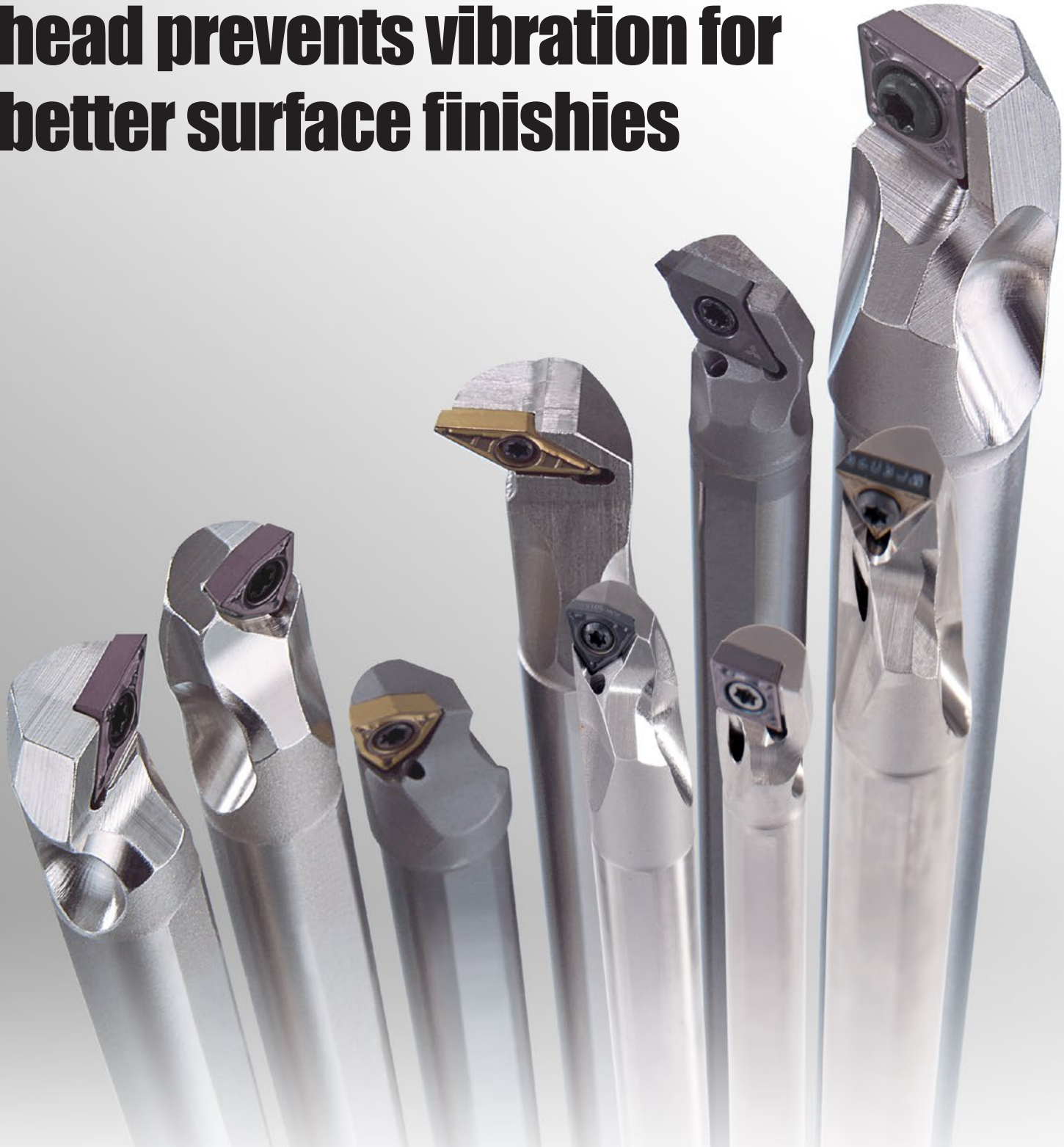
Chatter Resistant Boring Bars

Dimple Bar Series

Series Expansion

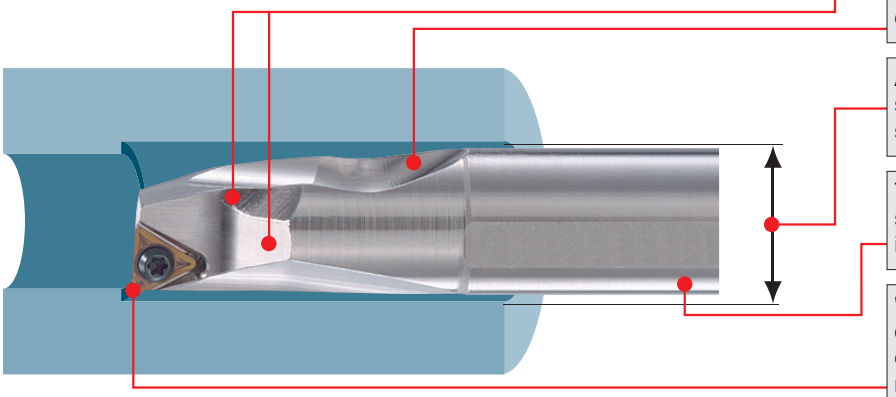
Highly rigid and lightweight head prevents vibration for better surface finishies



MITSUBISHI MATERIALS CORPORATION

Features of Dimple Bar

Highly rigid steel shank and a lightweight head configuration, designed by computer simulation analysis reduces chatter and improves the vibration damping properties.



- Chip disposal is improved by having two channels for chip evacuation.
- The lightweight head with its large dimple reduces chatter.
- Available in sizes smaller than the ISO standard. Therefore the boring of small diameter holes is possible.
- The boring bar has a laser printed scale on the shank to facilitate easy installation.
- "F and FS" breakers improves the quality of the surface finish, "MV" breaker offers excellent chip disposal. High wear resistant CBN inserts are also available for the machining of hardened materials.

■ Vibration Resistance

●DIMPLE BAR

Weight of the Head	Damping Time
49.7g	15.8ms

By reducing the weight of the head, the damping properties are increased.

●Conventional Product

Weight of the Head	Damping Time
70.1g	20ms

* The simulation data stated above was conducted with a FSCLP1816R-09S holder, under the following conditions; l/d=5, depth of cut=0.5mm, and feed=0.05mm/rev.

■ Direction for the use of CCG/MT • CPG/MT • CPMX • TPG/MX type inserts

By changing the clamp screw, it is possible to use the inserts listed in the table below.

Holder : FSCLC/P • FSCLC/P...E

Insert Number	Clamp Screw
CCG/MT0602○○ (ϕ6.35)	Can be used as it is.
CPG/MT0802○○ (ϕ7.94)	Change to **TS3**
CPG/MT0903○○ (ϕ9.525)	Change to **TS4**
CPMX0802○○ (ϕ7.94)	Can be used as it is.
CPMX0903○○ (ϕ9.525)	Can be used as it is.

Holder : FSTUP • FSTUP...E

Insert Number	Clamp Screw
TPG/MX0802○○ (ϕ4.76)	Change to **CS200T**
TPG/MX0902○○ (ϕ5.56)	Change to **CS250T**
TPG/MX1103○○ (ϕ9.525)	Change to **CS300890T**

* If the screw is too long the please shorten as necessary.

Note 1) TPMT/W09, W11 types cannot be used due to a different clamp screw size.

Selection Standard

Insert Shape	Page Reference	Holder Type	Tool Cutting Edge Angle KAPR	Shank Material	Economical	Cutting Edge Strength	Copying	Profile Turning and Inner End Facing	Internal Coolant	Deep Boring (l/d≥6)
RHOMBIC 80°	3, 4	**FSCLC/P○○○S**	95°	Steel		◎				
		FSCLC/P○○○A	95°	Steel		◎			◎	
		FSCLC/P○○○E	95°	Carbide		◎			◎	◎
TRIANGULAR 60°	5, 6	**FSTUP○○○S**	93°	Steel	◎					
		FSTUP○○○A	93°	Steel	◎				◎	
		FSTUP○○○E	93°	Carbide	◎				◎	◎
RHOMBIC 55°	7, 8	**FSDUC○○○S**	93°	Steel			◎			
		FSDUC○○○A	93°	Steel			◎		◎	
		FSDUC○○○E	93°	Carbide			◎		◎	◎
	9, 10	**FSDQC○○○S**	107.5°	Steel			◎			
		FSDQC○○○A	107.5°	Steel			◎		◎	
		FSDQC○○○E	107.5°	Carbide			◎		◎	◎
TRIGON	11, 12	**FSWUB/P○○○S**	93°	Steel	◎	◎				
		FSWUB/P○○○A	93°	Steel	◎	◎			◎	
		FSWUB/P○○○E	93°	Carbide	◎	◎			◎	◎
RHOMBIC 35°	13, 14, 15	**FSVUB/C○○○S**	93°	Steel			◎			
		FSVUB/C○○○A	93°	Steel			◎		◎	
		FSVPB/C○○○S	117.5°	Steel			◎			
		FSVPB/C○○○A	117.5°	Steel			◎		◎	
		FSVJB/C○○○S	142°	Steel				◎		

Identification

①Function

F	Fixed type

②Clamp Structure

S	Screw-on

③Insert Shape

C	RHOMBIC 80°
D	RHOMBIC 55°
T	TRIANGULAR 60°
V	RHOMBIC 35°
W	TRIGON

④Cutting Angle KAPR

U	93°
L	95°
Q	107.5°
P	117.5°
J	142°

⑤Insert Clearance

B	5°
C	7°
P	11°

⑥Min.Cutting Diameter DMIN (mm)

10	10	22	22
12	12	25	25
13	13	30	30
14	14	32	32
16	16	34	34
18	18	40	40
20	20		

⑦Shank Diameter DCON (mm)

08	8
10	10
12	12
16	16
20	20
25	25
32	32

①	②	③	④	⑤	⑥	⑦	⑧		⑨		⑩		⑪
F	S	C	L	C	10	08	R	-	06		E	-	2/3

⑧Hand of Tool

R	Right Hand
L	Left Hand

⑨Cutting Edge Length (mm)

Inscribed circle of insert	4.76	5.56	6.35	7.94	9.525
RHOMBIC 80°	–	–	**06**	**0.8**	**09**
RHOMBIC 55°	–	–	**07**	–	**11**
TRIANGULAR 60°	**08**	**09**	**11**	–	**16**
RHOMBIC 35°	**08**	–	**11**	–	**16**
TRIGON	**L3**	–	**04**	–	**06**

⑩Shank Material

E	Carbide Shank
A	Steel Shank Internal
S	Steel Shank External

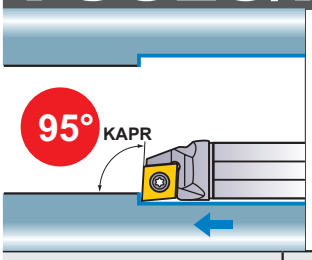
⑪Tool Length (Carbide shank only) (mm)

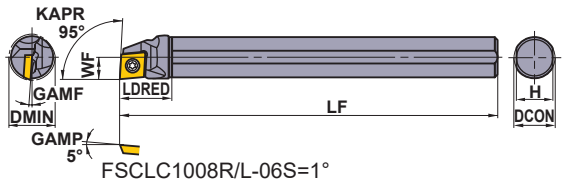
Shank Dia.	8	10	12	16	20
No symbol	140	160	180	220	250
2/3	90	105	120	145	165
1/2	70	80	90	110	125

DIMPLE BAR

FSCLC/P

Steel shank without coolant hole CC○○inserts, CP○○inserts





FSCLC1008R/L-06S=1°
Right hand tool holder shown.

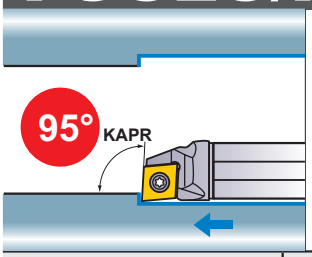
Finish	Finish	Finish	Light
FP	FV	FM	SV
(06)	(06,08,09)	(06)	(06,08,09)
Light	Medium	Medium	CBN/PCD
LP	MV	MP	
(06)	(06,08,09)	(06)	(06,08,09)

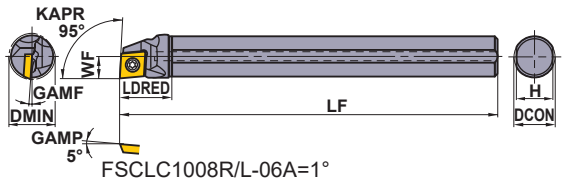
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *1	Wrench
FSCLC1008R/L-06S	●	●	CC○B/H/T/W	0602○○	8	125	18	5	7.2	12°	**10**	3	TS253	TKY08F
FSCLP1210R/L-08S	●	●	CPMB CPMH CPMT*2 CPMX*2 CPGB CPGT*2	0802○○	10	150	22.5	6	9	5°	**12**	3.5	TS3D	TKY10F
FSCLP1412R/L-08S	●	●		0802○○	12	150	27	7	11	4°	**14**	4	TS3D	TKY10F
FSCLP1612R/L-09S	●	●		0903○○	12	150	30	8	11	4°	**16**	4	TS4D	TKY15F
FSCLP1816R/L-09S	●	●		0903○○	16	180	36	9	15	3.5°	**18**	5	TS4D	TKY15F
FSCLP2220R/L-09S	●	●		0903○○	20	220	45	11	19	2°	**22**	5	TS4D	TKY15F
FSCLP3025R/L-09S	●	●		0903○○	25	250	56.3	15	23.4	0°	**30**	5	TS4D	TKY15F

* Clamp Torque (N • m) : TS253=1.0, TS3D=2.5, TS4D=3.5

FSCLC/P NEW

Steel shank with coolant hole CC○○inserts, CP○○inserts





FSCLC1008R/L-06A=1°
Right hand tool holder shown.

Finish	Finish	Finish	Light
FP	FV	FM	SV
(06)	(06,08,09)	(06)	(06,08,09)
Light	Medium	Medium	CBN/PCD
LP	MV	MP	
(06)	(06,08,09)	(06)	(06,08,09)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *1	Wrench
FSCLC1008R/L-06A	●	●	CC○B/H/T/W	0602○○	8	125	18	5	7.2	12°	**10**	3	TS253	TKY08F
FSCLP1210R/L-08A	●	●	CPMB CPMH CPMT*2 CPMX*2 CPGB CPGT*2	0802○○	10	150	22.5	6	9	5°	**12**	3.5	TS3D	TKY10F
FSCLP1412R/L-08A	●	●		0802○○	12	150	27	7	11	4°	**14**	4	TS3D	TKY10F
FSCLP1816R/L-09A	●	●		0903○○	16	180	36	9	15	3.5°	**18**	5	TS4D	TKY15F
FSCLP2220R/L-09A	●	●		0903○○	20	220	45	11	19	2°	**22**	5	TS4D	TKY15F
FSCLP3025R/L-09A	●	●		0903○○	25	250	56.3	15	23.4	0°	**30**	5	TS4D	TKY15F

* Clamp Torque (N • m) : TS253=1.0, TS3D=2.5, TS4D=3.5

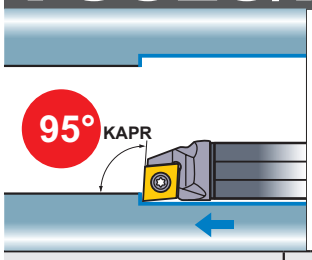
● = NEW

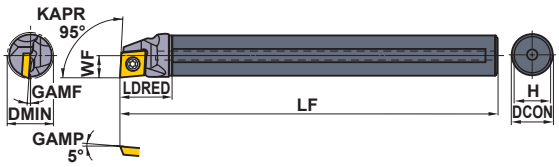
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆ are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

● : Inventory maintained in Japan.

FSCLC/P_E

Carbide shank with coolant hole CC○○inserts, CP○○inserts





FSCLC1008R/L-06E (-2/3, -1/2)=1°

Right hand tool holder shown.

Finish	Finish	Finish	Light
FP	FV	FM	SV
(06)	(06,08,09)	(06)	(06,08,09)
Light	**Medium**	**Medium**	**CBN/PCD**
LP	MV	MP	
(06)	(06,08,09)	(06)	(06,08,09)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *1	Wrench
FSCLC1008R/L-06E	●	●	CC○B CC○H CC○T CC○W	0602○○	8	140	13.8	5	7.2	12°	**10**	7	TS253	TKY08F
FSCLC1008R-06E-2/3	●			0602○○	8	90	13.8	5	7.2	12°	**10**	5	TS253	TKY08F
FSCLC1008R-06E-1/2	●			0602○○	8	70	13.8	5	7.2	12°	**10**	3	TS253	TKY08F
FSCLP1210R/L-08E	●	●	CPMB CPMH CPMT*2 CPMX*2 CPGB CPGT*2	0802○○	10	160	16.0	6	9	5°	**12**	7.5	TS3D	TKY10F
FSCLP1210R-08E-2/3	●			0802○○	10	105	16.0	6	9	5°	**12**	5	TS3D	TKY10F
FSCLP1210R-08E-1/2	●			0802○○	10	80	16.0	6	9	5°	**12**	3	TS3D	TKY10F
FSCLP1412R/L-08E	●	●		0802○○	12	180	17.8	7	11	4°	**14**	8	TS3D	TKY10F
FSCLP1412R-08E-2/3	●			0802○○	12	120	17.8	7	11	4°	**14**	5	TS3D	TKY10F
FSCLP1412R-08E-1/2	●			0802○○	12	90	17.8	7	11	4°	**14**	3	TS3D	TKY10F
FSCLP1816R/L-09E	●	●		0903○○	16	220	21.8	9	15	3.5°	**18**	8	TS4D	TKY15F
FSCLP1816R-09E-2/3	●			0903○○	16	145	21.8	9	15	3.5°	**18**	5	TS4D	TKY15F
FSCLP1816R-09E-1/2	●			0903○○	16	110	21.8	9	15	3.5°	**18**	3	TS4D	TKY15F
FSCLP2220R/L-09E	●	●		0903○○	20	250	24.0	11	19	2°	**22**	8	TS4D	TKY15F
FSCLP2220R-09E-2/3	●			0903○○	20	165	24.0	11	19	2°	**22**	5	TS4D	TKY15F
FSCLP2220R-09E-1/2	●			0903○○	20	125	24.0	11	19	2°	**22**	3	TS4D	TKY15F

*1 Clamp Torque (N • m) : TS253=1.0, TS3D=2.5, TS4D=3.5

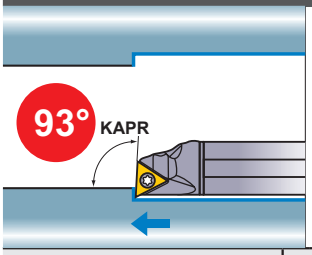
*2 By changing the clamp screw, it is possible to use a different insert. Please refer to page 1.

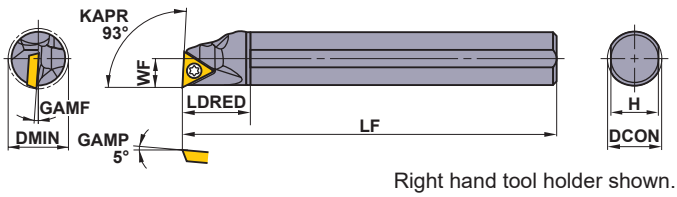
DIMPLE BAR

FSTUP

Steel shank without coolant hole

TP○○inserts





Right hand tool holder shown.

Finish	Light	Medium
FV	SV	MV
(08,09,11,16)	(08,09,11,16)	(08,09,11,16)
PCD	CBN	
R/L-F		
(08,09,11,16)	(08,09,11,16)	

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	*1 Clamp Screw	Wrench
FSTUP1008R/L-08S	●	●	TPMB TPMH TPMX*2 TPGB TPGH TPGX*2	0802○○	8	125	18	5	7.2	10°	**10**	3	TS2D	TKY06F
FSTUP1210R/L-09S	●	●		0902○○	10	150	22.5	6	9	8°	**12**	3.5	TS25D	TKY08F
FSTUP1412R/L-09S	●	●		0902○○	12	150	27	7	11	7°	**14**	4	TS25D	TKY08F
FSTUP1210R/L-11S	●	●		1103○○	10	150	22.5	6	9	8°	**12**	3.5	TS31D	TKY10F
FSTUP1412R/L-11S	●	●		1103○○	12	150	27	7	11	7°	**14**	4	TS31D	TKY10F
FSTUP1816R/L-11S	●	●		1103○○	16	180	36	9	15	4°	**18**	5	TS31D	TKY10F
FSTUP2220R/L-11S	●	●		1103○○	20	220	45	11	19	0°	**22**	5	TS31D	TKY10F
FSTUP3225R/L-16S ☆	●	●		1603○○	25	270	56.3	16	23.4	0°	**32**	5	TS4D	TKY15F

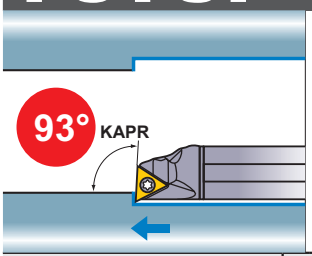
* Clamp Torque (N • m) : TS2D=0.6, TS25D=1.0, TS31D=2.5, TS4D=3.5

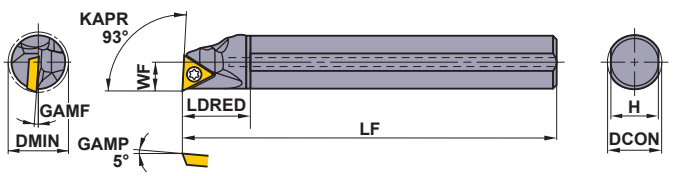
FSTUP

NEW

Steel shank with coolant hole

TP○○inserts





Right hand tool holder shown.

Finish	Light	Medium
FV	SV	MV
(08,09,11,16)	(08,09,11,16)	(08,09,11,16)
PCD	CBN	
R/L-F		
(08,09,11,16)	(08,09,11,16)	

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	*1 Clamp Screw	Wrench
FSTUP1008R/L-08A	●	●	TPMB TPMH TPMX*2 TPGB TPGH TPGX*2	0802○○	8	125	18	5	7.2	10°	**10**	3	TS2D	TKY06F
FSTUP1210R/L-09A	●	●		0902○○	10	150	22.5	6	9	8°	**12**	3.5	TS25D	TKY08F
FSTUP1412R/L-09A	●	●		0902○○	12	150	27	7	11	7°	**14**	4	TS25D	TKY08F
FSTUP1816R/L-11A	●	●		1103○○	16	180	36	9	15	4°	**18**	5	TS31D	TKY10F
FSTUP2220R/L-11A	●	●		1103○○	20	220	45	11	19	0°	**22**	5	TS31D	TKY10F
FSTUP3225R/L-16A ☆	●	●		1603○○	25	270	56.3	16	23.4	0°	**32**	5	TS4D	TKY15F

* Clamp Torque (N • m) : TS2D=0.6, TS25D=1.0, TS31D=2.5, TS4D=3.5

● = NEW

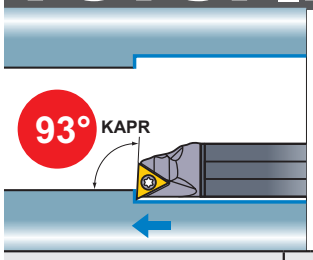
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆ are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

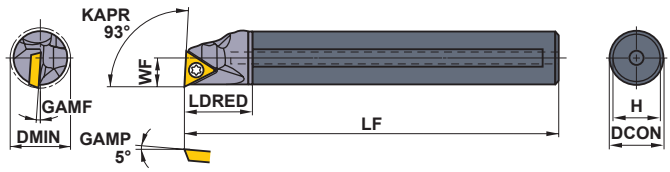
● : Inventory maintained in Japan.

FSTUP_E

Carbide shank with coolant hole

TP○○inserts





Right hand tool holder shown.

Finish	Light	Medium
FV	SV	MV
(08,09,11)	(08,09,11)	(08,09,11)
PCD	CBN	
R/L-F		
(08,09,11)	(08,09,11)	

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *1	Wrench
FSTUP1008R/L-08E	●	●	TPMB TPMH TPMX*2 TPGB TPGH TPGX*2	0802○○	8	140	13.8	5	7.2	10°	**10**	7	TS2D	TKY06F
FSTUP1008R-08E-2/3	●			0802○○	8	90	13.8	5	7.2	10°	**10**	5	TS2D	TKY06F
FSTUP1008R-08E-1/2	●			0802○○	8	70	13.8	5	7.2	10°	**10**	3	TS2D	TKY06F
FSTUP1210R/L-09E	●	●		0902○○	10	160	16.0	6	9	8°	**12**	7.5	TS25D	TKY08F
FSTUP1210R-09E-2/3	●			0902○○	10	105	16.0	6	9	8°	**12**	5	TS25D	TKY08F
FSTUP1210R-09E-1/2	●			0902○○	10	80	16.0	6	9	8°	**12**	3	TS25D	TKY08F
FSTUP1412R/L-09E	●	●		0902○○	12	180	17.8	7	11	7°	**14**	8	TS25D	TKY08F
FSTUP1412R-09E-2/3	●			0902○○	12	120	17.8	7	11	7°	**14**	5	TS25D	TKY08F
FSTUP1412R-09E-1/2	●			0902○○	12	90	17.8	7	11	7°	**14**	3	TS25D	TKY08F
FSTUP1816R/L-11E	●	●		1103○○	16	220	21.8	9	15	4°	**18**	8	TS31D	TKY10F
FSTUP1816R-11E-2/3	●			1103○○	16	145	21.8	9	15	4°	**18**	5	TS31D	TKY10F
FSTUP1816R-11E-1/2	●			1103○○	16	110	21.8	9	15	4°	**18**	3	TS31D	TKY10F
FSTUP2220R/L-11E	●	●		1103○○	20	250	24.0	11	19	0°	**22**	8	TS31D	TKY10F
FSTUP2220R-11E-2/3	●			1103○○	20	165	24.0	11	19	0°	**22**	5	TS31D	TKY10F
FSTUP2220R-11E-1/2	●			1103○○	20	125	24.0	11	19	0°	**22**	3	TS31D	TKY10F

*1 Clamp Torque (N • m) : TS2D=0.6, TS25D=1.0, TS31D=2.5

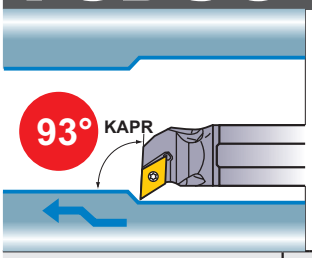
*2 By changing the clamp screw, it is possible to use a different insert. Please refer to page 1.

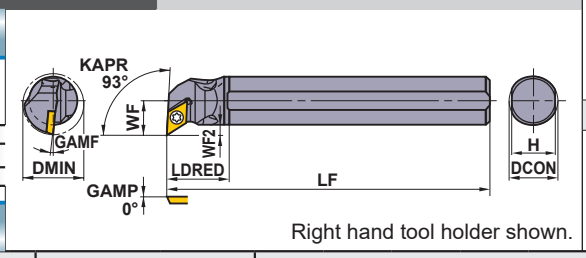
DIMPLE BAR

FSDUC

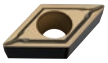
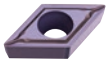
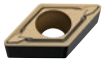
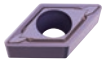
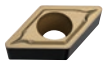
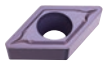
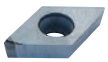
Steel shank without coolant hole

DC○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
					Dimensions(mm)										
FSDUC1410R/L-07S	●	●	DCMT DCMW DCGT DCGW	0702○○	10	150	18	8.3	3.3	9	7.5°	**14**	3.5	TS25	TKY08F
FSDUC1612R/L-07S	●	●		0702○○	12	150	20	9.3	3.3	11	6°	**16**	4	TS25	TKY08F
FSDUC2016R/L-07S	●	●		0702○○	16	180	20	11.3	3.3	15	5°	**20**	5	TS25	TKY08F
FSDUC3220R/L-11S☆	●	●		11T3○○	20	180	22.5	16.1	6.1	19	5°	**32**	5	TS43	TKY15F

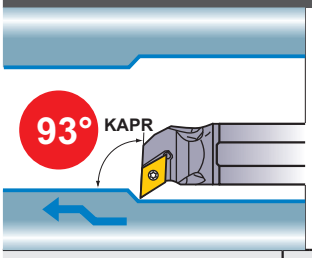
* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

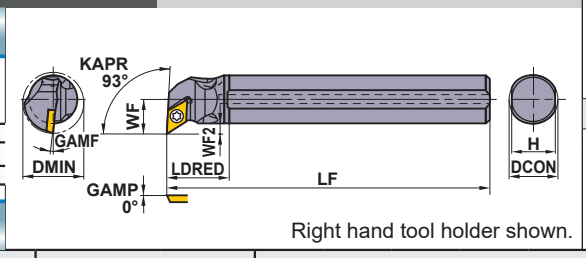
FSDUC

NEW

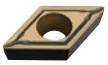
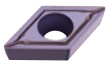
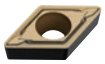
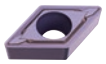
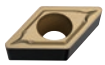
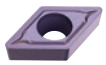
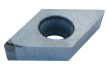
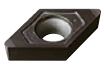
Steel shank with coolant hole

DC○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
					Dimensions(mm)										
FSDUC1410R/L-07A	●	●	DCMT DCMW DCGT DCGW	0702○○	10	150	18	8.3	3.3	9	7.5°	**14**	3.5	TS25	TKY08F
FSDUC1612R/L-07A	●	●		0702○○	12	150	20	9.3	3.3	11	6°	**16**	4	TS25	TKY08F
FSDUC2016R/L-07A	●	●		0702○○	16	180	20	11.3	3.3	15	5°	**20**	5	TS25	TKY08F
FSDUC3220R/L-11A☆	●	●		11T3○○	20	180	22.5	16.1	6.1	19	5°	**32**	5	TS43	TKY15F

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

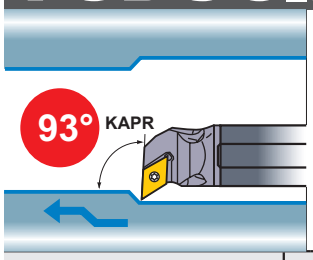
● = NEW

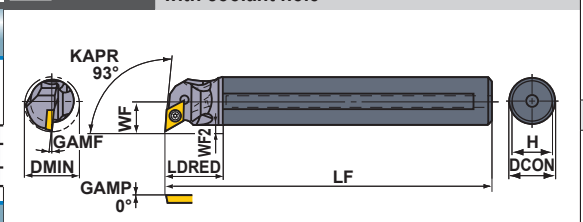
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆ are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

● : Inventory maintained in Japan.

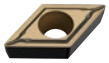
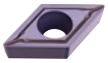
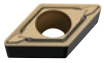
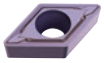
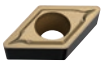
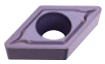
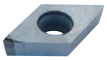
FSDUC_E

Carbide shank with coolant hole **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
FSDUC1410R/L-07E	●	●	DCMT DCMW DCGT DCGW	0702○○	10	160	16.0	8.3	3.3	9	7.5°	**14**	7.5	TS25	TKY08F
FSDUC1612R/L-07E	●	●		0702○○	12	180	17.8	9.3	3.3	11	6.0°	**16**	8	TS25	TKY08F
FSDUC2016R/L-07E	●	●		0702○○	16	220	21.8	11.3	3.3	15	5.0°	**20**	8	TS25	TKY08F
FSDUC3220R/L-11E☆	●	●		11T3○○	20	250	24.0	16.1	6.1	19	5.0°	**32**	8	TS43	TKY15F

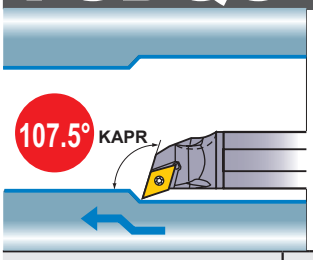
* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

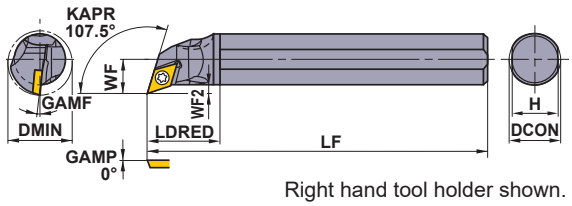
DIMPLE BAR

FSDQC

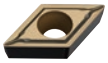
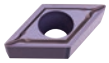
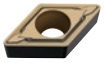
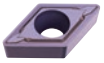
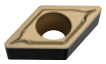
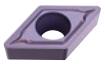
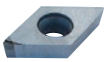
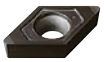
Steel shank without coolant hole

DC○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

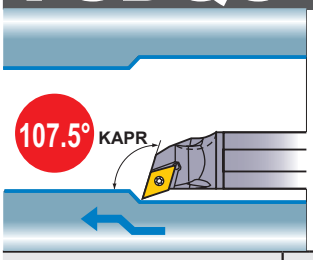
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
FSDQC1310R/L-07S	●	●	DCMT DCMW DCGT DCGW	0702○○	10	150	20.5	7.6	2.6	9	8°	**13**	3.5	TS25	TKY08F
FSDQC1612R/L-07S	●	●		0702○○	12	150	22.5	8.6	2.6	11	6°	**16**	4	TS25	TKY08F
FSDQC2016R/L-07S	●	●		0702○○	16	180	22.5	10.6	2.6	15	5°	**20**	5	TS25	TKY08F
FSDQC2520R/L-11S☆	●	●		11T3○○	20	180	26	13.7	3.7	19	7°	**25**	5	TS43	TKY15F

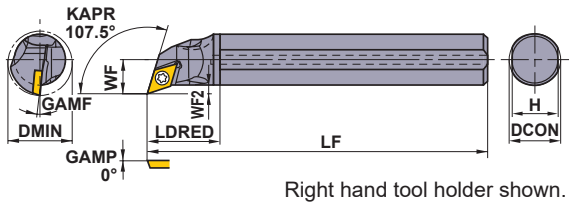
* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

FSDQC NEW

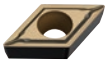
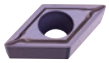
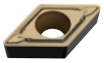
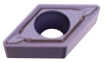
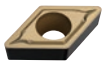
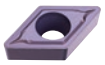
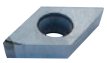
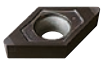
Steel shank with coolant hole

DC○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
FSDQC1310R/L-07A	●	●	DCMT DCMW DCGT DCGW	0702○○	10	150	20.5	7.6	2.6	9	8°	**13**	3.5	TS25	TKY08F
FSDQC1612R/L-07A	●	●		0702○○	12	150	22.5	8.6	2.6	11	6°	**16**	4	TS25	TKY08F
FSDQC2016R/L-07A	●	●		0702○○	16	180	22.5	10.6	2.6	15	5°	**20**	5	TS25	TKY08F
FSDQC2520R/L-11A☆	●	●		11T3○○	20	180	26	13.7	3.7	19	7°	**25**	5	TS43	TKY15F

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

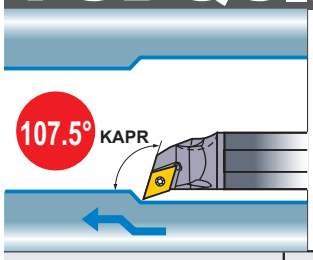
● = NEW

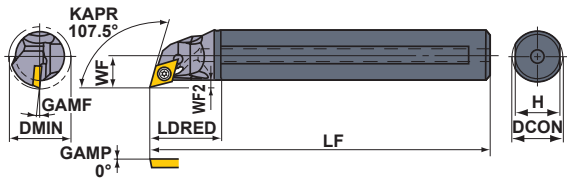
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆ are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

● : Inventory maintained in Japan.

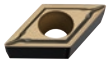
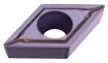
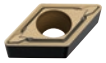
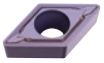
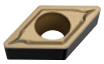
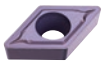
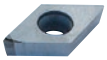
FSDQC_E

Carbide shank with coolant hole **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(07,11)	(07,11)	(07,11)	(07,11)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L-F	
			
(07,11)	(07,11)	(07,11)	(07,11)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	* Clamp Screw	Wrench
FSDQC1310R/L-07E	●	●	DCMT DCMW DCGT DCGW	0702○○	10	162	18.4	7.6	2.6	9	8°	**13**	7.5	TS25	TKY08F
FSDQC1612R/L-07E	●	●		0702○○	12	182	20.2	8.6	2.6	11	6°	**16**	8	TS25	TKY08F
FSDQC2016R/L-07E	●	●		0702○○	16	222	24.2	10.6	2.6	15	5°	**20**	8	TS25	TKY08F
FSDQC2520R/L-11E☆	●	●		11T3○○	20	254	28.0	13.7	3.7	19	7°	**25**	8	TS43	TKY15F

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

DIMPLE BAR

FSWUB/P

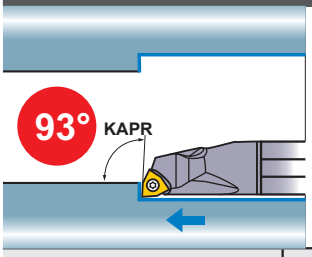
Steel shank without coolant hole

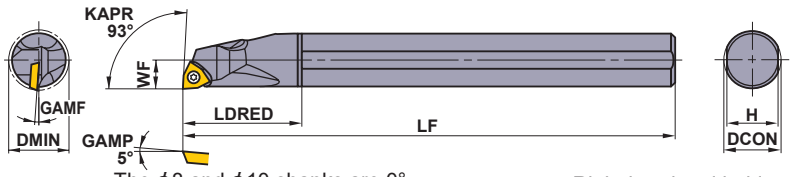
WB○○inserts, WP○○inserts

Finish
R/L-F·FS

(L3,04,06)
Medium
MV

(L3,04,06)





The ϕ8 and ϕ10 shanks are 0°

Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	* Clamp Screw	Wrench
FSWUB1008R/L-L3S ☆1	●	●	WBMT WBGT	L302○○	8	125	18	5	7.2	14°	**10**	3	TS2	TKY06F
FSWUB1210R/L-L3S ☆1	●	●		L302○○	10	150	22.5	6	9	11°	**12**	3.5	TS2	TKY06F
FSWUP1412R/L-04S	●	●	WPMT WPGT	0402○○	12	150	27	7	11	4°	**14**	4	TS253	TKY08F
FSWUP1816R/L-04S	●	●		0402○○	16	180	36	9	15	1°	**18**	5	TS253	TKY08F
FSWUP2220R/L-06S ☆2	●	●		0603○○	20	220	45	11	19	2°	**22**	5	TS4	TKY15F
FSWUP3025R/L-06S ☆2	●	●		0603○○	25	250	56.3	15	23.4	0°	**30**	5	TS4	TKY15F

* Clamp Torque (N • m) : TS2=0.6, TS253=1.0, TS4=3.5

FSWUB/P NEW

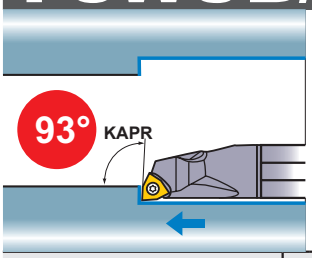
Steel shank with coolant hole

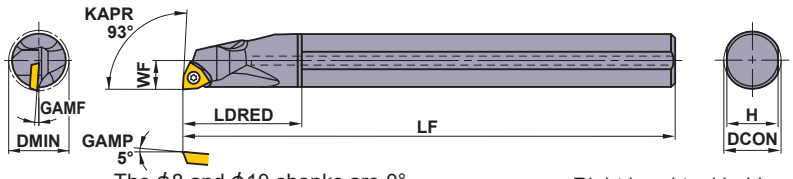
WB○○inserts, WP○○inserts

Finish
R/L-F·FS

(L3,04,06)
Medium
MV

(L3,04,06)





The ϕ8 and ϕ10 shanks are 0°

Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	* Clamp Screw	Wrench
FSWUB1008R/L-L3A ☆1	●	●	WBMT WBGT	L302○○	8	125	18	5	7.2	14°	**10**	3	TS2	TKY06F
FSWUB1210R/L-L3A ☆1	●	●		L302○○	10	150	22.5	6	9	11°	**12**	3.5	TS2	TKY06F
FSWUP1412R/L-04A	●	●	WPMT WPGT	0402○○	12	150	27	7	11	4°	**14**	4	TS253	TKY08F
FSWUP1816R/L-04A	●	●		0402○○	16	180	36	9	15	1°	**18**	5	TS253	TKY08F
FSWUP2220R/L-06A ☆2	●	●		0603○○	20	220	45	11	19	2°	**22**	5	TS4	TKY15F
FSWUP3025R/L-06A ☆2	●	●		0603○○	25	250	56.3	15	23.4	0°	**30**	5	TS4	TKY15F

* Clamp Torque (N • m) : TS2=0.6, TS253=1.0, TS4=3.5

● = NEW

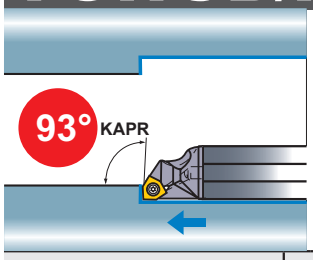
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆1 are with RE 0.2, types marked with ☆2 are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

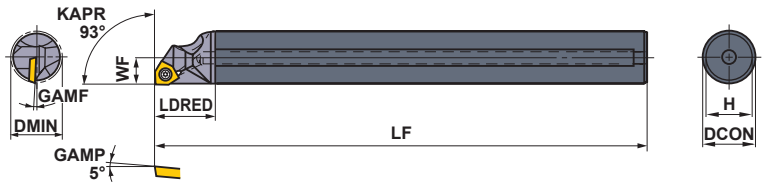
● : Inventory maintained in Japan.

FSWUB/P_E

Carbide shank with coolant hole

WB○○inserts, WP○○inserts





The ϕ8 and ϕ10 shanks are 0°

Right hand tool holder shown.

Finish

R/L-F·FS

(L3,04,06)

Medium

MV

(L3,04,06)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
FSWUB1008R/L-L3E ☆1	●	●	WBMT WBGT	L302○○	8	140	13.8	5	7.2	14°	**10**	7	TS2	TKY06F
FSWUB1008R-L3E-2/3 ☆1	●			L302○○	8	90	13.8	5	7.2	14°	**10**	5	TS2	TKY06F
FSWUB1008R-L3E-1/2 ☆1	●			L302○○	8	70	13.8	5	7.2	14°	**10**	3	TS2	TKY06F
FSWUB1210R/L-L3E ☆1	●	●		L302○○	10	160	16.0	6	9	11°	**12**	7.5	TS2	TKY06F
FSWUB1210R-L3E-2/3 ☆1	●			L302○○	10	105	16.0	6	9	11°	**12**	5	TS2	TKY06F
FSWUB1210R-L3E-1/2 ☆1	●			L302○○	10	80	16.0	6	9	11°	**12**	3	TS2	TKY06F
FSWUP1412R/L-04E	●	●	WPMT WPGT	0402○○	12	180	17.8	7	11	4°	**14**	8	TS253	TKY08F
FSWUP1412R-04E-2/3	●			0402○○	12	120	17.8	7	11	4°	**14**	5	TS253	TKY08F
FSWUP1412R-04E-1/2	●			0402○○	12	90	17.8	7	11	4°	**14**	3	TS253	TKY08F
FSWUP1816R/L-04E	●	●		0402○○	16	220	21.8	9	15	1°	**18**	8	TS253	TKY08F
FSWUP1816R-04E-2/3	●			0402○○	16	145	21.8	9	15	1°	**18**	5	TS253	TKY08F
FSWUP1816R-04E-1/2	●			0402○○	16	110	21.8	9	15	1°	**18**	3	TS253	TKY08F
FSWUP2220R/L-06E ☆2	●	●		0603○○	20	250	24.0	11	19	2°	**22**	8	TS4	TKY15F
FSWUP 2220R-06E-2/3 ☆2	●			0603○○	20	165	24.0	11	19	2°	**22**	5	TS4	TKY15F
FSWUP 2220R-06E-1/2 ☆2	●			0603○○	20	125	24.0	11	19	2°	**22**	3	TS4	TKY15F

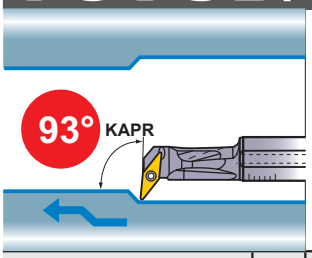
* Clamp Torque (N • m) : TS2=0.6, TS253=1.0, TS4=3.5

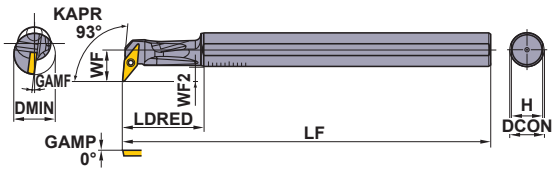
DIMPLE BAR

FSVUB/C

Steel shank without coolant hole

VC○○inserts, VB○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
(11,16)	(11,16)	(11,16)	(11,16)
Medium	Medium	Medium	CBN
MP	MM	Standard	
(16)	(16)	(16)	(11,16)

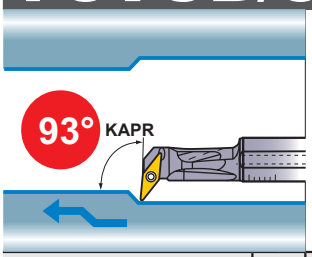
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Shim	Shim Pin	Clamp Screw *	Wrench
FSVUC1612R/L-08S	●	●	VCGT VCMT	0802○○	12	150	25	11	5.5	11	8°	**16**	4	–	–	TS202	TKY06F
FSVUB2016R/L-11S	●	●	VBMT VBMW VBET VBGW	1103○○	16	180	32.5	15.5	8	15	8°	**20**	5	–	–	TS255	TKY08F
FSVUB2520R/L-11S	●	●		1103○○	20	200	40.5	17.5	8	19	7°	**25**	5	–	–	TS255	TKY08F
FSVUB3425R/L-16S☆2	●	●		1604○○	25	220	50	20.5	8.5	23.4	13°	**34**	5	SPSVN32	BCP141	TS35D	TKY15F
FSVUB4032R/L-16S☆2	●	●		1604○○	32	250	84.0	27.5	12	30.4	9°	**40**	5	SPSVN32	BCP141	TS35D	TKY15F

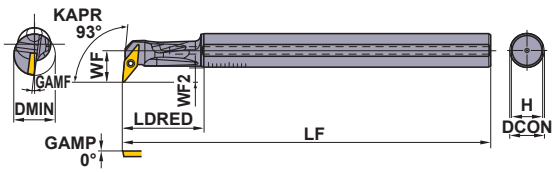
* Clamp Torque (N • m) : TS202=0.6, TS255=1.0, TS35D=3.5

FSVUB/C NEW

Steel shank with coolant hole

VC○○inserts, VB○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
(11,16)	(11,16)	(11,16)	(11,16)
Medium	Medium	Medium	CBN
MP	MM	Standard	
(16)	(16)	(16)	(11,16)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Shim	Shim Pin	Clamp Screw *	Wrench
FSVUC1612R/L-08A	●	●	VCGT VCMT	0802○○	12	150	25	11	5.5	11	8°	**16**	4	–	–	TS202	TKY06F
FSVUB2016R/L-11A	●	●	VBMT VBMW VBET VBGW	1103○○	16	180	32.5	15.5	8	15	8°	**20**	5	–	–	TS255	TKY08F
FSVUB2520R/L-11A	●	●		1103○○	20	200	40.5	17.5	8	19	7°	**25**	5	–	–	TS255	TKY08F
FSVUB3425R/L-16A☆2	●	●		1604○○	25	220	50	20.5	8.5	23.4	13°	**34**	5	SPSVN32	BCP141	TS35D	TKY15F
FSVUB4032R/L-16A☆2	●	●		1604○○	32	250	84.0	27.5	12	30.4	9°	**40**	5	SPSVN32	BCP141	TS35D	TKY15F

* Clamp Torque (N • m) : TS202=0.6, TS255=1.0, TS35D=3.5

● = NEW

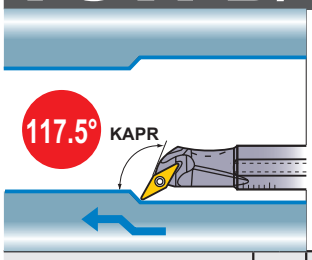
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆1 are with RE 0.2, types marked with ☆2 are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

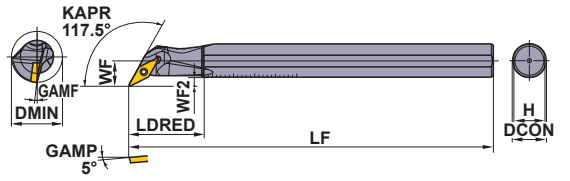
● : Inventory maintained in Japan.

FSVPB/C

Steel shank without coolant hole

VC○○inserts, VB○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
(11,16)	(11,16)	(11,16)	(11,16)
Medium	Medium	Medium	CBN
MP	MM	Standard	
(16)	(16)	(16)	(11,16)

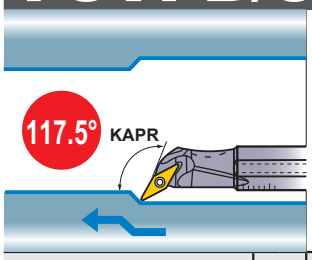
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Shim	Shim Pin	Clamp Screw *	Wrench
FSVPC1610R/L-08S	●	●	VCGT VCMT	0802○○	10	150	25	8	3	9	8°	**16**	3.5	–	–	TS202	TKY06F
FSVPB2012R/L-11S	●	●		1103○○	12	150	28	10	4.5	11	8°	**20**	4	–	–	TS255	TKY08F
FSVPB2516R/L-11S	●	●	VBMT VBMW VBET VBGW	1103○○	16	180	35	12.5	5	15	5°	**25**	5	–	–	TS255	TKY08F
FSVPB3020R/L-11S	●	●		1103○○	20	200	40	15	5	19	5°	**30**	5	–	–	TS255	TKY08F
FSVPB3425R/L-16S☆2	●	●		1604○○	25	220	50	17	5	23.4	13°	**34**	5	SPSVN32	BCP141	TS35D	TKY15F
FSVPB4032R/L-16S☆2	●	●		1604○○	32	250	55	22	6.5	30.4	9°	**40**	5	SPSVN32	BCP141	TS35D	TKY15F

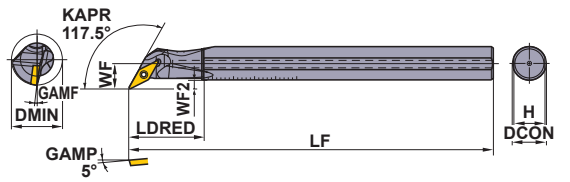
* Clamp Torque (N • m) : TS202=0.6, TS255=1.0, TS35D=3.5

FSVPB/C NEW

Steel shank with coolant hole

VC○○inserts, VB○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
(11,16)	(11,16)	(11,16)	(11,16)
Medium	Medium	Medium	CBN
MP	MM	Standard	
(16)	(16)	(16)	(11,16)

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Shim	Shim Pin	Clamp Screw *	Wrench
FSVPC1610R/L-08A	●	●	VCGT VCMT	0802○○	10	150	25	8	3	9	8°	**16**	3.5	–	–	TS202	TKY06F
FSVPB2012R/L-11A	●	●		1103○○	12	150	28	10	4.5	11	8°	**20**	4	–	–	TS255	TKY08F
FSVPB2516R/L-11A	●	●	VBMT VBMW VBET VBGW	1103○○	16	180	35	12.5	5	15	5°	**25**	5	–	–	TS255	TKY08F
FSVPB3425R/L-16A☆2	●	●		1604○○	25	220	50	17	5	23.4	13°	**34**	5	SPSVN32	BCP141	TS35D	TKY15F
FSVPB4032R/L-16A☆2	●	●		1604○○	32	250	55	22	6.5	30.4	9°	**40**	5	SPSVN32	BCP141	TS35D	TKY15F

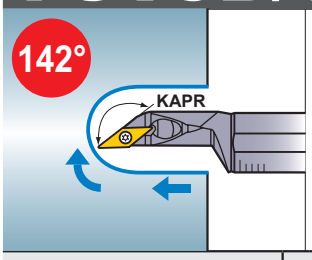
* Clamp Torque (N • m) : TS202=0.6, TS255=1.0, TS35D=3.5

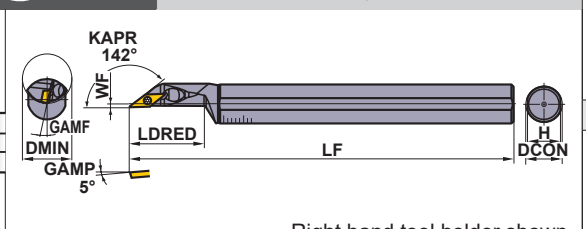
● = NEW

DIMPLE BAR

FSVJB/C

VC○○inserts, VB○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
(11)	(11)	(11)	(11)
Medium			
MV			
(08,11)			

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Maximum Recommendation l/d Ratio	Clamp Screw *	Wrench
FSVJC1612R/L-08S ☆	●	●	VCGT VCMT	0802○○	12	150	26	2	11	5°	**16**	4	TS202	TKY06F
FSVJC2016R/L-08S ☆	●	●		0802○○	16	180	36	2	15	5°	**20**	5	TS202	TKY06F
FSVJB2520R/L-11S ☆	●	●	VBMT VBMW	1103○○	20	200	37.5	2	19	5°	**25**	5	TS255	TKY08F
FSVJB3025R/L-11S ☆	●	●	VBET VBGW	1103○○	25	250	45	3.5	23.4	5°	**30**	5	TS255	TKY08F

* Clamp Torque (N • m) : TS202=0.6, TS255=1.0

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.4. (Types marked ☆ are with RE 0.8)
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

● : Inventory maintained in Japan.

Recommended Cutting Conditions

	Work Material	Properties	Cutting Mode	Chip Breaker		Recom-mendation	Cutting Speed (m/min)	L/D ≤ 3 (Steel shank)		L/D ≤ 4—5 (Steel shank)	
								Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel	≤180HB	Finish	FP	FV	NX2525	170 (120—220)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
			Light	LP	SV	MP3025	150 (100—200)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				LP	SV	NX2525	160 (110—210)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				SV	—	NX3035	150 (100—200)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
			Medium	MP	MV	MP3025	140 (90—190)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
				MP	MV	NX2525	150 (100—200)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
				MV	—	NX3035	140 (90—190)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
	Carbon Steel Alloy Steel	180-350HB	Finish	FP	—	MC6015	140 (90—190)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
				FV	—	VP15TF	140 (90—190)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
				FP	FV	NX2525	130 (80—180)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
			Light	LP	SV	MC6025	140 (90—190)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				LP	SV	MP3025	110 (60—160)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				SV	—	NX3035	110 (60—160)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
			Medium	MP	MV	MC6025	130 (80—180)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
				MP	MV	MP3025	100 (60—150)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
				MV	—	NX3035	100 (60—150)	0.25 (0.15—0.35)	—2.0	0.20 (0.15—0.25)	—1.5
M	Stainless Steel	≤200HB	Finish	FM	FV	VP15TF	150 (110—190)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
			Light	LM	—	MC7025	125 (85—165)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				SV	—	US735	125 (85—165)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				LM	SV	VP15TF	130 (90—170)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
			Medium	MM	—	MC7025	105 (70—135)	0.20 (0.10—0.25)	—2.0	0.20 (0.15—0.25)	—1.0
				MV	—	US735	125 (85—165)	0.20 (0.10—0.25)	—1.0	0.15 (0.05—0.20)	—1.0
				MM	MV	VP15TF	120 (80—160)	0.20 (0.10—0.25)	—2.0	0.20 (0.15—0.25)	—1.0
K	Gray Cast Iron	Tensile Strength ≤350MPa	Finish	F	FS	HTi10	130 (90—160)	0.15 (0.10—0.20)	—0.5	0.15 (0.05—0.20)	—0.5
			Medium	MK	—	MC5015	90 (60—120)	0.20 (0.15—0.25)	—2.0	0.20 (0.15—0.25)	—1.5
				MV	—	VP15TF	90 (60—120)	0.20 (0.10—0.25)	—2.0	0.20 (0.15—0.25)	—1.5
N	Aluminium Alloy	—	Finish	Chip	FS	HTi10	300 (200—400)	0.10 (0.05—0.15)	—0.5	0.10 (0.05—0.15)	—0.5
				Flat Top	—	MD220	200 (150—250)	0.10 (0.05—0.15)	—2.0	0.10 (0.05—0.15)	—1.0
H	Hardened Steel	35-65HRC	Finish	Flat Top	—	MB8120	100 (80—200)	0.10 (0.05—0.15)	—0.15	0.10 (0.05—0.15)	—0.1

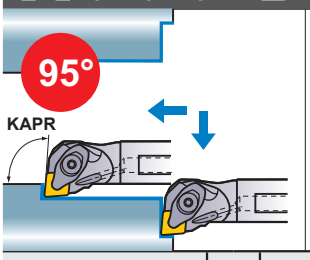
Note 1) When vibrations occur, reduce cutting speed by 30%.
Note 2) The depth of cut needs to be less than the corner diameter when using the FSVJ type.
Note 3) The recommended pressure for the internal coolant is 1MPa.

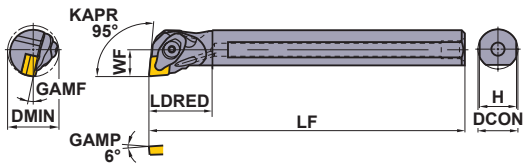
DOUBLE CLAMP DIMPLE BAR

A○○○-DCLN

With coolant hole

CN○○inserts





Right hand tool holder shown.

Finish	Light	Light	Light
FP	SA	LP	LM
(12)	(12)	(12)	(12)
Medium	**Medium**	**Stainless**	**CBN/PCD**
MP	Standard	MM	
(12)	(12)	(12)	(12)

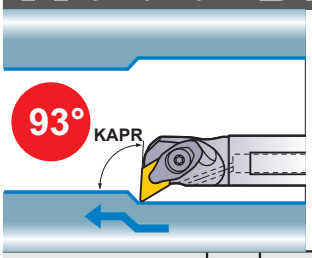
Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
					Dimensions(mm)												
A25R-DCLNR/L12	●	●	CN○A	1204○○	25	200	40	17	23	13°	32	LLSCP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DCLNR/L12	●	●	CN○G	1204○○	32	250	50	22	30	13°	40	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DCLNR/L12	●	●	CN○M	1204○○	40	300	63	27	37	10°	50	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

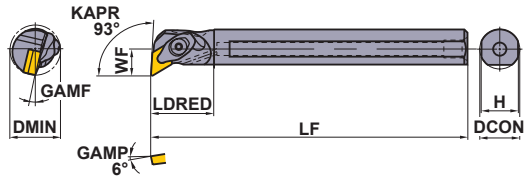
* Clamp Torque (N • m) : DC0621T=5.0

A○○○-DDUN

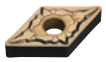
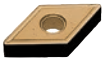
With coolant hole

DN○○inserts





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(15)	(15)	(15)	(15)
Medium	**Stainless**	**G class**	**CBN/PCD**
Standard	MM	R/L	
			
(15)	(15)	(15)	(15)

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
					Dimensions(mm)												
A25R-DDUNR/L15	●	●	DN○A	1504○○	25	200	40	17	23	13°	35	LLSDP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DDUNR/L15	●	●	DN○G	1504○○	32	250	50	22	30	13°	40	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DDUNR/L15	●	●	DN○M	1504○○	40	300	63	27	37	10°	50	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (N • m) : DC0621T=5.0

Recommended Cutting Conditions

	Work Material	Hardness	Cutting Mode	l/d≤3 Cutting Speed (m/min)	l/d≤3 Feed (mm/rev)	l/d≤3 Depth of Cut (mm)	l/d=3—4 Cutting Speed (m/min)	l/d=3—4 Feed (mm/rev)	l/d=3—4 Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180—350HB	Medium	110 (80—140)	0.25 (0.1—0.4)	—5.0	110 (80—140)	0.2 (0.1—0.3)	—4.0
M	Stainless Steel	≤200HB	Medium	80 (60—100)	0.2 (0.1—0.3)	—4.0	70 (50—100)	0.15 (0.1—0.25)	—3.0
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium	80 (60—100)	0.25 (0.1—0.4)	—5.0	80 (60—100)	0.2 (0.1—0.3)	—4.0

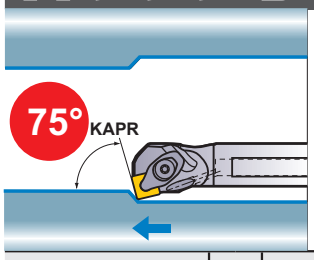
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.8.
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

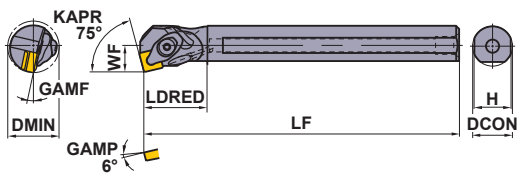
● : Inventory maintained in Japan.

A○○○-DSKN

With coolant hole

SN○○inserts





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
(12)	(12)	(12)	(12)
Medium	**Stainless**	**G class**	**CBN/PCD**
Standard	MM	R/L	
(12)	(12)	(12)	(12)

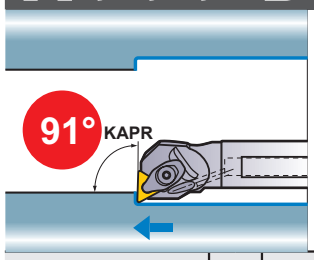
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
A25R-DSKNR/L12	●	●	SNMA SNMG SNMM	1204○○	25	200	40	17	23	13°	32	LLSSP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DSKNR/L12	●	●	SNGA SNGG	1204○○	32	250	50	22	30	13°	40	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

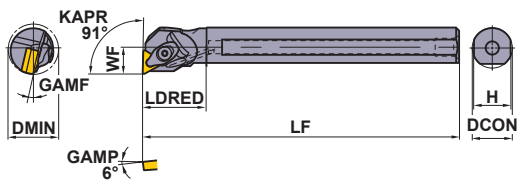
* Clamp Torque (N • m) : DC0621T=5.0

A○○○-DTFN

With coolant hole

TN○○inserts





Right hand tool holder shown.

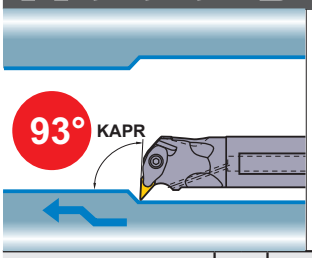
Finish	Light	Medium	Medium
FP	LP	MP	MH
(16)	(16)	(16)	(16)
Medium	**Stainless**	**G class**	**CBN/PCD**
Standard	MM	R/L	
(16)	(16)	(16)	(16)

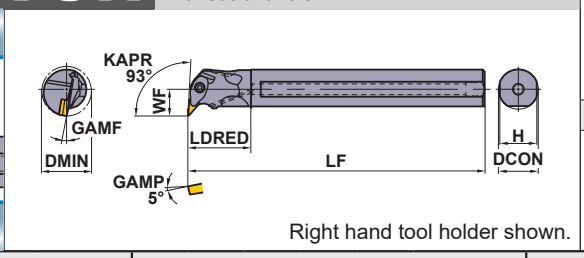
Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
A25R-DTFNR/L16	●	●	TN○A TN○G TN○M	1604○○	25	200	40	17	23	13°	32	LLSTP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A32S-DTFNR/L16	●	●		1604○○	32	250	50	22	30	13°	40	LLSTN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F

* Clamp Torque (N • m) : DC0520T=3.5

DOUBLE CLAMP DIMPLE BAR

A○○○-DVUN With coolant hole VN○○inserts





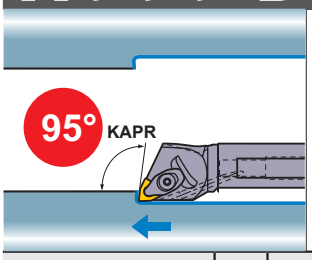
Right hand tool holder shown.

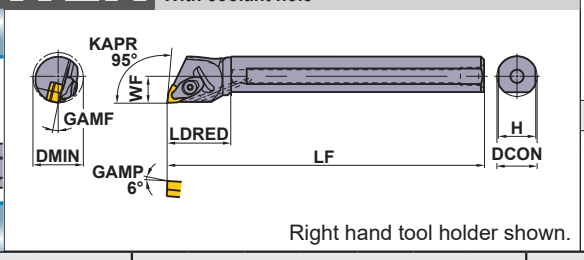
Finish	Light	Medium	Medium
FP	LP	MP	MH
(16)	(16)	(16)	(16)
Medium	**Stainless**	**G class**	**CBN/PCD**
Standard	MM	R/L	
(16)	(16)	(16)	(16)

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
					Dimensions(mm)												
A40T-DVUNR/L16	●	●	VN○A VN○G VN○M	1604○○	40	300	63	27	37	9°	50	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F

* Clamp Torque (N • m) : DC0520T=3.5

A○○○-DWLN With coolant hole WN○○inserts





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MK
(08)	(06, 08)	(06,08)	(08)
Medium	**Medium — Rough**	**Stainless**	
Standard	RP	MM	
(08)	(08)	(06,08)	

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
					Dimensions(mm)												
A25R-DWLNR/L06	●	●	WNMA WNMG	0604○○	25	200	40	17	23	13°	35	LLSWP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A25R-DWLNR/L08	●	●	WNMA	0804○○	25	200	40	17	23	13°	35	LLSWP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DWLNR/L08	●	●	WNMG	0804○○	32	250	50	22	30	13°	40	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DWLNR/L08	●	●	WNGA	0804○○	40	300	63	27	37	10°	50	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (N • m) : DC0520T=3.5, DC0621T=5.0

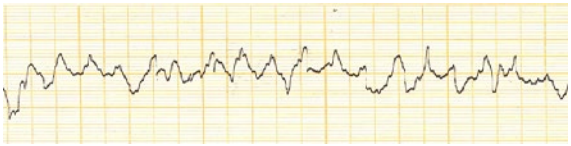
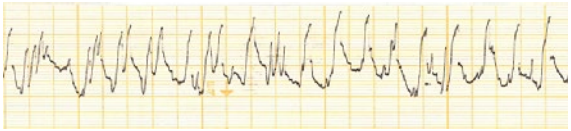
Recommended Cutting Conditions

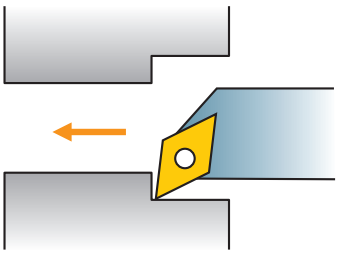
	Work Material	Hardness	Cutting Mode	l/d≤3 Cutting Speed (m/min)	l/d≤3 Feed (mm/rev)	l/d≤3 Depth of Cut (mm)	l/d=3—4 Cutting Speed (m/min)	l/d=3—4 Feed (mm/rev)	l/d=3—4 Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180—350HB	Medium	110 (80—140)	0.25 (0.1—0.4)	—5.0	110 (80—140)	0.2 (0.1—0.3)	—4.0
M	Stainless Steel	≤200HB	Medium	80 (60—100)	0.2 (0.1—0.3)	—4.0	70 (50—100)	0.15 (0.1—0.25)	—3.0
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium	80 (60—100)	0.25 (0.1—0.4)	—5.0	80 (60—100)	0.2 (0.1—0.3)	—4.0

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) Dimensions shown are with insert corner radius RE 0.8.
Note 3) When using inserts with a right or left handed chipbreaker, please use left handed inserts for right handed holders and right handed inserts for left handed holders.

● : Inventory maintained in Japan.

Cutting Performance

	Measured Value	Ra
NEW Steel shank with coolant hole		1.4μm
Steel shank without coolant hole		2.4μm



<Cutting Conditions>
Work Material : JIS SCM400
Tool : KAPR 93°
Inserts : DCMT070204-MV
Cutting Speed : vc=80m/min
Feed per Rev. : f=0.1mm/rev
Depth of Cut : ap=0.5mm
Cutting Mode : Wet Cutting Internal vs External
(Water-soluble Cutting Fluid)

Insert Grade

Cermet

The optimised alloy structure and special alloy binder improves both wear and fracture resistance.

For Wet Cutting
NX3035

For Dry Cutting
NX2525

For Improved Surface Finishes
MP3025

CBN

CBN-series for Hardened Steel Turning

BC8220 NEW

BC/MB8100

Coated CBN Grade for Cast Irons

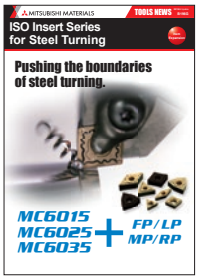
BC5110 NEW

Grade

ISO Insert Series for Steel Turning

MC6000 Series

MC6015 For High Speed Cutting
MC6025 The Standard Choice



PVD Coated Cemented Carbide Grade for Carbon Steels

MS6015

Ideal for carbon and free cutting steels. For superior surface finishes and excellent dimensional accuracy.

ISO Insert Series for Cast Iron Turning

MC5000 Series

Reduced cycle times!
New coating for speeds up to 600 m/min.

ISO Insert Series for Stainless Steel Turning

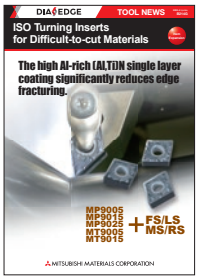
MC/MP7000 Series

Excellent resistance to notch wear and provides good burr control.
Long tool life achieved due to high plastic deformation resistance.

ISO Turning Inserts for Difficult-to-cut Materials

MP/MT9000 Series

The high Al-rich (Al,Ti)N single layer coating significantly reduces edge fracturing.



PVD Coated Grade for High Precision and Small Parts Machining

MS9025 NEW

Improved Cutting Edge Delivers Next Generation Small Parts Machining

Positive Inserts

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
		Coated																			Cermet		Coated Cermet				Carbide					
P	Steels	●	◐	◐	✠	●													✠		●	◐	◐	●	●	◐	✠				●
M	Stainless Steels						◐	✠	✠									◐	✠		○			○	○		✠				
K	Cast Irons									●	◐	●	◐					◐	✠		●			●	●		✠	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✠	◐	◐	✠										◐	◐	

Order Number	RE	Cutting Area	Features	Page
CCGT060202-AZ	0.2	F		3,4
CCGT060204-AZ	0.4	F		3,4
CCGH060202MR/L-F	0.18	F	Hand	3,4
CCGH060202R/L-F	0.2	F	Hand	3,4
CCGH060204MR/L-F	0.38	F	Hand	3,4
CCGH060204R/L-F	0.4	F	Hand	3,4
CCGT0602V5-FJ	0.05	F		3,4
CCGT060201-FJ	0.1	F		3,4
CCGT060202-FJ	0.2	F		3,4
CCGT060201M-FS	0.08	F		3,4
CCGT060202M-FS	0.18	F		3,4
CCGT060201M-FS-P	0.08	F	Mirror-surface	3,4
CCGT060202M-FS-P	0.18	F	Mirror-surface	3,4
CCMT060202-FM	0.2	F		3,4
CCMT060204-FM	0.4	F		3,4
CCMT060202-FP	0.2	F		3,4
CCMT060204-FP	0.4	F		3,4
CCMT060202-FV	0.2	F		3,4
CCMT060204-FV	0.4	F		3,4
CCGT060201M-LS	0.08	L		3,4
CCGT060202M-LS	0.18	L		3,4
CCGT060201M-LS-P	0.08	L	Mirror-surface	3,4
CCGT060202M-LS-P	0.18	L	Mirror-surface	3,4
CCGT0602V3R/L-SS	0.03	L	Hand	3,4
CCGT060201MR/L-SS	0.08	L	Hand	3,4
CCGT060201R/L-SS	0.1	L	Hand	3,4
CCGT060202MR/L-SS	0.18	L	Hand	3,4
CCGT060202R/L-SS	0.2	L	Hand	3,4
CCMT060204-LM	0.4	L		3,4
CCMT060208-LM	0.8	L		3,4
CCMT060204-LP	0.4	L		3,4
CCMT060208-LP	0.8	L		3,4
CCMT060202-LS	0.2	L		3,4
CCMT060204-LS	0.4	L		3,4
CCMH060202-SV	0.2	L		3,4
CCMH060204-SV	0.4	L		3,4
CCMT060202-SW	0.2	L	W	3,4
CCMT060204-SW	0.4	L	W	3,4
CCET060200R/L-SN	0	M	Hand	3,4
CCET0602V3R/L-SN	0.03	M	Hand	3,4
CCET0602V3R/LW-SN	0.03	M	Hand, W	3,4
CCET060201R/L-SN	0.1	M	Hand	3,4
CCET060202R/L-SN	0.2	M	Hand	3,4
CCET060204R/L-SN	0.4	M	Hand	3,4
CCET0602V3R/L-SR	0.03	M	Hand	3,4
CCET060201R/L-SR	0.1	M	Hand	3,4
CCET060202R/L-SR	0.2	M	Hand	3,4

● : Inventory maintained in Japan.
(10 inserts in one case)

Chatter Resistant Boring Bars

Positive Inserts

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✣	●													✣		●	◐	◐	●	●	◐	✣				●
M	Stainless Steels						◐	✣	✣									◐	✣		○			○	○		✣				
K	Cast Irons									●	◐	●	◐					◐	✣		●			●	●		✣	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✣	◐	◐	✣										◐	◐	

Order Number	RE	Cutting Area	Features	Coated																	Cermet		Coated Cermet				Carbide					Page
				UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15	
CCET060204R/L-SR	0.4	M	Hand																		●		●								●			3,4
CCGT060201M-SMG	0.08	M						●																										3,4
CCGT060202M-SMG	0.18	M						●													●													3,4
CCGT060204M-SMG	0.38	M						●													●													3,4
CCGT0602V3R-SN	0.03	M																			●													3,4
CCGT060201MR-SN	0.08	M	Hand					●											●															3,4
CCGT060201MRL-SN	0.08	M	Hand					●																										3,4
CCGT060201R/L-SN	0.1	M	Hand																		●													3,4
CCGT060202MR-SN	0.18	M	Hand					●											●															3,4
CCGT060202ML-SN	0.18	M	Hand					●																										3,4
CCGT060202R/L-SN	0.2	M	Hand																		●													3,4
CCMT060204-MK	0.4	M										●	●																					3,4
CCMT060208-MK	0.8	M										●	●																					3,4
CCMT060204-MM	0.4	M							●	●																								3,4
CCMT060208-MM	0.8	M							●	●																								3,4
CCMT060204-MP	0.4	M			●	●	●																●		●									3,4
CCMT060208-MP	0.8	M			●	●	●																●		●									3,4
CCMT060202-MS	0.2	M														●	●	●																3,4
CCMT060204-MS	0.4	M														●	●	●																3,4
CCMT060208-MS	0.8	M														●	●	●																3,4
CCMH060202-MV	0.2	M					●				●										●		●	●	●		●							3,4
CCMH060204-MV	0.4	M					●				●		●								●		●	●	●		●							3,4
CCMT060204-MW	0.4	M	W			●	●																●		●		●							3,4
CCMT060208-MW	0.8	M	W		●	●	●																●		●		●							3,4
CCMT060202	0.2	M			●						●												●	●	●	●			●					3,4
CCMT060204	0.4	M		●	●						●				●						●		●	●	●	●			●					3,4
CCMT060208	0.8	M			●						●				●						●		●						●					3,4
CCGW060200	0	-	Flat Top																				●											3,4
CCGW0602V5	0.05	-	Flat Top																				●											3,4
CCGW060202	0.2	-	Flat Top																														●	3,4
CCGW060204	0.4	-	Flat Top																														●	3,4
CCGW060208	0.8	-	Flat Top																														●	3,4
CCMW060202	0.2	-	Flat Top																												●			3,4
CCMW060204	0.4	-	Flat Top									●	●	●	●														●		●			3,4
CCMW060208	0.8	-	Flat Top									●	●																					3,4
CPGT080204R/L-F	0.4	F	*Hand																				●											3,4
CPGT080202	0.2	F	*																												●			3,4
CPGT080204	0.4	F	*																												●			3,4
CPMH080204R/L-F	0.4	F	Hand																		●		●								●			3,4
CPMH080202-FV	0.2	F																			●		●	●	●									3,4
CPMH080204-FV	0.4	F																			●		●	●	●									3,4
CPMH080202-SV	0.2	L					●				●										●		●	●	●			●						3,4
CPMH080204-SV	0.4	L					●				●										●		●	●	●			●						3,4
CPMH080204-MV	0.4	M					●				●		●								●		●	●	●	●		●						3,4
CPMH080208-MV	0.8	M					●				●		●								●		●	●	●	●		●						3,4
CPMX080204	0.4	M			●																	●												3,4
CPMX080208	0.8	M			●																	●												3,4

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✠	●													✠		●	◐	◐	●	●	◐	✠				●
M	Stainless Steels						◐	✠	✠									◐	✠		○			○	○		✠				
K	Cast Iron									●	◐	●	◐					◐	✠		●			●	●		✠	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✠	◐	◐	✠										◐	◐	

Order Number	RE	Cutting Area	Features	Page
CPGT090302R/L-F	0.2	F	*Hand	3,4
CPGT090304R/L-F	0.4	F	*Hand	3,4
CPGT090302	0.2	F	*	3,4
CPGT090304	0.4	F	*	3,4
CPMH090304R-F	0.4	F	Hand	3,4
CPMH090304L-F	0.4	F	Hand	3,4
CPMH090302-FV	0.2	F		3,4
CPMH090304-FV	0.4	F		3,4
CPMH090308-FV	0.8	F		3,4
CPMH090302-SV	0.2	L		3,4
CPMH090304-SV	0.4	L		3,4
CPMH090308-SV	0.8	L		3,4
CPMH090304-MV	0.4	M		3,4
CPMH090308-MV	0.8	M		3,4
CPMX090304	0.4	M		3,4
CPMX090308	0.8	M		3,4
DCGT070202-AZ	0.2	F		7,8,9,10
DCGT070204-AZ	0.4	F		7,8,9,10
DCGT070202R-F	0.2	F	Hand	7,8,9,10
DCGT070202L-F	0.2	F	Hand	7,8,9,10
DCGT070204R-F	0.4	F	Hand	7,8,9,10
DCGT070204L-F	0.4	F	Hand	7,8,9,10
DCGT070201M-FS	0.08	F		7,8,9,10
DCGT070202M-FS	0.18	F		7,8,9,10
DCGT070201M-FS-P	0.08	F	Mirror-surface	7,8,9,10
DCGT070202M-FS-P	0.18	F	Mirror-surface	7,8,9,10
DCGT070204M-FS-P	0.38	F	Mirror-surface	7,8,9,10
DCMT070202-FM	0.2	F		7,8,9,10
DCMT070204-FM	0.4	F		7,8,9,10
DCMT070202-FP	0.2	F		7,8,9,10
DCMT070204-FP	0.4	F		7,8,9,10
DCMT070202-FV	0.2	F		7,8,9,10
DCMT070204-FV	0.4	F		7,8,9,10
DCMT070208-FV	0.8	F		7,8,9,10
DCGT070201M-LS	0.08	L		7,8,9,10
DCGT070202M-LS	0.18	L		7,8,9,10
DCGT070204M-LS	0.38	L		7,8,9,10
DCGT070201M-LS-P	0.08	L	Mirror-surface	7,8,9,10
DCGT070202M-LS-P	0.18	L	Mirror-surface	7,8,9,10
DCGT070204M-LS-P	0.38	L	Mirror-surface	7,8,9,10
DCGT0702V3R/L-SS	0.03	L	Hand	7,8,9,10
DCGT070201MR/L-SS	0.08	L	Hand	7,8,9,10
DCGT070201R/L-SS	0.1	L	Hand	7,8,9,10
DCGT070202MR/L-SS	0.18	L	Hand	7,8,9,10
DCGT070202R/L-SS	0.2	L	Hand	7,8,9,10
DCMT070204-LM	0.4	L		7,8,9,10
DCMT070208-LM	0.8	L		7,8,9,10

Features ★: By changing the clamp screw, it is possible to use. Please refer to P1.

● = NEW

Hand : Hand of Tool, Flat Top : without a chip breaker, W : with wiper insert, Mirror-surface : Polished (mirror surface) finish specification

Chatter Resistant Boring Bars

Positive Inserts

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✣	●													✣		●	◐	◐	●	●	◐	✣				●
M	Stainless Steels						◐	✣	✣									◐	✣		○			○	○		✣				
K	Cast Ions									●	◐	●	◐					◐	✣		●			●	●		✣	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✣	◐	◐	✣										◐	◐	

Order Number	RE	Cutting Area	Features	Coated																	Cermet		Coated Cermet				Carbide					Page
				UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15	
DCMT070204-LP	0.4	L			●	●	●																●		●									7,8,9,10
DCMT070208-LP	0.8	L			●	●	●																●		●									7,8,9,10
DCMT070202-LS	0.2	L														●	●	●		●												●		7,8,9,10
DCMT070204-LS	0.4	L														●	●	●		●												●		7,8,9,10
DCMT070202-SV	0.2	L									●										●		●	●				●						7,8,9,10
DCMT070204-SV	0.4	L			●						●										●		●	●				●						7,8,9,10
DCMT070208-SV	0.8	L			●						●										●		●	●				●						7,8,9,10
DCET070200R/L-SN	0	M	Hand																		●		●							●				7,8,9,10
DCET0702V3R/L-SN	0.03	M	Hand																		●		●							●				7,8,9,10
DCET0702V3R/LW-SN	0.03	M	Hand, W																		●													7,8,9,10
DCET070201R-SN	0.1	M	Hand																●		●		●							●				7,8,9,10
DCET070201L-SN	0.1	M	Hand																		●		●							●				7,8,9,10
DCET070202R-SN	0.2	M	Hand																●		●		●							●				7,8,9,10
DCET070202L-SN	0.2	M	Hand																		●		●							●				7,8,9,10
DCET070204R-SN	0.4	M	Hand																●		●		●							●				7,8,9,10
DCET070204L-SN	0.4	M	Hand																		●		●							●				7,8,9,10
DCET0702V3R/L-SR	0.03	M	Hand																		●		●							●				7,8,9,10
DCET070201R/L-SR	0.1	M	Hand																		●		●							●				7,8,9,10
DCET070202R/L-SR	0.2	M	Hand																		●		●							●				7,8,9,10
DCET070204R/L-SR	0.4	M	Hand																		●		●							●				7,8,9,10
DCGT070201M-SMG	0.08	M						●																										7,8,9,10
DCGT070202M-SMG	0.18	M						●													●													7,8,9,10
DCGT070204M-SMG	0.38	M						●													●													7,8,9,10
DCGT0702V3R-SN	0.03	M	Hand																		●													7,8,9,10
DCGT070201MR/L-SN	0.08	M	Hand					●																										7,8,9,10
DCGT070201R-SN	0.1	M	Hand																		●													7,8,9,10
DCGT070202MR/L-SN	0.18	M	Hand					●																										7,8,9,10
DCGT070202R/L-SN	0.2	M	Hand																		●													7,8,9,10
DCMT070204-MK	0.4	M										●	●																					7,8,9,10
DCMT070208-MK	0.8	M										●	●																					7,8,9,10
DCMT070204-MM	0.4	M							●	●											●													7,8,9,10
DCMT070208-MM	0.8	M							●	●											●													7,8,9,10
DCMT070204-MP	0.4	M			●	●	●																●		●									7,8,9,10
DCMT070208-MP	0.8	M			●	●	●																●		●									7,8,9,10
DCMT070204-MS	0.4	M														●	●	●														●		7,8,9,10
DCMT070208-MS	0.8	M														●	●	●														●		7,8,9,10
DCMT070202-MV	0.2	M			●		●				●										●		●	●	●		●							7,8,9,10
DCMT070204-MV	0.4	M			●		●				●		●								●		●	●	●		●							7,8,9,10
DCMT070208-MV	0.8	M			●		●				●		●								●		●	●	●		●							7,8,9,10
DCMT070202	0.2	M			●						●												●	●	●	●		●						7,8,9,10
DCMT070204	0.4	M		●	●						●				●						●		●	●	●	●		●						7,8,9,10
DCMT070208	0.8	M			●						●				●								●	●	●	●								7,8,9,10
DCGW070200	0	-	Flat Top																				●											7,8,9,10
DCGW0702V5	0.05	-	Flat Top																				●											7,8,9,10
DCMW070204	0.4	-	Flat Top									●	●	●	●															●				7,8,9,10
DCGT11T302-AZ	0.2	F																												●				7,8,9,10
DCGT11T304-AZ	0.4	F																												●				7,8,9,10

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✠	●													✠		●	◐	◐	●	●	◐	✠			●
M	Stainless Steels						◐	✠	✠									◐	✠		○			○	○		✠			
K	Cast Irons									●	◐	●	◐					◐	✠		●			●	●		✠	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✠	◐	◐	✠										◐	◐	

Order Number	RE	Cutting Area	Features	Page
DCGT11T308-AZ	0.8	F		7,8,9,10
DCGT11T302R-F	0.2	F	Hand	7,8,9,10
DCGT11T302L-F	0.2	F	Hand	7,8,9,10
DCGT11T304R-F	0.4	F	Hand	7,8,9,10
DCGT11T304L-F	0.4	F	Hand	7,8,9,10
DCGT11T301M-FS	0.08	F		7,8,9,10
DCGT11T302M-FS	0.18	F		7,8,9,10
DCGT11T301M-FS-P	0.08	F	Mirror-surface	7,8,9,10
DCGT11T302M-FS-P	0.18	F	Mirror-surface	7,8,9,10
DCMT11T302-FM	0.2	F		7,8,9,10
DCMT11T304-FM	0.4	F		7,8,9,10
DCMT11T308-FM	0.8	F		7,8,9,10
DCMT11T302-FP	0.2	F		7,8,9,10
DCMT11T304-FP	0.4	F		7,8,9,10
DCMT11T308-FP	0.8	F		7,8,9,10
DCMT11T302-FV	0.2	F		7,8,9,10
DCMT11T304-FV	0.4	F		7,8,9,10
DCMT11T308-FV	0.8	F		7,8,9,10
DCGT11T301M-LS	0.08	L		7,8,9,10
DCGT11T302M-LS	0.18	L		7,8,9,10
DCGT11T304M-LS	0.38	L		7,8,9,10
DCGT11T301M-LS-P	0.08	L	Mirror-surface	7,8,9,10
DCGT11T302M-LS-P	0.18	L	Mirror-surface	7,8,9,10
DCGT11T304M-LS-P	0.38	L	Mirror-surface	7,8,9,10
DCGT11T3V3R-SS	0.03	L	Hand	7,8,9,10
DCGT11T301MR/L-SS	0.08	L	Hand	7,8,9,10
DCGT11T301R-SS	0.1	L	Hand	7,8,9,10
DCGT11T302MR/L-SS	0.18	L	Hand	7,8,9,10
DCGT11T302R-SS	0.2	L	Hand	7,8,9,10
DCGT11T304MR/L-SS	0.38	L	Hand	7,8,9,10
DCMT11T304-LM	0.4	L		7,8,9,10
DCMT11T308-LM	0.8	L		7,8,9,10
DCMT11T304-LP	0.4	L		7,8,9,10
DCMT11T308-LP	0.8	L		7,8,9,10
DCMT11T302-LS	0.2	L		7,8,9,10
DCMT11T304-LS	0.4	L		7,8,9,10
DCMT11T308-LS	0.8	L		7,8,9,10
DCMT11T302-SV	0.2	L		7,8,9,10
DCMT11T304-SV	0.4	L		7,8,9,10
DCMT11T308-SV	0.8	L		7,8,9,10
DCET11T300R/L-SN	0	M	Hand	7,8,9,10
DCET11T3V3R/L-SN	0.03	M	Hand	7,8,9,10
DCET11T3V3R/LW-SN	0.03	M	Hand, W	7,8,9,10
DCET11T301R/L-SN	0.1	M	Hand	7,8,9,10
DCET11T302R/L-SN	0.2	M	Hand	7,8,9,10
DCET11T304R/L-SN	0.4	M	Hand	7,8,9,10
DCET11T3V3R/L-SR	0.03	M	Hand	7,8,9,10

Order Number	UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
DCGT11T308-AZ																												●		
DCGT11T302R-F																		●		●								●		
DCGT11T302L-F																		●		●			●					●		
DCGT11T304R-F																		●		●								●		
DCGT11T304L-F																		●		●			●					●		
DCGT11T301M-FS													●	●																
DCGT11T302M-FS													●	●																
DCGT11T301M-FS-P																●													●	
DCGT11T302M-FS-P																●													●	
DCMT11T302-FM																		●												
DCMT11T304-FM																		●												
DCMT11T308-FM																		●												
DCMT11T302-FP		●	●	●																●		●								
DCMT11T304-FP		●	●	●																●		●								
DCMT11T308-FP		●	●	●																●		●								
DCMT11T302-FV																		●		●	●									
DCMT11T304-FV		●																●		●	●		●							
DCMT11T308-FV		●																●		●	●		●							
DCGT11T301M-LS														●			●													
DCGT11T302M-LS														●			●													
DCGT11T304M-LS														●			●													
DCGT11T301M-LS-P					●																								●	
DCGT11T302M-LS-P					●																								●	
DCGT11T304M-LS-P					●																								●	
DCGT11T3V3R-SS																		●												
DCGT11T301MR/L-SS					●																									
DCGT11T301R-SS																		●												
DCGT11T302MR/L-SS					●																									
DCGT11T302R-SS																		●												
DCGT11T304MR/L-SS					●																									
DCMT11T304-LM						●	●											●												
DCMT11T308-LM						●	●											●												
DCMT11T304-LP		●	●	●																●		●								
DCMT11T308-LP		●	●	●																●		●								
DCMT11T302-LS													●	●	●		●												●	
DCMT11T304-LS													●	●	●		●												●	
DCMT11T308-LS													●	●	●		●												●	
DCMT11T302-SV		●						●										●		●	●				●					
DCMT11T304-SV		●						●										●		●	●				●					
DCMT11T308-SV		●						●										●		●	●				●					
DCET11T300R/L-SN																		●		●								●		
DCET11T3V3R/L-SN																		●		●								●		
DCET11T3V3R/LW-SN																		●												
DCET11T301R/L-SN																		●		●								●		
DCET11T302R/L-SN																		●		●								●		
DCET11T304R/L-SN																		●		●								●		
DCET11T3V3R/L-SR																		●		●								●		

Features ★: By changing the clamp screw, it is possible to use. Please refer to P1.

● = NEW

Hand : Hand of Tool, Flat Top : without a chip breaker, W : with wiper insert, Mirror-surface : Polished (mirror surface) finish specification

Chatter Resistant Boring Bars

■ Positive Inserts

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✣	●													✣		●	◐	◐	●	●	◐	✣				●
M	Stainless Steels						◐	✣	✣									◐	✣		○			○	○		✣				
K	Cast Irons									●	◐	●	◐					◐	✣		●			●	●		✣	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✣	◐	◐	✣										◐	◐	

Order Number	RE	Cutting Area	Features	Page
DCET11T301R/L-SR	0.1	M	Hand	7,8,9,10
DCET11T302R/L-SR	0.2	M	Hand	7,8,9,10
DCET11T304R/L-SR	0.4	M	Hand	7,8,9,10
DCGT11T301M-SMG	0.08	M		7,8,9,10
DCGT11T302M-SMG	0.18	M		7,8,9,10
DCGT11T304M-SMG	0.38	M		7,8,9,10
DCGT11T3V3R/L-SN	0.03	M	Hand	7,8,9,10
DCGT11T301MR/L-SN	0.08	M	Hand	7,8,9,10
DCGT11T301R/L-SN	0.1	M	Hand	7,8,9,10
DCGT11T302MR/L-SN	0.18	M	Hand	7,8,9,10
DCGT11T302R/L-SN	0.2	M	Hand	7,8,9,10
DCGT11T304MR/L-SN	0.38	M	Hand	7,8,9,10
DCGT11T304R/L-SN	0.4	M	Hand	7,8,9,10
DCMT11T304-MK	0.4	M		7,8,9,10
DCMT11T308-MK	0.8	M		7,8,9,10
DCMT11T304-MM	0.4	M		7,8,9,10
DCMT11T308-MM	0.8	M		7,8,9,10
DCMT11T304-MP	0.4	M		7,8,9,10
DCMT11T308-MP	0.8	M		7,8,9,10
DCMT11T304-MS	0.4	M		7,8,9,10
DCMT11T308-MS	0.8	M		7,8,9,10
DCMT11T312-MS	1.2	M		7,8,9,10
DCMT11T302-MV	0.2	M		7,8,9,10
DCMT11T304-MV	0.4	M		7,8,9,10
DCMT11T308-MV	0.8	M		7,8,9,10
DCMT11T302	0.2	M		7,8,9,10
DCMT11T304	0.4	M		7,8,9,10
DCMT11T308	0.8	M		7,8,9,10
DCMT11T312	1.2	M		7,8,9,10
DCGW11T300	0	-	Flat Top	7,8,9,10
DCGW11T3V5	0.05	-	Flat Top	7,8,9,10
DCMW11T304	0.4	-	Flat Top	7,8,9,10
DCMW11T308	0.8	-	Flat Top	7,8,9,10
TPGH080202R-FS	0.2	F	Hand	5,6
TPGH080202L-FS	0.2	F	Hand	5,6
TPGH080204R-FS	0.4	F	Hand	5,6
TPGH080204L-FS	0.4	F	Hand	5,6
TPGX080202R	0.2	F	*Hand	5,6
TPGX080202L	0.2	F	*Hand	5,6
TPGX080204R	0.4	F	*Hand	5,6
TPGX080204L	0.4	F	*Hand	5,6
TPMH080202-FV	0.2	F		5,6
TPMH080204-FV	0.4	F		5,6
TPMH080202-SV	0.2	L		5,6
TPMH080204-SV	0.4	L		5,6
TPMH080202-MV	0.2	M		5,6
TPMH080204-MV	0.4	M		5,6

Order Number	UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
DCET11T301R/L-SR																		●		●								●		
DCET11T302R/L-SR																		●		●								●		
DCET11T304R/L-SR																		●		●								●		
DCGT11T301M-SMG					●																									
DCGT11T302M-SMG					●													●												
DCGT11T304M-SMG					●													●												
DCGT11T3V3R/L-SN																		●												
DCGT11T301MR/L-SN					●																									
DCGT11T301R/L-SN																		●												
DCGT11T302MR/L-SN					●																									
DCGT11T302R/L-SN																		●												
DCGT11T304MR/L-SN					●																									
DCGT11T304R/L-SN																		●												
DCMT11T304-MK									●	●																				
DCMT11T308-MK									●	●																				
DCMT11T304-MM						●	●											●												
DCMT11T308-MM						●	●											●												
DCMT11T304-MP		●	●	●																●		●								
DCMT11T308-MP		●	●	●																●		●								
DCMT11T304-MS													●	●	●														●	
DCMT11T308-MS													●	●	●														●	
DCMT11T312-MS													●	●	●														●	
DCMT11T302-MV		●		●				●										●		●	●	●	●		●					
DCMT11T304-MV		●		●				●		●								●		●	●	●	●		●					
DCMT11T308-MV		●		●				●		●								●		●	●	●	●		●					
DCMT11T302		●						●												●	●	●	●			●				
DCMT11T304	●	●						●				●						●		●	●	●	●			●				
DCMT11T308	●	●						●				●						●		●	●	●	●			●				
DCMT11T312		●																												
DCGW11T300																				●										
DCGW11T3V5																				●										
DCMW11T304									●	●	●	●														●		●		
DCMW11T308									●	●	●	●																●		
TPGH080202R-FS																		●		●								●		
TPGH080202L-FS																		●		●		●	●					●		
TPGH080204R-FS																		●		●								●		
TPGH080204L-FS																		●		●		●	●					●		
TPGX080202R																				●										
TPGX080202L																				●						●		●		
TPGX080204R																				●								●		
TPGX080204L																			●	●						●		●		
TPMH080202-FV																		●		●	●	●								
TPMH080204-FV																		●		●	●	●								
TPMH080202-SV				●				●										●		●	●	●								
TPMH080204-SV				●				●										●		●	●	●			●					
TPMH080202-MV				●				●										●		●	●	●								
TPMH080204-MV				●				●		●								●		●	●	●	●		●					

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

		Coated																			Cermet		Coated Cermet				Carbide					
		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	NEW MS9025	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15	
P	Steels	●	◐	◐	✠	●													✠		●	◐	◐	●	●	◐	✠				●	
M	Stainless Steels						◐	✠	✠									◐	✠		○			○	○		✠					
K	Cast Irons									●	◐	●	◐					◐	✠		●			●	●		✠	●	◐		●	
N	Non-ferrous Metals																												◐		●	
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✠	◐	◐	✠										◐	◐		

Order Number	RE	Cutting Area	Features	Page
TPGX080202	0.2	-	*Flat Top	5,6
TPGX080204	0.4	-	*Flat Top	5,6
TPGX080208	0.8	-	*Flat Top	5,6
TPGH090202R-FS	0.2	F	Hand	5,6
TPGH090202L-FS	0.2	F	Hand	5,6
TPGH090204R-FS	0.4	F	Hand	5,6
TPGH090204L-FS	0.4	F	Hand	5,6
TPGX090202R	0.2	F	*Hand	5,6
TPGX090202L	0.2	F	*Hand	5,6
TPGX090204R	0.4	F	*Hand	5,6
TPGX090204L	0.4	F	*Hand	5,6
TPGX090208R	0.8	F	*Hand	5,6
TPGX090208L	0.8	F	*Hand	5,6
TPMH090202-FV	0.2	F		5,6
TPMH090204-FV	0.4	F		5,6
TPMX090204L	0.4	F	Hand	5,6
TPMH090202-SV	0.2	L		5,6
TPMH090204-SV	0.4	L		5,6
TPMH090202-MV	0.2	M		5,6
TPMH090204-MV	0.4	M		5,6
TPMH090208-MV	0.8	M		5,6
TPGX090202	0.2	-	*Flat Top	5,6
TPGX090204	0.4	-	*Flat Top	5,6
TPGX090208	0.8	-	*Flat Top	5,6
TPGH110302R-FS	0.2	F	Hand	5,6
TPGH110302L-FS	0.2	F	Hand	5,6
TPGH110304R-FS	0.4	F	Hand	5,6
TPGH110304L-FS	0.4	F	Hand	5,6
TPGX110302L	0.2	F	*Hand	5,6
TPGX110304R	0.4	F	*Hand	5,6
TPGX110304L	0.4	F	*Hand	5,6
TPGX110308R	0.8	F	*Hand	5,6
TPGX110308L	0.8	F	*Hand	5,6
TPMH110302-FV	0.2	F		5,6
TPMH110304-FV	0.4	F		5,6
TPMH110308-FV	0.8	F		5,6
TPMX110304L	0.4	F	*Hand	5,6
TPMH110302-SV	0.2	L		5,6
TPMH110304-SV	0.4	L		5,6
TPMH110308-SV	0.8	L		5,6
TPMH110302-MV	0.2	M		5,6
TPMH110304-MV	0.4	M		5,6
TPMH110308-MV	0.8	M		5,6
TPMX110304	0.4	M	*	5,6
TPMX110308	0.8	M	*	5,6
TPGX110302	0.2	-	*Flat Top	5,6
TPGX110304	0.4	-	*Flat Top	5,6

Features ⋆: By changing the clamp screw, it is possible to use. Please refer to P1.

● = NEW

Hand : Hand of Tool, Flat Top : without a chip breaker, W : with wiper insert, Mirror-surface : Polished (mirror surface) finish specification

Chatter Resistant Boring Bars

■ Positive Inserts

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✣	●													✣		●	◐	◐	●	●	◐	✣				●
M	Stainless Steels						◐	✣	✣									◐	✣		○			○	○		✣				
K	Cast Irons									●	◐	●	◐					◐	✣		●			●	●		✣	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✣	◐	◐	✣										◐	◐	

Order Number	RE	Cutting Area	Features	Coated																	Cermet		Coated Cermet				Carbide					Page
				UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15	
TPGX110308	0.8	-	*Flat Top																			●	●						●	●	●			5,6
TPGH160304R-FS	0.4	F	Hand																		●		●								●			5,6
TPGH160304L-FS	0.4	F	Hand																		●		●		●						●			5,6
TPGH160308R-FS	0.8	F	Hand																		●		●								●			5,6
TPGH160308L-FS	0.8	F	Hand																		●		●		●						●			5,6
TPMH160302-FV	0.2	F																			●		●	●	●									5,6
TPMH160304-FV	0.4	F																			●		●	●	●									5,6
TPMH160308-FV	0.8	F																			●		●	●	●									5,6
TPMH160302-SV	0.2	L					●			●											●		●	●	●			●						5,6
TPMH160304-SV	0.4	L					●			●											●		●	●	●			●						5,6
TPMH160308-SV	0.8	L					●			●											●		●	●	●			●						5,6
TPMH160304-MV	0.4	M					●			●		●									●		●	●	●	●		●						5,6
TPMH160308-MV	0.8	M					●			●		●									●		●	●	●	●		●						5,6
TPGX160304	0.4	-	Flat Top																				●						●		●			5,6
TPGX160308	0.8	-	Flat Top																										●		●			5,6
VCGT080202R/L-F	0.2	F	Hand																		●		●			●					●			13,14,15
VCGT080204R/L-F	0.4	F	Hand																		●		●			●					●			13,14,15
VCMT080202-FV	0.2	F					●														●		●	●	●									13,14,15
VCMT080204-FV	0.4	F					●														●		●	●	●									13,14,15
VCMT080202-SV	0.2	L					●														●			●	●									13,14,15
VCMT080204-SV	0.4	L					●														●			●	●									13,14,15
VCMT080202-MV	0.2	M					●			●											●		●	●	●	●		●						13,14,15
VCMT080204-MV	0.4	M					●			●		●									●		●	●	●	●		●						13,14,15
VBGT110302R/L-F	0.2	F	Hand																		●		●		●	●					●			13,14,15
VBGT110304R/L-F	0.4	F	Hand																		●		●			●					●			13,14,15
VBMT110302-FM	0.2	F																			●													13,14,15
VBMT110304-FM	0.4	F																			●													13,14,15
VBMT110308-FM	0.8	F																			●													13,14,15
VBMT110302-FP	0.2	F			●	●	●																●		●									13,14,15
VBMT110304-FP	0.4	F			●	●	●																●		●									13,14,15
VBMT110308-FP	0.8	F			●	●	●																●		●									13,14,15
VBMT110304-FV	0.4	F																			●		●	●										13,14,15
VBMT110308-FV	0.8	F																			●		●	●										13,14,15
VBMT110304-LM	0.4	L							●	●											●													13,14,15
VBMT110308-LM	0.8	L							●	●											●													13,14,15
VBMT110304-LP	0.4	L			●	●	●																●		●									13,14,15
VBMT110308-LP	0.8	L			●	●	●																●		●									13,14,15
VBMT110302-LS	0.2	L														●	●	●														●		13,14,15
VBMT110304-LS	0.4	L														●	●	●														●		13,14,15
VBMT110308-LS	0.8	L														●	●	●														●		13,14,15
VBMT110304-SV	0.4	L																			●			●										13,14,15
VBMT110308-SV	0.8	L																			●			●										13,14,15
VBET110300R/L-SN	0	M	Hand																		●		●								●			13,14,15
VBET1103V3R/L-SN	0.03	M	Hand																		●		●								●			13,14,15
VBET1103V3R/LW-SN	0.03	M	Hand, W																		●													13,14,15
VBET110301R/L-SN	0.1	M	Hand																		●		●								●			13,14,15
VBET110302R/L-SN	0.2	M	Hand																		●		●								●			13,14,15

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 (NEW)	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✠	●													✠		●	◐	◐	●	●	◐	✠			●	
M	Stainless Steels						◐	✠	✠									◐	✠		○			○	○		✠				
K	Cast Ions									●	◐	●	◐					◐	✠		●			●	●		✠	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✠	◐	◐	✠										◐	◐	

Order Number	RE	Cutting Area	Features	Page
VBET110304R/L-SN	0.4	M	Hand	13,14,15
VBET1103V3R/L-SR	0.03	M	Hand	13,14,15
VBET110301R/L-SR	0.1	M	Hand	13,14,15
VBET110302R/L-SR	0.2	M	Hand	13,14,15
VBET110304R/L-SR	0.4	M	Hand	13,14,15
VBMT110304-MV	0.4	M		13,14,15
VBMT110308-MV	0.8	M		13,14,15
VBGT160402R/L-F	0.2	F	Hand	13,14,15
VBGT160404R/L-F	0.4	F	Hand	13,14,15
VBMT160404-FM	0.4	F		13,14,15
VBMT160408-FM	0.8	F		13,14,15
VBMT160404-FP	0.4	F		13,14,15
VBMT160408-FP	0.8	F		13,14,15
VBMT160404-FV	0.4	F		13,14,15
VBMT160408-FV	0.8	F		13,14,15
VBMT160404-LM	0.4	L		13,14,15
VBMT160408-LM	0.8	L		13,14,15
VBMT160404-LP	0.4	L		13,14,15
VBMT160408-LP	0.8	L		13,14,15
VBMT160404-LS	0.4	L		13,14,15
VBMT160408-LS	0.8	L		13,14,15
VBMT160404-SV	0.4	L		13,14,15
VBMT160408-SV	0.8	L		13,14,15
VBMT160404-MK	0.4	M		13,14,15
VBMT160408-MK	0.8	M		13,14,15
VBMT160404-MM	0.4	M		13,14,15
VBMT160408-MM	0.8	M		13,14,15
VBMT160404-MP	0.4	M		13,14,15
VBMT160408-MP	0.8	M		13,14,15
VBMT160402-MS	0.2	M		13,14,15
VBMT160404-MS	0.4	M		13,14,15
VBMT160408-MS	0.8	M		13,14,15
VBMT160412-MS	1.2	M		13,14,15
VBMT160404-MV	0.4	M		13,14,15
VBMT160408-MV	0.8	M		13,14,15
VBMT160404	0.4	M		13,14,15
VBMT160408	0.8	M		13,14,15
VBMW160408	0.8	-	Flat Top	13,14,15
WBGTL302V3L-F	0.03	F	Hand	11,12
WBGTL30201L-F	0.1	F	Hand	11,12
WBGTL30202R-F	0.2	F	Hand	11,12
WBGTL30202L-F	0.2	F	Hand	11,12
WBGTL30204R-F	0.4	F	Hand	11,12
WBGTL30204L-F	0.4	F	Hand	11,12
WBMTL30202R/L-MV	0.2	M	Hand	11,12
WBMTL30204R/L-MV	0.4	M	Hand	11,12
WPGT040204R/L-FS	0.4	F	Hand	11,12

Features ★: By changing the clamp screw, it is possible to use. Please refer to P1.

● = NEW

Hand : Hand of Tool, Flat Top : without a chip breaker, W : with wiper insert, Mirror-surface : Polished (mirror surface) finish specification

Chatter Resistant Boring Bars

■ Positive Inserts

		UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 NEW	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15
P	Steels	●	◐	◐	✣	●													✣		●	◐	◐	●	●	◐	✣				●
M	Stainless Steels						◐	✣	✣									◐	✣		○			○	○		✣				
K	Cast Irons									●	◐	●	◐					◐	✣		●			●	●		✣	●	◐		●
N	Non-ferrous Metals																												◐		●
S	Heat-resistant Alloys, Titanium Alloys													●	◐	✣	◐	◐	✣										◐	◐	

Order Number	RE	Cutting Area	Features	Coated																	Cermet		Coated Cermet				Carbide					Page
				UE6105	UE6110	MC6015	MC6025	MS6015	MC7025	MC7035	US735	MC5005	MC5015	UC5105	UC5115	MP9005	MP9015	MP9025	MS9025 NEW	VP10RT	VP15TF	UP20M	NX2525	NX3035	MP3025	AP25N	VP25N	VP45N	UTi20T	HTi05T	HTi10	MT9005	TF15	
WPMT040202-MV	0.2	M					●				●										●		●	●	●									11,12
WPMT040204-MV	0.4	M					●				●		●								●		●	●	●			●						11,12
WPGT060304R/L-FS	0.4	F	Hand																		●		●											11,12
WPMT060304-MV	0.4	M					●				●		●								●		●	●	●									11,12
WPMT060308-MV	0.8	M					●				●		●								●		●	●	●			●						11,12

● : Inventory maintained in Japan.
(10 inserts in one case)

Positive Inserts CBN & PCD

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

H	Hardened Materials	◐	●	●	◐	✠		●	◐	✠							
K	Cast Iron						●				◐		●	◐			
S	Heat-resistant Alloys, Titanium Alloys													◐			
N	Non-ferrous Metals														●		
	Sintered Alloys										◐	◐					

Order Number	RE	Features and Machining Methods	Coated CBN						CBN							PCD		Page
			NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		
NP-CCGW060202FS2	0.2	Continuous			●			●	●			●	●					3,4
NP-CCGW060204FS2	0.4	Continuous			●			●	●			●	●					3,4
NP-CCGW060208FS2	0.8	Continuous			●				●			●	●					3,4
NP-CCGW060202GS2	0.2			●	●			●				●		●	●			3,4
NP-CCGW060204GS2	0.4			●	●							●		●	●			3,4
NP-CCGW060208GS2	0.8			●	●							●		●	●			3,4
NP-CCGW060202GA2	0.2		●			●				●								3,4
NP-CCGW060204GA2	0.4		●			●	●			●								3,4
NP-CCGW060208GA2	0.8		●			●	●			●								3,4
NP-CCGW060202TS2	0.2	Interrupted											●					3,4
NP-CCGW060204TS2	0.4	Interrupted											●					3,4
NP-CCGW060208TS2	0.8	Interrupted											●	●				3,4
NP-CCGW060204TA2	0.4	Interrupted					●				●							3,4
NP-CCGW060208TA2	0.8	Interrupted					●				●							3,4
NP-CCGW060202FA2	0.2	Continuous												●	●			3,4
NP-CCGW060204FA2	0.4	Continuous												●	●			3,4
NP-CCGW060208FA2	0.8	Continuous												●	●			3,4
NP-CCGW060202SF2	0.2	For Sintered Alloys										●	●					3,4
NP-CCGW060204SF2	0.4	For Sintered Alloys										●	●					3,4
NP-CCGW060208SF2	0.8	For Sintered Alloys										●	●					3,4
NP-CCGW060202SE2	0.2	For Sintered Alloys										●	●					3,4
NP-CCGW060204SE2	0.4	For Sintered Alloys										●	●					3,4
NP-CCGW060208SE2	0.8	For Sintered Alloys										●	●					3,4
NP-CCMH060202	0.2															●		3,4
NP-CCMH060204	0.4															●		3,4
CCGW060202FS	0.2	Full Face											●					3,4
CCGW060204FS	0.4	Full Face											●					3,4
CCGW060208FS	0.8	Full Face											●					3,4
CCMW060202	0.2															●		3,4
CCMW060204	0.4															●		3,4
NP-CPGB080202FS2	0.2	Continuous										●	●					3,4
NP-CPGB080204FS2	0.4	Continuous			●							●	●					3,4
NP-CPGB080208FS2	0.8	Continuous			●													3,4
NP-CPGB080204GS2	0.4			●	●													3,4
NP-CPGB080208GS2	0.8			●	●													3,4
NP-CPGB080204GA2	0.4		●			●	●											3,4
NP-CPGB080208GA2	0.8		●			●	●											3,4
NP-CPGB080212GA2	1.2		●			●	●											3,4
NP-CPGB080204TA2	0.4	Interrupted					●											3,4
NP-CPGB080208TA2	0.8	Interrupted					●											3,4
NP-CPGB080212TA2	1.2	Interrupted					●											3,4
NP-CPGB080202SE2	0.2	For Sintered Alloys										●	●					3,4
NP-CPGB080204SE2	0.4	For Sintered Alloys										●	●					3,4
NP-CPMH080202	0.2															●		3,4
NP-CPMH080204	0.4															●		3,4
CPGT080202	0.2															●		3,4
CPGT080204	0.4															●		3,4

Features ★: By changing the clamp screw, it is possible to use. Please refer to P1.

Hand : Hand of Tool, Full Face : Full face CBN, Br : Insert with Chip breaker

● = NEW

Chatter Resistant Boring Bars

Positive Inserts CBN & PCD

H	Hardened Materials			◐	●	●	◐	✣		●	◐	✣						
K	Cast Ions								●				◐		●	◐		
S	Heat-resistant Alloys, Titanium Alloys															◐		
N	Non-ferrous Metals																●	
	Sintered Alloys												◐	◐				
	Order Number	RE	Features and Machining Methods	Coated CBN						CBN							PCD		Page
				NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		
	NP-CPGB090302FS2	0.2	Continuous		●	●							●	●					3,4
	NP-CPGB090304FS2	0.4	Continuous		●		●						●	●					3,4
	NP-CPGB090308FS2	0.8	Continuous		●		●						●	●					3,4
	NP-CPGB090312FS2	1.2	Continuous				●												3,4
	NP-CPGB090302GS2	0.2			●	●													3,4
	NP-CPGB090304GS2	0.4			●	●													3,4
	NP-CPGB090308GS2	0.8			●	●													3,4
	NP-CPGB090302GA2	0.2		●			●												3,4
	NP-CPGB090304GA2	0.4		●			●	●											3,4
	NP-CPGB090308GA2	0.8		●			●	●											3,4
	NP-CPGB090312GA2	1.2		●			●	●											3,4
NEW	NP-CPGB090304VA2	0.4	For High Speed and Feed	●															3,4
NEW	NP-CPGB090308VA2	0.8	For High Speed and Feed	●															3,4
NEW	NP-CPGB090312VA2	1.2	For High Speed and Feed	●															3,4
	NP-CPGB090304TA2	0.4	Interrupted	●			●	●											3,4
	NP-CPGB090308TA2	0.8	Interrupted	●			●	●											3,4
	NP-CPGB090312TA2	1.2	Interrupted	●			●	●											3,4
	NP-CPGB090302SE2	0.2	For Sintered Alloys										●	●					3,4
	NP-CPGB090304SE2	0.4	For Sintered Alloys										●	●					3,4
	NP-CPGB090308SE2	0.8	For Sintered Alloys										●	●					3,4
	NP-CPMH090302	0.2															●		3,4
	NP-CPMH090304	0.4															●		3,4
	CPGT090302	0.2															●		3,4
	CTGT090304	0.4															●		3,4
	NP-DCGW070202GA2	0.2		●			●				●								7,8,9,10
	NP-DCGW070204GA2	0.4		●			●	●			●								7,8,9,10
	NP-DCGW070208GA2	0.8		●				●											7,8,9,10
	NP-DCGW070202GS2	0.2				●	●												7,8,9,10
	NP-DCGW070204GS2	0.4				●	●		●				●						7,8,9,10
	NP-DCGW070208GS2	0.8				●	●						●						7,8,9,10
	NP-DCGW070202FS2	0.2	Continuous			●				●									7,8,9,10
	NP-DCGW070204FS2	0.4	Continuous			●	●		●	●			●	●					7,8,9,10
	NP-DCGW070208FS2	0.8	Continuous			●				●			●	●					7,8,9,10
	NP-DCGW070204TA2	0.4	Interrupted				●	●			●	●							7,8,9,10
	NP-DCGW070208TA2	0.8	Interrupted					●				●							7,8,9,10
	NP-DCGW070204TS2	0.4	Interrupted											●					7,8,9,10
	NP-DCGW070208TS2	0.8	Interrupted											●					7,8,9,10
	NP-DCGW070204SF2	0.4	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW070208SF2	0.8	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW070204SE2	0.4	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW070208SE2	0.8	For Sintered Alloys										●	●					7,8,9,10
	NP-DCMT070202R/L-F	0.2	Hand, Br														●		7,8,9,10
	NP-DCMT070204R/L-F	0.4	Hand, Br														●		7,8,9,10
	DCGW070204FS	0.4	Full Face											●					7,8,9,10
	DCGW070208FS	0.8	Full Face											●					7,8,9,10
	DCMW070202	0.2															●		7,8,9,10
	DCMW070204	0.4															●		7,8,9,10

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

H	Hardened Materials			◐	●	●	◐	✠		●	◐	✠						
K	Cast Irons								●				◐		●	◐		
S	Heat-resistant Alloys, Titanium Alloys															◐		
N	Non-ferrous Metals																●	
	Sintered Alloys												◐	◐				
				Coated CBN						CBN							PCD	
Order Number		RE	Features and Machining Methods	NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		Page
	NP-DCGW11T302GA2	0.2		●			●				●								7,8,9,10
	NP-DCGW11T304GA2	0.4		●			●	●			●								7,8,9,10
	NP-DCGW11T308GA2	0.8		●			●	●			●								7,8,9,10
	NP-DCGW11T302GS2	0.2			●	●							●						7,8,9,10
	NP-DCGW11T304GS2	0.4			●	●			●				●		●	●			7,8,9,10
	NP-DCGW11T308GS2	0.8			●	●			●				●		●	●			7,8,9,10
	NP-DCGW11T304GH2	0.4				●	●	●											7,8,9,10
	NP-DCGW11T308GH2	0.8				●	●	●											7,8,9,10
	NP-DCGW11T304FA2	0.4	Continuous												●	●			7,8,9,10
	NP-DCGW11T308FA2	0.8	Continuous												●	●			7,8,9,10
	NP-DCGW11T302FS2	0.2	Continuous		●	●				●			●	●					7,8,9,10
	NP-DCGW11T304FS2	0.4	Continuous		●	●	●			●			●	●					7,8,9,10
	NP-DCGW11T308FS2	0.8	Continuous		●	●	●		●	●			●	●					7,8,9,10
NEW	NP-DCGW11T304VA2	0.4	For High Speed and Feed	●															7,8,9,10
NEW	NP-DCGW11T308VA2	0.8	For High Speed and Feed	●															7,8,9,10
	NP-DCGW11T304TA2	0.4	Interrupted	●			●	●			●	●							7,8,9,10
	NP-DCGW11T308TA2	0.8	Interrupted	●			●	●			●	●							7,8,9,10
	NP-DCGW11T302TS2	0.2	Interrupted											●					7,8,9,10
	NP-DCGW11T304TS2	0.4	Interrupted											●					7,8,9,10
	NP-DCGW11T308TS2	0.8	Interrupted											●					7,8,9,10
	NP-DCGW11T304TH2	0.4	Interrupted				●	●				●							7,8,9,10
	NP-DCGW11T308TH2	0.8	Interrupted				●	●				●							7,8,9,10
	NP-DCGW11T302SF2	0.2	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW11T304SF2	0.4	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW11T308SF2	0.8	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW11T302SE2	0.2	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW11T304SE2	0.4	For Sintered Alloys										●	●					7,8,9,10
	NP-DCGW11T308SE2	0.8	For Sintered Alloys										●	●					7,8,9,10
	BF-DCGT11T304TS2	0.4	Interrupted, Br			●													7,8,9,10
	BF-DCGT11T308TS2	0.8	Interrupted, Br			●													7,8,9,10
	BM-DCGT11T304TA2	0.4	Interrupted, Br	●			●												7,8,9,10
	BM-DCGT11T308TA2	0.8	Interrupted, Br	●			●												7,8,9,10
	NP-DCGW11T302GS	0.2													●	●			7,8,9,10
	NP-DCGW11T304GS	0.4													●	●			7,8,9,10
	NP-DCMT11T302R/L-F	0.2	Hand, Br														●		7,8,9,10
	NP-DCMT11T304R/L-F	0.4	Hand, Br														●		7,8,9,10
	DCMW11T302	0.2															●		7,8,9,10
	DCMW11T304	0.4															●		7,8,9,10
	NP-TPGB080204GA3	0.4						●											5,6
	NP-TPGB080208GA3	0.8						●											5,6
	NP-TPGB080204GS3	0.4			●	●													5,6
	NP-TPGB080208GS3	0.8			●	●			●										5,6
	NP-TPGB080204TA3	0.4	Interrupted					●				●							5,6
	NP-TPGB080208TA3	0.8	Interrupted					●				●							5,6
	NP-TPMH080202R/L-F	0.2	Hand, Br														●		5,6
	NP-TPMH080204R/L-F	0.4	Hand, Br														●		5,6
	TPGX080202	0.2	*												●	●	●		5,6

Features *: By changing the clamp screw, it is possible to use. Please refer to P1.

Hand : Hand of Tool, Full Face : Full face CBN, Br : Insert with Chip breaker

● = NEW

Chatter Resistant Boring Bars

Positive Inserts CBN & PCD

H	Hardened Materials																
K	Cast Iron																
S	Heat-resistant Alloys, Titanium Alloys																
N	Non-ferrous Metals																
	Sintered Alloys																

Order Number	RE	Features and Machining Methods	Coated CBN						CBN							PCD		Page
			NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		
TPGX080204	0.4	*												●	●	●		5,6
TPGX080208	0.8	*														●		5,6
NP-TPGB090204GA3	0.4		●			●	●			●								5,6
NP-TPGB090208GA3	0.8		●			●	●			●								5,6
NP-TPGB090202GS3	0.2											●						5,6
NP-TPGB090204GS3	0.4			●	●							●						5,6
NP-TPGB090208GS3	0.8			●	●													5,6
NP-TPGB090202FS3	0.2	Continuous										●	●					5,6
NP-TPGB090204FS3	0.4	Continuous						●				●	●					5,6
NP-TPGB090204TA3	0.4	Interrupted					●				●							5,6
NP-TPGB090208TA3	0.8	Interrupted					●				●							5,6
NP-TPGB090202SF3	0.2	For Sintered Alloys										●	●					5,6
NP-TPGB090204SF3	0.4	For Sintered Alloys										●	●					5,6
NP-TPGB090202SE3	0.2	For Sintered Alloys										●	●					5,6
NP-TPGB090204SE3	0.4	For Sintered Alloys										●	●					5,6
NP-TPMH090202R/L-F	0.2	Hand, Br														●		5,6
NP-TPMH090204R/L-F	0.4	Hand, Br														●		5,6
NP-TPMX090202R/L-F	0.2	*Hand, Br														●		5,6
NP-TPMX090204L-F	0.4	*Hand, Br														●		5,6
NP-TPMX090208L-F	0.8	*Hand, Br														●		5,6
TPGX090202	0.2	*												●	●	●		5,6
TPGX090204	0.4	*												●	●	●		5,6
TPGX090208	0.8	*														●		5,6
NP-TPGB110302GA3	0.2		●			●				●								5,6
NP-TPGB110304GA3	0.4		●			●	●			●								5,6
NP-TPGB110308GA3	0.8		●			●	●			●								5,6
NP-TPGB110302GS3	0.2			●	●							●						5,6
NP-TPGB110304GS3	0.4			●	●			●				●						5,6
NP-TPGB110308GS3	0.8			●	●			●				●						5,6
NP-TPGB110302FS3	0.2	Continuous		●	●				●			●	●					5,6
NP-TPGB110304FS3	0.4	Continuous		●	●	●		●	●			●	●					5,6
NP-TPGB110308FS3	0.8	Continuous		●	●	●		●	●			●	●					5,6
NEW NP-TPGB110304VA3	0.4	For High Speed and Feed	●															5,6
NEW NP-TPGB110308VA3	0.8	For High Speed and Feed	●															5,6
NP-TPGB110304TA3	0.4	Interrupted	●			●	●			●	●							5,6
NP-TPGB110308TA3	0.8	Interrupted	●			●	●			●	●							5,6
NP-TPGB110302SF3	0.2	For Sintered Alloys										●	●					5,6
NP-TPGB110304SF3	0.4	For Sintered Alloys										●	●					5,6
NP-TPGB110308SF3	0.8	For Sintered Alloys										●	●					5,6
NP-TPGB110302SE3	0.2	For Sintered Alloys										●	●					5,6
NP-TPGB110304SE3	0.4	For Sintered Alloys										●	●					5,6
NP-TPGB110308SE3	0.8	For Sintered Alloys										●	●					5,6
NP-TPMH110302R/L-F	0.2	Hand, Br														●		5,6
NP-TPMH110304R/L-F	0.4	Hand, Br														●		5,6
NP-TPGX110304F	0.4	*												●				5,6
NP-TPGX110308F	0.8	*												●				5,6
NP-TPGX110304T	0.4	*													●			5,6

● : Inventory maintained in Japan.
(10 inserts in one case)

Cutting Conditions (Guide) : ● : Stable Cutting ◐ : General Cutting ✠ : Unstable Cutting

H	Hardened Materials			◐	●	●	◐	✠		●	◐	✠						
K	Cast Iron								●				◐		●	◐		
S	Heat-resistant Alloys, Titanium Alloys															◐		
N	Non-ferrous Metals																●	
	Sintered Alloys												◐	◐				
				Coated CBN						CBN							PCD		
Order Number	RE	Features and Machining Methods		NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		Page
NP-TPGX110308T	0.8	*														●			5,6
NP-TPMX110302L-F	0.2	*Hand, Br															●		5,6
NP-TPMX110304L-F	0.4	*Hand, Br															●		5,6
NP-TPMX110308L-F	0.8	*Hand, Br															●		5,6
TPGX110302	0.2	*															●		5,6
TPGX110304	0.4	*													●	●	●		5,6
TPGX110308	0.8	*													●	●	●		5,6
NP-TPGB160304GA3	0.4			●			●	●			●								5,6
NP-TPGB160308GA3	0.8			●			●	●			●								5,6
NP-TPGB160304GS3	0.4				●	●													5,6
NP-TPGB160308GS3	0.8				●	●													5,6
NP-TPGB160304GH3	0.4					●	●	●											5,6
NP-TPGB160308GH3	0.8					●	●	●											5,6
NP-TPGB160304FS3	0.4	Continuous					●												5,6
NP-TPGB160308FS3	0.8	Continuous					●												5,6
NP-TPGB160304TA3	0.4	Interrupted					●	●			●	●							5,6
NP-TPGB160308TA3	0.8	Interrupted					●	●			●	●							5,6
NP-TPGB160304TH3	0.4	Interrupted					●	●				●							5,6
NP-TPGB160308TH3	0.8	Interrupted					●	●				●							5,6
NP-TPMH160302R/L-F	0.2	Hand, Br															●		5,6
NP-TPMH160304R/L-F	0.4	Hand, Br															●		5,6
NP-TPMX160302L-F	0.2	Hand, Br															●		5,6
NP-TPMX160304L-F	0.4	Hand, Br															●		5,6
NP-TPMX160308L-F	0.8	Hand, Br															●		5,6
TPGX160304	0.4														●		●		5,6
TPGX160308	0.8														●		●		5,6
TPGT160302R/L-F	0.2	Hand, Br															●		5,6
TPGT160304R/L-F	0.4	Hand, Br															●		5,6
NP-VBGW110302GA2	0.2			●			●				●								13,14,15
NP-VBGW110304GA2	0.4			●			●	●			●								13,14,15
NP-VBGW110308GA2	0.8			●			●	●			●								13,14,15
NP-VBGW110302GS2	0.2				●	●													13,14,15
NP-VBGW110304GS2	0.4				●	●							●			●			13,14,15
NP-VBGW110308GS2	0.8				●	●							●			●			13,14,15
NP-VBGW110302FS2	0.2	Continuous				●				●									13,14,15
NP-VBGW110304FS2	0.4	Continuous				●				●			●	●					13,14,15
NP-VBGW110308FS2	0.8	Continuous				●				●			●	●					13,14,15
NP-VBGW110304TA2	0.4	Interrupted						●											13,14,15
NP-VBGW110308TA2	0.8	Interrupted						●											13,14,15
NP-VBGW110304TS2	0.4	Interrupted												●					13,14,15
NP-VBGW110308TS2	0.8	Interrupted												●					13,14,15
NP-VBGW110304SF2	0.4	For Sintered Alloys											●	●					13,14,15
NP-VBGW110308SF2	0.8	For Sintered Alloys											●	●					13,14,15
NP-VBGW110304SE2	0.4	For Sintered Alloys											●	●					13,14,15
NP-VBGW110308SE2	0.8	For Sintered Alloys											●	●					13,14,15
NP-VBGT1103V5R-F	0.05	Hand, Br															●		13,14,15
NP-VBGT110301R-F	0.1	Hand, Br															●		13,14,15

Features ★: By changing the clamp screw, it is possible to use. Please refer to P1.

Hand : Hand of Tool, Full Face : Full face CBN, Br : Insert with Chip breaker

● = NEW

Chatter Resistant Boring Bars

Positive Inserts CBN & PCD

H	Hardened Materials			◐	●	●	◐	✣		●	◐	✣						
K	Cast Iron								●				◐		●	◐		
S	Heat-resistant Alloys, Titanium Alloys															◐		
N	Non-ferrous Metals																●	
	Sintered Alloys												◐	◐				
	Order Number	RE	Features and Machining Methods	Coated CBN						CBN							PCD		Page
				NEW BC8220	BC8105	BC8110	BC8120	BC8130	NEW BC5110	MB8110	MB8120	MB8130	MB4120	MB4020	MB710	MB730	MD220		
	NP-VBGT110302R-F	0.2	Hand, Br														●		13,14,15
	NP-VBGT110304R-F	0.4	Hand, Br														●		13,14,15
	NP-VBGW160402GA2	0.2		●			●				●								13,14,15
	NP-VBGW160404GA2	0.4		●			●	●			●								13,14,15
	NP-VBGW160408GA2	0.8		●			●	●			●								13,14,15
	NP-VBGW160402GS2	0.2			●	●													13,14,15
	NP-VBGW160404GS2	0.4			●	●			●				●		●	●			13,14,15
	NP-VBGW160408GS2	0.8			●	●			●				●		●	●			13,14,15
	NP-VBGW160404GH2	0.4				●	●	●											13,14,15
	NP-VBGW160408GH2	0.8				●	●	●											13,14,15
	NP-VBGW160402FS2	0.2	Continuous			●				●									13,14,15
	NP-VBGW160404FS2	0.4	Continuous				●						●	●					13,14,15
	NP-VBGW160408FS2	0.8	Continuous				●						●	●					13,14,15
NEW	NP-VBGW160404VA2	0.4	For High Speed and Feed	●															13,14,15
NEW	NP-VBGW160408VA2	0.8	For High Speed and Feed	●															13,14,15
	NP-VBGW160404TA2	0.4	Interrupted	●			●	●			●								13,14,15
	NP-VBGW160408TA2	0.8	Interrupted	●			●	●			●								13,14,15
	NP-VBGW160404TS2	0.4	Interrupted											●					13,14,15
	NP-VBGW160408TS2	0.8	Interrupted											●					13,14,15
	NP-VBGW160404TH2	0.4	Interrupted				●	●											13,14,15
	NP-VBGW160408TH2	0.8	Interrupted				●	●											13,14,15
	NP-VBGW160404SF2	0.4	For Sintered Alloys										●	●					13,14,15
	NP-VBGW160408SF2	0.8	For Sintered Alloys										●	●					13,14,15
	NP-VBGW160404SE2	0.4	For Sintered Alloys										●	●					13,14,15
	NP-VBGW160408SE2	0.8	For Sintered Alloys										●	●					13,14,15
	WPGT040202	0.2															●		11,12
	WPGT040204	0.4															●		11,12
	WPGT060302	0.2															●		11,12
	WPGT060304	0.4															●		11,12

● = NEW

● : Inventory maintained in Japan.
(10 inserts in one case)

Memo

Chatter Resistant Boring Bars

Dimple Bar Series

For Your Safety
●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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