 160412 NLB	0,4 0,8 1,2		○	○	○	○	○										●	●	●	●				
Light Cut	Depth of cut (mm)  Feed rate (mm/rev)	 NSU	VBMT 110204 NSU VBMT 110208 NSU VBMT 110304 NSU	0,4 0,8 0,4	●	●	●	●	●	●	▲	●							●								
			VBMT 110308 NSU VBMT 160404 NSU	0,8 0,4	●	●	●	○	●	●	▲	●	●	●						●	●	●	○	○			
Light Cut	Depth of cut (mm)  Feed rate (mm/rev)	 NSK	VBMT 160408 NSU VBMT 160412 NSU	0,8 1,2	●	●	●	○	●	●	▲	●	●	●					●	●	●	○	○				
Light Cut	Depth of cut (mm)  Feed rate (mm/rev)	 NSK	VBMT 110204 NSK VBMT 110208 NSK	0,4 0,8		●	●	●																			
			VBMT 160404 NSK VBMT 160406 NSK VBMT 160408 NSK VBMT 160412 NSK	0,4 0,6 0,8 1,2		●	●	●	●	●										●	●						
Light - Medium Cut	Depth of cut (mm)  Feed rate (mm/rev)	 NMU	VBMT 160408 NMU	0,8	●																						
Light Cut			VBMT 160404 VBMT 160408	0,4 0,8																							

- Euro stock
- Japan stock
- ▲ To be replaced by new item

35° Diamond Type

5° Relief

With Insert Hole



Dimensions (mm)				
VB	ℓ	ϕd (IC)	s	d ₁
1103..	11,1	6,35	3,18	2,8
1604..	16,6	9,525	4,76	4,4



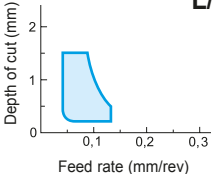
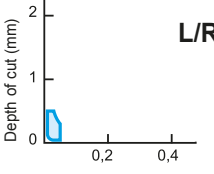
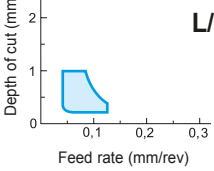
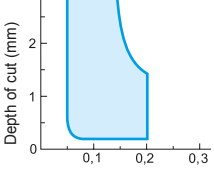
⇒ D38

⇒ E21~22

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VBGT

● G-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G1	EH	EH	H	
Finishing	 L/RFX 	VBGT 110301 LFX VBGT 110302 LFX VBGT 110304 LFX	0,1 0,2 0,4																○	○	○	○					
		VBGT 160402 LFX VBGT 160404 LFX	0,2 0,4																			○	○				
		VBGT 110301 RFX VBGT 110302 RFX VBGT 110304 RFX	0,1 0,2 0,4																○	○	○	○					
		VBGT 160402 RFX VBGT 160404 RFX	0,2 0,4																			○	○				
Finishing	 L/RFYS 	VBGT 1103003 LFYS VBGT 110301 LFYS VBGT 110302 LFYS VBGT 110304 LFYS VBGT 110308 LFYS	0,03 0,1 0,2 0,4 0,8															○	○	○	○						
		VBGT 1103003 RFYS VBGT 110301 RFYS VBGT 110302 RFYS VBGT 110304 RFYS VBGT 110308 RFYS	0,03 0,1 0,2 0,4 0,8																○	○	○	○					
Finishing	 L/RFY 	VBGT 110301 LFY VBGT 110302 LFY VBGT 110304 LFY	0,1 0,2 0,4																○	○	○	○					
		VBGT 110301 RFY VBGT 110302 RFY VBGT 110304 RFY	0,1 0,2 0,4																○	○	○	○					
Light Cut	 NSI 	VBGT 110301M NSI VBGT 110302M NSI VBGT 110304M NSI VBGT 110308M NSI	<0,1 <0,2 <0,4 <0,8																○	○	○	○					
		VBGT 160401M NSI VBGT 160402M NSI VBGT 160404M NSI VBGT 160408M NSI	<0,1 <0,2 <0,4 <0,8																	○	○	○	○				

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

V DIAMOND TYPE

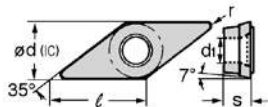
INSERTS FOR TURNING

7° Positive Inserts

35° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)				
VC	l	ød (IC)	s	d1
0802..	8,3	4,76	2,38	2,3
1103..	11,1	6,35	3,18	2,8
1604..	16,6	9,525	4,76	4,4

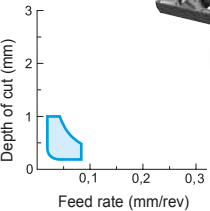
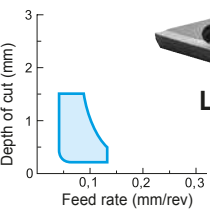
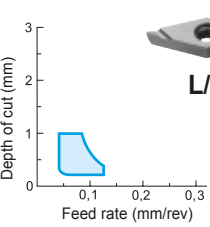
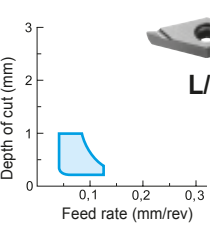
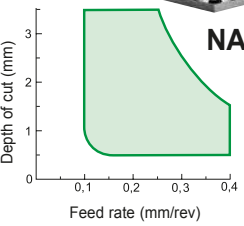
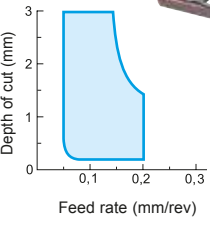
⇒ D39

"S...- SV...C" - Type
(⇒ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VCGT

● G-Class

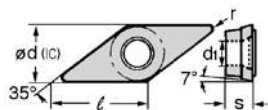
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T30	T15	T10	T15	G1	EH	EH	H1
Finishing	 NFC 	VC GT 080204M NFC	<0,4																○							
		VC GT 110301M NFC	<0,1																●	●						
		VC GT 110302M NFC	<0,2																●	●		○	○			
		VC GT 110304M NFC	<0,4																●	●		○	○			
Finishing	 L/RFX 	VC GT 110301 LFX	0,1																○	●	●					
		VC GT 110302 LFX	0,2																○	●	●					
		VC GT 110304 LFX	0,4																	○	●	●				
		VC GT 110301 RFX	0,1																	○	●	●				
Finishing	 L/RFY 	VC GT 110302 RFX	0,2																○	●	●					
		VC GT 110304 RFX	0,4																	○	●	●				
		VC GT 110301 LFY	0,1																	○	○	○				
		VC GT 110302 LFY	0,2																	○	○	○				
Finishing	 L/RFY 	VC GT 110304 LFY	0,4																○	○	○					
		VC GT 110301 RFY	0,1																	○	○	○				
		VC GT 110302 RFY	0,2																	○	○	○				
		VC GT 110304 RFY	0,4																	○	○	○				
Light Cut	 NAG 	VC GT 110302 NAG	0,2																							
		VC GT 110304 NAG	0,4																							
		VC GT 160408 NAG	0,8																							
		VC GT 160412 NAG	1,2																							
Light Cut	 NSI 	VC GT 110301M NSI	<0,1																●	●	●	○				
		VC GT 110302M NSI	<0,2																●	●	●	○				
		VC GT 110304M NSI	<0,4																●	●	●	○				
		VC GT 110308M NSI	<0,8																●	●	●	○				
		VC GT 160401M NSI	<0,1																●	●	●	○				
		VC GT 160402M NSI	<0,2																●	●	●	○				
		VC GT 160404M NSI	<0,4																●	●	●	○				
		VC GT 160408M NSI	<0,8																●	●	●	○				

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

35° Diamond Type

7° Relief

With Insert Hole



Dimensions (mm)					
VC	l	Ød (IC)	s	d1	
0802..	8,3	4,76	2,38	2,3	
1103..	11,1	6,35	3,18	2,8	
1604..	16,6	9,525	4,76	4,4	



⇒ D39

"S...- SV...C" - Type
(⇒ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VCMT

● M-Class

Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T15	T30	T10	T15	G10	EH	EH	H
Finishing	 NFB Depth of cut (mm) Feed rate (mm/rev)	VCMT 080202 NFB VCMT 080204 NFB	0,2 0,4															○	○	○	○				
		VCMT 160404 NFB VCMT 160408 NFB	0,4 0,8															○	○	○	○				
Finishing	 NLU Depth of cut (mm) Feed rate (mm/rev)	VCMT 160404 NLU VCMT 160408 NLU	0,4 0,8			○				○	○							○	○	○	○				
						○				○	○							○	○	○	○				
Light Cut	 NLB Depth of cut (mm) Feed rate (mm/rev)	VCMT 080202 NLB VCMT 080204 NLB	0,2 0,4			○				○	○	○						○	○						
		VCMT 160404 NLB VCMT 160408 NLB	0,4 0,8			○				○	○	○						○	○						
Light Cut	 NSU Depth of cut (mm) Feed rate (mm/rev)	VCMT 080204 NSU	0,4							○	○	●													
		VCMT 110302 NSU VCMT 110304 NSU VCMT 110308 NSU	0,2 0,4 0,8							○	●	●		○											
Light Cut	 NSK Depth of cut (mm) Feed rate (mm/rev)	VCMT 160404 NSU VCMT 160408 NSU	0,4 0,8	●	●	○			●	●	▲	●	●	●		●	●	●							
		VCMT 160404 NSK VCMT 160408 NSK	0,4 0,8	●	●	●											●	●							

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

W TRIGON TYPE

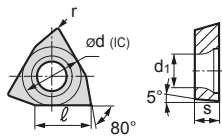
INSERTS FOR TURNING

5° Positive Inserts

80° Trigon Type

5° Relief

With Insert Hole



Dimensions (mm)				
WB	ℓ	∅d (IC)	s	d1
0601..	3,2	3,97	1,59	2,2
0802..	4,6	4,76	2,38	2,4



⇒ E23

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WBGT

● G-Class Handed Chipbreaker

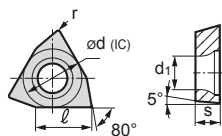
Application	Shape	ISO Cat. No.	r	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	T1:	T3:	T1:	T1:	G1:	EH	EH	H1
Finishing	 L/RFW	WBGT 060102 LFW WBGT 060104 LFW	0,2 0,4																		○	○		○				
		WBGT 080202 LFW WBGT 080204 LFW	0,2 0,4																		○	○		○				
		WBGT 060102 RFW WBGT 060104 RFW	0,2 0,4																		○	○		○				
		WBGT 080202 RFW WBGT 080204 RFW	0,2 0,4																		○	○		○				
Finishing	 L/RFX	WBGT 060102 LFX WBGT 060104 LFX	0,2 0,4																●	●								
		WBGT 080202 LFX WBGT 080204 LFX	0,2 0,4																○	○								
		WBGT 060102 RFX WBGT 060104 RFX	0,2 0,4																●	●								
		WBGT 080202 RFX WBGT 080204 RFX	0,2 0,4																○	○								
Finishing	 L/RFY	WBGT 0601003 LFY WBGT 060101 LFY WBGT 060102 LFY WBGT 060104 LFY	0,03 0,1 0,2 0,4																○	○			○	○	○	○		
		WBGT 080201 LFY WBGT 080202 LFY WBGT 080204 LFY	0,1 0,2 0,4																				○	○	○	○		
		WBGT 060101 RFY WBGT 060102 RFY WBGT 060104 RFY	0,1 0,2 0,4																○	○			○	○	○	○		
		WBGT 080201 RFY WBGT 080202 RFY WBGT 080204 RFY	0,1 0,2 0,4																				○	○	○	○		
Finishing ~ Light Cut	 L/RW	WBGT 060102 LW WBGT 060104 LW	0,2 0,4															●	●			○	●					
		WBGT 060102 RW WBGT 060104 RW	0,2 0,4															●	●			○	●					

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

80° Trigon Type

11° Relief

With Insert Hole



Dimensions (mm)				
WP	ℓ	ød (IC)	s	d ₁
1102..	4,3	6,35	2,38	2,8
1603..	6,5	9,525	3,18	4,4



P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Metals
S	Super Alloy
H	Hardened Steel

WPMT ○○○○ NLB

● M-Class

Application	Shape	ISO Cat. No.	r	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	AC1	T15	T30	T10	T15	G1	EH	EH	H
Light Cut Depth of cut (mm) Feed rate (mm/rev)	 NLB	WPMT 110204 NLB	0,4																												
		WPMT 160308 NLB	0,8																												

- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Pos.
Inserts

C

D

K

R

S

T

V

W

External Holders

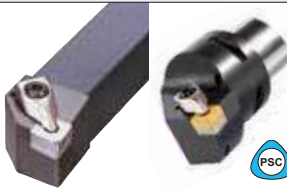
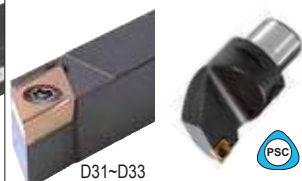
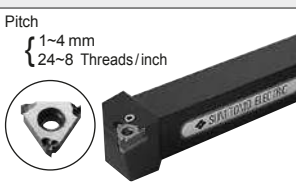
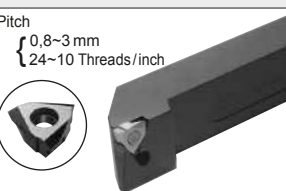
D1 ~ D46

D

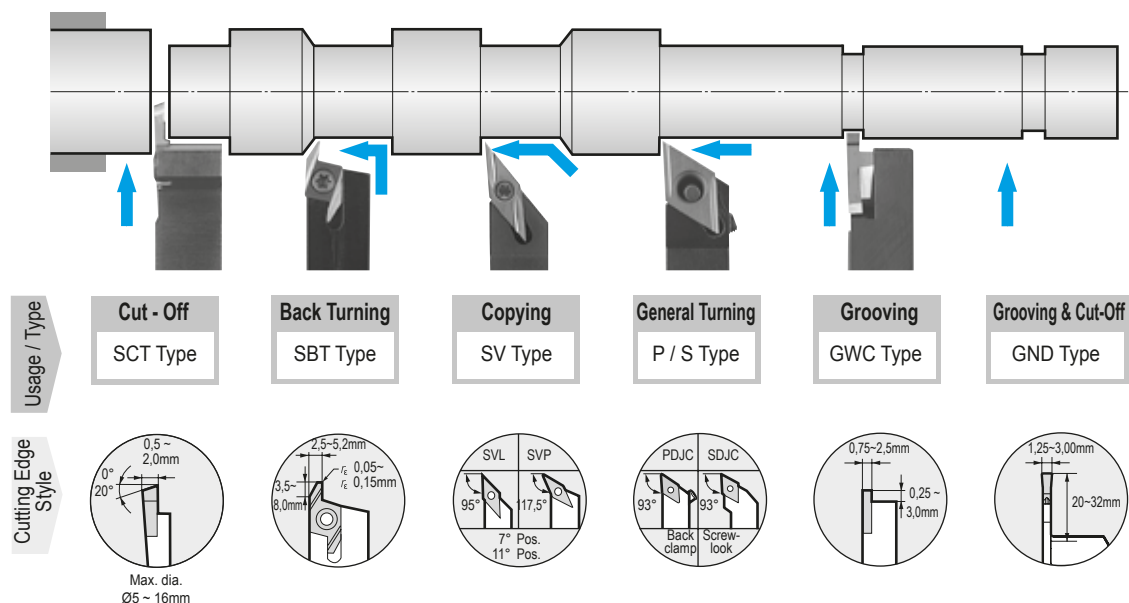


External
Holders

Selection	Turning Holder Series	D2 - 7
ISO	Turning Holder Identification Table	D8
	Calculation of The Cutting Edge Position	D9
T-REX Tool Holders	SumiTurn T-REX Tool Holders	D10 - 11
For High Performance Turning	D Type Double Clamp Holders	
	DC Type Holders	D12
	DD Type Holders	D13
	DS Type Holders	D14
	DT Type Holders	D15
	DV Type Holders	D16
	DW Type Holders	D17
For General Turning	P Type Lever Lock and M Type Top & Hole Clamp Holders	
	PC Type Holders.....	D18
	PD Type Holders	D19
	PS Type Holders	D20-21
	PT / MT Type Holders	D22-23
	PW / MW Type Holders	D24
For Solid CBN Inserts	C Type Clamp On Holders	D25-26
	X Type Dimple Lock Holders	D27
Selection	Mini Holders Series	D28-29
Special for Back Facing	SBT Type Mini Holders	D30
Small Product Turning	PC / SC Type Mini Holders	D31
	PD / SD Type Mini Holders	D32-33
	PR Type Holders	D34
	SR Type Holders	D35
	SS Type Mini Holders	D36
	ST Type Mini Holders	D37
	SV Type Copying Holders	D38-39
For High Performance Turning	Polygon-Shank Holders	D40
	D Type Double Clamp Holders	
	PSC**DC Type Holders	D41
	PSC**DD Type Holders	D41
	PSC**DS Type Holders	D41
	PSC**DT Type Holders	D42
	PSC**DW Type Holders	D42
For General Turning	S Type Srew Clamp	
	PSC**SC Type Holders	D43
	PSC**SD Type Holders	D43
	PSC**SS Type Holders	D43
	PSC**ST Type Holders	D44
	PSC**SV Type Holders	D44-45

Application	For Neg. Inserts	For Pos. Inserts	Special Type for Hardened Steel
General Turning	P Type Lever Lock Type  ⇒ D18~D22	P Type Lever Lock Type  ⇒ D31, D32	D Type Double Lock Type  ⇒ D12~D17 ⇒ D41~D42
	M Type Double Lock Type  ⇒ D23~D24	S Type Screw On Type  D31~D33 ⇒ D35~D37 ⇒ D43~D45	C Type Top Clamp Type  ⇒ D25~D26
	T-REX  ⇒ D10~D11	S Type Screw On Type  ⇒ D38~D39 ⇒ D43~D45	D Type Double Lock Type  ⇒ D13, D16 ⇒ D41
	GNDS, GNDM, GNDMS Type General Grooving  ⇒ F16, F18, F20 ⇒ F32, F33	GNDL, GNDLS Type Deep Grooving  ⇒ F16, F22 ⇒ F32, F33	GNDF, GNDFS Type Axial Grooving  ⇒ F28, F30 ⇒ F32, F33
Parting-Off Grooving	SCT and GWC Type  ⇒ F34~F36 ⇒ F34	Sumi Grip and Sumi Grip Jr.  ⇒ F37~F42	GWB Type Hard Grooving  ⇒ M42 ⇒ M43
	LTE and STE Type Pitch { 1~4 mm { 24~8 Threads/inch  ⇒ F46	THE Type Pitch { 0.8~3 mm { 24~10 Threads/inch  ⇒ Stock in Jp.	BNGG-TT Type Hard Threading Pitch 1~3 mm  ⇒ M44

External Turning



Holder Selection for Autolathe

	Offset - 0 mm Type Holders	Offset - 0.5 mm Type Holders
Tooling	Holder Reference Position 0 mm Work Guide Bush	Holder Reference Position 0.5 mm Work Guide bush
Features	Program correction is not necessary.	The position of cutting edge can be put in near guide bush through a program correction.
Holder Types	SDJC-X, SDAC-X, SDLC-X, SCAC-X, SVJC-X (⇒ Stock in Japan)	PDJC, SDJC, SDAC, PCLC, SCAC, STAC, SVLC

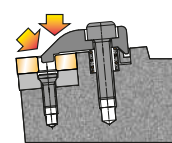


External Tool Holder Series

Lever Lock System



Double Lock (D)

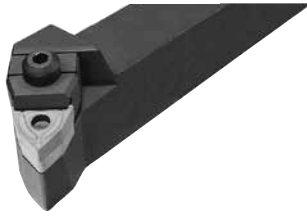


D Type "Double Clamp" Holders
for high performance machining

TOOLING SELECTION

Application			General Turning & Facing		General Turning & Copying			General Turning	
Insert Type			80° Diamond Type		55° Diamond Type		T-REX 55°	90° Square Type	
System									
Screw Lock System	S Type Mini Holder						—	—	
			⇒ D31	⇒ D31	⇒ D32	⇒ D32			⇒ D36
Lever Lock System	P Type (* Side Lever Lock Type)		—	—		—	—	—	—
			—	—	⇒ D33				
Lever Lock System	P Type (* Side Lever Lock Type)			—		—	—		
			⇒ D31		⇒ D32			⇒ D20	⇒ D20
Lever Lock System	P Type (* Side Lever Lock Type)					—	—		
			⇒ D18	⇒ D18	⇒ D19			⇒ D21	⇒ D21
Top-On Clamp System	C & M Type			—	—	—	—		
			⇒ D25					⇒ D25	⇒ D25
Double Lock (D) Dimple Lock (X)	D & X Type					—			—
			⇒ D12	⇒ D27	⇒ D13		⇒ D11	⇒ D27	
Double Lock (D) Dimple Lock (X)	D & X Type		—	—			—		
					⇒ D13	⇒ D13		⇒ D14	⇒ D14

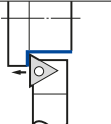
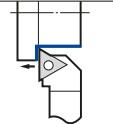
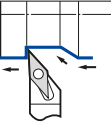
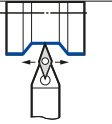
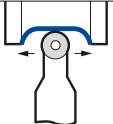
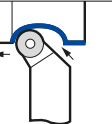
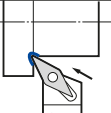
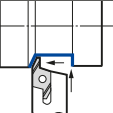
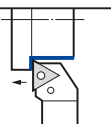
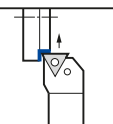
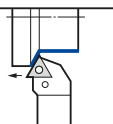
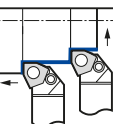
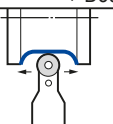
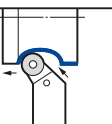
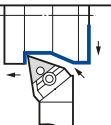
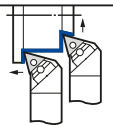
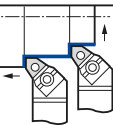
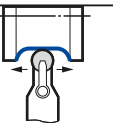
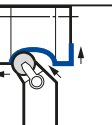
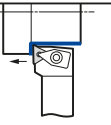
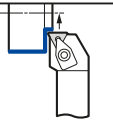
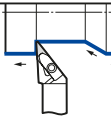
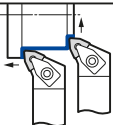
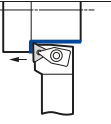
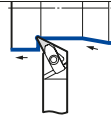
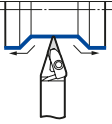
Top-On Clamp System



Screw Lock System



TOOLING SELECTION

Application		General Turning			Copying		General Turning	Special Turning	
Insert Type		60° Triangle Type			35° Diamond Type		80° Trigon Type	Round and Special Purpose Inserts	
System									
Screw Lock System	S Type Mini Holder	 STAC ⇒ D37	 STGC ⇒ D37	—	 SVJB SVLC ⇒ D38 ⇒ D39	 SVVB ⇒ D38	—	 SRDC ⇒ D35	 SRSC ⇒ D35
		—	—	—	 SVPB SVPC ⇒ D38 ⇒ D39	—	—	 SBT ⇒ D30	—
Lever Lock System	P Type	 PTGN ⇒ D22	 PTFN ⇒ D22	 PTTN ⇒ D22	—	—	 PWLN ⇒ D24	 PRDC ⇒ D34	 PRGC ⇒ D34
		—	—	—	—	—	—	—	—
Top-On Clamp System	C & M Type	 MTJN ⇒ D23	 MTXN ⇒ D23	—	—	—	 MWLN ⇒ D24	 CRDN ⇒ D26	 CRSN ⇒ D26
Double Lock (D) Dimple Lock (X)	D & X Type	 DTJN ⇒ D15	 DTFN ⇒ D15	—	 DVJN ⇒ D16	—	 DWLN ⇒ D17	—	—
		 DTGN ⇒ D15	—	—	 DVQN ⇒ D16	 DVVN ⇒ D16	—	—	—

Polygon - Shank Holder - Produced According to ISO 26623-1

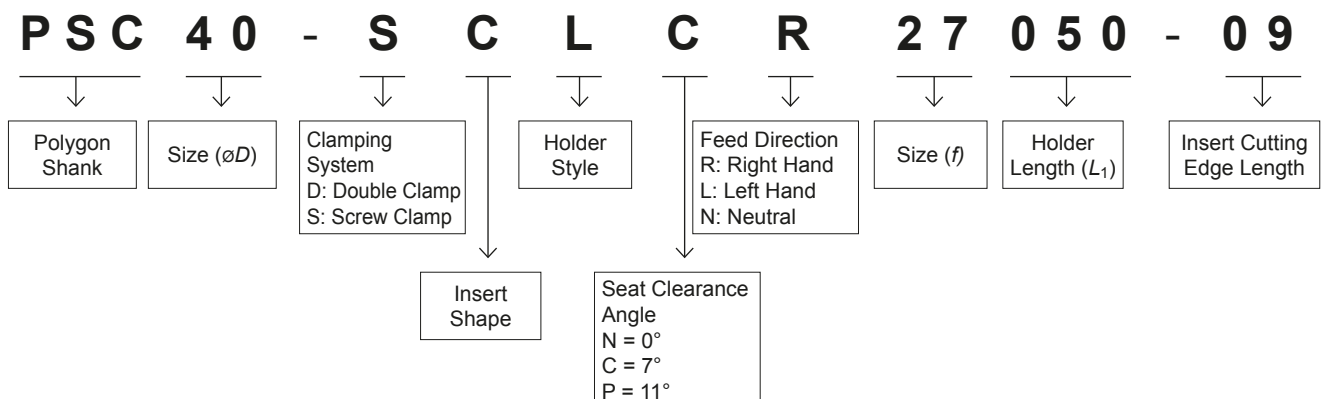


Negative Insert Type

TOOLING SELECTION

Application			General Turning & Facing		General Turning & Copying			General Turning	
Insert Type			80° Diamond Type		55° Diamond Type			90° Square Type	
System									
Screw Lock System	S Type Mini Holder		SCLC ⇒ D43	—	SDJC ⇒ D43	—	—	—	SSBC ⇒ D43
			—	—	SDHC ⇒ D43	—	— SRSCR	—	—
Double Lock (D)	D Type		DCLN ⇒ D41	—	DDJN ⇒ D41	—	—	—	—
			—	—	DDHN ⇒ D41	—	—	DSBN ⇒ D41	—

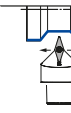
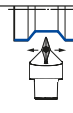
Classification System for Polygon - Shank Holder



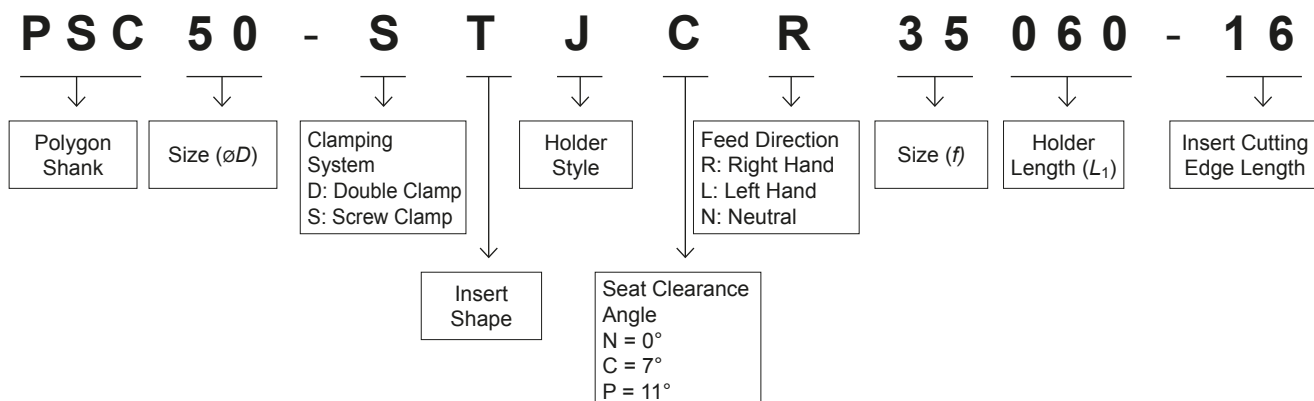


Positive Insert Type

TOOLING SELECTION

Application		General Turning			Copying		General Turning	Special Turning	
Insert Type		60° Triangle Type			35° Diamond Type		80° Trigon Type	Round and Special Purpose Inserts	
System									
Screw Lock System	S Type Mini Holder	 STJC ⇒ D44	—	—	 SVJB ⇒ D44 SVHB ⇒ D44	 SVJC ⇒ D45 SVHC ⇒ D45	—	—	—
		—	—	—	 SVVB ⇒ D44	 SVVC ⇒ D45	—	—	—
Double Lock (D)	D Type	 DTJN ⇒ D42	—	—	—	—	 DWLN ⇒ D42	—	—
		—	—	—	—	—	—	—	—

Classification System for Polygon - Shank Holder



ISO Holders Identification

■ Catalogue Classification System For SEC-Tool Holders

D	T	F	N	R	25	25	M	16	E
Clamping System Chart 1	Holder Style Chart 3	Feed Direction Chart 5	Shank Width Chart 7	Insert Shape Chart 2	Seat Clearance Angle Chart 4	Shank Height Chart 6	Shank Length Chart 8	Insert Size Chart 9	For D-Type Euro-Inserts D11150600

DTFNR2525M16



Clamping: Double clamp system
Shape: Triangular insert with 91° approach angle
Shank: H = 25mm, W = 25mm, L = 150mm

Chart 1

Clamping System					
Symbol	Clamp Types	Example of Structure	Symbol	Clamp Types	Example of Structure
C	Top Clamp		M	Top & Hole Clamp Type	
D	Double Clamp		P	Lever Lock Type (Insert is Supported by 1 face)	
E	Pin Lock Type (Insert is supported by 1 face)		S	Screw Clamp Type	

Chart 2

Insert Shape					
Symbol	Insert Shape	Symbol	Insert Shape	Symbol	Insert Shape
A	Parallelogram 85°	M	Rhombic 86°		
B	Parallelogram 82°	O	Octagonal		
C	Diamond 80°	P	Pentagonal		
D	Diamond 55°	R	Round		
E	Diamond 75°	S	Square		
F	Diamond 50°	T	Triangular		
H	Hexagonal	V	Diamond 35°		
K	Parallelogram 55°	W	Trigon		
L	Rectangular				

Chart 4

Symbol	Relief Angle	Symbol	Relief Angle
A	3°		
B	5°		
C	7°		
D	15°		
E	20°		
F	25°		
G	30°		
N	0°		
P	11°		
O	Special Angle		

Chart 5

Feed Direction					
Symbol	Right Hand Feed	Symbol	Neutral Feed	Symbol	Left Hand Feed
R		N		L	

Chart 3

Holder Style					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		Nil	L		With Offset
B		Nil	N		Nil
D		Nil	R		With Offset
E		Nil	S		With Offset
F		With Offset	T		With Offset
G		With Offset	U		With Offset
J		With Offset	W		With Offset
K		With Offset	Y		With Offset

Chart 6

Shank Height		Shank Width	
Symbol	Height (mm)	Symbol	Width (mm)
12	12	12	12
16	16	16	16
20	20	20	20
25	25	25	25
32	32	32	32
40	40	40	40
50	50	50	50
00	Round shank,		Shank Diameter is Shown for Round Shank,

2 digits are used for each dimension in mm.

Chart 7

Chart 8

Shank Length	
Symbol	Length (mm)
F	80
H	100
K	125
M	150
N	160
P	170
Q	180
S	250
T	300
U	350

For some Products, a Hyphen is used Instead of an alphabet.

Chart 9

Cutting Edge		For Round Inserts:	
Symbol	Length (mm)		
	Eg. for Triangle Inserts:		
06	6,9	10	10
08	8,2	12	12
09	9,6	16	16
11	11,0	20	20
16	16,5	25	25
22	22,0	32	32
27	27,5		
33	33,0		

Cutting Edge Dimensions by Corner Radius

(This table shows X and Y dimensions based on 0° approach angle cutting edge inclination)

Holders			Dimensions(mm)			Holders			Dimensions(mm)		
Symbol	Shapes	Corner Shapes	R	X	Y	Symbol	Shapes	Corner Shapes	R	X	Y
A			0,4	0,291	—	K			0,4	0,024	0,089
			0,8	0,581	—				0,8	0,048	0,178
			1,2	0,872	—				1,2	0,072	0,268
			1,6	1,162	—				1,6	0,096	0,357
			2,4	1,743	—				2,4	0,143	0,535
B			0,4	0,089	0,024	L			0,4	0,040	0,040
			0,8	0,178	0,048				0,8	0,079	0,079
			1,2	0,268	0,072				1,2	0,119	0,119
			1,6	0,357	0,096				1,6	0,159	0,159
			2,4	0,535	0,143				2,4	0,238	0,238
D			0,4	0,164	0,164	N			0,4	0,463	0,263
			0,8	0,329	0,329				0,8	0,925	0,471
			1,2	0,493	0,493				1,2	1,388	0,707
			1,6	0,658	0,658				1,6	1,850	0,943
			2,4	0,986	0,986				2,4	2,776	1,414
E			0,4	0,396	0,229	S			0,4	0,164	0,164
			0,8	0,793	0,458				0,8	0,329	0,329
			1,2	1,190	0,687				1,2	0,493	0,493
			1,6	1,587	0,916				1,6	0,658	0,658
			2,4	2,381	1,374				2,4	0,986	0,986
F			0,4	—	0,291	T			0,4	0,396	0,229
			0,8	—	0,581				0,8	0,793	0,458
			1,2	—	0,872				1,2	1,190	0,687
			1,6	—	1,162				1,6	1,587	0,916
			2,4	—	1,743				2,4	2,381	1,374
G			0,4	0,291	—	U			0,4	0,253	0,058
			0,8	0,581	—				0,8	0,506	0,116
			1,2	0,872	—				1,2	0,759	0,175
			1,6	1,162	—				1,6	1,013	0,233
			2,4	1,743	—				2,4	1,519	0,350
J			0,4	0,344	0,033	Y			0,4	0,002	0,033
			0,8	0,687	0,079				0,8	0,005	0,066
			1,2	1,031	0,118				1,2	0,008	0,099
			1,6	1,375	0,157				1,6	0,011	0,132
			2,4	2,062	0,236				2,4	0,017	0,198

Calculation of the Nose Radius Dimensions

(Unit in mm)

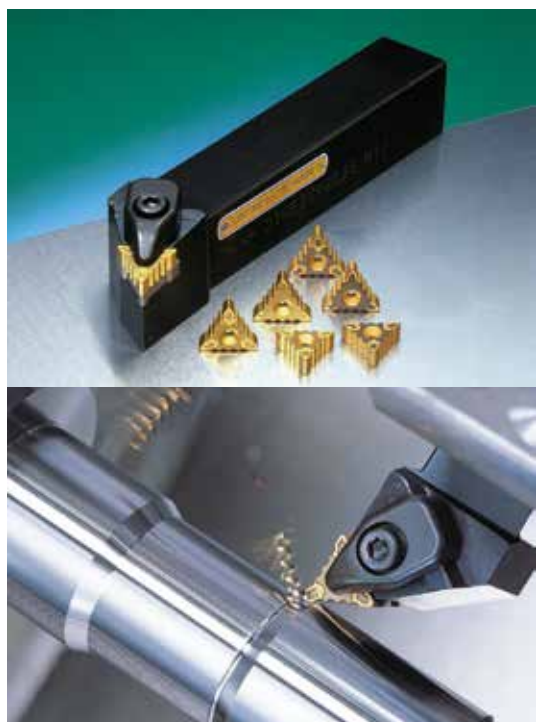
Insert Shape	Calculation
	$B = \frac{3}{2}A - R$
	$B = (\sqrt{2}-1) \times (\frac{A}{2} - R)$
	$B = \{ \frac{1}{\sin(\theta/2)} - 1 \} \times (\frac{A}{2} - R)$

Figures of „A“ and „R“ to calculate Figure „B“

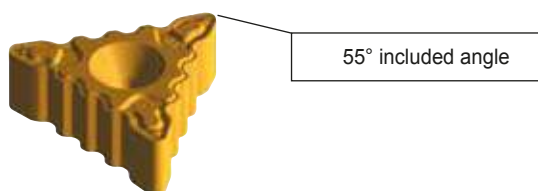
I.C. size (inch)	„A“ dimensions (mm)	Nose symbol	Size (inch)	„R“ dimension (mm)
— 5/32	3,9688	02	(0)	0,203
— 6/32	4,7625	04	1/64	0,397
— 7/32	5,5562	08	2/64	0,794
2/8 8/32	6,3500	12	3/64	1,191
— (0)	7,9375	16	4/64	1,588
3/8 —	9,5250	24	6/64	2,389
4/8 —	12,7000			
5/8 —	15,8750			
6/8 —	19,0500			
8/8 —	25,4000			

SumiTurn T-REX Tool Holders

RIGIDITY - ECONOMY - PRECISION



- T-REX clamping for maximum rigidity 50% more cutting edges than a DNMG Insert



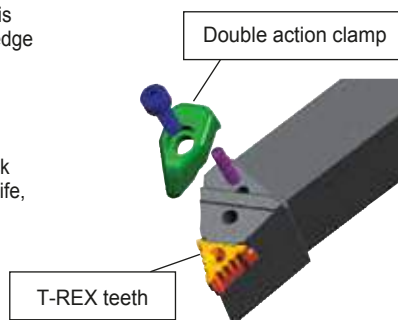
Advantages

● T-REX Inserts for Maximum Economy

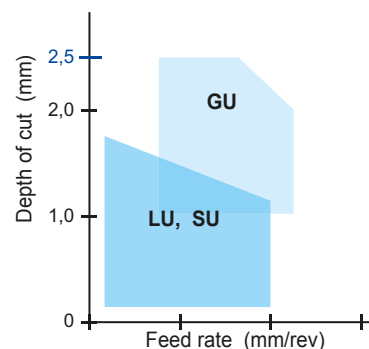
With 6 cutting edges and a 55 degree included angle - T-Rex is the intelligent alternative to profile turning with a traditional 4 edge DNMG insert.

● Biting Performance from T-REX Teeth

The double clamp tool holder and powerful teeth of T-REX lock the insert to eliminate movement, dramatically improving tool life, machining accuracy, and cutting edge security.

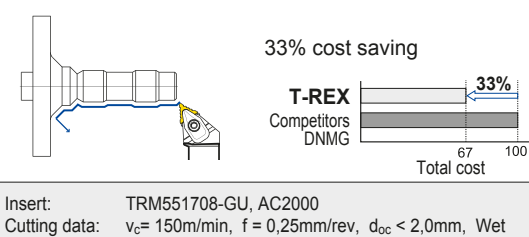


Application Range

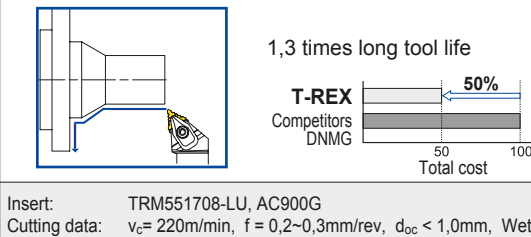


Application Examples

● 20Cr4 Shaft



● 25CrMo4 Gear



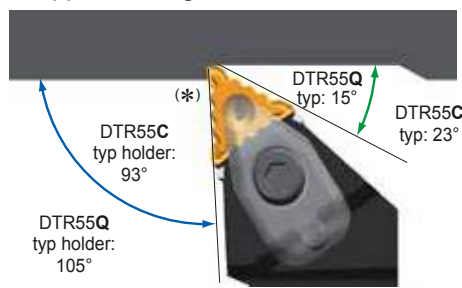
Recommendations

● Depth of Cut



Max. $a_p = 2,5\text{ mm}$

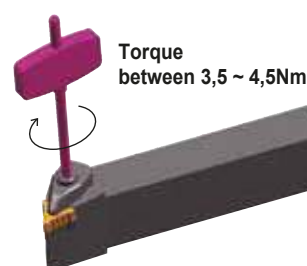
● Approach Angle



(*) Angle of major cutting edge

C-Type: 95,5°
Q-Type: 107,5°

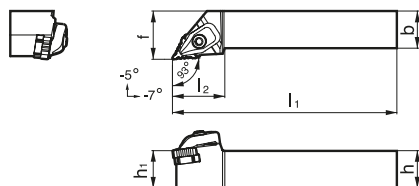
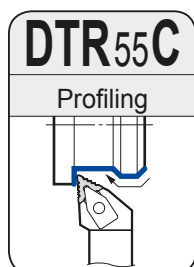
● Insert Clamping



Recommended Tightening Torque (N·m)

● = Eurostock
○ = Japanstock

External Turning & Copying



■ Holders

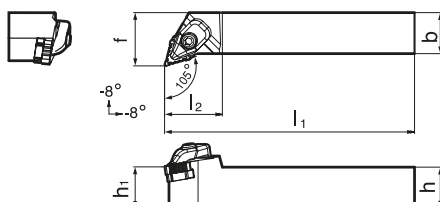
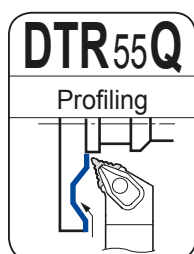
Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	L ₁	L ₂	f	
DTR 55C-R/L 2020-K17	●	●	20	20	20	125	35	25	
DTR 55C-R/L 2525-M17	●	●	25	25	25	150	35	32	

■ Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N	TSW040	TRX10 ^(*)

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	L ₁	L ₂	f	
DTR 55Q-R/L 2020-K17	●	●	20	20	20	125	35	28,5	
DTR 55Q-R/L 2525-M17	●	●	25	25	25	150	35	32	

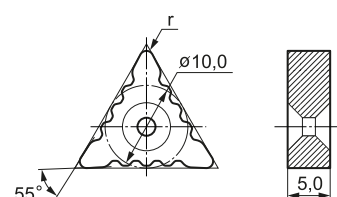
■ Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N	TSW040	TRX10 ^(*)

(*) Note: Wrench (TRX) for shim clamp screw is not included.

■ Inserts

Applic.	Shape	Ordering No.	r	Coated Carbide					Coated Cermert
				AC810P	AC8025P ^{New}	AC820P	AC830P	AC630M	T3000Z
Fine Finishing		TRM 551704-FL	0,4		○				○
		551708-FL	0,8		○				
Finishing		TRM 551704-LU	0,4	●	○	●			○
		551708-LU	0,8	●	○	●			○
		551712-LU	1,2	●	○	●			○
		TRM 551704-SU	0,4		○	○		●	○
		551708-SU	0,8		○	○		●	○
		551712-SU	1,2		○	○		●	○
Light Cut		TRM 551704-GU	0,4	●	○	●	●	●	
		551708-GU	0,8	●	○	●	●	●	
		551712-GU	1,2	●	○	●	●	○	



Application **P** Steel
M Stainless steel

● Recommended Cutting Conditions

— Cutting speed (m/min)

Grade		Coated Carbide					Coated Cermert
		AC810P	AC8025P	AC820P	AC830P	AC630M	T3000Z
Work materials	Low carbon steel	220 400	150 350	150 350	120 300	120 300	100 400
	Alloy steel	150 300	100 250	100 250	80 200	80 230	100 250
	Stainless steel				50 150	100 160	
Application range	Finishing	○	○	○	○	○	○
	Medium cutting	○	○	○	○	○	○
	Interrupted cutting		○	○	○	○	○

◎ Preferred choice

○ Suitable

External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts CN



■ Characteristics

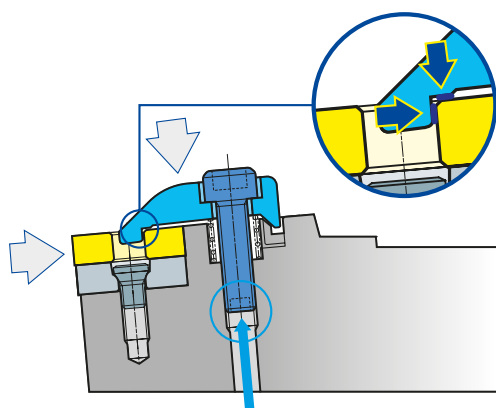
Insert is clamping firmly for improved fracture resistance.

High indexing accuracy improves machining accuracy.

Insert can be changed from below the holder. Suitable for high efficiency machining and interrupted cutting in hardened steel.

■ Clamp Mechanism

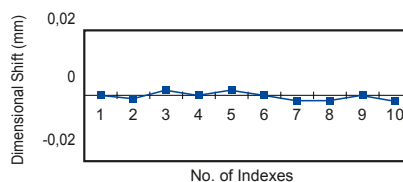
Secured in two directions and supported by two faces.



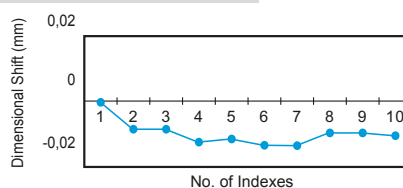
Insert can be changed from below the holder.

■ Index Accuracy Comparison (Length Wise)

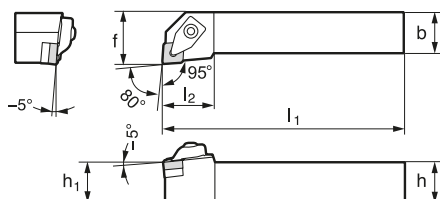
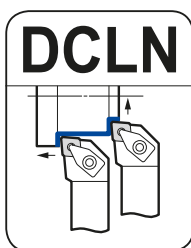
D Type Tool Holders



Lever Lock



General Turning and Facing



■ Inserts



Eg.

N-GU

- ① CNMG 120408 N-GU
- ② CNMG 160608 N-GU
- ③ CNMM 190612 N-HG
- ④ CNMM 250924 N-HU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-2		5,0 (N·m)	CNS1204	BFTX0409N 3,4 (N·m)	TRX15 ^(*)	LH040 LH025	①
SCP-3		5,0 (N·m)	CNS1606	BFTX0509N 5,0 (N·m)	TRX20 ^(*)	LH040 LH025	②
SCP-5		5,0 (N·m)	CNS1906	BFTX0511N 5,0 (N·m)	TRX20 ^(*)	LH040 LH025	③
SCP-6		6,0 (N·m)	CNS2509	BFTX0615N 7,5 (N·m)	TRD25 ^(*)	LH060	④

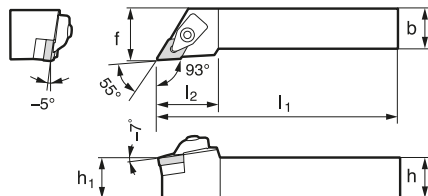
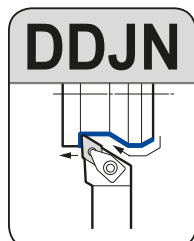
(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.

■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
DCLN R/L 2020 K12	●	●	20	20	20	125	32	25	
DCLN R/L 2525 M12	●	●	25	25	25	150	32	32	
DCLN R/L 2525 M16	●	●	25	25	25	150	32	32	
DCLN R/L 3232 P16	●	●	32	32	32	170	32	40	
DCLN R/L 3232 P19	●	●	32	32	32	170	42	40	
DCLN R/L 4040 S19	●	●	40	40	40	250	42	50	
DCLN R/L 4040 S25	●	●	40	40	40	250	53	50	

General Turning and Copying

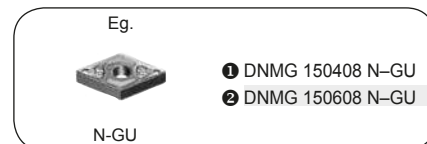


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)					
	R	L	h	h ₁	b	l ₁	l ₂	f
DDJN R/L 2020 K15			20	20	20	125	38	25
DDJN R/L 2020 K15E	●	●	20	20	20	125	38	25
DDJN R/L 2525 M15	□		25	25	25	150	38	32
DDJN R/L 2525 M15E	●	●	25	25	25	150	38	32

■ Inserts



Eg.



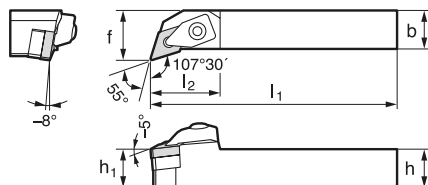
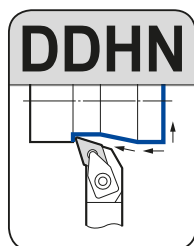
N-GU

- ① DNMG 150408 N-GU
- ② DNMG 150608 N-GU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
			DNS1504				①
			DNS1506	BFTX0409N	TRX15 ^(*)	LH040	②
			DNS1504				①
			DNS1506				②

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)					
	R	L	h	h ₁	b	l ₁	l ₂	f
DDHN R/L 2020 K15E	●	●	20	20	20	125	35	25
DDHN R/L 2525 M15E	●	●	25	25	25	150	35	32

■ Inserts



Eg.



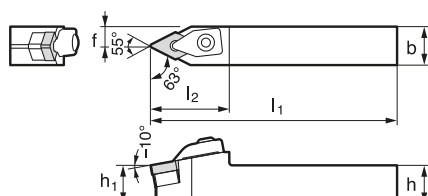
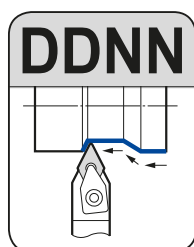
N-GU

- ② DNMG 150608 N-GU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
			DNS1506	BFTX0409N	TRX15 ^(*)	LH040	②

(*) Note: Wrench (TRX) for shim clamp screw is not included.

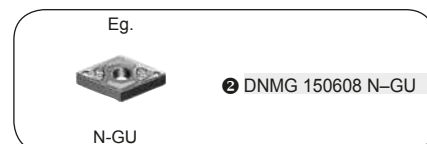


■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)					
		h	h ₁	b	l ₁	l ₂	f
DDNN N 2020 K15E	●	20	20	20	125	40	10,5
DDNN N 2525 M15E	●	25	25	25	150	40	13,0

■ Inserts



Eg.



N-GU

- ② DNMG 150608 N-GU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
			DNS1506	BFTX0409N	TRX15 ^(*)	LH040	②

(*) Note: Wrench (TRX) for shim clamp screw is not included.

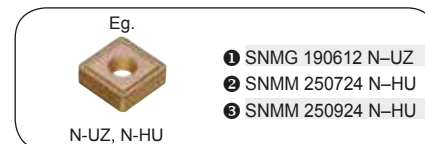
External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts SN

General Turning and Facing



■ Inserts

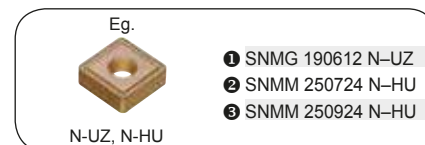


■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-5		5,0 ^(Nm)	SNS1906	BFTX0511N 5,0 ^(Nm)	TRX20 ^(*)	LH040, LH025	①
SCP-6		6,0 ^(Nm)	SNS2507	BFTX0615N	TRD25 ^(*)	LH060	②
			SNS2509	7,5 ^(Nm)			③

(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.

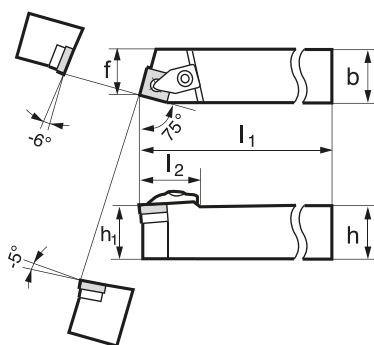
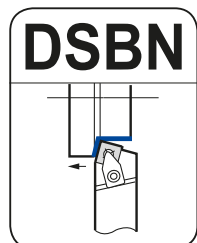
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-5		5,0 ^(Nm)	SNS1906	BFTX0511N 5,0 ^(Nm)	TRX20 ^(*)	LH040, LH025	①
SCP-6		6,0 ^(Nm)	SNS2507	BFTX0615N	TRD25 ^(*)	LH060	②
			SNS2509	7,5 ^(Nm)			③

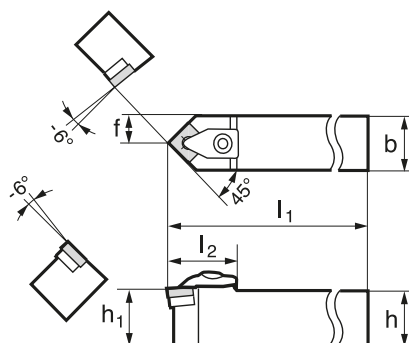
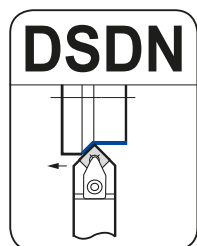
(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
DSBN R/L 3232 P19	●	●	32	32	32	170	45	27	
DSBN R/L 4040 S2507	●	●	40	40	40	250	58	35	
DSBN R/L 4040 S2509	●	●	40	40	40	250	58	35	

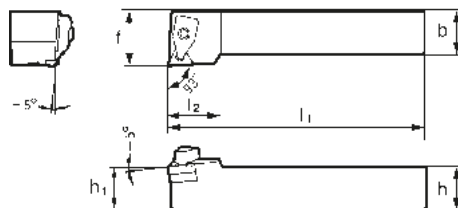
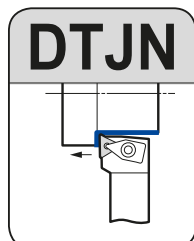


■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)						
		h	h ₁	b	l ₁	l ₂	f	
DSDN N 3232 P19	●	32	32	32	170	50	16	
DSDN N 4040 S2507	●	40	40	40	250	63	20	
DSDN N 4040 S2509	●	40	40	40	250	63	20	

General Turning and Facing

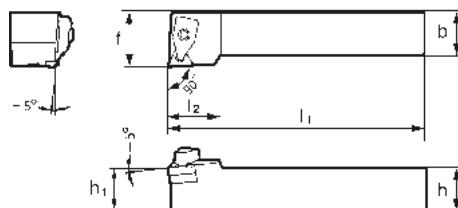


Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	
	R	L	h	h ₁	b	l ₁	l ₂	f									
DTJN R/L 2020 K16	●	●	20	20	20	125	31	25	SCP-1	5,0 	TNS1604	BFTX0307N	2,0 	TRX10 ^(*)	LH040		
DTJN R/L 2525 M16	●	●	25	25	25	150	31	32									

(*) Note: Wrench (TRX) for shim clamp screw is not included.

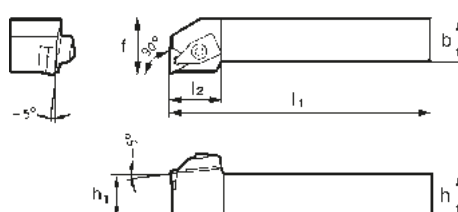
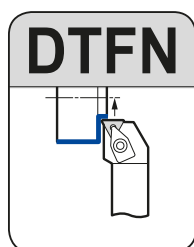


Holders

Above figures show right hand tools.

Above figures show right hand tools.																	
Ordering No.	Stock		Dimensions (mm)							Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	
	R	L	h	h ₁	b	l ₁	l ₂	f									
DTGN R/L 2020 K16	□		20	20	20	125	31	25		SCP-1	5,0 	TNS1604	BFTX0307N	2,0 	TRX10 ^(*)	LH040	
DTGN R/L 2525 M16	●	●	25	25	25	150	31	32									

(*) Note: Wrench (TRX) for shim clamp screw is not included.



Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	
	R	L	h	h ₁	b	l ₁	l ₂	f									
DTFN R/L 2020 K16	□		20	20	20	125	30	25	SCP-1	5.0 	TNS1604	BFTX0307N	2.0 	TRX10 ^(*)	LH040		
DTFN R/L 2525 M16	●	●	25	25	25	150	30	32									

(*) Note: Wrench (TRX) for shim clamp screw is not included.

Inserts



Spare Parts

							Insert
SCP-1		5,0 (N·m)	TNS1604	BFTX0307N	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.

Inserts



Spare Parts

							Insert
SCP-1		5,0 (N·m)	TNS1604	BFTX0307N	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.

Inserts



Spare Parts

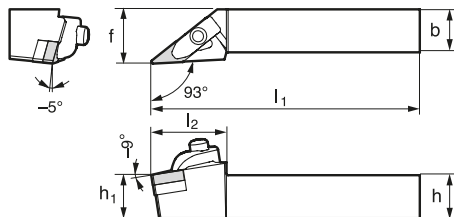
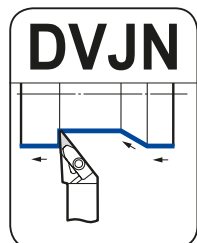
							Insert
SCP-1		5,0 (N·m)	TNS1604	BFTX0307N	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.

External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts VN

General Turning and Copying

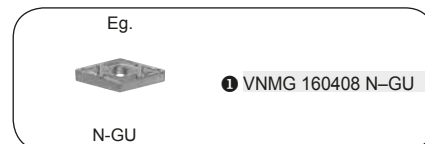


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)					
	R	L	h	h ₁	b	L ₁	L ₂	f
DVJN R/L 2020 K16	●	●	20	20	20	125	35	25
DVJN R/L 2525 M16	●	●	25	25	25	150	35	32

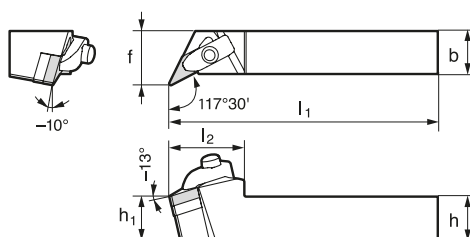
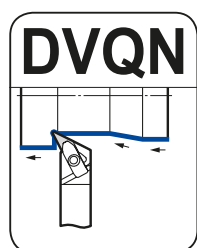
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-4		5,0 (N·m)	VNS1604	BFTX0307N 2,0 (N·m)	TRX10 ^(*)	LH040 LH025	1

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)					
	R	L	h	h ₁	b	L ₁	L ₂	f
DVQN R/L 2020 K16	●	●	20	20	20	125	35	25
DVQN R/L 2525 M16	●	●	25	25	25	150	35	32

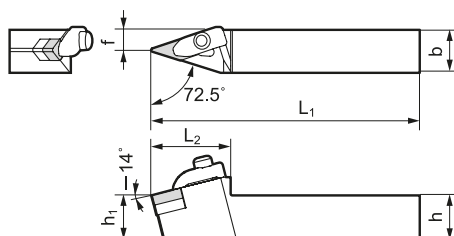
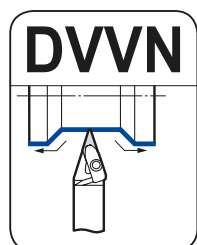
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-4		5,0 (N·m)	VNS1604	BFTX0307N 2,0 (N·m)	TRX10 ^(*)	LH040 LH025	1

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

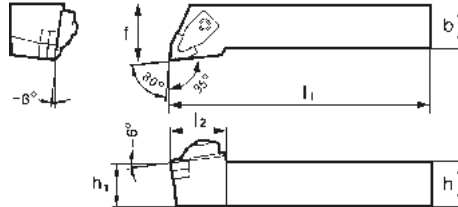
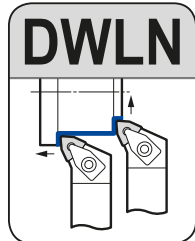
Ordering No.	Stock	Dimensions (mm)					
		h	h ₁	b	L ₁	L ₂	f
DVVN N 2020 K16	●	20	20	20	125	37	10,0
DVVN N 2525 M16	●	25	25	25	150	37	12,5

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-4		5,0 (N·m)	VNS1604	BFTX0307N 2,0 (N·m)	TRX10 ^(*)	LH040 LH025	1

(*) Note: Wrench (TRX) for shim clamp screw is not included.

General Turning and Facing



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
DWLN R/L 2020 K08	●	●	20	20	20	125	32	25	
DWLN R/L 2525 M08	●	●	25	25	25	150	32	32	

■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP-2		5,0 (Net)	WNS0804	BFTX0409N 3,4 (Net)	TRX15 ^(*)	LH040 LH025	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.

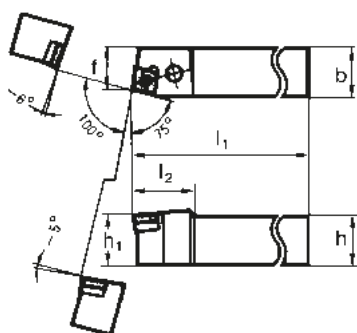
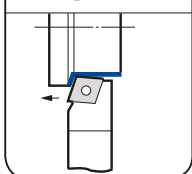
External Tool Holders P Type (Lever Lock)

Tool Holders for neg. Inserts CN

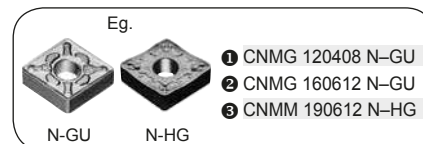
General Turning and Facing



PCBN



Inserts



Spare Parts

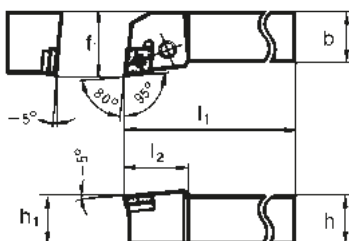
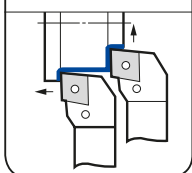
Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL4SD	LCS42BS-SD	LSC42SD	LSP4SD	LH030	1
LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030	2
LCL6SD	LCS6B-SD	LSC63SD	LSP6SD	LH040	3

Holders

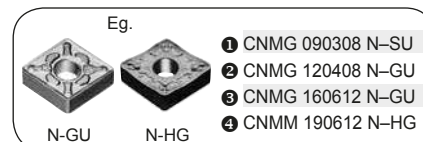
Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PCBN R/L 2020 K12	●	□	20	20	20	125	27	17	
PCBN R/L 2525 M12	●	●	25	25	25	150	27,7	22	
PCBN R/L 3225 P12	□	●	32	32	25	170	27,7	22	
PCBN R/L 2525 M16	□	●	25	25	25	150	31,7	22	
PCBN R/L 3225 P16	□	●	32	32	25	170	31,7	22	
PCBN R/L 3232 P19	●	●	32	32	32	170	37,9	27	

PCLN



Inserts



Spare Parts

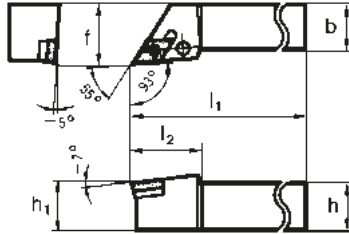
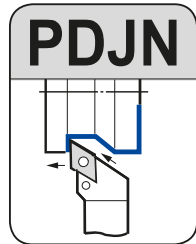
Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LSC32SD	LSP3SD	LH025	1
LCL4SD	LCS4CA LCS42BS-SD	LSC42SD	LSP4SD	LH030	2
LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030	3
LCL6SD	LCS6B-SD	LSC63SD	LSP6SD	LH040	4

Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PCLN R/L 1616 H09	●	●	16	16	16	100	25,7	20	
PCLN R/L 2020 K09	●	□	20	20	20	125	27	25	
PCLN R/L 2525 M09	□	□	25	25	25	150	27	32	
PCLN R/L 1616 H12	●	●	16	16	16	100	26,1	20	
PCLN R/L 2020 K12	□	□	20	20	20	125	27,4	25	
PCLN R/L 2525 M12	□	□	25	25	25	150	28	32	
PCLN R/L 3225 P12	●	●	32	32	25	170	28	32	
PCLN R/L 2525 M16	●	□	25	25	25	150	32,6	32	
PCLN R/L 3225 P16	●	□	32	32	25	170	32,6	32	
PCLN R/L 3232 P16	●	●	32	32	32	170	32,6	40	
PCLN R/L 2525 M19	□	●	25	25	25	150	37	32	
PCLN R/L 3225 P19	□	□	32	32	32	170	38	32	
PCLN R/L 3232 P19	□	□	32	32	32	170	38	40	
PCLN R/L 4040 S19	□	□	40	40	40	250	37,8	50	

General Turning and Facing

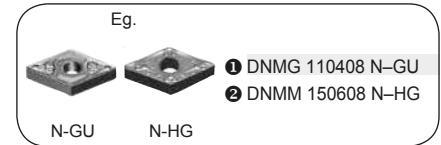


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PDJN R/L 1616 H11	●	●	16	16	16	100	30	20	
PDJN R/L 2020 K11	●	●	20	20	20	125	30	25	
PDJN R/L 2525 M11	●	●	25	25	25	150	30	32	
PDJN R/L 2020 K15	●	●	20	20	20	125	34,7	25	
PDJN R/L 2525 M15	●	●	25	25	25	150	34,7	32	
PDJN R/L 3225 P15	●	●	32	32	25	170	34,7	32	
PDJN R/L 4025 P15	□	□	40	40	25	170	35	28,7	

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3D-SD	LCS3TB-SD	LSD32SD	LSP3SD	LH025	1
LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030	2

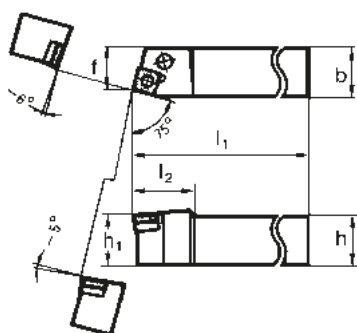
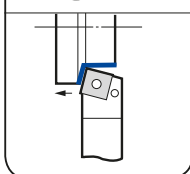
External Tool Holders P Type (Lever Lock)

Tool Holders for neg. Inserts SN

General Turning and Chamfering



PSBN



■ Inserts



■ Spare Parts

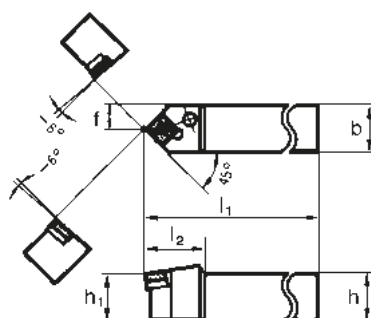
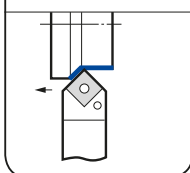
Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	①
LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	②
LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	③

■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PSBN R/L 2020 K12	●	●	20	20	20	125	27,5	17	
PSBN R/L 2525 M12	●	●	25	25	25	150	27,5	22	
PSBN R/L 2525 M15	●	●	25	25	25	150	32	22	
PSBN R/L 3225 P15	●	●	32	32	25	170	32	22	
PSBN R/L 3232 P19	●	●	32	32	32	170	39,2	27	

PSDN



■ Inserts



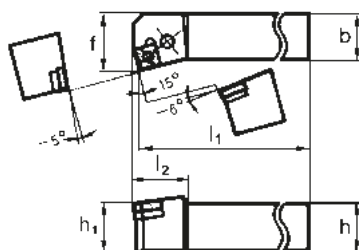
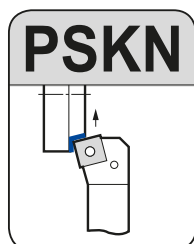
■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS 3TB-SD	LSS32SD	LSP3SD	LH025	①
LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	②
LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	③

■ Holders

Ordering No.	Stock	Dimensions (mm)						
		h	h ₁	b	l ₁	l ₂	f	
PSDN N 1616 H09	●	16	16	16	100	21	8,3	
PSDN N 2020 K12	●	20	20	20	125	27,6	10,3	
PSDN N 2525 M12	●	25	25	25	150	27,6	12,8	
PSDN N 3225 P12	●	32	32	25	170	27,6	12,8	
PSDN N 3225 P19	□	32	32	25	170	40,6	13	
PSDN N 3232 P19	●	32	32	32	170	40,6	16,5	

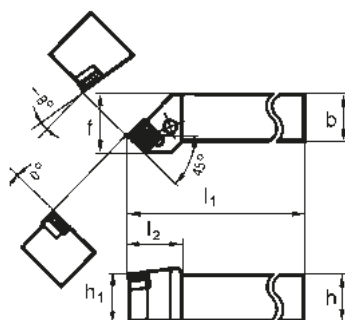
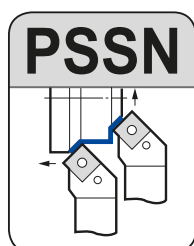
General Turning and Facing



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f							
PSKN R/L 2020 K12	●	□	20	20	20	125	22,7	17							
PSKN R/L 2525 M12	●	●	25	25	25	150	22,7	32		LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	❶
PSKN R/L 3225 P12	□	□	32	32	25	170	22,7	32							
PSKN R/L 2525 M15	□	□	25	25	25	150	32	32							
PSKN R/L 3225 P15	□	●	32	32	25	170	32	32		LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	❷
PSKN R/L 3232 P15	□	□	32	32	32	170	32	40							
PSKN R/L 3232 P19	□	□	32	32	32	170	33,7	40		LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	❸



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f							
PSSN R/L 2020 K12	●	●	20	20	20	125	29,3	25							
PSSN R/L 2525 M12	●	●	25	25	25	150	29,3	32		LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	❶
PSSN R/L 3225 P12	●	□	32	32	25	170	29,3	32							
PSSN R/L 2525 M15	●	●	25	25	25	150	32	32							
PSSN R/L 3225 P15	□	□	32	32	25	170	32	32		LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	❷
PSSN R/L 3232 P15	●	□	32	32	32	170	32	40							
PSSN R/L 3232 P19	●	●	32	32	32	170	40,2	40		LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	❸

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert

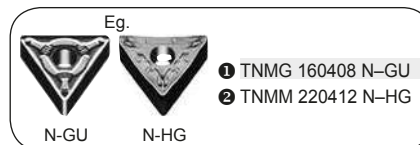
External Tool Holders P Type (Lever Lock)

Tool Holders for neg. Inserts TN

General Turning and Facing



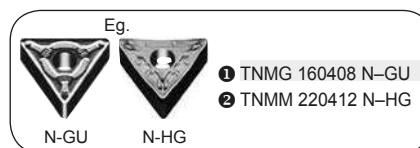
■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	1
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	2

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	1
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	2

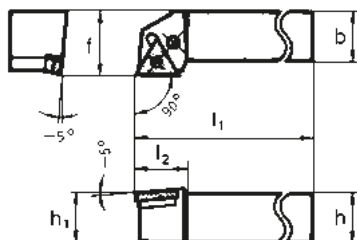
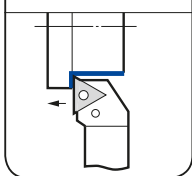
■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	1
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	2

PTGN

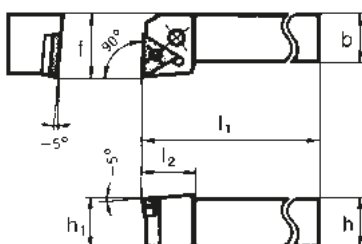
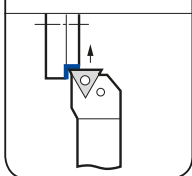


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PTGN R/L 1616 H16	●	●	16	16	16	100	20	20	
PTGN R/L 2020 K16	●	●	20	20	20	125	20	25	
PTGN R/L 2525 M16	●	●	25	25	25	150	22,2	32	
PTGN R/L 2525 M22	●	●	25	25	25	150	28,7	32	
PTGN R/L 3225 P22	●	□	32	32	25	170	28,7	32	
PTGN R/L 3232 P22	●	●	32	32	32	170	28,7	32	

PTFN

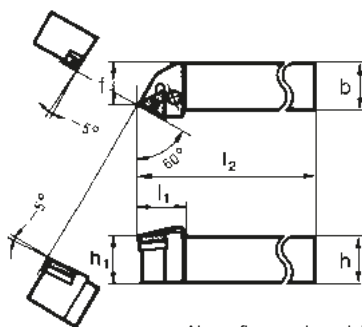
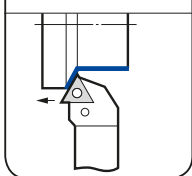


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PTFN R/L 1616 H16	●	●	16	16	16	100	19,7	20	
PTFN R/L 2020 K16	●	●	20	20	20	125	20,2	25	
PTFN R/L 2525 M16	●	●	25	25	25	150	20,2	32	
PTFN R/L 2525 M22	●	□	25	25	25	150	25,2	32	
PTFN R/L 3225 P22	●	●	32	32	25	170	25,2	32	

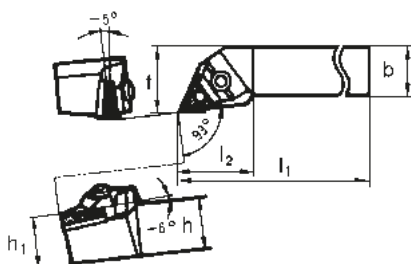
PTTN



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PTTN R/L 2020 K16	□	□	20	20	20	125	25,9	17	
PTTN R/L 2525 M16	●	□	25	25	25	150	25,9	22	
PTTN R/L 2525 M22	□	□	25	25	25	150	31,9	22	
PTTN R/L 3225 P22	□	●	32	32	25	170	31,9	22	



Above figures show right hand tools.

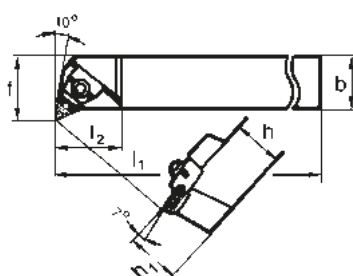
Ordering No.	Stock		Dimensions (mm)							Wedge	Shim pin	Shim	Clamp bold	Nut	Ring	Wrench	
	R	L	h	h ₁	b	l ₁	l ₂	f									
MTJN R/L 2020-33 (K16)	●	●	20	20	20	125	37	25		MMW30	MP317	STW323	BHA0525	CPM32N	ER04	LH030	①
MTJN R/L 2525-33 (M16)	●	□	25	25	25	150	37	32			MP320		4,0 				
MTJN R/L 2525-43 (M22)	●	●	25	25	25	150	37	32		MMW40	MP420	STW434	BHA0625	CPM43N	ER05	LH030 LH040	②
MTJN R/L 3225-43 (P22)	□	□	32	32	25	170	37	32									
MTJN R/L V-43 (D22)			20	20	25	60	37	30			MP416		4,5 				

Eg.

N-GU N-HG

- ① TNMG 160408 N-GU
- ② TNMM 220412 N-HG

							Insert
Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	
MMW30	MP317 MP320	STW323	BHA0525 4,0	CPM32N	ER04	LH030	1
MMW40	MP420 MP416	STW434	BHA0625 4,5	CPM43N	ER05	LH030 LH040	2



Above figures show right hand tools.

Ordering No.		Stock		Dimensions (mm)						Wedge	Shim pin	Shim	Clamp bold	Nut	Ring	Wrench	
		R	L	h	h ₁	b	l ₁	l ₂	f								
MTXN R/L 2020-33 (K16)	□ □	20	20	20	125	32	25			MMW30	MP317	STW323	BHA0525	CPM32N	ER04	LH030	1
MTXN R/L 2525-33 (M16)	□ □	25	25	25	150	32	32				MP320		4.0 6mm				
MTXN R/L 2525-43 (M22)				25	25	25	150	38	32	MMW40	MP420	STW434	BHA0625 4.5 6mm	CPM43N	ER05	LH030.040	2

Eg.

N-GU N-HG

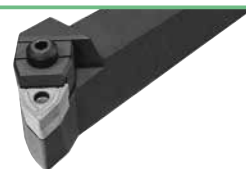
① TNMG 160408 N-GU
② TNMM 220412 N-HG

							Insert
Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	
MMW30	MP317 MP320	STW323	BHA0525 4.0	CPM32N	ER04	LH030	
MMW40	MP420	STW434	BHA0625 4.5	CPM43N	ER05	LH030, 040	②

External Tool Holders M Type (Wedge Clamp)

Tool Holders for neg. Inserts WN

General Turning and Facing

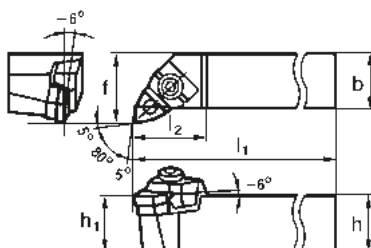
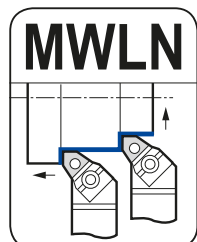


■ Inserts



■ Spare Parts

Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	Insert
MWW40	MP416	BHA0625	CPM43S	ER05	LH030	LH040	1, 2
	MP420	SWW433	4,5 Nm	CPM43N			
MWW50	MP531	BHA0834	CPM54N	ER07	LH040	LH050	
	MP534	SWW544					



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
MWLN R/L 2020-43 (K08)			20	20	20	125	32	25	
MWLN R/L 2525-43 (M08)	□	□	25	25	25	150	32	32	
MWLN R/L 3225-43 (P08)	□	□	32	32	25	170	32	32	
MWLN R/L 2525-54 (M10)			25	25	25	150	37	32	
MWLN R/L 3225-54 (P10)			32	32	25	170	37	32	

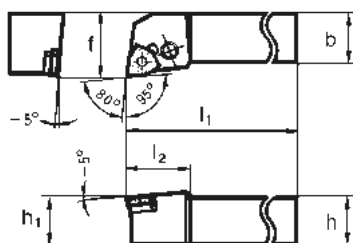
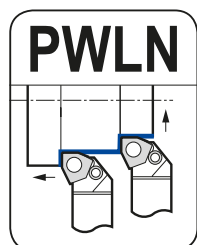
P Type Lever Lock Holders

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LSW317	LSP3SD	LH025	1

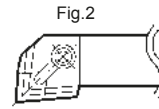
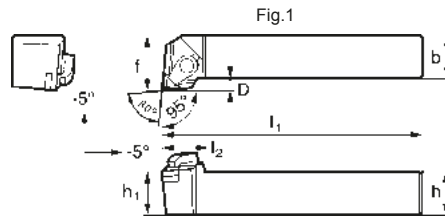
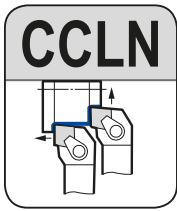


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	
PWLN R/L 2020 K06 (PWLN R/L 2020 -33)	□	□	20	20	20	125	27	25	
PWLN R/L 2525 M06 (PWLN R/L 2525 -33)	□	□	25	25	25	150	27	32	

C Type Top Clamp Holders



■ Inserts



- ① CNGN0903**
- ② CNGN1203**
- ③ CNGN1204**

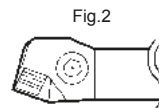
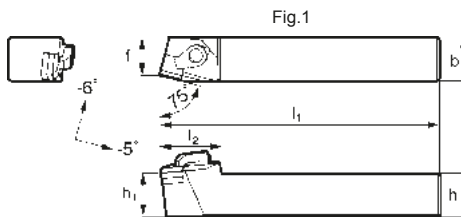
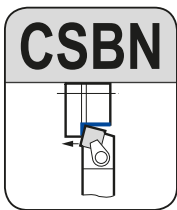
■ Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Wrench	Insert
CCM8UL	CBC0903 CBC4	WB8-22T	SCN0903 SCND433	SPP3	LT27	①
CCM8-LONG	CBC4	WB8-30	SCND433	SPP3	LH040	②
						③

■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)							Fig.
	R	L	h=h ₁	b	l ₁	l ₂	f	D	
CCLN R/L 2525 M09	□		25	25	150	25	32	7	1
CCLN R/L 2525 M12-03	□		25	25	150	30	32	7	1
CCLN R/L 2525 M12-04	□		25	25	150	30	32	7	2



■ Inserts



- ① SNGN0903**
- ② SNGN1203**
- ③ SNGN1204**

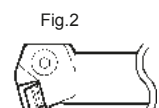
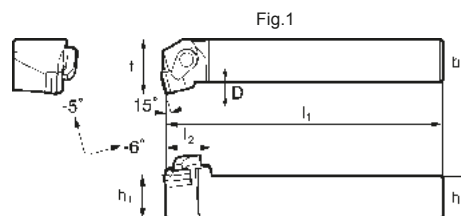
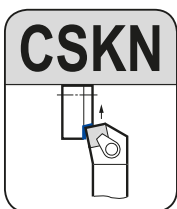
■ Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
CCM8UL	CBS13 CBS14	WB8-22T	SSN0903 SSND423	-	-	LH040	①
							②
DC-RL1	CBD 4 R/L	BH 0830 R/L	SSND423	SPP3	DSP5	LH040	③

■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)							Fig.
	R	L							
CSBN R/L 2525 N09	□		25	25	160	30	21,5	-	1
CSBN R/L 2525 N12-03	□		25	25	160	35	21,5	-	1
CSBN R/L 2525 N12-04	□		25	25	160	33	21,5	-	2



■ Inserts



- ① SNGN0903**
- ② SNGN1203**
- ③ SNGN1204**

■ Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
CCM8UL	CBS13 CBS14	WB8-22T	SSN0903 SSND423	-	-	LH040	①
							②
DC-L/R1	CBD 4 L/R	BH 0830 L/R	SSND423	SPP3	DSP5	LH040	③

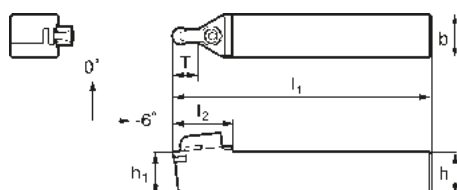
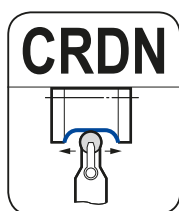
■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)							Fig.
	R	L							
CSKN R/L 2525 N09	□		25	25	160	25	32	7	1
CSKN R/L 2525 N12-03	□		25	25	160	25	32	7	1
CSKN R/L 2525 N12-04	□		25	25	160	21	32	7	2

External Tool Holders for Solid SUMIBORON

C Type Top Clamp Holders



■ Inserts

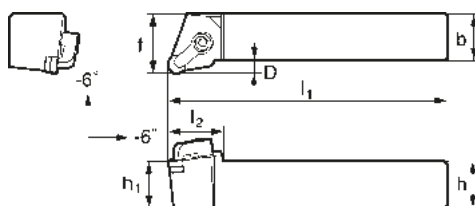
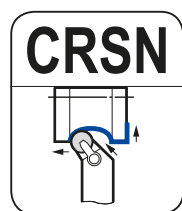


- ① RNGN0903**
- ② RNGN1203**
- ③ RNGN1204**

■ Spare Parts

■ Holders

Ordering No.	Stock	Dimensions (mm)							Clamp	Double screw	Shim	Shim pin	Wrench	Insert
		h	h ₁	b	l ₁	l ₂	f	T						
CRDNN 2525 M09	●	25	25	25	150	35	—	15	CCM8-LONG	WB8-22T	SRND32	SPP3	LT27	①
CRDNN 2525 M12-03	●	25	25	25	150	35	—	20			SRND42			②
CRDNN 2525 M12-04	●	25	25	25	150	35	—	20			SRND42			③



■ Inserts



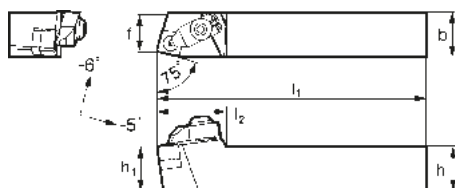
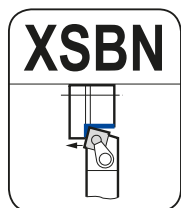
- ① RNGN0903**
- ② RNGN1203**
- ③ RNGN1204**

■ Spare Parts

■ Holders

Ordering No.	Stock		Dimensions (mm)							Clamp	Double screw	Shim	Shim pin	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f	D						
CRSN R/L 2525 M09	●	●	25	25	25	150	30	32	7	CCM8-LONG	WB8-22T	SRND32	SPP3	LT27	①
CRSN R/L 2525 M12-03	●	●	25	25	25	150	30	32	7			SRND42			②
CRSN R/L 2525 M12-04	●	●	25	25	25	150	30	32	7			SRND42			③

Above figures show right hand tools.

X Type Dimple Lock Holders

■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Clamp	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f	D							
XSBN R/L 2525 N12	●		25	25	25	160	38	21,5	7	DSLX8	BH0825	SSND423	SPP3	GSP10	LH050	①

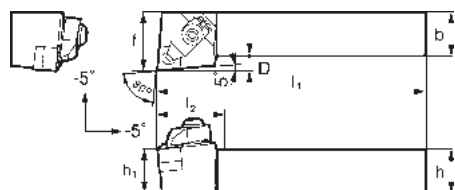
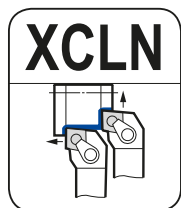
■ Inserts



① SNGX1204 **

■ Spare Parts

							Insert
DSLX8	BH0825	SSND423	SPP3	GSP10	LH050		①



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Clamp	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f	D							
XCLN R/L 2525 M12	●		25	25	25	150	33	32	7	DSLX8	BH0825	SCND433	SPP3	GSP10	LH050	①

■ Inserts



① CNGX1204 **

■ Spare Parts

							Insert
DSLX8	BH0825	SCND433	SPP3	GSP10	LH050		①

External Mini Holders

External Holders
for pos. Inserts



Back-Turning Tool Holder SBT Type

Sharp cutting edges with good surface finish.
Max. reach of insert 8,0mm, edge width 2,5mm



Cut-off Tool Holder SCT Type

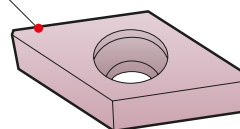
Easy insert change by just loosening the screw
from the back.

Max. cut-off dia. Ø5mm, Ø12mm, Ø16mm

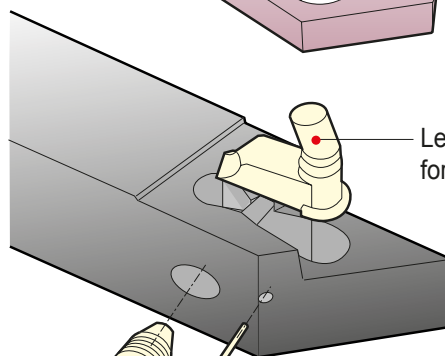


PDJCR type
lever lock holder

Wear-resistant tool materials;
T1500A (Cermet) and
AC530U (2000 layers
coated carbide grade)



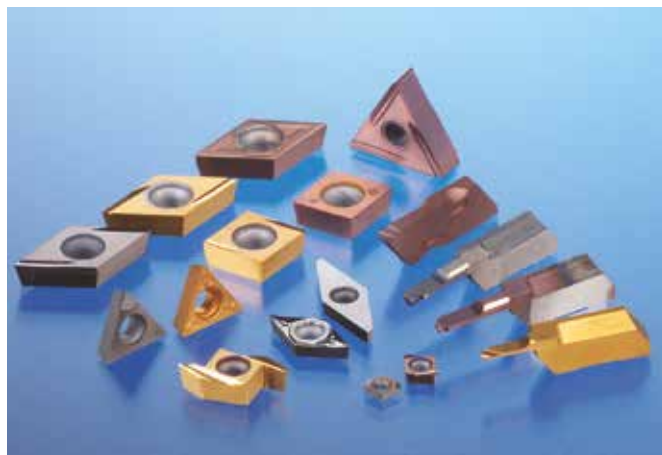
Sharp cutting edge
($r = 0,03$
0,1 and 0,2 mm)



Lever lock clamping
for 7° positive inserts

Easy access
side locking screw

External Mini Holders



In 1984, Sumitomo Electric Hardmetal first released the Mini Tool Holder series for the machining of small components in small NC autolathes.

A full range of insert grades comprising of the Cermet T1500A, SUMIBORON BN2000, SUMIDIA DA1000 and especially AC530U, was also introduced to meet a variety of machining requirements.

External Holders
for pos. Inserts

Grade Selection

Category	Application Range			Work Material					
	High Precision	Finish-Light Cut	Medium Cut	General Steel	Stainless Steel	Cast Iron	Heat Resistant Steel	Hardening Steel	Non-Ferrous Metal
Coated Carbide (PVD)	ACZ150			◎	◎	○	◎		○
	AC510U			○	◎	○	◎		
	AC520U			○	◎	○	◎		
	AC530U			◎	◎	○	○		○
	*New AC1030U			◎	◎	○	○		○
Cermet/Coated Cermet	T1000A			◎	○	◎			○
	T1500A / T1500Z			◎	○	○			○
Carbide	H1			○	○	○			◎
	EH510			○	○	○	◎		○
CBN (SUMIBORON)	BN1000 / BN2000							◎	
SUMIDIA	DA1000								◎

◎ Preferred Choice

○ Suitable

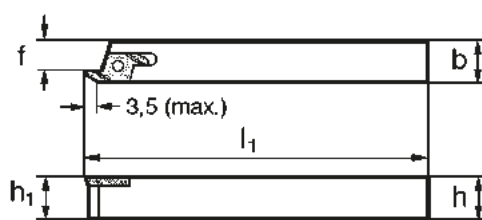
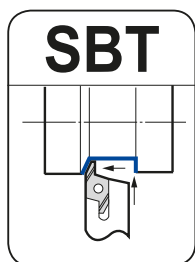
Recommended Cutting Conditions

Work Material	P Free Cutting Steel		P Carbon Steel		M Stainless Steel		H Hardened Steel		N Aluminium		N Brass	
	v_c (m/min)	f (mm/rev)	v_c (m/min)	f (mm/rev)	v_c (m/min)	f (mm/rev)	v_c (m/min)	f (mm/rev)	v_c (m/min)	f (mm/rev)	v_c (m/min)	f (mm/rev)
ACZ150	50 - 200	0,02 - 0,10	50 - 150	0,01 - 0,08	50 - 150	0,01 - 0,05			70 - 300	0,05 - 0,20	70 - 300	0,05 - 0,20
AC510U	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 200	*0,02 - 0,10					70 - 300	0,05 - 0,20
AC520U	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 200	*0,02 - 0,10					70 - 300	0,05 - 0,20
AC530U	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 200	*0,02 - 0,10					70 - 300	0,05 - 0,20
AC1030U	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 200	*0,02 - 0,10					70 - 300	0,05 - 0,20
T1000A	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 150	*0,02 - 0,10			70 - 300	0,05 - 0,20	70 - 300	0,05 - 0,20
T1500A	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 150	*0,02 - 0,10			70 - 300	0,05 - 0,20	70 - 300	0,05 - 0,20
T1500Z	50 - 200	0,02 - 0,15	50 - 200	0,02 - 0,10	*50 - 150	*0,02 - 0,10			70 - 300	0,05 - 0,20	70 - 300	0,05 - 0,20
BN1000							50 - 200	0,02 - 0,10				
BN2000							50 - 120	0,02 - 0,10				
DA1000									70 - 300	0,02 - 0,10	70 - 300	0,02 - 0,10

* Please use maximal possible C/speed

External Mini Tool Holders SBT Type

Special Mini Holders for Back Facing



■ Spare Parts

Screw	Torque (N·m)	Wrench	Insert
BFTX0307N	2,0	TRX10	BTR 35_ _

■ Holders

Above figures show right hand tools.

Ordering No.	Stock	Dimensions (mm)					
		h	h ₁	b	l ₁	f	
SBT 35-R 1010	●	10	10	10	120	7,5	
SBT 35-R 1212	●	12	12	12	120	9,5	
SBT 35-R 1616	●	16	16	16	120	13,5	

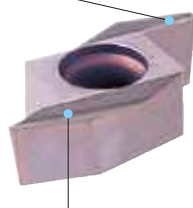
■ INSERTS

Coated carbide

Uncoated Cermet

BTR	Ordering No.	Stock				Dimensions (mm)		
		AC130U	AC530U	ACZ310	T1500A	d	s	r
	BTR 3505	○	▲	●	○	6,8	3,8	0,05
	BTR 3515	○	▲	●	○	6,8	3,8	0,15

Sharp cutting edge with 15° rake angle



Wide groove breaker for smooth chip evacuation

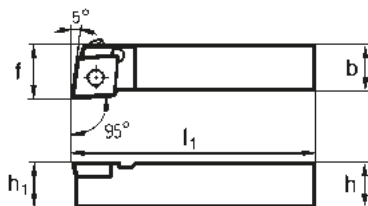
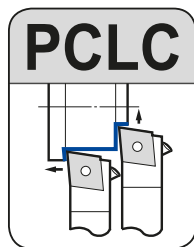
● Surface roughness comparison

BTR 3505	P10 des Wettbewerbs
Work Material: C45 Insert: BTR3505 (ACZ310) Cutting Data: v _c = 80 m/min, f = 0,04 mm/rev d _{oc} = 3,0 mm, Wet	

■ Recommended cutting data (SBT type)

Work Material	Tooling	v _c (m/min)	f (mm/rev)
General steel	Grooving	50 ~ 150	0,02 ~ 0,05
	Back facing		0,02 ~ 0,10
Free-cutting steel	Grooving	50 ~ 150	0,02 ~ 0,10
	Back facing		0,02 ~ 0,15
Stainless steel	Grooving	50 ~ 150	0,02 ~ 0,04
	Back facing		0,02 ~ 0,06

P Type Lever Lock Holders



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Lever pin	Clamp screw	Side pin	Wrench	Insert
	R	L	h	h ₁	b	l ₁	f							
PCLC R/L 0810 K06	□	□	8	8	10	125	10,5			LCL 06	BTT 0407	LP 07	TH 020	①
PCLC R/L 1010 K06	●	□	10	10	10	125	10,5							
PCLC R/L 1212 M09	●	●	12	12	12	150	12,5			LCL 09	BTT 0411	LP 06		②
PCLC R/L 1616 M09	●		16	16	16	150	16,5							

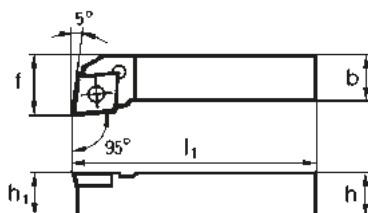
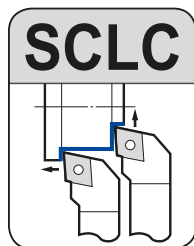
■ Inserts



■ Spare Parts

Lever pin	Clamp screw	Side pin	Wrench	Insert
LCL 06	BTT 0407	LP 07	TH 020	①
LCL 09	BTT 0411	LP 06		②

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

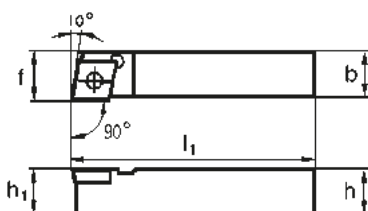
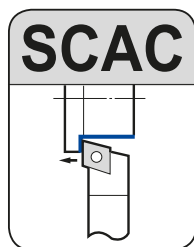
Ordering No.	Stock		Dimensions (mm)							Screw		Wrench		Insert
	R	L	h	h ₁	b	l ₁	f							
SCLC R/L 0808 D06	●	●	8	8	8	60	10			BFTX02506N	1,5	TRX08		❶
SCLC R/L 1010 E06	●	●	10	10	10	70	12							
SCLC R/L 1212 F09	●	●	12	12	12	80	16			BFTX0409N	3,4	TRX15		❷
SCLC R/L 1616 H09	●	●	16	16	16	100	20							
SCLC R/L 2020 H09	●	□	20	20	20	100	25							
SCLC R/L 2020 K09	●	●	20	20	20	125	25			BFTX0511N	5,0	TRX20		❸
SCLC R/L 2020 K12	●	●	20	20	20	125	25							
SCLC R/L 2525 M12	●	●	20	25	25	150	32							

■ Inserts



■ Spare Parts

			Insert
Screw		Wrench	
BFTX02506N	1,5	TRX08	①
BFTX0409N	3,4	TRX15	②
BFTX0511N	5,0	TRX20	③

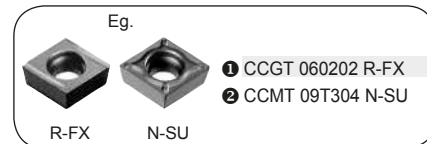


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Screw		Wrench		Insert
	R	L	h	h ₁	b	l ₁	f							
SCAC R/L 0808 D06	●	□	8	8	8	60	8,5			BFTX02506N	1,5	TRX08		❶
SCAC R/L 1010 E06	●	□	10	10	10	70	10,5							
SCAC R/L 1212 F09	●	□	12	12	12	80	12,5			BFTX0409N	3,4	TRX15		❷

■ Inserts



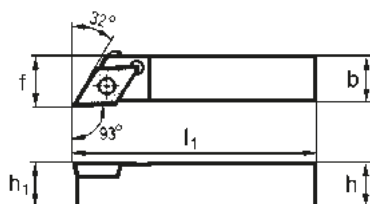
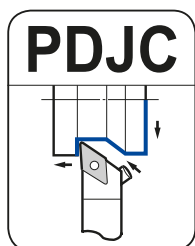
■ Spare Parts

				Insert
Screw		Wrench		
BFTX02506N	1,5	TRX08		①
BFTX0409N	3,4	TRX15		②

External Mini Tool Holders PD/SD Type

Mini Holders for 7° DC__ pos. Inserts

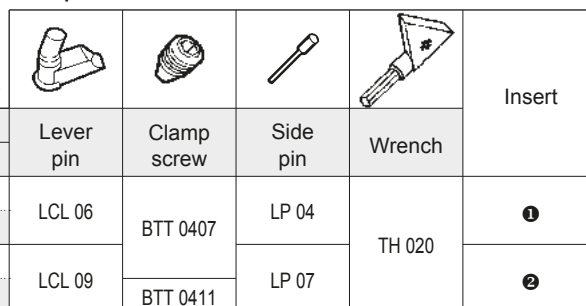
P Type Lever Lock Holders



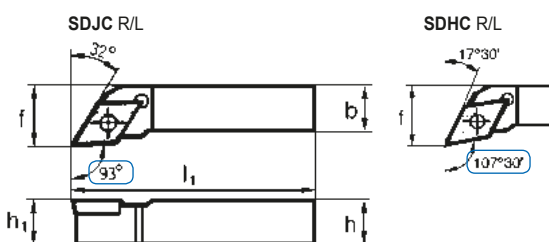
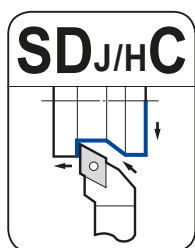
■ Inserts



■ Spare Parts



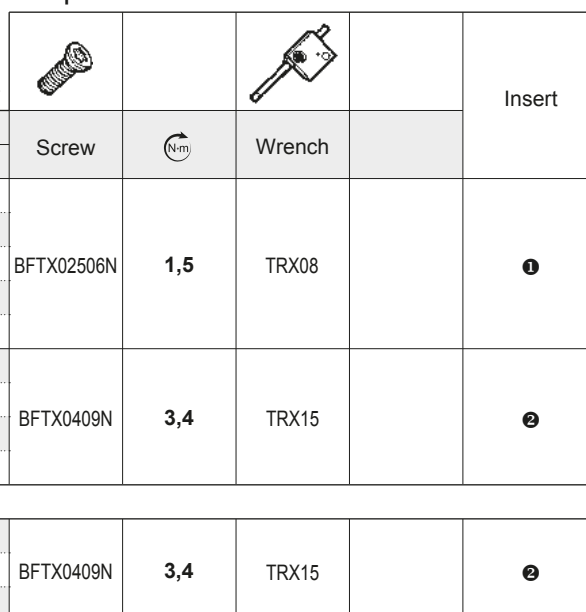
S Type Screw Lock Holders



■ Inserts



■ Spare Parts

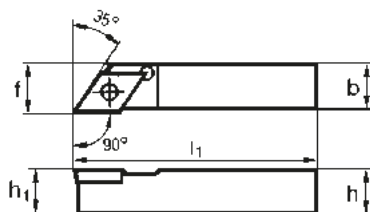
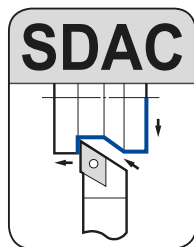


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Screw		Wrench		Insert
	R	L	h	h ₁	b	l ₁	f							
SDJC R/L 0808 D07	●	●	8	8	8	60	10			BFTX02506N	1,5	TRX08		①
SDJC R/L 1010 E07	●	●	10	10	10	70	12							
SDJC R/L 1212 F07	●	●	12	12	12	80	16							
SDJC R/L 1616 H07	●	●	16	16	16	100	20							
SDJC R/L 2020 K07	●	●	20	20	20	125	25							
SDJC R/L 1212 F11	●	●	12	12	12	80	16			BFTX0409N	3,4	TRX15		②
SDJC R/L 1616 H11	●	●	16	16	16	100	20							
SDJC R/L 2020 K11	●	●	20	20	20	125	25							
SDJC R/L 2525 M11	●	●	25	25	25	150	32							
SDHC R/L 1616 H11	●	●	16	16	16	100	20			BFTX0409N	3,4	TRX15		②
SDHC R/L 2020 K11	●	●	20	20	20	125	25							
SDHC R/L 2525 M11	●	●	25	25	25	150	32							

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

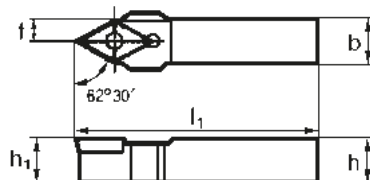
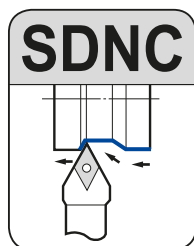
Ordering No.	Stock		Dimensions (mm)							Screw		Wrench		Insert
	R	L	h	h ₁	b	l ₁	f							
SDAC R/L 0808 D07		●	8	8	8	60	8,5			BFTX02506N	1,5	TRX08		❶
SDAC R/L 1010 E07	●	●	10	10	10	70	10,5							
SDAC R/L 1212 F11	●	●	12	12	12	80	12,5			BFTX0409N	3,4	TRX15		❷

■ Inserts



■ Spare Parts

Screw	Wrench	Insert
BFTX02506N	1,5	TRX08
BFTX0409N	3,4	TRX15



■ Holders

Ordering No.	Stock	Dimensions (mm)							Screw		Wrench		Insert
		h	h ₁	b	l ₁	f							
SDNCN 0808 D07	●	8	8	8	60	4,2			BFTX02506N	1,5	TRX08		①
SDNCN 1010 E07	●	10	10	10	70	5,2							
SDNCN 1212 F07	●	12	12	12	80	6,2							
SDNCN 1616 H07	●	16	16	16	100	8,2							
SDNCN 2020 K07	●	20	20	20	125	10,2							
SDNCN 1212 F11	●	12	12	12	80	6,5			BFTX0409N	3,4	TRX15		②
SDNCN 1616 H11	●	16	16	16	100	8,5							
SDNCN 2020 K11	●	20	20	20	125	10,5							
SDNCN 2525 M11	●	25	25	25	150	13							

■ Inserts



■ Spare Parts

Screw	Wrench	Insert
BFTX02506N	1,5	TRX08
BFTX0409N	3,4	TRX15

External Tool Holders PR Type

External Holders for 7° RC ___ pos. Inserts

P Type Lever Lock Holders



■ Inserts

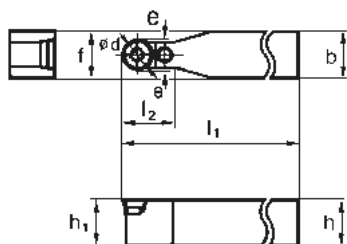
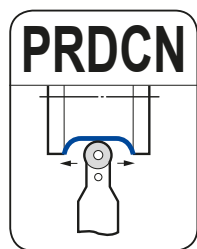
Eg.

N-RP

- ❶ RCOO 0906M0
- ❷ RCOO 1003M0 N-RO
- ❸ RCOO 1204M0 N-RO
- ❹ RCOO 1606M0 N-RO
- ❺ RCOO 2006M0 N-RO

■ Spare Parts

Lever pin	Clamp screw	Shim	Shim pin	Wrench	Insert
LCL3S	LCS 3	LSR817	LSP3	LH025	❶
LCL10	LCS10	LSR10	LSP10	LH020	❷
LCL12	LCS12	LSR12	LSP10	LH025	❸
LCL16	LCS16	LSR16	LSP16	LH025	❹
LCL20	LCS20	LSR20	LSP20	LH030	❺



■ Holders

Ordering No.	Stock	Dimensions (mm)						
		h	h ₁	b	l ₁	l ₂	f	e
PRDC N 3225 P9	□	32	32	25	170	25	12,5	0,5
PRDC N 2020 M10	●	20	20	20	150	22	15,0	1,0
PRDC N 2525 M10	●	25	25	25	150	22	17,5	1,0
PRDC N 2525 M12	●	25	25	25	150	24	18,5	1,2
PRDC N 3225 Q12	●	32	32	25	180	24	18,5	1,2
PRDC N 3225 Q16	●	32	32	25	180	28	20,5	1,5
PRDC N 3232 Q20	●	32	32	32	180	32	26,0	1,7

■ Inserts

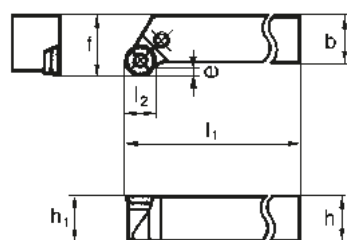
Eg.

N-RP

- ❶ RCOO 0906M0
- ❷ RCOO 1003M0 N-RO
- ❸ RCOO 1204M0 N-RO
- ❹ RCOO 1606M0 N-RO
- ❺ RCOO 2006M0 N-RO

■ Spare Parts

Lever pin	Clamp screw	Shim	Shim pin	Wrench	Insert
LCL3S	LCS 3	LSR817	LSP3	LH025	❶
LCL10	LCS10	LSR10	LSP10	LH020	❷
LCL12	LCS12	LSR12	LSP10	LH025	❸
LCL16	LCS16	LSR16	LSP16	LH025	❹
LCL20	LCS20	LSR20	LSP20	LH030	❺

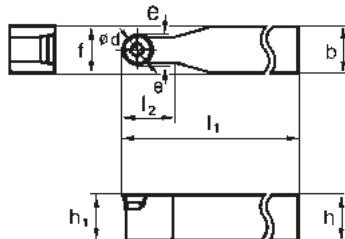
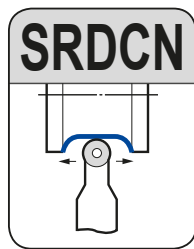


■ Holders

Above figures show right hand tools.

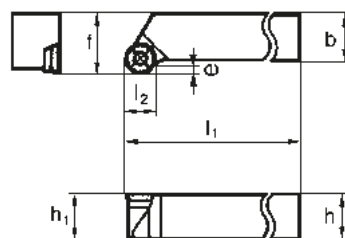
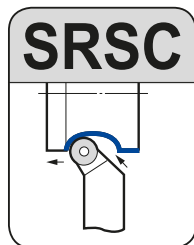
Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h ₁	b	l ₁	l ₂	f	ød
PRGC R/L 3225 P9	□	□	32	32	25	170	10	32	—
PRGC R/L 2020 K10	●	□	20	20	20	125	—	25	1,5
PRGC R/L 2525 M10	●	●	25	25	25	150	—	32	1,5
PRGC R/L 2020 K12	●	□	20	20	20	125	—	25	2,5
PRGC R/L 2525 M12	□	●	25	25	25	150	—	32	2,5
PRGC R/L 3225 P12	□	□	32	32	25	170	—	32	2,5
PRGC R/L 2525 M16	●	□	25	25	25	150	—	32	3
PRGC R/L 3225 P16	●	□	32	32	25	170	—	32	3
PRGC R/L 3232 P20	●	□	32	32	32	170	—	40	4

S Type Screw Lock Holders



■ Holders

Ordering No.	Stock	Dimensions (mm)								Screw	Shim	Screw	Wrench	Wrench	Insert
		h	h ₁	b	l ₁	l ₂	f	e							
SRDC N 2020 K10T3	●	20	20	20	125	25	15,0	1,0	BFTX 03510-SD	SRNS 103-SD	BW 0508F-SD TRX...	TRX 15 IP-35	LH 035		①
SRDC N 2525 M10T3	●	25	25	25	150	25	17,5	1,0	2,0						②
SRDC N 2525 M12	●	25	25	25	150	28	18,5	1,2	BFTX 03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050		③
SRDC N 3225 P12	●	32	32	25	170	28	18,5	1,2	2,0						④
SRDC N 2525 M16	□	25	25	25	150	35	20,5	1,5	BFTX 0517-SD	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060		③
SRDC N 3225 P16	●	32	32	25	170	35	20,5	1,5	5,0						④
SRDC N 3232 P16	□	32	32	32	170	35	20,5	1,5	BFTX 0618-SD	SRNS 204-SD	BW 0912F-SD	LT 25 IP	LH 060		④
SRDC N 3232 P20	●	32	32	32	170	40	26,0	1,7	7,5						④



■ Holders

Ordering No.	Stock		Dimensions (mm)								Screw	Shim	Screw	Wrench	Wrench	Insert
	R	L	h	h ₁	b	l ₁	l ₂	f	e							
SRSC R/L 2020 K10T3	●	●	20	20	20	125	—	25	1,5	BFTX 03510-SD	SRNS 103-SD	BW 0508F-SD	TRX 15 IP-35	LH 035		①
SRSC R/L 2525 M10T3	●	●	25	25	25	150	—	32	1,5	2,0						②
SRSC R/L 2525 M12	●	●	25	25	25	150	—	32	2,5	BFTX 03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050		③
SRSC R/L 3225 P12	●	●	32	32	25	170	—	32	2,5	2,0						④
SRSC R/L 3225 M16	□	□	25	25	25	150	—	32	3,0	BFTX 0517-SD	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060		③
SRSC R/L 3225 P16	●	●	32	32	25	170	—	32	3,0	5,0						④
SRSC R/L 3232 P16	□	□	32	32	32	170	—	40	3,0	BFTX 0618-SD	SRNS 204-SD	BW 0912F-SD	LT 25 IP	LH 060		④
SRSC R/L 3232 P20	●	●	32	32	32	170	—	40	4,0	7,5						④

■ Inserts

Eg.	- RCOO 1003M0
	① RCOO 10T3M0 N-RO
	② RCOO 1204M0 N-RO
	③ RCOO 1606M0 N-RO
	④ RCOO 2006M0 N-RO

■ Spare Parts

					Insert
TRX...	LT...				

■ Inserts

Eg.	- RCOO 1003M0
	① RCOO 10T3M0 N-RO
	② RCOO 1204M0 N-RO
	③ RCOO 1606M0 N-RO
	④ RCOO 2006M0 N-RO

■ Spare Parts

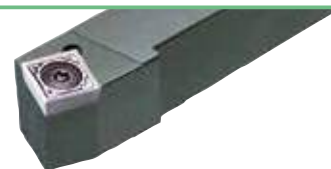
					Insert
TRX...	LT...				

External Mini Tool Holders

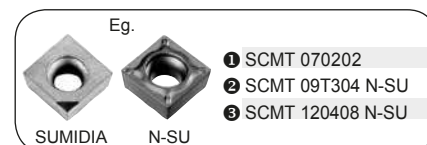
SS Type

Mini Holders for 7° SC__ pos. Inserts

S Type Screw Lock Holders

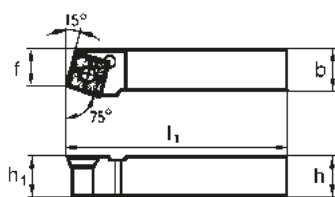
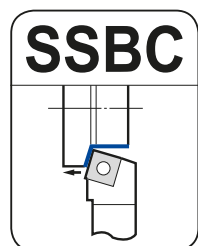


■ Inserts



■ Spare Parts

		Insert	
Screw		Wrench	
BFTX0307N	2,0	TRX10	❶
BFTX0409N	3,4	TRX15	❷
BFTX0511N	5,0	TRX20	❸



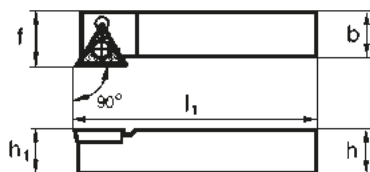
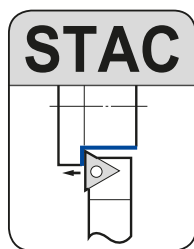
■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							
	R	L	h	h ₁	b	l ₁	f			
SSBC R/L 1010 E07	□	□	10	10	10	70	9			
SSBC R/L 1212 F09	□	●	12	12	12	80	11			
SSBC R/L 1616 H09	●	●	16	16	16	100	13			
SSBC R/L 2020 K12	□	□	20	20	20	125	17			
SSBC R/L 2525 M12	□	□	25	25	25	150	22			

External Holders
for pos. Inserts

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

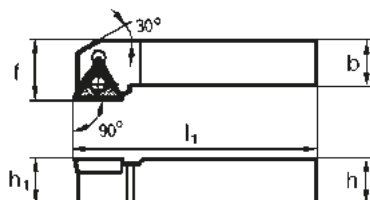
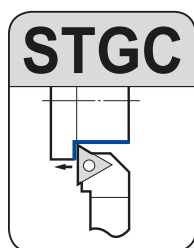
Ordering No.	Stock		Dimensions (mm)							Screw	N·m	Wrench	Insert
	R	L	h	h ₁	b	l ₁	f						
STAC R/L 0808 D09	●		8	8	8	60	8,5			BFTX02205N	1,1	TRX06	①
STAC R/L 1010 E09	□		10	10	10	70	10,5						
STAC R/L 1212 F11	●	□	12	12	12	80	12,5			BFTX02506N	1,5	TRX08	②

■ Inserts



■ Spare Parts

Screw	N·m	Wrench	Insert
BFTX02205N	1,1	TRX06	①
BFTX02506N	1,5	TRX08	②

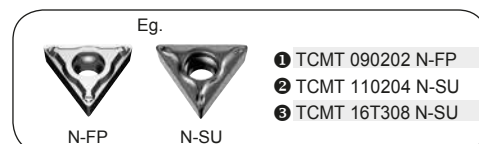


■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Screw	N·m	Wrench	Insert
	R	L	h	h ₁	b	l ₁	f						
STGC R/L 0808 D09	□		8	8	8	60	10			BFTX02205N	1,1	TRX06	①
STGC R/L 1010 E09	●	●	10	10	10	70	12						
STGC R/L 1212 F11	●	●	12	12	12	80	16			BFTX02506N	1,5	TRX08	②
STGC R/L 1616 H11	●	●	16	16	16	100	20						
STGC R/L 1616 H16	●	●	16	16	16	100	20			BFTX0409N	3,4	TRX15	③
STGC R/L 2020 K16	●	●	20	20	20	125	25						
STGC R/L 2525 M16	□	□	25	25	25	150	32						

■ Inserts



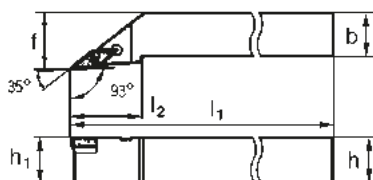
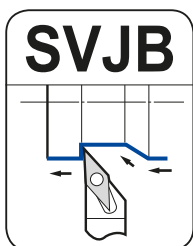
■ Spare Parts

Screw	N·m	Wrench	Insert
BFTX02205N	1,1	TRX06	①
BFTX02506N	1,5	TRX08	②
BFTX0409N	3,4	TRX15	③

External Mini Tool Holders SV Type

Mini Holders for 5° VB__ pos. Inserts

S Type Screw Lock Holders



■ Inserts



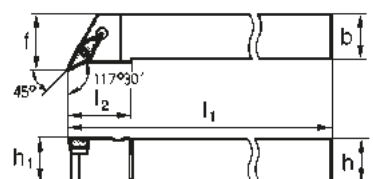
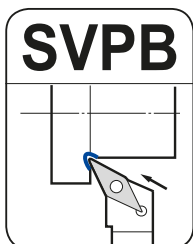
■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	Wrench	Insert
VP20	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP25	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP32	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2

■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h1	b	l1	l2	f	
SVJB R/L 1212 F11	●	●	12	12	12	80	25	16	
SVJB R/L 1616 H11	●	●	16	16	16	100	25	20	
SVJB R/L 2020 K16	●	●	20	20	20	125	41	25	
SVJB R/L 2525 M16	●	●	25	25	25	150	41	32	
SVJB R/L 3225 P16	●	●	32	32	25	170	41	32	



■ Inserts



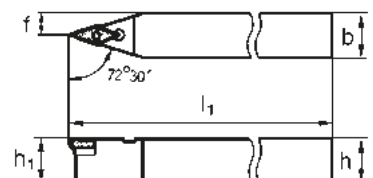
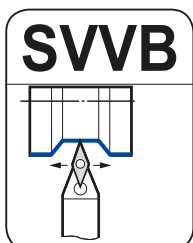
■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	Wrench	Insert
VP20	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP25	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP32	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2

■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)						
	R	L	h	h1	b	l1	l2	f	
SVPB R/L 1212 F11	●	□	12	12	12	80	25	16	
SVPB R/L 1616 H11	●	●	16	16	16	100	25	20	
SVPB R/L 2020 K16	●	●	20	20	20	125	36	25	
SVPB R/L 2525 M16	●	●	25	25	25	150	36	32	
SVPB R/L 3225 P16	●	●	32	32	25	170	36	32	



■ Inserts



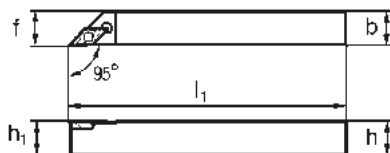
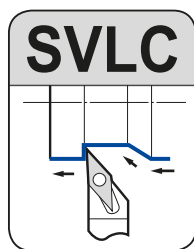
■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	Wrench	Insert
VP20	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP25	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2
VP32	CPV33N	SVP32	LH025	BFTX 03508 2,0 (N·m)	TRX10	2

■ Holders

Ordering No.	Stock	Dimensions (mm)						
		h	h1	b	l1	l2	f	
SVVB N 1212 F11	●	12	12	12	80	-	6	
SVVB N 1616 H11	●	16	16	16	100	-	8	
SVVB N 2020 K16	●	20	20	20	125	-	10	
SVVB N 2525 M16	●	25	25	25	150	-	12,5	
SVVB N 3225 P16	●	32	32	25	170	-	12,5	

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

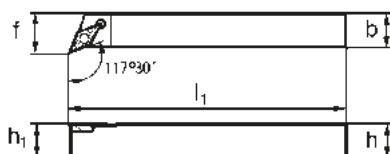
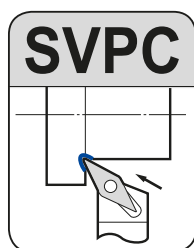
Ordering No.	Stock		Dimensions (mm)							Screw	N·m	Wrench	Insert
	R	L	h	h ₁	b	l ₁	f						
SVLC R/L 1010 H11	●	●	10	10	10	100	10,5			BFTX 02508NV	1,5	TRX08	①
SVLC R/L 1212 H11	●	●	12	12	12	100	12,5						
SVLC R/L 1616 H11	●	●	16	16	16	100	16,5						
SVLC R/L 2525 M11	●		25	25	25	150	25,5						

■ Inserts



■ Spare Parts

Screw	N·m	Wrench	Insert
BFTX 02508NV	1,5	TRX08	①



■ Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)							Screw	N·m	Wrench	Insert
	R	L	h	h ₁	b	l ₁	f						
SVPC R/L 1010 H11	□	□	10	10	10	100	14,5			BFTX 02508NV	1,5	TRX08	①
SVPC R/L 1212 H11	●	●	12	12	12	100	16,5						
SVPC R/L 1616 H11	●	●	16	16	16	100	20,5						

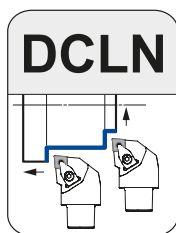
■ Inserts



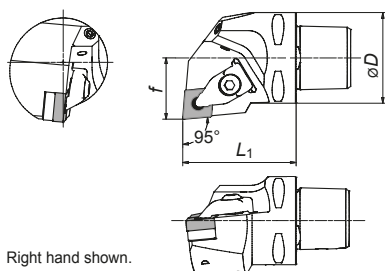
■ Spare Parts

Screw	N·m	Wrench	Insert
BFTX 02508NV	1,5	TRX08	①

General Turning, Copying and Facing



■ Holders



Right hand shown.

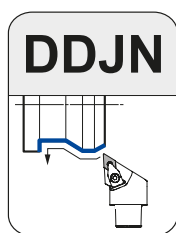
Cat. No.	Stock		Dimensions (mm)			Applicable Insert	Clamp Set	N·m	Shim	Shim Screw	Shim Wrench	Wrench
	R	L	L ₁	f	∅D							
PSC40 DCLN R/L 27050-12	●	●	50	27	40	CN□□ 1204	SCP-2	5.0	CNS1204	BFTX0409N	TRX15 (*)	LH040
PSC50 DCLN R/L 35060-12	●	●	60	35	50							

■ Inserts

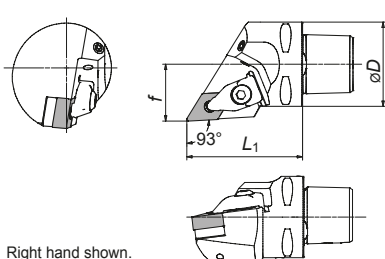

CNMG1204__ NGE
(Representative example)

■ Spare Parts

SCP-2	5.0	CNS1204	BFTX0409N	TRX15 (*)	LH040



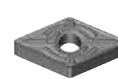
■ Holders



Right hand shown.

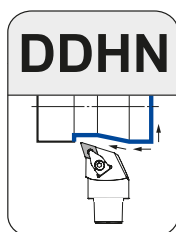
Cat. No.	Stock		Dimensions (mm)			Applicable Insert	Clamp Set	N·m	Shim	Shim Screw	Shim Wrench	Wrench
	R	L	L ₁	f	∅D							
PSC40 DDJN R/L 27055-15	●	●	55	27	40	DN□□ 1506	SCP-2	5.0	DNS1506	BFTX0409N	TRX15 (*)	LH040
PSC50 DDJN R/L 35060-15	●	●	60	35	50							

■ Inserts

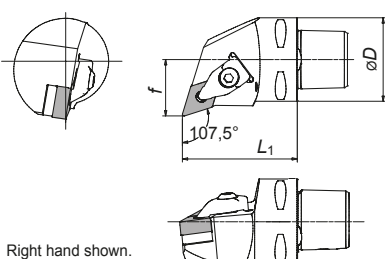

DNMG1506__ NGE
(Representative example)

■ Spare Parts

SCP-2	5.0	DNS1506	BFTX0409N	TRX15 (*)	LH040



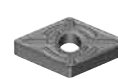
■ Holders



Right hand shown.

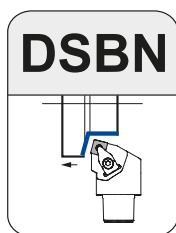
Cat. No.	Stock		Dimensions (mm)			Applicable Insert	Clamp Set	N·m	Shim	Shim Screw	Shim Wrench	Wrench
	R	L	L ₁	f	∅D							
PSC40 DDHN R/L 27055-15	●	●	55	27	40	DN□□ 1506	SCP-2	5.0	DNS1506	BFTX0409N	TRX15 (*)	LH040
PSC50 DDHN R/L 35060-15	●	●	60	35	50							

■ Inserts

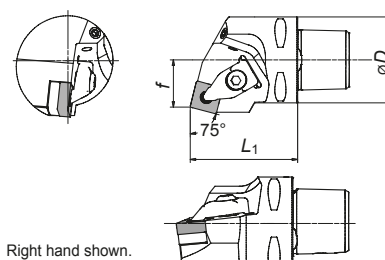

DNMG1506__ NGE
(Representative example)

■ Spare Parts

SCP-2	5.0	DNS1506	BFTX0409N	TRX15 (*)	LH040



■ Holders



Right hand shown.

Cat. No.	Stock		Dimensions (mm)			Applicable Insert	Clamp Set	N·m	Shim	Shim Screw	Shim Wrench	Wrench
	R	L	L ₁	f	∅D							
PSC40 DSBN R/L 22050-12	●	●	50	22	40	SN□□ 1204	SCP-2	5.0	SNS1204	BFTX0409N	TRX15 (*)	LH040
PSC50 DSBN R/L 27060-12	●	●	60	27	50							

■ Inserts


SNMG1204__ NGE
(Representative example)

■ Spare Parts

SCP-2	5.0	SNS1204	BFTX0409N	TRX15 (*)	LH040

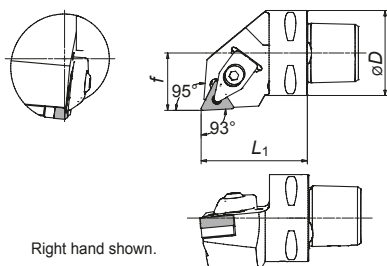
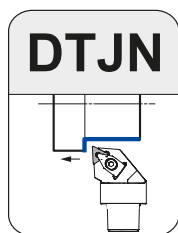
(*) Item is sold separately.

External Tool Holders

Polygon - Shank Holder

Negative Insert Type

General Turning and Facing



■ Holders

Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	L ₁	f	ØD	
PSC40 DTJN R/L 27050-16	●	●	50	27	40	TN□□ 1604
PSC50 DTJN R/L 35060-16	●	●	60	35	50	

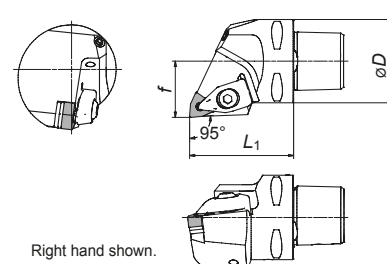
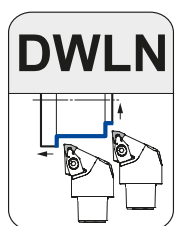
■ Inserts



TNMG1604__NGE
(Representative example)

■ Spare Parts

Clamp Set		N·m	Shim	Shim Screw	Shim Wrench	Wrench
SCP-1	5.0		TNS1604	BFTX0307N	TRX15 (*)	LH040



■ Holders

Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	L ₁	f	ØD	
PSC40 DWLN R/L 27050-06	●	●	50	27	40	WN□□ 06
PSC50 DWLN R/L 35060-06	●	●	60	35	50	
PSC40 DWLN R/L 27050-08	●	●	50	27	40	WN□□ 08
PSC50 DWLN R/L 35060-08	●	●	60	35	50	

■ Inserts



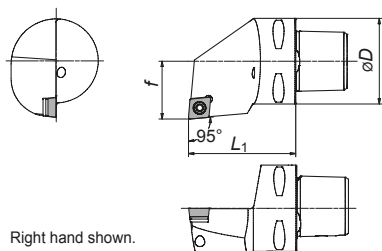
WNMG0804__NSE
(Representative example)

■ Spare Parts

Clamp Set		N·m	Shim	Shim Screw	Shim Wrench	Wrench
SCP-1	5.0		WNS0604	BFTX0307N	TRX15 (*)	LH040
SCP-2	5.0		WNS0804	BFTX0409N	TRX15 (*)	LH040

(*) Item is sold separately.

General Turning, Copying and Facing



■ Holders

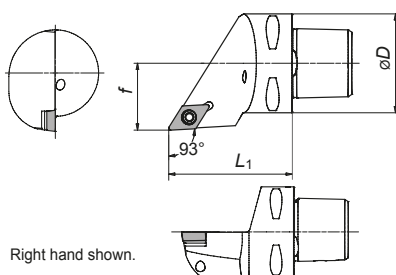
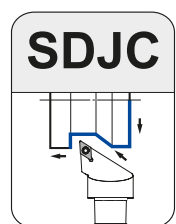
Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	ØD							
PSC40 SCLC R/L 27050-09	●	●		50	27	40	CC□□ 09T3	CCS09T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SCLC R/L 35060-09	●	●		60	35	50							

■ Inserts

CCMT09T3__NSU
(Representative example)

■ Spare Parts

					
Shim	Shim Screw	Insert Screw		Wrench	Shim Wrench
CCS09T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

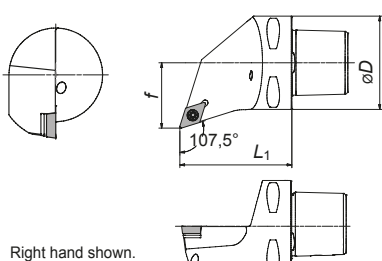
Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	ØD							
PSC40 SDJC R/L 27050-11	●	●		50	27	40	DC□□ 11T3	DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SDJC R/L 35060-11	●	●		60	35	50							

■ Inserts

DCMT11T3__NMU
(Representative example)

■ Spare Parts

					
Shim	Shim Screw	Insert Screw		Wrench	Shim Wrench
DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

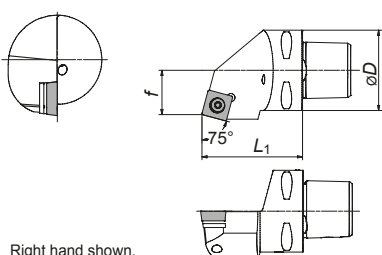
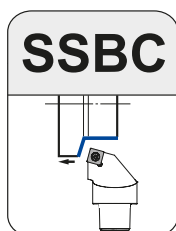
Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	ØD							
PSC40 SDHC R/L 27050-11	●	●		50	27	40	DC□□ 11T3	DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SDHC R/L 35060-11	●	●		60	35	50							

■ Inserts

DCMT11T3__NMU
(Representative example)

■ Spare Parts

					
Shim	Shim Screw	Insert Screw		Wrench	Shim Wrench
DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	ØD							
PSC40 SSBC R/L 22050-12	●	●		50	22	40	SC□□ 1204	SCS1204	KGBS1221	KSS1221	4,5	LT15K	LH045K*
PSC50 SSBC R/L 27060-12	●	●		60	27	50							

■ Inserts

SCMT1204__NMU
(Representative example)

■ Spare Parts

					
Shim	Shim Screw	Insert Screw		Wrench	Shim Wrench
SCS1204	KGBS1221	KSS1221	4,5	LT15K	LH045K*

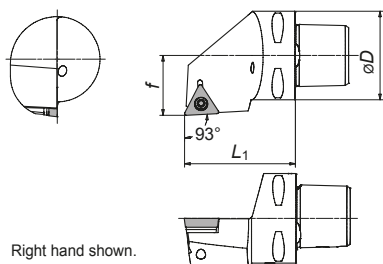
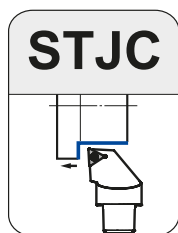
(*) Item is sold separately.

External Tool Holders

Polygon - Shank Holder

Positive Insert Type

General Turning, Copying and Facing



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	L ₁	f	ØD	
PSC40 STJC R/L 27050-16	●	●		50	27	40	TC□□ 16T3
PSC50 STJC R/L 35060-16	●	●		60	35	50	

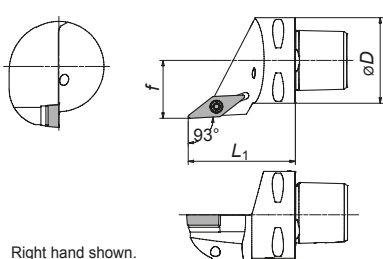
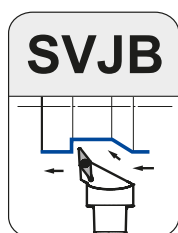
■ Inserts



TCM16T3__NSU
(Representative example)

■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
TCS16T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	L ₁	f	ØD	
PSC40 SVJB R/L 27050-16	●	●		50	27	40	VB□□ 1604
PSC50 SVJB R/L 35060-16	●	●		60	35	50	

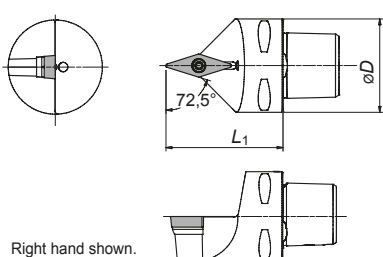
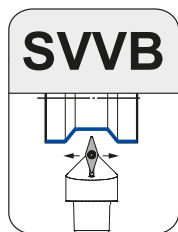
■ Inserts



VBMT1604__NSU
(Representative example)

■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	L ₁	f	ØD	
PSC40 SVVB N 00050-16			●	50		40	VB□□ 1604
PSC50 SVVB N 00060-16			●	60		50	

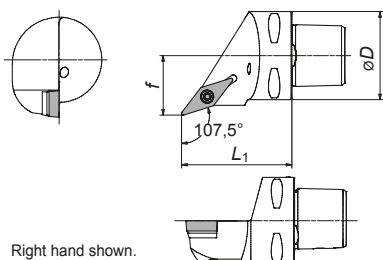
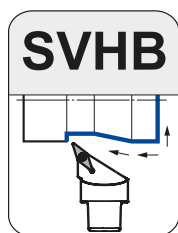
■ Inserts



VBMT1604__NSU
(Representative example)

■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	L ₁	f	ØD	
PSC40 SVHB R/L 27050-16	●	●		50	27	40	VB□□ 1604
PSC50 SVHB R/L 35060-16	●	●		60	35	50	

■ Inserts



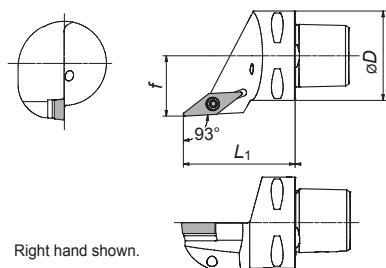
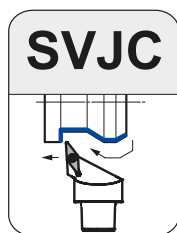
VBMT1604__NSU
(Representative example)

■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*

(*) Item is sold separately.

General Turning, Copying and Facing



Right hand shown.

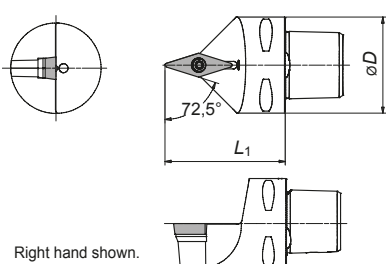
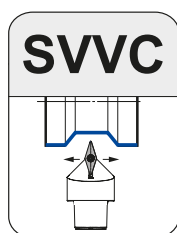
■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	∅D							
PSC40 SVJC R/L 27050-16	●	●		50	27	40	VC□□ 1604	VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SVJC R/L 35060-16	●	●		60	35	50							

■ Inserts

VCMT1604__NSU
(Representative example)

■ Spare Parts



Right hand shown.

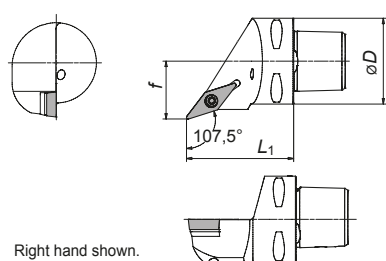
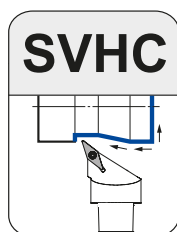
■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	∅D							
PSC40 SVVC N 00050-16			●	50		40	VC□□ 1604	VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SVVC N 00060-16			●	60		50							

■ Inserts

VCMT1604__NSU
(Representative example)

■ Spare Parts



Right hand shown.

■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert	Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
	R	L	N	L ₁	f	∅D							
PSC40 SVHC R/L 27050-16	●	●		50	27	40	VC□□ 1604	VCS1604	KGBS1111	KSS1111	3,5	LT15K	LH035K*
PSC50 SVHC R/L 35060-16	●	●		60	35	50							

■ Inserts

VCMT1604__NSU
(Representative example)

■ Spare Parts

(*) Item is sold separately.

Boring Bars

E1 ~ E24



Boring Bars

Selection	Boring Tool Selection Table	E2 - 4
ISO	Boring Tool Identification Table	E5
Features	Boring Tool Series	E6 - 7

Boring Bars for Negative Insert Type :

CN_	D...DCLN / S...PCLN	E8
DN_	D...DDUN / S...PDUN	E9
SN_	S...PSKN.....	E10
SumiTurn T-Rex	S...DTR.....	E11
TN_	D...DTFN / S...PTFN	E12
WN_	D...DWLN / S...WMLN.....	E13

Boring Bars for Positive Insert Type :

X-Bar for CC_	B/D...SCLC.....	E14
CC_	S ... SCLC	E14
CP_	S/C...SCLP	E15
X-Bar for DC_	B/D...SDUC / SDQC	E16-17
DC_	S ... SDQC / SDUC	E16-17
SP_	S/C...SSKP	E18
TC_	S ... STFC.....	E19
X-Bar for TP_	B/D...STUP	E20
TP_	S/C...STUP	E20
X-Bar for VB_	D ... SVUB / SVZB	E21
VB_	S ... SVQB / SVUB / SVZB	E22
WB_	S/C...SWUB.....	E23

Very Small Dia. Boring	BXBR...R(-NB).....	E24
------------------------	--------------------	-----

Boring Tools Selection

According to Applications / Boring - ϕD

BORING TOOLS

Coloured boxes indicate available size.

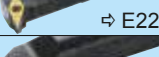
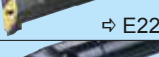
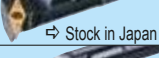
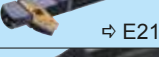
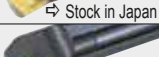
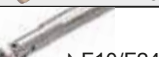
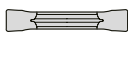
Application	Type	Boring Depth (L/D)			Applicable Insert	Tooling	Min. Boring ϕ D (mm)																											
		Shank					(Min. cutting diameter is shown when not matched in this table.)																											
		Steel	Carbide	X-Bar (Steel)			2	2.5	3	3.5	4	4.5	5	6	7	8	10	12	13	14	16	18	20	22	25	28	35	44	54	70				
Very Small Dia. Boring	BXBR		$\Rightarrow$ E24		~ 5		Special boring bar		○	○	○	○	○	○																				
	DABB		$\Rightarrow$ M45		~ 2		Sumidia brazed					●		●		●		●																
Stop Boring	BSME		$\Rightarrow$ M36-M38		~ 4		Sumiboron brazed			●	●	●	●	●	●																			
	SEXC		$\Rightarrow$ M36,37,39		~ 3		 Sumiboron insert						●		●	●																		
	BNBB		$\Rightarrow$ M40		~ 5		Sumiboron brazed					●	3.5		4.5	5.5	6.5		8.5															
	BNB		$\Rightarrow$ M41		~ 4		 Sumiboron insert												●	●		●		●										
	S/C-SWUB		$\Rightarrow$ E23	~ 3	~ 8		 Trigon Type 5° Pos.								●	5.5																		
	S-STFC		$\Rightarrow$ E19	~ 3																●		●		●		●		32	40	50				
	B/D-STUP		$\Rightarrow$ E20		~ 6															●	●		●		●		●		40					
	S-STUP(B)		$\Rightarrow$ E20	~ 3			 Triangle Type 5° & 11° Pos.													●	●	●		●		●								
	C-STUP		$\Rightarrow$ E20		~ 8															●	●	●		●		●								
	CTFP		$\Rightarrow$ Stock in Japan	~ 3			 Triangle 11° Pos.															○		○		○		32						
	D-DTFN		$\Rightarrow$ E12	~ 3	~ 6																							32	40	50				
	S-PTFN		$\Rightarrow$ E12				 Triangle Neg. Type																					32	40	50				
	Bottom Facing	BNZ		$\Rightarrow$ M33		~ 5		 Sumiboron insert												●		●	9	11	●		●		●					
S-SCLP			$\Rightarrow$ E15	~ 3																●		●		●		●		●						
B-SCLP			$\Rightarrow$ Stock in Japan		~ 6		 80° Diamond 11° Pos. Type														○		○		○									
C-SCLP			$\Rightarrow$ E15		~ 8																●		●		●									
B/D-SCLC			$\Rightarrow$ E14		~ 6															●	●		●		●		32	40						
S-SCLC			$\Rightarrow$ E14	~ 3			 80° Diamond 7° Pos. Type														●		●		●		32	40	50					
C-SCLC			$\Rightarrow$ Stock in Japan		~ 8																○	○	○	○	○	○	○							
D-DCLN			$\Rightarrow$ E8		~ 6																							32	40	50				
S-PCLN			$\Rightarrow$ E8	~ 3			 80° Diamond Neg. Type																				30	32	40	50	63			
D-DWLN			$\Rightarrow$ E13		~ 6																							32	40	50				
S-MWLN			$\Rightarrow$ E13	~ 3			 Trigon Neg. Type																					32	40	50				

● = Eurostock
○ = Japanstock

Boring Tools Selection

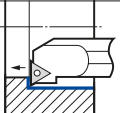
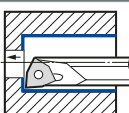
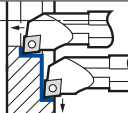
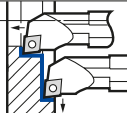
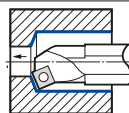
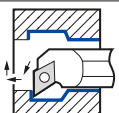
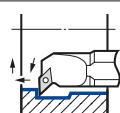
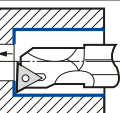
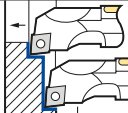
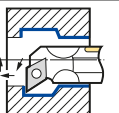
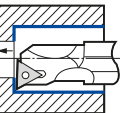
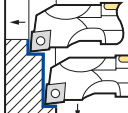
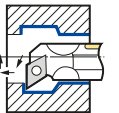
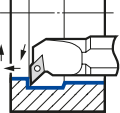
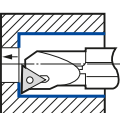
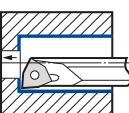
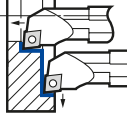
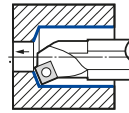
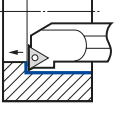
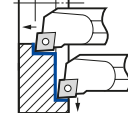
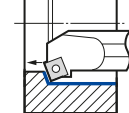
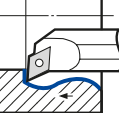
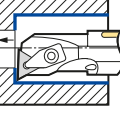
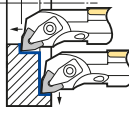
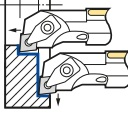
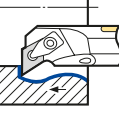
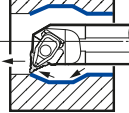
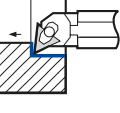
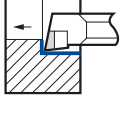
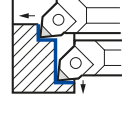
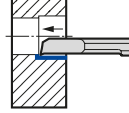
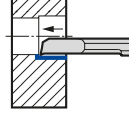
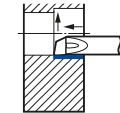
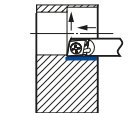
■ BORING TOOLS

Coloured boxes indicate available size.

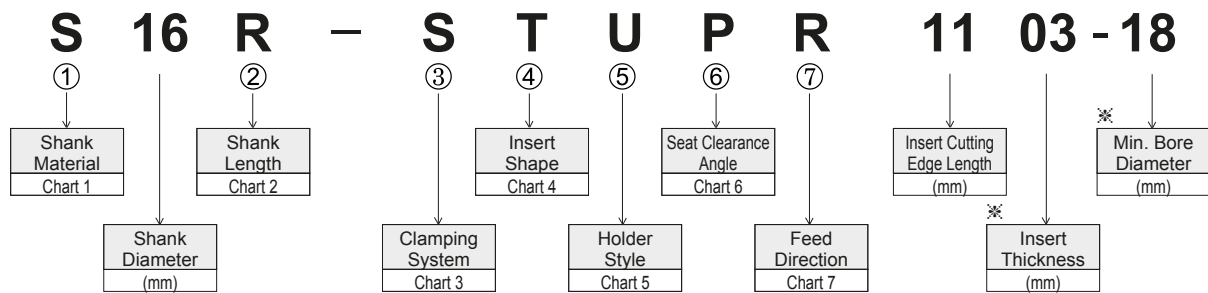
Application	Type	Boring Depth (L/D)			Applicable Insert	Tooling	Min. Boring ϕ D (mm)																						
		Shank					6	8	10	12	13	14	16	18	20	22	25	28	32	34	35	40	44	50	54	70			
		Steel	Carbide	X-Bar (Steel)																									
Copying	B/D-SDUC  ⇒ E16			~ 6																									
	S-SDUC  ⇒ E16	~ 3																											
	C-SDUC  ⇒ Stock in Japan		~ 8																										
	B/D-SDQC  ⇒ E17			~ 6																									
	S-SDQC  ⇒ E17	~ 3																											
	D-SVUB  ⇒ E21			~ 6																									
	S-SVUB  ⇒ E22	~ 3																											
	S-SVQB  ⇒ E22	~ 3																											
	B/C-SVQB  ⇒ Stock in Japan		~ 8	~ 6																									
	D-SVZB  ⇒ E21			~ 6																									
	S-SVZB  ⇒ E22																												
	D-DDUN  ⇒ E9			~ 6																									
	S-PDUN  ⇒ E9	~ 3																											
	Through Boring	S-SSKP  ⇒ E18	~ 3																										
C-SSKP  ⇒ E18			~ 8																										
SSKC  ⇒ Stock in Japan		~ 3																											
CSKP  ⇒ Stock in Japan		~ 3																											
S-PSKN  ⇒ E10		~ 3																											
Grooving	GNDI  ⇒ F10/F24	~																											
	GNDIS   ⇒ F10/F26	~																											

Boring Tool Series

TOOLING SELECTION

Application		Stop Boring		Bottom Facing		Trough Boring	Copying		
Insert Type		Triangle	Polygon / Others	80° Diamond		Square	55° T-REX	55° Diamond	35° Diamond
System									
Screw Lock	Steel	 S-STFC ⇨ E19 S-STUP(B) ⇨ E20	 S-SWUB ⇨ E23	 S-SCLC ⇨ E14	 S-SCLP ⇨ E15	 S-SSKP ⇨ E18	—	 S-SDUC ⇨ E16 S-SDQC ⇨ E17	 S-SVUB (S-SVQB ⇨ E22, S-SVZB ⇨ E22)
	Anti-vibration	 B-STUP ⇨ E20	—	 B-SCLC ⇨ E14	—	—	—	 B-SDUC ⇨ E16 B-SDQC ⇨ E17	—
	Anti-vibration with Oil Hole	 D-STUP ⇨ E20	—	 D-SCLC ⇨ E14	—	—	—	 D-SDUC ⇨ E16 D-SDQC ⇨ E17	 D-SVUB ⇨ E21 D-SVZB ⇨ E21
	Carbide	 C-STUP (C-STUB) ⇨ E20	 C-SWUB ⇨ E23	—	 C-SCLP ⇨ E15	 C-SSKP ⇨ E18	—	—	—
Lever Lock	Steel	 S-PTFN ⇨ E12	—	 S-PCLN ⇨ E8	—	 S-PSKN ⇨ E10	—	 S-PDUN ⇨ E9	—
Top Clamp	Anti-vibration with Oil Hole	 D-DTFN ⇨ E12	 D-DWLN ⇨ E13	 D-DCLN ⇨ E8	—	—	—	 D-DDUN ⇨ E9	—
	Steel	—	 S-MWLN ⇨ E13	—	—	—	 S-DTR ⇨ E11	—	—
CBN	Carbide	 BNB ⇨ M41	 BNBB ⇨ M40	 BNZ ⇨ M41	 BXBR ⇨ E24	 BXBR ⇨ E24			
		 BSME ⇨ M38	 SEXC ⇨ M39	—					

■ Catalogue Classification System For Boring Holders



※ This code may only be included in some of the catalogue nos.

① Chart 1

Shank Material	
S	Steel
B	Steel with Anti-vibration Mechanism without Oil Hole
C	Carbide
D	Steel with Anti-vibration Mechanism with Oil Hole
E	Carbide with Oil Hole

② Chart 2

Shank Length			
Symbol	Length (mm)	Symbol	Length (mm)
F	80	P	170
G	90	Q	180
H	100	R	200
J	110	S	250
K	125	T	300
L	140	U	350
M	150	V	400
N	160	W	450

③ Chart 3

Clamping System					
Symbol	System	Structure	Symbol	System	Structure
C	Top Clamp		M	Top & Hole Clamp Type	
D	Double Clamp		P	Lever Lock Type (Insert is Supported by 1 face)	
E	Pin Lock Type (Insert is supported by 1 face)		S	Screw Clamp Type	

⑦ Chart 7

Feed Direction	
Symbol	Feed Direction
R	Right Hand Feed
L	Left Hand Feed
N	Neutral Feed

④ Chart 4

Insert Shape			
Symbol	Insert Shape	Symbol	Insert Shape
A	Parallelogram 85°	M	Rhombic 86°
B	Parallelogram 82°	O	Octagonal
C	Diamond 80°	P	Pentagonal
D	Diamond 55°	R	Round
E	Diamond 75°	S	Square
F	Diamond 50°	T	Triangular
H	Hexagonal	V	Diamond 35°
K	Parallelogram 55°	W	Trigon
L	Rectangular		

⑤ Chart 5

Holder Style					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		Nil	N		Nil
B		Nil	Q		With Offset
D		Nil	R		With Offset
E		Nil	S		With Offset
F		With Offset	T		With Offset
G		With Offset	U		With Offset
J		With Offset	W		With Offset
K		With Offset	Y		With Offset
L		With Offset	Z		With Offset

⑥ Chart 6

Seat Clearance Angle	
Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special Angle

Boring Bars

Boring Tool Series



General Features

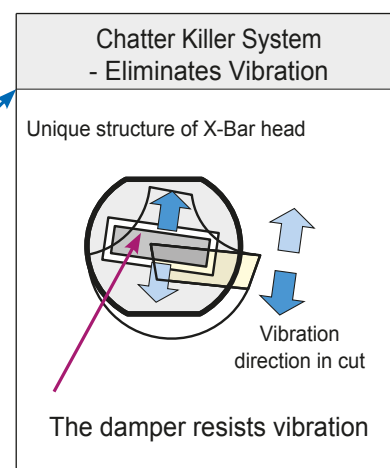
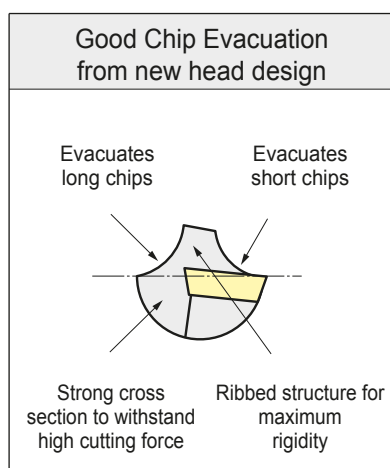
Since being the first in 1976 to introduce indexable boring bars, Sumitomo Electric has been continuously developing a comprehensive range which includes the SEC-Small Hole boring bar series, high rigidity boring head series, with either steel / carbide shanks, and the latest anti-vibration mechanism - SumiTurn X-Bar series coupled with a wide variety of insert grades and chipbreakers, cover a whole range of process requirements.

Features

- Wide selection for various boring operations
- Minimum bore diameter from $\varnothing 5,5\text{mm}$ onwards
- New anti-vibration boring bars, SumiTurn X-Bar.
- High rigidity head-design for small boring bars
- Wide selection of grades and chipbreakers available for various processes and work materials

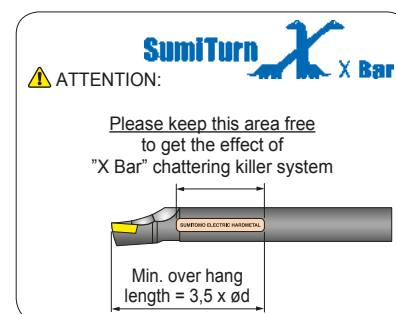
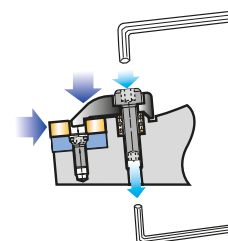
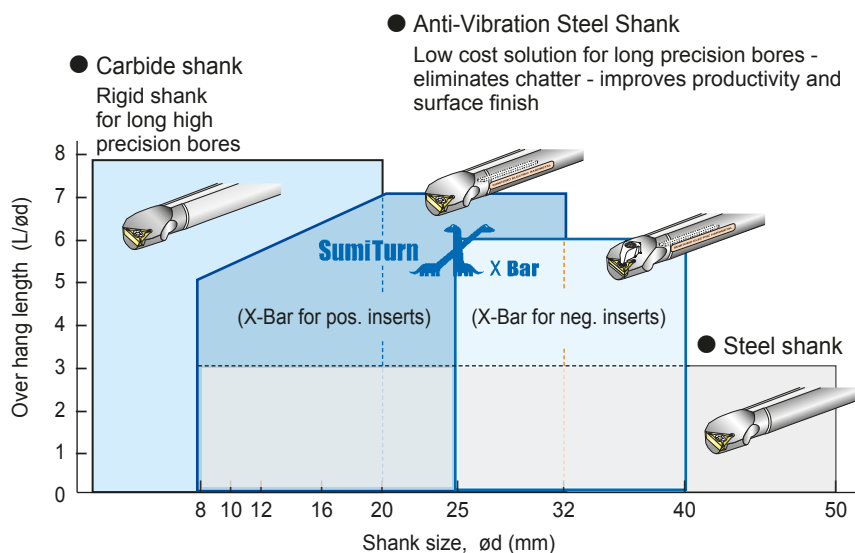
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Series SumiTurn X Bar



- New negative type "X Bar" with high performance double clamping system

Application Guide



Boring Bars

Boring Tool Series

Recommended Over Hang Length / Shank Diameter (L/D)

Type of boring bar		Over hang length (L/D)									
		1	2	3	4	5	6	7	8	9	10
● Steel Shank	Rigid head design for low cost hole boring.										
● Anti-Vibration Type Shank	Chatter killer system eliminates vibration - improves productivity - improves quality	 (X-Bar for pos. inserts) (X-Bar for neg. inserts)									
● Carbide Shank	High rigidity shank for high accuracy hole boring.										

Grades

Tool Material		Process			Work Material							
		High Precision	Finish~Light Cut	Medium Cut	P General Steel	M Stainless Steel	K Cast Iron	S Heat Resistant Alloy	H Hardened Steel	N Non-Ferrous Metal	Powder Metal	
Coated Carbide	CVD		AC805P		◎							
			New AC8025P		◎	○	○					
			AC810P		◎							
			AC820P		◎							
			AC830P		◎	○						
			New AC6020M		◎	◎						
			AC6030M		○	◎						
			AC405K				◎					
			AC415K				◎					
			AC420K				◎					
	PVD		ACZ150		◎	◎					○	
			AC510U		◎	◎						○
			AC520U		◎	◎		◎				
			AC530U		◎	◎		◎				
			New AC1030U		◎	◎		◎				
			AC6040M			◎						
Cermet			T1000A		◎	◎	◎				○	
Coated Cermet			T1500A/T1500Z		◎	◎				◎		
Cermet			T3000Z		◎	◎						
Carbide			G10E			◎				◎		
SumiBoron		BN1000							◎			
		BN2000						◎				
		BNC2010						◎				
		BNC2020						◎				
		BN7000 (BN700)					◎				◎	
		BN7500									◎	
SumiDia		DA1000								◎		
		DA150								◎		

○ Preferred choice

○ Suitable

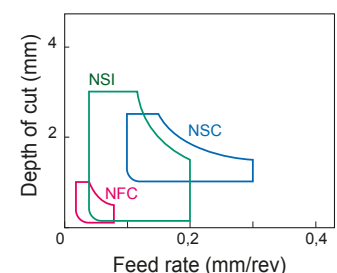
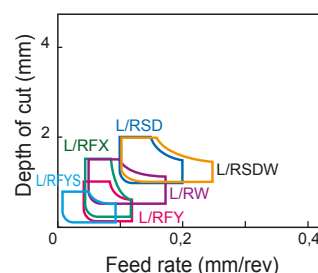
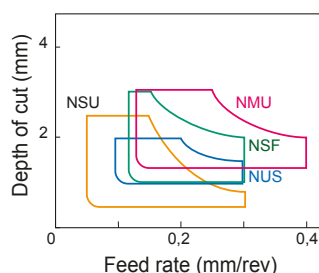
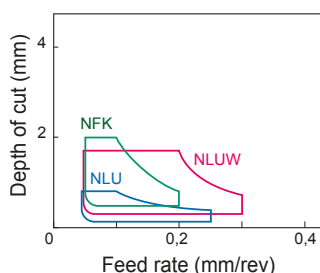
Recommended Chip Breakers

● M-Class Finish-Light-Cut

● M-Class Light-Medium-Cut

● G-Class Ground Typ

● G-Class Breaker

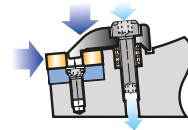


D...DCLN / S...PCLN Type

For Negative CN __ - Inserts ($\alpha = 0^\circ$)



SumiTurn X Bar



Insert (eg.)

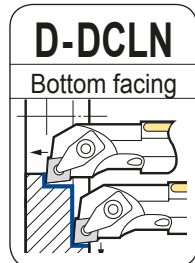


N-GU

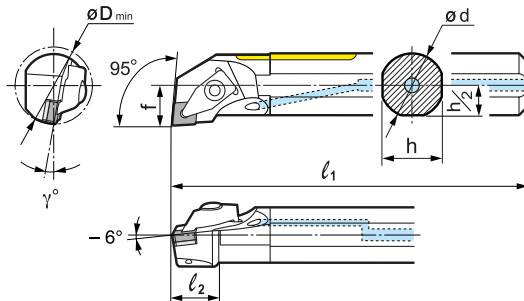
Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim screw	Wrench	Wrench
SCP-2			CNS1203B	BFTX0307N	TRX10 ^(*)	
			CNS1204B	BFTX0409N	TRX15 ^(*)	LH040 LH025

(*) Note: Wrench (TRX type) for shim screw is not included.



Anti-vibration D type with oil hole



Holders

Above figures show right hand tools.

Ordering No.	Stock		ϕD_{min}	Dimensions (mm)							Insert (eg.)
	R	L		ϕd	h	l_1	l_2	f	γ		
D25T - DCLN R/L 1204-32	●	●	32	25	23	300	26	17	-12°		CNC□1204□□
D32T - DCLN R/L 1204-40	●	●	40	32	30	300	26	22	-10°		
D40U - DCLN R/L 1204-50	●	●	50	40	37	350	26	27	-10°		

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

Holders

Tool holders (P type) with lever-lock system	Ordering No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
	S20S - PCLN R/L09	●	●	25	20	18	250	29	13	-11°	CN __ 0903 __
	S25T - PCLN R/L09	●	●	30	25	23	300	33	17	-10°	
	S25T - PCLN R/L12	●	●	32	25	23	300	42	17	-10°	CN __ 1204 __
	S32U - PCLN R/L12	●	●	40	32	30	350	49	22	-11°	
	S40V - PCLN R/L12	●	●	50	40	37	400	56	27	-10°	
	S32U - PCLN R/L16	●	●	40	32	30	350	56	22	-11°	CN __ 1606 __
	S40V - PCLN R/L16	●	●	50	40	37	400	56	27	-10°	
	S50W - PCLN R/L16	□	□	63	50	47	450	56	35	-11°	
	S50W - PCLN R/L19	□	□	63	50	47	450	63	35	-11°	CN __ 1906 __

All figures show right hand tools.

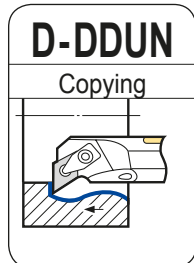
Applicable Inserts

Spare Parts

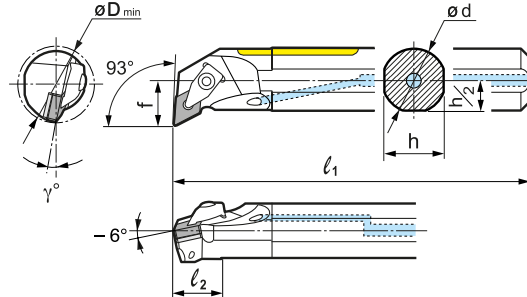
Holder	Carbides, Cermets		CBN, PCD	Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
	Double sided	One sided							
S - PCLN R/L									
S.....09	CNMG 0903 __ NGU	-	-	LCL3C-SD	LCS3B-SD	-	-	LH020	
S25T.....12	CNMG 1204 __ NGU	CNMM 1204 __ NMP	CNGA 1204 __	LCL4C-SD	LCS4B-SD	-	-	LH025	
S32U.....12	CNMG 1204 __ NGU	CNMM 1204 __ NMP	CNGA 1204 __	LCL4T-SD	LCS41BS-SD	LSC42SD	LSP4SD	LH030	
S40V.....12	CNMG 1204 __ NGU	CNMM 1204 __ NMP	CNGA 1204 __	LCL4SD	LCS42BS-SD	LSC42SD	LSP4SD	LH030	
S.....16	CNMG 1606 __ NGU	CNMM 1606 __ NMP	-	LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030	
S.....19	CNMG 1906 __ NGU	CNMM 1906 __ NMP	-	LCL5C-SD	LCS6B-SD	LSC63SD	LSP6SD	LH040	

● = Eurostock
□ = Delivery on request

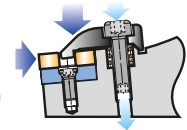
Recommended Tightening Torque (N·m)



Anti-vibration D type with oil hole



SumiTurn X Bar



Insert (eg.)



N-GU

Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim screw	Wrench	Wrench
	SCP-1		DNS1104B	BFTX0307N	TRX10 (*)	
	SCP-2		DNS1506B	BFTX0409N C 3,4	TRX15 (*)	LH040 LH025

(*) Note: Wrench (TRX type) for shim screw is not included.

Holders

Above figures show right hand tools.

Ordering No.	Stock		øD _{min}	Dimensions (mm)							Insert (eg.)	Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench		
	R	L		ød	h	ℓ ₁	ℓ ₂	f	γ										
D32T - DDUN R/L 1104-40	●	●	40	32	30	300	26	22	-10°	DN□□1104○○	SCP-1			DNS1104B	BFTX0307N	TRX10 ^(*)			
D32T - DDUN R/L 1506-40	●	●	40	32	30	300	26	22	-12°	DN□□1506○○	SCP-2			DNS1506B	BFTX0409N	TRX15 ^(*)	LH040	LH025	
D40U - DDUN R/L 1506-50	●	●	50	40	37	350	26	27	-12°	DN□□1506○○					3.4				

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

Holders

Tool holders (P type) with lever-lock system	Ordering No.	Stock		Dimensions (mm)							Image
		R	L	ØD _{min}	d	h	l ₁	l ₂	f	γ	
S - PDUN R/L	S25T - PDUN R/L 11	●	●	32	25	23	300	35	17	-11°	DN__ 1104__
	S32U - PDUN R/L 15 04	●	●	40	32	30	350	40	22	-11°	DN__ 1504__
	S40V - PDUN R/L 15	●	●	50	40	37	400	56	27	-11°	DN__ 1506__
	S50W - PDUN R/L 15	□	□	63	50	47	450	63	35	-10°	DN__ 1506__

All figures show right hand tools.

Applicable Inserts

Spare Parts

Holder	Carbides, Cermets		CBN, PCD	Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
	Double sided	One sided							
S - PDUN R/L									
S25T11	DNMG 1104__ NGU	-	DNGA 1104__	LCL3DB-SD	LCS3DB-SD	-	-	LH020	
S32U15 04	DNMG 1504__ NGU	DNMM 1504__ NMP	DNGA 1504__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030	
S40V15	DNMG 1506__ NGU	DNMM 1506__ NMP	DNGA 1506__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030	
S50W15	DNMG 1506__ NGU	DNMM 1506__ NMP	DNGA 1506__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030	

Boring Bars

S...PSKN Type

For Negative SN__ - Inserts ($\alpha = 0^\circ$)



■ Holders

	Tool holders (P type) with lever-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - PSKN R/L 		S25T - PSKN R/L 12	●	●	32	25	23	300	42	17	-11°	SN__ 1204__
		S32U - PSKN R/L 12	●	●	40	32	30	350	45	22	-10°	
		S40V - PSKN R/L 12	●	●	50	40	37	400	50	27	-10°	
		S40V - PSKN R/L 15	●	□	63	40	47	400	60	35	-10°	SN__ 1506__
		S50W - PSKN R/L 15	□	□	63	50	47	450	60	35	-10°	
		S50W - PSKN R/L 19	□	□	63	50	47	450	60	35	-9°	SN__ 1906__

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

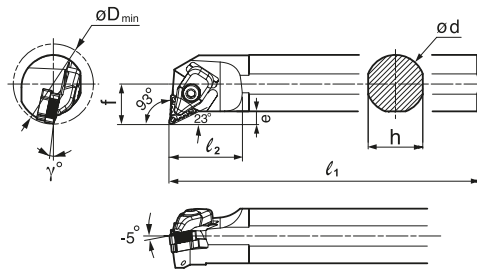
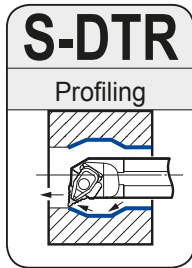
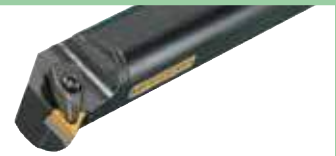
Holder	Carbides, Cermets		CBN	Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
	Double sided	One sided							
S - PSKN R/L									
S25T....12	SNMG 0903__ NGU	-	-	LCL4C-SD	LCS4B-SD	-	-	LH025	
S32U....12	SNMG 1204__ NGU	SNMM 1204__ NMP	SNGA 1204__	LCL4T-SD	LCS41BS-SD	LSS42SD	LSP4SD	LH030	
S40V....12	SNMG 1204__ NGU	SNMM 1204__ NMP	SNGA 1204__	LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	
S....15	SNMG 1506__ NGU	SNMM 1506__ NMP	-	LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	
S....19	SNMG 1906__ NGU	SNMM 1906__ NMP	-	LCL5C-SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	

● = Eurostock
□ = Delivery on request

○ = Japanstock

Recommended Tightening Torque (N·m)

Internal Turning & Copying

SumiTurn **T-REX**

Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N 2.0	TSW040	TRX10 ^(*)

(*) Note: Wrench (TRX10) for shim is not included.

Holders

Above figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)								Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
	R	L	ϕD_{min}	ϕd	h	ℓ_1	ℓ_2	f	γ	e							
S32S-DTR55C R/L-17	●	□	44	32	30	250	40	22	-12°	7	TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N 2.0	TSW040	TRX10 ^(*)
S40T-DTR55C R/L-17	●	□	50	40	37	300	40	25	-10°	6,2	TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N 2.0	TSW040	TRX10 ^(*)

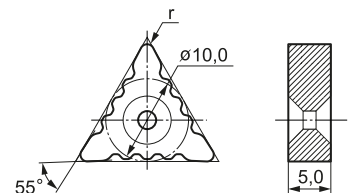
Advantages

● T-REX Inserts for Maximum Economy

With 6 cutting edges and a 55 degree included angle - T-Rex is the intelligent alternative to profile turning with a traditional 4 edge DNMG insert.

Inserts

Applic.	Shape	Ordering No.	r	Coated Carbide					Coated Cermet
				AC810P	AC8025P ^{New}	AC820P	AC830P	AC630M	
Fine Finishing	 FL	TRM 551704-FL	0,4	○	○	○	○	○	○
		551708-FL	0,8	○	○	○	○	○	○
Finishing	 LU	TRM 551704-LU	0,4	●	○	●	○	○	○
		551708-LU	0,8	●	○	●	○	○	○
		551712-LU	1,2	●	○	●	○	○	○
	 SU	TRM 551704-SU	0,4	○	○	○	○	●	○
		551708-SU	0,8	○	○	○	○	●	○
		551712-SU	1,2	○	○	○	○	●	○
Light Cut	 GU	TRM 551704-GU	0,4	●	○	●	●	●	○
		551708-GU	0,8	●	○	●	●	●	○
		551712-GU	1,2	●	○	●	●	○	○



Application **P** Steel
M Stainless steel

● Recommended Cutting Conditions

Cutting speed (m/min)

Grade		Coated Carbide					Coated Cermet
		AC810P	AC8025P	AC820P	AC830P	AC630M	T3000Z
Work materials	Low carbon steel	220 400	150 350	150 350	120 300	120 300	100 400
	Alloy steel	150 300	100 250	100 250	80 200	80 230	100 250
	Stainless steel				50 150	100 160	
Application range	Finishing	◎	○	○	○	○	◎
	Medium cutting	○	◎	◎	○	◎	○
	Interrupted cutting		○	○	◎	○	○

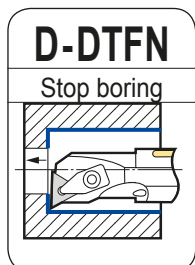
◎ Preferred choice

○ Suitable

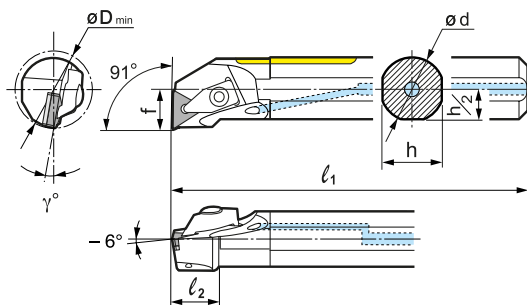
Boring Bars

D...DTFN / S...PTFN Type

For Negative TN__ - Inserts ($\alpha = 0^\circ$)



Anti-vibration D type with oil hole



SumiTurn X Bar

Insert (eg.)



N-GU

Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench
SCP-1			TNS1603B TNS1604B	BFTX0307N 2.0	TRX10 ^(*)	LH040 LH025

Holders

Above figures show right hand tools.

Ordering No.	Stock		$\varnothing D_{min}$	Dimensions (mm)							Insert (eg.)
	R	L		$\varnothing d$	h	ℓ_1	ℓ_2	f	γ		
D25T - DTFN R/L 1604-32	●	●	32	25	23	300	21	17	-12°	TN□□1604□□	
D32T - DTFN R/L 1604-40	●	●	40	32	30	300	26	22	-10°		
D40U - DTFN R/L 1604-50	●	●	50	40	37	350	26	27	-10°		

(*) Note: Wrench (TRX type) for shim screw is not included.

Holders

Tool holders (P type) with lever-lock system	Ordering No.	Stock		Dimensions (mm)							Image
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - PTFN R/L	S20S - PTFN R/L 11	●	●	25	20	18	250	30	13	-12°	TN__ 1103__
	S25T - PTFN R/L 16	●	●	32	25	23	300	43,3	17	-13°	TN__ 1604__
	S32U - PTFN R/L 16	●	●	40	32	30	350	49,6	27	-12°	
	S40V - PTFN R/L 16	●	□	50	40	37	400	49,5	27	-11°	
	S50W - PTFN R/L 16	□	□	63	50	47	450	56	35	-10°	
	S40V - PTFN R/L 22	●	●	50	40	37	400	59	27	-11°	TN__ 2204__
	S50W - PTFN R/L 22	□	□	63	50	47	450	66	35	-10°	

All figures show right hand tools.

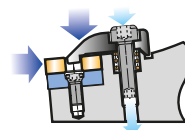
Applicable Inserts

Spare Parts

Holder	Carbides, Cermets		CBN	Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
	Double sided	One sided							
S - PTFN R/L									
S...11	-	-	-	LCL3T-SD	LCS3B-SD	-	-	LH020	
S...16	TNMG 1604__ NGU	TNMM 1604__ NMP	TNGA 1604__	LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	
S...22	TNMG 2204__ NGU	TNMM 2204__ NMP	TNGA 2204__	LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	



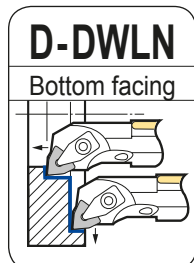
SumiTurn X Bar



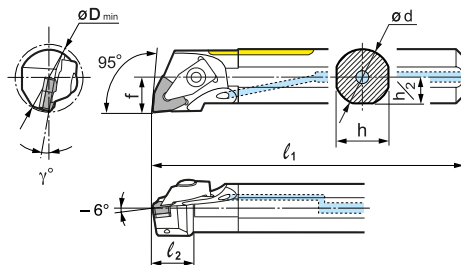
Insert (eg.)



N-GU

**D-DWLN**

Bottom facing

Anti-vibration D type
with oil hole

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench
SCP-2			WNS0803B	BFTX0307N	TRX10 ^(*)	
			WNS0804B	BFTX0409N 3.4	TRX15 ^(*)	LH040 LH025

Above figures show right hand tools.

■ Holders

Ordering No.	Stock		ϕD_{min}	Dimensions (mm)							Insert (eg.)
	R	L		ϕd	h	l_1	l_2	f	γ		
D25T - DWLN R/L 0804-32	●	●	32	25	23	300	26	17	-12°		WN□□0804□□
D32T - DWLN R/L 0804-40	●	●	40	32	30	300	26	22	-10°		
D40U - DWLN R/L 0804-50	●	●	50	40	37	350	26	27	-10°		

(*) Note: Wrench (TRX type) for shim screw is not included.

■ Holders

	Tool holders (M type) with wedge clamp system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - MWLN R/L 		S25R - MWLN R/L 08	●	●	32	25	23	200	28	17	-15°	WNMG 0804__
		S32S - MWLN R/L 08	●	●	40	32	30	250	28	22	-14°	
		S40T - MWLN R/L 08	●	●	50	40	37	300	28	27	-12°	

All figures show right hand tools.

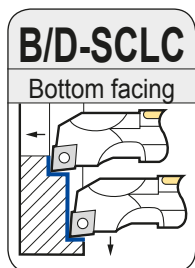
■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets			Clamp	Double screw	Pin	Shim	Wrench	
	Double sided	One sided							
S - MWLN R/L									
S...08	WNMG 0804__ NGU	WNMM 0804__ NMP		HE060011W	WB 6-16	HE060011P	HE060011E	LH025, LH030	

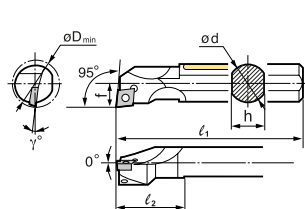
Boring Bars B/D/S...SCLC Type

For Positive CC__ - Inserts ($\alpha = 7^\circ$)

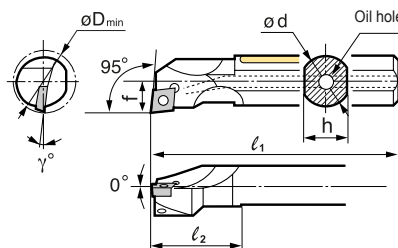


B Type (Fig.1)

Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



■ Holders

Steel shank	Ordering No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench
		R	L		ϕd	h	l_1	f	l_2	γ				
Anti-vibration B type	B08H - SCLC R/L 0602-10	●	●	10	8	7	100	5,5	19	-13°	1.	CC□T 0602□□	BFTX02505N C 1,1	TRX08
	B10K - SCLC R/L 0602-12	●	●	12	10	9	125	6	21	-12°			BFTX02506N	
Anti-vibration D type with oil hole	D12M - SCLC R/L 0602-14	●	●	14	12	11	150	7	25	-10°	2.	CC□T 09T3□□	BFTX0407N	TRX15
	D16R - SCLC R/L 09T3-18	●	●	18	16	15	200	11	30	-8°			BFTX0409N	
	D20S - SCLC R/L 09T3-22	●	●	22	20	18	250	13	30	-7°			BFTX0511N C 5,0	
	D25T - SCLC R/L 1204-32	●	●	32	25	23	300	17	38	-6°				
	D32T - SCLC R/L 1204-40	●	●	40	32	30	300	20	53	-6°				

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - SCLC R/L		S10K - SCLC R/L 06	●	●	13	10	9	125	9	7	-12°	CC__ 0602__
		S12M - SCLC R/L 06	●	●	16	12	11	150	11	9	-10°	
		S16R - SCLC R/L 06	●	●	20	16	15	200	15	11	-8°	
		S16R - SCLC R/L 09	●	●	20	16	15	200	15	11	-8°	CC__ 09T3__
		S20S - SCLC R/L 09	●	●	25	20	18	250	20	13	-7°	
		S25T - SCLC R/L 12	●	●	32	25	23	300	20	17	-6°	CC__ 1204__
		S32U - SCLC R/L 12	●	●	40	32	30	350	25	22	-10°	
		S40V - SCLC R/L 12	□	●	50	40	37	400	25	27	-8°	

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

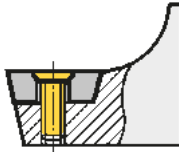
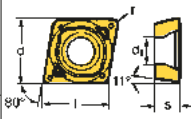
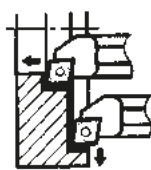
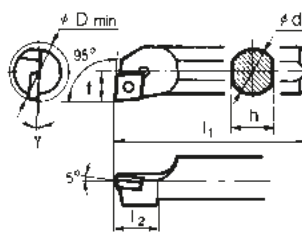
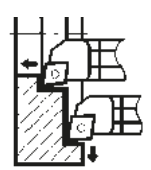
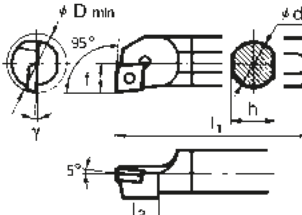
Holder	Carbides, Cermets		Screw		Wrench				
S - SCLC R/L									
S.....06	CCMT 0602__ NFP	CCGW 0602__	-	BFTX02505N	1,1	TRX08			
S16R.....09	CCMT 09T3__ NFP	CCGW 09T3__	-	BFTX0407N	3,0	TRX15			
S20S.....09	CCMT 09T3__ NFP	CCGW 09T3__	-	BFTX0409N	3,4	TRX15			
S.....12	CCMT 1204__ NFP	CCGW 1204__	-	BFTX0511N	5,0	TRX20			

● = Eurostock
□ = Delivery on request

Recommended Tightening Torque (N·m)



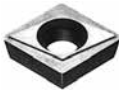
■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ØD _{min}	d	h	l ₁	l ₂	f	γ	
S - SCLP R/L Steel shank 		S10K - SCLP R/L 08	●	●	12	10	9	125	12	6	-5°	CP_T 0802__
		S12M - SCLP R/L 08	●	●	16	12	11	150	15	8	-3°	
		S16R - SCLP R/L 09	●	●	20	16	15	200	18	10	-3°	CP_T 0903__
		S20S - SCLP R/L 09	●	●	25	20	18	250	18	12,5	0	
		S25T - SCLP R/L 12	●	●	28	25	22	300	17,4	14	-3°	CP_T 1204__
C - SCLP R/L Carbide shank 		C10Q - SCLP R/L 08	●	□	12	10	9	180	15	6	-5°	CP_T 0802__
		C12R - SCLP R/L 08	□	□	16	12	11	200	15	8	-2°	
		C16S - SCLP R/L 09	●	□	20	16	15	250	15	10	-2°	CP_T 0903__

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN		Screw		Wrench			
S/C-SCLP R/L									
S/C 10.....08	CPGT 0802__ NSD	CPMW 0802__		BFTX 0305 A	-	TRX 10			
S/C 12.....08	CPGT 0802__ NSD	CPMW 0802__		BFTX 0305 A	-	TRX 10			
S/C 16.....09	CPGT 0903__ NSD	CPMW 0903__		BFTX 0407 A	3,4	TRX 15			
S 20.....09	CPGT 0903__ NSD	CPMW 0903__		BFTX 0407 A	3,4	TRX 15			
S 25.....12	CPGT 1204__ NSD	-		BFTX 0509 A	5,0	TRX 20			

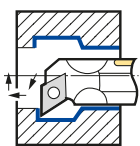
Boring Bars B/D/S...SDUC Type

For Positive DC __ - Inserts ($\alpha = 7^\circ$)



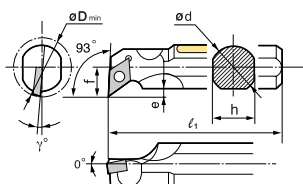
B/D-SDUC

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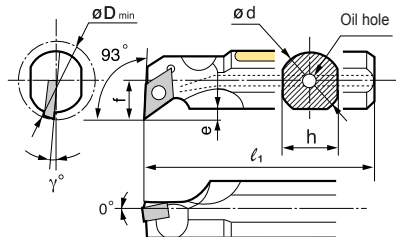


B Type (Fig.1)

Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



Spare Parts



Holders

Steel shank	Ordering No.	Stock		øD _{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench
		R	L		ød	h	ℓ ₁	f	e	γ				
Anti-vibration B type	B10M - SDUC R/L 0702-13	●	●	13	10	9	150	7	2,5	-8°	1.	DC□T 0702○○	BFTX02506N 1,5 	TRX08
Anti-vibration D type with oil hole	D12M - SDUC R/L 0702-16	●	●	16	12	11	150	9	3,5	-8°	2.			
	D16R - SDUC R/L 0702-20	●	●	20	16	15	200	11	4,0	-6°				
	D20S - SDUC R/L 11T3-25	●	●	25	20	18	250	13	4,5	-6°				
	D25S - SDUC R/L 11T3-32	●	●	32	25	22	250	17	7,0	-6°				
	D32T - SDUC R/L 11T3-40	●	●	40	32	30	300	22	8,0	-6°				

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	ℓ_1	f	e	γ	
S - SDUC R/L		S10K - SDUC R/L 07	●	●	13	10	9	125	7	2,5	-8°	DC__ 0702__
		S12M - SDUC R/L 07	●	●	16	12	11	150	9	3,5	-8°	
		S16R - SDUC R/L 07	●	●	20	16	15	200	11	4	-6°	
		S20S - SDUC R/L 11	●	●	25	20	18	250	13	4,5	-6°	DC__ 11T3__
		S25T - SDUC R/L 11	●	●	32	25	22	300	17	7,5	-6°	
		S32U - SDUC R/L 11	●	●	40	32	30	350	22	11	-6°	

All figures show right hand tools.

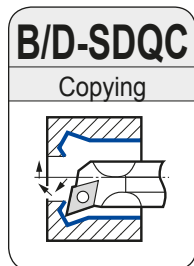
Applicable Inserts

Spare Parts

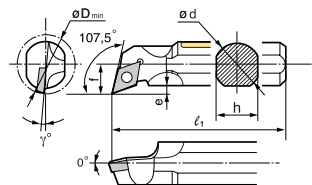
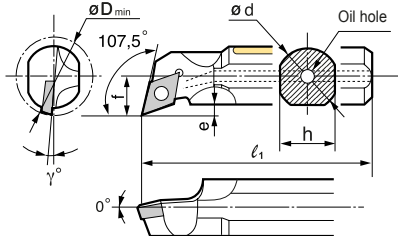
Holder	Carbides, Cermets		CBN, PCD	Screw	(N·m)	Wrench			
S - SDUC R/L S - SDQC R/L									
S10K.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S12M.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S16R.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S.....11	DCMT 11T3__ NFP	DCMT 11T3__ NSK	DCGW 11T3__	BFTX0409N	3,4	TRX15			

● = Eurostock

(N·m) Recommended Tightening Torque (N·m)

**B Type** (Fig.1)

Min. Bore Dia.

**D Type** (Fig.2)

Insert (ex.)



■ Spare Parts

Insert (ex.)	Screw	Wrench

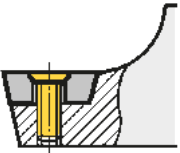
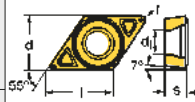
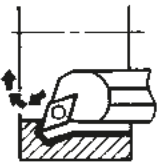
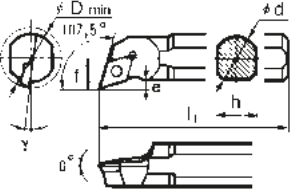
■ Holders

Steel shank	Ordering No.	Stock	Dimensions (mm)	Fig.	Insert (ex.)	Screw	Wrench
Anti-vibration B type	B10M - SDQC R/L 0702-13	● ●	13 10 9 150 7 2,5 -8°	1.	DC□ 0702□□	BFTX02506N 1,5 (N·m)	TRX08
Anti-vibration D type with oil hole	D12M - SDQC R/L 0702-16	● ●	16 12 11 150 9 3,5 -8°	2.	DC□ 11T3□□	BFTX0409N 3,4 (N·m)	TRX15
	D16R - SDQC R/L 0702-20	● ●	20 16 15 200 11 4,0 -6°				
	D20S - SDQC R/L 11T3-25	● ●	25 20 18 250 13 4,5 -6°				
	D25S - SDQC R/L 11T3-32	● ●	32 25 22 250 17 7,0 -6°				
	D32T - SDQC R/L 11T3-40	● ●	40 32 30 300 22 7,0 -10°				

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

All figures show right hand tools.

■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock	Dimensions (mm)								
				R	L	ϕD_{min}	d	h	l_1	f	e	
S - SDQC R/L 		S10K - SDQC R/L-07	● ●	13	10	9	125	7	2,5	-8°	DC__ 0702__	
		S12M - SDQC R/L-07	● ●	16	12	11	150	9	3,5	-8°		
		S16R - SDQC R/L-07	● ●	20	16	15	200	11	4	-6°		
		S20S - SDQC R/L-11	● ●	25	20	18	250	13	4,5	-6°	DC__ 11T3__	
		S25T - SDQC R/L-11	● ●	32	25	22	300	17	7	-6°		

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

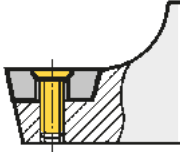
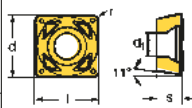
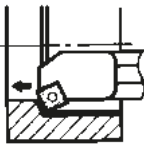
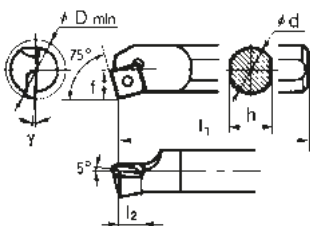
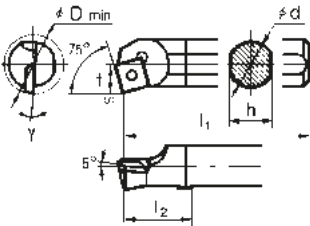
Holder	Carbides, Cermets		CBN, PCD	Screw	(N·m)	Wrench			
S - SDUC R/L S - SDQC R/L									
S10K.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S12M.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S16R.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S.....11	DCMT 11T3__ NFP	DCMT 11T3__ NSK	DCGW 11T3__	BFTX0409N	3,4	TRX15			

Boring Bars S/C...SSKP Type

For Positive SP__ - Inserts ($\alpha = 11^\circ$)



■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - SSKP R/L Steel shank 		S12M - SSKP R/L 09	●	●	16	12	11	150	9	8	-6°	SP_T 0903__
		S16R - SSKP R/L 09	●	●	20	16	15	200	6,8	10	-4°	
		S20S - SSKP R/L 09	●	□	25	20	18	250	8,5	12,5	-2°	
		S25T - SSKP R/L 09	●	□	28	25	22	300	5	14	0	
C - SSKP R/L Carbide shank 		C12R - SSKP R/L 09	●	□	16	12	11	200	25	8	-6°	SP_T 0903__
		C16S - SSKP R/L 09	●	□	20	16	15	250	30	10	-4°	

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.
SPGT figure shows left hand tool.

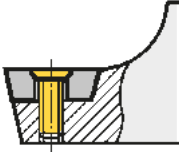
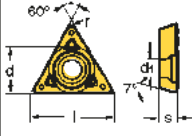
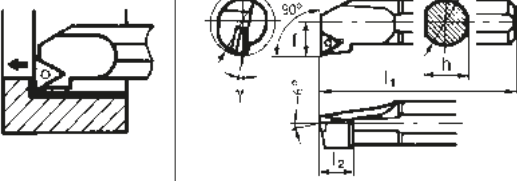
■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN		Screw		Wrench			
S/C-SSKP R/L									
S/C 12.....09	SPGT 0903__ L/R-SD	SPGW 0903__		BFTX 0307 A	2,0	TRX 10			
S/C 16.....09									
S 20.....09									
S 25.....09									



■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
S - STFC R/L 		S10K - STFC R/L 09	●	●	13	10	9	125	-	7	-15°	TC__ 0902__
		S12M - STFC R/L 11	●	●	16	12	11	150	10	9	-10°	TC__ 1102__
		S16R - STFC R/L 11	●	●	20	16	15	200	12	11	-6°	
		S20S - STFC R/L 11	●	●	25	20	18	250	14	13	-3°	
		S25T - STFC R/L 16	●	□	32	25	23	300	18	17	-6°	TC__ 16T3__
		S32U - STFC R/L 16	●	□	40	32	30	350	20	22	-10°	
		S40V - STFC R/L 16	□	□	50	40	37	400	25	27	-8°	

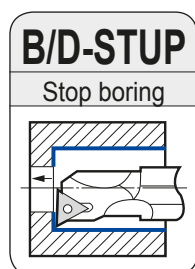
All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

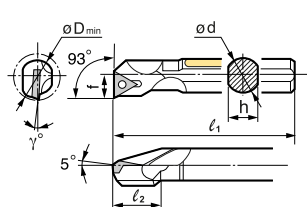
Holder	Carbides, Cermets		CBN, PCD	Screw	(N·m)	Wrench			
S - STFC R/L									
S.....09	TCMT 0902__ NFP	-	TCGW 0902__	BFTX02205N	0,5	TRX06			
S.....11	TCMT 1102__ NFP	TCMT 1102__ NSK	TCGW 1102__	BFTX02506N	1,5	TRX08			
S.....16	TCMT 16T3__ NFP	TCMT 16T3__ NSK	TCGW 16T3__	BFTX0409N	3,4	TRX15			

For Positive TB / TP __ - Inserts ($\alpha = 5, 11^\circ$)

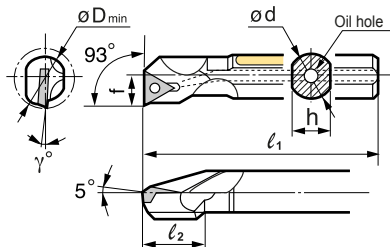


B Type (Fig.1)

Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



■ Spare Parts



■ Holders

Steel shank	Ordering No.	Stock		øD _{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench
		R	L		ød	h	ℓ ₁	f	ℓ ₂	γ				
Anti-vibration B type	B08H - STUP R/L 0802-10	●	●	10	8	7	100	5	13	-10°	1.	TP□T 0802○○	BFTX0204A ⌀0.5	TRX06
	B10K - STUP R/L 1103-12	●	●	12	10	9	125	6	15	-8°			BFTX0306A ⌀2.0	
Anti-vibration D type with oil hole	D12M - STUP R/L 1103-14	●	●	14	12	11	150	7	17	-7°	2.	TP□T 1103○○	BFTX0307A ⌀2.0	TRX10
	D16R - STUP R/L 1103-18	●	●	18	16	15	200	9	18	-4°			BFTX0410A ⌀3.4	
	D20S - STUP R/L 1103-22	●	●	22	20	18	250	11	18	-3°				
	D25T - STUP R/L 1604-28	●	●	28	25	22	300	14	18	-2°		TP□T 1604○○		TRX15
	D32T - STUP R/L 1604-40	●	●	40	32	30	300	20	13	-2°				

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

[illegible]

■ Applicable Inserts

Holder	Carbides, Cermets	CBN, PCD		Screw		Wrench			
S/C-STU_ R/L									
S/C 08.....06-01	TBGT 0601_ L/R-W	-		BFTX 0204 A	0,5	TRX 06			
S/C 08.....08-02	TPGT 0802_ L/R-W	TPMW 0802_		BFTX 0204 A	0,5	TRX 06			
S/C 10.....11-03	TPGT 1103_ L/R-W	TPGW 1103_		BFTX 0306 A	2,0	TRX 10			
S/C 12/16.....11-03	TPGT 1103_ L/R-W	TPGW 1103_		BFTX 0307 A	2,0	TRX 10			
S 20/25.....16	TPGT 1604 L/R-W	TPGW 1604		BFTX 0410 A	3,4	TRX 15			

■ Spare Parts

Screw		Wrench			
					
BFTX 0204 A	0,5	TRX 06			
BFTX 0204 A	0,5	TRX 06			
BFTX 0306 A	2,0	TRX 10			
BFTX 0307 A	2,0	TRX 10			
BFTX 0410 A	3,4	TRX 15			

SumiTurn X Bar



Insert (ex.)

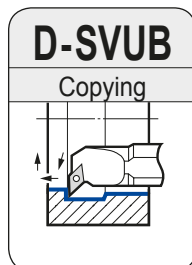
Anti-vibration D type
with oil hole

Fig.1

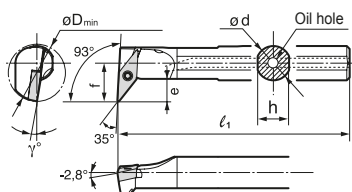
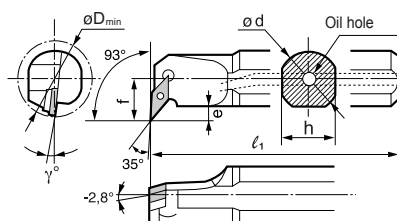


Fig.2



Spare Parts

Pin	Clamp screw	Shim	Screw	Wrench	Wrench
VP32B	BH03504	SVP32	BFTX02506 BFTX03508 2.0	TRX08 TRX10	— LH020

Holders

Above figures show right hand tools.

Ordering No.	Stock	ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
D16R - SVUB R/L 1103-22	● ●	22	16	15	200	13	5	-7°	1.	VB□□ 1103□□	—	—	—	BFTX02506	TRX08	—
D20S - SVUB R/L 1103-27	● ●	27	20	18	250	15	5	-5°	1.	VB□□ 1103□□	—	—	—	BFTX02506	TRX08	—
D25T - SVUB R/L 1604-35	● ●	35	25	23	300	20,5	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	BFTX03508 2.0	TRX10	LH020
D32T - SVUB R/L 1604-40	● ●	40	32	30	300	22	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	BFTX03508 2.0	TRX10	LH020

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

SumiTurn X Bar



Insert (ex.)

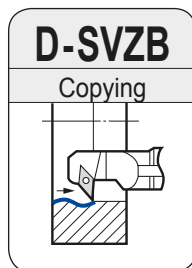
Anti-vibration D type
with oil hole

Fig.1

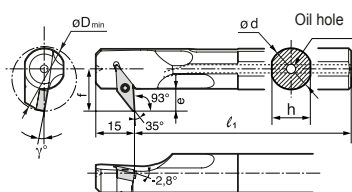
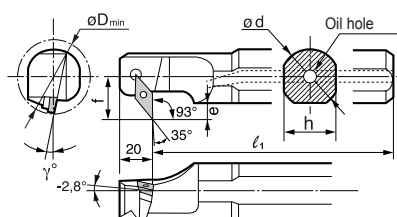


Fig.2



Spare Parts

Pin	Clamp screw	Shim	Screw	Wrench	Wrench
VP32B	BH03504	SVP32	BFTX02506 BFTX03508 2.0	TRX08 TRX10	— LH020

Holders

Above figures show right hand tools.

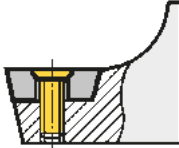
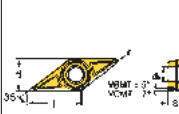
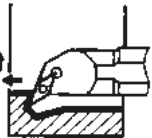
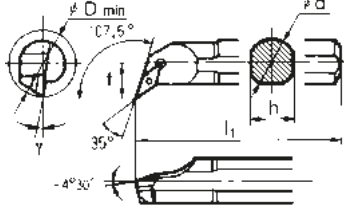
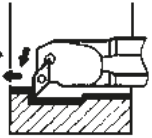
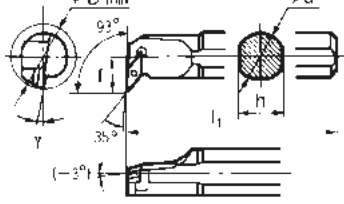
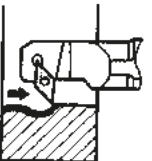
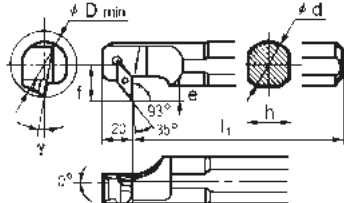
Ordering No.	Stock	ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
D16R - SVZB R/L 1103-22	● ●	22	16	15	200	13	5	-7°	1.	VB□□ 1103□□	—	—	—	BFTX02506	TRX08	—
D20S - SVZB R/L 1103-27	● ●	27	20	18	250	15	5	-5°	1.	VB□□ 1103□□	—	—	—	BFTX02506	TRX08	—
D25T - SVZB R/L 1604-35	● ●	35	25	23	300	20,5	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	BFTX03508 2.0	TRX10	LH020
D32T - SVZB R/L 1604-40	● ●	40	32	30	300	22	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	BFTX03508 2.0	TRX10	LH020

S...SVQB / SVUB, SVZB Type

For Positive VB__ - Inserts ($\alpha = 5^\circ$)



■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	f	γ	e	
S - SVQB R/L 		S16R - SVQB R/L 11	●	●	22	16	15	200	13	-6,5°		VB__ 1102__
		S20S - SVQB R/L 11	●	●	27	20	18	250	15	-6,5°		
		S25T - SVQB R/L 16	●	●	35	25	23	300	20,5	-6,5°		VB__ 1604__
		S32U - SVQB R/L 16	●	●	40	32	30	350	22	-6,5°		
		S40V - SVQB R/L 16	□	□	50	40	37	400	27	-6,5°		
S - SVUB R/L 		S16R - SVUB R/L 11	●	●	22	16	15	200	13	-7,5°		VB__ 1102__
		S20S - SVUB R/L 11	●	●	27	20	18	250	15	-7,5°		
		S25T - SVUB R/L 16	●	●	35	25	23	300	20,5	-7,5°		VB__ 1604__
		S32U - SVUB R/L 16	●	●	40	32	30	350	22	-7,5°		
		S40V - SVUB R/L 16	□	□	50	40	37	400	27	-7,5°		
S - SVZB R/L 		S16R - SVZB R/L 11	●	●	22	16	15	200	13	-7,5°	5	VB__ 1102__
		S20S - SVZB R/L 11	●	●	27	20	18	250	15	-7,5°	5	
		S25T - SVZB R/L 16	●	●	35	25	23	300	20,5	-7,5°	9	VB__ 1604__
		S32U - SVZB R/L 16	●	●	40	32	30	350	22	-7,5°	9	
		S40V - SVZB R/L 16	□	□	50	40	37	400	27	-7,5°	10	

All figures show right hand tools.

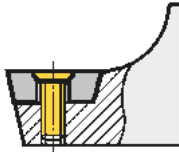
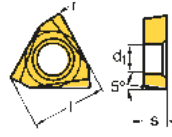
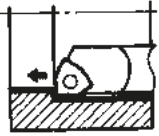
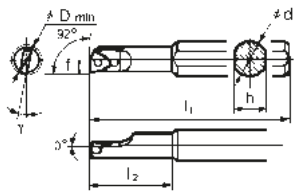
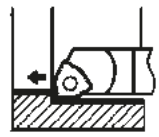
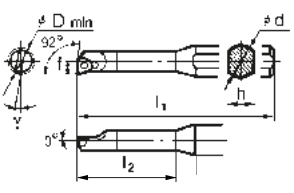
■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets		CBN	Pin	Clamp bolt	Shim	Screw	Wrench	Wrench
									
S16R	VBMT 1102__ NFP	VBMT 1102__ NSK	-	-	-	-	BFTX02506N Cm 1,5	TRX08	-
S20S	VBMT 1102__ NFP	VBMT 1102__ NSK	-	-	-	-		TRX08	-
S25T	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	-	-	-	BFTX03508 Cm 2,0	TRX10	-
S32U	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	VP32B	BH03504	SVP32		TRX10	LH020
S40V	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	VP40B	BH03504	SVP32		TRX10	LH020



■ Holders

	Tool holders (S type) with screw-lock system	Ordering No.	Stock		Dimensions (mm)							
			R	L	$\varnothing D_{min}$	d	h	l_1	l_2	f	γ	
S - SWUB R/L Steel shank 		S08H - SWUB R/L 06-01	●	●	5,5	8	7	100	18	3	-12°	WBGT 0601__
C - SWUB R/L Carbide shank 		C08K - SWUB R/L 06	●	●	5,5	8	7	125	30	3	-12°	WBGT 0601__

All figures show right hand tools.

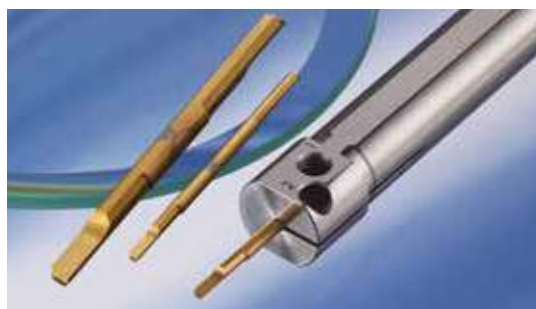
Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN		Screw		Wrench			
S/C-SWUBR/L									
S/C 08.....R 06	WBGT 0601__ LW	-		BFTX 0203 N	0,5	TRX 06			
S/C 08.....L 06	WBGT 0601__ RW	-		BFTX 0203 N	0,5	TRX 06			

Solid Carbide Boring Bars BXBR Type



■ Characteristics

- Economical, two-cornered insert.
- Maximum boring depth 5D (5 times the shank diameter)
- Usable at any desired overhang.
- Shank size = min. bore diameter for easy selection.
(Available from $\phi 2$ mm to $\phi 5$ mm in 0,5 mm increments.)
- KBMX Type cutting edge used, no breaker versions also available in stock.

Sumi Small

Small Hole Finishing

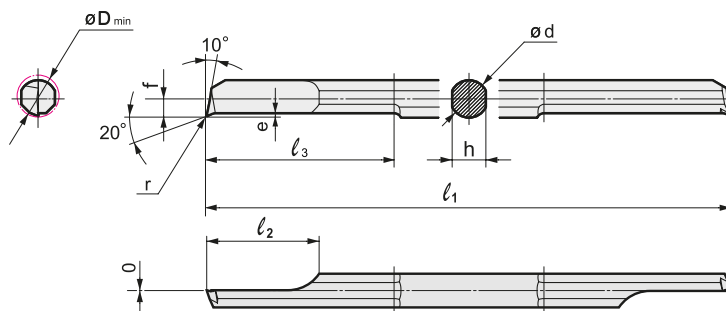
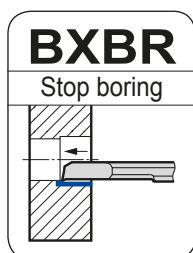


Figure shows tool with breaker.

* l_3 : Max. depth of boring

■ Solid Carbide Bar

	Cat. No.	Stock		ϕD_{min}	Dimensions (mm)								Applicable Sleeve
		ACZ150	AC530U		ϕd	h	l_1	f	l_2	l_3	e	r	
With Breaker	BXBR 02005 R	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,05	HBX 2016
	02020 R	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,20	HBX 2016
	BXBR 02505 R	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,05	HBX 2516
	02520 R	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,20	HBX 2516
	BXBR 03005 R	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,05	HBX 3016
	03020 R	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,20	HBX 3016
	BXBR 03505 R	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,05	HBX 3516
	03520 R	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,20	HBX 3516
	BXBR 04005 R	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,05	HBX 4016
	04020 R	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,20	HBX 4016
	BXBR 04505 R	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,05	HBX 4516
	04520 R	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,20	HBX 4516
No Breaker	BXBR 05005 R	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,05	HBX 5016
	05020 R	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,20	HBX 5016
	BXBR 02005 R-NB	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,05	HBX 2016
	02020 R-NB	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,20	HBX 2016
	BXBR 02505 R-NB	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,05	HBX 2516
	02520 R-NB	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,20	HBX 2516
	BXBR 03005 R-NB	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,05	HBX 3016
	03020 R-NB	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,20	HBX 3016
	BXBR 03505 R-NB	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,05	HBX 3516
	03520 R-NB	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,20	HBX 3516
	BXBR 04005 R-NB	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,05	HBX 4016
	04020 R-NB	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,20	HBX 4016
	BXBR 04505 R-NB	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,05	HBX 4516
	04520 R-NB	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,20	HBX 4516
	BXBR 05005 R-NB	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,05	HBX 5016
	05020 R-NB	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,20	HBX 5016

■ Adaptor Sleeve (Optional)

	Cat. No.	Stock	ϕD_s (mm)	Applicable Bar
	HBX 2016	○	2,0	BXBR 02000 R(-NB)
	HBX 2516	○	2,5	BXBR 02500 R(-NB)
	HBX 3016	○	3,0	BXBR 03000 R(-NB)
	HBX 3516	○	3,5	BXBR 03500 R(-NB)
	HBX 4016	○	4,0	BXBR 04000 R(-NB)
	HBX 4516	○	4,5	BXBR 04500 R(-NB)
	HBX 5016	○	5,0	BXBR 05000 R(-NB)

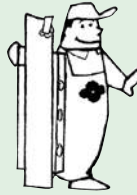
* BXBR bars can be used with HBB type sleeves. Commercially available sleeves may also be used.

■ Spare Parts (For sleeve)

Screw	(N·m)	Setting Screw	Wrench
BFTX 0409 N	3,4	BT 06035 T	TRD 15

Grooving & Parting-Off Threading Holders

F1 ~ F48



GND Type Grooving Tools Selection Guide	GND	F 2-15
External Grooving, (Small Tools)	GNDM / GNDL	F16-17
(Shallow Grooves)	GND S	F18-19
	GNDM / GNDMS	F20-21
	GNDL / GNDLS	F22-23
Internal Grooving	GNDI / GNDIS New	F24-26
Necking	GNDN New	F27
Face Grooving	GND F / GND F S New	F28-31
ISO-PSC Polygon Modular Grooving System Holders	PSC New	F32
ISO-PSC Polygon Modular Grooving System Inserts	GCM	F33
"SumiTurn B-Groove" Holders	GW C / GWCS / GWCI / PSC	F34-35
"SumiTurn B-Groove" Inserts	TGA-BF	F35
Parting-Off Mini Holders	SCT	F36
Sumi-Grip Inserts	WCF (-N/R/L)	F37
"Sumi-Grip Jr." Steel Type	STFH / STFS R/L	F38-39
"Sumi-Grip" Carbide Blade Type	WCFH / WCF S R/L	F40-42
Threading Tools Selection Guide		F43-44
Cutting Conditions		F45
External Threading Holders	LTER / STER	F46
Internal Threading Holders	STIR	F47

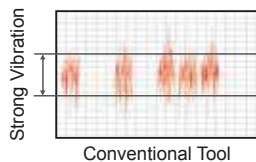
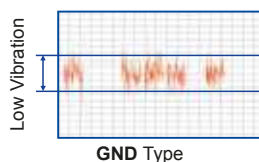
Grooving Tool Holders GND Type



Cutting Performance

Eliminates Vibration

Reduces vibration up to 30% compared to conventional grades thanks to its high-rigidity design.

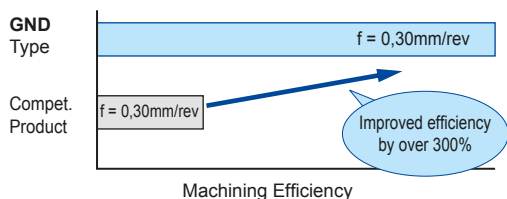


Work Material: 15CrMo5
Holder: GNDL R2525M 220
Insert: GCM N2002 GG
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,10\text{mm/rev}$, $a_p=20\text{mm}$, wet

Application Examples

Substantially improved machining efficiency!

High rigidity holder enables high load machining at high feed rate.



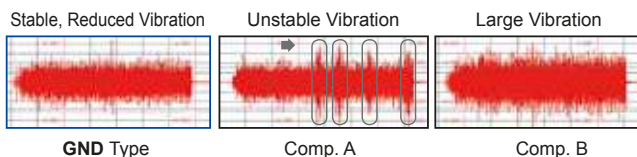
Work Material: 42CrMo4
Holder: GNDL R2525M 320
Insert: GCM N3002 GG (AC530U)
Cutting Conditions: $v_c=130\text{m/min}$, $f=0,30\text{mm/rev}$, wet

Characteristics

- Wide range of application processes
Applicable for grooving, turning, copying, facing, boring and cut-off.
- Achieving stable tool life
An array of chipbreakers improves the efficiency in chip control in various applications and prevents unexpected damages caused by chip blockade.
- Achieving smooth cutting and high efficiency machining
Holders utilizing one-piece body construction made of special steel, reduce vibration by 30% during machining as compared to conventional types.
- Achieving high precision grooving widths with moulded inserts
Grooving insert width tolerance of $\pm 0,03\text{mm}$ over the entire range

Ensures both high rigidity and good chip evacuation

Internal



Work Material: 15CrMo5
Holder: GNDI R2532 T306
Insert: GCM N3002 GG
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,05\text{mm/rev}$, $a_p=3,0\text{mm}$, wet

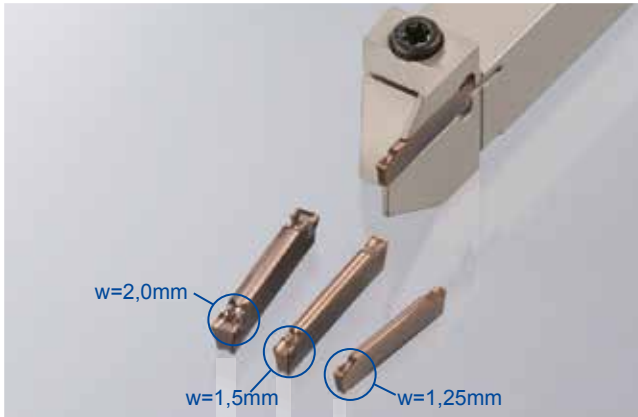
Stable and long tool life ensures reliable functionality even on automatic production lines!

Reduction of chattering prevents unexpected breakage.



Work Material: C53
Holder: GNDM L2525M 618
Insert: GCM N6030 RG (AC530U)
Cutting Conditions: $v_c=130\text{m/min}$, $f=0,30\text{mm/rev}$, wet

Grooving Tool Holders GND Type



■ GND Series Expansion for Small Lathes

- Supplementing the holder program with the cross-section 1010, 1212, 1616, 2020 and 2525.
- The line up includes grooving widths of 1,25mm, 1,5mm, 2,0mm and 3,0mm.
- Reduces chattering and achieves high-efficiency machining

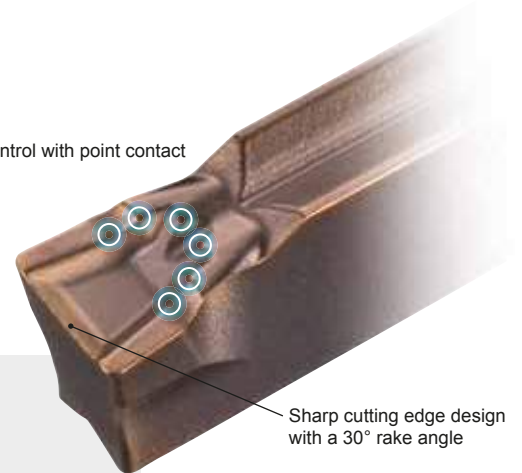
Reducing vibration during grooving by employing the same high-rigidity holder design of the GND series.

■ Low Cutting Resistance Chipbreaker GF Type

- Reduces chip control problems
The GF type chipbreaker is added to the current wide selection of chipbreakers to improve chip control under various conditions.
- Reduces chattering during cutting
- Ideal for machining using low-powered equipment such as small lathes
- Reduces adhesion to tools and achieves long tool life in machining of stainless steel, etc.

Achieves excellent chip control and reduced cutting resistance due to the sharp cutting edge design with a 30° rake angle as well as the reduction of frictional resistance through chip control with point contact.

Chip control with point contact



■ Minimum Groove Width: 1,25mm

Effective for reduction of material costs and for reduction of vibration during cutting off.



Work Material: 15CrMo5, Ø22mm
Holder: GNDL R1212JX 1,2512
Insert: GCM N125005GF (AC530U)
Cutting Conditions: $n=2000\text{min}^{-1}$, $f=0,03\text{mm/rev}$, wet

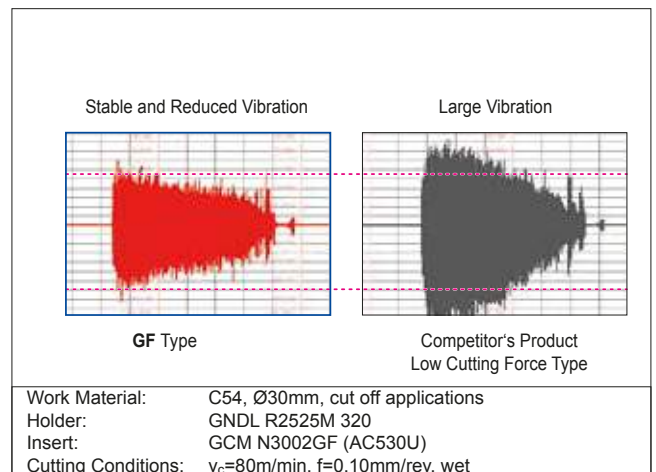
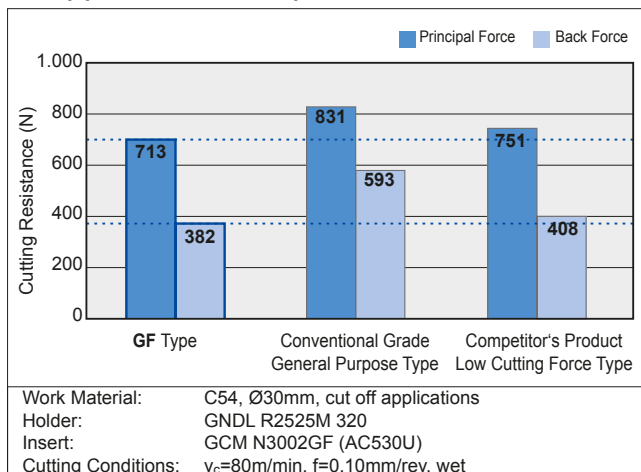
Provides Excellent Surface Finish and Chip Control



GND (GF) Type

Competitor's Product

■ Application Examples



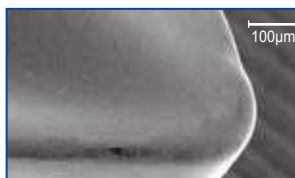
Grooving Tool Holders GND Type

New



■ Cermet Grade T2500A

- Presenting a new cermet grade for steel grooving and turning
- Greatly improves toughness through a dense and uniform structure for stability and longer tool life.
- Uses a new cutting edge treatment method to maintain a good glossy surface finish from the beginning and over a long period of time.

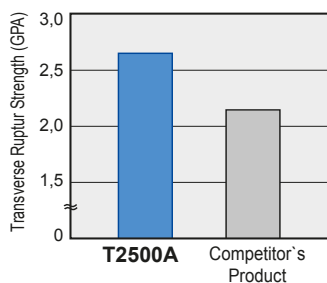


T2500A

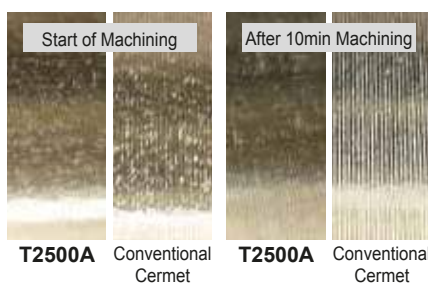


Conventional Grade

● Transverse Rupture Strength

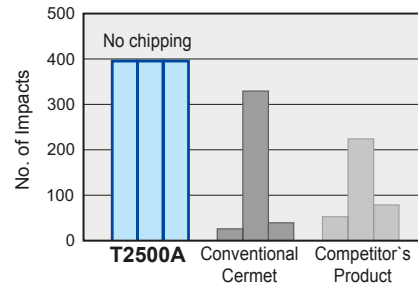


● Excellent Machined Surface Quality



Work Material: 15CrMo5
Cutting Conditions: $v_c=150\text{m/min}$, $f=0,2\text{mm/rev}$, $a_p=0,8\text{mm}$, wet

● Interrupted Cutting



Work Material: 34CrMo4, grooved
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,2\text{mm/rev}$, $a_p=1,0\text{mm}$, dry

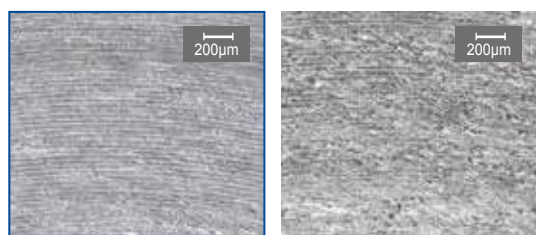
New



■ GA Type Ground Breakers

- For aluminium alloy and non-ferrous metals
- High quality ground breaker GA type reduces work material adhesion and provides excellent machined surface
- Achieves good chip control
- Stable machining in combination with special carbide grade H10 for grooving

● Machined Surface Quality

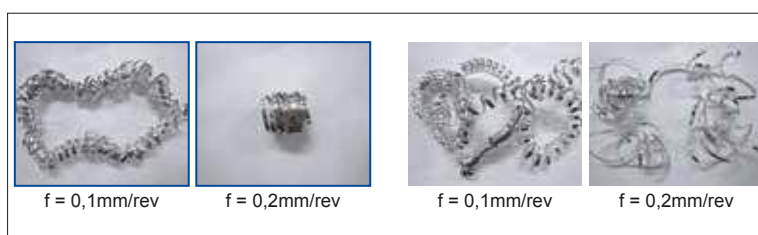


H10 + GA

Conventional Grade

Work Material: A5056 (Aluminium Alloy)
Application: Inner Diameter Radial Groove (ID Ø60mm)
Cutting Conditions: $a_p=2,8\text{mm}$, Width= 3mm, $n_{max}=3.500\text{min}^{-1}$, $v_c=200\text{m/min}$, $f=0,05\text{mm/rev}$, wet

● Excellent Chip Management



H10 + GA

Conventional Grade

Work Material: A5056 (Aluminium Alloy)
Application: Inner Diameter Radial Groove (ID Ø60mm)
Cutting Conditions: $a_p=5,0\text{mm}$, Width=3mm, $v_c=200\text{m/min}$, $f=0,1-0,2\text{mm/rev}$, wet

Grooving Tool Holders GND Type

New

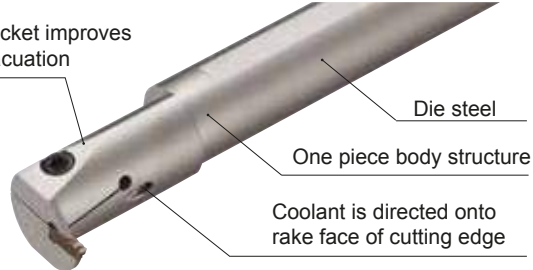


Notice: Different insert sizes
GNDIS type: use smaller GXM type inserts
GNDI type: use standard GCM inserts

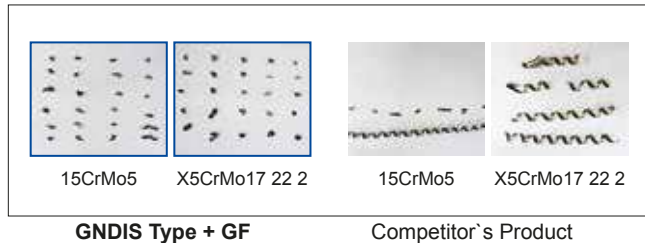
■ GNDIS Type for Internal Grooving

- For small bores with minimum bore diameters from $\varnothing 14\text{mm}$
- Reduces vibration during grooving by employing the same high-rigidity holder design of the GND series
- Increased tool life through one-piece body structure
Uses special 2-cornered inserts (GXM type)

Wide pocket improves chip evacuation

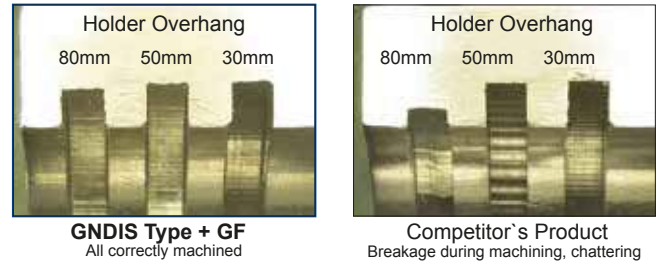


● Improved Chip Management



Work Material: 15CrMo5/X5CrMo17 22 2
Cutting Conditions: Grooving Widths: 3,0mm
 $v_c=100\text{m/min}$, $f=0,05\text{mm/rev}$, $a_p=2,0\text{mm}$, wet

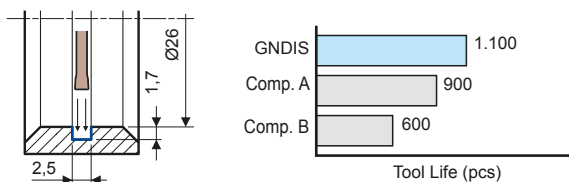
● Chattering Resistance Performance



Work Material: X5CrMo172222
Cutting Conditions: Grooving Widths: 2,0mm
 $v_c=100\text{m/min}$, $f=0,05\text{mm/rev}$, $a_p=2,0\text{mm}$, wet

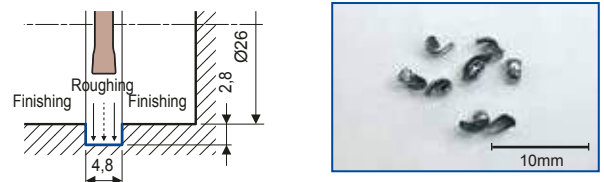
■ Application Examples

Long tool life through stable chip control using a high-rigidity tool and 3D breaker.



Work Material: C45
Toolholder: GNDISR1620-T2046
Insert: GXM N2002S GF (AC1030U)
Cutting Conditions: $v_c=150\text{m/min}$, $f=0,03\text{mm/rev}$, $a_p=1,7\text{mm}$, wet

With good chip control, the step machining of roughing process performed by competitor's product is not necessary.



Work Material: 20CrMo5
Toolholder: GNDISR1620-T2046
Insert: GXM N2002S GF (AC1030U)
Cutting Conditions: Roughing: $v_c=50\text{m/min}$, $f=0,07\text{mm/rev}$, $a_p=2,8\text{mm}$, wet
Finishing: $v_c=80\text{m/min}$, $f=0,05\text{mm/rev}$, $a_p=2,8\text{mm}$, wet

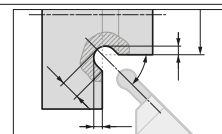
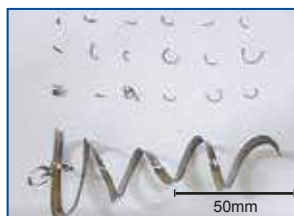
New



■ GNDN Type Holder for Necking

- The lineup includes grooving widths from 2mm to 6mm
- Demonstrates excellent chip control in corner necking when combined with RN chipbreakers

● Chip Management



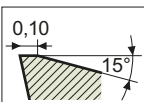
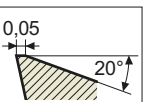
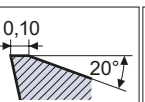
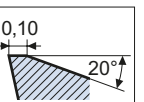
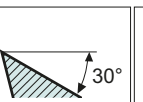
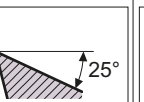
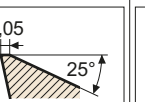
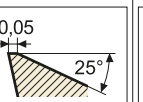
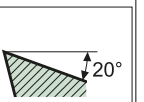
Work Material: 34CrMo4, Grooving Widths: 3mm
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,1\text{mm/rev}$, Necking Depth=1,0mm, wet

Grooving Tool Holders

GND Type

■ Inserts - Chipbreaker Series

Achieving stability and longer tool life. A variety of chipbreakers ensures outstanding chip control performance in many different types of applications.

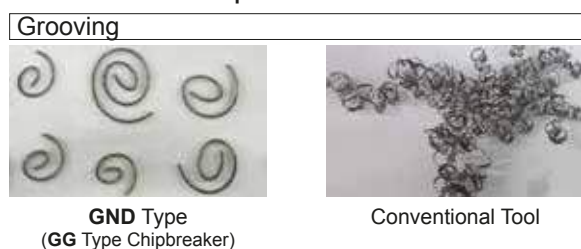
Grooving / Turning		Grooving / Cut-Off				Profiling	Necking	Non Ferrous Metals
General Type	Low Feed Type	General Type	Low Feed Type	Low Cutting Force Type	Cut-Off Type	General Type	General Type	General Type
MG	ML	GG	GL	GF	CG	RG	RN New	GA New
								
Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge	Cross Section of Cut. Edge
								
Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)
1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0
3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0
6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0
Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K	AC830P AC425K AC830P AC425K
AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U	AC520U AC530U AC520U AC530U
AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A	AC1030U T2500A AC1030U T2500A
H10	H10	H10	H10	H10	H10	H10	H10	H10

Stock
 * Only use with GNDIS

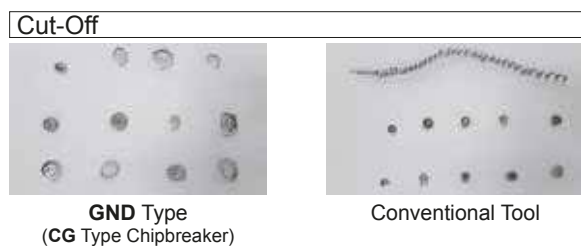
■ Recommended Cutting Conditions

Work Material	P Carbon Steel / Alloy Steel				M Stainless Steel			K Cast Iron				S Exotic Alloy			N
Grade	AC830P	AC520U	AC530U	T2500A	AC830P	AC520U	AC530U	AC425K	AC520U	AC530U	AC1030U	AC520U	AC530U	AC1030U	H10
Cutting Speed (m/min)	80~200	80~200	50~200	50~200	70~150	70~150	50~150	80~200	60~200	50~200	50~200	20~80	20~60	20~60	150~300

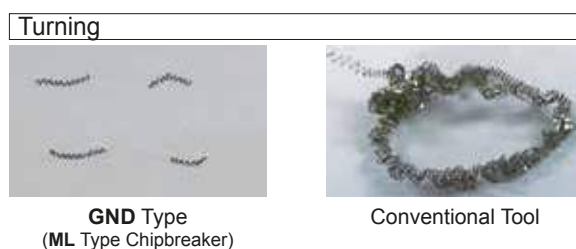
■ Excellent Chip Control



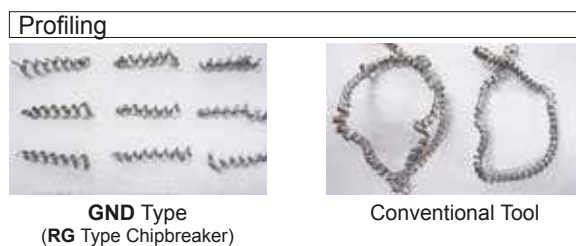
Work Material: 15CrMo5
 Holder: GNDL R2525M 320
 Insert: GCM N3002 GG
 Cutting Conditions: $v_c=100\text{m/min}$, $f=0,15\text{mm/rev}$, $a_p=12,0\text{mm}$, wet



Work Material: X5CrMo17122 (Ø30mm)
 Holder: GNDL R2525M 220
 Insert: GCM R2002 CG 05
 Cutting Conditions: $v_c=100\text{m/min}$, $f=0,15\text{mm/rev}$, wet



Work Material: 15CrMo5
 Holder: GNDM R2525M 312
 Insert: GCM N3012 ML
 Cutting Conditions: $v_c=100\text{m/min}$, $f=0,10\text{mm/rev}$, $a_p=0,5\text{mm}$, wet

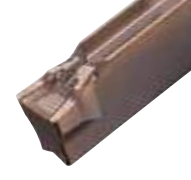


Work Material: 15CrMo5
 Holder: GNDM R2525M 312
 Insert: GCM N3015 RG
 Cutting Conditions: $v_c=100\text{m/min}$, $f=0,15\text{mm/rev}$, $a_p=0,1\text{mm}$, wet

Grooving Tool Holders

GND Type

Chipbreaker Selection

	 Grooving / Turning	 Grooving	 Cut-Off
1st Recommendation	MG General Feed 	GG General Feed 	GG General Feed 
2nd Recommendation	ML Low Feed Good Chip Control 	GL General Feed Good Chip Control 	CG Handed Type 
	GF Low Cutting Force 	GL General Feed Good Chip Control 	GF Low Cutting Force 

	 Profiling / Radius Grooving Outside Diameter	 Necking / Radius Grooving Internal Profiling	 For Non Ferrous Metals
Recommendation	RG General Feed 1st Recommendation 	RN General Feed 2nd Recommendation w = 2mm 	GA General Feed 

Grade Selection

	P Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N Non Ferrous Metals
1st Recommendation	AC530U AC1030U* PVD	AC530U AC1030U* PVD	AC425K CVD	AC520U PVD	H10 Uncoated Carbide
2nd Recommendation	AC520U PVD AC830P CVD T2500A Uncoated Cermet	AC520U PVD AC830P CVD	AC520U PVD AC530U AC1030U* PVD	AC530U AC1030U* PVD	

* Will replace grade AC530U

Grooving Tool Holders

GND Type

For External Machining

Turning / Profiling

Grooving / Cut-Off

GNDM (Small Tools) Straight Type Shank Size Height x Width 16mm x 16mm	GNDL (Shallow Grooves) Straight Type Shank Size Height x Width 20mm x 20mm 25mm x 25mm	GNDM (Small Tools) Straight Type Shank Size Height x Width 20mm x 20mm 25mm x 25mm 32mm x 25mm 32mm x 32mm	GNDMS L Type Shank Size Height x Width 20mm x 20mm 25mm x 25mm	GNDL (Small Tools) Straight Type Shank Size Height x Width 10mm x 10mm 12mm x 12mm 16mm x 16mm	GNDL (Small Tools) Straight Type Shank Size Height x Width 20mm x 20mm 25mm x 25mm 32mm x 25mm 32mm x 32mm	GNDLS L Type Shank Size Height x Width 20mm x 20mm 25mm x 25mm
Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)
1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0
3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0
6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0
Chipbreaker	Chipbreaker	Chipbreaker	Chipbreaker	Chipbreaker	Chipbreaker	Chipbreaker
MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA	MG ML GG GL GF GR RN CG GA

Series for External Machining

Type	Shank Size Height x Width	Cutting Width (mm)							Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker								
		1.25	1.5	2	3	4	5	6		5	10	15	20	25	30		MG	ML	GG	GL	GF	GR	RN	CG	GA
Small Tools	10 10	1.25	1.5						GNDL	10						→ F16									
			2						GNDL	10						→ F16									
				3					GNDL	10						→ F16									
	12 12	1.25	1.5						GNDL	12						→ F16									
			2						GNDL	12.5						→ F16									
				3					GNDL	12.5						→ F16									
	16 16	1.25	1.5						GNDM	8						→ F16									
		1.25	1.5						GNDL	12.5						→ F16									
		1.5							GNDM	10						→ F16									
			2						GNDM	12						→ F16									
			2						GNDL	16						→ F16									
				3					GNDM	12						→ F16									
Straight Type	20 20	1.25	1.5						GNDM	10						→ F20									
		1.25	1.5						GNDL	16						→ F22									
			2						GNDL	6						→ F18									
			2						GNDM	10						→ F20									
			2						GNDL	20						→ F22									
				3					GNDL	6						→ F18									
				3					GNDM	12						→ F20									
				3					GNDL	20						→ F22									
	25 25			4					GNDL	10						→ F18									
				4					GNDM	18						→ F20									
				4					GNDL	25						→ F22									
					5 6				GNDL	10						→ F18									
					5 6				GNDM	18						→ F20									
					5 6				GNDL	25						→ F22									
	32 25					7 8			GNDM	18						→ F20									
						7 8			GNDL	25						→ F22									
									GNDM	12						→ F20									
									GNDL	20						→ F22									
									GNDM	18						→ F20									
									GNDL	25						→ F22									
L Type	20 20		2						GNDLS	16						→ F22									
				3					GNDMS	10						→ F20									
				3					GNDLS	16						→ F22									
					4				GNDMS	12						→ F20									
					5				GNDMS	12						→ F20									
			2						GNDLS	18						→ F22									
	25 25			3					GNDMS	12						→ F20									
				3					GNDLS	18						→ F22									
					4				GNDMS	14						→ F20									
					4				GNDLS	23						→ F22									
					5 6				GNDMS	14						→ F20									
					5 6				GNDLS	23						→ F22									

Stock

* Make to order item (32x25mm)

1st Recommendation

2nd Recommendation

Grooving Tool Holders

GND Type

For Necking

Necking

GNDN
Straight Type
New

Shank Size
Height x Width
20mm x 20mm
25mm x 25mm



Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

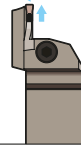
Chipbreaker
MG ML GG GL GF RG RN CG GA

For Face Machining

Grooving / Turning / Profiling

GDNF
Straight Type

Shank Size
Height x Width
20mm x 20mm
25mm x 25mm

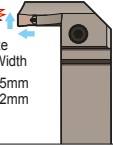


Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG ML GG GL GF RG RN CG GA

GNDFS
L Type
New

Shank Size
Height x Width
25mm x 25mm
32mm x 32mm



Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG ML GG GL GF RG RN CG GA

Series for Necking

Type	Shank Size	Cutting Width (mm)					Series	Max. Grooving Depth (mm)							Min. Bore (mm)	Ref. Page	Applicable Chipbreaker								
		2	3	4	5	6		5	10	15	20	25	30	MG			ML	GG	GL	GF	RG	RN	CG	GA	
Straight Type	20	20	2						2,0		ø20		→ F27												
				3				2,5	ø20																
					4			3,0	ø30																
						5		3,5	ø30																
	25	25						4,0			ø30														
						6																			

Stock

Series for Face Machining

Type	Shank Size		Cutting Width (mm)					Series	Max. Grooving Depth (mm)					Bore (mm)					Ref. Page	Applicable Chipbreaker													
	Height	Width	3	4	5	6	7		8	5	10	15	20	25	30	50	100	150		200	250	300	1,000	MG	ML	GG	GL	GF	RG	RN	CG	GA	
Straight Type	20	20	3						GNDF	12						ø35	ø45	→ F28															
			3								12						ø40		ø55														
			3								18						ø50		ø70														
			3								18						ø65		ø100														
			3								18						ø90		ø150														
			3								18						ø140		ø200														
	25	25		4					GNDF	18						ø40	ø55	→ F28															
				4							23						ø50		ø70														
				4							23						ø65		ø90														
				4							23						ø85		ø130														
				4							23						ø125		ø200														
				4							23						ø180		ø300														
20	20			5				GNDF	23						ø50	ø70	→ F28																
				5						23						ø65		ø90															
				5						23						ø85		ø130															
				5						23						ø125		ø200															
				5						23						ø180		ø300															
				5						23						ø280		ø1,000															
25	25				6			GNDF	23						ø50	ø75	→ F28																
					6					23						ø70		ø110															
					6					23						ø100		ø200															
					6					23						ø180		ø300															
					6					23						ø280		ø1,000															
					6					23						ø450~																	
L Type	20	20				6		GNDFS	20						ø70	ø100	→ F30																
						6				20						ø100		ø200															
						6				20						ø180		ø300															
						6				20						ø280		ø1,000															
						6				20						ø450~																	
						6				20						ø70		ø100															
25	25						GNDFS	20						ø100	ø200	→ F30																	
								20						ø180	ø300																		
								20						ø280	ø1,000																		
								20						ø450~																			
								20						ø70	ø100																		
								20						ø100	ø200																		

Stock

Make to order item

1st Recommendation

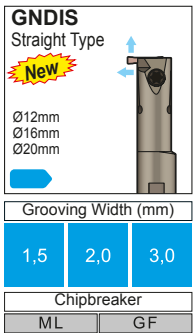
2nd Recommendation

Grooving Tool Holders

GND Type

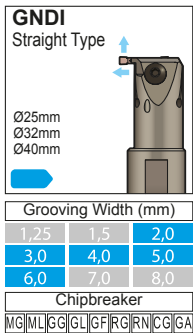
For Internal Machining ($\geq \varnothing 14\text{mm} \sim$)

Grooving / Turning / Copying



For Internal Machining ($\geq \varnothing 32\text{mm} \sim$)

Grooving / Turning / Copying



Series for Internal Machining ($\geq \varnothing 14\text{mm} \sim$)

Type	Shank Size $\varnothing D_s(\text{mm})$	Cutting Width (mm)			Series	Max. Grooving Depth (mm) 5 10 15 20 25 30	Min. Bore (mm)	Ref. Page	Applicable Chipbreaker	
		1,5	2	3					ML	GF
Straight Type	$\varnothing 12$	1,5			GNDIS	2,6	$\varnothing 14$	→ F26		○
		1,5				3,6	$\varnothing 14$			○
			2	3		2,6	$\varnothing 14$		○	○
			2	3		3,6	$\varnothing 14$		○	○
	$\varnothing 16$	1,5			GNDIS	3,6	$\varnothing 16$			○
		1,5				4,6	$\varnothing 20$			○
			2	3		3,6	$\varnothing 16$		○	○
			2	3		4,6	$\varnothing 20$		○	○
	$\varnothing 20$	1,5			GNDIS	6,6	$\varnothing 25$			○
			2	3		6,6	$\varnothing 25$			○
									○	○
									○	○

Stock GNDIS type: use smaller GXM type inserts 1st Recommendation

Series for Internal Machining ($\geq \varnothing 32\text{mm} \sim$)

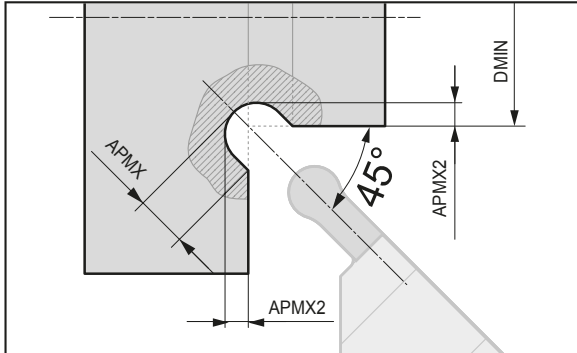
Type	Shank Size ØDs (mm)	Cutting Width (mm)					Series	Max. Grooving Depth (mm) 5 10 15 20 25 30	Min. Bore (mm)	Ref. Page	Applicable Chipbreaker									
		2	3	4	5	6					MG	ML	GG	GL	GF	RG	RN	CG	GA	
Straight Type	ø25	2					GNDI		ø32	→ F24										
	ø32	2		3	4	5					ø32									
				3	4	5					ø32									
				3	4	5		6			ø40									
	ø40			3	4	5	6		ø50											
Stock ◎ 1st Recommendation ○ 2nd Recommendation																				

Tips for Necking

Notes for Undercutting

Recommended Chipbreaker: **RN**

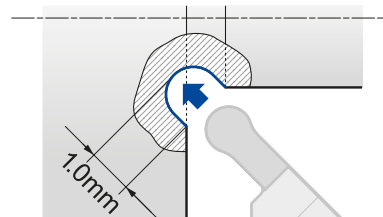
Distance between Workpiece and Necking



Edge Width CW (mm)	Depth of Necking APMX (mm)	Distance between Workpiece and Necking APMX2 (mm)
2,0	1,50	0,646
3,0	2,00	0,793
4,0	2,50	0,939
5,0	3,00	1,086
6,0	3,50	1,232

The recommended cutting conditions for necking are the same as grooving with RN type chipbreaker and edge width. To prevent interference with the work material, do not use the holder for less than the minimum cutting diameter (DMIN) as specified for GNGN type holders.

Chip Shape

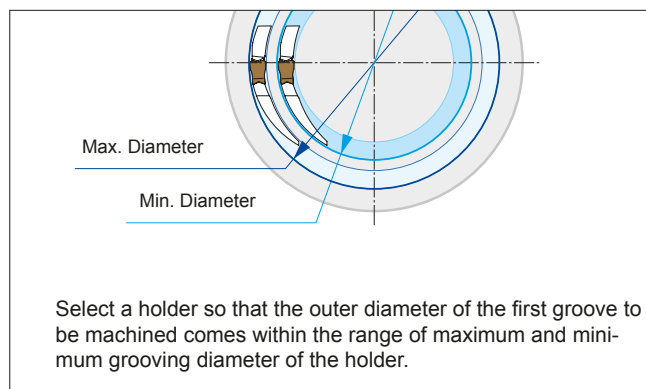


Work Material: 34CrMo4
 Holder: GNDN R2020K 325-020
 Insert: GCM N3015 RN
 Cutting Conditions: $v_c = 100\text{m/min}$, $f = 0,1\text{mm/rev}$
 Depth of Necking = 1,0mm, wet

Grooving Tool Holders GND Type

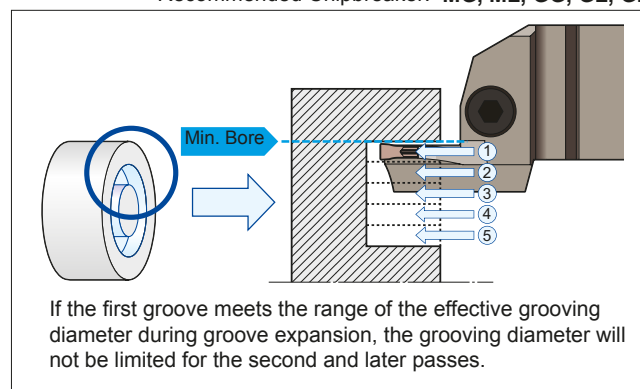
Key Points for Face Machining

Holder Selection



Precautions for Groove Expansion

Recommended Chipbreaker: **MG, ML, GG, GL, GF**

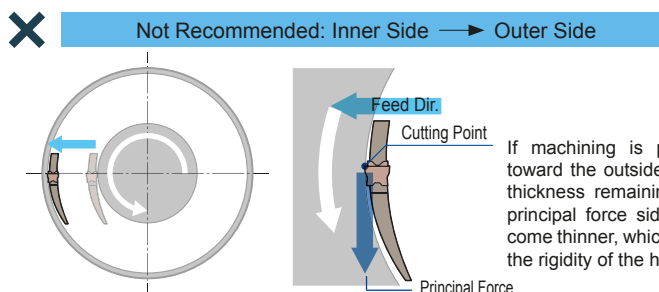
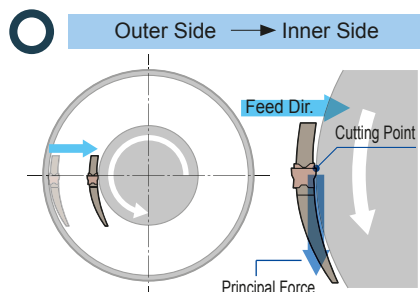


Precautions for Turning

Recommended Chipbreaker:

MG, ML

Considering the rigidity of the holder, we recommend machining from the outside to the inside.



- If the first groove meets the range of the effective grooving diameter in face turning, the grooving diameter will not be limited for the second and later passes.
- Select the chipbreaker of the lower limit side of the recommended cutting conditions and straight chips before evacuation. (In face grooving, broken chips easily get stuck in grooves, which causes problems.)
- When breaking chips, step feed is required.

Key Points for Internal Machining

Precautions for Internal Machining

Recommended Chipbreaker:

ML, GL

If the prepared hole diameter is small, use an ML or GL low-feed chipbreaker, each of which reduces chip curl diameter, to ensure adequate chip evacuation.



Work Material: 15CrMo5 (Ø25mm)
Holder: GNDI R2532 T306
Insert: GCM N300□-□□
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,10\text{mm/rev}$, $a_p=3,0\text{mm}$, wet

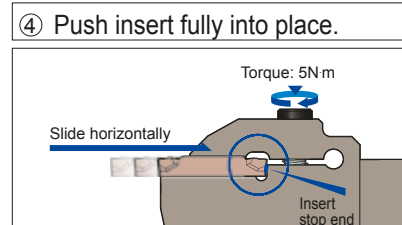
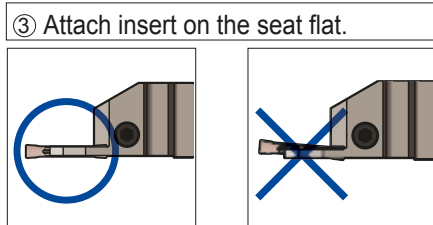


Chip shapes differ between internal and external machining even under the same cutting conditions.

Work Material: 15CrMo5
Holder: GNDL R2525M 320
Insert: GCM N3002 GG
Cutting Conditions: $v_c=100\text{m/min}$, $f=0,10\text{mm/rev}$, $a_p=5\text{mm}$, wet

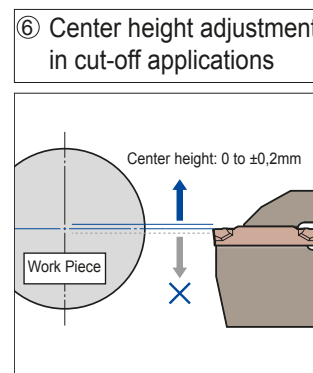
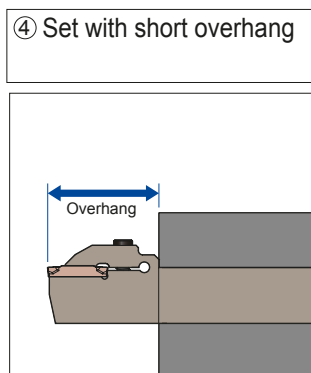
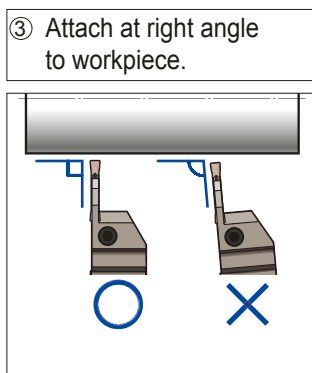
■ Notes on how to Attach Inserts

- ① Remove any foreign particles or oil from the insert seat before attaching the insert.
- ② Ensure the seat location is clean and free of damage.
- ③ Slide the insert level over its seat.
- ④ Push the insert with its opposite end (the holder side) firmly against the insert stop end.
- ⑤ The recommended tightening torque is 5N·m. Tightening above the recommended torque may damage the insert or the holder which could cause injury and other accidents.



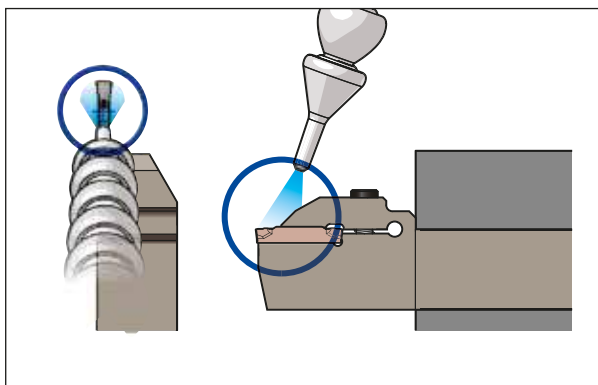
■ Notes on how to Apply Holders

- ① Remove any foreign particles or oil from the tool post before attaching the holder.
- ② Ensure the seat location is clean and free of damage.
- ③ Attach the holder so that the insert is perpendicular to the workpiece.
- ④ Set holder with shortest possible overhang.
- ⑤ When grooving or turning, adjust the center height of the cutting edge to as close $\pm 0\text{mm}$ as possible. (Within $\pm 0,1\text{mm}$ is recommended)
- ⑥ Incorrect center height adjustment may cause chattering. (In cut-off applications, adjust the center height of the cutting edge to a value from 0,0 to $+0,2\text{mm}$).
A lower center height will result in larger nip at the center.



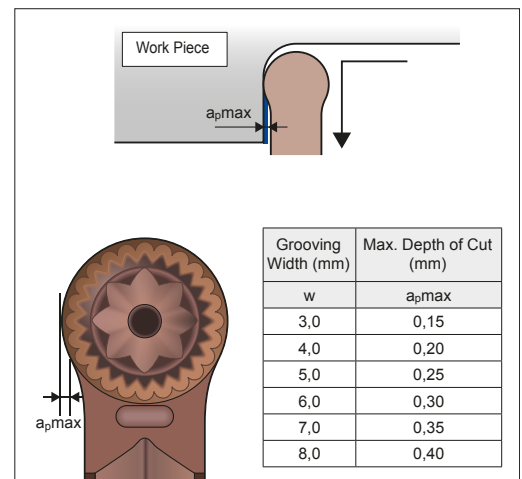
■ Notes on Setting Coolant Supply Nozzle

Set the coolant supply nozzle so that coolant can be supplied from the top of the upper clamp unit.



■ Maximum Depth of Cut

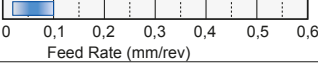
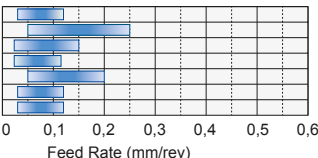
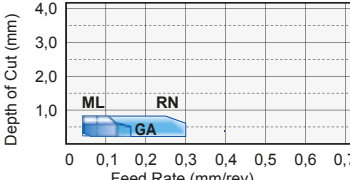
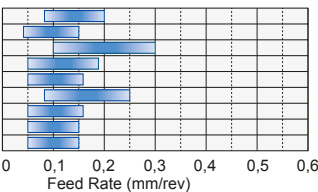
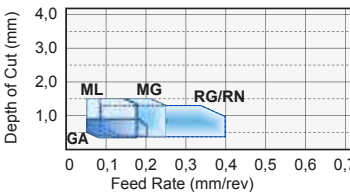
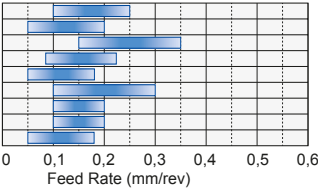
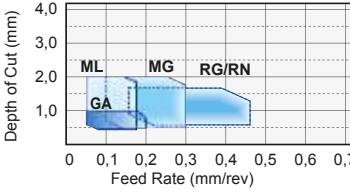
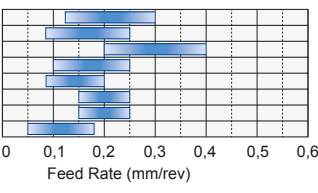
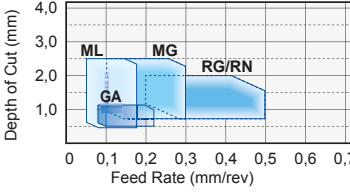
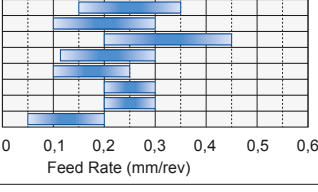
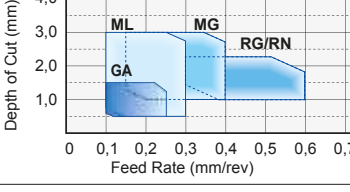
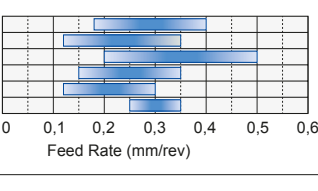
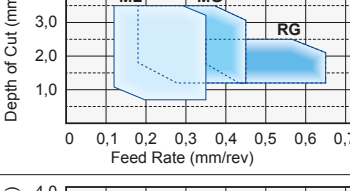
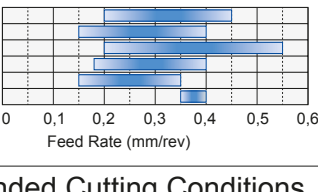
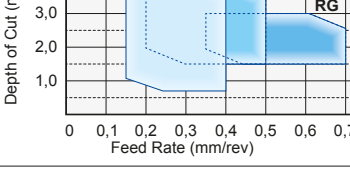
Maximum depth of cut when pulling up with RG chipbreaker



Grooving Tool Holders

GND Type

Chipbreaker Selection Guide

Groov. Width (mm)	Recommended Cutting Conditions		Nose Radius (mm)	Inserts
	Grooving	Turning		
1,25	Chip-breaker GF 		0,05	GCM N12505 GF
1,5	Chip-breaker GF 		0,05	GCM N150005 GF
2,0	Chipbreaker ML GG GL GF CG RN GA 		0,2	GCM N2002 ML GCM N2002 GG GCM N2002 GL GCM N2002 GF GCM R/L2002 CG05 GCM N2002 GA
			1,0	GCM N2010 RN
3,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N3002 ML GCM N3002 GG GCM N3002 GL GCM N3002 GF GCM R/L3002 CG05
			0,4	GCM N3004 GA GCM N3004 MG GCM N3004 GG
			1,5	GCM N3015 RG GCM N3015 RN
4,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N4002 GG GCM N4002 GL GCM N4002 GF GCM R/L4002 CG05
			0,4	GCM N4004 ML GCM N4004 GG GCM N4004 GA
			0,8	GGCM N 4008 MG
			2,0	GCM N4020 RG GCM N4020 RN
5,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N5002 GG GCM N5002 GL GCM N5002 GF
			0,4	GCM N5004 ML GCM N5004 GG GCM N5004 GA
			0,8	GCM N5008 MG
			2,5	GCM N5025 RG GCM N2025 RN
6,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N6002 GG GCM N6002 GL GCM N6002 GF
			0,4	GCM N6004 ML GCM N6004 GG GCM N6004 GA
			0,8	GCM N6008 MG
			3,0	GCM N6030 RG GCM N6030 RN
7,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N7002 GF
			0,4	GCM N7004 ML GCM N7004 GG GCM N7004 GL GCM N7004 GF
			0,8	GCM N7008 MG
			3,5	GCM N7035 RG
8,0	Chipbreaker MG ML GG GL GF CG RN GA 		0,2	GCM N8002 GF
			0,4	GCM N8004 ML GCM N8004 GG GCM N8004 GL GCM N8004 GF
			0,8	GCM N8008 MG
			4,0	GCM N8040 RG

Recommended Cutting Conditions

Work Material	P Carbon Steel / Alloy Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy
Grade	AC830P AC520U AC530U	AC830P AC520U AC530U	AC425K AC520U AC530U	AC520U AC530U
Cutting Speed (m/min)	80 ~ 200 80 ~ 200 50 ~ 200	70 ~ 150 70 ~ 150 50 ~ 150	80 ~ 200 60 ~ 200 50 ~ 200	20 ~ 80 20 ~ 60

Grooving Tool Holders

GND Type

Identification Details – Holders

G	N	D	M	R	25	25	(M)	(T)	3	12	(- 0 3 5)
①	②	③	④	⑤	⑥	⑦	⑧	⑨			
Series Symbol GND		Holder Design Chart 3	Shank Width / Work Dia. Chart 5			Type Internal Grooving		Max. Grooving Depth Chart 8			
	Application Chart 2		Shank Height / Dia. Chart 4		Shank Length Chart 6		Insert Width Chart 7		Min. Machining Dia. (mm)		

② Application			③ Holder Design		④ Shank Height / Diameter			⑤ Shank Width / Work Dia.		
Symbol	Application		Symbol	Direction	Application	Symbol	Height (mm)	Application	Symbol	Width (mm)
S	External Multi-Purpose	Grooving / Cut Off / Turning / Profiling	R	Right	External/ Face	10	10	External/ Face	10	10
M	External Multi-Purpose	Grooving / Cut Off / Turning / Profiling	L	Left	Grooving (Shank Height)	12	12	Grooving (Shank Width)	12	12
L	External Grooving	Grooving / Cut Off				16	16		16	16
MS	External L-Styled (Side Cut) Multi-Purpose	Grooving / Turning / Profiling				20	20		20	20
LS	External L-Styled (Side Cut) Deep Grooving	Grooving				25	25		25	25
I	Internal Grooving	Grooving / Turning / Profiling			Internal Grooving (Shank Diameter)	25	25	Internal Grooving (Shank Diameter)	32	32
F	Face Grooving	Grooving / Turning / Profiling				32	32		40	40
						40	40		50	50

⑥ Shank Length		⑧ Insert Width		⑨ Max. Grooving Depth	
Symbol	Length (mm)	Symbol	Groov. Width (mm)	Symbol	Groov. Depth (mm)
JX	120	1,25	1,25	06	6
K	125	1,5	1,5	10	10
M	150	2	2,0	11	11
P	170	3	3,0	12	12
		4	4,0	12,5	12,5
		5	5,0	18	18
		6	6,0	20	20
		7	7,0	21	21
		8	8,0	25	25

To ensure maximum rigidity, use the multi-purpose type holder to machine the maximum grooving depth.

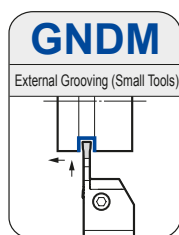
Identification Details – Inserts

G		C		M		N		30		02		G G		-		(05)	
①		②		③		④		⑤		⑥		⑦		⑧			
Series Symbol		Tolerance						Insert Width		Nose Radius		Chipbreaker				Front Angle	
Grooving		M Class						Symbol Groov. Width (mm)		Symbol R (mm)		Symbol Application				05 : 5°	
								125 1,25		005 0,05		MG Multi-Purpose: General Feed					
								150 1,5		02 0,2		ML Multi-Purpose: Low Feed					
								20 2,0		04 0,4		GG Grooving: General Feed					
								30 3,0		08 0,8		GL Grooving: Low Feed					
								40 4,0		15 1,5		GF Grooving: Low Cutting Forces					
								50 5,0		20 2,0		CG Cut-Off					
								60 6,0		25 2,5		RG Copying: General Feed					
								70 7,0		30 3,0		RN Multi-Purpose: General Feed					
								80 8,0				GA Multi-Purpose: General Feed					

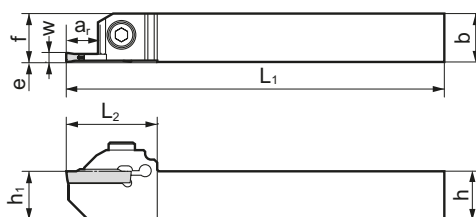
Front Relief Angle		Insert Design	
C: 7°		Symbol	Direction
		N	Neutral
		R	Right Hand
		L	Left Hand

Grooving Tool Holders GNDM /GNDL Type

External Multi-Purpose Small Tools Type (Grooving, Turning, Profiling)



Use the multi-purpose profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)							Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Applicable Insert	Cap Screw	 N·m	Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	e	w	a _r					
 GNDM R/L 1616 JX 1.2508	●	●	16	16	120	(16)	16	26	0	1,25	8,0	16	GCM N125005 GF	BX0515	4,0	LH040
GNDM R/L 1616 JX 1.510	●	●	16	16	120	(16)	16	26	0	1,50	10,0	20	GCM N150005 GF			
GNDM R/L 1616 JX 212	●	●	16	16	120	(16)	16	30	0	2,00	12,0	24	GCM □200○-□□			
GNDM R/L 1616 JX 312	●	●	16	16	120	(16)	16	30	0	3,00	12,0	24	GCM □300○-□□			

Select holders and inserts with the same grooving width (w).

External Grooving / Cut-Off Small Tools

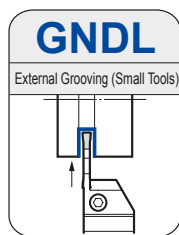


Fig. 1

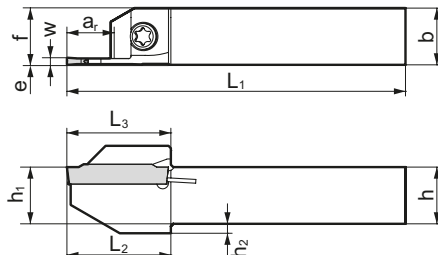
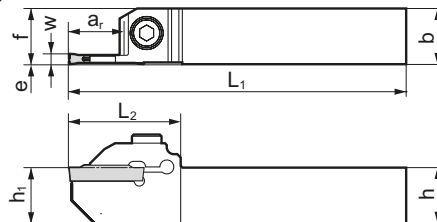


Fig. 2



Above figures show right hand tools.

■ Spare Parts



■ Holders

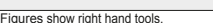
Cat. No.	Stock		Dimensions (mm)										Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Fig.	Applicable Insert	Cap Screw		Spanner
	R	L	h	b	L ₁	f	h ₁	h ₂	L ₂	L ₃	e	w								
GNDL R/L 1010 JX 1.2510	●	●	10	10	120	(10)	10	2,0	18	18,3	0	1,25	10,0	20	1	GCM N125005 GF	BFTX0412N	3,0	LT15-10	
GNDL R/L 1010 JX 1.510	●	●	10	10	120	(10)	10	2,0	18	18,3	0	1,50	10,0	20		GCM N150005 GF				
GNDL R/L 1010 JX 210	●	●	10	10	120	(10)	10	2,0	22	22,3	0	2,00	10,0	20		GCM □2000-□□				
GNDL R/L 1010 JX 310	●	●	10	10	120	(10)	10	2,0	22	22,3	0	3,00	10,0	20		GCM □3000-□□				
GNDL R/L 1212 JX 1.2512	●	●	12	12	120	(12)	12	2,0	19	19,3	0	1,25	12,0	24	1	GCM N125005 GF	BFTX0412N	3,0	LT15-10	
GNDL R/L 1212 JX 1.512	●	●	12	12	120	(12)	12	2,0	19	19,3	0	1,50	12,0	24		GCM N150005 GF				
GNDL R/L 1212 JX 212.5	●	●	12	12	120	(12)	12	2,0	22	22,3	0	2,00	12,5	25		GCM □2000-□□				
GNDL R/L 1212 JX 312.5	●	●	12	12	120	(12)	12	2,0	22	22,3	0	3,00	12,5	25		GCM □3000-□□				
 GNDL R/L 1616 JX 1.2512.5	●	●	16	16	120	(16)	16		28		0	1,25	12,5	20	2	GCM N125005 GF	BFTX0515	4,0	LH040	
GNDL R/L 1616 JX 1.512.5	●	●	16	16	120	(16)	16		28		0	1,50	12,5	25		GCM N150005 GF				
GNDL R/L 1616 JX 216	●	●	16	16	120	(16)	16		32		0	2,00	16,0	32		GCM □2000-□□				
GNDL R/L 1616 JX 316	●	●	16	16	120	(16)	16		32		0	3,00	16,0	32		GCM □3000-□□				

Select holders and inserts with the same grooving width (w).

Grooving Tool Holders GNDM / GNDL Type

■ Inserts for GNDM (Small Tools) / GNGL (Small Tools)

Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)				
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	w		r _ε	ℓ	s
										Cutting Width	Tolerance			
Grooving / Turning		General Purpose	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8
		Low Feed	GCM N2002 ML New			○	●			2,0	±0,03	0,2	21,1	3,6
			N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8
			GCM N2002 GG	●		○	●			2,0	±0,03	0,2	21,1	3,6
Copying / Cut-Off		General Purpose	N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N3004 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8
		Low Feed	GCM N2002 GL	●		○	●			2,0	±0,03	0,2	21,1	3,6
			M3002 GL	●		○	●			3,0	±0,03	0,2	21,1	3,8
		Low Cutting Force	GCM N125005 GF				●			1,25	±0,03	0,05	17,4	3,2
			N150005 GF				●			1,5	±0,03	0,05	17,4	3,7
			N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6
			N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8
Copying		General Purpose	GCM N3015 RG	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8
Face / Necking		General Purpose	GCM N2010 RN New			○	○			2,0	±0,03	1,0	21,7	3,6
			N3015 RN New	○	○	○	○			3,0	±0,03	1,5	22,4	3,8
Non Ferrous Metals		General Purpose	GCG N2002 GA New						○	2,0	±0,025	0,2	21,1	3,6
			N3002 GA New						○	3,0	±0,025	0,2	21,1	3,8

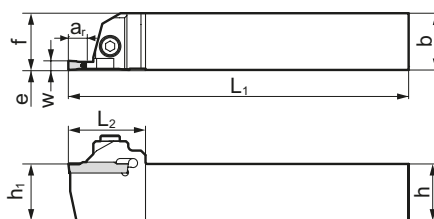
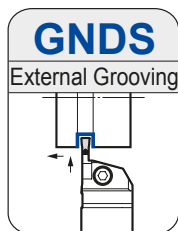
Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)										
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	w		r _ε	ℓ	s						
				R	L	R	L	R	L	R	L				R	L				
Cut-Off	Figures show right hand tools. 	General Purpose	GCM R/L2002 CG 05	●	●		○	○	●	●					2,0	±0,03	0,2	21,1	3,6	
			R/L3002 CG 05	●	●		○	○	●	●						3,0	±0,03	0,2	21,3	3,8

Select holders and inserts with the same grooving width (w).

Grooving Tool Holders

GNDS Type

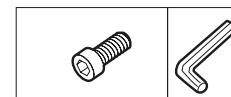
External Multi-Purpose Shallow Grooves Type (Grooving, Turning, Profiling)



Use the multi-purpose profiling insert for turning (wide grooves).

Above figures show right hand tools.

■ Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw		Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	w	a _r				
GNDS R/L 2020 K 206	●	●	20	20	125	20	20	30	2,0	6	GCM □20○○-□□	BX0520	5,0	LH040
GNDS R/L 2020 K 306	●	●	20	20	125	20	20	30	3,0	6	GCM □30○○-□□			
GNDS R/L 2020 K 410	●	●	20	20	125	20	20	34	4,0	10	GCM □40○○-□□			
GNDS R/L 2020 K 510	●	●	20	20	125	20	20	34	5,0	10	GCM N50○○-□□			
GNDS R/L 2020 K 610	●	●	20	20	125	20	20	34	6,0	10	GCM N60○○-□□			
GNDS R/L 2525 M 206	●	●	25	25	150	25	25	30	2,0	6	GCM □20○○-□□			
GNDS R/L 2525 M 306	●	●	25	25	150	25	25	30	3,0	6	GCM □30○○-□□			
GNDS R/L 2525 M 410	●	●	25	25	150	25	25	34	4,0	10	GCM □40○○-□□			
GNDS R/L 2525 M 510	●	●	25	25	150	25	25	34	5,0	10	GCM N50○○-□□			
GNDS R/L 2525 M 610	●	●	25	25	150	25	25	34	6,0	10	GCM N60○○-□□			

Select holders and inserts with the same grooving width (w).

● = Euro stock
○ = Japan stock

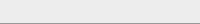
$\text{N}\cdot\text{m}$ Recommended Tightening Torque (N·m)

Grooving Tool Holders

GNDS Type

Inserts for GNDS

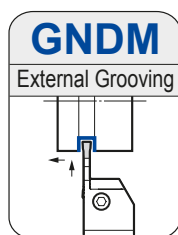
Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)				
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	W		r_ϵ	ℓ	s
										Cutting Width	Tolerance			
Grooving / Turning		MG General Purpose	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8
			N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0
			N5008 MG	●	●	○	●			5,0	±0,03	0,8	26,4	4,1
			N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5
		ML w<4mm w>=5mm Low Feed	GCM N2002 ML New	●	●	○	●			2,0	±0,03	0,2	21,1	3,6
			N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8
			N4004 ML	●	●	○	●	○		4,0	±0,03	0,4	26,4	4,0
			N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5
Copying / Cut-Off		GG General Purpose	GCM N2002 GG	●		○	●			2,0	±0,03	0,2	21,1	3,6
			N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N4002 GG	●		○	●			4,0	±0,03	0,2	26,4	4,0
			N5002 GG	●		○	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5
		GL Low Feed	GCM N3004 GL	●		○	●			3,0	±0,03	0,4	21,1	3,8
			N4004 GL	●		○	●			4,0	±0,03	0,4	26,4	4,0
			N5004 GL	●		○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 GL	●		○	●			6,0	±0,03	0,4	26,4	4,5
		GF Low Cutting Force	GCM N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6
			N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8
			N4002 GF	●		●	●	○		4,0	±0,03	0,2	26,4	4,0
			N5002 GF	●		●	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GF	●		●	●			6,0	±0,03	0,2	26,4	4,5
		RG General Purpose	GCM N3015 RG New	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8
			N4020 RG New	●	●	○	●	○		4,0	±0,03	2,0	26,4	4,0
			N5025 RG New	●	●	○	●			5,0	±0,03	2,5	27,2	4,1
			N6030 RG New	●	●	○	●			6,0	±0,03	3,0	27,5	4,5
Copying		RN General Purpose	GCM N2010 RN New	○		○	○			2,0	±0,03	1,0	21,7	3,6
			N3015 RN New	○	○	○	○			3,0	±0,03	1,5	22,4	3,8
			N4020 RN New	○	○	○	○			4,0	±0,03	2,0	28,0	4,0
			N5025 RN New	○	○	○	○			5,0	±0,03	2,5	28,1	4,1
			N6030 RN New	○	○	○	○			6,0	±0,03	3,0	28,1	4,5
Face / Necking		GA General Purpose	GCM N2002 GA						○	2,0	±0,025	0,2	21,1	3,6
			N3002 GA						○	3,0	±0,025	0,2	21,1	3,8
			N4004 GA						○	4,0	±0,025	0,4	26,4	4,0
			N5004 GA						○	5,0	±0,025	0,4	26,4	4,1
			N6004 GA						○	6,0	±0,025	0,4	26,4	4,5
Non Ferrous Metals		GA General Purpose	GCM N2002 GA						○	2,0	±0,025	0,2	21,1	3,6
			N3002 GA						○	3,0	±0,025	0,2	21,1	3,8
			N4004 GA						○	4,0	±0,025	0,4	26,4	4,0
			N5004 GA						○	5,0	±0,025	0,4	26,4	4,1
			N6004 GA						○	6,0	±0,025	0,4	26,4	4,5

Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)									
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	w		r _ε	ℓ	s					
				R	L	R	L	R	L	R	L				R	L	Cutting Width	Tolerance	
Cut-Off	Figures show right hand tools. 	CG  General Purpose	GCM R/L2002 CG 05	●	●		○	○	●	●					2,0	±0,03	0,2	21,1	3,6
	R/L3002 CG 05		●	●			○	○	●	●					3,0	±0,03	0,2	21,3	3,8
	R/L4002 CG 05		●	●			○	○	●	●					4,0	±0,03	0,2	26,7	4,0

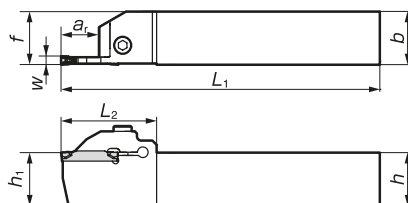
Select holders and inserts with the same grooving width (w).

Grooving Tool Holders GNDM / GNDMS Type

External Multi-Purpose Type (Grooving, Turning, Profiling)

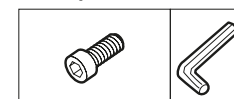


Use for multi-purpose or profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts

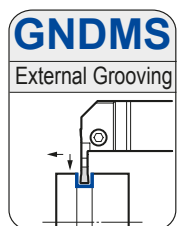


■ Holders

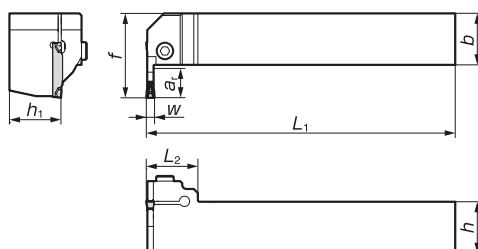
Cat. No.	Stock		Dimensions (mm)							Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	w							
GNDM R/L 2020 K 1.2510 New	●	●	20	20	125	20	20	34,0	1,25	10	20	GCM N125005 GF	BX0520	5,0	LH040	
GNDM R/L 2020 K 1.510 New	●	●	20	20	125	20	20	34,0	1,50	10	20	GCM N150005 GF				
GNDM R/L 2020 K 210	●	●	20	20	125	20	20	33,6	2,00	10	20	GCM □20○-□□				
GNDM R/L 2020 K 312	●	●	20	20	125	20	20	36,6	3,00	12	24	GCM □30○-□□				
GNDM R/L 2020 K 418	●	●	20	20	125	20	20	45,0	4,00	18	36	GCM □40○-□□				
GNDM R/L 2020 K 518	●	●	20	20	125	20	20	45,0	5,00	18	36	GCM N50○-□□				
GNDM R/L 2020 K 618	●	●	20	20	125	20	20	45,0	6,00	18	36	GCM N60○-□□				
GNDM R/L 2525 M 1.2510 New	●	●	25	25	150	25	25	36,0	1,25	10	20	GCM N125005 GF	BX0520	5,0	LH040	
GNDM R/L 2525 M 1.510 New	●	●	25	25	150	25	25	36,0	1,25	10	20	GCM N150005 GF				
GNDM R/L 2525 M 210	●	●	25	25	150	25	25	33,6	2,00	10	20	GCM N20○-□□				
GNDM R/L 2525 M 312	●	●	25	25	150	25	25	36,6	3,00	12	24	GCM □30○-□□				
GNDM R/L 2525 M 418	●	●	25	25	150	25	25	45,0	4,00	18	36	GCM □40○-□□				
GNDM R/L 2525 M 518	●	●	25	25	150	25	25	45,0	5,00	18	36	GCM N50○-□□				
GNDM R/L 2525 M 618	●	●	25	25	150	25	25	45,0	6,00	18	36	GCM N60○-□□				
GNDM R/L 3225 P 312			32	25	170	25	32	36,6	3,00	12	24	GCM □30○-□□	BX0620	6,0	LH050	
GNDM R/L 3225 P 418			32	25	170	25	32	45,0	4,00	18	36	GCM □40○-□□				
GNDM R/L 3225 P 518			32	25	170	25	32	45,0	5,00	18	36	GCM N50○-□□				
GNDM R/L 3225 P 618			32	25	170	25	32	45,0	6,00	18	36	GCM N60○-□□				
GNDM R/L 3225 P 718			32	25	170	25	32	50,0	7,00	18	36	GCM N70○-□□				
GNDM R/L 3225 P 818			32	25	170	25	32	50,0	8,00	18	36	GCM N80○-□□				
GNDM R/L 3232 P 312	●	●	32	32	170	32	32	36,6	3,00	12	24	GCM □30○-□□	BX0620	6,0	LH050	
GNDM R/L 3232 P 418	●	●	32	32	170	32	32	45,0	4,00	18	36	GCM □40○-□□				
GNDM R/L 3232 P 518	●	●	32	32	170	32	32	45,0	5,00	18	36	GCM N50○-□□				
GNDM R/L 3232 P 618	●	●	32	32	170	32	32	45,0	6,00	18	36	GCM N60○-□□				
GNDM R/L 3232 P 718	●	●	32	32	170	32	32	50,0	7,00	18	36	GCM N70○-□□				
GNDM R/L 3232 P 818	●	●	32	32	170	32	32	50,0	8,00	18	36	GCM N80○-□□				

Select holders and inserts with the same grooving width (w).

External L-Styled (Side Cut) Multi-Purpose Type (Grooving, Turning, Profiling)

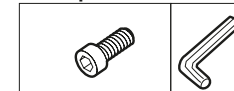


Use for multi-purpose or profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts



■ Holders

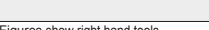
Cat. No.	Stock		Dimensions (mm)							Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	w						
GNDMS R/L 2020 K 310	●	●	20	20	125	32	20	25	3,0	10		GCM □30○-□□	BX0520	5,0	LH040
GNDMS R/L 2020 K 412	●	●	20	20	125	34	20	25	4,0	12		GCM □40○-□□			
GNDMS R/L 2020 K 512	●	●	20	20	125	34	20	25	5,0	12		GCM N50○-□□			
GNDMS R/L 2525 M 312	●	●	25	25	150	39	25	25	3,0	12		GCM □30○-□□			
GNDMS R/L 2525 M 414	●	●	25	25	150	41	25	25	4,0	14		GCM □40○-□□			
GNDMS R/L 2525 M 514	●	●	25	25	150	41	25	25	5,0	14		GCM N50○-□□			
GNDMS R/L 2525 M 614	●	●	25	25	150	41	25	25	6,0	14		GCM N60○-□□			

Select holders and inserts with the same grooving width (w).

Grooving Tool Holders GNDM / GNDMS Type

Inserts for GNDM / GNDMS

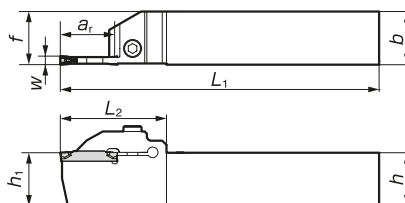
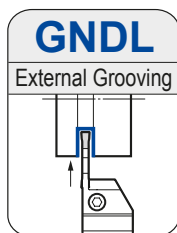
Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)						
				AC830P	AC425K	AC520U	AC530U			T2500A	H10	W		r_{ε}	ℓ	s
												Cutting Width	Tolerance			
Grooving / Turning		MG 	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8		
			N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0		
			N5008 MG	●	●	○	●			5,0	±0,03	0,8	26,4	4,1		
			N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5		
			N7008 MG	●	●	○	●			7,0	±0,04	0,8	28,75	5,5		
			N8008 MG	●	●	○	●			8,0	±0,04	0,8	28,75	6,0		
		ML 	GCM N2002 ML New	●		○	●			2,0	±0,03	0,2	21,1	3,6		
			N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8		
			N4004 ML	●	●	○	●	○		4,0	±0,03	0,4	26,4	4,0		
			N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1		
			N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5		
			N7004 ML	●	●	○	●			7,0	±0,04	0,4	28,75	5,5		
			N8004 ML	●	●	○	●			8,0	±0,04	0,4	28,75	6,0		
Copying / Cut-Off		GG 	GCM N2002 GG	●		○	●			2,0	±0,03	0,2	21,1	3,6		
			N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8		
			N4002 GG	●		○	●			4,0	±0,03	0,2	26,4	4,0		
			N5002 GG	●		○	●			5,0	±0,03	0,2	26,4	4,1		
			N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5		
			GCM N3004 GG	●		○	●			3,0	±0,03	0,4	21,1	3,8		
			N4004 GG	●		○	●			4,0	±0,03	0,4	26,4	4,0		
			N5004 GG	●		○	●			5,0	±0,03	0,4	26,4	4,1		
			N6004 GG	●		○	●			6,0	±0,03	0,4	26,4	4,5		
			N7004 GG	●		○	●			7,0	±0,04	0,4	28,75	5,5		
			N8004 GG	●		○	●			8,0	±0,04	0,4	28,75	6,0		
		GL 	GCM N2002 GL	●		○	●			2,0	±0,03	0,2	21,1	3,6		
			M3002 GL	●		○	●			3,0	±0,03	0,2	21,1	3,8		
			N4002 GL	●		○	●			4,0	±0,03	0,2	26,4	4,0		
			N5002 GL	●		○	●			5,0	±0,03	0,2	26,4	4,1		
			N6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5		
			N7004 GL	●		○	●			7,0	±0,04	0,4	28,75	5,5		
			N8004 GL	●		○	●			8,0	±0,04	0,4	28,75	6,0		
		GF 	GCM N125005 GF				●			1,25	±0,03	0,05	17,4	3,2		
			N150005 GF				●			1,5	±0,03	0,05	17,4	3,7		
			N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6		
			N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8		
			N4002 GF	●		●	●	○		4,0	±0,03	0,2	26,4	4,0		
			N5002 GF	●		●	●			5,0	±0,03	0,2	26,4	4,1		
			N6002 GF	●		●	●			6,0	±0,03	0,2	26,4	4,5		
			N7002 GF New	●		○	●			7,0	±0,04	0,2	28,75	5,5		
			N8002 GF New	●		○	●			8,0	±0,04	0,2	28,75	6,0		
			GCM N7004 GF New	●		○	●			7,0	±0,04	0,4	28,75	5,5		
			N8004 GF New	●		○	●			8,0	±0,04	0,4	28,75	6,0		
Copying		RG 	GCM N3015 RG	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8		
			N4020 RG	●	●	○	●	○		4,0	±0,03	2,0	26,4	4,0		
			N5025 RG	●	●	○	●			5,0	±0,03	2,5	27,2	4,1		
			N6030 RG	●	●	○	●			6,0	±0,03	3,0	27,5	4,5		
			N7035 RG	●	●	○	●			7,0	±0,04	3,5	29,05	5,5		
			N8040 RG	●	●	○	●			8,0	±0,04	4,0	29,25	6,0		
Face / Necking		RN 	GCM N2010 RN New	○		○	○			2,0	±0,03	1,0	21,7	3,6		
			N3015 RN New	○	○	○	○			3,0	±0,03	1,5	22,4	3,8		
			N4020 RN New	○	○	○	○			4,0	±0,03	2,0	28,0	4,0		
			N5025 RN New	○	○	○	○			5,0	±0,03	2,5	28,1	4,1		
			N6030 RN New	○	○	○	○			6,0	±0,03	3,0	28,1	4,5		
Non Ferrous Metals		GA 	GCG N2002 GA New						○	2,0	±0,025	0,2	21,1	3,6		
			N3002 GA New						○	3,0	±0,025	0,2	21,1	3,8		
			N4004 GA New						○	4,0	±0,025	0,4	26,4	4,0		
			N5004 GA New						○	5,0	±0,025	0,4	26,4	4,1		
			N6004 GA New						○	6,0	±0,025	0,4	26,4	4,5		

Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)											
				AC830P		AC425K		AC520U		AC530U		T2500A	H10		w		r _ε	ℓ	s		
				R	L	R	L	R	L	R	L	R	L	Cutting Width	Tolerance						
Cut-Off		 General Purpose	GCM R/L2002 CG 05	●	●			○	○	●	●					2,0	±0,03	0,2	21,1	3,6	
			R/L3002 CG 05	●	●			○	○	●	●						3,0	±0,03	0,2	21,3	3,8
			R/L4002 CG 05	●	●			○	○	●	●						4,0	±0,03	0,2	26,7	4,0

Select holders and inserts with the same grooving width (w).

Grooving Tool Holders GNDL / GNDLS Type

External Deep Grooving and Cut-Off



Above figures show right hand tools.

Spare Parts

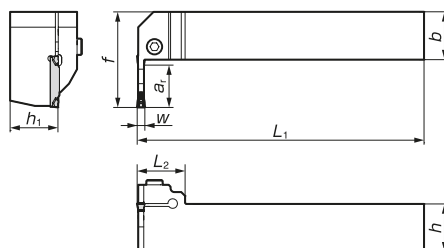
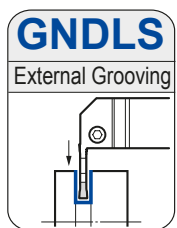


■ Holders

Cat. No.	Stock		Dimensions (mm)							Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Applicable Insert	Cap Screw		Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	w	a _r						
GNDL R/L 2020 K 1.2516 	●	●	20	20	125	20	20	38,0	1,25	16	32	GCM N125005 GF	BX0520	5,0	LH040	
GNDL R/L 2020 K 1.516 	●	●	20	20	125	20	20	38,0	1,50	16	32	GCM N150005 GF				
GNDL R/L 2020 K 220	●	●	20	20	125	20	20	44,5	2,00	20	40	GCM □20○-□□				
GNDL R/L 2020 K 320	●	●	20	20	125	20	20	44,5	3,00	20(18)	40	GCM □30○-□□				
GNDL R/L 2020 K 425	●	●	20	20	125	20	20	50,0	4,00	25(23)	50	GCM □40○-□□				
GNDL R/L 2020 K 525	●	●	20	20	125	20	20	50,0	5,00	25(23)	50	GCM N50○-□□				
GNDL R/L 2020 K 625	●	●	20	20	125	20	20	50,0	6,00	25(23)	50	GCM N60○-□□				
GNDL R/L 2525 M 1.2516 	●	●	25	25	150	25	25	40,0	1,25	16	32	GCM N125005 GF				
GNDL R/L 2525 M 1.516 	●	●	25	25	150	25	25	40,0	1,50	16	32	GCM N150005 GF				
GNDL R/L 2525 M 220	●	●	25	25	150	25	25	44,5	2,00	20	40	GCM □20○-□□				
GNDL R/L 2525 M 320	●	●	25	25	150	25	25	44,5	3,00	20(18)	40	GCM □30○-□□	BX0520	6,0	LH050	
GNDL R/L 2525 M 425	●	●	25	25	150	25	25	50,0	4,00	25(23)	50	GCM □40○-□□				
GNDL R/L 2525 M 525	●	●	25	25	150	25	25	50,0	5,00	25(23)	50	GCM N50○-□□				
GNDL R/L 2525 M 625	●	●	25	25	150	25	25	50,0	6,00	25(23)	50	GCM N60○-□□				
GNDL R/L 3225 P 320			32	25	170	25	32	44,5	3,00	20(18)	40	GCM □30○-□□				
GNDL R/L 3225 P 425			32	25	170	25	32	50,0	4,00	25(23)	50	GCM □40○-□□				
GNDL R/L 3225 P 525			32	25	170	25	32	50,0	5,00	25(23)	50	GCM N50○-□□				
GNDL R/L 3225 P 625			32	25	170	25	32	50,0	6,00	25(23)	50	GCM N60○-□□				
GNDL R/L 3225 P 725			32	25	170	25	32	50,0	7,00	25(23)	50	GCM N70○-□□				
GNDL R/L 3225 P 825			32	25	170	25	32	50,0	8,00	25(23)	50	GCM N80○-□□				
GNDL R/L 3232 P 320	●	●	32	32	170	32	32	44,5	3,00	20(18)	40	GCM □30○-□□	BX0620	6,0	LH050	
GNDL R/L 3232 P 425	●	●	32	32	170	32	32	50,0	4,00	25(23)	50	GCM □40○-□□				
GNDL R/L 3232 P 525	●	●	32	32	170	32	32	50,0	5,00	25(23)	50	GCM N50○-□□				
GNDL R/L 3232 P 625	●	●	32	32	170	32	32	50,0	6,00	25(23)	50	GCM N60○-□□				
GNDL R/L 3232 P 725	●	●	32	32	170	32	32	50,0	7,00	25(23)	50	GCM N70○-□□				
GNDL R/L 3232 P 825	●	●	32	32	170	32	32	50,0	8,00	25(23)	50	GCM N80○-□□				

Select holders and inserts with the same grooving width (w). Dimensions in parentheses are for applications that use copying inserts (RG type breakers).

External L-Styled (Side Cut) Grooving



Above figures show right hand tools.

■ Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw		Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	w	a _r				
GNDLS R/L 2020 K 216	●	●	20	20	125	38	20	25	2,0	16	GCM □20○-□□	BX0520	5,0	LH040
GNDLS R/L 2020 K 316	●	●	20	20	125	38	20	25	3,0	16	GCM □30○-□□			
GNDLS R/L 2525 M 218	●	●	25	25	150	45	25	25	2,0	18	GCM □20○-□□			
GNDLS R/L 2525 M 318	●	●	25	25	150	45	25	25	3,0	18	GCM □30○-□□			
GNDLS R/L 2525 M 423	●	●	25	25	150	50	25	25	4,0	23	GCM □40○-□□			
GNDLS R/L 2525 M 523	●	●	25	25	150	50	25	25	5,0	23	GCM N50○-□□			
GNDLS R/L 2525 M 623	●	●	25	25	150	50	25	25	6,0	23	GCM N60○-□□			

Select holders and inserts with the same grooving width (w).

● = Euro stock
○ = Japan stock

⌚ Recommended Tightening Torque (N·m)

Grooving Tool Holders

GNDL / GNDLS Type

Inserts for GNDL / GNDLS

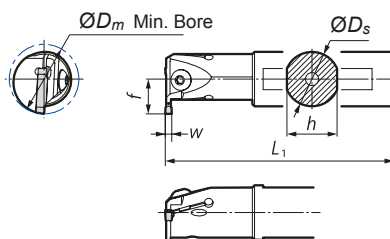
Application	Shape	Type	Cat. No.	Coated Carbide				Cermets	Carbide	Dimensions (mm)						
				AC830P	AC425K	AC520U	AC530U			T2500A	H10	W		r_{ε}	ℓ	s
												Cutting Width	Tolerance			
Grooving / Turning		MG General Purpose	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8		
			N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0		
			N5008 MG	●	●	○	●			5,0	±0,03	0,8	26,4	4,1		
			N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5		
			N7008 MG	●	●	○	●			7,0	±0,04	0,8	28,75	5,5		
		N8008 MG	●	●	○	●			8,0	±0,04	0,8	28,75	6,0			
		ML w<4mm w>=5mm Low Feed	GCM N2002 ML New	●		○	●			2,0	±0,03	0,2	21,1	3,6		
			N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8		
			N4004 ML	●	●	○	●	○		4,0	±0,03	0,4	26,4	4,0		
			N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1		
			N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5		
			N7004 ML	●	●	○	●			7,0	±0,04	0,4	28,75	5,5		
			N8004 ML	●	●	○	●			8,0	±0,04	0,4	28,75	6,0		
			Copying / Cut-Off		GG General Purpose	GCM N2002 GG	●		○	●			2,0	±0,03	0,2	21,1
N3002 GG	●						○	●			3,0	±0,03	0,2	21,1	3,8	
N4002 GG	●					○	●			4,0	±0,03	0,2	26,4	4,0		
N5002 GG	●					○	●			5,0	±0,03	0,2	26,4	4,1		
N6002 GG	●					○	●			6,0	±0,03	0,2	26,4	4,5		
GCM N3004 GG	●					○	●			3,0	±0,03	0,4	21,1	3,8		
N4004 GG	●					○	●			4,0	±0,03	0,4	26,4	4,0		
N5004 GG	●					○	●			5,0	±0,03	0,4	26,4	4,1		
N6004 GG	●				○	●			6,0	±0,03	0,4	26,4	4,5			
N7004 GG	●				○	●			7,0	±0,04	0,4	28,75	5,5			
N8004 GG	●				○	●			8,0	±0,04	0,4	28,75	6,0			
GL Low Feed	GCM N2002 GL	●				○	●			2,0	±0,03	0,2	21,1	3,6		
	M3002 GL	●				○	●			3,0	±0,03	0,2	21,1	3,8		
	N4002 GL	●		○	●			4,0	±0,03	0,2	26,4	4,0				
	N5002 GL	●		○	●			5,0	±0,03	0,2	26,4	4,1				
	N6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5				
	N7004 GL	●		○	●			7,0	±0,04	0,4	28,75	5,5				
N8004 GL	●		○	●			8,0	±0,04	0,4	28,75	6,0					
GF Low Cutting Force	GCM N125005 GF				●			1,25	±0,03	0,05	17,4	3,2				
	N150005 GF				●			1,5	±0,03	0,05	17,4	3,7				
	N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6				
	N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8				
	N4002 GF	●		●	●	○		4,0	±0,03	0,2	26,4	4,0				
	N5002 GF	●		●	●			5,0	±0,03	0,2	26,4	4,1				
	N6002 GF	●		●	●			6,0	±0,03	0,2	26,4	4,5				
	N7002 GF New	●		○	●			7,0	±0,04	0,2	28,75	5,5				
	N8002 GF New	●		○	●			8,0	±0,04	0,2	28,75	6,0				
	GCM N7004 GF New	●		○	●			7,0	±0,04	0,4	28,75	5,5				
N8004 GF New	●		○	●			8,0	±0,04	0,4	28,75	6,0					
Copying		RG General Purpose	GCM N3015 RG	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8		
			N4020 RG	●	●	○	●	○		4,0	±0,03	2,0	26,4	4,0		
			N5025 RG	●	●	○	●			5,0	±0,03	2,5	27,2	4,1		
			N6030 RG	●	●	○	●			6,0	±0,03	3,0	27,5	4,5		
			N7035 RG	●	●	○	●			7,0	±0,04	3,5	29,05	5,5		
			N8040 RG	●	●	○	●			8,0	±0,04	4,0	29,25	6,0		
Face / Necking		RN General Purpose	GCM N2010 RN New			○	○			2,0	±0,03	1,0	21,7	3,6		
			N3015 RN New	○	○	○	○			3,0	±0,03	1,5	22,4	3,8		
			N4020 RN New	○	○	○	○			4,0	±0,03	2,0	28,0	4,0		
			N5025 RN New	○	○	○	○			5,0	±0,03	2,5	28,1	4,1		
			N6030 RN New	○	○	○	○			6,0	±0,03	3,0	28,1	4,5		
Non Ferrous Metals		GA General Purpose	GCG N2002 GA New						○	2,0	±0,025	0,2	21,1	3,6		
			N3002 GA New						○	3,0	±0,025	0,2	21,1	3,8		
			N4004 GA New						○	4,0	±0,025	0,4	26,4	4,0		
			N5004 GA New						○	5,0	±0,025	0,4	26,4	4,1		
			N6004 GA New						○	6,0	±0,025	0,4	26,4	4,5		

Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide		Dimensions (mm)										
				AC830P		AC425K		AC520U		AC530U		T2500A		H10		w		r _ε	ℓ	s	
				R	L	R	L	R	L	R	L	R	L	R	L	Cutting Width	Tolerance				
Cut-Off	Figures show right hand tools. 	CG  General Purpose	GCM R/L2002 CG 05	●	●			○	○	●	●						2,0	±0,03	0,2	21,1	3,6
	R/L3002 CG 05		●	●			○	○	●	●							3,0	±0,03	0,2	21,3	3,8
	R/L4002 CG 05		●	●			○	○	●	●							4,0	±0,03	0,2	26,7	4,0

Grooving Tool Holders

GNDI Type

Internal Grooving



Use for multi-purpose or profiling insert for turning (wide grooves).

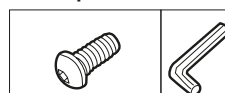
Above figures show right hand tools.

■ Holders

Cat. No.	Stock		Dimensions (mm)				Min. Bore (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	ØDs	h	L1	f	ØDm	w	ar				
GNDI R/L 2532 T 206	●	●	25	23	200	16	32	2,0	6	GCM N2000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 210	●	●	32	30	250	26	40	2,0	10	GCM N2000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 306	●	●	25	23	200	16	32	3,0	6	GCM N3000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 310	●	●	32	30	250	26	40	3,0	10	GCM N3000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 311	●	●	40	38	300	31	50	3,0	11	GCM N3000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 406	●	●	25	23	200	19	32	4,0	6	GCM N4000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 410	●	●	32	30	250	26	40	4,0	10	GCM N4000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 411	●	●	40	38	300	31	50	4,0	11	GCM N4000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 506	●	●	25	23	200	19	32	5,0	6	GCM N5000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 510	●	●	32	30	250	26	40	5,0	10	GCM N5000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 511	●	●	40	38	300	31	50	5,0	11	GCM N5000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 611	●	●	40	38	300	31	50	6,0	11	GCM N6000-□□	BH0616	6,0	LH040

Select holders and inserts with the same grooving width (w).

■ Spare Parts



Grooving Tool Holders

GNDI Type

GNDI Inserts

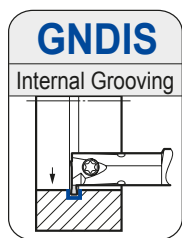
Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)				
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	w		r _ε	ℓ	s
										Cutting Width	Tolerance			
Grooving / Turning		MG General Purpose	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8
			N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0
			N5008 MG	●	●	○	●			5,0	±0,03	0,8	26,4	4,1
			N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5
		ML w<4mm w>5mm Low Feed	GCM N2002 ML New	●	●	○	●			2,0	±0,03	0,2	21,1	3,6
			N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8
			N4004 ML	●	●	○	●	○		4,0	±0,03	0,4	26,4	4,0
			N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5
Copying / Cut-Off		GG General Purpose	GCM N2002 GG	●		○	●			2,0	±0,03	0,2	21,1	3,6
			N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N4002 GG	●		○	●			4,0	±0,03	0,2	26,4	4,0
			N5002 GG	●		○	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5
			GCM N3004 GG	●		○	●			3,0	±0,03	0,4	21,1	3,8
			N4004 GG	●		○	●			4,0	±0,03	0,4	26,4	4,0
			N5004 GG	●		○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 GG	●		○	●			6,0	±0,03	0,4	26,4	4,5
		GL Low Feed	GCM N2002 GL	●		○	●			2,0	±0,03	0,2	21,1	3,6
			M3002 GL	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N4002 GL	●		○	●			4,0	±0,03	0,2	26,4	4,0
			N5002 GL	●		○	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5
		GF Low Cutting Force	GCM N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6
			N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8
			N4002 GF	●		●	●	○		4,0	±0,03	0,2	26,4	4,0
			N5002 GF	●		●	●			5,0	±0,03	0,2	26,4	4,1
Copying		RG General Purpose	GCM N3015 RG New	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8
			N4020 RG New	●	●	○	●	○		4,0	±0,03	2,0	26,4	4,0
			N5025 RG New	●	●	○	●			5,0	±0,03	2,5	27,2	4,1
			N6030 RG New	●	●	○	●			6,0	±0,03	3,0	27,5	4,5
Face / Necking		RN General Purpose	GCM N2010 RN New	○		○	○			2,0	±0,03	1,0	21,7	3,6
			N3015 RN New	○	○	○	○			3,0	±0,03	1,5	22,4	3,8
			N4020 RN New	○	○	○	○			4,0	±0,03	2,0	28,0	4,0
			N5025 RN New	○	○	○	○			5,0	±0,03	2,5	28,1	4,1
			N6030 RN New	○	○	○	○			6,0	±0,03	3,0	28,1	4,5
Non Ferrous Metals		GA General Purpose	GCG N2002 GA						○	2,0	±0,025	0,2	21,1	3,6
			N3002 GA						○	3,0	±0,025	0,2	21,1	3,8
			N4004 GA						○	4,0	±0,025	0,4	26,4	4,0
			N5004 GA						○	5,0	±0,025	0,4	26,4	4,1
			N6004 GA						○	6,0	±0,025	0,4	26,4	4,5

Select holders and inserts with the same grooving width (w).

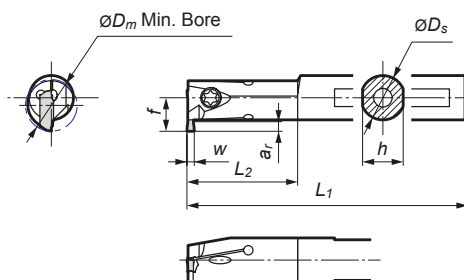
Grooving Tool Holders

GNDIS Type

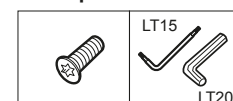
Internal Grooving



New



Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)						Min. Bore (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	Spanner
	R	L	ØDs	h	L1	L2	f	ØDm						
GNDIS R/L 1214 T 1526	●	○	12	11	150	30	9,0	14	1,5	2,6	GXM N150005S GF	BFTX0409N	3,4	LT15
GNDIS R/L 1214 T 1536	●	○	12	11	150	30	10,0	14	1,5	3,6	GXM N150005F GF			
GNDIS R/L 1616 T 1536	●	○	16	15	160	35	11,5	16	1,5	3,6	GXM N150005S GF			
GNDIS R/L 1620 T 1546	●	○	16	15	160	40	14,5	20	1,5	4,6	GXM N150005S GF	BFTX0511N	5,0	LT20
GNDIS R/L 2025 T 1566	●	○	20	19	180	40	19,0	25	1,5	6,6	GXM N150005S GF			
GNDIS R/L 1214 T 2026	●	○	12	11	150	30	9,0	14	2,0	2,6	GXM N2002S-□□	BFTX0409N	3,4	LT15
GNDIS R/L 1214 T 2036	●	○	12	11	150	30	10,0	14	2,0	3,6	GXM N2002S-□□			
GNDIS R/L 1616 T 2036	●	○	16	15	160	35	11,5	16	2,0	3,6	GXM N2002S-□□	BFTX0511N	5,0	LT20
GNDIS R/L 1620 T 2046	●	○	16	15	160	40	14,5	20	2,0	4,6	GXM N2002S-□□			
GNDIS R/L 2025 T 2066	●	○	20	19	180	40	19,0	25	2,0	6,6	GXM N2002S-□□			
GNDIS R/L 1214 T 3026	●	○	12	11	150	30	9,0	14	3,0	2,6	GXM N3002S-□□	BFTX0409N	3,4	LT15
GNDIS R/L 1214 T 3036	●	○	12	11	150	30	10,0	14	3,0	3,6	GXM N3002S-□□			
GNDIS R/L 1616 T 3036	●	○	16	15	160	35	11,5	16	3,0	3,6	GXM N3002S-□□			
GNDIS R/L 1620 T 3046	●	○	16	15	160	40	14,5	20	3,0	4,6	GXM N3002S-□□	BFTX0511N	5,0	LT20
GNDIS R/L 2025 T 3066	●	○	20	19	180	40	19,0	25	3,0	6,6	GXM N3002S-□□			

Select holders and inserts with the same grooving width (w).

Only GXM inserts can be used.

■ GNDIS Inserts

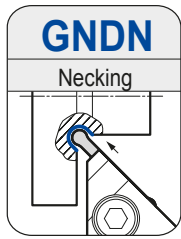
Application	Shape	Type	Cat. No.	Coated Carbide		Dimensions (mm)				
				AC520U	AC1030U	w		r _ε	ℓ	s
						Cutting Width	Tolerance			
Grooving / Turning		ML Low Feed	GXM N2002S ML New	○	○	2,0	±0,03	0,2	11,1	3,1
			N3002S ML New	○	○	3,0	±0,03	0,2	11,1	3,1
Grooving		GF Low Cutting Force	GXM N150005S GF New	○	○	1,5	±0,03	0,05	11,1	3,1
			N2002S GF New	○	○	2,0	±0,03	0,2	11,1	3,1
			N3002S GF New	○	○	3,0	±0,03	0,2	11,1	3,1

Select holders and inserts with the same grooving width (w).

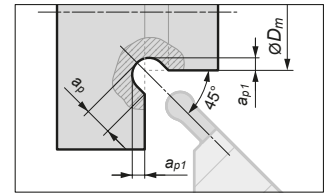
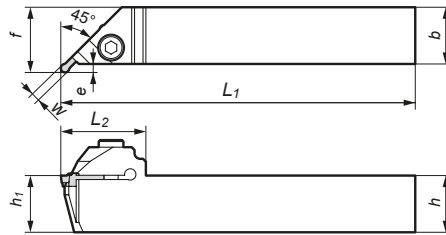
GCM and GCG inserts are not compatible.

Grooving Tool Holders GNDN Type

Necking

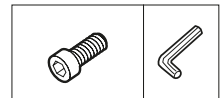


New



Above figures show right hand tools.

■ Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)							Min. Bore (mm)	Groov. Width (mm)	a_p	a_{p1}	Applicable Insert	Cap Screw	Spanner
	R	L	h	b	L_1	f	h_1	L_2	e							
GNDN R/L2020 K 220-020	○	○	20	20	125	23	20	30	3,0	20	2,0	2,0	1,00	GCM N2010 RN	BX0520	5,0 LH040
GNDN R/L2020 K 325-020	○	○	20	20	125	23	20	30	3,0	20	3,0	2,5	1,15	GCM N3015 RN		
GNDN R/L2020 K 430-030	○	○	20	20	125	24	20	32	4,0	30	4,0	3,0	1,29	GCM N4020 RN		
GNDN R/L2020 K 535-030	○	○	20	20	125	25	20	35	5,0	30	5,0	3,5	1,44	GCM N5025 RN		
GNDN R/L2020 K 640-030	○	○	20	20	125	25	20	35	5,0	30	6,0	4,0	1,59	GCM N6030 RN		
GNDN R/L2525 M 220-020	○	○	25	25	150	23	25	30	3,0	20	2,0	2,0	1,00	GCM N2010 RN	BX0520	5,0 LH040
GNDN R/L2525 M 325-020	○	○	25	25	150	28	25	30	3,0	20	3,0	2,5	1,15	GCM N3015 RN		
GNDN R/L2525 M 430-030	○	○	25	25	150	29	25	32	4,0	30	4,0	3,0	1,29	GCM N4020 RN		
GNDN R/L2525 M 535-030	○	○	25	25	150	30	25	35	5,0	30	5,0	3,5	1,44	GCM N5025 RN		
GNDN R/L2525 M 640-030	○	○	25	25	150	30	25	35	5,0	30	6,0	4,0	1,59	GCM N6030 RN		

Select holders and inserts with the same grooving width (w).

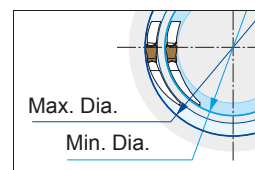
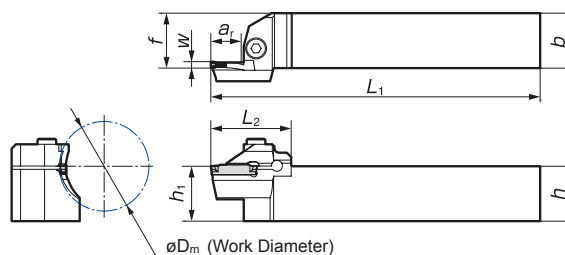
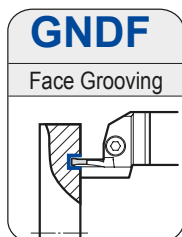
■ GNDN Inserts

Application	Shape	Type	Cat. No.	Coated Carbide				Dimensions (mm)				
				AC830P	AC425K	AC520U	AC530U	w		r_ϵ	ℓ	s
								Cutting Width	Tolerance			
Face / Necking		RN	GCM N2010 RN	○	○	○	○	2,0	±0,03	0,4	21,7	3,6
			N3015 RN	○	○	○	○	3,0	±0,03	0,8	22,4	3,8
			N4020 RN	○	○	○	○	4,0	±0,03	0,8	28,0	4,0
			N5025 RN	○	○	○	○	5,0	±0,03	0,8	28,1	4,1
			N6030 RN	○	○	○	○	6,0	±0,03	0,2	28,1	4,5

Select holders and inserts with the same grooving width (w).

Grooving Tool Holders GNDF Type

Face Grooving

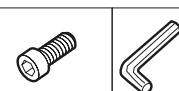


Work diameters in the stock indicate external diameters of face grooving.

Use for multi-purpose or profiling insert for turning (wide grooves).

Above figures show right hand tools.

Spare Parts



Holders

Cat. No.	Stock		Dimensions (mm)						Work Dia. (mm)	Groov. Width (mm)	Max. Cut- off Dia. (mm)	Applicable Insert	Cap Screw		Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂	ØD _m	w	a _r				
GNDF R/L 2020 K 312-035	●	●	20	20	125	20	20	35,6	35 ~ 45	3,0	12	GCM N30○○-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 312-040	●	●	20	20	125	20	20	35,6	40 ~ 55	3,0	12				
GNDF R/L 2020 K 318-050	●	●	20	20	125	20	20	41,6	50 ~ 70	3,0	18				
GNDF R/L 2020 K 318-065	●	●	20	20	125	20	20	41,6	65 ~ 100	3,0	18				
GNDF R/L 2020 K 318-090	●	●	20	20	125	20	20	41,6	90 ~ 150	3,0	18				
GNDF R/L 2020 K 318-140	●	●	20	20	125	20	20	41,6	140 ~ 200	3,0	18				
GNDF R/L 2020 K 318-180	●	●	20	20	125	20	20	41,6	180 ~ 300	3,0	18	GCM N40○○-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 418-040	●	●	20	20	125	20	20	41,6	40 ~ 55	4,0	18				
GNDF R/L 2020 K 423-050	●	●	20	20	125	20	20	46,6	50 ~ 70	4,0	23				
GNDF R/L 2020 K 423-065	●	●	20	20	125	20	20	46,6	65 ~ 90	4,0	23				
GNDF R/L 2020 K 423-085	●	●	20	20	125	20	20	46,6	85 ~ 130	4,0	23				
GNDF R/L 2020 K 423-125	●	●	20	20	125	20	20	46,6	125 ~ 200	4,0	23				
GNDF R/L 2020 K 423-180	●	●	20	20	125	20	20	46,6	180 ~ 300	4,0	23	GCM N50○○-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 423-280	●	●	20	20	125	20	20	46,6	280 ~ 1000	4,0	23				
GNDF R/L 2020 K 523-050	●	●	20	20	125	20	20	46,6	50 ~ 70	5,0	23				
GNDF R/L 2020 K 523-065	●	●	20	20	125	20	20	46,6	65 ~ 90	5,0	23				
GNDF R/L 2020 K 523-085	●	●	20	20	125	20	20	46,6	85 ~ 130	5,0	23				
GNDF R/L 2020 K 523-125	●	●	20	20	125	20	20	46,6	125 ~ 200	5,0	23				
GNDF R/L 2020 K 523-180	●	●	20	20	125	20	20	46,6	180 ~ 300	5,0	23	GCM N60○○-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 523-280	●	●	20	20	125	20	20	46,6	280 ~ 1000	5,0	23				
GNDF R/L 2020 K 623-050	●	●	20	20	125	20	20	46,6	50 ~ 75	6,0	23				
GNDF R/L 2020 K 623-070	●	●	20	20	125	20	20	46,6	70 ~ 110	6,0	23				
GNDF R/L 2020 K 623-100	●	●	20	20	125	20	20	46,6	100 ~ 200	6,0	23				
GNDF R/L 2020 K 623-180	●	●	20	20	125	20	20	46,6	180 ~ 300	6,0	23				
GNDF R/L 2020 K 623-280	●	●	20	20	125	20	20	46,6	280 ~ 1000	6,0	23	GCM N30○○-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 312-035	●	●	25	25	150	25	25	35,6	35 ~ 45	3,0	12				
GNDF R/L 2525 M 312-040	●	●	25	25	150	25	25	35,6	40 ~ 55	3,0	12				
GNDF R/L 2525 M 318-050	●	●	25	25	150	25	25	41,6	50 ~ 70	3,0	18				
GNDF R/L 2525 M 318-065	●	●	25	25	150	25	25	41,6	65 ~ 100	3,0	18				
GNDF R/L 2525 M 318-090	●	●	25	25	150	25	25	41,6	90 ~ 150	3,0	18				
GNDF R/L 2525 M 318-140	●	●	25	25	150	25	25	41,6	140 ~ 200	3,0	18	GCM N40○○-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 318-180	●	●	25	25	150	25	25	41,6	180 ~ 300	3,0	18				
GNDF R/L 2525 M 418-040	●	●	25	25	150	25	25	41,6	40 ~ 55	4,0	18				
GNDF R/L 2525 M 423-050	●	●	25	25	150	25	25	46,6	50 ~ 70	4,0	23				
GNDF R/L 2525 M 423-065	●	●	25	25	150	25	25	46,6	65 ~ 90	4,0	23				
GNDF R/L 2525 M 423-085	●	●	25	25	150	25	25	46,6	85 ~ 130	4,0	23				
GNDF R/L 2525 M 423-125	●	●	25	25	150	25	25	46,6	125 ~ 200	4,0	23	GCM N50○○-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 423-180	●	●	25	25	150	25	25	46,6	180 ~ 300	4,0	23				
GNDF R/L 2525 M 423-280	●	●	25	25	150	25	25	46,6	280 ~ 1000	4,0	23				
GNDF R/L 2525 M 523-050	●	●	25	25	150	25	25	46,6	50 ~ 70	5,0	23				
GNDF R/L 2525 M 523-065	●	●	25	25	150	25	25	46,6	65 ~ 90	5,0	23				
GNDF R/L 2525 M 523-085	●	●	25	25	150	25	25	46,6	85 ~ 130	5,0	23				
GNDF R/L 2525 M 523-125	●	●	25	25	150	25	25	46,6	125 ~ 200	5,0	23	GCM N60○○-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 523-180	●	●	25	25	150	25	25	46,6	180 ~ 300	5,0	23				
GNDF R/L 2525 M 523-280	●	●	25	25	150	25	25	46,6	280 ~ 1000	5,0	23				
GNDF R/L 2525 M 623-050	●	●	25	25	150	25	25	46,6	50 ~ 75	6,0	23				
GNDF R/L 2525 M 623-070	●	●	25	25	150	25	25	46,6	70 ~ 110	6,0	23				
GNDF R/L 2525 M 623-100	●	●	25	25	150	25	25	46,6	100 ~ 200	6,0	23				
GNDF R/L 2525 M 623-180	●	●	25	25	150	25	25	46,6	180 ~ 300	6,0	23	GCM N30○○-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 623-280	●	●	25	25	150	25	25	46,6	280 ~ 1000	6,0	23				

Select holders and inserts with the same grooving width (w).

● = Euro stock
○ = Japan stock

⌚ Recommended Tightening Torque (N·m)

Grooving Tool Holders

GNDF Type

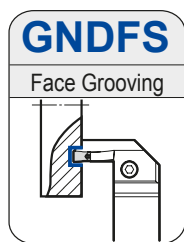
Inserts for GNDF

Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)				
				AC830P	AC425K	AC520U	AC530U	T2500A	H10	w		r_ϵ	ℓ	s
										Cutting Width	Tolerance			
Grooving / Turning		MG General Purpose	GCM N3004 MG	●	●	○	●			3,0	±0,03	0,4	21,1	3,8
			N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0
			N5008 MG	●	●	○	●			5,0	±0,03	0,8	26,4	4,1
			N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5
		ML w<4mm w>=5mm Low Feed	GCM N3002 ML	●	●	○	●	○		3,0	±0,03	0,2	21,1	3,8
			N4004 ML	●	●	○	●			4,0	±0,03	0,4	26,4	4,0
			N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5
Copying / Cut-Off		GG General Purpose	GCM N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N4002 GG	●		○	●			4,0	±0,03	0,2	26,4	4,0
			N5002 GG	●		○	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5
			GCM N3004 GG	●		○	●			3,0	±0,03	0,4	21,1	3,8
			N4004 GG	●		○	●			4,0	±0,03	0,4	26,4	4,0
			N5004 GG	●		○	●			5,0	±0,03	0,4	26,4	4,1
			N6004 GG	●		○	●			6,0	±0,03	0,4	26,4	4,5
		GL Low Feed	GCM M3002 GL	●		○	●			3,0	±0,03	0,2	21,1	3,8
			N4002 GL	●		○	●			4,0	±0,03	0,2	26,4	4,0
			N5002 GL	●		○	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5
		GF Low Cutting Force	GCM N3002 GF	●		●	●	○		3,0	±0,03	0,2	21,1	3,8
			N4002 GF	●		●	●	○		4,0	±0,03	0,2	26,4	4,0
			N5002 GF	●		●	●			5,0	±0,03	0,2	26,4	4,1
			N6002 GF	●		●	●			6,0	±0,03	0,2	26,4	4,5
Face / Necking		RN General Purpose	GCM N3015 RN	○	○	○	○			3,0	±0,03	1,5	22,4	3,8
			N4020 RN	○	○	○	○			4,0	±0,03	2,0	28,0	4,0
			N5025 RN	○	○	○	○			5,0	±0,03	2,5	28,1	4,1
			N6030 RN	○	○	○	○			6,0	±0,03	3,0	28,1	4,5
Non Ferrous Metals		GA General Purpose	GCM N3002 GA						○	3,0	±0,025	0,2	21,1	3,8
			N4004 GA						○	4,0	±0,025	0,4	26,4	4,0
			N5004 GA						○	5,0	±0,025	0,4	26,4	4,1
			N6004 GA						○	6,0	±0,025	0,4	26,4	4,5

Select holders and inserts with the same grooving width (w).

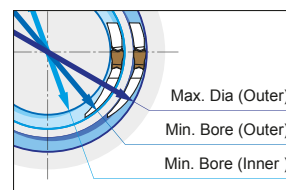
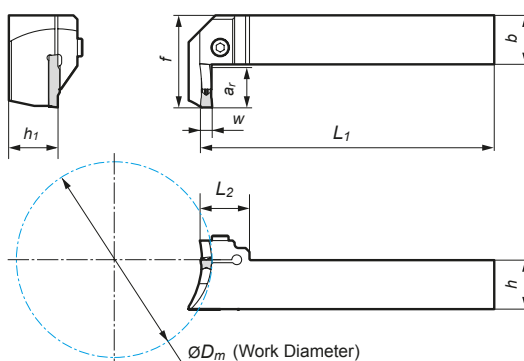
Grooving Tool Holders GNDFS Type

Face Grooving L-Styled (Non-Adjustable Type)



New

Use the multi-purpose copying inserts for turning (wide grooves).



Above figures show right hand tools.

■ Holders

Cat. No.	Stock		Dimensions (mm)						Work Dia. (mm)	Min. Bore Ø Inner (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	Spanner
	R	L	h	b	L ₁	f	h ₁	L ₂							
GNDFS R/L2525M 620 070			25	25	150	47	25	25	70~100	64	6,0	20	GC□ N60□□-□□	BX0520	5,0 LH040
GNDFS R/L2525M 620 100			25	25	150	47	25	25	100~200	94	6,0	20			
GNDFS R/L2525M 620 180			25	25	150	47	25	25	180~300	174	6,0	20			
GNDFS R/L2525M 620 280			25	25	150	47	25	25	280~1000	274	6,0	20			
GNDFS R/L2525M 620 450			25	25	150	47	25	25	>450	444	6,0	20			
GNDFS R/L3232P 620 070			32	32	170	54	32	25	70~100	64	6,0	20	GC□ N60□□-□□	BX0620	6,0 LH050
GNDFS R/L3232P 620 100			32	32	170	54	32	25	100~200	94	6,0	20			
GNDFS R/L3232P 620 180			32	32	170	54	32	25	180~300	174	6,0	20			
GNDFS R/L3232P 620 280			32	32	170	54	32	25	280~1000	274	6,0	20			
GNDFS R/L3232P 620 450			32	32	170	54	32	25	>450	444	6,0	20			
GNDFS R/L2525M 820 070			25	25	150	47	25	30	70~100	62	8,0	20	GCM N80□□-□□	BX0620	6,0 LH050
GNDFS R/L2525M 820 100			25	25	150	47	25	30	100~200	92	8,0	20			
GNDFS R/L2525M 820 180			25	25	150	47	25	30	180~300	172	8,0	20			
GNDFS R/L2525M 820 280			25	25	150	47	25	30	280~1000	272	8,0	20			
GNDFS R/L2525M 820 450			25	25	150	47	25	30	>450	442	8,0	20			
GNDFS R/L3232P 820 070			32	32	170	54	32	30	70~100	62	8,0	20	GCM N80□□-□□	BX0620	6,0 LH050
GNDFS R/L3232P 820 100			32	32	170	54	32	30	100~200	92	8,0	20			
GNDFS R/L3232P 820 180			32	32	170	54	32	30	180~300	172	8,0	20			
GNDFS R/L3232P 820 280			32	32	170	54	32	30	280~1000	272	8,0	20			
GNDFS R/L3232P 820 450			32	32	170	54	32	03	>450	442	8,0	20			

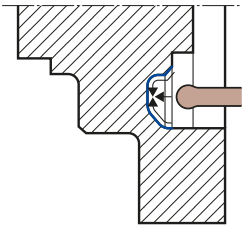
Select holders and inserts with the same grooving width (w).

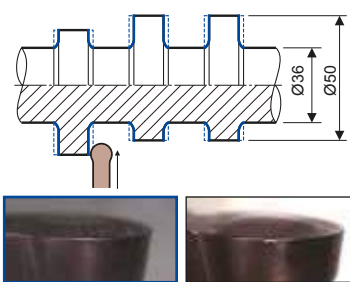
■ Inserts for GNDFS

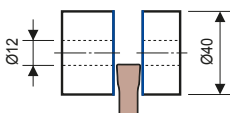
Application	Shape	Type	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)						
				AC830P	AC425K	AC520U	AC530U			T2500A	H10	W		r_{ϵ}	ℓ	s
												Cutting Width	Tolerance			
Grooving / Turning		MG	GCM N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5		
		General Purpose	N8008 MG	●	●	○	●			8,0	±0,04	0,8	28,75	6,0		
		ML	GCM N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5		
		Low Feed	N8004 ML	●	●	○	●			8,0	±0,04	0,4	28,75	6,0		
Copying / Cut-Off		GG	GCM N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5		
		General Purpose	N6004 GG	●		○	●			6,0	±0,03	0,4	26,4	4,5		
			N8004 GG	●		○	●			8,0	±0,04	0,4	28,75	6,0		
			GL	GCM M6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5	
		Low Feed	N8004 GL	●		○	●			8,0	±0,04	0,4	28,75	6,0		
		GF	GCM N6002 GF	●		●	●			6,0	±0,03	0,2	26,4	4,5		
		Low Cutting Force	N8002 GF New	●		●	●			8,0	±0,04	0,2	28,75	6,0		
			N8004 GF New	●		●	●			8,0	±0,04	0,4	28,75	6,0		
RN	GCM N6030 RN New		○	○	○	○			6,0	±0,03	3,0	28,1	4,5			
Face / Necking		General Purpose														
Non Ferrous Metals		GA	GCM N6004 GA New						○	6,0	±0,025	0,4	26,4	4,5		
		General Purpose														

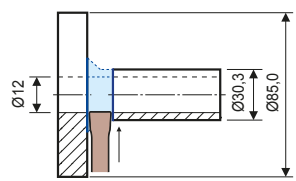
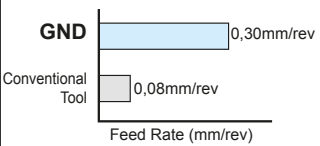
Select holders and inserts with the same grooving width (w).

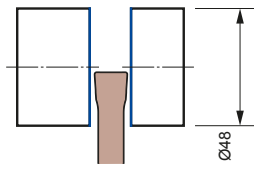
Application Examples

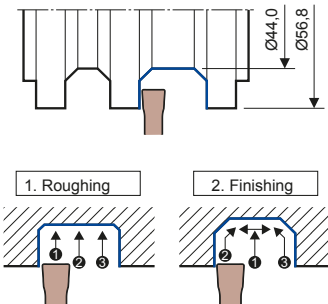
20CrMo5, Automotive Part, Face Profiling	
	Target: - Higher rigidity - Vibration reduction - Chip control - Wear resistance performance
	Holder: GDNF R2525M 423-125 Insert: GCM N4020 RG Grooving width: 4mm Cutting conditions: $v_c = 200\text{m/min}$ $f = 0,14\text{mm/rev}$ wet
Stable machining free of vibration! Excellent chip control using the GND type.	

C53, Cam Shaft Grooving / Finishing (Contin. to Heavy Interrupted)	
	Target: - Higher rigidity - Vibration reduction - Chip control - Fracture resistance
	Holder: GNDM L2525M 618 Insert: GCM N6030 RG Grooving width: 6mm Cutting conditions: $v_c = 130\text{m/min}$ $f = 0,36\text{mm/rev}$ wet
Stable machining free of vibration! Excellent fracture resistance Stable chip control	

C48, Machine Part, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Fracture resistance
	Holder: GNDL R2525M 320 Insert: GCM N3002 GG Grooving width: 3mm Cutting conditions: $n = 1600\text{min}^{-1}$ $v_c = 200\text{m/min}$ $f = 0,05\text{mm/rev}$ wet
	
Stable machining free of vibration! Excellent fracture resistance Stable fracture resistance	

34CrMo4, Crank, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDL R2525M 320 Insert: GCM N3002 GG Grooving width: 3mm Cutting conditions: $v_c = 115\text{m/min}$ $f = 0,30\text{mm/rev}$ wet
	
Improved efficiency Stable machining free of vibration Stable chip control	

X40CrVMo5-1, (45-48HRC), Machine Part, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDL R2525M 425 Insert: GCM N4002 GG Grooving width: 4mm Cutting conditions: $v_c = 50\text{m/min}$ $f = 0,03\text{mm/rev}$ wet
Stable machining free of vibration! Excellent chip control using the GND type. No more unexpected breakage!	

20Cr4, Gear Shaft, Grooving / Pocketing	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDM R2020K 518 Insert: GCM N5008 MG Grooving width: 5mm Cutting conditions: $v_c = 150\text{m/min}$ $f = 0,1\text{mm/rev}$ wet
Stable machining free of vibration! Excellent chip control using the GND type.	

ISO-PSC Polygon Modular GND Grooving System

New

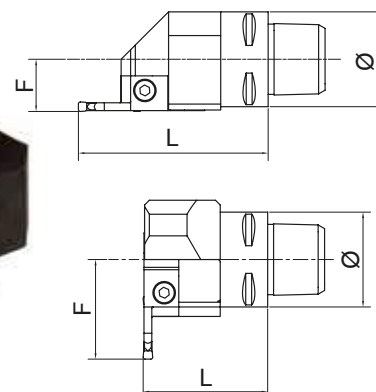


General Features

New grades and chipbreakers have been added to the already established GND grooving system with polygon shank and a flexible and economical cassette system for inserts. An array of chipbreakers improves the efficiency in chip control in various applications such as grooving, turning, profiling and cut-off.

Advantages

- GND inserts for soft grooving from 2,0 - 6,0 mm width
- Expanded grade selection with 9 different chipbreakers for a wide application range
- Provides excellent chip control
- Achieves stable long tool life



Holder

Cat. No.	R	L	Ø (mm)	F (mm)	L (mm)	Cap Screw	Tightening Torque (N·m)	Spanner
PSC40GM00 R/L	●	●	40	22	80	BFTX0619N	7,5	LT25
PSC50GM00 R/L	●	●	50	27				
PSC40GM90 R/L	●	●	40	42				
PSC50GM90 R/L	●	●	50	47				



Cassette

Cat. No.	R	L	Grooving Width w (mm)	Grooving Depth (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Spanner
GNDCM R/L 212	●	●	2	12	GCM □20□□-□□	BX0512	5,0 	LH040
GNDCM R/L 312	●	●	3		GCM □30□□-□□			
GNDCM R/L 418	●	●	4	18	GCM □40□□-□□		6,0 	
GNDCM R/L 518	●	●	5		GCM □50□□-□□			
GNDCM R/L 618	●	●	6		GCM □60□□-□□			

Identification Details - Polygon-Toolholder

PSC	40	-	G	M	00	R
Polygonshank	Shank Diameter (Ø D)		Series Symbol GND	Application External Multi-Purpose	Style 00 = Straight 90 = L-Style	Holder Design R = Right L = Left

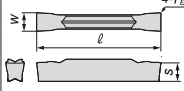
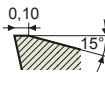
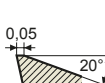
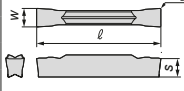
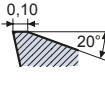
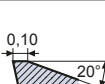
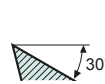
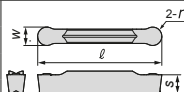
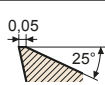
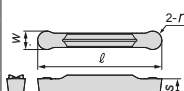
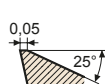
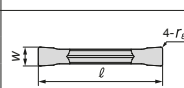
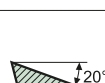
Identification Details - Cassette

GND	C	M	L	3	12
Series Symbol GND	Cassette	Application External Multi-Purpose	Holder Design R = Right L = Left	Grooving Width	Max. Grooving Depth

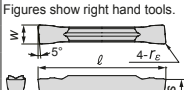
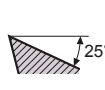
● = Euro stock
○ = Japan stock

Recommended Tightening Torque (N·m)

■ Inserts

Application	Shape	Type	Cross section of cutting edge	Cat. No.	Coated Carbide				Cermet	Carbide	Dimensions (mm)							
					AC830P	AC425K	AC520U	AC530U			T2500A	H10	w		r _ε	ℓ	s	
													Cutting Width	Tolerance				
Grooving / Turning		MG  General Purpose		GCM N3004 MG	●	●		●				3,0	±0,03	0,4	21,1	3,8		
				N4008 MG	●	●	○	●			4,0	±0,03	0,8	26,4	4,0			
				N5008 MG	●	●		●			5,0	±0,03	0,8	26,4	4,1			
				N6008 MG	●	●	○	●			6,0	±0,03	0,8	26,4	4,5			
		ML  Low Feed		GCM N2002 ML			○	●			2,0	±0,03	0,2	21,1	3,6			
				N3002 ML	●	●		●	○		3,0	±0,03	0,2	21,1	3,8			
				N4004 ML	●	●		●		○	4,0	±0,03	0,4	26,4	4,0			
				N5004 ML	●	●	○	●			5,0	±0,03	0,4	26,4	4,1			
				N6004 ML	●	●	○	●			6,0	±0,03	0,4	26,4	4,5			
Copying / Cut-Off		GG  General Purpose		GCM N2002 GG	●			●			2,0	±0,03	0,2	21,1	3,6			
				N3002 GG	●		○	●			3,0	±0,03	0,2	21,1	3,8			
				N4002 GG	●			●			4,0	±0,03	0,2	26,4	4,0			
				N5002 GG	●		○	●			5,0	±0,03	0,2	26,4	4,1			
				N6002 GG	●		○	●			6,0	±0,03	0,2	26,4	4,5			
				GCM N3004 GG	●			●			3,0	±0,03	0,4	21,1	3,8			
				N4004 GG	●			●			4,0	±0,03	0,4	26,4	4,0			
				N5004 GG	●		○	●			5,0	±0,03	0,4	26,4	4,1			
				N6004 GG	●		○	●			6,0	±0,03	0,4	26,4	4,5			
		GL  Low Feed		GCM N2002 GL	●		○	●			2,0	±0,03	0,2	21,1	3,6			
				N3002 GL	●		○	●			3,0	±0,03	0,2	21,1	3,8			
				N4002 GL	●		○	●			4,0	±0,03	0,2	26,4	4,0			
				N5002 GL	●		○	●			5,0	±0,03	0,2	26,4	4,1			
				N6002 GL	●		○	●			6,0	±0,03	0,2	26,4	4,5			
				GF  Low Cutting Force		N2002 GF			○	●	○		2,0	±0,03	0,2	21,1	3,6	
						N3002 GF	●			●	●	○		3,0	±0,03	0,2	21,1	3,8
						N4002 GF	●			●	●	○		4,0	±0,03	0,2	26,4	4,0
						N5002 GF	●			●	●			5,0	±0,03	0,2	26,4	4,1
N6002 GF	●					●	●			6,0	±0,03	0,2	26,4	4,5				
Copying		RG  General Purpose		GCM N3015 RG	●	●	○	●	○		3,0	±0,03	1,5	21,1	3,8			
				N4020 RG	●	●		●	○		4,0	±0,03	2,0	26,4	4,0			
				N5025 RG	●	●		●			5,0	±0,03	2,5	27,2	4,1			
				N6030 RG	●	●	○	●			6,0	±0,03	3,0	27,5	4,5			
Face / Necking		RN  General Purpose		GCM N2010 RN			○	○			2,0	±0,03	1,0	21,7	3,6			
				N3015 RN	○	○	○	○			3,0	±0,03	1,5	22,4	3,8			
				N4020 RN	○	○	○	○			4,0	±0,03	2,0	28,0	4,0			
				N5025 RN	○	○	○	○			5,0	±0,03	2,5	28,1	4,1			
				N6030 RN	○	○	○	○			6,0	±0,03	3,0	28,1	4,5			
Non Ferrous Metals		GA  General Purpose		GCG N2002 GA						○	2,0	±0,025	0,2	21,1	3,6			
				N3002 GA						○	3,0	±0,025	0,2	21,1	3,8			
				N4004 GA						○	4,0	±0,025	0,4	26,4	4,0			
				N5004 GA						○	5,0	±0,025	0,4	26,4	4,1			
				N6004 GA						○	6,0	±0,025	0,4	26,4	4,5			

Select holders and inserts with the same grooving width (w).

Application	Shape	Type	Cross section of cutting edge	Cat. No. R / L	Coated Carbide				Cermet	Carbide		Dimensions (mm)										
					AC830P		AC425K		AC520U		AC530U		T2500A	H10		w		r _ε	ℓ	s		
					R	L	R	L	R	L	R	L	R	L	R	L	Cutting Width				Tolerance	
Cut-Off	Figures show right hand tools. 	CG  General Purpose		GCM□2002 CG 05	●	●			○	○	●	●					2,0	±0,03	0,2	21,1	3,6	
				□3002 CG 05	●	●			○	○	●	●						3,0	±0,03	0,2	21,3	3,8
				□4002 CG 05	●	●			○	○	●	●						4,0	±0,03	0,2	26,7	4,0

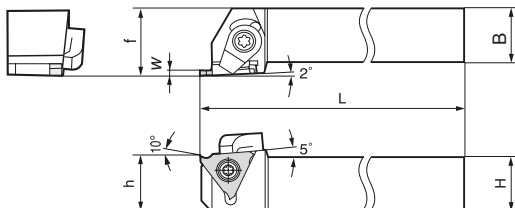
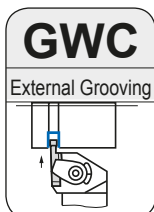
SumiTurn B-Groove Insert TGA-BF Type



■ Characteristics

- Outstanding chip control when grooving
- Excellent chip control when finishing wide grooves using axial feed
Grooving inserts from 1,5mm - 4,5mm wide
- Grade **AC530U** with Super ZX ultra hard coating for steels,
- stainless steels and cast iron increases productivity and extends tool life

External Grooving

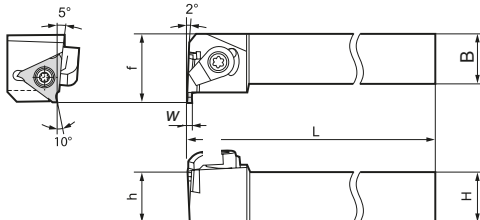
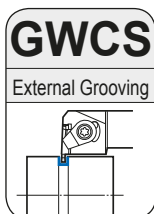


Figures show right hand tools.

■ Holders

Right handed tool holders are used with **right** handed inserts (TGA-R),
left handed clamp (CCM 8U-L) and **right** handed screw (WB8-22-T).

Cat. No.	Stock		Dimensions (mm)					Grooving width w (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	Wrench	Clamp	Screw	Wrench
	R	L	H	B	L	f	h								
GWC R/L 2020-15	●	●	20	20	125	25	20	1,25~1,45	2,0	①	BFTX 0511N	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	LT27
GWC R/L 2020-25	●	●	20	20	125	25	20	1,50~2,30	3,5	②					
GWC R/L 2020-35	●	●	20	20	125	25	20	2,50~4,80	5,0	③					
GWC R/L 2525-15	●	●	25	25	150	30	25	1,25~1,45	2,0	①					
GWC R/L 2525-25	●	●	25	25	150	30	25	1,50~2,30	3,5	②					
GWC R/L 2525-35	●	●	25	25	150	30	25	2,50~4,80	5,0	③					



Figures show right hand tools.

■ Holders

Right handed tool holders are used with **left** handed inserts (TGA-L),
right handed clamp (CCM 8U-R) and **left** handed screw (WB8-22-TL).

Cat. No.	Stock		Dimensions (mm)					Grooving width w (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	Wrench	Clamp	Screw	Wrench
	R	L	H	B	L	f	h								
GWCS R/L 2020-15	□	□	20	20	125	27	20	1,25~1,45	2,0	①	BFTX 0511N	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	LT27
GWCS R/L 2020-25	□	□	20	20	125	27	20	1,50~2,30	3,5	②					
GWCS R/L 2020-35	□	□	20	20	125	27	20	2,50~4,80	5,0	③					
GWCS R/L 2525-15	□	□	25	25	150	32	25	1,25~1,45	2,0	①					
GWCS R/L 2525-25	□	□	25	25	150	32	25	1,50~2,30	3,5	②					
GWCS R/L 2525-35	□	□	25	25	150	32	25	2,50~4,80	5,0	③					

ISO-PSC Polygon Modular



New



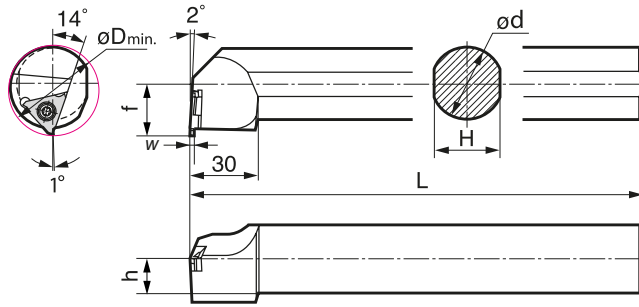
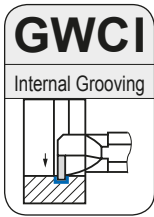
■ Holder

Cat. No.	R	L	Ø (mm)	F (mm)	L (mm)	Cap Screw	Spanner
PSC 40 GM00 R/L	●	●	40	22	80,0	BFTX0619N 7,5	LT25
PSC 50 GM00 R/L	●	●	50	27	80,0		
PSC 40 GM90 R/L	●	●	40	42	52,5		
PSC 50 GM90 R/L	●	●	50	47	55,0		

■ Cassette

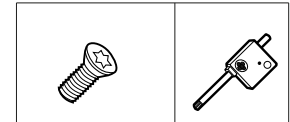
Cat. No.	R	L	Grooving Width w (mm)	Grooving Depth ℓ (mm)	Insert	Insert Screw	Spanner	Clamp Finger	Cap Screw	Spanner
GWCCM R/L 25	●	●	1,5 - 2,3	3,9	TGA□4□□□BF	BFTX0511N 5,0	TRX20	CLWN01	BX0414 3,0	LH030
GWCCM R/L 35	●	●	2,5 - 4,5	5,4	TGA□4□□□BF					

Internal Grooving



Figures show right hand tools.

Spare Parts

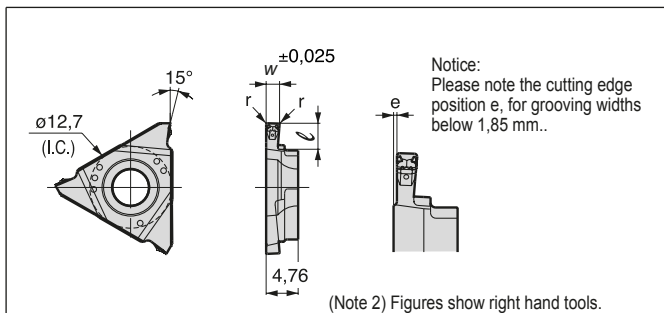


Holders

Right handed tool holders are applicable with **left** handed inserts (TGA-L).

Cat. No.	Stock		Dimensions (mm)						Grooving width w (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	Wrench
	R	L	ϕD_{min}	ϕd	L	H	h	f					
GWCI R/L 325			35	25	200	23	11,5	17,5	0,33~2,80	0,8~2,0		BFTX 0409N	3,4 TRX 15
GWCI R/L 432	□	□	40	32	250	30	15,0	17,5	1,25~4,80	2,0~2,5	① ② ③	BFTX 0511N	5,0 TRX 20

Inserts



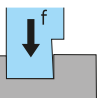
Cat. No.	Coated		Dimensions (mm)				Applicable holder & insert group		
	AC530U		() in ℓ presents max. depth						
	R	L	w	ℓ	r	e			
TGA R/L 4145BF			1,45	2,5 (2,0)	0,2	0,275	①		
TGA R/L 4150BF	●	●	1,50	3,9 External (3,5) Internal (2,5)		0,250		②	
TGA R/L 4165BF	○	○	1,65			0,175			
TGA R/L 4175BF	○	○	1,75			0,125			
TGA R/L 4185BF	○		1,85			0,075			
TGA R/L 4200BF	●	●	2,00			0,3	0		③
TGA R/L 4220BF	○	○	2,20						
TGA R/L 4230BF	○	○	2,30						
TGA R/L 4250BF	●	●	2,50		5,4 External (5,0) Internal (2,5)				
TGA R/L 4265BF	○	○	2,65						
TGA R/L 4270BF	○	○	2,70						
TGA R/L 4280BF	○	○	2,80						
TGA R/L 4300BF	●	●	3,00						
TGA R/L 4320BF	○	○	3,20						
TGA R/L 4330BF	○	○	3,30						
TGA R/L 4350BF	●	●	3,50	0,4					
TGA R/L 4370BF	○	○	3,70						
TGA R/L 4390BF	○	○	3,90						
TGA R/L 4400BF	●	●	4,00						
TGA R/L 4410BF	○	○	4,10						
TGA R/L 4420BF		○	4,20						
TGA R/L 4430BF	○	○	4,30						
TGA R/L 4440BF	○	○	4,40						
TGA R/L 4450BF	●	●	4,50						

Recommended Cutting Conditions

Grooving

Wet condition is recommended.

Feed direction

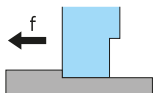


Work Material	General Steel	Stainless Steel	
Cutting speed (m/min)	50 ~ 180	50 ~ 160	
Groove width (mm)	1,5 ~ 2,3	2,5 ~ 3,3	3,5 ~ 4,5
Feed rate (mm/rev)	0,03 ~ 0,12	0,04 ~ 0,12	0,05 ~ 0,12
Depth of cut (mm)	Ext.	~ 3,5	~ 5,0
	Int.	~ 2,5	

Axial Feed

Wet condition is recommended.

Feed direction for axial feed



Work Material	General Steel	Stainless Steel	
Cutting speed (m/min)	50 ~ 180	50 ~ 160	
Feed rate (mm/rev)	0,03 ~ 0,10	0,05 ~ 0,10	0,07 ~ 0,12
Depth of cut (mm)	~ 0,3	~ 0,5	~ 0,7

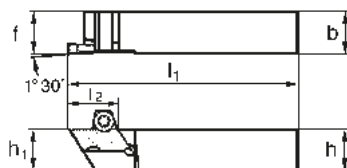
*) Please select applicable inserts for the holders by using matching group numbers.

Parting-Off Mini Holders SCT Type

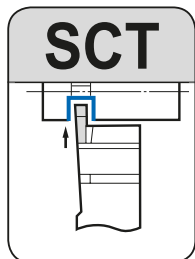


Parting-Off
Tools

■ Holders



■ Spare Parts

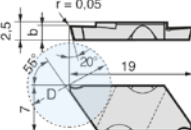
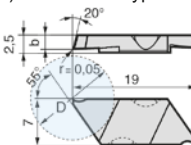
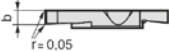


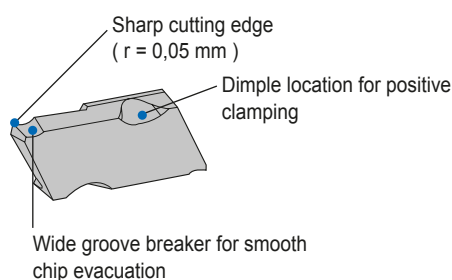
Ordering No.	Stock	Dimensions (mm)					Applicable inserts	Screw	Wrench
		h=h ₁	b	l ₁	l ₂	f			
SCT R 1010	●	10	10	120	15	10	CTR ____	BFTX 0410 T8 L 1,1 	TRX 08
SCT R 1212	●	12	12	120	15	12			
SCT R 1616	●	16	16	120	15	16			
SCT L 1010	●	10	10	120	15	10	CTL ____	BFTX 0410 T8 R 1,1 	
SCT L 1212	●	12	12	120	15	12			
SCT L 1616	●	16	16	120	15	16			

Above figures show right hand tools.

■ Inserts

(Coated carbide)

CTR CTL	Ordering No.	Stock	Dimensions (mm)		Insert Type
		ACZ310	b	Max. ø D	
	CTR 050505 R		0,5	5	(R) right handed type  (N) neutral type 
	CTR 121005 R	●	1,0	12	
	CTR 121505 R	●	1,5		
	CTR 122005 R	●	2,0		
	CTR 121005 N	●	1,0		
	CTR 121505 N	●	1,5		
CTR 122005 N	●	2,0			
	CTL 050505 L		0,5	5	(L) left handed type  (N) neutral type 
	CTL 121005 L	●	1,0	12	
	CTL 121505 L	●	1,5		
	CTL 122005 L	●	2,0		
	CTL 121005 N	●	1,0		
	CTL 121505 N	●	1,5		
	CTL 122005 N	●	2,0		



● Surface Finish Comparision

SCT	Competitor's tool
Work Material: X6Cr17 (ø8 mm) Insert: CTR 121005 R, (b =1,0 mm) Cutting Data: v _c = 45 m/min f = 0,02 mm/rev, Wet	

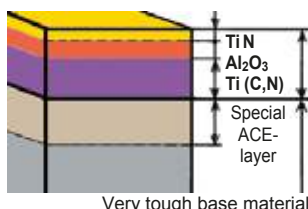
■ Recommended Cutting Data (SCT Type)

Work Material	Approach angle	v _c (m/min)	f (mm/rev)
General steel	20° (R/L-Platte)	50 ~ 150	0,02 ~ 0,05
	0° (N-Platte)		0,02 ~ 0,10
Free-cutting steel	20° (R/L-Platte)	50 ~ 150	0,02 ~ 0,05
	0° (N-Platte)		0,02 ~ 0,10
Stainless steel	20° (R/L-Platte)	50 ~ 150	0,02 ~ 0,04
	0° (N-Platte)		0,02 ~ 0,05

Cutting data for coated grade ACZ310

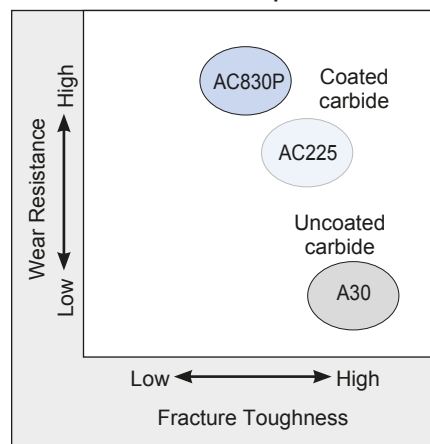
- = Euro stock
- = Japan stock
- ▲ = To be replaced by new item

Neutral (N) 	WCF - N/R/L ____ (General steel)			WCF - N/R/L ____ A Type A for hard to cut materials (Slow feed)				WCF - N/R/L ____ B		
	Ordering No.	Coated carbide AC830P	[a] (mm)	Ordering No.	Coated carbide AC225	Uncoated carbide A30	[a] (mm)	Ordering No.	Uncoated carbide G10E	[a] (mm)
Right hand (R) 	WCFN 2 T	○	2	WCFN 2 A	●		2			
	WCFN 3	○		WCFN 3 A	●			WCFN 3 B	●	
	WCFR 3	○	3	WCFR 3 A	●		3	WCFR 3 B	●	3
Left hand (L) 	WCFL 3	○		WCFL 3 A	●			WCFL 3 B	●	
	WCFN 4	○		WCFN 4 A	●	○		WCFN 4 B	●	
	WCFR 4	○	4	WCFR 4 A	●		4	WCFR 4 B		4
	WCFL 4	○		WCFL 4 A	●			WCFL 4 B		
	WCFN 5	○		WCFN 5 A	●			WCFN 5 B		
	WCFR 5	○	5	WCFR 5 A			5	WCFR 5 B		5
	WCFL 5	○		WCFL 5 A				WCFL 5 B		

Structure of
AC225 coated layer

There is a multi layer coating which includes a 2 μm thick Al₂O₃ layer.
It is very tough and resistant to adhesion wear.

■ Insert Grade Map



■ Applications and Features of Inserts

Grade	Ordering No. (Ex. a=3mm)	Applications	Features
AC830P (AC3000)	WCFN 3	General steel and high feed cutting (0,08~0,3/rev)	Coated insert having excellent wear resistance with low cutting resistance
AC225	WCFN 3A	General steel and slow feed cutting (0,04~0,25/rev) soft steel, stainless steel	Coated insert having excellent fracture toughness with good chip removal
A30	WCFN 3A	Hard to cut materials	Equivalent to P30
G10E	WCFN 3B	Cast iron, aluminum alloy	Equivalent to K10 with a small edge treatment

■ Recommended Cutting Conditions

Grade	v_c (m/min) f (mm/rev)	General Steel	Soft Steel	Stainless Steel	Die Steel	Gray Cast Iron
AC830P (AC3000)	v_c	100 - 220	120 - 250	80 - 200	60 - 150	-
	f	0,08 - 0,3	0,08 - 0,15	0,08 - 0,15	0,08 - 0,15	-
AC225	v_c	80 - 200	100 - 230	60 - 180	60 - 150	-
	f	0,04 - 0,25	0,04 - 0,2	0,04 - 0,2	0,04 - 0,2	-
A30	v_c	50 - 120	70 - 150	70 - 150	50 - 120	-
	f	0,05 - 0,2	0,04 - 0,15	0,04 - 0,15	0,04 - 0,15	-
G10E	v_c	-	-	-	-	50 - 100
	f	-	-	-	-	0,06 - 0,2

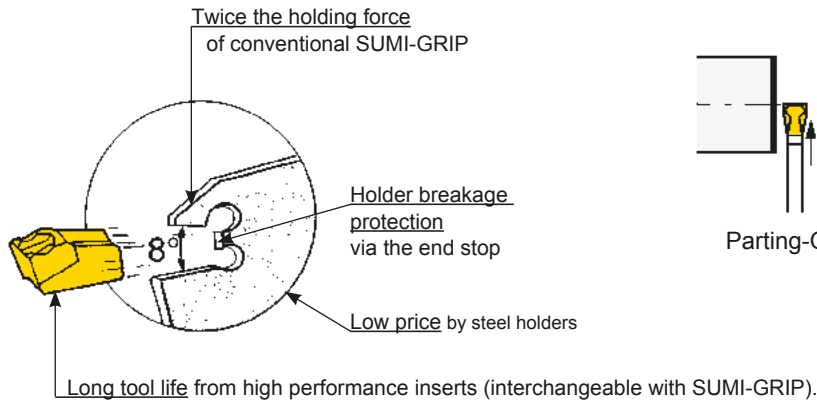
The recommended cutting conditions are valid when using the part-off tool with tool block type and shank type in the clamping system.

Parting-Off Holders

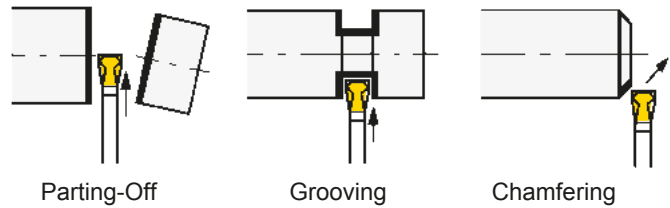
Sumi-Grip "Jr."

Steel Blade and Shank Type

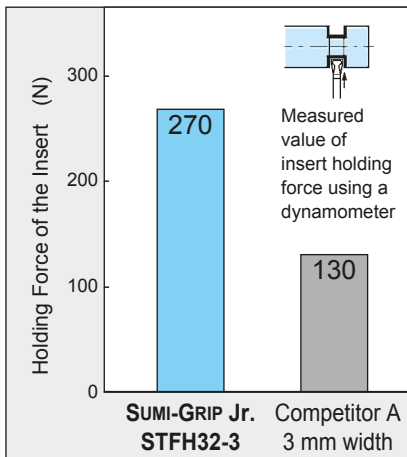
Features of Design



Effective Tooling with Sumi-Grip Jr.

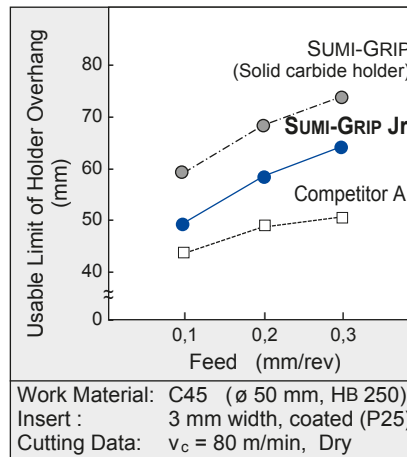


Twice the Insert Holding Force



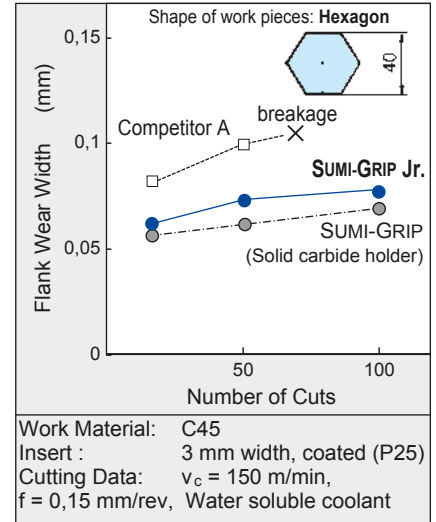
Low Vibration

Comparison of usable limit vibration



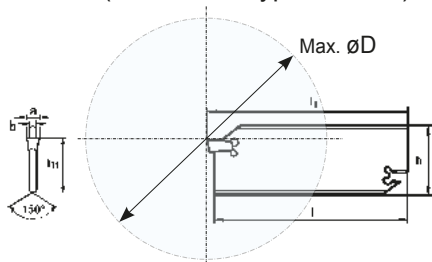
WEAR RESISTANCE

(Interrupted cut part off)



Part-Off Holders

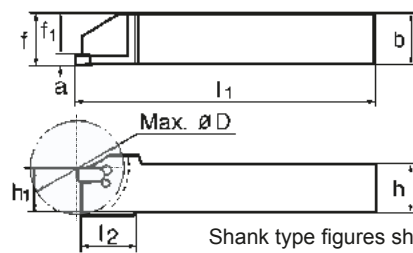
Steel Blades (Tool Block Type Holders)



Ordering No.	Stock	Dimensions (mm)							Applicable inserts
		a	øD _{Max}	h	h ₁	b	l	l ₁	
STFH 26-2	●	2	40	26	21,4	1,7	108	109	WCF_2_
STFH 26-3	●	3	70	26	21,4	2,4	108	109	WCF_3_
STFH 26-4	●	4	70	26	21,4	3,4	108	109	WCF_4_
STFH 26-5	●	5	70	26	21,4	4,3	108	109	WCF_5_
STFH 32-2	●	2	40	32	25	1,7	148	149	WCF_2_
STFH 32-3	●	3	100	32	25	2,4	148	149	WCF_3_
STFH 32-4	●	4	100	32	25	3,4	148	149	WCF_4_
STFH 32-5	●	5	100	32	25	4,3	148	149	WCF_5_

Remarks: All tool holders include a wrench type **SL-4**.
Tool blocks for steel blades are ordered separately.

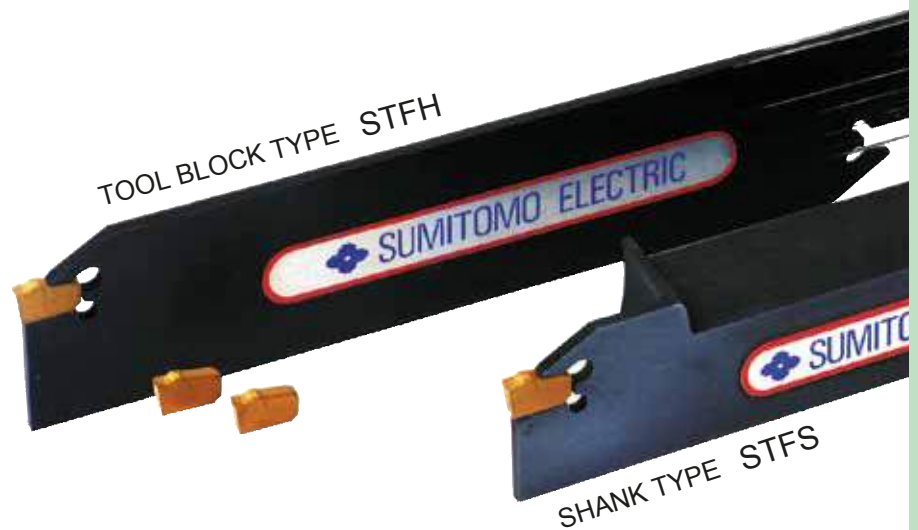
Shank Type Holders



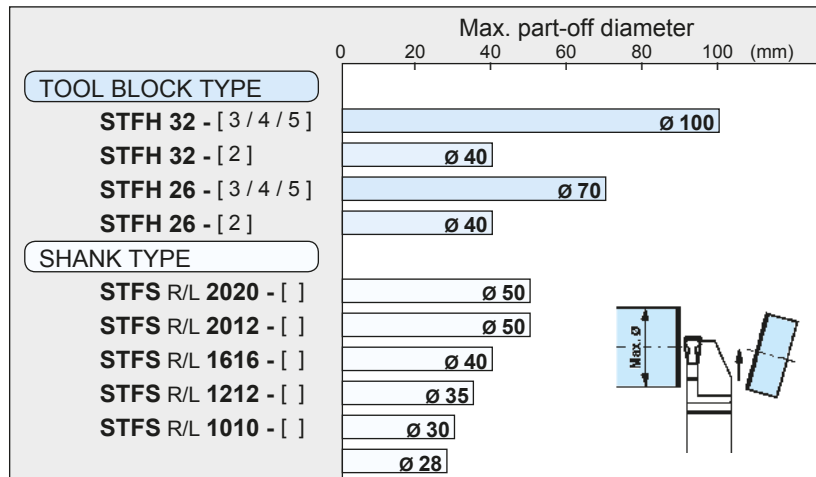
Shank type figures show right hand tools.

Ordering No.	Stock		Dimensions (mm)										Applicable inserts
	R	L	a	øD _{Max}	h	h ₁	b	l ₁	l ₂	f	f ₁		
STFS R/L 1010-2	●	□	2	28	10	10	10	86	18	10	8	WCF_2_	
STFS R/L 1212-2	●	●		30	12	12	12	110	20	12	10		
STFS R/L 1616-2	●	●		35	16	16	16	110	20	16	14		
STFS R/L 2020-2	●	●		50	20	20	20	125	-	20	18		
STFS R/L 1616-3	●	●	3	35	16	16	16	110	20	16	13	WCF_3_	
STFS R/L 2012-3	●	□		40	20	20	12	110	-	12	9		
STFS R/L 2020-3	●	●		50	20	20	20	125	-	20	17		
STFS R/L 2525-3	●	●		50	25	25	25	150	-	25	22		
STFS R/L 2020-4	●	●	4	50	20	20	20	125	-	20	16	WCF_4_	
STFS R/L 2525-4	●	●		50	25	25	25	150	-	25	21		
STFS R/L 2020-5	●	□	5	50	20	20	20	125	-	20	15	WCF_5_	
STFS R/L 2525-5	●	□		50	25	25	25	150	-	25	20		

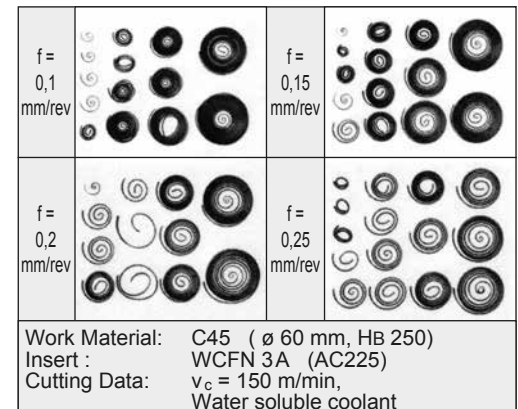
Parting-Off Holders Sumi-Grip "Jr."



Recommended Application Range



Good Chip Removal



Grooving &
Parting-Off

Tool Blocks

< Type SBN > Clamp System						< Type SBU > Wedge System					
(SBN 20-26)						BCS15 BCS20 BCS25					
Ordering No.	Stock	Dimensions (mm)					SPARE PARTS				
		h	h ₁	h ₂	h ₃	l	Applicable steel blades	Clamp	Screw	Wrench	
SBN 20-26	●	45	20	20	10	80	STFH 26 _				
SBN 20-32	●	50	20	20	13,5	100	STFH 32 _				
SBN 25-32	●	50	25	25	8,5	110	STFH 32 _				

Ordering No.	Stock	Dimensions (mm)					SPARE PARTS				
		h	h ₁	h ₂	h ₃	l	Applicable steel blades	Wedge	Screw	Wrench	
SBU 20-26	●	45	20	20	10	80	STFH 26 _	BCS15			
SBU 20-32	●	50	20	20	13,5	100	STFH 32 _	BCS20			
SBU 25-32	●	50	25	25	8,5	110	STFH 32 _	BCS25			

Recommended Grades and Cutting Conditions

Work material	Grade	Cutting speed (m/min)	
		Feed (mm/rev)	
General steel	AC225	80	200
		0,05	0,2
Mild steel			
Stainless steel	AC225	60	180
		0,05	0,2
Cast iron	G10E	50	120
		0,06	0,2

Parting-Off Holders Sumi-Grip Series

Carbide Blade Type

Sumi-Grip- Series



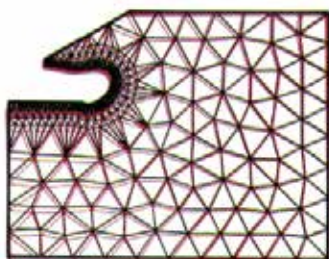
Features of Sumi-Grip

● High Rigidity

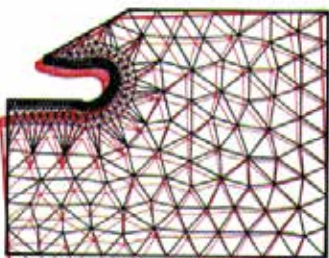
This figure shows a computer generated comparison of the distortion of steel and carbide holders caused by cutting forces.

The reduced distortion of the carbide holder makes cutting under harsher conditions and higher feeds possible.

Distortion of **Sumi-Grip** (Carbide holder)



Distortion of steel holder



Structure of distortions

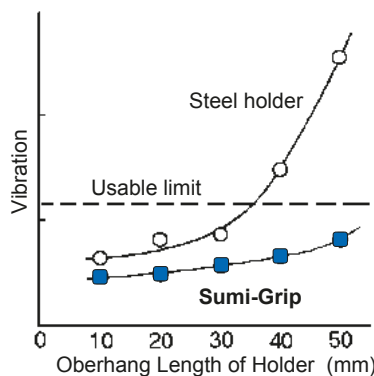
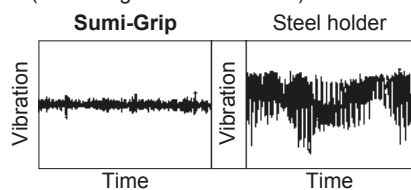
— Changed sharp
— Unchanged sharp

● Low Vibration

The figure shows the measurement of cutting vibration.

At high speeds the carbide holder experiences for less vibrations than does the steel holder. Thus, the overhang length can be extended and cutting speed can be increased with the **Sumi Grip**'s carbide holder.

Measurement of vibrations
(Overhang of holder: 50 mm)

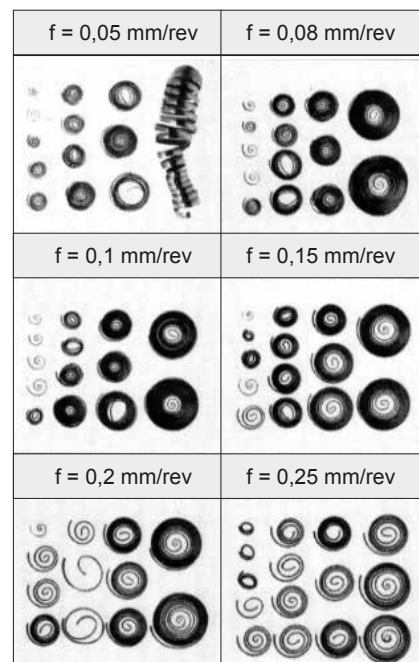


Work: Carbon steel (ø 60mm, HB250)
Width of Insert: 3 mm
Cutting Data: $v_c = 150$ m/min, $f = 0,1$ mm/rev

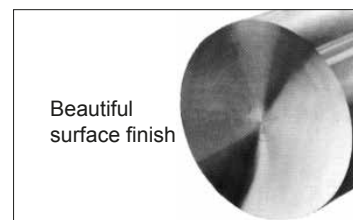
● Good Chip Removal

This picture show the shape of chips according to feed rate.

SUMI GRIP produces rolled chip which are easily removed.



Work material: Ck 45 (ø 60mm, HB250)
Insert width and type : 3 mm,
WCFN 3A (AC225)
Cutting conditions: $v_c = 150$ m/min, Wet

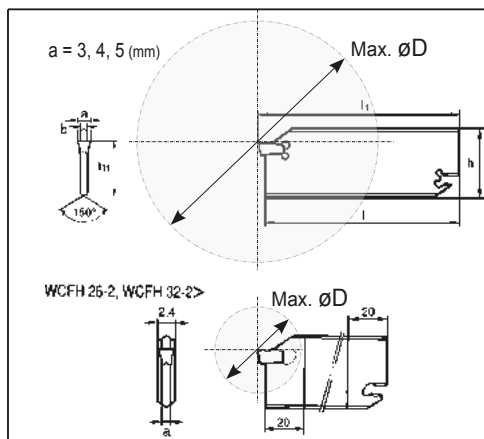


Beautiful
surface finish



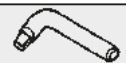
- Width of cut off: 2 ~ 5 mm
- Max. cut-off diameter is 140 mm (In case of 2,0 mm width insert up to ϕ 40 mm).
- double sided carbide blade
- Tool block and carbide holder are interchangeable between right and left hand use.

Carbide Blades



Ordering No.	Stock	Dimensions (mm)								Applicable inserts
		a	ϕD_{Max}	h	h ₁	b	l	l ₁		
WCFH 26-2	●	2	40	26	21,4	1,7	109	110		WCF_2_
WCFH 26-3	●	3	80	26	21,4	2,4	108,5	110		WCF_3_
WCFH 26-4	●	4	80	26	21,4	3,4	108,5	110		WCF_4_
WCFH 26-5	●	5	80	26	21,4	4,3	108,5	110		WCF_5_
WCFH 32-2	●	2	40	32	25	1,7	149	150		WCF_2_
WCFH 32-3	●	3	140	32	25	2,4	148,5	150		WCF_3_
WCFH 32-4	●	4	140	32	25	3,4	148,5	150		WCF_4_
WCFH 32-5	●	5	140	32	25	4,3	148,5	150		WCF_5_

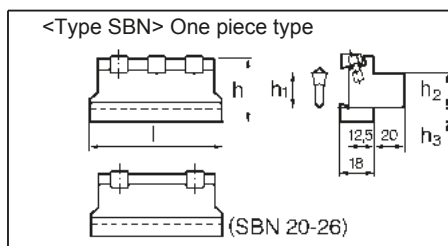
Wrench



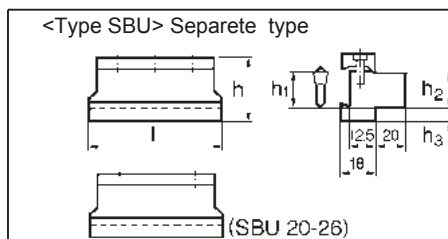
SL - 2
SL - 1
SL - 1
SL - 1
SL - 2
SL - 1
SL - 1
SL - 1

Remark: A carbide blade includes a wrench. Applicable Tool block and insert are ordered separately.

Tool Blocks



Ordering No.	Stock	Dimensions (mm)						Applicable carbide blades
		h	h ₁	h ₂	h ₃	l		
SBN 20-26	●	45	20	20	10	80		WCFH 26_
SBN 20-32	●	50	20	20	13,5	100		WCFH 32_
SBN 25-26	□	48	25	25	10	80		WCFH 26_
SBN 25-32	●	50	25	25	8,5	110		WCFH 32_



Ordering No.	Stock	Dimensions (mm)						Applicable carbide blades
		h	h ₁	h ₂	h ₃	l		
SBU 20-26	●	45	20	20	10	80		WCFH 26_
SBU 20-32	●	50	20	20	13,5	100		WCFH 32_
SBU 25-26	□	48	25	25	10	80		WCFH 26_
SBU 25-32	●	50	25	25	8,5	110		WCFH 32_

Spare Parts

Clamp	Screw	Wrench
BWS 30	WB 8-20	LH 040

Wedge		
SBU 20-26	SBU 20-32	SBU 25-32
BCS 15	BCS 20	BCS 25
Screw	Wrench	
BX 0622	LH 050	

Nomenclature

Holder	Insert
WCF H 26-3 Sumi-Grip Holder type Insert width a = 2, 3, 4, 5 mm Holder height h = 26, 32 mm (Type H) h = 20, 25 mm (Type S)	WCF N 3 A Sumi-Grip Feed direction Neutral (N) Right hand (R) Left hand (L) Breaker type - Standard (Nil) - Type A - Type B Insert width a = 2, 3, 4, 5 mm

Parting-Off Holders Sumi-Grip Series

Shank Type with Carbide Blade



- Carbide blade on shank fixed type
- Width of cut off: 3,0 ~ 5,0 mm
- Max. cut off diameter is 50 mm
- Suitable for machining with small N/C machines and automated lathe machines



- Carbide blade on shank brazed type
- Width of cut off: 2,0 mm
- Economical brazed type
- Suitable for machining with small CNC machines

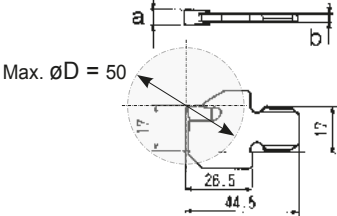
■ Holders (Fixed Type)

Ordering No.	Stock		Dimensions (mm)								Included carbide blade	Applicable inserts
	R	L	a	b	h	h ₁	l ₁	f	f ₁			
WCFS R/L 20-3	●	●	3	20	20	20	125	23	20	WCFH 17-3	WCF_3_	
WCFS R/L 20-4	●	●	4	20	20	20	125	24	20	WCFH 17-4	WCF_4_	
WCFS R/L 20-5	□	□	5	20	20	20	125	25	20	WCFH 17-5	WCF_5_	
WCFS R/L 25-3	●	●	3	25	25	25	150	28	25	WCFH 17-3	WCF_3_	
WCFS R/L 25-4	●	□	4	25	25	25	150	29	25	WCFH 17-4	WCF_4_	
WCFS R/L 25-5	●	□	5	25	25	25	150	30	25	WCFH 17-5	WCF_5_	

Remarks: A holder includes an applicable carbide blade and a wrench.
All figures show right hand tools.

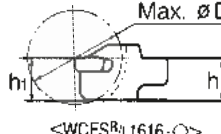
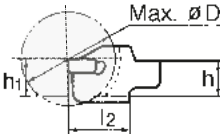
■ Spare Parts

■ Wrench

						
Carbide blade	Stock	Dimensions (mm)		Applicable inserts	Ordering No.	
		a	b			
WCFH 17-3	●	3	2,4	WCF_3_	SL - 1	
WCFH 17-4	●	4	3,4	WCF_4_	SL - 1	
WCFH 17-5	●	5	4,3	WCF_5_	SL - 1	

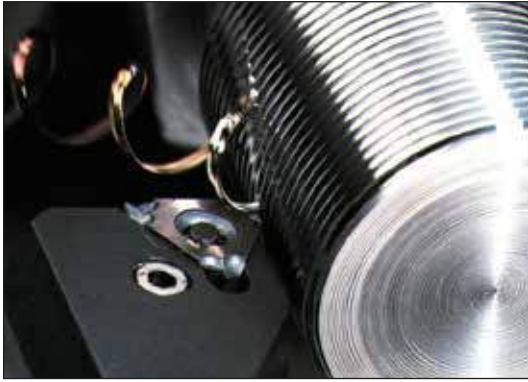
■ Holders (Brazed Type)

Wrench

	<table><tr><th rowspan="2">Ordering No.</th><th colspan="2">Stock</th><th colspan="10">Dimensions (mm)</th><th rowspan="2">Applicable inserts</th></tr><tr><th>R</th><th>L</th><th>a</th><th>øD_{max}</th><th>h</th><th>h₁</th><th>b</th><th>l₁</th><th>l₂</th><th>f</th><th>f₁</th></tr><tr><td>WCFS R/L 1010-2</td><td>●</td><td>□</td><td>2</td><td>28</td><td>10</td><td>10</td><td>10</td><td>86</td><td>18</td><td>10</td><td>8</td><td>WCFN 2A</td></tr><tr><td>WCFS R/L 1212-2</td><td>●</td><td>●</td><td>2</td><td>30</td><td>12</td><td>12</td><td>12</td><td>110</td><td>20</td><td>12</td><td>10</td><td>WCFN 2A</td></tr><tr><td>WCFS R/L 1616-2</td><td>□</td><td>●</td><td>2</td><td>35</td><td>16</td><td>16</td><td>16</td><td>100</td><td>—</td><td>16</td><td>14</td><td>WCFN 2A</td></tr></table>												Ordering No.	Stock		Dimensions (mm)										Applicable inserts	R	L	a	øD _{max}	h	h ₁	b	l ₁	l ₂	f	f ₁	WCFS R/L 1010-2	●	□	2	28	10	10	10	86	18	10	8	WCFN 2A	WCFS R/L 1212-2	●	●	2	30	12	12	12	110	20	12	10	WCFN 2A	WCFS R/L 1616-2	□	●	2	35	16	16	16	100	—	16	14	WCFN 2A	
Ordering No.	Stock		Dimensions (mm)											Applicable inserts																																																															
	R	L	a	øD _{max}	h	h ₁	b	l ₁	l ₂	f	f ₁																																																																		
WCFS R/L 1010-2	●	□	2	28	10	10	10	86	18	10	8	WCFN 2A																																																																	
WCFS R/L 1212-2	●	●	2	30	12	12	12	110	20	12	10	WCFN 2A																																																																	
WCFS R/L 1616-2	□	●	2	35	16	16	16	100	—	16	14	WCFN 2A																																																																	
 <WCFS ^R /L1616-□>	 <WCFS ^R /L1010-2> <WCFS ^R /L1212-2>																																																																												

Remarks: A holder includes an applicable wrench.
All figures show right hand tools.

Threading Tools



General Features

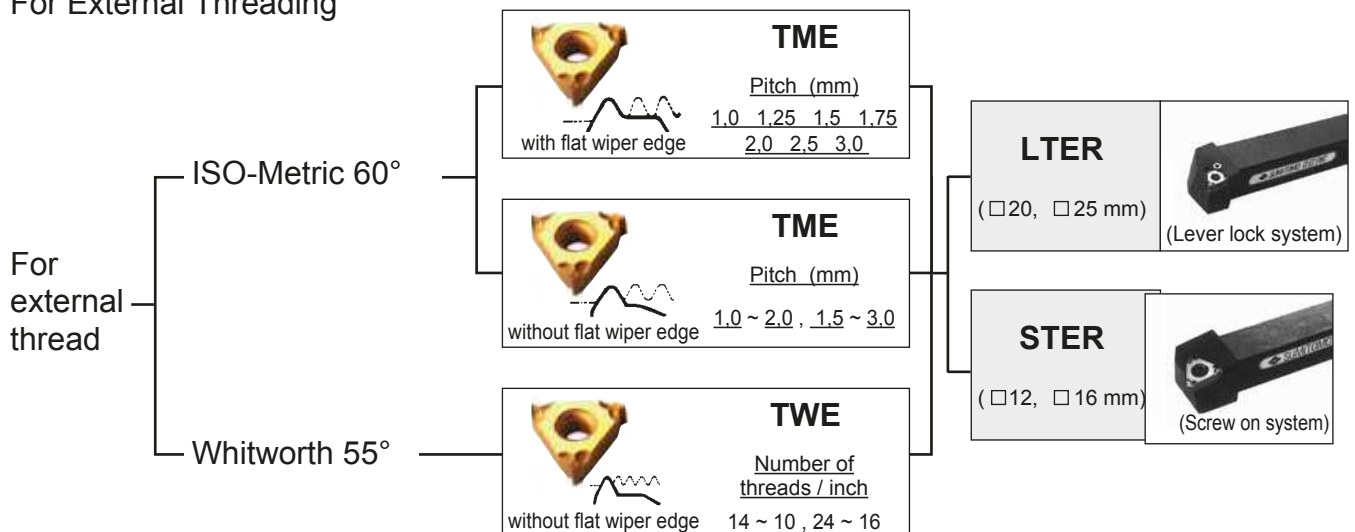
Sumitomo Electric has developed „TME“ external threading inserts with pitch ranges of 1,0 ~ 3,0 mm or 10 ~ 24 threads/inch and „TMI“ internal threading inserts with a pitch range of 1,0 ~ 3,0 mm.

The superior features of the new sintered threading inserts include an M-class tolerance and dimple shaped chip breaker. The M-class tolerance reduces insert cost by eliminating the need for expensive grinding.

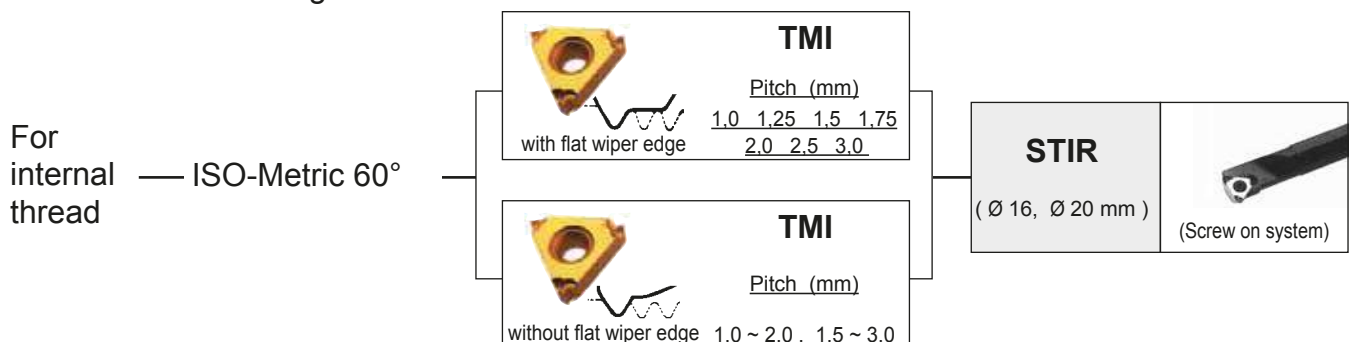
Furthermore, chip control is greatly improved as a result of the specially designed dimple chip breakers.

New Series of Indexable Inserts and Holders for Threading

For External Threading

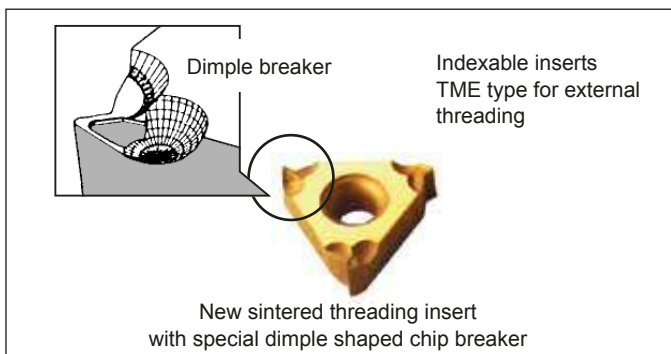


For Internal Threading



Threading Tools

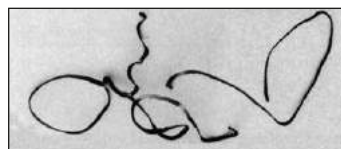
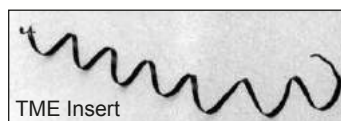
Threading Insert



General Features

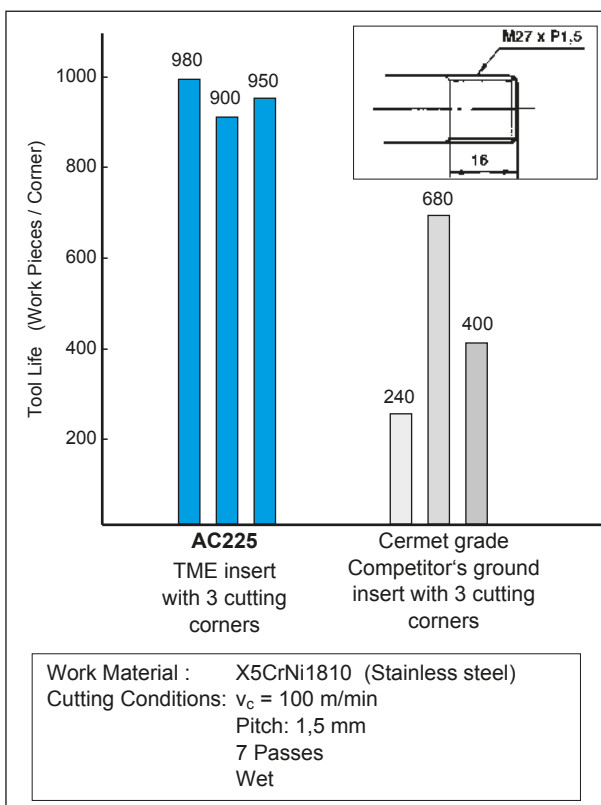
- A positive rake angle encourages good chip control and reduces cutting resistance.
- Two tier dimple-style chip breakers evacuate chip smoothly and easily.
- M-class tolerance reduces insert cost.
- Four available grades cover a wider range of applications.
- The LTER type holder is designed for easy clamping and replacement.

Comparison of Chip Control



Work material: 25 CrMo 4
Cutting speed: 100 m/min
Pitch: 1,5 mm

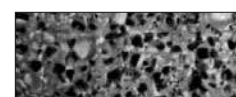
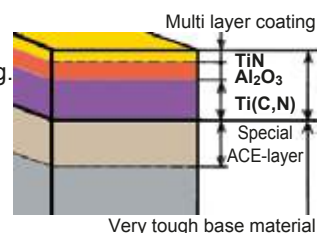
Comparison of Tool Life



Cutting Grades for Threading

AC225

The AC225 is a carbide insert with a 2 μ m multiple-layer coating. This design results in improved toughness and adhesion resistance making this grade **suitable for stainless steel and general steel**.



Neue
Cermet-Grade
T130A

T130A

The T130A is a cermet grade containing high TiN with a uniform fine-grain microstructure which results in improved wear resistance and toughness. Thus, the T130A **produces a goods surface finish**.

Threading Tools

Cutting Conditions

Recommended Cutting Conditions

● Cutting Speed (m/min.)

Grade	AC225	T130A
Work material		
Soft steel	150 ~170	100 ~150
Carbon steel	100 ~170	80 ~130
Alloy steel	90 ~150	80 ~120
Stainless steel	70 ~140	-

● Depth of Cut (Wiper Insert)

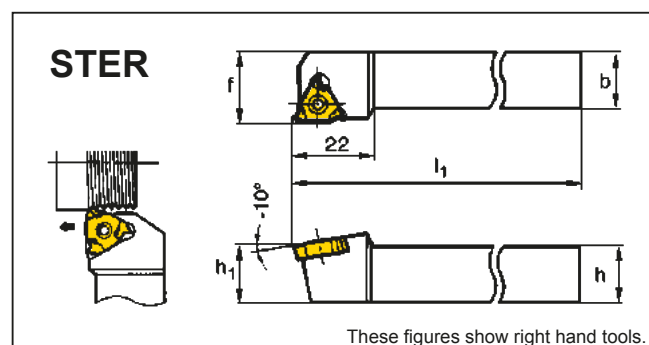
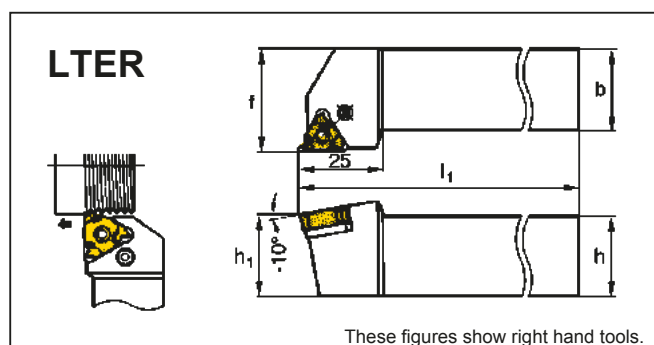
		Cat. No.	Pitch	Depth of cut	Pass	1	2	3	4	5	6	7	8	9	10	11	12
ISO-Metric 60°	External	TME 100 R	1,00	0,68	5	0,20	0,16	0,14	0,11	0,07							
		TME 125 R	1,25	0,82	6	0,20	0,18	0,15	0,12	0,10	0,07						
		TME 150 R	1,50	0,96	7	0,22	0,18	0,14	0,13	0,12	0,10	0,07					
		TME 175 R	1,75	1,12	8	0,22	0,19	0,16	0,14	0,13	0,12	0,09	0,07				
		TME 200 R	2,00	1,25	8	0,25	0,21	0,18	0,16	0,15	0,13	0,10	0,07				
		TME 250 R	2,50	1,55	10	0,27	0,24	0,20	0,18	0,16	0,13	0,11	0,10	0,09	0,07		
		TME 300 R	3,00	1,86	12	0,28	0,25	0,20	0,19	0,17	0,15	0,13	0,12	0,10	0,10	0,09	0,07
	Internal	TMI 100 R	1,00	0,63	5	0,18	0,16	0,12	0,10	0,07							
		TMI 125 R	1,25	0,77	6	1,08	0,16	0,14	0,12	0,10	0,07						
		TMI 150 R	1,50	0,90	7	0,20	0,16	0,14	0,13	0,11	0,09	0,07					
		TMI 175 R	1,75	1,03	8	0,20	0,18	0,15	0,14	0,11	0,10	0,08	0,07				
		TMI 200 R	2,00	1,18	8	0,22	0,19	0,17	0,15	0,14	0,13	0,11	0,07				
		TMI 250 R	2,50	1,44	10	0,25	0,22	0,19	0,16	0,14	0,12	0,10	0,10	0,09	0,07		
		TMI 300 R	3,00	1,7	12	0,27	0,24	0,20	0,17	0,14	0,12	0,10	0,10	0,10	0,09	0,06	0,07

● Depth of Cut (Non wiper insert)

		Cat. No.	Radius	Pitch	Depth of cut	Pass	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
ISO-Metric 60°	External	TME 1020 R	0,13	1,00	0,68	5	0,20	0,16	0,12	0,10	0,07											
				1,25	0,84	6	0,20	0,18	0,16	0,13	0,10	0,07										
				1,50	1,03	7	0,22	0,20	0,17	0,15	0,12	0,10	0,07									
				1,75	1,22	8	0,22	0,21	0,18	0,16	0,15	0,13	0,10	0,07								
				2,00	1,41	10	0,22	0,20	0,18	0,16	0,14	0,13	0,12	0,10	0,09	0,07						
		TME 1530 R	0,20	1,50	0,95	7	0,22	0,17	0,14	0,13	0,12	0,10	0,07									
				1,75	1,14	8	0,22	0,18	0,15	0,14	0,13	0,12	0,09	0,07								
				2,00	1,33	9	0,25	0,20	0,18	0,16	0,15	0,13	0,10	0,09	0,07							
				2,50	1,71	12	0,25	0,22	0,19	0,17	0,15	0,14	0,13	0,12	0,10	0,09	0,08	0,07				
				3,00	2,09	14	0,25	0,22	0,20	0,20	0,18	0,17	0,15	0,14	0,14	0,10	0,10	0,09	0,08	0,07		
	Internal	TMI 1020 R	0,06	1,00	0,59	6	0,16	0,12	0,10	0,08	0,08	0,05										
				1,25	0,75	7	0,16	0,14	0,12	0,10	0,10	0,08	0,05									
				1,50	0,92	8	0,18	0,15	0,14	0,12	0,10	0,10	0,08	0,05								
				1,75	1,08	9	0,18	0,16	0,14	0,13	0,12	0,12	0,10	0,08	0,05							
				2,00	1,24	10	0,20	0,18	0,15	0,14	0,12	0,12	0,10	0,10	0,08	0,05						
		TMI 1530 R	0,09	1,50	0,91	8	0,18	0,14	0,14	0,12	0,10	0,10	0,08	0,05								
				1,75	1,07	9	0,18	0,16	0,13	0,13	0,12	0,12	0,10	0,08	0,05							
				2,00	1,23	10	0,20	0,18	0,14	0,14	0,12	0,12	0,10	0,10	0,08	0,05						
				2,50	1,56	12	0,20	0,18	0,16	0,16	0,15	0,13	0,13	0,11	0,11	0,10	0,08	0,05				
				3,00	1,88	14	0,22	0,20	0,18	0,18	0,16	0,16	0,14	0,14	0,10	0,10	0,10	0,08	0,07	0,05		

The shorter pitch, the slower speed. In case of non wiper insert or internal threading, passing time should be requested to increase.

External Threading Holders LTER / STER Type



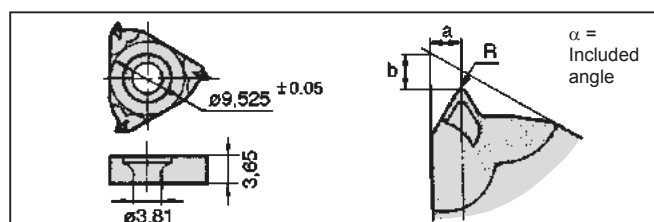
■ Holders with Lever Lock System

Ordering No.	Stock	Dimensions (mm)					
		h	h ₁	b	l ₁	f	
LTER 2020	●	20	20	20	125	25	
LTER 2525	●	25	25	25	150	32	

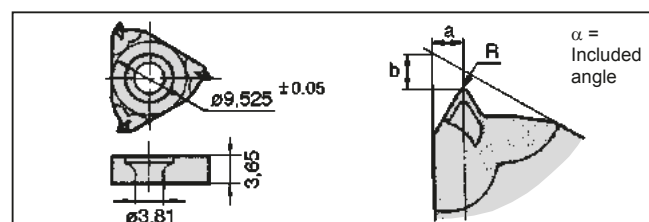
■ Holders with Screw on System

Ordering No.	Stock	Dimensions (mm)					
		h	h ₁	b	l ₁	f	
STER 1212	●	12	12	12	100	16	
STER 1616	●	16	16	16	100	20	

■ Inserts



■ Inserts

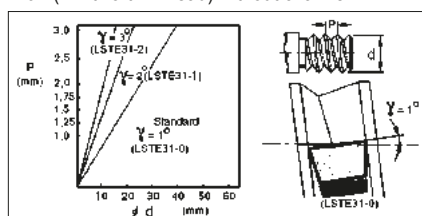


Ordering No.	Pitch		Coated carbide AC225	Cemet T130A	Dimensions (mm)				
	(mm)	Threads No./inch			R	α	a	b	
TME 100 R	1,00	-	●	○	0,13	60	0,8	1,2	(1)
TME 125 R	1,25	-	●		0,17	60	0,8	1,2	
TME 150 R	1,50	-	●		0,20	60	1,0	1,2	
TME 175 R	1,75	-	●		0,24	60	1,2	1,2	
TME 200 R	2,00	-	●		0,27	60	1,4	1,2	
TME 250 R	2,50	-	●		0,35	60	1,4	1,2	
TME 300 R	3,00	-	●		0,42	60	1,8	1,2	
TME 1020 R	1,00~2,00	24~12	●		0,13	60	1,4	1,2	(2)
TME 1530 R	1,50~3,00	16~8	●		0,20	60	1,4	1,0	
TWE 1410 R	-	14~10	●		0,13	55	1,4	1,2	(3)
TWE 2416 R	-	24~16	●		0,23	55	1,4	1,2	

Ordering No.	Pitch		Coated carbide	Cermet	Dimensions (mm)				
	(mm)	Threads No./inch			R	α	a	b	
									AC225
TME 100 R	1,00	-	●	○	0,13	60	0,8	1,2	
TME 125 R	1,25	-	●		0,17	60	0,8	1,2	
TME 150 R	1,50	-	●		0,20	60	1,0	1,2	
TME 175 R	1,75	-	●		0,24	60	1,2	1,2	
TME 200 R	2,00	-	●		0,27	60	1,4	1,2	
TME 250 R	2,50	-	●		0,35	60	1,4	1,2	
TME 300 R	3,00	-	●		0,42	60	1,8	1,2	
TME 1020 R	1,00 ~ 2,00	24 ~ 12	●		0,13	60	1,4	1,2	
TME 1530 R	1,50 ~ 3,00	16 ~ 8	●		0,20	60	1,4	1,0	
TWE 1410 R	-	14 ~ 10	●		0,13	55	1,4	1,2	
TWE 2416 R	-	24 ~ 16	●		0,23	55	1,4	1,2	

Remarks: (1) TME100R - 300R (ISO Thread)
(2) TME1020R, 1530R (ISO Thread) without chamfer
(3) TWE1410R, 2416R (Whitworth Thread) without chamfer

Remarks: (1) TME100R- 300R (ISO Thread)
(2) TME1020R, 1530R (ISO Thread) without chamfer
(3) TWE1410R, 2416R (Whitworth Thread) without chamfer



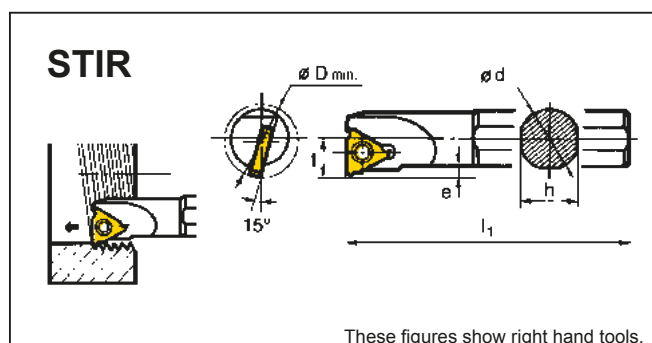
■ Spare Parts

Holder	Lever Pin	Screw	Shim	Shim pin	Wrench
LTER	LCL3SD	LCS3TE	LSTE31-0 *	LSP3SD	LH025

■ Spare Parts

Holder	Screw	Wrench
STER	BFTX03508	TRX 10

*Remarks: LTER type has supplement of $\gamma=1^\circ$ shim LSTE 31-0.
Shims LSTE 31-1 for $\gamma=2^\circ$ and LSTE 31-2 for $\gamma=3^\circ$ are option.



■ Holders with Screw on System

Ordering No.	Stock	Dimensions (mm)					
		$\varnothing d$	h	l_1	e	f	$\varnothing D_{min.}$
STIR 316	●	16	15	150	3,5	11	20
STIR 320	●	20	18	180	5,0	14	25

■ Inserts

Ordering No.	Pitch		Coated carbide	Cermet	Dimensions (mm)				
	(mm)	Threads No./inch			R	α	a	b	
TMI 100 R	1,00	-	●		0,06	60	0,8	1,2	
TMI 125 R	1,25	-	●		0,07	60	0,8	1,2	
TMI 150 R	1,50	-	●		0,09	60	1,0	1,2	
TMI 175 R	1,75	-	●		0,11	60	1,2	1,2	(1)
TMI 200 R	2,00	-	●		0,12	60	1,4	1,2	
TMI 250 R	2,50	-	●		0,16	60	1,4	1,2	
TMI 300 R	3,00	-	●		0,20	60	1,8	1,2	
TMI 1020 R	1,00~2,00	24~12			0,06	60	1,0	1,2	
TMI 1530 R	1,50~3,00	16~8	●		0,09	60	1,5	1,2	(2)

Remarks: (1) TME100R- 300R (ISO Thread)
(2) TME1020R,1530R (ISO Thread) without chamfer

■ Spare Parts

Holder	Screw	Wrench
	 2,0 Nm	
STIR	BFTX03508	TRX 10



CARBIDE - CBN - DIAMOND

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