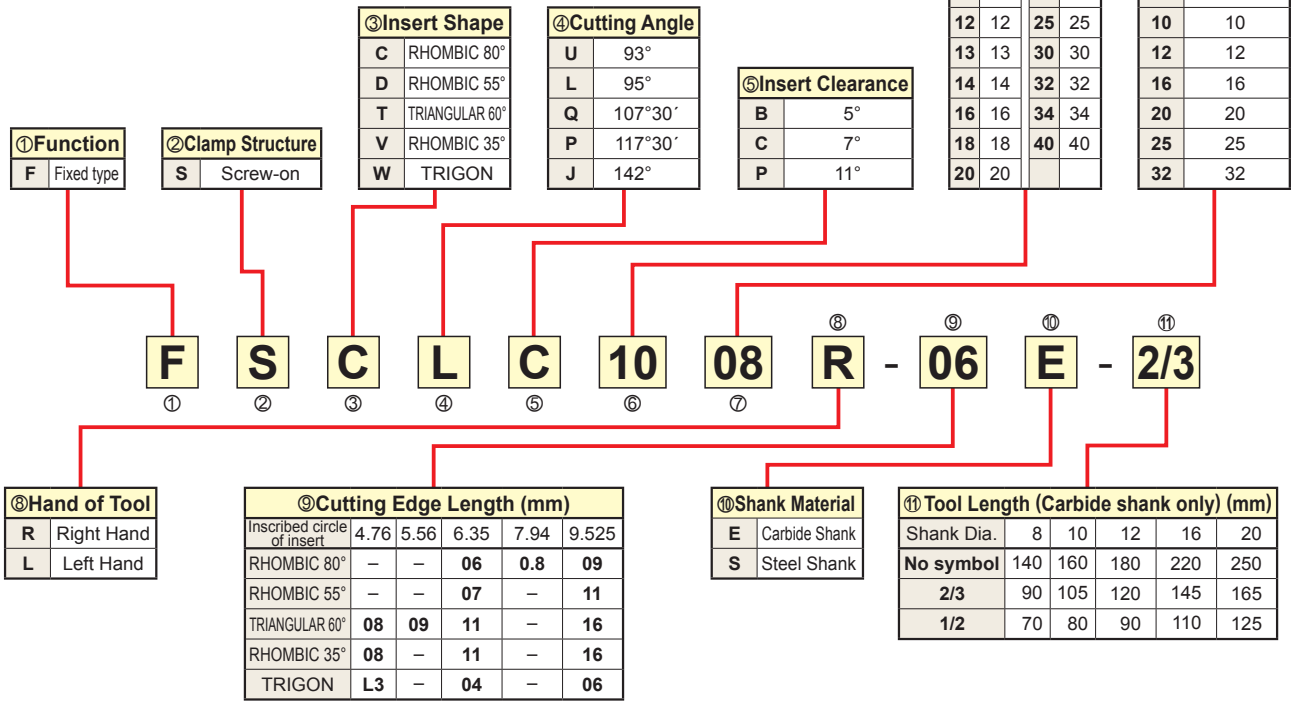
TURNING TOOLS
BORING BARS

★Arranged by Alphabetical order

IDENTIFICATION

DIMPLE BAR



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**

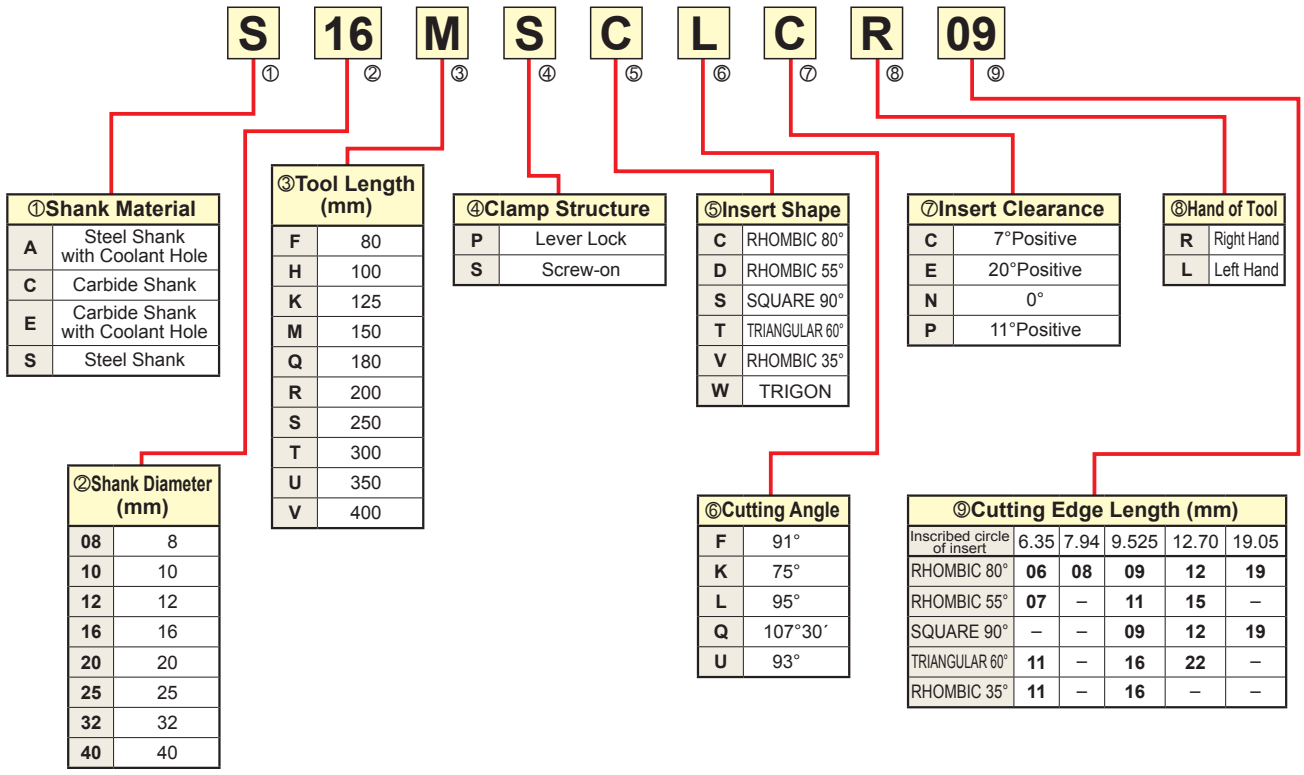
⑩Shank Material

E	Carbide Shank
S	Steel Shank

⑪Tool Length (Carbide shank only) (mm)

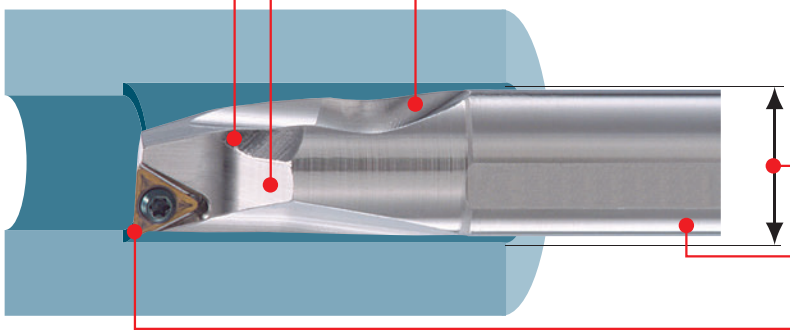
Shank Dia.	8	10	12	16	20
No symbol	140	160	180	220	250
2/3	90	105	120	145	165
1/2	70	80	90	110	125

ISO TYPE Boring tools
[For Aluminium Alloy, P-type and S-type]



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.

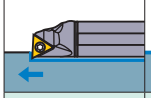
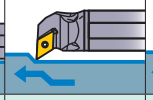
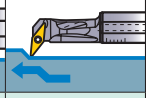
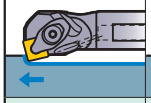
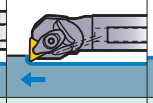
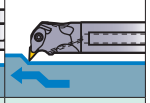
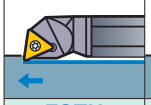
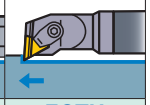
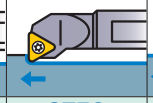
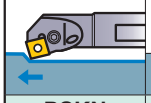
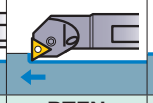
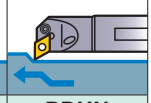
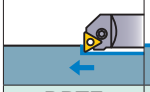
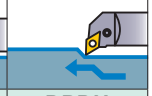
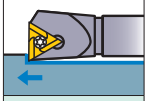
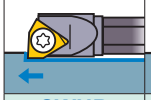
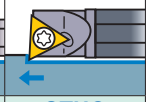
Holder : FSTUP • FSTUP...E

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.

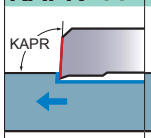
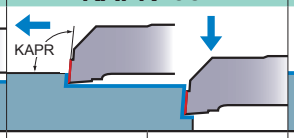
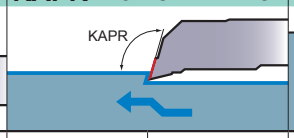
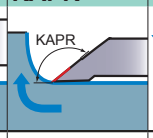
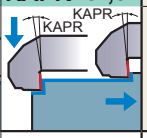
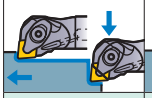
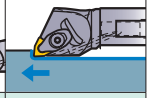
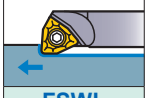
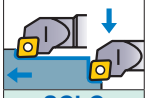
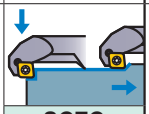
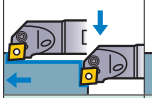
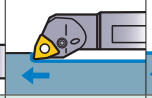
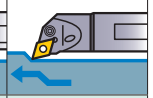
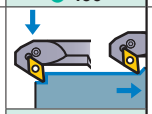
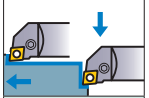
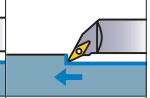
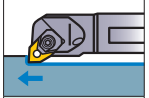
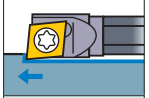
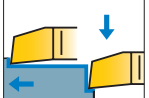
(Note) TPMT/W09, W11 types cannot be used due to a different clamp screw size.

CLASSIFICATION

Name of Tool Holder	Features	KAPR=75°	KAPR=91°	KAPR=93°		
		KAPR	KAPR	KAPR		
DIMPLE BAR 	● The minimum cutting diameter is from ϕ10. ● 5°, 7°, 11° positive insert. ● Excellent vibration resistance due to a light dimple head. ● l/d is 3 to 5 times the diameter (Carbide shank is 7 to 8 times the diameter).			 FSTUP ➲ 388	 FSDUC ➲ 390	 FSVUB/C ➲ 396
DOUBLE CLAMP DIMPLE BAR 	● The minimum cutting diameter is from ϕ32. ● Economical negative insert. ● Single action type. ● Excellent vibration resistance due to a light dimple head. (With coolant hole.) ● l/d is 3 to 4 times the diameter.	 DSKN ➲ 402	 DTFN ➲ 403	 DDUN ➲ 401	 DVUN ➲ 404	
F Type Boring Bars 	● The minimum cutting diameter is from ϕ5.8. ● 11°positive insert. ● Screw-on type and Clamp-on type. ● l/d is 3 to 5 times the diameter. ● FSWL type is 7°positive insert.			 FSTU ➲ 418	 FCTU ➲ 420	
S Type Boring Bars 	● The minimum cutting diameter is from ϕ11. ● ISO standard. ● 7°positive insert. ● Screw-on type. ● l/d is 3 to 5 times the diameter (Carbide shank is 7 times the diameter).	 SSKC ➲ 434	 STFC ➲ 424	 SDUC ➲ 426	 SVUC ➲ 435	
P Type Boring Bars 	● The minimum cutting diameter is from ϕ25. ● ISO standard. ● Economical negative insert. ● Lever lock type, and pin lock type. ● l/d is 3 times the diameter.	 PSKN ➲ 437	 PTFN ➲ 438	 PDUN ➲ 439		
D Type Boring Head 	● The minimum cutting diameter is from ϕ40. ● Economical negative insert. ● Lever lock type. ● Exchangeable head type.		 DPTF ➲ 445	 DPDU ➲ 446		
M Type Boring Bars 	● The minimum cutting diameter is from ϕ32. ● Negative trigon shape insert. ● Double clamp type. ● l/d is 3 times the diameter.					
AL Type Boring Bars 	● The minimum cutting diameter is from ϕ20. ● Suitable for non-ferrous metal. ● 20°positive insert. ● Screw-on type. ● l/d is 6 times the diameter. ● Excellent vibration resistance.		 STFE ➲ 451			
MICRO-DEX Boring Bars (Carbide Shank) 	● The minimum cutting diameter is from ϕ5. ● 7°positive insert. ● Carbide shank type. ● Easy-to-use tool geometries. ● Suitable for small workpieces. ● l/d is 5 times the diameter.			 SWUB ➲ 407	 STUC ➲ 408	
MICRO-MINI TWIN Boring Bars 	● The minimum cutting diameter is from ϕ2.2. ● Solid carbide type with two cutting edges. ● Continuous cutting from boring to facing. ● With or without a chip breaker.					
MICRO-MINI Boring Bars 	● The minimum cutting diameter is from ϕ3.2. ● Solid carbide type (Single cutting edges). ● l/d is 5 times the diameter. ● Cutting edge can be shaped according to the application. Thus, it covers a wide cutting range (threading,grooving,copying, etc.).	 C○○FR-BLS ➲ 417				

(Note 1) Holders with blue colour symbol have an anti-vibration carbide shank. (For Micro-dex boring bars, carbide shank only.)

CLASSIFICATION

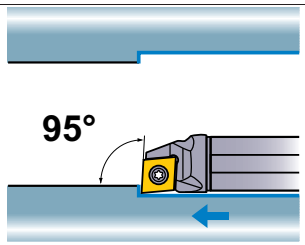
KAPR=93°	KAPR=95°		KAPR=107.5°—117.5°		KAPR=142°	KAPR=3°,5°	Economical	Low Cutting Resistance (Sharpness)	Clamp Rigidity	Vibration Resisiance	Operation Efficiency	Coolant Hole	Specialized	Small Diameter Cutting
														
 FSWUB/P ➲ 394	 FSCLC/P ➲ 386		 FSDQC ➲ 392	 FSVPB/C ➲ 397	 FSVJB/C ➲ 398			◎		◎*	◎	◎*		
	 DCLN ➲ 400	 DWLN ➲ 405												
	 FSWL ➲ 422							○		○*				○*
	 SCLC ➲ 428		 SDQC ➲ 430	 SVQC ➲ 432		 SCZC ➲ 436		○		○*				
	 PCLN ➲ 440	 PWLN ➲ 441	 PDQN ➲ 442			 PDZN ➲ 443	◎		○		◎	◎		
	 DPCL ➲ 447		 DPDH ➲ 448	 DPVP ➲ 449			◎		○		◎			
	 MWLN ➲ 444						◎		◎		○	◎		
								◎		○			◎	
	 SCLC ➲ 406									◎				◎
	 CB□□RS(-B) ➲ 410				 CR ➲ 412			◎		◎				◎
								◎						◎

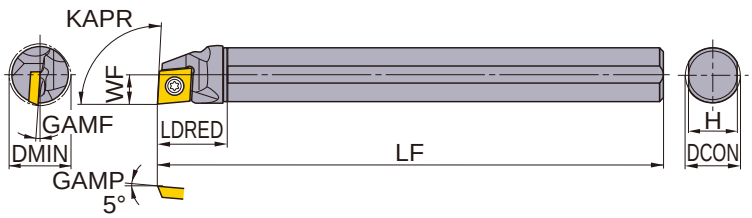
(Note 2) ◎ : 1st recommendation. ○: 2nd recommendation.
(Note 3) ＊Indicates that the shank material is carbide.

FSCLC/P DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
FEATURES OF DIMPLE BAR >> 383
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971



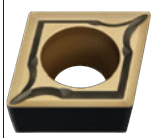
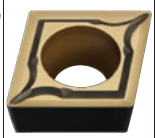
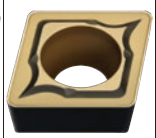
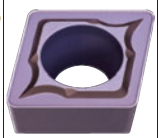


※GAMP:FSCL108R/L-06S = 1° Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSCLC1008R-06S	●	R	CC**0602	8	125	18	5	7.2	12°	10	3	95°	TS253	TKY08F
FSCLP1210R-08S	●	R	CP**0802(*)	10	150	22.5	6	9	5°	12	3.5	95°	TS3D	TKY10F
FSCLP1412R-08S	●	R	CP**0802(*)	12	150	27	7	11	4°	14	4	95°	TS3D	TKY10F
FSCLP1612R-09S	●	R	CP**0903(*)	12	150	30	8	11	4°	16	4	95°	TS4D	TKY15F
FSCLP1816R-09S	●	R	CP**0903(*)	16	180	36	9	15	3.5°	18	5	95°	TS4D	TKY15F
FSCLP2220R-09S	●	R	CP**0903(*)	20	220	45	11	19	2°	22	5	95°	TS4D	TKY15F
FSCLP3025R-09S	●	R	CP**0903(*)	25	250	56.3	15	23.4	0°	30	5	95°	TS4D	TKY15F
FSCLC1008L-06S	●	L	CC**0602	8	125	18	5	7.2	12°	10	3	95°	TS253	TKY08F
FSCLP1210L-08S	●	L	CP**0802(*)	10	150	22.5	6	9	5°	12	3.5	95°	TS3D	TKY10F
FSCLP1412L-08S	●	L	CP**0802(*)	12	150	27	7	11	4°	14	4	95°	TS3D	TKY10F
FSCLP1612L-09S	●	L	CP**0903(*)	12	150	30	8	11	4°	16	4	95°	TS4D	TKY15F
FSCLP1816L-09S	●	L	CP**0903(*)	16	180	36	9	15	3.5°	18	5	95°	TS4D	TKY15F
FSCLP2220L-09S	●	L	CP**0903(*)	20	220	45	11	19	2°	22	5	95°	TS4D	TKY15F
FSCLP3025L-09S	●	L	CP**0903(*)	25	250	56.3	15	23.4	0°	30	5	95°	TS4D	TKY15F

- Clamp Torque(N • m) : TS253=1.0, TS3D=2.5, TS4D=3.5
- (*)By changing the clamp screw, it is possible to use the other inserts. Please refer to the FEATURES OF DIMPLE BAR
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	CBN/PCD
FP	FM	LP	LM	MP	MM	
						
(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

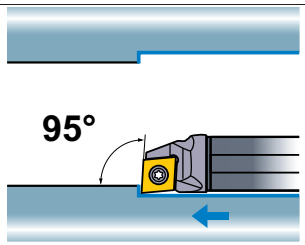
FSCLC/P-E DIMPLE BAR

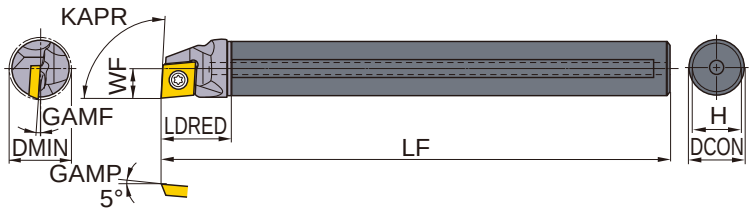
Carbide shank with coolant hole

Product Information

95° KAPR

RECOMMENDED CUTTING CONDITION >> 399
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
FEATURES OF DIMPLE BAR >> 383
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971



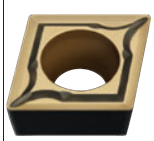
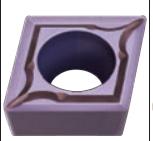
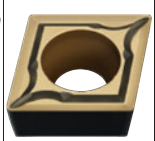
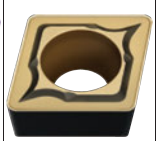
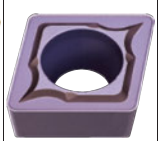


※GAMP:FSCL108R/L-06E = 1° Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSCLC1008R-06E	●	R	CC**0602	8	140	13.8	5	7.2	12°	10	7	95°	TS253	TKY08F
FSCLC1008R-06E-2/3	●	R	CC**0602	8	90	13.8	5	7.2	12°	10	7	95°	TS253	TKY08F
FSCLC1008R-06E-1/2	●	R	CC**0602	8	70	13.8	5	7.2	12°	10	7	95°	TS253	TKY08F
FSCLP1210R-08E	●	R	CP**0802(*)	10	160	16	6	9	5°	12	7.5	95°	TS3D	TKY10F
FSCLP1210R-08E-2/3	●	R	CP**0802(*)	10	105	16	6	9	5°	12	7.5	95°	TS3D	TKY10F
FSCLP1210R-08E-1/2	●	R	CP**0802(*)	10	80	16	6	9	5°	12	7.5	95°	TS3D	TKY10F
FSCLP1412R-08E	●	R	CP**0802(*)	12	180	17.8	7	11	4°	14	8	95°	TS3D	TKY10F
FSCLP1412R-08E-2/3	●	R	CP**0802(*)	12	120	17.8	7	11	4°	14	8	95°	TS3D	TKY10F
FSCLP1412R-08E-1/2	●	R	CP**0802(*)	12	90	17.8	7	11	4°	14	8	95°	TS3D	TKY10F
FSCLP1816R-09E	●	R	CP**0903(*)	16	220	21.8	9	15	3.5°	18	8	95°	TS4D	TKY15F
FSCLP1816R-09E-2/3	●	R	CP**0903(*)	16	145	21.8	9	15	3.5°	18	8	95°	TS4D	TKY15F
FSCLP1816R-09E-1/2	●	R	CP**0903(*)	16	110	21.8	9	15	3.5°	18	8	95°	TS4D	TKY15F
FSCLP2220R-09E	●	R	CP**0903(*)	20	250	24	11	19	2°	22	8	95°	TS4D	TKY15F
FSCLP2220R-09E-2/3	●	R	CP**0903(*)	20	165	24	11	19	2°	22	8	95°	TS4D	TKY15F
FSCLP2220R-09E-1/2	●	R	CP**0903(*)	20	125	24	11	19	2°	22	8	95°	TS4D	TKY15F
FSCLC1008L-06E	●	L	CC**0602	8	140	13.8	5	7.2	12°	10	7	95°	TS253	TKY08F
FSCLP1210L-08E	●	L	CP**0802(*)	10	160	16	6	9	5°	12	7.5	95°	TS3D	TKY10F
FSCLP1412L-08E	●	L	CP**0802(*)	12	180	17.8	7	11	4°	14	8	95°	TS3D	TKY10F
FSCLP1816L-09E	●	L	CP**0903(*)	16	220	21.8	9	15	3.5°	18	8	95°	TS4D	TKY15F
FSCLP2220L-09E	●	L	CP**0903(*)	20	250	24	11	19	2°	22	8	95°	TS4D	TKY15F

- Clamp Torque(N • m) : TS253=1.0, TS3D=2.5, TS4D=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	CBN/PCD
FP	FM	LP	LM	MP	MM	
						
(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)

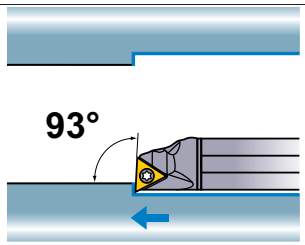
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

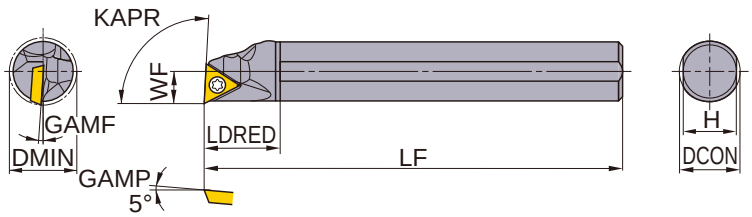
FSTUP

DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 254
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
FEATURES OF DIMPLE BAR >> 383
TURNING INSERTS >> 158
PCD TURNING INSERTS >> 277
TECHNICAL INFO >> 1971



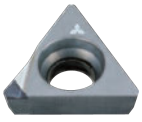


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSTUP1008R-08S	●	R	TP**0802(*)	8	125	18	5	7.2	10°	10	3	93°	TS2D	TKY06F
FSTUP1210R-09S	●	R	TP**0902(*)	10	150	22.5	6	9	8°	12	3.5	93°	TS25D	TKY08F
FSTUP1210R-11S	●	R	TP**1103(*)	10	150	22.5	6	9	8°	12	3.5	93°	TS31D	TKY10F
FSTUP1412R-09S	●	R	TP**0902(*)	12	150	27	7	11	7°	14	4	93°	TS25D	TKY08F
FSTUP1412R-11S	●	R	TP**1103(*)	12	150	27	7	11	7°	14	4	93°	TS31D	TKY10F
FSTUP1816R-11S	●	R	TP**1103(*)	16	180	36	9	15	4°	18	5	93°	TS31D	TKY10F
FSTUP2220R-11S	●	R	TP**1103(*)	20	220	45	11	19	0°	22	5	93°	TS31D	TKY10F
FSTUP3225R-16S	●	R	TP**1603(*)	25	270	56.3	16	23.4	0°	32	5	93°	TS4D	TKY15F
FSTUP1008L-08S	●	L	TP**0802(*)	8	125	18	5	7.2	10°	10	3	93°	TS2D	TKY06F
FSTUP1210L-09S	●	L	TP**0902(*)	10	150	22.5	6	9	8°	12	3.5	93°	TS25D	TKY08F
FSTUP1210L-11S	●	L	TP**1103(*)	10	150	22.5	6	9	8°	12	3.5	93°	TS31D	TKY10F
FSTUP1412L-09S	●	L	TP**0902(*)	12	150	27	7	11	7°	14	4	93°	TS25D	TKY08F
FSTUP1412L-11S	●	L	TP**1103(*)	12	150	27	7	11	7°	14	4	93°	TS31D	TKY10F
FSTUP1816L-11S	●	L	TP**1103(*)	16	180	36	9	15	4°	18	5	93°	TS31D	TKY10F
FSTUP2220L-11S	●	L	TP**1103(*)	20	220	45	11	19	0°	22	5	93°	TS31D	TKY10F
FSTUP3225L-16S	●	L	TP**1603(*)	25	270	56.3	16	23.4	0°	32	5	93°	TS4D	TKY15F

- Clamp Torque(N • m) : TS2D=0.6, TS25D=1.0, TS31D=2.5, TS4D=3.5
- (*)By changing the clamp screw, it is possible to use the other inserts. Please refer to the FEATURES OF DIMPLE BAR
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

FSTUP-E

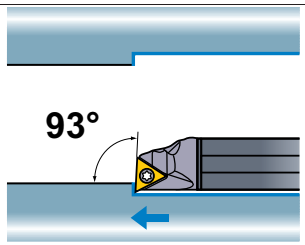
DIMPLE BAR

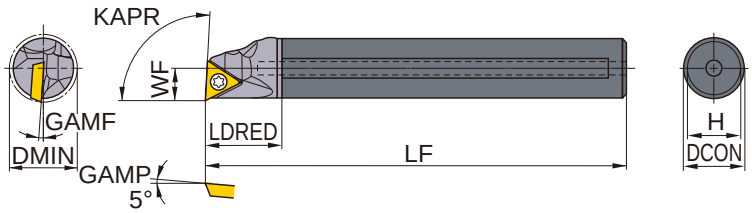
Carbide shank with coolant hole

Product Information

93° KAPR

RECOMMENDED CUTTING CONDITION >> 399
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 254
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
FEATURES OF DIMPLE BAR >> 383
TURNING INSERTS >> 158
PCD TURNING INSERTS >> 277
TECHNICAL INFO >> 1971





Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSTUP1008R-08E	●	R	TP**0802(*)	8	140	13.8	5	7.2	10°	10	7	93°	TS2D	TKY06F
FSTUP1008R-08E-2/3	●	R	TP**0802(*)	8	90	13.8	5	7.2	10°	10	7	93°	TS2D	TKY06F
FSTUP1008R-08E-1/2	●	R	TP**0802(*)	8	70	13.8	5	7.2	10°	10	7	93°	TS2D	TKY06F
FSTUP1210R-09E	●	R	TP**0902(*)	10	160	16	6	9	8°	12	7.5	93°	TS25D	TKY08F
FSTUP1210R-09E-2/3	●	R	TP**0902(*)	10	105	16	6	9	8°	12	7.5	93°	TS25D	TKY08F
FSTUP1210R-09E-1/2	●	R	TP**0902(*)	10	80	16	6	9	8°	12	7.5	93°	TS25D	TKY08F
FSTUP1412R-09E	●	R	TP**0902(*)	12	180	17.8	7	11	7°	14	8	93°	TS25D	TKY08F
FSTUP1412R-09E-2/3	●	R	TP**0902(*)	12	120	17.8	7	11	7°	14	8	93°	TS25D	TKY08F
FSTUP1412R-09E-1/2	●	R	TP**0902(*)	12	90	17.8	7	11	7°	14	8	93°	TS25D	TKY08F
FSTUP1816R-11E	●	R	TP**1103(*)	16	220	21.8	9	15	4°	18	8	93°	TS31D	TKY10F
FSTUP1816R-11E-2/3	●	R	TP**1103(*)	16	145	21.8	9	15	4°	18	8	93°	TS31D	TKY10F
FSTUP1816R-11E-1/2	●	R	TP**1103(*)	16	110	21.8	9	15	4°	18	8	93°	TS31D	TKY10F
FSTUP2220R-11E	●	R	TP**1103(*)	20	250	24	11	19	0°	22	8	93°	TS31D	TKY10F
FSTUP2220R-11E-2/3	●	R	TP**1103(*)	20	165	24	11	19	0°	22	8	93°	TS31D	TKY10F
FSTUP2220R-11E-1/2	●	R	TP**1103(*)	20	125	24	11	19	0°	22	8	93°	TS31D	TKY10F
FSTUP1008L-08E	●	L	TP**0802(*)	8	140	13.8	5	7.2	10°	10	7	93°	TS2D	TKY06F
FSTUP1210L-09E	●	L	TP**0902(*)	10	160	16	6	9	8°	12	7.5	93°	TS25D	TKY08F
FSTUP1412L-09E	●	L	TP**0902(*)	12	180	17.8	7	11	7°	14	8	93°	TS25D	TKY08F
FSTUP1816L-11E	●	L	TP**1103(*)	16	220	21.8	9	15	4°	18	8	93°	TS31D	TKY10F
FSTUP2220L-11E	●	L	TP**1103(*)	20	250	24	11	19	0°	22	8	93°	TS31D	TKY10F

- Clamp Torque(N • m) : TS2D=0.6, TS25D=1.0, TS31D=2.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

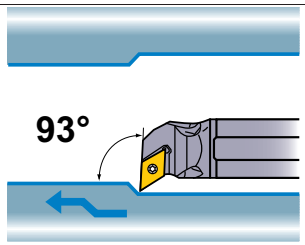
FSDUC

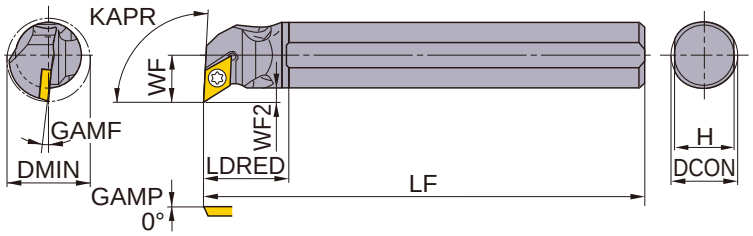
DIMPLE BAR

Product Information

93° KAPR

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



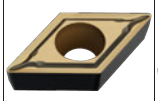
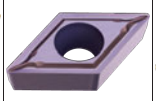
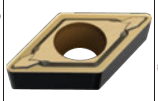
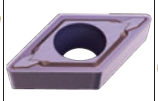
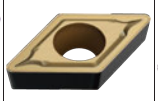
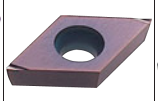
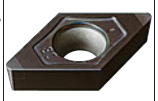


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSDUC1410R-07S	●	R	DC**0702	10	150	18	8.3	3.3	9	7.5°	14	3.5	93°	TS25	TKY08F
FSDUC1612R-07S	●	R	DC**0702	12	150	20	9.3	3.3	11	6°	16	4	93°	TS25	TKY08F
FSDUC2016R-07S	●	R	DC**0702	16	180	20	11.3	3.3	15	5°	20	5	93°	TS25	TKY08F
FSDUC3220R-11S	●	R	DC**11T3	20	180	22.5	16.1	6.1	19	5°	32	5	93°	TS43	TKY15F
FSDUC1410L-07S	●	L	DC**0702	10	150	18	8.3	3.3	9	7.5°	14	3.5	93°	TS25	TKY08F
FSDUC1612L-07S	●	L	DC**0702	12	150	20	9.3	3.3	11	6°	16	4	93°	TS25	TKY08F
FSDUC2016L-07S	●	L	DC**0702	16	180	20	11.3	3.3	15	5°	20	5	93°	TS25	TKY08F
FSDUC3220L-11S	●	L	DC**11T3	20	180	22.5	16.1	6.1	19	5°	32	5	93°	TS43	TKY15F

- Clamp Torque(N • m) : TS25=1.0, TS43=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	PCD	CBN
FP	FM	LP	LM	MP	MM	RL-F	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

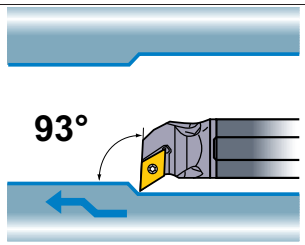
FSDUC-E

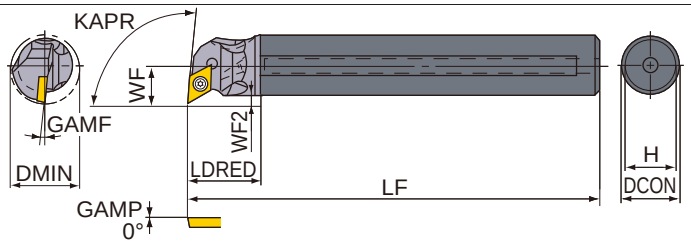
DIMPLE BAR

Carbide shank with coolant hole

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



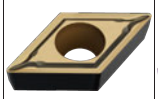
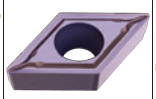
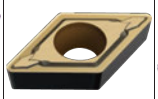
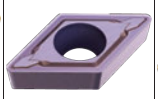
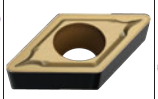
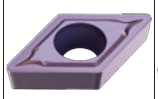
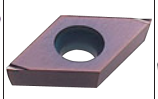
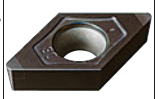


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSDUC1410R-07E	●	R	DC**0702	10	160	16	8.3	3.3	9	7.5°	14	7.5	93°	TS25	TKY08F
FSDUC1612R-07E	●	R	DC**0702	12	180	17.8	9.3	3.3	11	6°	16	8	93°	TS25	TKY08F
FSDUC2016R-07E	●	R	DC**0702	16	220	21.8	11.3	3.3	15	5°	20	8	93°	TS25	TKY08F
FSDUC3220R-11E	●	R	DC**11T3	20	250	24	16.1	6.1	19	5°	32	8	93°	TS43	TKY15F
FSDUC1410L-07E	●	L	DC**0702	10	160	16	8.3	3.3	9	7.5°	14	7.5	93°	TS25	TKY08F
FSDUC1612L-07E	●	L	DC**0702	12	180	17.8	9.3	3.3	11	6°	16	8	93°	TS25	TKY08F
FSDUC2016L-07E	●	L	DC**0702	16	220	21.8	11.3	3.3	15	5°	20	8	93°	TS25	TKY08F
FSDUC3220L-11E	●	L	DC**11T3	20	250	24	16.1	6.1	19	5°	32	8	93°	TS43	TKY15F

- Clamp Torque(N • m) : TS25=1.0, TS43=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	PCD	CBN
FP	FM	LP	LM	MP	MM	RL-F	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)

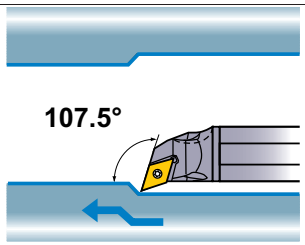
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

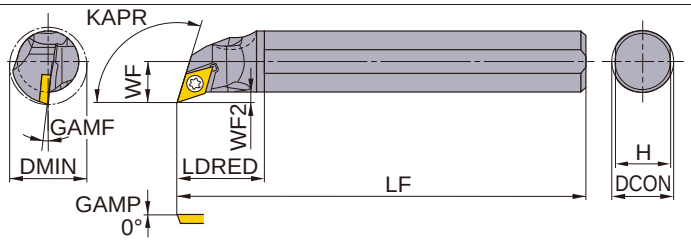
FSDQC

DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



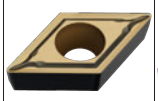
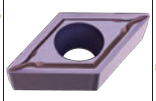
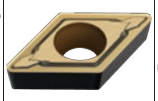
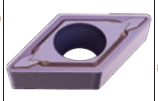
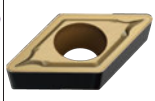
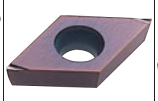
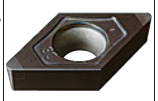


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSDQC1310R-07S	●	R	DC**0702	10	150	20.5	7.6	2.6	9	8°	13	3.5	107.5°	TS25	TKY08F
FSDQC1612R-07S	●	R	DC**0702	12	150	22.5	8.6	2.6	11	6°	16	4	107.5°	TS25	TKY08F
FSDQC2016R-07S	●	R	DC**0702	16	180	22.5	10.6	2.6	15	5°	20	5	107.5°	TS25	TKY08F
FSDQC2520R-11S	●	R	DC**11T3	20	180	26	13.7	3.7	19	7°	25	5	107.5°	TS43	TKY15F
FSDQC1310L-07S	●	L	DC**0702	10	150	20.5	7.6	2.6	9	8°	13	3.5	107.5°	TS25	TKY08F
FSDQC1612L-07S	●	L	DC**0702	12	150	22.5	8.6	2.6	11	6°	16	4	107.5°	TS25	TKY08F
FSDQC2016L-07S	●	L	DC**0702	16	180	22.5	10.6	2.6	15	5°	20	5	107.5°	TS25	TKY08F
FSDQC2520L-11S	●	L	DC**11T3	20	180	26	13.7	3.7	19	7°	25	5	107.5°	TS43	TKY15F

- Clamp Torque(N • m) : TS25=1.0, TS43=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	PCD	CBN
FP	FM	LP	LM	MP	MM	RL-F	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

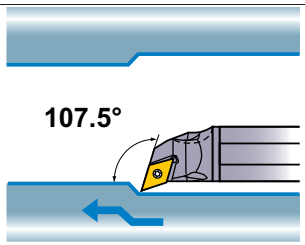
FSDQC-E

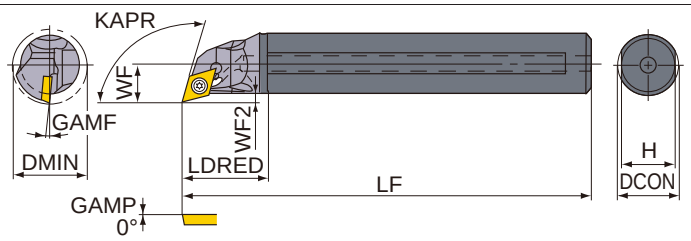
DIMPLE BAR

Carbide shank with coolant hole

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



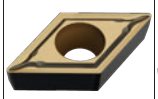
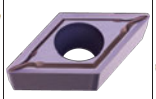
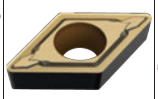
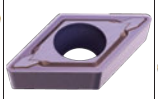
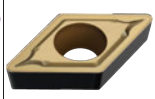
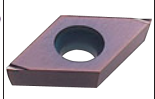
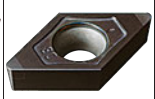


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSDQC1310R-07E	●	R	DC**0702	10	162	18.4	7.6	2.6	9	8°	13	7.5	107.5°	TS25	TKY08F
FSDQC1612R-07E	●	R	DC**0702	12	182	20.2	8.6	2.6	11	6°	16	8	107.5°	TS25	TKY08F
FSDQC2016R-07E	●	R	DC**0702	16	222	24.2	10.6	2.6	15	5°	20	8	107.5°	TS25	TKY08F
FSDQC2520R-11E	●	R	DC**11T3	20	254	28	13.7	3.7	19	7°	25	8	107.5°	TS43	TKY15F
FSDQC1310L-07E	●	L	DC**0702	10	162	18.4	7.6	2.6	9	8°	13	7.5	107.5°	TS25	TKY08F
FSDQC1612L-07E	●	L	DC**0702	12	182	20.2	8.6	2.6	11	6°	16	8	107.5°	TS25	TKY08F
FSDQC2016L-07E	●	L	DC**0702	16	222	24.2	10.6	2.6	15	5°	20	8	107.5°	TS25	TKY08F
FSDQC2520L-11E	●	L	DC**11T3	20	254	28	13.7	3.7	19	7°	25	8	107.5°	TS43	TKY15F

- Clamp Torque(N • m) : TS25=1.0, TS43=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	PCD	CBN
FP	FM	LP	LM	MP	MM	RL-F	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)	(07,11)

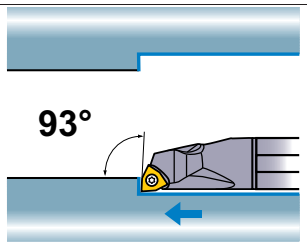
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

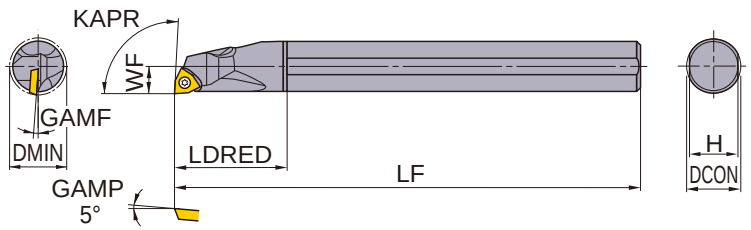
FSWUB/P DIMPLE BAR

Product Information

93° KAPR

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 166
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
GRADES AND CHIP BREAKERS >> 38
PCD TURNING INSERTS >> 282
TECHNICAL INFO >> 1971



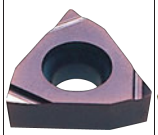


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSWUB1008R-L3S	●	R	WB**L302	8	125	18	5	7.2	14°	10	3	93°	TS2	TKY06F
FSWUB1210R-L3S	●	R	WB**L302	10	150	22.5	6	9	11°	12	3.5	93°	TS2	TKY06F
FSWUP1412R-04S	●	R	WP**0402	12	150	27	7	11	4°	14	4	93°	TS253	TKY08F
FSWUP1816R-04S	●	R	WP**0402	16	180	36	9	15	1°	18	5	93°	TS253	TKY08F
FSWUP2220R-06S	●	R	WP**0603	20	220	45	11	19	2°	22	5	93°	TS4	TKY15F
FSWUP3025R-06S	●	R	WP**0603	25	250	56.3	15	23.4	0°	30	5	93°	TS4	TKY15F
FSWUB1008L-L3S	●	L	WB**L302	8	125	18	5	7.2	14°	10	3	93°	TS2	TKY06F
FSWUB1210L-L3S	●	L	WB**L302	10	150	22.5	6	9	11°	12	3.5	93°	TS2	TKY06F
FSWUP1412L-04S	●	L	WP**0402	12	150	27	7	11	4°	14	4	93°	TS253	TKY08F
FSWUP1816L-04S	●	L	WP**0402	16	180	36	9	15	1°	18	5	93°	TS253	TKY08F
FSWUP2220L-06S	●	L	WP**0603	20	220	45	11	19	2°	22	5	93°	TS4	TKY15F
FSWUP3025L-06S	●	L	WP**0603	25	250	56.3	15	23.4	0°	30	5	93°	TS4	TKY15F

- Clamp Torque(N • m) : TS2=0.6, TS253=1.0, TS4=3.5
- ●: Inventory maintained in Japan.
- GAMP of FSWUB1008R/L-L3S and FSWUB1210R/L-L3S are 0°

·CHIP BREAKER EXAMPLE

Finish Cutting	Medium Cutting
R/L-F・FS	MV
	
(L3,04,06)	(L3,04,06)

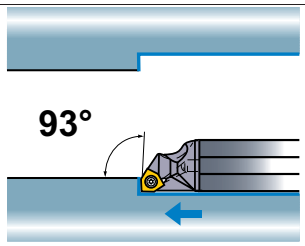
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

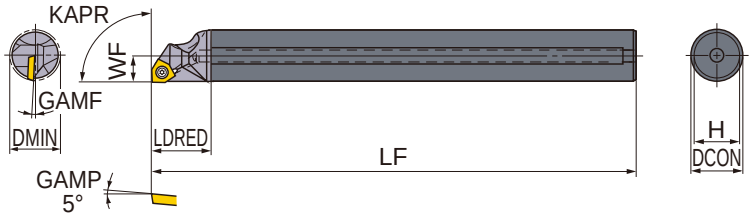
FSWUB/P-E DIMPLE BAR

Carbide shank with coolant hole

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 166
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
GRADES AND CHIP BREAKERS >> 38
PCD TURNING INSERTS >> 282
TECHNICAL INFO >> 1971



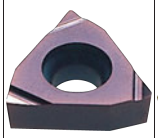


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSWUB1008R-L3E	●	R	WB**L302	8	140	13.8	5	7.2	14°	10	7	93°	TS2	TKY06F
FSWUB1008R-L3E-2/3	●	R	WB**L302	8	90	13.8	5	7.2	14°	10	7	93°	TS2	TKY06F
FSWUB1008R-L3E-1/2	●	R	WB**L302	8	70	13.8	5	7.2	14°	10	7	93°	TS2	TKY06F
FSWUB1210R-L3E	●	R	WB**L302	10	160	16	6	9	11°	12	7.5	93°	TS2	TKY06F
FSWUB1210R-L3E-2/3	●	R	WB**L302	10	105	16	6	9	11°	12	7.5	93°	TS2	TKY06F
FSWUB1210R-L3E-1/2	●	R	WB**L302	10	80	16	6	9	11°	12	7.5	93°	TS2	TKY06F
FSWUP1412R-04E	●	R	WP**0402	12	180	17.8	7	11	4°	14	8	93°	TS253	TKY08F
FSWUP1412R-04E-2/3	●	R	WP**0402	12	120	17.8	7	11	4°	14	8	93°	TS253	TKY08F
FSWUP1412R-04E-1/2	●	R	WP**0402	12	90	17.8	7	11	4°	14	8	93°	TS253	TKY08F
FSWUP1816R-04E	●	R	WP**0402	16	220	21.8	9	15	1°	18	8	93°	TS253	TKY08F
FSWUP1816R-04E-2/3	●	R	WP**0402	16	145	21.8	9	15	1°	18	8	93°	TS253	TKY08F
FSWUP1816R-04E-1/2	●	R	WP**0402	16	110	21.8	9	15	1°	18	8	93°	TS253	TKY08F
FSWUP2220R-06E	●	R	WP**0603	20	250	24	11	19	2°	22	8	93°	TS4	TKY15F
FSWUP2220R-06E-2/3	●	R	WP**0603	20	165	24	11	19	2°	22	8	93°	TS4	TKY15F
FSWUP2220R-06E-1/2	●	R	WP**0603	20	125	24	11	19	2°	22	8	93°	TS4	TKY15F
FSWUB1008L-L3E	●	L	WB**L302	8	140	13.8	5	7.2	14°	10	7	93°	TS2	TKY06F
FSWUB1210L-L3E	●	L	WB**L302	10	160	16	6	9	11°	12	7.5	93°	TS2	TKY06F
FSWUP1412L-04E	●	L	WP**0402	12	180	17.8	7	11	4°	14	8	93°	TS253	TKY08F
FSWUP1816L-04E	●	L	WP**0402	16	220	21.8	9	15	1°	18	8	93°	TS253	TKY08F
FSWUP2220L-06E	●	L	WP**0603	20	250	24	11	19	2°	22	8	93°	TS4	TKY15F

- Clamp Torque(N • m) : TS2=0.6, TS253=1.0, TS4=3.5
- ●: Inventory maintained in Japan. GAMP of FSWUB1008R/L-L3SE and FSWUB1210R/L-L3E are 0°

·CHIP BREAKER EXAMPLE

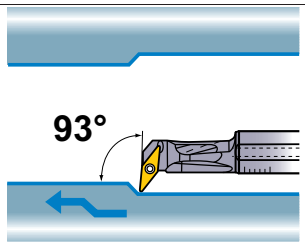
Finish Cutting	Medium Cutting
R/L-F・FS	MV
	
(L3,04,06)	(L3,04,06)

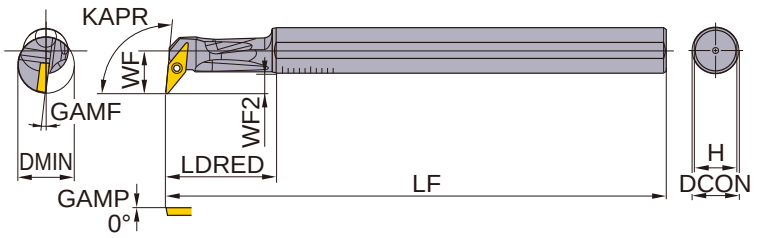
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

FSVUB/C DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



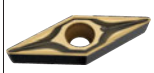
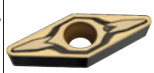
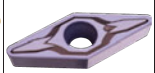
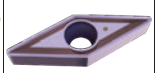


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Shim	Shim Pin	Clamp Screw	Wrench
FSVUC1612R-08S	●	R	VC**0802	12	150	25	11	5.5	11	8°	16	4	93°			TS202	TKY06F
FSVUB2016R-11S	●	R	VB**1103	16	180	32.5	15.5	8	15	8°	20	5	93°			TS255	TKY08F
FSVUB2520R-11S	●	R	VB**1103	20	200	40.5	17.5	8	19	7°	25	5	93°			TS255	TKY08F
FSVUB3425R-16S	●	R	VB**1604	25	220	50	20.5	8.5	23.4	13°	34	5	93°	SPSVN32	BCP141	TS35D	TKY15F
FSVUB4032R-16S	●	R	VB**1604	32	250	84	27.5	12	30.4	9°	40	5	93°	SPSVN32	BCP141	TS35D	TKY15F
FSVUC1612L-08S	●	L	VC**0802	12	150	25	11	5.5	11	8°	16	4	93°			TS202	TKY06F
FSVUB2016L-11S	●	L	VB**1103	16	180	32.5	15.5	8	15	8°	20	5	93°			TS255	TKY08F
FSVUB2520L-11S	●	L	VB**1103	20	200	40.5	17.5	8	19	7°	25	5	93°			TS255	TKY08F
FSVUB3425L-16S	●	L	VB**1604	25	220	50	20.5	8.5	23.4	13°	34	5	93°	SPSVN32	BCP141	TS35D	TKY15F
FSVUB4032L-16S	●	L	VB**1604	32	250	84	27.5	12	30.4	9°	40	5	93°	SPSVN32	BCP141	TS35D	TKY15F

- Clamp Torque(N • m) : TS202=0.6, TS255=1.0, TS35D=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

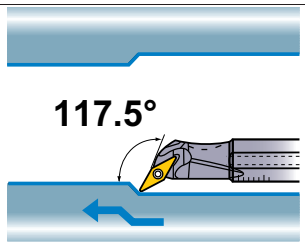
Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	CBN
FP	FM	LP	LM	MP	MM	Standard	
							
(11,16)	(11,16)	(11,16)	(11,16)	(16)	(16)	(16)	(16)

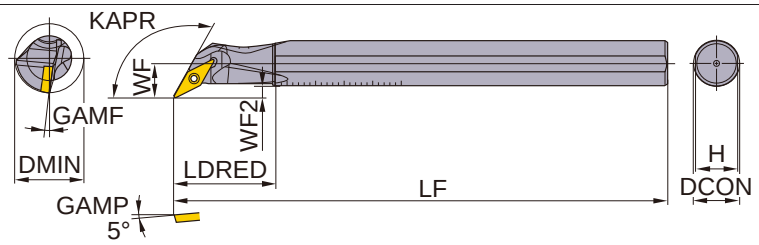
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

FSVPB/C DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



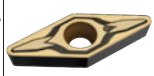
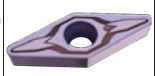
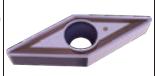


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	l/d	KAPR	Shim	Shim Pin	Clamp Screw	Wrench
FSVPC1610R-08S	●	R	VC**0802	10	150	25	8	3	9	8°	16	3.5	117.5°			TS202	TKY06F
FSVPB2012R-11S	●	R	VB**1103	12	150	28	10	4.5	11	8°	20	4	117.5°			TS255	TKY08F
FSVPB2516R-11S	●	R	VB**1103	16	180	35	12.5	5	15	5°	25	5	117.5°			TS255	TKY08F
FSVPB3020R-11S	●	R	VB**1103	20	200	40	15	5	19	5°	30	5	117.5°			TS255	TKY08F
FSVPB3425R-16S	●	R	VB**1604	25	220	50	17	5	23.5	13°	34	5	117.5°	SPSVN32	BCP141	TS35D	TKY15F
FSVPB4032R-16S	●	R	VB**1604	32	250	55	22	6.5	30.4	9°	40	5	117.5°	SPSVN32	BCP141	TS35D	TKY15F
FSVPC1610L-08S	●	L	VC**0802	10	150	25	8	3	9	8°	16	3.5	117.5°			TS202	TKY06F
FSVPB2012L-11S	●	L	VB**1103	12	150	28	10	4.5	11	8°	20	4	117.5°			TS255	TKY08F
FSVPB2516L-11S	●	L	VB**1103	16	180	35	12.5	5	15	5°	25	5	117.5°			TS255	TKY08F
FSVPB3020L-11S	●	L	VB**1103	20	200	40	15	5	19	5°	30	5	117.5°			TS255	TKY08F
FSVPB3425L-16S	●	L	VB**1604	25	220	50	17	5	23.5	13°	34	5	117.5°	SPSVN32	BCP141	TS35D	TKY15F
FSVPB4032L-16S	●	L	VB**1604	32	250	55	22	6.5	30.4	9°	40	5	117.5°	SPSVN32	BCP141	TS35D	TKY15F

- Clamp Torque(N • m) : TS202=0.6, TS255=1.0, TS35D=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

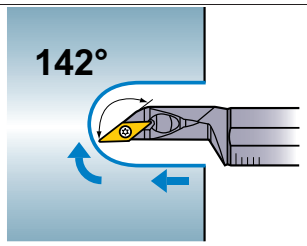
Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	CBN
FP	FM	LP	LM	MP	MM	Standard	
							
(11,16)	(11,16)	(11,16)	(11,16)	(16)	(16)	(16)	(16)

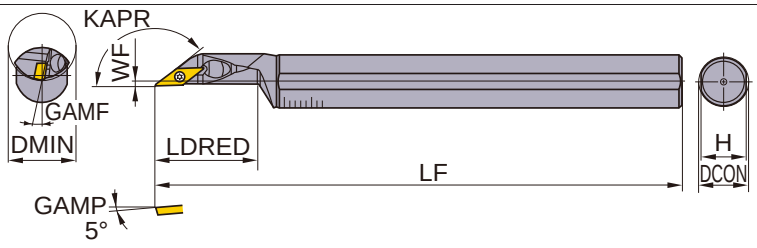
- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

FSVJB/C DIMPLE BAR

Product Information

RECOMMENDED CUTTING CONDITION >> 399
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971
GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



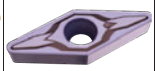


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	l/d	KAPR	Clamp Screw	Wrench
FSVJC1612R-08S	●	R	VC**0802	12	150	26	2	11	5°	16	4	142°	TS202	TKY06F
FSVJC2016R-08S	●	R	VC**0802	16	180	36	2	15	5°	20	5	142°	TS202	TKY06F
FSVJB2520R-11S	●	R	VB**1103	20	200	37.5	2	19	5°	25	5	142°	TS255	TKY08F
FSVJB3025R-11S	●	R	VB**1103	25	250	45	3.5	23.4	5°	30	5	142°	TS255	TKY08F
FSVJC1612L-08S	●	L	VC**0802	12	150	26	2	11	5°	16	4	142°	TS202	TKY06F
FSVJC2016L-08S	●	L	VC**0802	16	180	36	2	15	5°	20	5	142°	TS202	TKY06F
FSVJB2520L-11S	●	L	VB**1103	20	200	37.5	2	19	5°	25	5	142°	TS255	TKY08F
FSVJB3025L-11S	●	L	VB**1103	25	250	45	3.5	23.4	5°	30	5	142°	TS255	TKY08F

- Clamp Torque(N • m) : TS202=0.6, TS255=1.0
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Cutting Mode	Breaker	Recom-mendation	Grade	Cutting Speed (m/min)	l/d ≤ 3 (Steel shank) l/d ≤ 6 (Carbide shank)		l/d = 4–5 (Steel shank) l/d = 7–8 (Carbide shank)	
							Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel ≤180HB	Finish	FP	①	NX2525	170 (120–220)	0.10 (0.05–0.15)	–0.5	0.10 (0.05–0.15)	–0.5
		Light	LP	①	MP3025	150 (100–200)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
				②	NX2525	160 (110–210)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
		Medium	MP	①	MP3025	140 (90–190)	0.25 (0.15–0.35)	–2.0	0.20 (0.15–0.25)	–1.5
				②	NX2525	150 (100–200)	0.25 (0.15–0.35)	–2.0	0.20 (0.15–0.25)	–1.5
	Carbon Steel Alloy Steel 180–350HB	Finish	FP	①	MC6015	140 (90–190)	0.10 (0.05–0.15)	–0.5	0.10 (0.05–0.15)	–0.5
				②	NX2525	130 (80–180)	0.10 (0.05–0.15)	–0.5	0.10 (0.05–0.15)	–0.5
		Light	LP	①	MC6025	140 (90–190)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
				②	MP3025	110 (60–160)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
		Medium	MP	①	MC6025	130 (80–180)	0.25 (0.15–0.35)	–2.0	0.20 (0.15–0.25)	–1.5
				②	MP3025	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	①	VP15TF	150 (110–190)	0.10 (0.05–0.15)	–0.5	0.10 (0.05–0.15)	–0.5
		Light	LM	①	MC7025	125 (85–165)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
				②	VP15TF	130 (90–170)	0.20 (0.10–0.25)	–1.0	0.15 (0.05–0.20)	–1.0
		Medium	MM	①	MC7025	105 (70–135)	0.20 (0.15–0.25)	–2.0	0.20 (0.15–0.25)	–1.0
				②	VP15TF	120 (80–160)	0.20 (0.15–0.25)	–2.0	0.20 (0.15–0.25)	–1.0
K	Gray Cast Iron Tensile Strength ≤350MPa	Finish	F, FS	①	HTi10	130 (90–160)	0.15 (0.10–0.20)	–0.5	0.15 (0.10–0.20)	–0.5
		Medium	MK	①	MC5015	90 (60–120)	0.20 (0.15–0.25)	–2.0	0.20 (0.15–0.25)	–1.5
N	Aluminium Alloy	Finish	F, FS	①	HTi10	300 (200–400)	0.10 (0.05–0.15)	–0.5	0.10 (0.05–0.15)	–0.5
			Flat Top	①	MD220	200 (150–250)	0.10 (0.05–0.15)	–2.0	0.10 (0.05–0.15)	–1.0
H	Heat Treated Steel 35–65HRC	Finish	Flat Top	①	MB8025	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.

DCLN

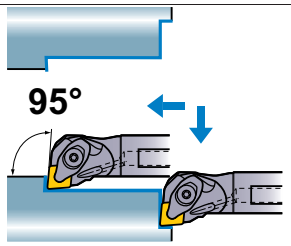
DOUBLE CLAMP DIMPLE BAR

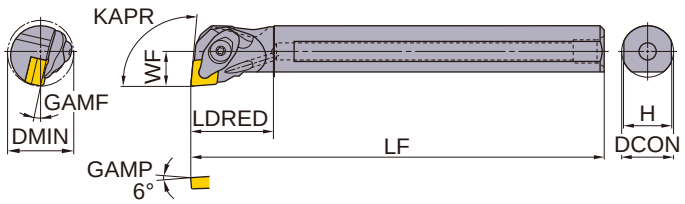
With coolant hole

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 222
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 102
PCD TURNING INSERTS >> 266
TECHNICAL INFO >> 1971



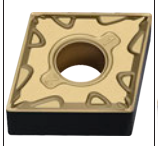


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A25R-DCLNR12	●	R	CN**1204	25	200	40	17	23	13°	32	95°	LLSCP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DCLNR12	●	R	CN**1204	32	250	50	22	30	13°	40	95°	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DCLNR12	●	R	CN**1204	40	300	63	27	37	10°	50	95°	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A25R-DCLNL12	●	L	CN**1204	25	200	40	17	23	13°	32	95°	LLSCP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DCLNL12	●	L	CN**1204	32	250	50	22	30	13°	40	95°	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DCLNL12	●	L	CN**1204	40	300	63	27	37	10°	50	95°	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

- Clamp Torque(N • m) : DC0621T=5.0
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

DDUN

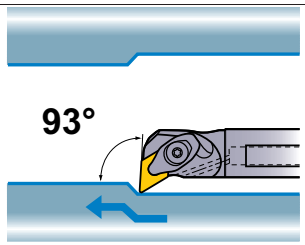
DOUBLE CLAMP DIMPLE BAR

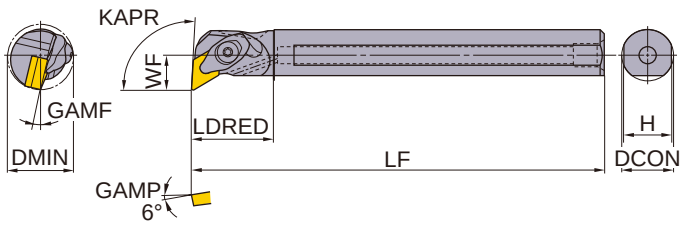
With coolant hole

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971



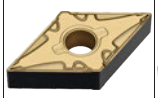
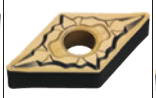
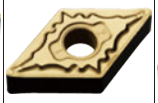
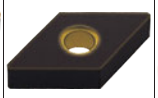
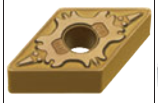
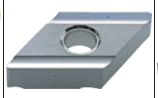
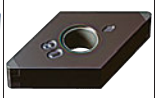


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A25R-DDUNR15	●	R	DN**1504	25	200	40	17	23	13°	35	93°	LLSDP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DDUNR15	●	R	DN**1504	32	250	50	22	30	13°	40	93°	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DDUNR15	●	R	DN**1504	40	300	63	27	37	10°	50	93°	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A25R-DDUNL15	●	L	DN**1504	25	200	40	17	23	13°	35	93°	LLSDP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DDUNL15	●	L	DN**1504	32	250	50	22	30	13°	40	93°	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DDUNL15	●	L	DN**1504	40	300	63	27	37	10°	50	93°	LLSDN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

- Clamp Torque(N • m) : DC0621T=5.0
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Work Material		Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

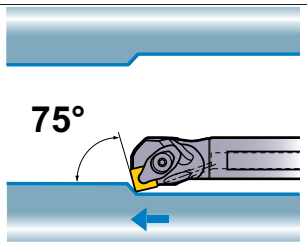
DSKN

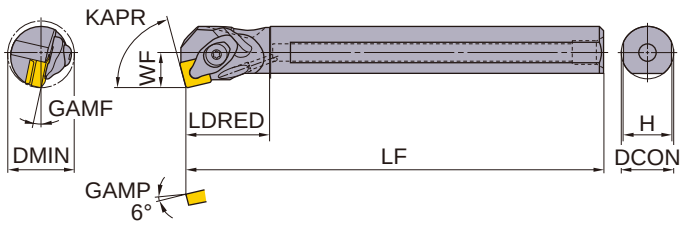
DOUBLE CLAMP DIMPLE BAR

With coolant hole

Product Information

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 230
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 115
PCD TURNING INSERTS >> 268
TECHNICAL INFO >> 1971





Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A25R-DSKNR12	●	R	SN**1204	25	200	40	17	23	13°	32	75°	LLSSP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DSKNR12	●	R	SN**1204	32	250	50	22	30	13°	40	75°	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A25R-DSKNL12	●	L	SN**1204	25	200	40	17	23	13°	32	75°	LLSSP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DSKNL12	●	L	SN**1204	32	250	50	22	30	13°	40	75°	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

- Clamp Torque(N • m) : DC0621T=5.0
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3–4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

DTFN

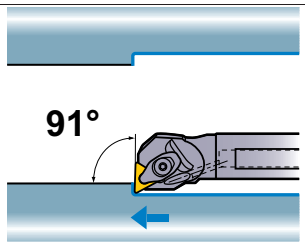
DOUBLE CLAMP DIMPLE BAR

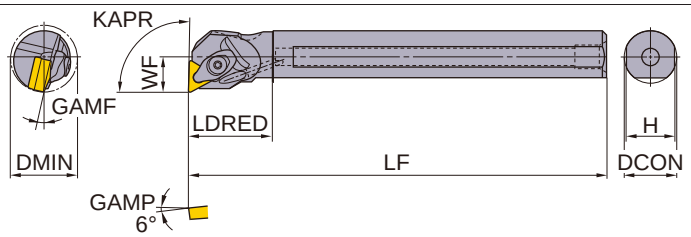
With coolant hole

Product Information

91° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 232
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 121
PCD TURNING INSERTS >> 269
TECHNICAL INFO >> 1971



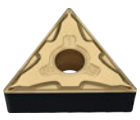
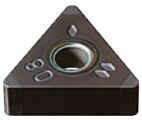


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A25R-DTFNR16	●	R	TN**1604	25	200	40	17	23	13°	32	91°	LLSTP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A32S-DTFNR16	●	R	TN**1604	32	250	50	22	30	13°	40	91°	LLSTN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A25R-DTFNL16	●	L	TN**1604	25	200	40	17	23	13°	32	91°	LLSTP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A32S-DTFNL16	●	L	TN**1604	32	250	50	22	30	13°	40	91°	LLSTN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F

- Clamp Torque(N • Clamp Torque (N • m) : DC0520T=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	R/L	
							
(16)	(16)	(16)	(16)	(16,22)	(16,22)	(16,22)	(16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

DVUN

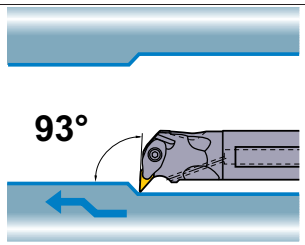
DOUBLE CLAMP DIMPLE BAR

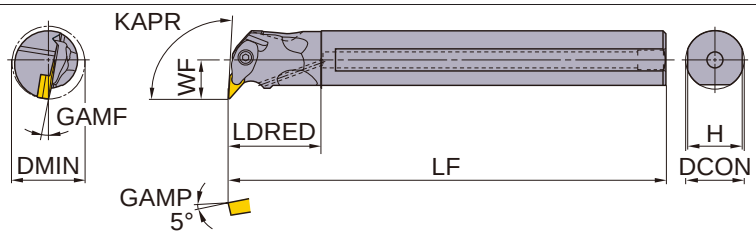
With coolant hole

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 235
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 128
PCD TURNING INSERTS >> 270
TECHNICAL INFO >> 1971





Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A40T-DVUNR16	●	R	VN**1604	40	300	63	27	37	9°	50	93°	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F
A40T-DVUNL16	●	L	VN**1604	40	300	63	27	37	9°	50	93°	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F

- Clamp Torque(N • Clamp Torque (N • m) : DC0520T=3.5
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

DWLN

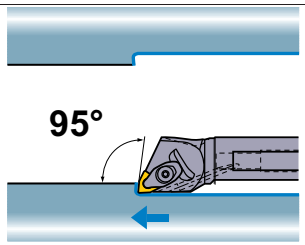
DOUBLE CLAMP DIMPLE BAR

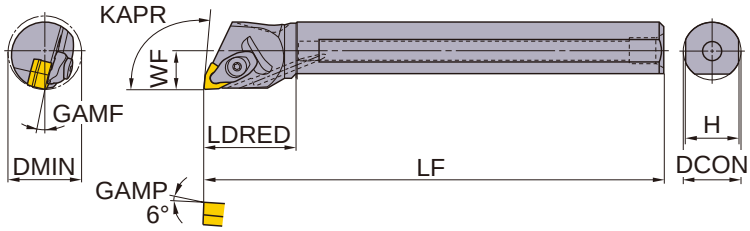
With coolant hole

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 237
TECHNICAL INFO >> 1971
TURNING INSERTS >> 130
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966



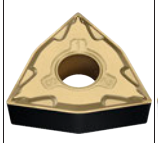


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	LDRED	WF	H	GAMF	DMIN	KAPR	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench
A25R-DWLNR06	●	R	WN**0604	25	200	40	17	23	13°	35	95°	LLSWP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A25R-DWLNR08	●	R	WN**0804	25	200	40	17	23	13°	35	95°	LLSWP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DWLNR08	●	R	WN**0804	32	250	50	22	30	13°	40	95°	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DWLNR08	●	R	WN**0804	40	300	63	27	37	10°	50	95°	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A25R-DWLNL06	●	L	WN**0604	25	200	40	17	23	13°	35	95°	LLSWP32	LLP23	DCK2211	DCS2	DC0520T	TKY15F
A25R-DWLNL08	●	L	WN**0804	25	200	40	17	23	13°	35	95°	LLSWP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A32S-DWLNL08	●	L	WN**0804	32	250	50	22	30	13°	40	95°	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
A40T-DWLNL08	●	L	WN**0804	40	300	63	27	37	10°	50	95°	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

- Clamp Torque(N • Clamp Torque (N • m) : DC0520T=3.5, DC0621T=5.0
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Medium to Rough Cutting	For Stainless Steel
FP	LP	MP	MH	Standard	RP	MM
						
(08)	(08)	(06,08)	(08)	(08)	(08)	(06,8)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

SCLC

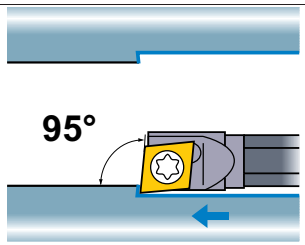
MICRO-DEX BORING BARS

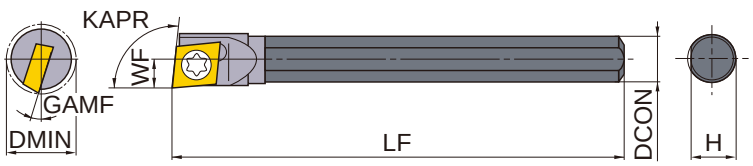
Carbide shank

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971





Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	WF	H	GAMF	DMIN	KAPR	Clamp Screw	Wrench
C04GSCLCR03	●	R	CC**03S1	4	90	2.5	3.7	15°	5	95°	TS16	TKY06F
C05HSCLCR03	●	R	CC**03S1	5	100	3.0	4.7	13°	6	95°	TS16	TKY06F
C06JSCLCR04	●	R	CC**04T0	6	110	3.5	5.7	13°	7	95°	TS21	TKY06F
C07KSCLCR04	●	R	CC**04T0	7	125	4.0	6.7	11°	8	95°	TS21	TKY06F

- Diameter of inscribed circle is special. (For SCLC type)
- Clamp Torque(N • m) : TS16=0.6, TS21=0.6
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting	CBN/PCD
L-F	
	
(03,04)	(03,04)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d
P	Carbon Steel, Alloy Steel 180–350HB	**NX2525**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
M	Stainless Steel ≤200HB	**VP15TF**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
K	Gray Cast Iron ≤350MPa	**VP15TF**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
N	Non-Ferrous Meterial	**VP15TF**	120 (80–160)	0.05 (0.01–0.08)	0.4 (0.1–0.6)	3–5
		MD220	120 (80–160)	0.05 (0.01–0.08)	0.4 (0.1–0.6)	3–5
H	Heat Treated Steel 35–65HRC	**MB810**	80 (40–120)	0.03 (0.01–0.05)	0.1 (0.03–0.2)	3–5

SWUB

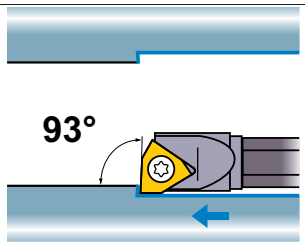
MICRO-DEX BORING BARS

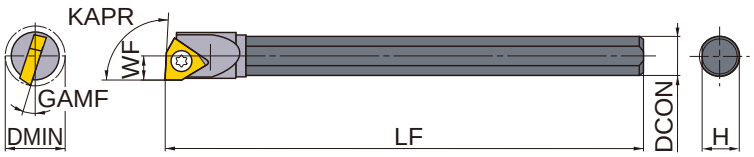
Carbide shank

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 166
TECHNICAL INFO >> 1971



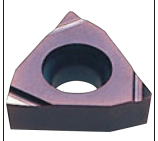


Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	WF	H	GAMF	DMIN	KAPR	Clamp Screw	Wrench
C05HSWUBR02	●	R	WB**0201	5	100	3.0	4.7	15°	6	93°	TS21	TKY06F
C06JSWUBR02	●	R	WB**0201	6	110	3.5	5.7	13°	7	93°	TS2C	TKY06F
C07KSWUBRL3	●	R	WB**L302	7	125	4.0	6.7	15°	8	93°	TS2	TKY06F

- Clamp Torque(N • m) : TS21=0.6, TS2C=0.6, TS2=0.6
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

Finish Cutting
L-F

(02,L3)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d
P	Carbon Steel, Alloy Steel 180—350HB	**NX2525**	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5
M	Stainless Steel ≤200HB	**VP15TF**	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5
K	Gray Cast Iron ≤350MPa	**VP15TF**	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5
N	Non-Ferrous Meterial	**VP15TF**	120 (80—160)	0.05 (0.01—0.08)	0.4 (0.1—0.6)	3—5
		MD220	120 (80—160)	0.05 (0.01—0.08)	0.4 (0.1—0.6)	3—5
H	Heat Treated Steel 35—65HRC	**MB810**	80 (40—120)	0.03 (0.01—0.05)	0.1 (0.03—0.2)	3—5

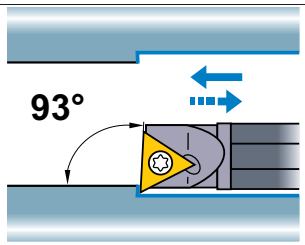
STUC

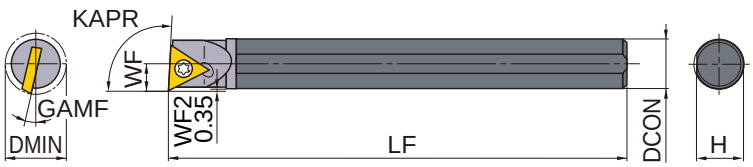
MICRO-DEX BORING BARS

Carbide shank

Product Information

GRADES AND CHIP BREAKERS >> 38
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 155
TECHNICAL INFO >> 1971





Right hand tool holder shown. Unit: mm

Order Number	Stock	L/R	Inserts	DCON	LF	WF	H	GAMF	DMIN	KAPR	Clamp Screw	Wrench
C07KSTUCR06	●	R	TC**0601	7	125	4	6.7	12°	8	93°	TS2C	TKY06F

- Clamp Torque(N • m) :TS2C=0.6
- ●: Inventory maintained in Japan.

·CHIP BREAKER EXAMPLE

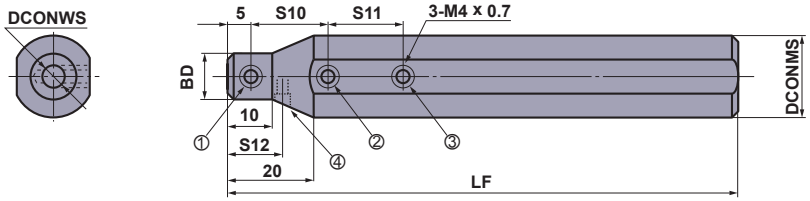
Finish Cutting
L-F  (06)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

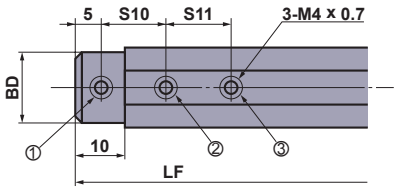
·RECOMMENDED CUTTING CONDITION

	Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d
P	Carbon Steel, Alloy Steel 180–350HB	**NX2525**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
M	Stainless Steel ≤200HB	**VP15TF**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
K	Gray Cast Iron ≤350MPa	**VP15TF**	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5
N	Non-Ferrous Meterial	**VP15TF**	120 (80–160)	0.05 (0.01–0.08)	0.4 (0.1–0.6)	3–5
		MD220	120 (80–160)	0.05 (0.01–0.08)	0.4 (0.1–0.6)	3–5
H	Heat Treated Steel 35–65HRC	**MB810**	80 (40–120)	0.03 (0.01–0.05)	0.1 (0.03–0.2)	3–5

STANDARD HOLDER



RBH22○○N has a temporary set screw for different machine specifications.
(Represented by number 4)



RBH158○○N, RBH16○○N,
RBH190○○N

Order Number	Stock	Dimensions(mm)							MICRO-DEX	∗Clamp Screw				Wrench	Torque (N • m)
		DCONMS	DCONWS	BD	LF	S10	S11	S12		①	②	③	④		
RBH15840N	●	15.875	4	15	100	15	15	—	C04GS○○○R○○	A	A	A	—	HKY20F	2.0
RBH15850N	●	15.875	5	15	100	15	15	—	C05HS○○○R○○	A	A	A	—	HKY20F	2.0
RBH15860N	●	15.875	6	15	100	15	15	—	C06JS○○○R○○	A	A	A	—	HKY20F	2.0
RBH15870N	●	15.875	7	15	100	20	20	—	C07KS○○○R○○	A	A	A	—	HKY20F	2.0
RBH1640N	●	16	4	15	100	15	15	—	C04GS○○○R○○	A	A	A	—	HKY20F	2.0
RBH1650N	●	16	5	15	100	15	15	—	C05HS○○○R○○	A	A	A	—	HKY20F	2.0
RBH1660N	●	16	6	15	100	15	15	—	C06JS○○○R○○	A	A	A	—	HKY20F	2.0
RBH1670N	●	16	7	15	100	20	20	—	C07KS○○○R○○	A	A	A	—	HKY20F	2.0
∗2 RBH19040N	●	19.05	4	18	125	15	15	—	C04GS○○○R○○	B	B	B	—	HKY20F	2.0
∗2 RBH19050N	●	19.05	5	18	125	15	15	—	C05HS○○○R○○	B	B	B	—	HKY20F	2.0
∗2 RBH19060N	●	19.05	6	18	125	15	15	—	C06JS○○○R○○	B	B	B	—	HKY20F	2.0
∗2 RBH19070N	●	19.05	7	18	125	20	20	—	C07KS○○○R○○	B	B	B	—	HKY20F	2.0
RBH2040N	●	20	4	13	125	15	15	—	C04GS○○○R○○	A	B	B	—	HKY20F	2.0
RBH2050N	●	20	5	14	125	15	15	—	C05HS○○○R○○	A	B	B	—	HKY20F	2.0
RBH2060N	●	20	6	15	125	15	15	—	C06JS○○○R○○	A	B	B	—	HKY20F	2.0
RBH2070N	●	20	7	16	125	20	20	—	C07KS○○○R○○	A	B	B	—	HKY20F	2.0
RBH2240N	●	22	4	13	125	15	15	12.5	C04GS○○○R○○	A	B	B	A	HKY20F	2.0
RBH2250N	●	22	5	14	125	15	15	12.5	C05HS○○○R○○	A	B	B	A	HKY20F	2.0
RBH2260N	●	22	6	15	125	15	15	15	C06JS○○○R○○	A	B	B	A	HKY20F	2.0
RBH2270N	●	22	7	16	125	20	20	15	C07KS○○○R○○	A	B	B	A	HKY20F	2.0
RBH2540N	●	25	4	13	150	15	15	—	C04GS○○○R○○	A	C	C	—	HKY20F	2.0
RBH2550N	●	25	5	14	150	15	15	—	C05HS○○○R○○	A	C	C	—	HKY20F	2.0
RBH2560N	●	25	6	15	150	15	15	—	C06JS○○○R○○	A	C	C	—	HKY20F	2.0
RBH2570N	●	25	7	16	150	20	20	—	C07KS○○○R○○	A	C	C	—	HKY20F	2.0
RBH25440N	●	25.4	4	13	150	15	15	—	C04GS○○○R○○	A	C	C	—	HKY20F	2.0
RBH25450N	●	25.4	5	14	150	15	15	—	C05HS○○○R○○	A	C	C	—	HKY20F	2.0
RBH25460N	●	25.4	6	15	150	15	15	—	C06JS○○○R○○	A	C	C	—	HKY20F	2.0
RBH25470N	●	25.4	7	16	150	20	20	—	C07KS○○○R○○	A	C	C	—	HKY20F	2.0

∗1 Order number of clamp screw A=HSS04004, B=HSS04006, C=HSS04008
∗2 Revised order number.

Conventional Order Number	Revised Order Number
RBH1940N	RBH19040N
RBH1950N	RBH19050N
RBH1960N	RBH19060N
RBH1970N	RBH19070N

● : Inventory maintained in Japan. (MICRO-MINI TWIN is available in 1 piece in one pack.)

CB

MICRO-MINI TWIN

Carbide shank

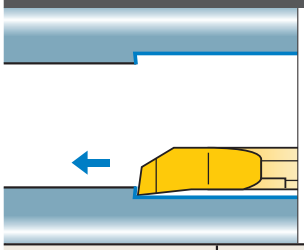
Product Information

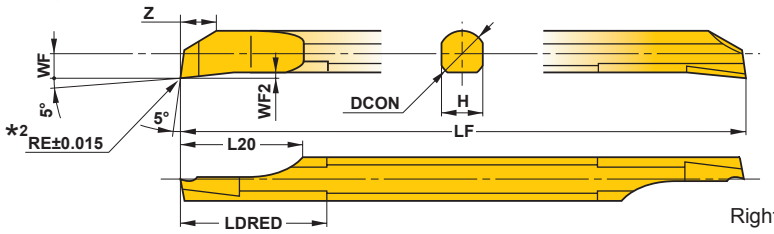
TECHNICAL INFO >> 1971

ISO13399 PROPERTY >> 1966

CB

For internal machining





Right hand tool only.

Order Number	Stock		Breaker	Dimensions(mm)									
	Micro Grain	Coated		DMIN*1		RE	DCON	LF	L20	LDRED	WF	WF2	H	Z
	TF15	VP15TF		l/d ≤ 3	l/d>3									
CB02RS	●	●	without	2.2	3.6	0.05	2	50	5	6	1	0.25	1.8	1.4
CB02RS-B	●	●	with	2.2	3.9	0.05	2	50	5	6	1	0.25	1.8	1.4
CB02RS-01	●	●	without	2.2	3.6	0.1	2	50	5	6	1	0.25	1.8	1.4
CB02RS-01B	●	●	with	2.2	4.2	0.1	2	50	5	6	1	0.25	1.8	1.4
CB02RS-02	●	●	without	2.2	3.6	0.2	2	50	5	6	1	0.25	1.8	1.4
CB02RS-02B	●	●	with	2.2	4.9	0.2	2	50	5	6	1	0.25	1.8	1.4
CB03RS	●	●	without	3.2	4.2	0.05	3	50	7.5	9	1.5	0.35	2.7	2.3
CB03RS-B	●	●	with	3.2	4.4	0.05	3	50	7.5	9	1.5	0.35	2.7	2.3
CB03RS-01	●	●	without	3.2	4.2	0.1	3	50	7.5	9	1.5	0.35	2.7	2.3
CB03RS-01B	●	●	with	3.2	4.5	0.1	3	50	7.5	9	1.5	0.35	2.7	2.3
CB03RS-02	●	●	without	3.2	4.2	0.2	3	50	7.5	9	1.5	0.35	2.7	2.3
CB03RS-02B	●	●	with	3.2	4.8	0.2	3	50	7.5	9	1.5	0.35	2.7	2.3
CB04RS	●	●	without	4.2	5.1	0.05	4	60	10	12	2	0.45	3.6	3.1
CB04RS-B	●	●	with	4.2	5.2	0.05	4	60	10	12	2	0.45	3.6	3.1
CB04RS-01	●	●	without	4.2	5.1	0.1	4	60	10	12	2	0.45	3.6	3.1
CB04RS-01B	●	●	with	4.2	5.3	0.1	4	60	10	12	2	0.45	3.6	3.1
CB04RS-02	●	●	without	4.2	5.1	0.2	4	60	10	12	2	0.45	3.6	3.1
CB04RS-02B	●	●	with	4.2	5.5	0.2	4	60	10	12	2	0.45	3.6	3.1
CB05RS	●	●	without	5.2	6.0	0.05	5	70	12.5	15	2.5	0.55	4.5	3.9
CB05RS-B	●	●	with	5.2	6.1	0.05	5	70	12.5	15	2.5	0.55	4.5	3.9
CB05RS-02	●	●	without	5.2	6.0	0.2	5	70	12.5	15	2.5	0.55	4.5	3.9
CB05RS-02B	●	●	with	5.2	6.4	0.2	5	70	12.5	15	2.5	0.55	4.5	3.9
CB06RS	●	●	without	6.2	7.2	0.05	6	75	12.5	18	3	0.65	5.4	4.7
CB06RS-B	●	●	with	6.2	7.3	0.05	6	75	12.5	18	3	0.65	5.4	4.7
CB06RS-02	●	●	without	6.2	7.2	0.2	6	75	12.5	18	3	0.65	5.4	4.7
CB06RS-02B	●	●	with	6.2	7.8	0.2	6	75	12.5	18	3	0.65	5.4	4.7
CB07RS	●	●	without	7.2	8.6	0.05	7	85	12.5	21	3.5	0.75	6.3	5.5
CB07RS-B	●	●	with	7.2	8.8	0.05	7	85	12.5	21	3.5	0.75	6.3	5.5
CB07RS-02	●	●	without	7.2	8.6	0.2	7	85	12.5	21	3.5	0.75	6.3	5.5
CB07RS-02B	●	●	with	7.2	9.2	0.2	7	85	12.5	21	3.5	0.75	6.3	5.5
CB08RS	●	●	without	8.2	9.5	0.05	8	95	15	24	4	0.85	7.2	6.3
CB08RS-B	●	●	with	8.2	9.6	0.05	8	95	15	24	4	0.85	7.2	6.3
CB08RS-02	●	●	without	8.2	9.5	0.2	8	95	15	24	4	0.85	7.2	6.3
CB08RS-02B	●	●	with	8.2	9.8	0.2	8	95	15	24	4	0.85	7.2	6.3

*1 DMIN : Min. Cutting Diameter

*2 The RE dimension represents the size before grinding a chip breaker.

·RECOMMENDED CUTTING CONDITION

	Work Material	Micro-Mini Twin **CB**				Micro-Mini Twin **CR**		
		Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d	Cutting Speed (m/min)	Feed(mm/rev)	
							03RS/04RS	**05RS**
P	Carbon Steel Alloy Steel 180—350HB	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5	80 (40—120)	0.02 (0.01—0.03)	0.03 (0.01—0.05)
M	Stainless Steel ≤200HB	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5	80 (40—120)	0.02 (0.01—0.03)	0.03 (0.01—0.05)
K	Gray Cast Iron ≤350MPa	80 (40—120)	0.03 (0.01—0.05)	0.2 (0.1—0.3)	3—5	80 (40—120)	0.03 (0.01—0.05)	0.03 (0.01—0.05)
N	Non-Ferrous Meterial	120 (80—160)	0.05 (0.01—0.08)	0.3 (0.1—0.5)	3—5	120 (80—160)	0.03 (0.01—0.05)	0.05 (0.01—0.08)

(Note) Recommend wet machining.

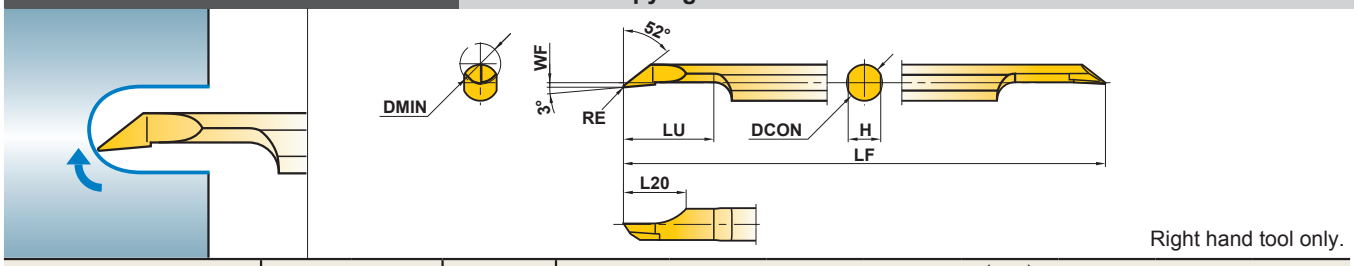
CR — MICRO-MINI TWIN — Carbide shank

Product Information

TECHNICAL INFO >> 1971

ISO13399 PROPERTY >> 1966

CR — For internal copying



Right hand tool only.

Order Number	Stock		Breaker	Dimensions(mm)							
	Micro Grain	Coated		DMIN	RE	DCON	LF	LU	L20	WF	H
	TF15	VP15TF									
CR03RS-01	●	●	without	**3.5**	0.1	3	50	8	6	0.15	2.7
CR03RS-01B	●	●	with	**3.5**	0.1	3	50	8	6	0.15	2.7
CR04RS-01	●	●	without	**4.5**	0.1	4	60	10	7	0.15	3.6
CR04RS-01B	●	●	with	**4.5**	0.1	4	60	10	7	0.15	3.6
CR05RS-01	●	●	without	**5.5**	0.1	5	70	12	8	0.15	4.5
CR05RS-01B	●	●	with	**5.5**	0.1	5	70	12	8	0.15	4.5

● : **Inventory maintained in Japan. (MICRO-MINI TWIN is available in 1 piece in one pack.)**

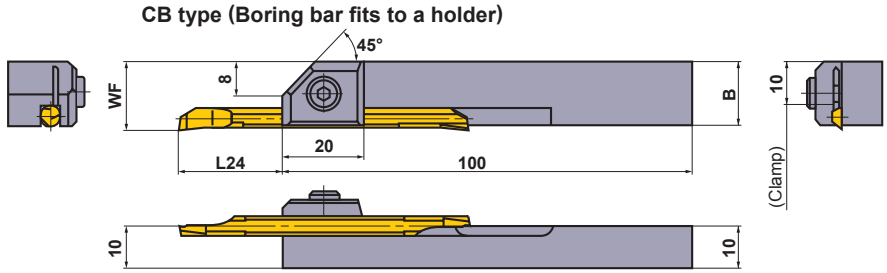
·RECOMMENDED CUTTING CONDITION

	Work Material	Micro-Mini Twin **CB**				Micro-Mini Twin **CR**		
		Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d	Cutting Speed (m/min)	Feed(mm/rev)	
							03RS/04RS	05RS
P	Carbon Steel Alloy Steel 180–350HB	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5	80 (40–120)	0.02 (0.01–0.03)	0.03 (0.01–0.05)
M	Stainless Steel ≤200HB	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5	80 (40–120)	0.02 (0.01–0.03)	0.03 (0.01–0.05)
K	Gray Cast Iron ≤350MPa	80 (40–120)	0.03 (0.01–0.05)	0.2 (0.1–0.3)	3–5	80 (40–120)	0.03 (0.01–0.05)	0.03 (0.01–0.05)
N	Non-Ferrous Meterial	120 (80–160)	0.05 (0.01–0.08)	0.3 (0.1–0.5)	3–5	120 (80–160)	0.03 (0.01–0.05)	0.05 (0.01–0.08)

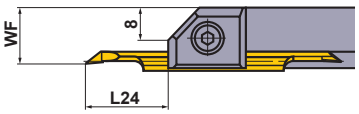
(Note 1) Recommend wet machining.
(Note 2) The recommended tool overhang of CR type is LU+2mm.

SQUARE TYPE HOLDER

CB type (Boring bar fits to a holder)



CR type (Boring bar fits to a holder)



Order Number	Stock	Dimensions(mm) WF CB	WF CR	L24* CB	L24* CR	B CB	B CR	Micro-Mini Twin CB	Micro-Mini Twin CR	Clamp Screw	Wrench	Torque (N • m)
SBH1020R	●	13	—	6—24 (6—10)	—	12.9		02RS(-B) 02RS-0□(B)	—	HSC04010	HKY30R	4.8
SBH1030R	●	14	12.65	8.5—22 (9—15)	11—19.5 (12)	13.8		03RS(-B) 03RS-0□(B)	03RS-01(B)	HSC05012	HKY40R	9.5
SBH1040R	●	15	13.15	11—29.5 (12—20)	13—27.5 (14)	14.7		04RS(-B) 04RS-0□(B)	04RS-01(B)	HSC05012	HKY40R	9.5
SBH1050R	●	16	13.65	13.5—37 (15—25)	15—35.5 (16)	15.6		05RS(-B) 05RS-0□(B)	05RS-01(B)	HSC05012	HKY40R	9.5
SBH1060R	●	17	—	13.5—42 (18—30)	—	16.5		06RS(-B) 06RS-0□(B)	—	HSC05012	HKY40R	9.5
SBH1070R	●	18	—	13.5—52 (21—35)	—	17.4		07RS(-B) 07RS-0□(B)	—	HSC05012	HKY40R	9.5

(Note) The MICRO-DEX and the MICRO-MINI cannot be fit to square holders.
*L24 is the length of overhang for sufficient clamping, and ( ) is the recommended length for machining of carbon and alloy steel.

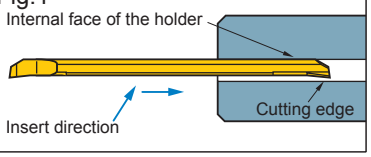
● : Inventory maintained in Japan.

PRECAUTIONS WHEN USING THE MICRO-MINI TWIN

●When using a holder for general purpose / small automatic lathe:

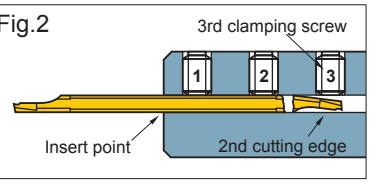
1 To avoid chipping of the 2nd cutting edge take care when inserting the boring bar into the holder. Refer to fig.1. If the 2nd edge contacts the internal face of the holder there is a possibility that it may chip.

Fig.1



2 When using this type of holder, there is a possibility that damage to the shank and the 2nd cutting edge can occur. Make sure that the clamping screws are tightened to the set torque value. Additionally make sure that there is no clamping screw near the 2nd cutting edge as this can break the boring bar.

Fig.2



◎When using Mitsubishi holders

When using holders with a tool overhang of recommended quantity, ensure that the 3rd clamping screw is removed prior to machining. (RBH1620N, RBH19020N, RBH2020N and RBH2520N do not have the 3rd screw.) The set torque value for clamping screw is 2.0 N•m.

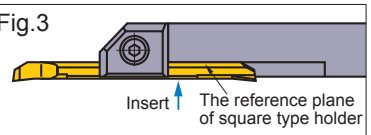
●When using a square type holder:

1 When installing the boring bar into the holder, tighten the clamp screws after ensuring the flats on the tool holder are parallel to the reference flats on the micro-mini bar. Refer to fig.3.

2 Make sure that the clamping screws are tightened to the recommended values.

3 Do not tighten the clamp screw without a bar in place, otherwise the bridge will be deformed.

Fig.3



Tighten the clamping screw ensuring making the micro-mini twin boring bars is in contact with the reference plane of square type holder.

MACHINING METHODS OF THE CR TYPE

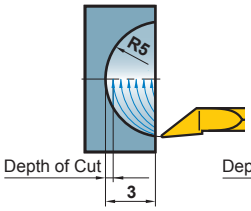
●Profile turning

By drilling a pre-prepared hole, the machining time will be shortened and chip control will be improved.

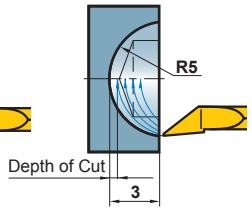
<Cutting Conditions>

Workpiece	: JIS S20C
Holder	: CR05RS-01B
Cutting Speed	: 80m/min
Feed	: 0.05mm/rev
Depth of Cut	: 0.05mm
Wet Cutting	

Machining a work piece without a pre-prepared hole



Machining a work piece with a pre-prepared hole



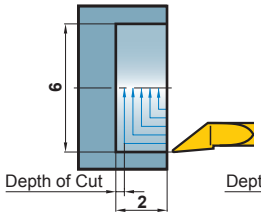
●Inner end facing

By drilling a pre-prepared hole, the machining time will be shortened and chip control will be improved.

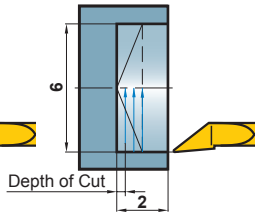
<Cutting Conditions>

Workpiece	: JIS S20C
Holder	: CR05RS-01B
Cutting Speed	: 80m/min
Feed	: 0.05mm/rev
Depth of Cut	: 0.05mm
Wet Cutting	

Machining a work piece without a pre-prepared hole

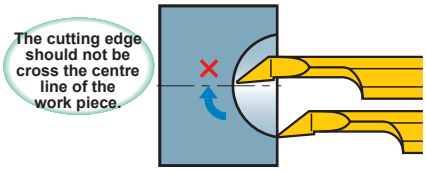


Machining a work piece with a pre-prepared hole



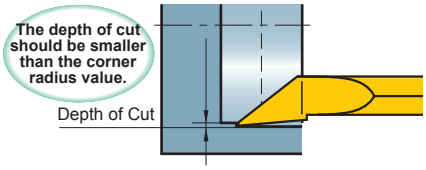
NOTES FOR USE

Profile turning, Inner end facing



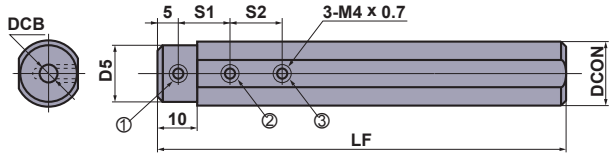
If the cutting edge crosses the centre line of a work piece, the cutting edge can fracture.

Copying

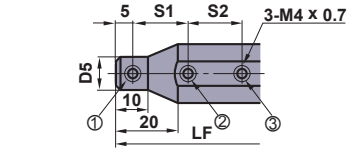


With depths of cut larger than the corner radius value, burrs will be formed.

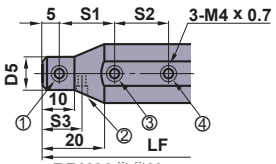
ROUND TYPE HOLDER



RBH158○○N, RBH16○○N, RBH190○○N



RBH20○○N, RBH25○○N, RBH254○○N



RBH22○○N

	Order Number	Stock	Dimensions(mm)							Micro-Mini C	Micro-Mini Twin		∗1 Clamp Screw				Wrench	Torque (N • m)
			DCON	DCB	D5	LF	S1	S2	S3		CB	CR	①	②	③	④		
	RBH15820N	●	15.875	2	15	100	10	—	—	—	02RS(-B) 02RS-0○(B)	—	B	B	—	—	HKY20F	2.0
	RBH15830N	●	15.875	3	15	100	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH15840N	●	15.875	4	15	100	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH15850N	●	15.875	5	15	100	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH15860N	●	15.875	6	15	100	15	15	—	—	06RS(-B) 06RS-0○(B)	—	A	A	A	—	HKY20F	2.0
	RBH15870N	●	15.875	7	15	100	20	20	—	—	07RS(-B) 07RS-0○(B)	—	A	A	A	—	HKY20F	2.0
	RBH15880N	●	15.875	8	15	100	20	20	—	—	08RS(-B) 08RS-0○(B)	—	D	D	D	—	HKY20F	2.0
	RBH1620N	●	16	2	15	100	10	—	—	—	02RS(-B) 02RS-0○(B)	—	B	B	—	—	HKY20F	2.0
	RBH1630N	●	16	3	15	100	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH1640N	●	16	4	15	100	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH1650N	●	16	5	15	100	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	A	A	—	HKY20F	2.0
	RBH1660N	●	16	6	15	100	15	15	—	—	06RS(-B) 06RS-0○(B)	—	A	A	A	—	HKY20F	2.0
	RBH1670N	●	16	7	15	100	20	20	—	—	07RS(-B) 07RS-0○(B)	—	A	A	A	—	HKY20F	2.0
	RBH1680N	●	16	8	15	100	20	20	—	—	08RS(-B) 08RS-0○(B)	—	D	D	D	—	HKY20F	2.0
∗2	RBH19020N	●	19.05	2	18	125	10	—	—	—	02RS(-B) 02RS-0○(B)	—	C	C	—	—	HKY20F	2.0
∗2	RBH19030N	●	19.05	3	18	125	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	B	B	B	—	HKY20F	2.0
∗2	RBH19040N	●	19.05	4	18	125	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	B	B	B	—	HKY20F	2.0
∗2	RBH19050N	●	19.05	5	18	125	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	B	B	B	—	HKY20F	2.0
∗2	RBH19060N	●	19.05	6	18	125	15	15	—	—	06RS(-B) 06RS-0○(B)	—	B	B	B	—	HKY20F	2.0
∗2	RBH19070N	●	19.05	7	18	125	20	20	—	—	07RS(-B) 07RS-0○(B)	—	B	B	B	—	HKY20F	2.0
	RBH19080N	●	19.05	8	18	125	20	20	—	—	08RS(-B) 08RS-0○(B)	—	A	A	A	—	HKY20F	2.0
	RBH2020N	●	20	2	11	125	10	—	—	—	02RS(-B) 02RS-0○(B)	—	A	A	—	—	HKY20F	2.0
	RBH2030N	●	20	3	12	125	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	A	B	—	HKY20F	2.0
	RBH2040N	●	20	4	13	125	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	B	B	—	HKY20F	2.0
	RBH2050N	●	20	5	14	125	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	B	B	—	HKY20F	2.0
	RBH2060N	●	20	6	15	125	15	15	—	—	06RS(-B) 06RS-0○(B)	—	A	B	B	—	HKY20F	2.0
	RBH2070N	●	20	7	16	125	20	20	—	—	07RS(-B) 07RS-0○(B)	—	A	B	B	—	HKY20F	2.0
	RBH2080N	●	20	8	17	125	20	20	—	—	08RS(-B) 08RS-0○(B)	—	A	A	A	—	HKY20F	2.0

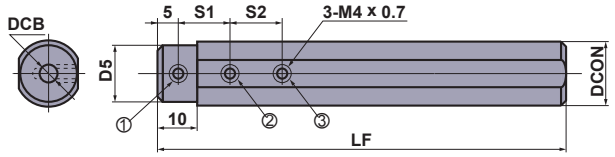
∗1 Order number of clamp screw A=HSS04004, B=HSS04006, C=HSS04008, D=HSS04003 ∗2 Revised order number.

Conventional Order Number	Revised Order Number
RBH1920N	RBH19020N
RBH1930N	RBH19030N
RBH1940N	RBH19040N

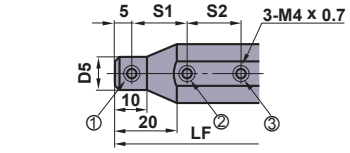
Conventional Order Number	Revised Order Number
RBH1950N	RBH19050N
RBH1960N	RBH19060N
RBH1970N	RBH19070N

● : Inventory maintained in Japan.

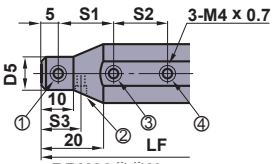
ROUND TYPE HOLDER



RBH158○○N, RBH16○○N, RBH190○○N



RBH20○○N, RBH25○○N, RBH254○○N



RBH22○○N

Order Number	Stock	Dimensions(mm)							Micro-Mini C	Micro-Mini Twin		*1 Clamp Screw				Wrench	Torque (N • m)
		DCON	DCB	D5	LF	S1	S2	S3		CB	CR	①	②	③	④		
RBH2220N	●	22	2	11	125	10	—	10	—	02RS(-B) 02RS-0○(B)	—	A	B	—	A	HKY20F	2.0
RBH2230N	●	22	3	12	125	10	10	10	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	B	C	A	HKY20F	2.0
RBH2240N	●	22	4	13	125	15	15	12.5	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	B	B	A	HKY20F	2.0
RBH2250N	●	22	5	14	125	15	15	12.5	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	B	B	A	HKY20F	2.0
RBH2260N	●	22	6	15	125	15	15	15	—	06RS(-B) 06RS-0○(B)	—	A	B	B	A	HKY20F	2.0
RBH2270N	●	22	7	16	125	20	20	15	—	07RS(-B) 07RS-0○(B)	—	A	B	B	A	HKY20F	2.0
RBH2280N	●	22	8	17	125	20	20	15	—	08RS(-B) 08RS-0○(B)	—	A	B	B	A	HKY20F	2.0
RBH2520N	●	25	2	11	150	10	—	—	—	02RS(-B) 02RS-0○(B)	—	A	B	—	—	HKY20F	2.0
RBH2530N	●	25	3	12	150	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	B	C	—	HKY20F	2.0
RBH2540N	●	25	4	13	150	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	C	C	—	HKY20F	2.0
RBH2550N	●	25	5	14	150	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	C	C	—	HKY20F	2.0
RBH2560N	●	25	6	15	150	15	15	—	—	06RS(-B) 06RS-0○(B)	—	A	C	C	—	HKY20F	2.0
RBH2570N	●	25	7	16	150	20	20	—	—	07RS(-B) 07RS-0○(B)	—	A	C	C	—	HKY20F	2.0
RBH2580N	●	25	8	17	150	20	20	—	—	08RS(-B) 08RS-0○(B)	—	A	B	B	—	HKY20F	2.0
RBH25420N	●	25.4	2	11	150	10	—	—	—	02RS(-B) 02RS-0○(B)	—	A	B	—	—	HKY20F	2.0
RBH25430N	●	25.4	3	12	150	10	10	—	03FR-BLS	03RS(-B) 03RS-0○(B)	03RS-01(B)	A	B	C	—	HKY20F	2.0
RBH25440N	●	25.4	4	13	150	15	15	—	04FR-BLS	04RS(-B) 04RS-0○(B)	04RS-01(B)	A	C	C	—	HKY20F	2.0
RBH25450N	●	25.4	5	14	150	15	15	—	05HR-BLS	05RS(-B) 05RS-0○(B)	05RS-01(B)	A	C	C	—	HKY20F	2.0
RBH25460N	●	25.4	6	15	150	15	15	—	—	06RS(-B) 06RS-0○(B)	—	A	C	C	—	HKY20F	2.0
RBH25470N	●	25.4	7	16	150	20	20	—	—	07RS(-B) 07RS-0○(B)	—	A	C	C	—	HKY20F	2.0
RBH25480N	●	25.4	8	17	150	20	20	—	—	08RS(-B) 08RS-0○(B)	—	A	B	B	—	HKY20F	2.0

*1 Order number of clamp screw A=HSS04004, B=HSS04006, C=HSS04008, D=HSS04003 *2 Revised order number.

Conventional Order Number	Revised Order Number
RBH1920N	**RBH19020N**
RBH1930N	**RBH19030N**
RBH1940N	**RBH19040N**

Conventional Order Number	Revised Order Number
RBH1950N	**RBH19050N**
RBH1960N	**RBH19060N**
RBH1970N	**RBH19070N**

● : **Inventory maintained in Japan.**

C-BLS

MICRO-MINI BORING BARS

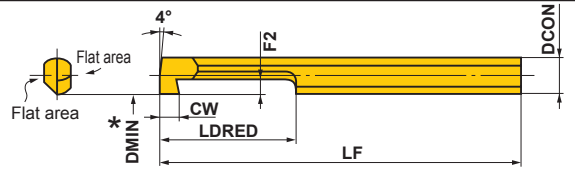
Carbide shank

Product Information

ROUND TYPE HOLDER >> 412
ISO13399 PROPERTY >> 1966
TECHNICAL INFO >> 1971

STANDARD MICRO-MINI BORING BARS (Solid carbide boring bar)

Order Number	Stock	Dimensions(mm)						Geometry
	TF15	CW	DCON	LF	LDRED	DMIN	F2	
C03FR-BLS	●	2.0	3	80	15	3.2	1.0	
C04FR-BLS	●	2.5	4	80	20	4.2	1.5	
C05HR-BLS	●	3.0	5	100	25	5.2	2.0	



Right hand tool only.

*DMIN : Min. Cutting Diameter

● : **Inventory maintained in Japan. (MICRO MINI is available in 1 piece in one pack.)**

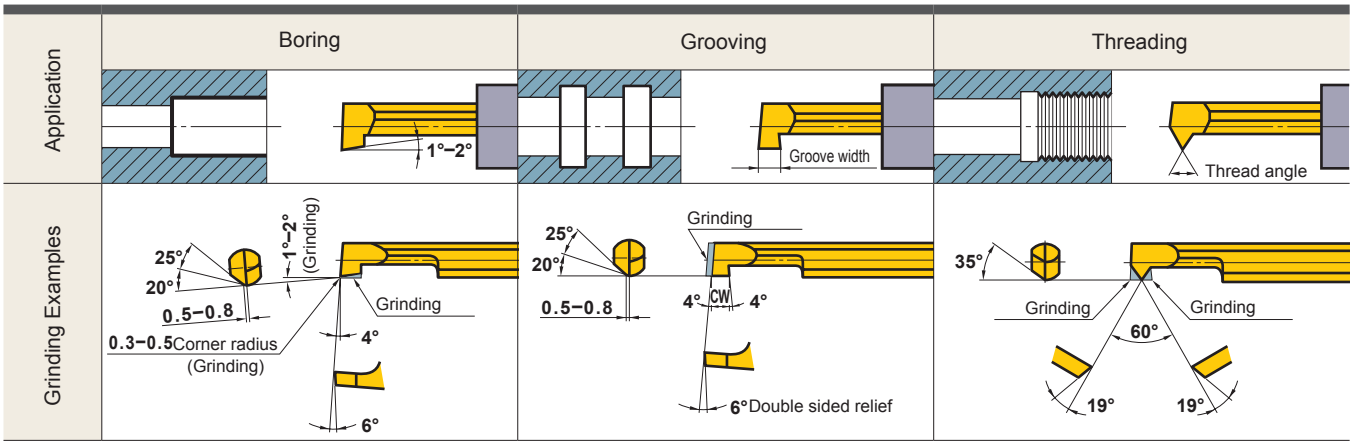
RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	l/d	Edge Condition (mm)	
						*Corner Radius or C	*Honing
P	Carbon Steel, Alloy Steel 180–350HB	40 (30–50)	0.05 (–0.1)	0.2 (0.1–0.3)	5	0.1–0.5	0.01–0.05
M	Stainless Steel ≤200HB	40 (30–50)	0.05 (–0.1)	0.2 (0.1–0.3)	5	≤0.4	≤0.03 (Honing not required)
K	Gray Cast Iron ≤350MPa	40 (30–50)	0.05 (–0.05)	0.2 (0.1–0.3)	5	0.1–0.5	0.01–0.05
N	Non-Ferrous Meterial	80 (60–100)	0.05 (–0.1)	0.3 (0.1–0.5)	5	0.1–0.5	≤0.03 (Honing not required)

*Cutting edge is not honed. Please hone according to the workpiece before machining.

GRINDING THE CUTTING EDGE OF MICRO-MINI BORING BAR

- MICRO-MINI boring bar can be applied to boring and grooving without any modifications. It can also be reground as shown below.
- For shaping and regrinding, use a diamond whetstone approximately #250–#400.
  Please grind according to the application using the figure below as a reference.



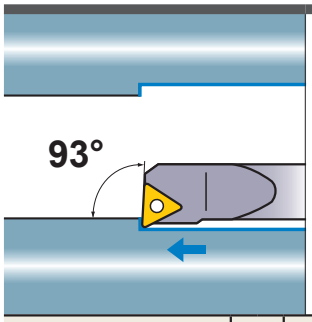
FSTU1

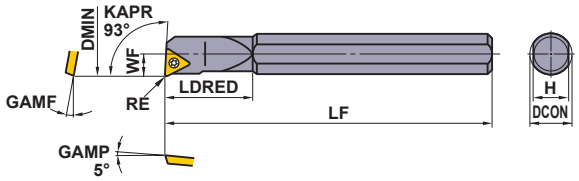
F TYPE BORING BARS

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 254
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 158
PCD TURNING INSERTS >> 277
TECHNICAL INFO >> 1971





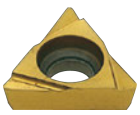
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
FSTU108R/L	●	●	TPGX TPMX NP-TPGX NP-TPMX	0802◌◌	8	125	18	5	7	15°	**10**	0.4	CS200T	TKY06F
FSTU110R/L	●	●		0902◌◌	10	150	22	6	9	13°	**12**	0.4	CS250T	TKY08F
FSTU112R/L	●	●		0902◌◌	12	180	25	8	11	10°	**16**	0.4	CS250T	TKY08F
FSTU116R/L	●	●		1103◌◌	16	200	30	11	14	7°	**22**	0.4	CS300890T	TKY08F

∗ Clamp Torque (N • m) : CS200T=0.6, CS250T=1.0, CS300890T=1.0

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Light Cutting	Without Breaker	PCD	CBN/PCD
R/L		R/L-F	
			
(08,09,11)	(08,09,11)	(08,09,11)	(11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

FSTU2

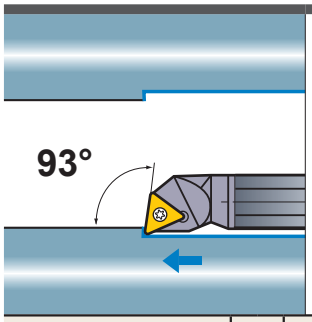
F TYPE BORING BARS

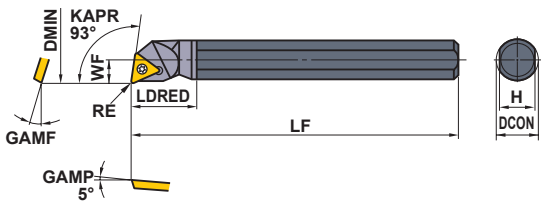
Carbide shank

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 254
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 158
PCD TURNING INSERTS >> 277
TECHNICAL INFO >> 1971





Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
FSTU208R/L	●	●	TPGX TPMX NP-TPGX NP-TPMX	0802○○	8	125	13	5	7	15°	**10**	0.4	CS200T	TKY06F
FSTU210R/L	●	●		0902○○	10	150	16	6	9	13°	**12**	0.4	CS250T	TKY08F
FSTU212R/L	●	●		0902○○	12	180	19	8	11	10°	**16**	0.4	CS250T	TKY08F
FSTU216R/L	●	●		1103○○	16	200	26	11	14	7°	**22**	0.4	CS300890T	TKY08F

* Clamp Torque (N • m) : CS200T=0.6, CS250T=1.0, CS300890T=1.0

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Light Cutting	Without Breaker	PCD	CBN/PCD
R/L		R/L-F	
			
(08,09,11)	(08,09,11)	(08,09,11)	(11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

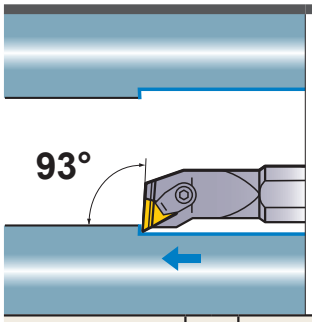
FCTU1

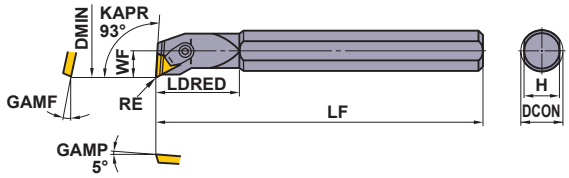
F TYPE BORING BARS

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 263
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 173
PCD TURNING INSERTS >> 287
TECHNICAL INFO >> 1971





Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Shim	Shim Pin	Clamp Set *	Breaker Piece	Wrench
FCTU116R/L	●	●	TPMN TPMR TPGN TPGR	1103○○	16	200	30	11	14	7°	**22**	0.4	–	–	C3	CBT2N	HKY25R
FCTU120R/L	●	●		1603○○	20	200	37	13	18	5°	**26**	0.8	–	–	C4	CBT3F	HKY30R
FCTU125R/L (4 Side Flat Shank)	●	●		1603○○	25	250	40	16	22	5°	**32**	0.8	PT32	BCP202	C4	CBT3F	HKY30R
FCTU132R/L (4 Side Flat Shank)	●	●		1603○○	32	300	45	20	29	0°	**40**	0.8	PT32	BCP201	C4	CBT3F	HKY30R

∗ Clamp Torque (N • m) : C3=2.2, C4=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

M Class	M Class	G class	G class	CBN/PCD
Standard	Flat Top	R/L		
				
(11,16)	(11,16)	(11,16)	(11,16)	(11,16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

FCTU2

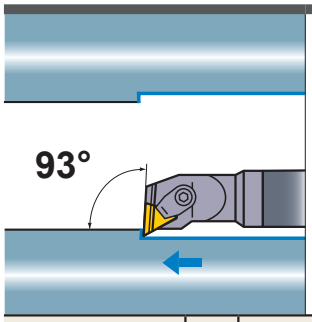
F TYPE BORING BARS

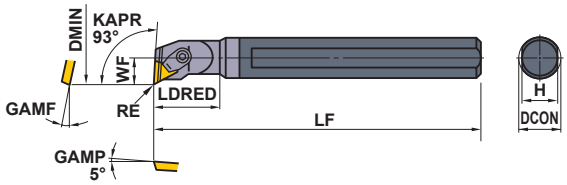
Carbide shank

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 263
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 173
PCD TURNING INSERTS >> 287
TECHNICAL INFO >> 1971





Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)								Shim	Shim Pin	Clamp Set *	Breaker Piece	Wrench
	R			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE					
FCTU216R	●	TPMN TPMR TPGN TPGR	1103○○	16	200	26	11	14	7°	**22**	0.4	—	—	C3	CBT2N	HKY25R
FCTU220R	●		1603○○	20	200	33	13	18	5°	**26**	0.8	—	—	C4	CBT3F	HKY30R
FCTU225R	●		1603○○	25	250	37	16	22	5°	**32**	0.8	PT32	BCP202	C4	CBT3F	HKY30R

∗ Clamp Torque (N • m) : C3=2.2, C4=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

M Class	M Class	G class	G class	CBN/PCD
Standard	Flat Top	R/L		
				
(11,16)	(11,16)	(11,16)	(11,16)	(11,16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

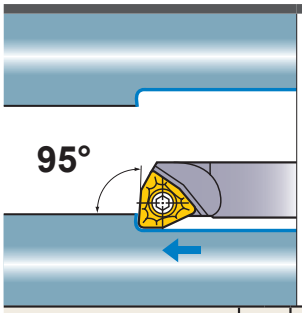
Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

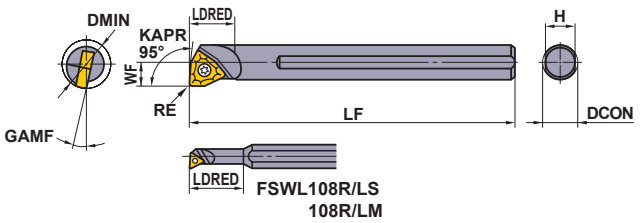
FSWL1 F TYPE BORING BARS

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 260
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 167
PCD TURNING INSERTS >> 281
TECHNICAL INFO >> 1971





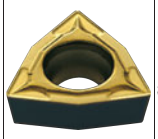
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	* Clamp Screw	Wrench
FSWL108R/LS	●	●	WCMT WCGT	0201○○	8	100	19	2.9	7	17°	**5.8**	0.4	TS21	TKY06F
FSWL108R/LM	●	●	WCMT WCGT WCMW	L302○○	8	100	25	4	7	15°	**8**	0.4	TS2	TKY06F
FSWL108R/L	●	●	WCMT WCMW	0402○○	8	125	10	5	7	15°	**10**	0.4	TS25	TKY08F
FSWL110R/L	●	●		0402○○	10	150	12	6	9	13°	**12**	0.4	TS25	TKY08F
FSWL112R/L	●	●		06T3○○	12	180	15	8	11	13°	**16**	0.8	TS4	TKY15F
FSWL116R/L	●	●		06T3○○	16	200	20	11	14	7°	**22**	0.8	TS4	TKY15F

* Clamp Torque (N • m) : TS21=0.6, TS2=0.6, TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Light Cutting	Light Cutting	CBN/PCD
Standard	R/L	
		
(02,L3,04,06)	(02,L3)	(L3,04,06)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

FSWL2

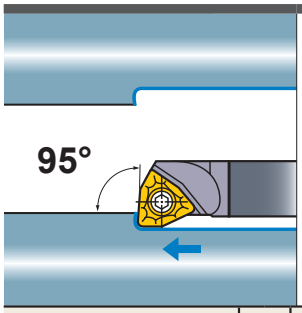
F TYPE BORING BARS

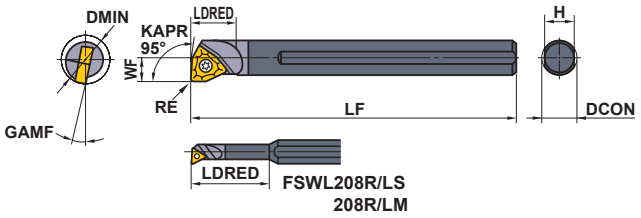
Carbide shank

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 260
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 167
PCD TURNING INSERTS >> 281
TECHNICAL INFO >> 1971





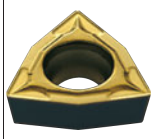
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	* Clamp Screw	Wrench
FSWL208R/LS	●	●	WCMT WCGT	0201○○	8	122	25	2.9	7	17°	**5.8**	0.4	TS21	TKY06F
FSWL208R/LM	●	●	WCMT WCGT WCMW	L302○○	8	125	33	4	7	15°	**8**	0.4	TS2	TKY06F
FSWL208R/L	●	●	WCMT WCMW	0402○○	8	125	10	5	7	15°	**10**	0.4	TS25	TKY08F
FSWL210R/L	●	●		0402○○	10	150	12	6	9	13°	**12**	0.4	TS25	TKY08F
FSWL212R/L	●	●		06T3○○	12	180	15	8	11	13°	**16**	0.8	TS4	TKY15F
FSWL216R/L	●	●		06T3○○	16	200	20	11	14	7°	**22**	0.8	TS4	TKY15F

∗ Clamp Torque (N • m) : TS21=0.6, TS2=0.6, TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Light Cutting	Light Cutting	CBN/PCD
Standard	R/L	
		
(02,L3,04,06)	(02,L3)	(L3,04,06)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

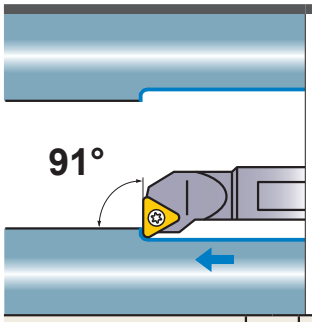
Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

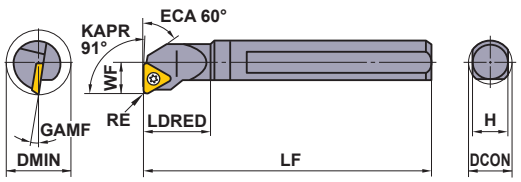
S-STFC S TYPE BORING BARS

Product Information

91° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 252
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 155
PCD TURNING INSERTS >> 276
TECHNICAL INFO >> 1971





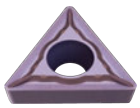
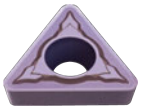
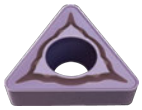
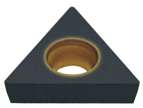
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	* Clamp Screw	Wrench
S08FSTFCR/L09	●	●	TCMT	0902○○	8	80	12	6	7	15°	**11**	0.4	TS22	TKY06F
S10HSTFCR/L11	●	●	TCMW TCMT	1102○○	10	100	16	7	9	13°	**13**	0.4	TS25	TKY08F
S12KSTFCR/L11	●	●		1102○○	12	125	20	9	11	10°	**16**	0.4	TS25	TKY08F
S16MSTFCR/L11	●	●		1102○○	16	150	25	11	14	7°	**20**	0.4	TS25	TKY08F
S20QSTFCR/L16	●	●		16T3○○	20	180	32	13	18	7°	**25**	0.8	TS4	TKY15F
S25RSTFCR/L16	●	●		16T3○○	25	200	40	17	23	5°	**32**	0.8	TS4	TKY15F
S32SSTFCR/L16	●	●		16T3○○	32	250	50	22	30	5°	**40**	0.8	TS4	TKY15F

* Clamp Torque (N • m) : TS22=0.6, TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(11,16)	(11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

C-STFC

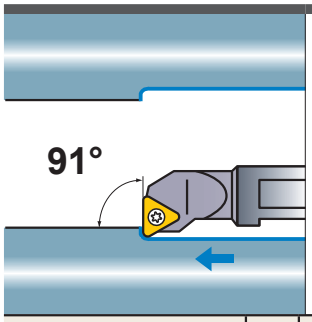
S TYPE BORING BARS

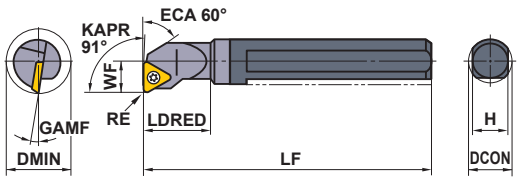
Carbide shank

Product Information

91° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 252
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 155
PCD TURNING INSERTS >> 276
TECHNICAL INFO >> 1971





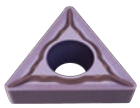
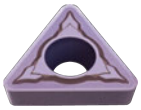
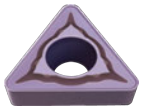
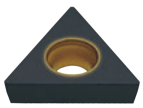
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)								*	
				DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
	R												
C08HSTFCR09	●	TCMT	0902○○	8	100	12	6	7	15°	11	0.4	TS22	TKY06F
C10KSTFCR11	●	TCMW TCMT	1102○○	10	125	16	7	9	13°	13	0.4	TS25	TKY08F
C12MSTFCR11	●		1102○○	12	150	20	9	11	10°	16	0.4	TS25	TKY08F
C16RSTFCR11	●		1102○○	16	200	25	11	14	7°	20	0.4	TS25	TKY08F
C20SSTFCR16	●		16T3○○	20	250	32	13	18	7°	25	0.8	TS4	TKY15F
C25TSTFCR16	●		16T3○○	25	300	40	17	23	5°	32	0.8	TS4	TKY15F

* Clamp Torque (N • m) : TS22=0.6, TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(09,11,16)	(11,16)	(11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

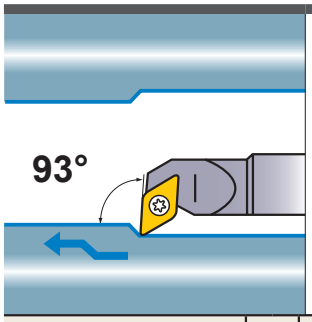
S-SDUC

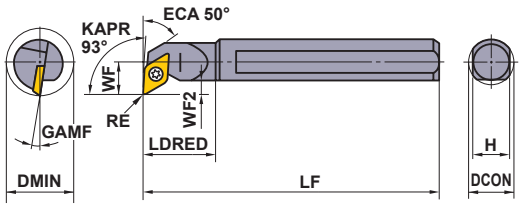
S TYPE BORING BARS

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971





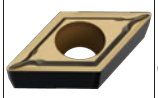
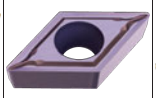
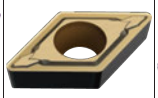
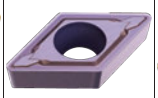
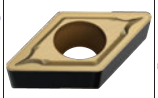
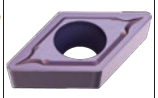
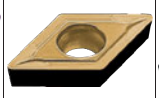
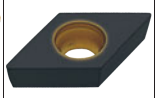
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)									*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
S10HSDUCR/L07	●	●	DCMT DCET DCGT DCMW DCGW NP-DCGW NP-DCMT	0702○○	10	100	16	7	2.4	9	13°	**13**	0.4	TS25	TKY08F
S12KSDUCR/L07	●	●		0702○○	12	125	20	9	3.4	11	10°	**16**	0.4	TS25	TKY08F
S16MSDUCR/L07	●	●		0702○○	16	150	25	11	3.9	14	7°	**20**	0.4	TS25	TKY08F
S20QSDUCR/L11	●	●		11T3○○	20	180	32	13	4.4	18	7°	**25**	0.8	TS4	TKY15F
S25RSDUCR/L15	●	●		1504○○	25	200	40	17	6.9	23	5°	**32**	0.8	TS5	TKY25F
S32SSDUCR/L15	●	●		1504○○	32	250	50	22	8.4	30	5°	**40**	0.8	TS5	TKY25F
S40TSDUCR/L15	●	●		1504○○	40	300	63	27	9.4	37	5°	**50**	0.8	TS5	TKY25F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11,15)	(07,11,15)	(07,11,15)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

C-SDUC

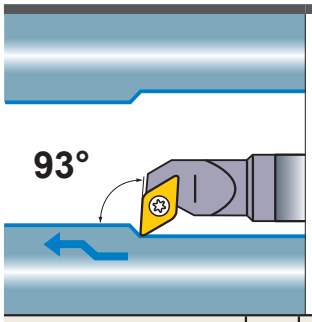
S TYPE BORING BARS

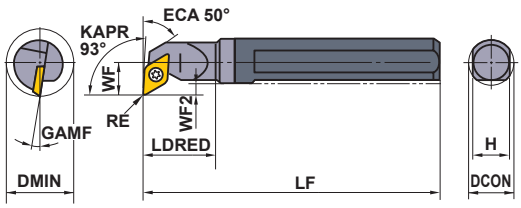
Carbide shank

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971





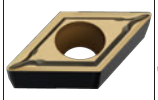
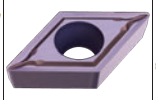
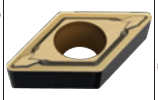
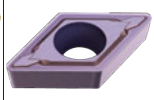
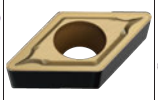
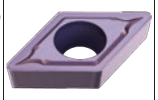
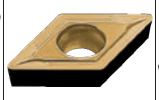
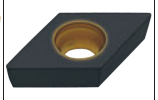
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)									*	
				DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
	R													
C10KSDUCR07	●	DCMT DCET DCGT DCMW DCGW NP-DCGW NP-DCMT	0702○○	10	125	16	7	2.1	9	13°	**13**	0.4	TS25	TKY08F
C12MSDUCR07	●		0702○○	12	150	20	9	3.1	11	10°	**16**	0.4	TS25	TKY08F
C16RSDUCR07	●		0702○○	16	200	25	11	3.1	14	7°	**20**	0.4	TS25	TKY08F
C20SSDUCR11	●		11T3○○	20	250	32	13	3.1	18	7°	**25**	0.8	TS4	TKY15F
C25TSDUCR15	●	DCMW DCMT	1504○○	25	300	40	17	4.9	23	5°	**32**	0.8	TS5	TKY25F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11,15)	(07,11,15)	(07,11,15)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

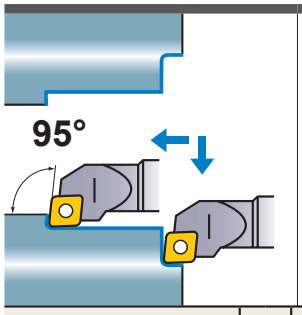
S-SCLC

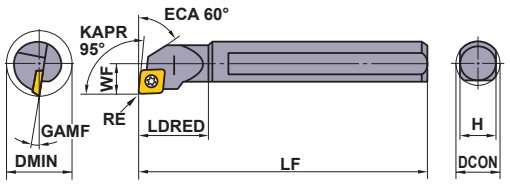
S TYPE BORING BARS

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971





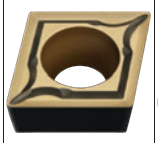
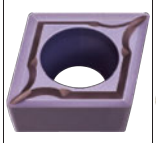
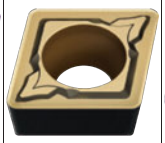
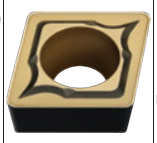
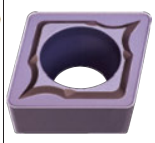
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
S08FSCLCR/L06	●	●	CCMH CCMT CCET CCGT CCMW CCGW NP-CCGW	0602□□	8	80	12	6	7	15°	**11**	0.4	TS25	TKY08F
S10HSCLCR/L06	●	●		0602□□	10	100	16	7	9	13°	**13**	0.4	TS25	TKY08F
S12KSCLCR/L06	●	●		0602□□	12	125	20	9	11	10°	**16**	0.4	TS25	TKY08F
S16MSCLCR/L09	●	●		09T3□□	16	150	25	11	14	7°	**20**	0.8	TS4	TKY15F
S20QSCLCR/L09	●	●		09T3□□	20	180	32	13	18	7°	**25**	0.8	TS4	TKY15F
S25RSCLCR/L12	●	●		1204□□	25	200	40	17	23	5°	**32**	0.8	TS5	TKY25F
S32SSCLCR/L12	●	●		1204□□	32	250	50	22	30	5°	**40**	0.8	TS5	TKY25F
S40TSCLCR/L12	●	●		1204□□	40	300	63	27	37	5°	**50**	0.8	TS5	TKY25F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(06,09)	(06,09)	(06,09)	(06,09)	(06,09,12)	(06,09,12)	(06,09,12)	(06,09,12)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

C-SCLC

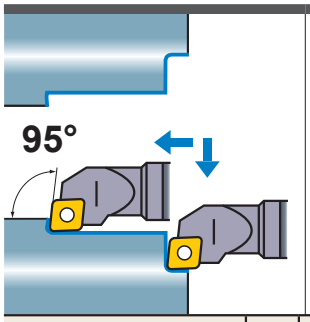
S TYPE BORING BARS

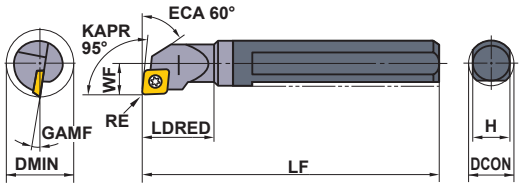
Carbide shank

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971





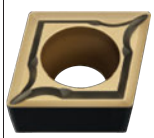
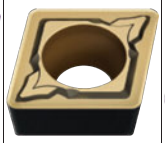
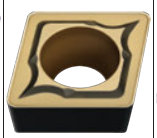
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)								*	
				DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
	R												
C08HSCLCR06	●	CCMH CCMT CCET CCGT CCMW CCGW NP-CCGW	0602○○	8	100	12	6	7	15°	11	0.4	TS25	TKY08F
C10KSCLCR06	●		0602○○	10	125	16	7	9	13°	13	0.4	TS25	TKY08F
C12MSCLCR06	●		0602○○	12	150	20	9	11	10°	16	0.4	TS25	TKY08F
C16RSCLCR09	●		09T3○○	16	200	25	11	14	7°	20	0.8	TS4	TKY15F
C20SSCLCR09	●		09T3○○	20	250	32	13	18	7°	25	0.8	TS4	TKY15F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

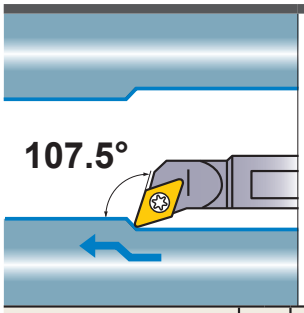
S-SDQC

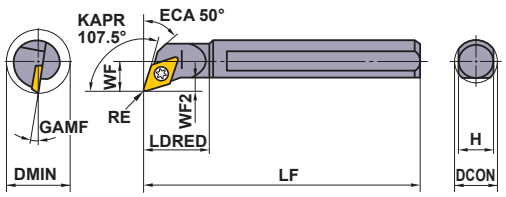
S TYPE BORING BARS

Product Information

107° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971





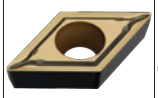
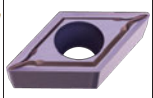
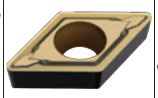
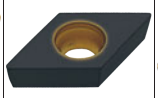
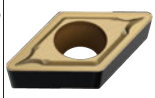
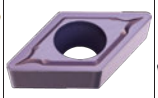
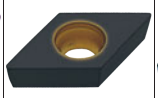
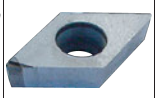
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)									*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
S10HSDQCR/L07	●	●	DCMT DCET DCGT DCMW DCGW NP-DCMW NP-DCMT	0702□□	10	100	16	7	2.4	9	13°	**13**	0.4	TS25	TKY08F
S12KSDQCR/L07	●	●		0702□□	12	125	20	9	3.4	11	10°	**16**	0.4	TS25	TKY08F
S16MSDQCR/L07	●	●		0702□□	16	150	25	11	3.9	14	7°	**20**	0.4	TS25	TKY08F
S20QSDQCR/L11	●	●		11T3□□	20	180	32	13	4.4	18	7°	**25**	0.8	TS4	TKY15F
S25RSDQCR/L15	●	●		1504□□	25	200	40	17	6.9	23	5°	**32**	0.8	TS5	TKY25F
S32SSDQCR15	●			1504□□	32	250	50	22	8.4	30	5°	**40**	0.8	TS5	TKY25F
S40TSDQCR15	●			1504□□	40	300	63	27	9.4	37	5°	**50**	0.8	TS5	TKY25F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11,15)	(07,11,15)	(07,11,15)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

C-SDQC

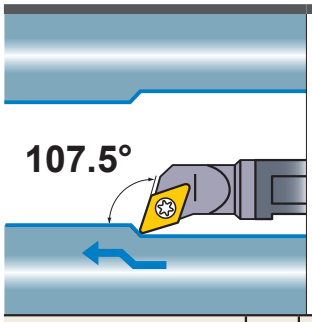
S TYPE BORING BARS

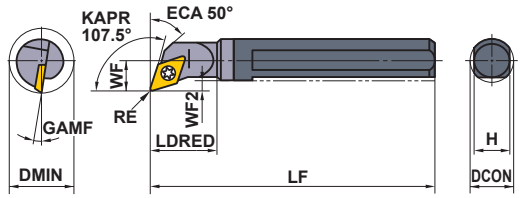
Carbide shank

Product Information

107° 30' KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 249
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 145
PCD TURNING INSERTS >> 274
TECHNICAL INFO >> 1971





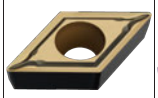
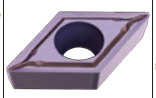
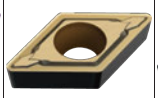
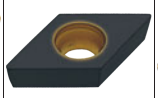
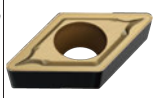
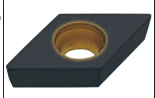
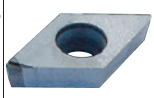
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)									*	
	R			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
C10KSDQCR07	●	DCMT DCET DCGT DCMW DCGW	0702□□	10	125	16	7	2.1	9	13°	**13**	0.4	TS25	TKY08F
C12MSDQCR07	●		0702□□	12	150	20	9	3.1	11	10°	**16**	0.4	TS25	TKY08F
C16RSDQCR07	●		0702□□	16	200	25	11	3.1	14	7°	**20**	0.4	TS25	TKY08F
C20SSDQCR11	●	NP-DCMW NP-DCMT	11T3□□	20	250	32	13	3.1	18	7°	**25**	0.8	TS4	TKY15F
C25TSDQCR15	●	DCMW DCMT	1504□□	25	300	40	17	4.9	23	5°	**32**	0.8	TS5	TKY25F

∗ Clamp Torque (N • m) : TS25=1.0, TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(07,11)	(07,11)	(07,11)	(07,11)	(07,11,15)	(07,11,15)	(07,11,15)	(07,11)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

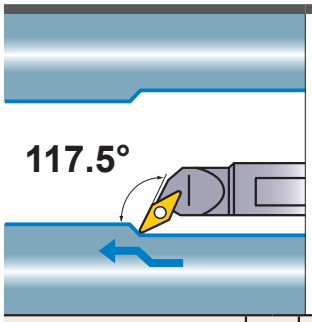
S-SVQC

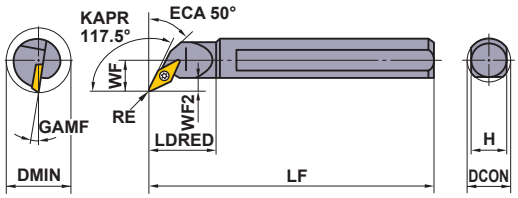
S TYPE BORING BARS

Product Information

117° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971





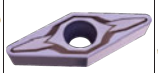
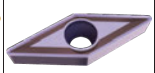
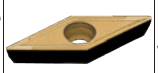
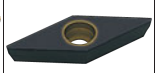
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	* Clamp Screw	Wrench
S16MSVQCR/L11	●	●	VCMW VCMT	1103□□	16	150	25	11	3.9	14	7°	**20**	0.4	TS25	TKY08F
S20QSVQCR/L11	●	●		1103□□	20	180	32	13	4.4	18	7°	**25**	0.4	TS25	TKY08F
S25RSVQCR/L16	●	●		1604□□	25	200	40	17	6.9	23	5°	**32**	0.8	TS4	TKY15F
S32SSVQCR/L16	●	●		1604□□	32	250	50	22	8.4	30	5°	**40**	0.8	TS4	TKY15F
S40TSVQCR16	●			1604□□	40	300	63	27	9.4	37	5°	**50**	0.8	TS4	TKY15F

∗ Clamp Torque (N • m) : TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(11,16)	(11,16)	(11,16)	(11,16)	(16)	(16)	(11,16)	(11,16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Steel Shank			l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
	Carbide Shank			l/d≤5			l/d=6–7		
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

C-SVQC

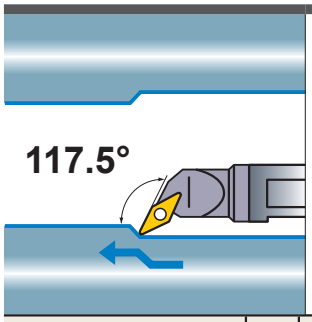
S TYPE BORING BARS

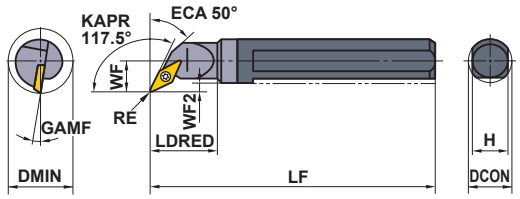
Carbide shank

Product Information

117° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971





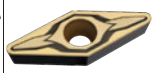
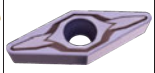
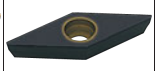
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)									*	
	R			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
C16RSVQCR11	●	VCMT VCMW	1103◌◌	16	200	25	11	3.1	14	7°	**20**	0.4	TS25	TKY08F
C20SSVQCR11	●		1103◌◌	20	250	32	13	3.1	18	7°	**25**	0.4	TS25	TKY08F
C25TSVQCR16	●		1604◌◌	25	300	40	17	4.9	23	5°	**32**	0.8	TS4	TKY15F

∗ Clamp Torque (N • m) : TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(11,16)	(11,16)	(11,16)	(11,16)	(16)	(16)	(11,16)	(11,16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

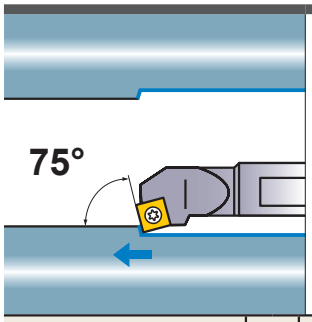
S-SSKC

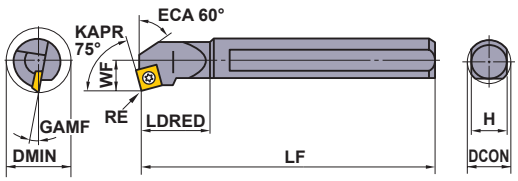
S TYPE BORING BARS

Product Information

75° KAPR

GRADES AND CHIP BREAKERS >> 38
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 152
TECHNICAL INFO >> 1971





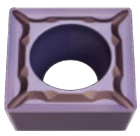
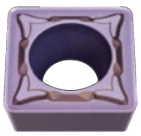
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Clamp Screw	Wrench
S16MSSKCR/L09	●	●	SCMW SCMT	09T3○○	16	150	25	11	14	7°	**20**	0.8	TS4	TKY15F
S20QSSKCR/L09	●	●		09T3○○	20	180	32	13	18	7°	**25**	0.8	TS4	TKY15F
S25RSSKCR/L12	●	●		1204○○	25	200	40	17	23	5°	**32**	0.8	TS5	TKY25F

* Clamp Torque (N • m) : TS4=3.5, TS5=7.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(09)	(09)	(09)	(09)	(09,12)	(09,12)	(09,12)	(09,12)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

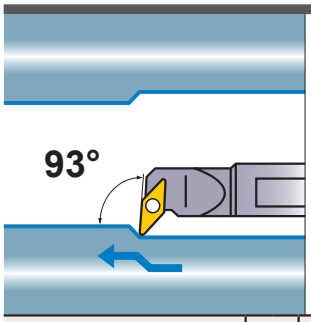
S-SVUC

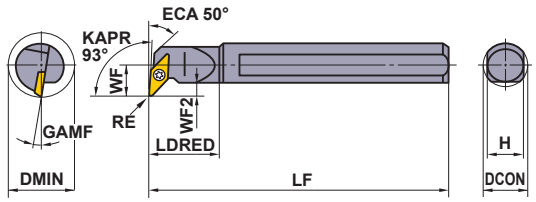
S TYPE BORING BARS

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 259
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 162
PCD TURNING INSERTS >> 280
TECHNICAL INFO >> 1971





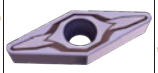
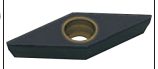
Right hand tool holder only.

Order Number	Stock		Insert Number		Dimensions(mm)									*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Clamp Screw	Wrench
S20QSVUCR/L11	●	●	VCMW VCMT	1103○○	20	180	32	13	4.4	18	7°	**25**	0.4	TS25	TKY08F
S25RSVUCR/L16	●	●		1604○○	25	200	40	17	6.9	23	5°	**32**	0.8	TS4	TKY15F
S32SSVUCR/L16	●	●		1604○○	32	250	50	22	8.4	30	5°	**40**	0.8	TS4	TKY15F
S40TSVUCR/L16	●	●		1604○○	40	300	63	27	9.4	37	5°	**50**	0.8	TS4	TKY15F

* Clamp Torque (N • m) : TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Without Breaker
FP	FM	LP	LM	MP	MM	Standard	Flat Top
							
(11,16)	(11,16)	(11,16)	(11,16)	(16)	(16)	(11,16)	(11,16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

Steel Shank				l/d≤3			l/d=3–4 (Shank Diameter ≥ 25mm)		
Carbide Shank				l/d≤5			l/d=6–7		
Work Material		Hardness	Cutting Mode	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

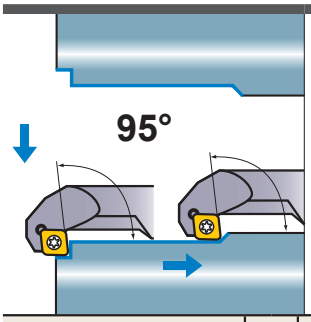
S-SCZC

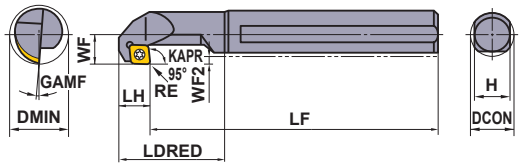
S TYPE BORING BARS

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 244
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 138
PCD TURNING INSERTS >> 272
TECHNICAL INFO >> 1971





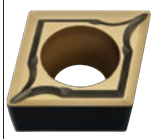
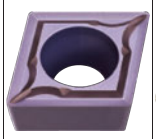
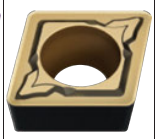
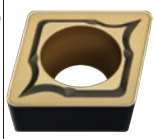
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	LH	WF	WF2	H	GAMF	DMIN	RE	* Clamp Screw	Wrench
S16MSCZCR/L06	●	●	CCMH CCMT CCET CCGT CCMW	0602□□	16	150	36	11	11	3	14	10°	**20**	0.4	TS25	TKY08F
S20QSCZCR/L09	●	●	CCMH CCMT CCET CCGT CCMW	09T3□□	20	180	50	18	13	3	18	7°	**25**	0.8	TS4	TKY15F

∗ Clamp Torque (N • m) : TS25=1.0, TS4=3.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Without Breaker	CBN/PCD
FP	FM	LP	LM	MP	MM	Flat Top	
							
(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)	(06,09)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	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 (Shank Diameter ≥ 25mm) Cutting Speed (m/min)	l/d=3–4 (Shank Diameter ≥ 25mm) Feed (mm/rev)	l/d=3–4 (Shank Diameter ≥ 25mm) Depth of Cut (mm)
P	Carbon Steel Alloy Steel	180–350HB	Light Cutting	130 (90–160)	0.1 (0.05–0.15)	0.2	120 (80–150)	0.1 (0.05–0.15)	0.2
			Medium Cutting	90 (60–120)	0.25 (0.15–0.35)	–3.0	80 (50–110)	0.15 (0.1–0.2)	–1.5
M	Stainless Steel	≤200HB	Light Cutting	140 (100–180)	0.1 (0.05–0.15)	0.2	140 (100–180)	0.1 (0.05–0.15)	0.2
			Medium Cutting	70 (50–90)	0.2 (0.15–0.25)	–2.0	60 (40–80)	0.15 (0.1–0.2)	–1.0
N	Aluminium Alloy	–	Light Cutting	300 (200–400)	0.1 (0.05–0.15)	0.2	300 (200–400)	0.1 (0.05–0.15)	0.2
			Medium Cutting	200 (150–250)	0.1 (0.05–0.15)	–2.0	200 (150–250)	0.1 (0.05–0.15)	–1.5

A-PSKN

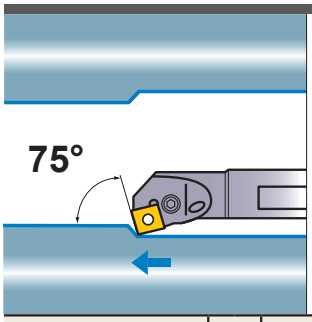
P TYPE BORING BARS

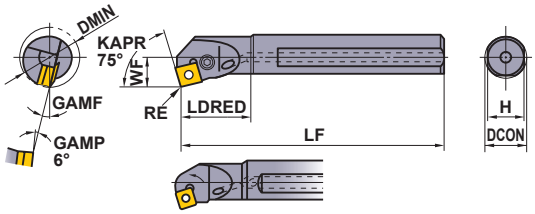
With coolant hole

Product Information

75° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 230
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 115
PCD TURNING INSERTS >> 268
TECHNICAL INFO >> 1971





∗1 Pin Lock Type

Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								*2						*2		
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Plug	Clamp Pin	Pin	Screw
A20QPSKNR/L09	●	●	SNMA SNMG	0903○○	20	180	32	13	18	13°	**25**	0.8	—	—	—	—	HKY15R HKY25R	HGM-PT1/8	HP3T	P208AM	HSS03005
A25RPSKNR/L12	●	●	SNMM	1204○○	25	200	40	17	23	13°	**32**	0.8	MLSP42	—	—	—	HKY15R HKY30R	HGM-PT1/4	HP43	P210AM	HSS03005
A32SPSKNR/L12	●	●	SNGA SNGG	1204○○	32	250	50	22	30	13°	**44**	0.8	LLSSN42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A20QPSKNR/L09, A25RPSKNR/L12
∗2 Clamp Torque (N • m) : LLCS108S=3.3, HP3T=2.2, HP43=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

A-PTFN

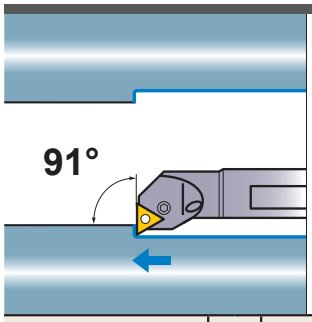
P TYPE BORING BARS

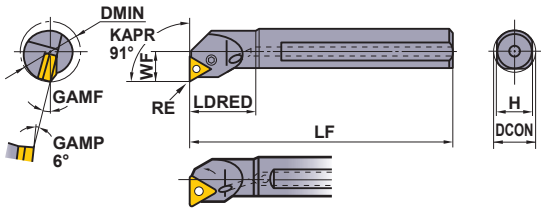
With coolant hole

Product Information

91° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 232
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 121
PCD TURNING INSERTS >> 269
TECHNICAL INFO >> 1971





∗1 Pin Lock Type

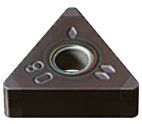
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								Shim	Shim Pin	Clamp Lever	Clamp Screw ∗2	Wrench	Plug	Clamp Pin ∗2	Pin	Screw
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE									
A20QPTFNR/L16	●	●	TNMA TNMG TNMM TNGA TNGG	1604□□	20	180	32	13	18	15°	**25**	0.8	—	—	—	—	HKY15R HKY25R	HGM-PT1/8	HP31	P208AM	HSS03005
A25RPTFNR/L16	●	●		1604□□	25	200	40	17	23	13°	**32**	0.8	MLTP32	—	—	—	HKY15R HKY25R	HGM-PT1/4	HP33	P208AM	HSS03005
A32SPTFNR/L16	●	●		1604□□	32	250	50	22	30	13°	**44**	0.8	LLSTN32	LLP13	LLCL13	LLCS106	HKY25R	HGM-PT3/8	—	—	—
A40TPTFNR/L22	●	●		2204□□	40	300	63	27	37	10°	**54**	0.8	LLSTN42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A50UPTFNR/L22	●	●		2204□□	50	350	80	35	47	9°	**70**	0.8	LLSTN42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A20QPTFNR/L16, A25RPTFNR/L16
∗2 Clamp Torque (N • m) : LLCS106=2.2, LLCS108S=3.3, HP31=2.2, HP33=2.2

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	R/L	
							
(16)	(16)	(16)	(16)	(16,22)	(16,22)	(16,22)	(16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3–4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

A-PDUN

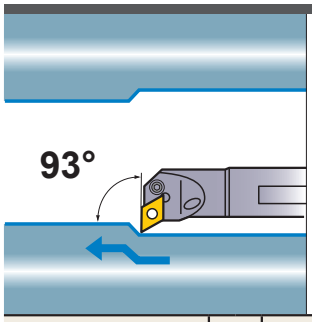
P TYPE BORING BARS

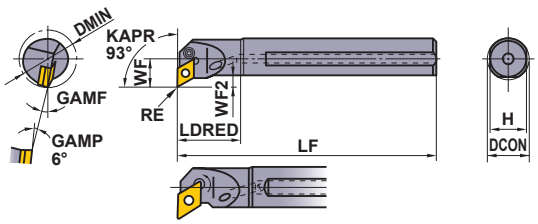
With coolant hole

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971





∗1 Pin Lock Type

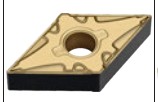
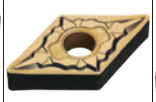
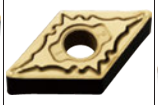
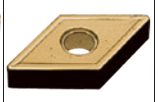
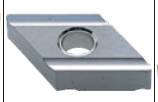
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)									Shim	Shim Pin	Clamp Lever	Clamp Screw ∗2	Wrench	Plug	Clamp Pin ∗2	Pin	Screw
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE									
A20QPDUNR/L11	●	●	DNMA DNMG DNMX DNMM DNGA DNGG	1104□□	20	180	32	15	6.4	18	13°	**26**	0.8	—	—	LLCL23S	LLCS125	HKY20R	HGM-PT1/8	—	—	—
A25RPDUNR/L11	●	●		1104□□	25	200	40	17	6.9	23	15°	**32**	0.8	LLSDN32	LLP13	LLCL23	LLCS106	HKY25R	HGM-PT1/4	—	—	—
A25RPDUNR/L15	●	●		1504□□	25	200	40	17	6.9	23	13°	**32**	0.8	MLDP42	—	—	—	HKY15R HKY30R	HGM-PT1/4	HP43	P210AM	HSS03005
A32SPDUNR/L11	●	●		1104□□	32	250	50	22	8.4	30	13°	**44**	0.8	LLSDN32	LLP13	LLCL23	LLCS106	HKY25R	HGM-PT3/8	—	—	—
A32SPDUNR/L15	●	●		1504□□	32	250	50	22	8.4	30	13°	**44**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A40TPDUNR/L15	●	●		1504□□	40	300	63	27	9.4	37	10°	**54**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A50UPDUNR/L15	●	●		1504□□	50	350	80	35	12.4	47	9°	**70**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A25RPDUNR/L15
∗2 Clamp Torque (N • m) : LLCS125=1.5, LLCS106=2.2, LLCS108S=3.3, HP43=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	L	
							
(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

A-PCLN

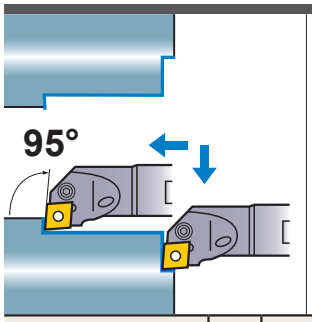
P TYPE BORING BARS

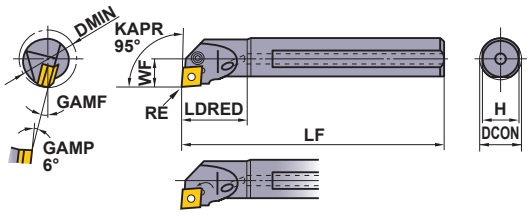
With coolant hole

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 222
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 102
PCD TURNING INSERTS >> 266
TECHNICAL INFO >> 1971





∗1 Pin Lock Type

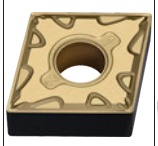
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		Dimensions(mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	RE	Shim	Shim Pin	Clamp Lever	Clamp Screw *2	Wrench	Plug	Clamp Pin *2	Pin	Screw
A16MPCLNR/L09	●	●	CNMA CNMG CNMM CNGG	09T3□□	16	150	25	11	14	15°	**20**	0.8	—	—	LLCL13S	LLCS105	HKY20R	HGM-PT1/8	—	—	—
A20QPCLNR/L09	●	●		09T3□□	20	180	32	13	18	13°	**25**	0.8	—	—	—	—	HKY25R HKY15R	HGM-PT1/8	HP3T	P208AM	HSS03005
A20QPCLNR/L09N	●	●		09T3□□	20	180	32	13	18	13°	**25**	0.8	—	—	LLCL13S	LLCS105	HKY20R	HGM-PT1/8	—	—	—
A25RPCLNR/L09	●	●		09T3□□	25	200	40	17	23	13°	**32**	0.8	—	—	LLCL13S	LLCS105	HKY20R	HGM-PT1/4	—	—	—
A25RPCLNR/L12	●	●		1204□□	25	200	40	17	23	13°	**32**	0.8	MLCP42	—	—	—	HKY30R HKY15R	HGM-PT1/4	HP43	P210AM	HSS03005
A32SPCLNR/L12	●	●		1204□□	32	250	50	22	30	13°	**44**	0.8	LLSCN42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A40TPCLNR/L12	●	●		1204□□	40	300	63	27	37	10°	**54**	0.8	LLSCN42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A50UPCLNR12	●			1204□□	50	350	80	35	47	10°	**63**	0.8	LLSCP42	LLP14	LLCL14	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A20QPCLNR/L09, A25RPCLNR/L12
∗2 Clamp Torque (N • m) : LLCS105=1.5, LLCS106=2.2, LLCS108S=3.3, HP3T=2.2, HP43=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	CBN/PCD
FP	SA	LP	MP	MH	Standard	MM	
							
(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	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

A-PWLN

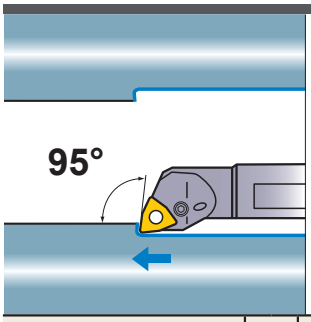
P TYPE BORING BARS

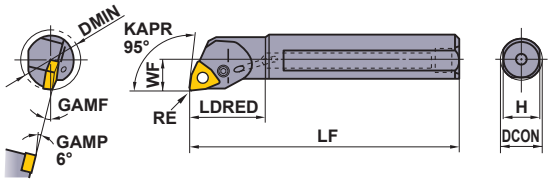
With coolant hole

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 237
TECHNICAL INFO >> 1971
TURNING INSERTS >> 130
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966





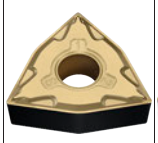
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)								Clamp Lever	Clamp Screw *	Wrench	Plug
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE				
A16MPWLNR/L06	●	●	WNMG	06T3○○	16	150	25	11	14	15°	**20**	0.8	LLCL13S	LLCS105	HKY20R	HGM-PT1/8
A20QPWLNR/L06	●	●		06T3○○	20	180	32	13	18	13°	**25**	0.8	LLCL13S	LLCS105	HKY20R	HGM-PT1/8
A25RPWLNR/L06	●	●		06T3○○	25	200	40	17	23	13°	**32**	0.8	LLCL13S	LLCS105	HKY20R	HGM-PT1/4

* Clamp Torque (N • m) : LLCS105=1.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Medium to Rough Cutting	For Stainless Steel
FP	LP	MP	MH	Standard	RP	MM
						
(08)	(08)	(06,08)	(08)	(08)	(08)	(06,8)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

A-PDQN

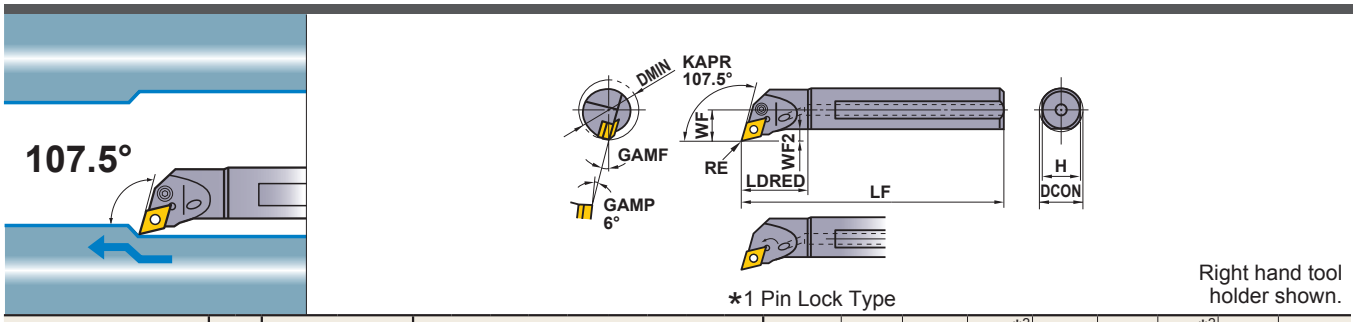
P TYPE BORING BARS

With coolant hole

Product Information

107° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971



∗1 Pin Lock Type

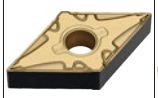
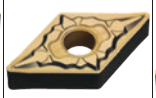
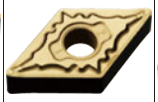
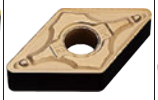
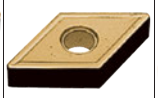
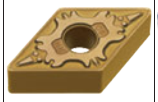
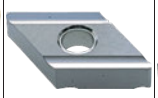
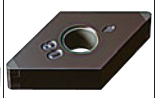
Right hand tool holder shown.

Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE	Shim	Shim Pin	Clamp Lever	Clamp Screw ∗2	Wrench	Plug	Clamp Pin ∗2	Pin	Screw
A25RPDQNR/L15	●	●	DNMA DNMG DNMM DNGA DNGG	1504□□	25	200	40	17	6.9	23	13°	**32**	0.8	MLDP42	—	—	—	HKY15R HKY30R	HGM-PT1/4	HP43	P210AM	HSS03005
A32SPDQNR/L15	●	●		1504□□	32	250	50	22	8.4	30	13°	**44**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A40TPDQNR/L15	●	●		1504□□	40	300	63	27	9.4	37	10°	**54**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A50UPDQNR15	●			1504□□	50	350	80	35	12.4	47	9°	**70**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A25RPDQNR/L15
∗2 Clamp Torque (N • m) : LLCS108S=3.3, HP43=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	L	
							
(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	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

A-PDZN

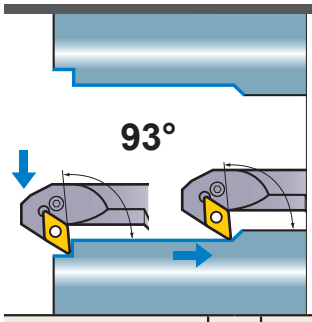
P TYPE BORING BARS

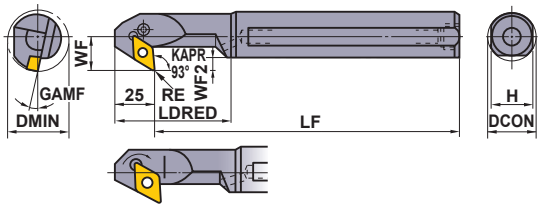
With coolant hole

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971





∗1 Pin Lock Type

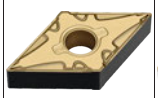
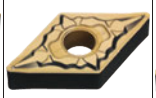
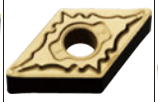
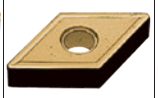
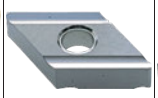
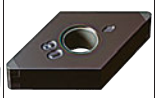
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)									Shim	Shim Pin	Clamp Lever	Clamp Screw *2	Wrench	Plug	Clamp Pin *2	Pin	Screw
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	RE									
A25RPDZNR/L15	●	●	DNMA DNMG DNMX DNMM DNGA DNGG	1504◌◌	25	200	65	17	6.7	23	13°	**32**	0.8	MLDP42	—	—	—	HKY15R HKY30R	HGM-PT1/4	HP43	P210AM	HSS03005
A32SPDZNR/L15	●	●		1504◌◌	32	250	75	22	8.2	30	13°	**40**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A40TPDZNR/L15	●	●		1504◌◌	40	300	88	27	9.2	37	10°	**50**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—
A50UPDZNR/L15	●	●		1504◌◌	50	350	105	35	12.2	47	9°	**63**	0.8	LLSDN42	LLP14	LLCL24	LLCS108S	HKY30R	HGM-PT3/8	—	—	—

∗1 Pin Lock Type : A25RPDZNR/L15
∗2 Clamp Torque (N • m) : LLCS108S=3.3, HP43=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	L	
							
(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3–4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

MWLN

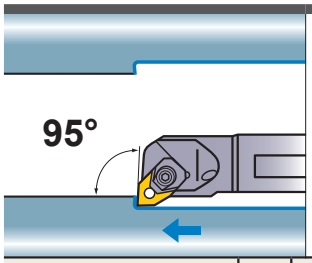
M TYPE BORING BARS

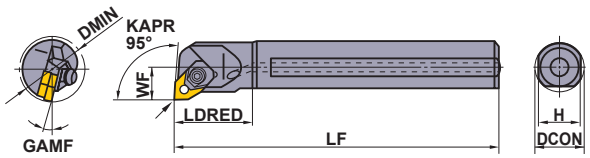
With coolant hole

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 237
TECHNICAL INFO >> 1971
TURNING INSERTS >> 130
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966





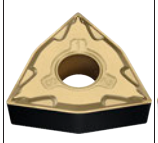
Right hand (R) only for the standard.

Order Number	Stock	Insert Number		Dimensions(mm)								Shim	Shim Pin	Clamp Bridge	Side Lock Plate	Spring	Clamp Screw *	Wrench	Plug
	R			DCON	LF	LDRED	WF	H	GAMF	DMIN	RE								
A50UMWLNR08	●	WNMA WNMG	0804□□	50	350	80	35	63	9°	63	0.8	WPS WC43	CCP44	CCK13	CPT24	MES2	SLCS105	HKY25R HKY40R	HGM-PT3/8

∗ Clamp Torque (N • m) : SLCS105=7.0

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	Medium to Rough Cutting	For Stainless Steel
FP	LP	MP	MH	Standard	RP	MM
						
(08)	(08)	(06,08)	(08)	(08)	(08)	(06,8)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

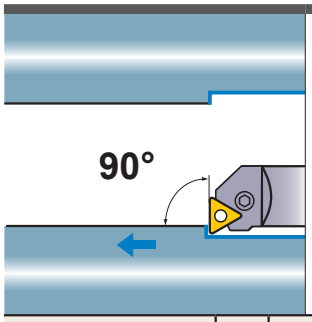
DPTF

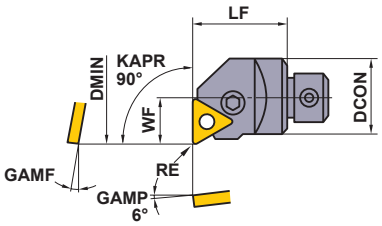
D TYPE BORING HEAD

Product Information

90° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 232
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 121
PCD TURNING INSERTS >> 269
TECHNICAL INFO >> 1971
STANDARD ARBOR FOR D TYPE BORING HEAD >> 450





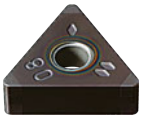
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)						Shim	Shim Pin	Clamp Lever	Clamp Screw *	Wrench
	R			DCON	LF	WF	GAMF	DMIN	RE					
DPTF132R	●	TNMA TNMG TNMM TNGA TNGG	1604◌◌	32	40	20	12°	**40**	0.8	LLSTN32	LLP13	LLCL13	LLCS106	HKY25R
DPTF140R	●		2204◌◌	40	50	25	10°	**50**	0.8	LLSTN42	LLP14	LLCL14	LLCS108	HKY30R

∗ Clamp Torque (N • m) : LLCS106=2.2, LLCS108=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	R/L	
							
(16)	(16)	(16)	(16)	(16,22)	(16,22)	(16,22)	(16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3–4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

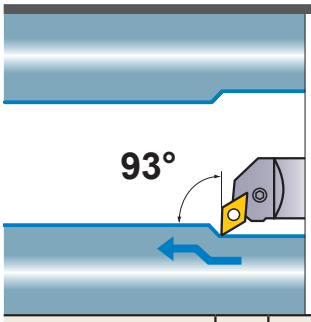
DPDU

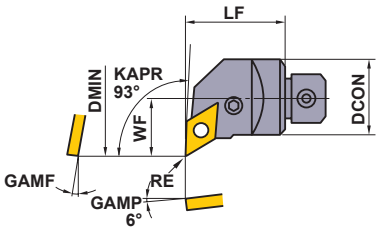
D TYPE BORING HEAD

Product Information

93° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971
STANDARD ARBOR FOR D TYPE BORING HEAD >> 450





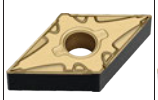
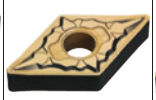
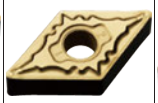
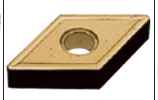
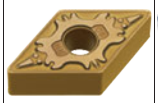
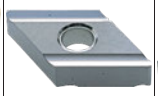
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)						Shim	Shim Pin	Clamp Lever	Clamp Screw *	Wrench
	R			DCON	LF	WF	GAMF	DMIN	RE					
DPDU132R	●	DNMA DNMG DNMX DNMM DNGA DNGG	1504○○	32	40	25	10°	**50**	0.8	LLSDN42	LLP14	LLCL24	LLCS108	HKY30R
DPDU140R	●		1504○○	40	50	30	9°	**60**	0.8	LLSDN42	LLP14	LLCL24	LLCS108	HKY30R

∗ Clamp Torque (N • m) : LLCS108=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	L	
							
(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3–4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

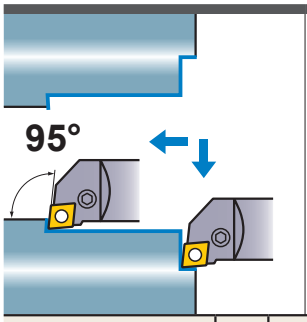
DPCL

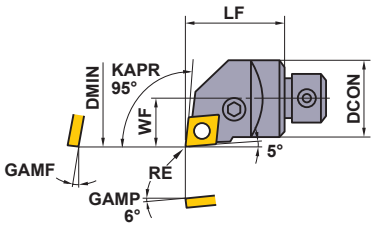
D TYPE BORING HEAD

Product Information

95° KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 222
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 102
PCD TURNING INSERTS >> 266
TECHNICAL INFO >> 1971
STANDARD ARBOR FOR D TYPE BORING HEAD >> 450





Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)						Shim	Shim Pin	Clamp Lever	Clamp Screw *	Wrench
	R			DCON	LF	WF	GAMF	DMIN	RE					
DPCL132R	●	CNMA CNMG	1204◌◌	32	40	20	12°	**40**	0.8	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R
DPCL140R	●	CNMM CNGG	1204◌◌	40	50	25	10°	**50**	0.8	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R

∗ Clamp Torque (N • m) : LLCS108=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

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

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

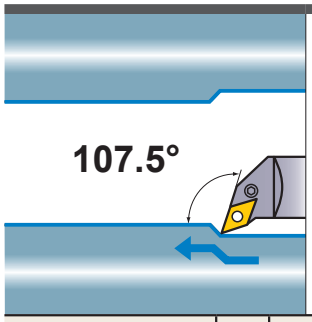
DPDH

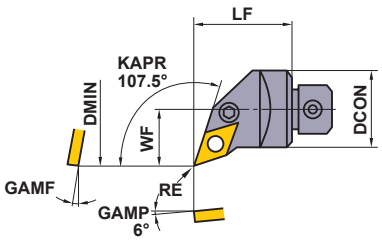
D TYPE BORING HEAD

Product Information

107° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 226
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 108
PCD TURNING INSERTS >> 267
TECHNICAL INFO >> 1971
STANDARD ARBOR FOR D TYPE BORING HEAD >> 450





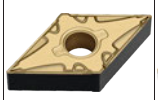
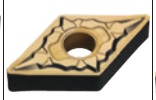
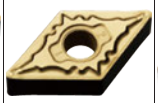
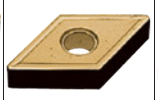
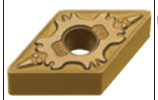
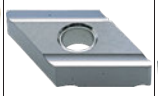
Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)						Shim	Shim Pin	Clamp Lever	Clamp Screw *	Wrench
	R			DCON	LF	WF	GAMF	DMIN	RE					
DPDH132R	●	DNMA DNMG DNMM DNGA DNGG	1504◯◯	32	40	25	10°	**50**	0.8	LLSDN42	LLP14	LLCL24	LLCS108	HKY30R
DPDH140R	●		1504◯◯	40	50	30	9°	**60**	0.8	LLSDN42	LLP14	LLCL24	LLCS108	HKY30R

∗ Clamp Torque (N • m) : LLCS108=3.3

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	CBN/PCD
FP	LP	MP	MH	Standard	MM	L	
							
(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

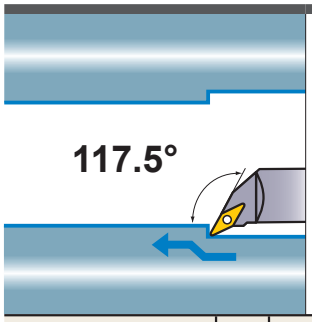
DPVP

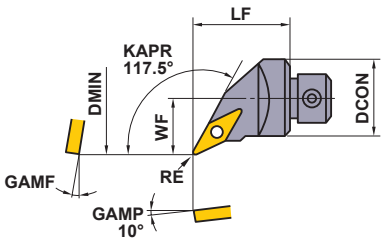
D TYPE BORING HEAD

Product Information

117° 30′ KAPR

GRADES AND CHIP BREAKERS >> 38
CBN TURNING INSERTS >> 235
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TURNING INSERTS >> 128
PCD TURNING INSERTS >> 270
TECHNICAL INFO >> 1971





Right hand tool holder only.

Order Number	Stock	Insert Number		Dimensions(mm)										
				DCON	LF	WF	GAMF	DMIN	RE	Shim	Lock Pin	Lock Screw *	Stop Ring	Wrench
	R													
DPVP132R	●	VNMG VNGA VNGG	1604□□	32	40	25	13°	**50**	0.8	PV322	P11S	HSP05008C	E03	HKY25R
DPVP140R	●		1604□□	40	50	30	13°	**60**	0.8	PV322	P11S	HSP05008C	E03	HKY25R

∗ Clamp Torque (N • m) : HSP05008C=2.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Finish Cutting	Light Cutting	Medium Cutting	Medium Cutting	For Stainless Steel	G class	PCD	CBN
FP	LP	MP	MH	MM	L	L-F	
							
(16)	(16)	(16)	(16)	(16)	(16)	(16)	(16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Hardness	Cutting Mode	l/d≤3			l/d=3—4		
				Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)	Cutting Speed (m/min)	Feed (mm/rev)	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

B1 Arbor

Product Information

SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966
TECHNICAL INFO >> 1971

STANDARD ARBOR FOR D TYPE BORING HEAD

① **B** ② **1** ③ **32** ④ **32**

①Designation

②Arbor Length (mm)

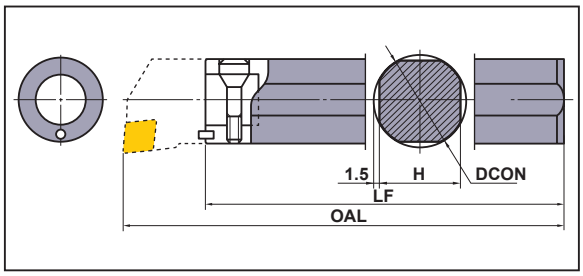
Symbol	DCON	LF	OAL
1	32	260	300
	40	310	360

③Arbor Diameter (mm)

Symbol	Diameter(DCON)
32	32
40	40

④Head Diameter (mm)

Symbol	Diameter(DCON)
32	32
40	40



Order Number	Stock	Dimensions (mm)				Set Bolt	Wrench	Head Order Number
		DCON	LF	H	OAL			
B13232	●	32	260	29	300	SD32	HKY60R	DP○○132R
B14040	●	40	310	37	360	SD40	HKY60R	DP○○140R

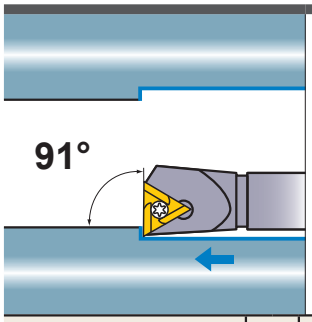
S-STFE

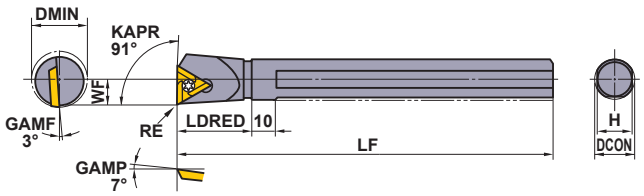
AL TYPE BORING BARS

Product Information

91° KAPR

GRADES AND CHIP BREAKERS >> 38
PCD TURNING INSERTS >> 284
TECHNICAL INFO >> 1971
TURNING INSERTS >> 157
SPARE PARTS >> 1927
ISO13399 PROPERTY >> 1966





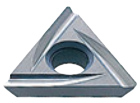
Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions(mm)							*	
					DCON	LF	LDRED	WF	H	DMIN	RE	Clamp Screw	Wrench
	R	L											
S16RSTFER/L16	●	●	TEGX...R/L	1603○○	16	200	30	11	14.6	**20**	0.4	FC400890T	TKY10F
S20RSTFER/L16	●	●		1603○○	20	200	37	13	18	**25**	0.4	FC400890T	TKY10F
S25SSTFER/L16	●	●		1603○○	25	250	40	17	23	**32**	0.4	FC400890T	TKY10F

∗ Clamp Torque (N • m) : FC400890T=2.5

● : **Inventory maintained in Japan.**

·CHIP BREAKER EXAMPLE

Medium Cutting	PCD	PCD
R/L	R/L	
		
(16)	(16)	(16)

- The insert photos are only examples. The letters refer to the chip breaker and the bracketed dimension are refers to the inscribed circle.
- When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

·RECOMMENDED CUTTING CONDITION

	Work Material	Grade	Cutting Speed (m/min)	l/d=3		l/d=4		l/d=5		l/d=6	
				Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	Depth of Cut (mm)
N	Aluminium Alloy	**HTi10**	400 (200—600)	0.15 (0.05—0.25)	—3.0	0.15 (0.05—0.25)	—3.0	0.1 (0.05—0.2)	—2.5	0.1 (0.05—0.2)	—1.0
		MD220	800 (200—1500)	0.15 (0.05—0.25)	—3.0	0.15 (0.05—0.25)	—3.0	0.1 (0.05—0.2)	—2.5	0.1 (0.05—0.2)	—1.0