HOW TO READ THE STANDARD OF BORING BARS

●How this section page is organized

①Organized by product series.
(Refer to the index on the next page.)

TYPE OF BORING BAR
indicates the initial letters for the order number, as well as applicable insert types.

TITLE OF PRODUCT SERIES

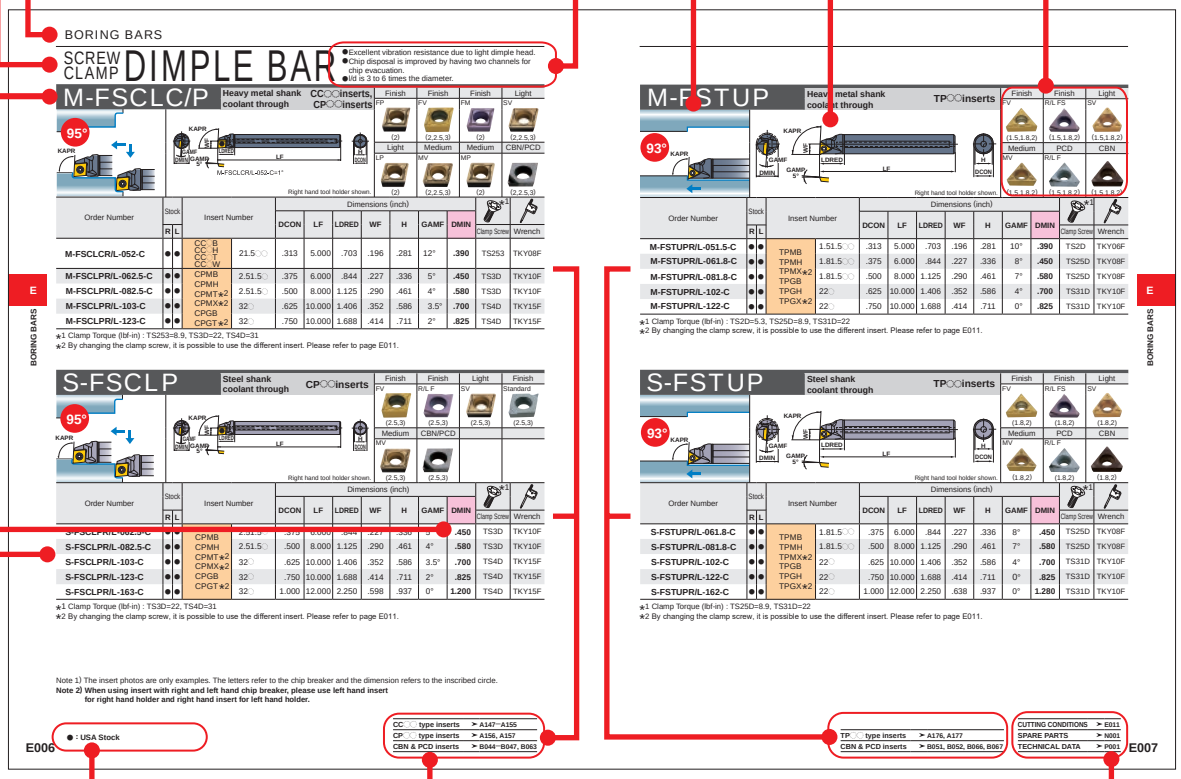
PRODUCT SECTION

PRODUCT FEATURES

FIGURE SHOWING THE TOOLING APPLICATION
uses illustrations and arrows to depict available machining applications along with cutting edge lead angles.

GEOMETRY

CHIP BREAKER BY CUTTING APPLICATION



LEGEND FOR STOCK STATUS MARK
is shown on the left hand page of each double-page spread.

PRODUCT STANDARDS
indicates order numbers, stock status (per right/left hand), applicable inserts, dimensions, minimum cutting diameters, standard corner radius, recommended l/d ratios, and spare parts.

MIN. CUTTING DIAMETER
is colour-coded to let you find, at a glance, the maximum / minimum cutting diameters for internal machining.

REFERENCE PAGE FOR APPLICABLE INSERTS
indicates reference pages for details of inserts that are applicable to the title product.

PAGE REFERENCE
·SPARE PARTS
·TECHNICAL DATA
indicates reference pages, including the above, on the right hand page of each double-page spread.

●To Order : Please specify order number and hand of tool (right/left).

TURNING

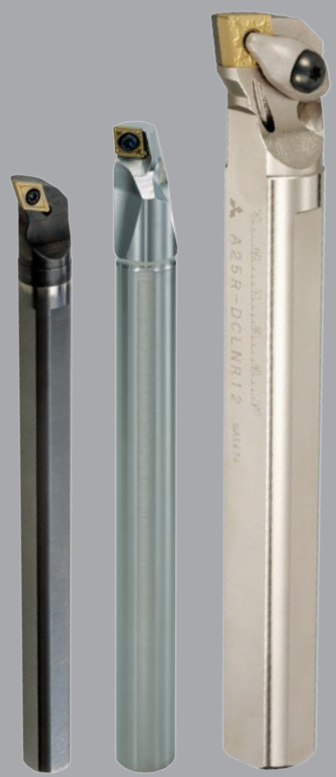
BORING BARS

CLASSIFICATION ····· E002
IDENTIFICATION ····· E004

STANDARD BORING BARS
SCREW CLAMP DIMPLE BAR ····· E006
SCREW CLAMP TYPE BORING BARS ····· E012
DOUBLE CLAMP DIMPLE BAR ····· E021
MULTIPLE CLAMP TYPE BORING BARS ····· E024
AL TYPE BORING BARS ····· E028
MICRO-DEX BORING BARS ····· E029
MICRO-MINI BORING BARS ····· E031
MICRO-MINI TWIN BORING BARS ····· E032
RBH TYPE HOLDER (FOR MICRO-MINI AND MICRO-MINI TWIN) ····· E034
SBH TYPE HOLDER (FOR MICRO-MINI AND MICRO-MINI TWIN) ····· E037
COOLANT THROUGH CARBIDE BORING BARS ····· E040

*Arranged by Alphabetical order

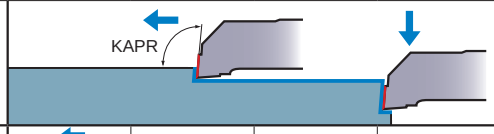
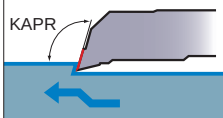
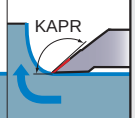
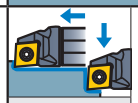
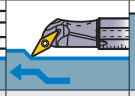
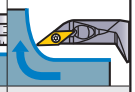
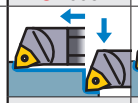
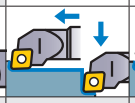
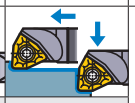
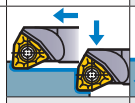
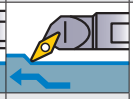
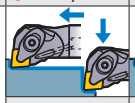
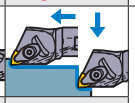
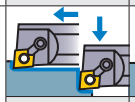
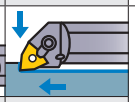
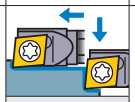
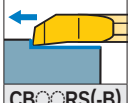
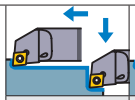
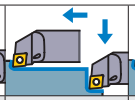
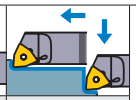
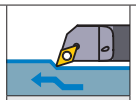
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E033	**CR**	E010	**M-FSVPB/C**	E025	**S-MTFN**
E031	**C○○○R-BLS**	E009	**M-FSVUB/C**	E026	**S-MVUN**
E013	**C-SCLC**	E009	**M-FSWUB/P**	E026	**S-MWLN**
E014	**C-SDQC**	E027	**M-MWLN**	E012	**S-SCLC**
E016	**C-STUC**	E012	**M-SCLC**	E013	**S-SDQC**
E017	**C-SWL**	E020	**M-SWLO**	E014	**S-SDUC**
E019	**C-SWLO**	E020	**M-SWLO**	E015	**S-SSKC**
E040	**E-SCLC**	E034	**RBH (INCH)**	E028	**S-STFE**
E041	**E-SCLP**	E036	**RBH (MM)**	E015	**S-STUC**
E042	**E-SDQC**	E037	**SBH**	E016	**S-SVQC**
E043	**E-SDUC**	E029	**SCLC**	E017	**S-SVUC**
E044	**E-STUC**	E021	**S-DCLN**	E019	**S-SWUC**
E045	**E-STUP**	E021	**S-DDUN**	E030	**STUC**
E046	**E-SVUC**	E022	**S-DSKN**	E029	**SWUB**
E047	**E-SWLO**	E022	**S-DTFN**		
E018	**FSWL1**	E023	**S-DVUN**		
E018	**FSWL2**	E023	**S-DWLN**		
E006	**M-FSCLC/P**	E006	**S-FSCLP**		
E008	**M-FSDQC**	E007	**S-FSTUP**		
E008	**M-FSDUC**	E024	**S-MCLN**		
E007	**M-FSTUP**	E024	**S-MDUN**		



CLASSIFICATION

Type of Tool	Features	KAPR= 75°	KAPR= 90°, 91°	KAPR= 93°			
		KAPR	KAPR	KAPR			
SCREW CLAMP DIMPLE BAR 	● The minimum cutting diameter is ϕ.390 inch. ● 5°, 11° positive insert. ● Excellent vibration resistance due to light dimple head. ● Chip disposal is improved by having two channels for chip evacuation. ● l/d is 3 to 6 times the diameter.			M-FSTUP, S-FSTUP ➲E007	M-FSDUC ➲E008	M-FSVUB/C ➲E009	M-FSWUB/P ➲E009
S Type Boring Bars 	● Two wall pocket. ● 7º positive insert, low cutting force. ● Screw-on type.	S-SSKC ➲E015		S-SDUC ➲E014	S-STUC, C-STUC ➲E015, E016	S-SVUC ➲E017	S-SWUC ➲E019
DOUBLE CLAMP DIMPLE BAR 	● Negative rake. ● New double clamp type. ● Holds inserts securely. ● Excellent cutting edge repeatability.	S-DSKN ➲E022	S-DTFN ➲E022	S-DDUN ➲E021	S-DVUN ➲E023		
M Type Boring Bars 	● Negative rake. ● Two wall pocket. ● Pin lock and top clamp retention. ● (Opt.) Single clamp available as clamp on or pin lock holder.	S-MSKN ➲E025	S-MTFN ➲E025	S-MDUN ➲E024	S-MVUN ➲E026		
AL Type Boring Bars 	● Shank sizes ϕ.625 inch thru ϕ1.000 inch. ● Screw-on type. ● Recommended for aluminum, nonferrous metals and plastics.		S-STFE ➲E028				
MICRO-DEX Boring Bars (Carbide Shank) 	● The minimum cutting diameter is ϕ5 mm (.197 inch). ● 7°positive insert. ● Carbide shank type. ● Easy-to-use tool geometries. ● Suitable for small workpiece. ● l/d is 5 times the diameter.			SWUB ➲E029	STUC ➲E030		
MICRO-MINI TWIN Boring Bars 	● The minimum cutting diameter is ϕ2.2 mm (.087 inch). ● 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 ϕ3.2 mm (.126 inch). ● 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○○F/HR-BLS ➲E031					
Coolant Through Carbide Boring Bars 	● Two wall pocket. ● 7° and 11° positive insert, low cutting force. ● Screw-on type. ● Carbide shanks are stocked in various diameters.			E-SDUC ➲E043	E-STUC ➲E044	E-STUP ➲E045	E-SVUC ➲E046
RBH Type Holder 	● Holder for MICRO-MINI TWIN and MICRO-MINI. ● Round shanks suitable for use with frontal gang type tool posts with sleeve.	 RBH Inch➲E034, Metric➲E036					
SBH Type Holder 	● Holder for MICRO-MINI TWIN and MICRO-MINI. ● Square shanks suitable for use with frontal gang type tool posts.	 SBH ➲E037					

Note 1) **S** : Steel shank, **M** : Heavy metal shank, **C** : Carbide shank. (For Micro-dex boring bars, carbide shank only.)

	KAPR= 95°					KAPR = 107.5° – 117.5°		KAPR= 142°	Selection Standard							
									Economical	Low Cutting Resistance (Sharpness)	Clamp Rigidity	Vibration Resisiance	Operation Efficiency	Coolant Thru	Specialized	Small Diameter Cutting
	 M-FSCLC/P, S-FSCLP ➲E006					 M-FSDQC ➲E008	 M-FSVPB/C ➲E010	 M-FSVJB/C ➲E010		◎		○	◎	◎		
	 C-SWLO, M-SWLO ➲E019, E020	 S-SCLC, M-SCLC, C-SCLC ➲E012, E013	 C-SWL ➲E017		 FSWL1, 2 ➲E018	 S-SDQC, C-SDQC ➲E013, E014	 S-SVQC ➲E016			○		○*				
		 S-DCLN ➲E021	 S-DWLN ➲E023								◎		◎	◎		
		 S-MCLN ➲E024	 S-MWLN, M-MWLN ➲E026, E027						◎		◎		○			
										○		○			◎	
		 SCLC ➲E029										◎				◎
		 CB○○RS(-B) ➲E032						 CR○○RS-01(B) ➲E033		◎		◎				◎
										◎						◎
		 E-SCLC ➲E040	 E-SCLP ➲E041	 E-SWLO ➲E047		 E-SDQC ➲E042				◎		◎	◎	◎		

Note 2) ◎: 1st recommendation. ○: 2nd recommendation.
Note 3) ⋆ Indicates in case that shank material is carbide.

IDENTIFICATION

Boring Bar ANSI Designation Chart

A	Steel Bar w/Coolant Hole
AX	(A-type) Dimple Bar
B	Solid Steel Anti-vibration Bar
C	Carbide Bar (Steel Head)
D	Steel Anti-vibration Bar w/Coolant Hole
E	Carbide Bar (Steel Head) w/Coolant Hole
EX	(E-type) Dimple Bar
F	Carbide Anti-vibration Bar (Steel Head)
G	Carbide Anti-vibration Bar (Steel Head w/Coolant Hole)
H	Heavy Metal Bar
J	Heavy Metal Bar w/Coolant Hole
JX	(J-type) Dimple Bar
S	Solid Steel Bar

① Boring Bar Type

03	3/16"	16	1"
04	1/4"	20	1-1/4"
05	5/16"	24	1-1/2"
06	3/8"	28	1-3/4"
08	1/2"	32	2"
10	5/8"	36	2-1/4"
12	3/4"	40	2-1/2"

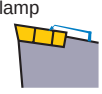
② Shank Diameter

F	3"	Q	7"
G	3-1/2"	R	8"
H	4"	S	10"
J	4-1/2"	T	12"
K	5"	U	14"
L	5-1/2"	V	16"
M	6"	W	18"
N	6-1/2"	Y	20"
P	6-3/4"	Z	Special

③ Length

E	12	M	–	S	C
①	②	③		④	⑤

④ Insert Holding

C	Top Clamp 
D	Double Clamp 
M	Clamp and Lock Pin 
P	Hole Clamp 
S	Screw Lock Only 

⑤ Insert Shape

C	D	R	S
			
80°Rhombic	55°Rhombic	Round	Square

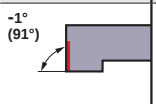
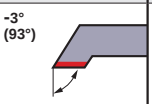
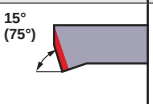
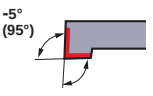
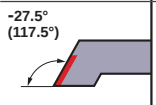
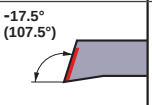
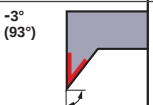
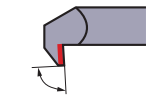
T	V	W
		
Triangular	35°Rhombic	Trigon

Inscribed Circle of Insert (inch)	.156	.187	.219	.250	.313	.375	.500	.625	.750	1.000
T	1.2	1.5	1.8	2	2.5	3	4	5	6	
S R						3	4	5	6	8
W	1.2	1.5		2		3	4	5		
80° C	1.2	1.5		2	2.5	3	4	5	6	
55° D				2		3	4	5		
35° V		1.5		2		3	4			

⑨ Insert Size

L ⑥	C ⑦	R ⑧	2 ⑨

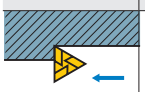
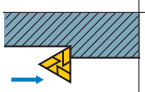
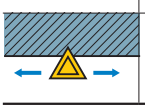
④ Boring Bar Style

F	J	K	L
			
End Cutting	Side Cutting	End Cutting	Side & End Cutting
P	**Q**	**U**	**X**
			
End Cutting	End Cutting	End Cutting	Back Boring

⑦ Insert Relief Angle

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

⑧ Hand

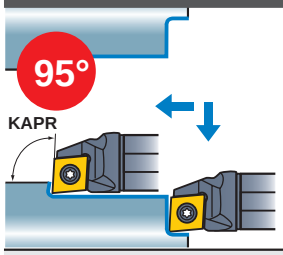
Figure	Hand	Symbol
	Right	R
	Left	L
	Neutral	N

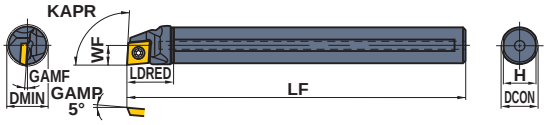
SCREW CLAMP DIMPLE BAR

- Excellent vibration resistance due to light dimple head.
- Chip disposal is improved by having two channels for chip evacuation.
- l/d is 3 to 6 times the diameter.

M-FSCLC/P

Heavy metal shank coolant through **CC○○inserts, CP○○inserts**





M-FSCLCR/L-052-C=1°

Right hand tool holder shown.

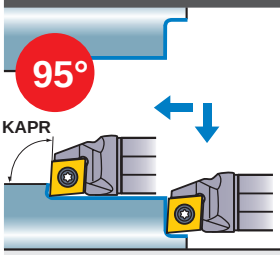
Finish	Finish	Finish	Light
FP	FV	FM	SV
			
(2)	(2,2.5,3)	(2)	(2,2.5,3)
Light	**Medium**	**Medium**	**CBN/PCD**
LP	MV	MP	
			
(2)	(2,2.5,3)	(2)	(2,2.5,3)

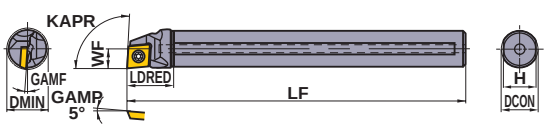
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	✶1 Clamp Screw	Wrench
M-FSCLCR/L-052-C	●	●	CC○B CC○H CC○T CC○W	21.5○○	.313	5.000	.703	.196	.281	12°	**.390**	TS253	TKY08F
M-FSCLPR/L-062.5-C	●	●	CPMB CPMH CPMT✶2 CPMX✶2 CPGB CPGT✶2	2.51.5○	.375	6.000	.844	.227	.336	5°	**.450**	TS3D	TKY10F
M-FSCLPR/L-082.5-C	●	●		2.51.5○	.500	8.000	1.125	.290	.461	4°	**.580**	TS3D	TKY10F
M-FSCLPR/L-103-C	●	●		32○	.625	10.000	1.406	.352	.586	3.5°	**.700**	TS4D	TKY15F
M-FSCLPR/L-123-C	●	●		32○	.750	10.000	1.688	.414	.711	2°	**.825**	TS4D	TKY15F

✶1 Clamp Torque (lbf-in) : TS253=8.9, TS3D=22, TS4D=31
✶2 By changing the clamp screw, it is possible to use the different insert. Please refer to page E011.

S-FSCLP

Steel shank coolant through **CP○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Finish
FV	R/L F	SV	Standard
			
(2.5,3)	(2.5,3)	(2.5,3)	(2.5,3)
Medium	**CBN/PCD**		
MV			
			
(2.5,3)	(2.5,3)		

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	✶1 Clamp Screw	Wrench
S-FSCLPR/L-062.5-C	●	●	CPMB CPMH CPMT✶2 CPMX✶2 CPGB CPGT✶2	2.51.5○	.375	6.000	.844	.227	.336	5°	**.450**	TS3D	TKY10F
S-FSCLPR/L-082.5-C	●	●		2.51.5○	.500	8.000	1.125	.290	.461	4°	**.580**	TS3D	TKY10F
S-FSCLPR/L-103-C	●	●		32○	.625	10.000	1.406	.352	.586	3.5°	**.700**	TS4D	TKY15F
S-FSCLPR/L-123-C	●	●		32○	.750	10.000	1.688	.414	.711	2°	**.825**	TS4D	TKY15F
S-FSCLPR/L-163-C	●	●		32○	1.000	12.000	2.250	.598	.937	0°	**1.200**	TS4D	TKY15F

✶1 Clamp Torque (lbf-in) : TS3D=22, TS4D=31
✶2 By changing the clamp screw, it is possible to use the different insert. Please refer to page E011.

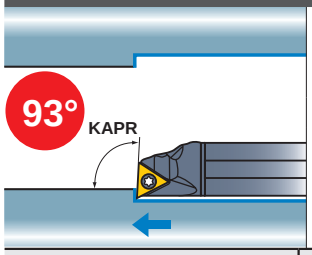
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

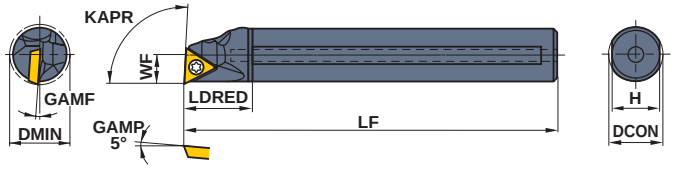
● : USA Stock

CC○○ type inserts	**➤ A147–A155**
CP○○ type inserts	**➤ A156, A157**
CBN & PCD inserts	**➤ B044–B047, B063**

M-FSTUP

Heavy metal shank coolant through — **TP○○inserts**





Right hand tool holder shown.

Finish	Finish	Light
FV	R/L FS	SV
(1.5,1.8,2)	(1.5,1.8,2)	(1.5,1.8,2)
Medium	**PCD**	**CBN**
MV	R/L F	
(1.5,1.8,2)	(1.5,1.8,2)	(1.5,1.8,2)

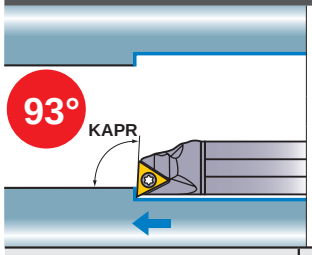
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	✶1 Clamp Screw	Wrench
M-FSTUPR/L-051.5-C	●	●	TPMB TPMH TPMX✶2 TPGB TPGH TPGX✶2	1.51.5○○	.313	5.000	.703	.196	.281	10°	**.390**	TS2D	TKY06F
M-FSTUPR/L-061.8-C	●	●		1.81.5○○	.375	6.000	.844	.227	.336	8°	**.450**	TS25D	TKY08F
M-FSTUPR/L-081.8-C	●	●		1.81.5○○	.500	8.000	1.125	.290	.461	7°	**.580**	TS25D	TKY08F
M-FSTUPR/L-102-C	●	●		22○	.625	10.000	1.406	.352	.586	4°	**.700**	TS31D	TKY10F
M-FSTUPR/L-122-C	●	●		22○	.750	10.000	1.688	.414	.711	0°	**.825**	TS31D	TKY10F

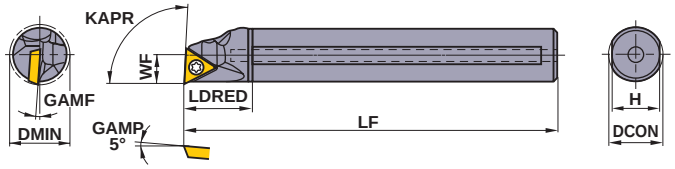
✶1 Clamp Torque (lbf-in) : TS2D=5.3, TS25D=8.9, TS31D=22

✶2 By changing the clamp screw, it is possible to use the different insert. Please refer to page E011.

S-FSTUP

Steel shank coolant through — **TP○○inserts**





Right hand tool holder shown.

Finish	Finish	Light
FV	R/L FS	SV
(1.8,2)	(1.8,2)	(1.8,2)
Medium	**PCD**	**CBN**
MV	R/L F	
(1.8,2)	(1.8,2)	(1.8,2)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	✶1 Clamp Screw	Wrench
S-FSTUPR/L-061.8-C	●	●	TPMB TPMH TPMX✶2 TPGB TPGH TPGX✶2	1.81.5○○	.375	6.000	.844	.227	.336	8°	**.450**	TS25D	TKY08F
S-FSTUPR/L-081.8-C	●	●		1.81.5○○	.500	8.000	1.125	.290	.461	7°	**.580**	TS25D	TKY08F
S-FSTUPR/L-102-C	●	●		22○	.625	10.000	1.406	.352	.586	4°	**.700**	TS31D	TKY10F
S-FSTUPR/L-122-C	●	●		22○	.750	10.000	1.688	.414	.711	0°	**.825**	TS31D	TKY10F
S-FSTUPR/L-162-C	●	●		22○	1.000	12.000	2.250	.638	.937	0°	**1.280**	TS31D	TKY10F

✶1 Clamp Torque (lbf-in) : TS25D=8.9, TS31D=22

✶2 By changing the clamp screw, it is possible to use the different insert. Please refer to page E011.

TP○○ type inserts	➤ A176, A177
CBN & PCD inserts	➤ B051, B052, B066, B067

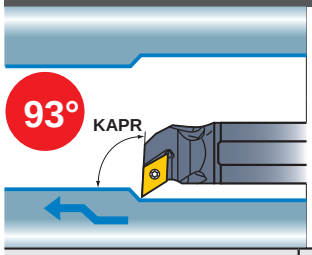
CUTTING CONDITIONS	➤ E011
SPARE PARTS	➤ N001
TECHNICAL DATA	➤ P001

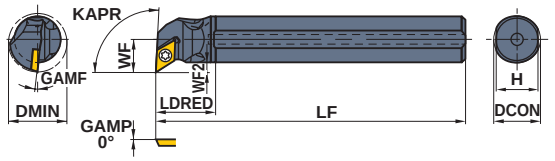
SCREW CLAMP DIMPLE BAR

- Excellent vibration resistance due to light dimple head.
- Chip disposal is improved by having two channels for chip evacuation.
- l/d is 3 to 6 times the diameter.

M-FSDUC

Heavy metal shank coolant through **DC○○inserts**





Right hand tool holder shown.

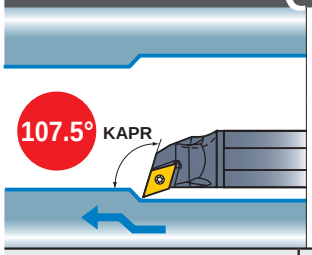
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L F	
			
(2,3)	(2,3)	(2,3)	(2,3)

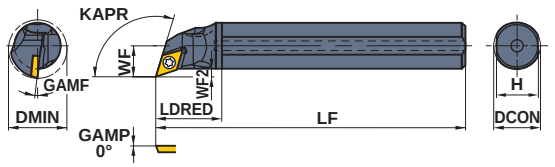
Order Number	Stock		Insert Number		Dimensions (inch)								*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Clamp Screw	Wrench
M-FSDUCR/L-062-C	●	●	DCMT DCMW DCGT DCGW	21.5○	.375	6.000	.675	.317	.130	.336	7.5°	**.525**	TS25	TKY08F
M-FSDUCR/L-082-C	●	●		21.5○	.500	8.000	.833	.380	.130	.461	6°	**.667**	TS25	TKY08F
M-FSDUCR/L-102-C	●	●		21.5○	.625	10.000	.781	.442	.130	.586	5°	**.781**	TS25	TKY08F
M-FSDUCR/L-123-C	●	●		32.5○	.750	10.000	.844	.615	.240	.711	5°	**1.200**	TS43	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS43=31

M-FSDQC

Heavy metal shank coolant through **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L F	
			
(2,3)	(2,3)	(2,3)	(2,3)

Order Number	Stock		Insert Number		Dimensions (inch)								*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Clamp Screw	Wrench
M-FSDQCR/L-062-C	●	●	DCMT DCMW DCGT DCGW	21.5○	.375	6.000	.769	.290	.102	.336	8°	**.488**	TS25	TKY08F
M-FSDQCR/L-082-C	●	●		21.5○	.500	8.000	.938	.352	.102	.461	6°	**.667**	TS25	TKY08F
M-FSDQCR/L-102-C	●	●		21.5○	.625	10.000	.879	.415	.102	.586	5°	**.781**	TS25	TKY08F
M-FSDQCR/L-123-C	●	●		32.5○	.750	10.000	.975	.521	.146	.711	7°	**.938**	TS43	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS43=31

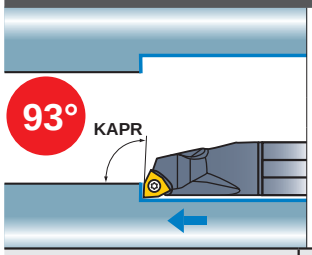
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

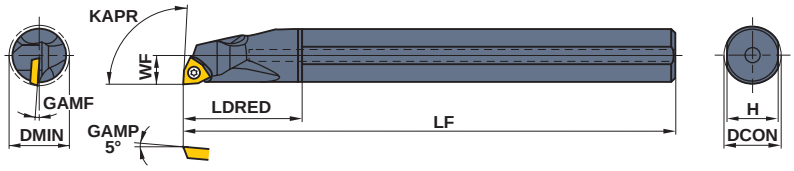
● : USA Stock

DC○○ type inserts ➢ A158–A165
CBN & PCD inserts ➢ B048, B049, B064

M-FSWUB/P

Heavy metal shank coolant through — **WB○○inserts, WP○○inserts**





The ϕ.313 and ϕ.375 shanks are 0°.

Right hand tool holder shown.

Finish
R/L F·FS

(1.5,2,3)
Medium
MV

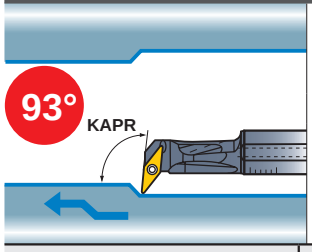
(1.5,2,3)

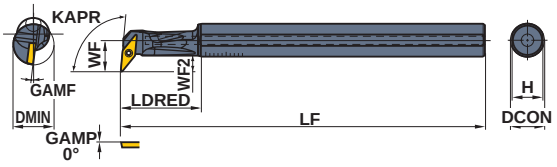
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
M-FSWUBR/L-051.5-C	●	●	WBMT WBGT	1.51.5○	.313	5.000	.703	.196	.281	14°	**.391**	TS2	TKY06F
M-FSWUBR/L-061.5-C	●	●		1.51.5○	.375	6.000	.844	.227	.336	11°	**.450**	TS2	TKY06F
M-FSWUPR/L-082-C	●	●	WPMT WPGT	21.5○	.500	8.000	1.125	.289	.461	4°	**.583**	TS253	TKY08F
M-FSWUPR/L-102-C	●	●		21.5○	.625	10.000	1.406	.352	.586	1°	**.703**	TS253	TKY08F
M-FSWUPR/L-123-C	●	●		32○	.750	10.000	1.688	.414	.711	2°	**.825**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS2=5.3, TS253=8.9, TS4=31

M-FSVUB/C

Heavy metal shank coolant through — **VC○○inserts, VB○○inserts**





Right hand tool holder shown.

Finish
FV

(1.5)
Finish
FP

(2)
Finish
FM

(2)
Light
SV

(1.5,2)
Light
LP

(2)
Light
LM

(2)
Medium
MV

(1.5,2)
CBN

(2)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	* Clamp Screw	Wrench
M-FSVUCR/L-081.5-C	●	●	VCGT VCMT	1.51.5○	.500	8.000	1.042	.447	.197	.461	8°	**.667**	TS202	TKY06F
M-FSVUBR/L-102-C	●	●	VBGT VBMT VBGW	22○	.625	10.000	1.269	.608	.295	.586	8°	**.781**	TS255	TKY08F
M-FSVUBR/L-122-C	●	●		22○	.750	10.000	1.519	.670	.295	.711	7°	**.938**	TS255	TKY08F

* Clamp Torque (lbf-in) : TS202=5.3, TS255=8.9

WB○○ type inserts	**➤ A189**
WP○○ type inserts	**➤ A191**
VC○○ type inserts	**➤ A184–A186**
VB○○ type inserts	**➤ A180, A182, A183**
CBN & PCD inserts	**➤ B053, B068, B069**

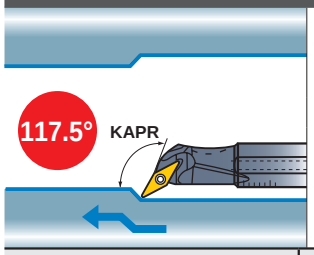
CUTTING CONDITIONS ➤ E011

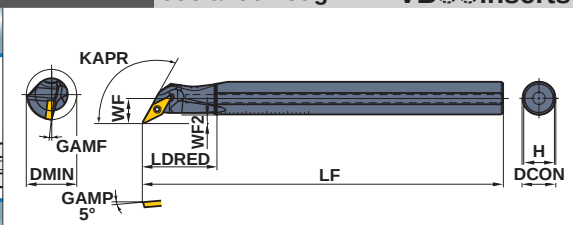
SCREW CLAMP DIMPLE BAR

- Excellent vibration resistance due to light dimple head.
- Chip disposal is improved by having two channels for chip evacuation.
- l/d is 3 to 6 times the diameter.

M-FSVPB/C

Heavy metal shank coolant through **VC○○inserts, VB○○inserts**





Right hand tool holder shown.

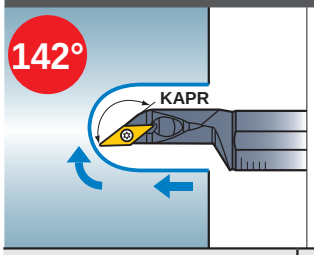
Finish	Finish	Finish	Light
FV	FP	FM	SV
			
(1.5)	(2)	(2)	(1.5,2)
Light	**Light**	**Medium**	**CBN**
LP	LM	MV	
			
(2)	(2)	(1.5,2)	(2)

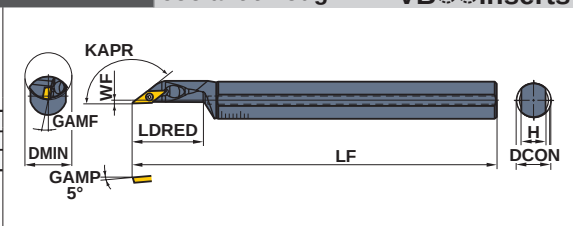
Order Number	Stock		Insert Number		Dimensions (inch)								*	
	R	L			DCON	LF	LDRED	WF	WF2	H	GAMF	DMIN	Clamp Screw	Wrench
M-FSVPCR/L-061.5-C	●	●	VCGT VCMT	1.51.5○	.375	6.000	.938	.306	.118	.336	8°	**.600**	TS202	TKY06F
M-FSVPBR/L-082-C	●	●	VBGT VBMT VBGW	22○	.500	8.000	1.167	.407	.157	.461	8°	**.833**	TS255	TKY08F
M-FSVPBR/L-102-C	●	●		22○	.625	10.000	1.367	.490	.177	.586	5°	**.977**	TS255	TKY08F
M-FSVPBR/L-122-C	●	●		22○	.750	10.000	1.500	.572	.197	.711	5°	**1.125**	TS255	TKY08F

* Clamp Torque (lbf-in) : TS202=5.3, TS255=8.9

M-FSVJB/C

Heavy metal shank coolant through **VC○○inserts, VB○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2)	(2)	(2)	(2)
Medium			
MV			
			
(1.5,2)			

Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
M-FSVJCR/L-081.5-C	●	●	VCGT VCMT	1.51.5○	.500	8.000	1.083	.093	.461	5°	**.667**	TS202	TKY06F
M-FSVJCR/L-101.5-C	●	●		1.51.5○	.625	10.000	1.406	.076	.586	5°	**.781**	TS202	TKY06F
M-FSVJBR/L-122-C	●	●	VBET VBGT VBMT VBGW	22○	.750	10.000	1.406	.060	.711	5°	**.938**	TS255	TKY08F

* Clamp Torque (lbf-in) : TS202=5.3, TS255=8.9

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) 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.

● : USA Stock

VC○○ type inserts	**➤ A184–A186**
VB○○ type inserts	**➤ A180, A182, A183**
CBN & PCD inserts	**➤ B053, B068**

RECOMMENDED CUTTING CONDITIONS

Steel Shank							l/d ≤ 3		3 < l/d ≤ 5	
Heavy Metal Shank							l/d ≤ 3		3 < l/d ≤ 6	
	Work Material	Cutting Mode	Breaker	Recom-mendation	Grade	Cutting Speed (SFM)	Feed (IPR)	D.O.C. (inch)	Feed (IPR)	D.O.C. (inch)
P	Mild Steel ≤180HB	Finish	FP	①	NX2525	555 (395—720)	.004 (.002—.006)	—.020	.004 (.002—.006)	—.020
		Light	LP	①	MP3025	490 (330—655)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
				②	NX2525	525 (360—690)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
		Medium	MP	①	MP3025	460 (295—620)	.010 (.006—.014)	—.080	.008 (.006—.010)	—.060
				②	NX2525	490 (330—655)	.010 (.006—.014)	—.080	.008 (.006—.010)	—.060
	Carbon Steel Alloy Steel 180—350HB	Finish	FP	①	MC6015	460 (295—620)	.004 (.002—.006)	—.020	.004 (.002—.006)	—.020
				②	NX2525	425 (260—590)	.004 (.002—.006)	—.020	.004 (.002—.006)	—.020
		Light	LP	①	MC6025	460 (295—620)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
				②	MP3025	360 (195—525)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
		Medium	MP	①	MC6025	425 (260—590)	.010 (.006—.014)	—.080	.008 (.006—.010)	—.060
				②	MP3025	330 (195—490)	.010 (.006—.014)	—.080	.008 (.006—.010)	—.060
M	Stainless Steel ≤200HB	Finish	FM	①	VP15TF	490 (360—620)	.004 (.002—.006)	—.020	.004 (.002—.006)	—.020
		Light	LM	①	MC7025	410 (280—540)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
				②	VP15TF	425 (295—555)	.008 (.004—.010)	—.040	.006 (.002—.008)	—.040
		Medium	MM	①	MC7025	345 (230—440)	.008 (.006—.010)	—.080	.008 (.006—.010)	—.040
				②	VP15TF	390 (260—525)	.008 (.006—.010)	—.080	.008 (.006—.010)	—.040
K	Gray Cast Iron Tensile Strength ≤350MPa	Finish	F, FS	①	HTi10	425 (295—525)	.006 (.004—.008)	—.020	.006 (.004—.008)	—.020
		Medium	MK	①	MC5015	295 (195—390)	.008 (.006—.010)	—.080	.008 (.006—.010)	—.060
N	Aluminum Alloy	Finish	F, FS	①	HTi10	985 (655—1310)	.004 (.002—.006)	—.020	.004 (.002—.006)	—.020
			Flat Top	①	MD220	655 (490—820)	.004 (.002—.006)	—.080	.004 (.002—.006)	—.040
H	Hardened Steel 35–65HRC	Finish	Flat Top	①	MB8120	330 (260—655)	.004 (.002—.006)	—.006	.004 (.002—.006)	—.004

When vibrations occur, reduce cutting speed to 70% of the above.
The depth of cut needs to be less than the corner diameter when using the FSVJ type.

■CCG/MT, CPGT, CPMX, TPGD/P, TPGA/M, TPMX inserts

• By changing the insert screw, it is possible to use the inserts listed on the left hand side.

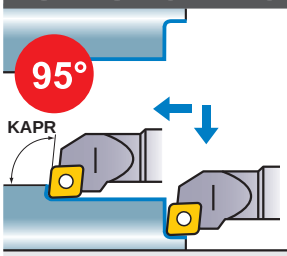
Order Number	Insert Screw	Remark
CCG/MT21.5○	Can be used as it is.	If the screw is too long then please grind away the unnecessary material.
CPGT2.51.5○	Change to TS3.	
CPGT32○	Change to TS4.	
CPMX2.51.5○	Can be used as it is.	
CPMX32○	Can be used as it is.	
TPGD/P1.51.5○	Change to CS200T.	
TPGD/P1.81.5○	Change to CS250T.	
TPGA/M22○	Change to CS300890T.	
TPMX1.51.5○	Change to CS200T.	
TPMX1.81.5○	Change to CS250T.	
TPMX22○	Change to CS300890T.	

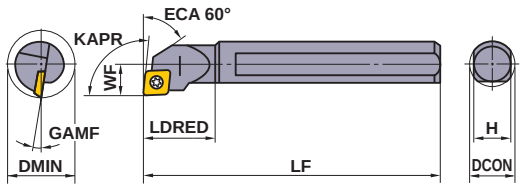
SCREW CLAMP TYPE

- Two wall pocket.
- 7º positive insert, low cutting force.
- Screw-on type.
- Steel and carbide shanks are stocked in various diameters.

S-SCLC

Steel shank — **CC○○inserts**





Right hand tool holder shown.

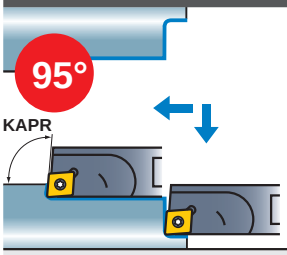
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Flat Top**	**PCD/CBN**
MP	MM		
			
(2,3,4)	(2,3,4)	(2,3,4)	(2,3,4)

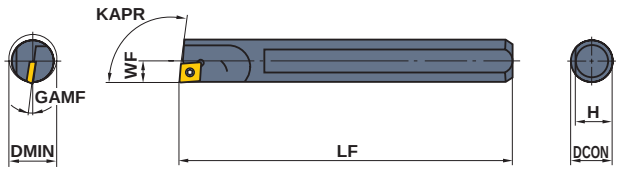
Order Number	Stock R	Stock L	Insert Number		DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw *	Wrench
S-SCLCR/L-062	●	●	CCMT CCMW CCGB	21.5○	.375	6.000	.625	.250	.340	15°	**.477**	TS25	TKY08F
S-SCLCR/L-082	●	●		21.5○	.500	6.000	.750	.313	.460	13°	**.602**	TS25	TKY08F
S-SCLCR/L-103	●	●	CCGW CCGT	32.5○	.625	8.000	1.250	.406	.560	10°	**.797**	TS4	TKY15F
S-SCLCR/L-123	●	●	CCGH	32.5○	.750	10.000	1.875	.500	.700	8°	**.954**	TS4	TKY15F
S-SCLCR/L-164	●	●	CCET CCMH	43○	1.000	12.000	2.500	.641	.910	7°	**1.219**	TS5	TKY25F
S-SCLCR/L-204	●	●	CCGW	43○	1.250	12.000	2.500	.875	1.160	5°	**1.579**	TS5	TKY25F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31, TS5=66

M-SCLC

Heavy metal shank — **CC○○inserts**





Right hand tool holder only.

Finish: L F



(03,04)

PCD/CBN



(03,04)

Order Number	Stock R	Insert Number		DCON	LF	WF	H	GAMF	DMIN	Clamp Screw *	Wrench
M-SCLCR-063	●	CCGT CCMW CCGW	03S1○○	.188	3.000	.100	.173	15°	**.200**	TS16	TKY06F
M-SCLCR-073	●		03S1○○	.219	3.500	.120	.199	14°	**.240**	TS16	TKY06F
M-SCLCR-064	●		04T0○○	.250	4.000	.140	.230	14°	**.280**	TS21	TKY06F

* Clamp Torque (lbf-in) : TS16=5.3, TS21=5.3

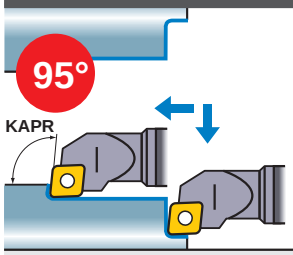
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

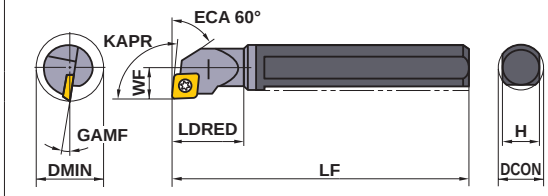
● : USA Stock

CC○○ type inserts ➤ A147–A155
CBN & PCD inserts ➤ B044–B046, B063

C-SCLC

Carbide shank — **CC○○inserts**





Right hand tool holder shown.

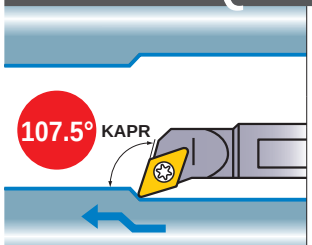
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Flat Top**	**CBN**
MP	MM		
			
(2,3)	(2,3)	(2,3)	(2,3)

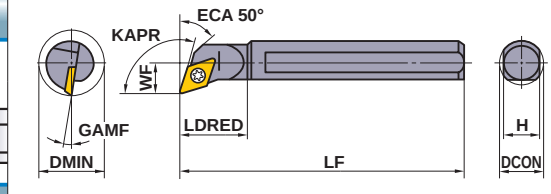
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw *	Wrench
C-SCLCR/L-062	●	●	CCMT CCMW CCGB CCGW CCGT CCGH CCET CCMH	21.5○	.375	6.000	.625	.250	.360	15°	**.477**	TS25	TKY08F
C-SCLCR/L-082	●	●		21.5○	.500	6.000	.750	.313	.485	13°	**.602**	TS25	TKY08F
C-SCLCR/L-103	●	●		32.5○	.625	8.000	1.250	.406	.600	10°	**.797**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31

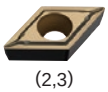
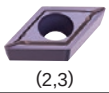
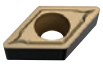
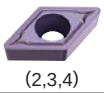
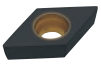
S-SDQC

Steel shank — **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Flat Top**	**PCD/CBN**
MP	MM		
			
(2,3,4)	(2,3,4)	(2,3,4)	(2,3)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw *	Wrench
S-SDQCR/L-082	●	●	DCMT DCMW DCGW DCGT DCET	21.5○	.500	6.000	.875	.375	.460	10°	**.665**	TS25	TKY08F
S-SDQCR/L-102	●	●		21.5○	.625	8.000	1.000	.406	.560	7°	**.797**	TS25	TKY08F
S-SDQCR/L-123	●	●		32.5○	.750	10.000	1.250	.500	.700	7°	**.954**	TS4	TKY15F
S-SDQCR/L-164	●	●		43○	1.000	12.000	1.500	.641	.910	5°	**1.219**	TS5	TKY25F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31, TS5=66

RECOMMENDED CUTTING CONDITIONS

Steel Shank	l/d ≤ 3	3 < l/d ≤ 4 (Shank Diameter ≥ 1.000 inch)
Heavy Metal Shank	l/d ≤ 3	3 < l/d ≤ 6
Carbide Shank	l/d ≤ 5	5 < l/d ≤ 7

	Work Material	Hardness	Cutting Mode	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Carbon Steel Alloy Steel	180–280HB	Light Cutting	295–525	.002–.006	.008	260–490	.002–.006	.008
			Medium Cutting	195–395	.006–.014	–.118	165–360	.004–.008	.059
M	Stainless Steel	≤200HB	Light Cutting	330–590	.002–.006	.008	330–590	.002–.006	.008
			Medium Cutting	165–295	.006–.010	–.079	130–260	.004–.008	.039
N	Aluminum Alloy	–	Light Cutting	655–1310	.002–.006	.008	655–1310	.002–.006	.008
			Medium Cutting	490–820	.002–.006	–.079	490–820	.002–.006	.059

CC○○ type inserts ➤ A147–A155
DC○○ type inserts ➤ A158–A165
CBN & PCD inserts ➤ B044–B046, B048, B049, B063, B064

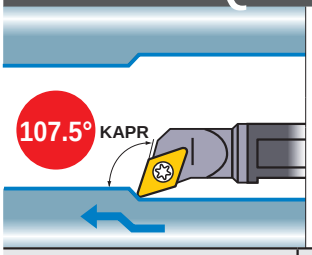
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

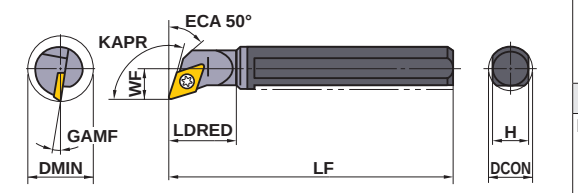
SCREW CLAMP TYPE

- Two wall pocket.
- 7º positive insert, low cutting force.
- Screw-on type.
- Steel and carbide shanks are stocked in various diameters.

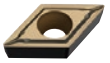
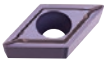
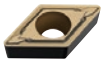
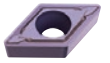
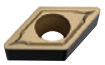
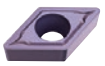
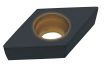
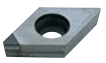
C-SDQC

Carbide shank **DC○○inserts**





Right hand tool holder shown.

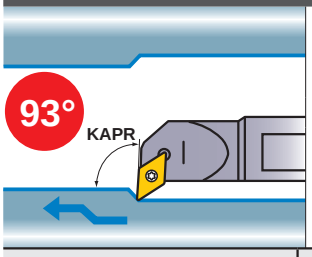
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Flat Top**	**PCD/CBN**
MP	MM		
			
(2,3)	(2,3)	(2,3)	(2,3)

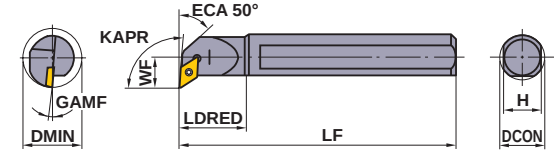
Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
C-SDQCR/L-082	●	●	DCMT DCMW DCGW DCGT DCET	21.5○	.500	6.000	.875	.375	.485	10°	**.665**	TS25	TKY08F
C-SDQCR/L-102	●	●		21.5○	.625	8.000	1.000	.406	.600	7°	**.797**	TS25	TKY08F
C-SDQCR/L-123	●	●		32.5○	.750	10.000	1.250	.500	.725	7°	**.954**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31

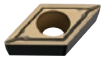
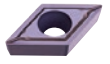
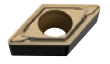
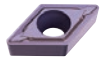
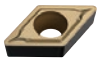
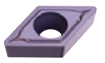
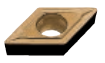
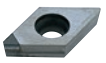
S-SDUC

Steel shank **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Medium**	**PCD/CBN**
MP	MM	Standard	
			
(2,3,4)	(2,3,4)	(2,3,4)	(2,3)

Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
S-SDUCR/L-062	●	●	DCMT DCMW DCGW DCGT DCET	21.5○	.375	6.000	.625	.437	.340	7°	**.664**	TS25	TKY08F
S-SDUCR/L-082	●	●		21.5○	.500	6.000	.750	.500	.460	7°	**.789**	TS25	TKY08F
S-SDUCR/L-102	●	●		21.5○	.625	8.000	1.250	.563	.560	7°	**.954**	TS25	TKY08F
S-SDUCR/L-123	●	●		32.5○	.750	10.000	1.875	.625	.700	7°	**1.079**	TS4	TKY15F
S-SDUCR/L-164	●	●		43○	1.000	12.000	2.500	.750	.910	5°	**1.329**	TS5	TKY25F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31, TS5=66

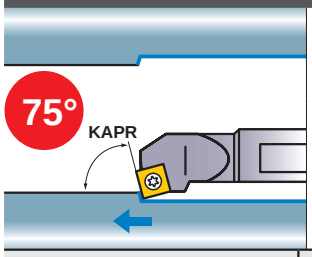
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

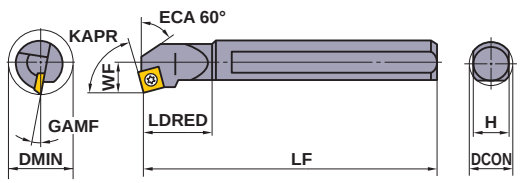
● : USA Stock

DC○○ type inserts	**➢ A158–A165**
CBN & PCD inserts	**➢ B048, B049, B064**

S-SSKC

Steel shank — **SC○○inserts**





Right hand tool holder shown.

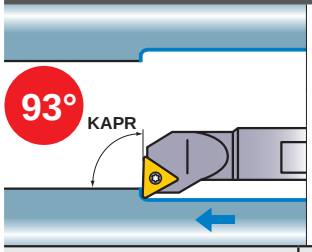
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(3)	(3)	(3)	(3)
Medium	**Medium**	**Medium**	**Flat Top**
MP	MM	Standard	
			
(3,4)	(3,4)	(3,4)	(3,4)

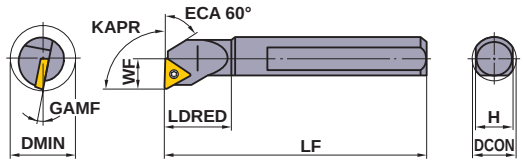
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
S-SSKCR/L-103	●	●	SCMT SCMW	32.5○	.625	8.000	1.250	.406	.560	10°	**.797**	TS4	TKY15F
S-SSKCR/L-123	●	●		32.5○	.750	10.000	1.875	.500	.700	8°	**.954**	TS4	TKY15F
S-SSKCR/L-164	●	●		43○	1.000	12.000	2.500	.641	.910	7°	**1.219**	TS5	TKY25F

* Clamp Torque (lbf-in) : TS4=31, TS5=66

S-STUC

Steel shank — **TC○○inserts**





Right hand tool holder shown.

Finish	Finish
FP	FM
	
(2,3)	(2,3)
Light	**Medium**
LP	MP
	
(2,3)	(2,3)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
S-STUCR/L-062	●	●	TCMT TCMW TCGT TCGW	21.5○	.375	6.000	.625	.250	.360	15°	**.477**	TS25	TKY08F
S-STUCR/L-082	●	●		21.5○	.500	6.000	.750	.313	.485	13°	**.602**	TS25	TKY08F
S-STUCR/L-102	●	●		21.5○	.625	8.000	1.250	.406	.600	10°	**.797**	TS25	TKY08F
S-STUCR/L-123	●	●		32.5○	.750	10.000	1.875	.500	.725	8°	**.954**	TS4	TKY15F
S-STUCR/L-163	●	●		32.5○	1.000	12.000	2.500	.641	.910	7°	**1.219**	TS4	TKY15F
S-STUCR/L-203	●	●		32.5○	1.250	12.000	2.500	.875	1.160	5°	**1.579**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31

RECOMMENDED CUTTING CONDITIONS

Steel Shank	l/d ≤ 3	3 < l/d ≤ 4 (Shank Diameter ≥ 1.000 inch)
Heavy Metal Shank	l/d ≤ 3	3 < l/d ≤ 6
Carbide Shank	l/d ≤ 5	5 < l/d ≤ 7

	Work Material	Hardness	Cutting Mode	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Carbon Steel Alloy Steel	180−280HB	Light Cutting	295−525	.002−.006	.008	260−490	.002−.006	.008
			Medium Cutting	195−395	.006−.014	−.118	165−360	.004−.008	.059
M	Stainless Steel	≤200HB	Light Cutting	330−590	.002−.006	.008	330−590	.002−.006	.008
			Medium Cutting	165−295	.006−.010	−.079	130−260	.004−.008	.039
N	Aluminum Alloy	−	Light Cutting	655−1310	.002−.006	.008	655−1310	.002−.006	.008
			Medium Cutting	490−820	.002−.006	−.079	490−820	.002−.006	.059

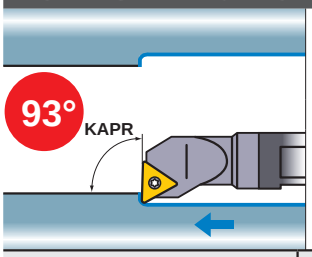
SC○○ type inserts ➤ A168, A169
TC○○ type inserts ➤ A171−A174
CBN & PCD inserts ➤ B050, B065
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

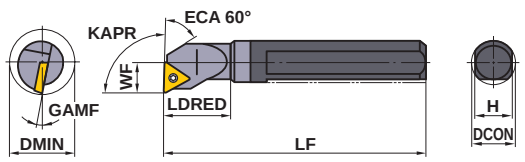
SCREW CLAMP TYPE

- Two wall pocket.
- 7º positive insert, low cutting force.
- Screw-on type.
- Steel and carbide shanks are stocked in various diameters.

C-STUC

Carbide shank — **TC○○inserts**





Right hand tool holder shown.

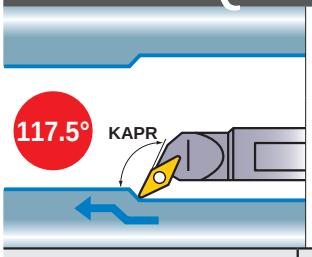
Finish	Finish
FP	FM
	
(2,3)	(2,3)
Light	**Medium**
LP	MP
	
(2,3)	(2,3)

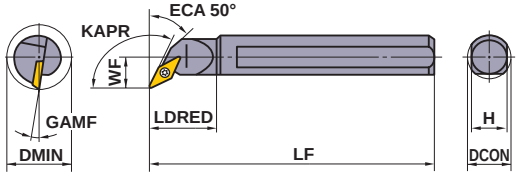
Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
C-STUCR/L-062	●	●	TCMT TCMW TCGT TCGW	21.5○	.375	6.000	.625	.250	.340	15°	**.477**	TS25	TKY08F
C-STUCR/L-082	●	●		21.5○	.500	6.000	.750	.313	.460	13°	**.602**	TS25	TKY08F
C-STUCR/L-102	●	●		21.5○	.625	8.000	1.250	.406	.560	10°	**.797**	TS25	TKY08F

* Clamp Torque (lbf-in) : TS25=8.9

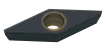
S-SVQC

Steel shank — **VC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Medium**	**Flat Top**
MP	MM	Standard	
			
(3)	(3)	(2,3)	(2,3)

Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
S-SVQCR/L-102	●	●	VCMT VCMW VCGT VCGW	22○	.625	8.000	1.000	.406	.560	8°	**.797**	TS25	TKY08F
S-SVQCR/L-122	●	●		22○	.750	10.000	1.250	.500	.700	7°	**.954**	TS25	TKY08F
S-SVQCR/L-163	●	●		33○	1.000	12.000	1.500	.641	.910	6°	**1.219**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS25=8.9, TS4=31

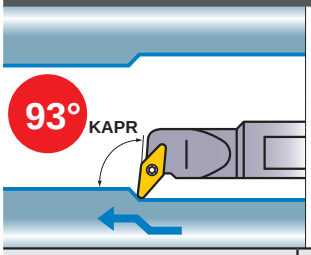
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

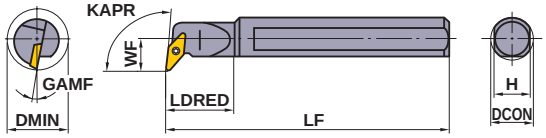
● : USA Stock

TC○○ type inserts	**➤ A171–A174**
VC○○ type inserts	**➤ A184–A186**
CBN & PCD inserts	**➤ B050, B054, B065, B068**

S-SVUC

Steel shank — **VC○○inserts**





Right hand tool holder shown.

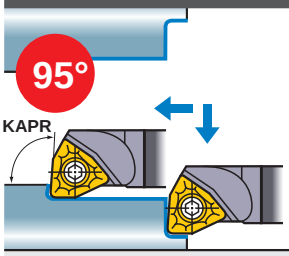
Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Medium**	**Flat Top**
MP	MM	Standard	
			
(3)	(3)	(2,3)	(2,3)

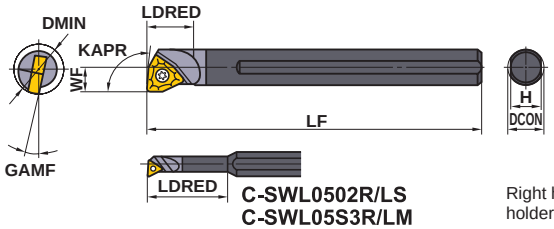
Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
S-SVUCR/L-122	●	●	VCMT VCMW VCGT VCGW	22○	.750	10.000	1.250	.500	.700	7°	**1.000**	TS25	TKY08F
S-SVUCR/L-163	●	●		33○	1.000	12.000	1.500	.641	.910	6°	**1.281**	TS4	TKY15F

∗ Clamp Torque (lbf-in) : TS25=8.9, TS4=31

C-SWL

Carbide shank — **WC○○inserts**





C-SWL0502R/LS
C-SWL05S3R/LM

Right hand tool holder shown.

Finish	Finish	Light
FJ-P	R/L	MJ
		
(2)	(1.2,1.5)	(2)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2)	(1.2,1.5,2)	(1.5,2)

Order Number	Stock		Insert Number		Dimensions (inch)							*	
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN	Clamp Screw	Wrench
C-SWL0502R/LS	●	●	WCMT WCGT WCMW WCGW	1.21○	.313	5.000	1.000	.114	.282	17°	**.228**	TS21	TKY06F
C-SWL05S3R/LM	●	●		1.51.5○	.313	5.000	1.370	.156	.282	15°	**.312**	TS2	TKY06F
C-SWL0504R/L	●	●		21.5○	.313	5.000	.598	.203	.282	15°	**.406**	TS25	TKY08F

∗ Clamp Torque (lbf-in) : TS21=5.3, TS2=5.3, TS25=8.9

RECOMMENDED CUTTING CONDITIONS

Steel Shank	l/d ≤ 3	3 < l/d ≤ 4 (Shank Diameter ≥ 1.000 inch)
Heavy Metal Shank	l/d ≤ 3	3 < l/d ≤ 6
Carbide Shank	l/d ≤ 5	5 < l/d ≤ 7

	Work Material	Hardness	Cutting Mode	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Carbon Steel Alloy Steel	180—280HB	Light Cutting	295—525	.002—.006	.008	260—490	.002—.006	.008
			Medium Cutting	195—395	.006—.014	—.118	165—360	.004—.008	.059
M	Stainless Steel	≤200HB	Light Cutting	330—590	.002—.006	.008	330—590	.002—.006	.008
			Medium Cutting	165—295	.006—.010	—.079	130—260	.004—.008	.039
N	Aluminum Alloy	—	Light Cutting	655—1310	.002—.006	.008	655—1310	.002—.006	.008
			Medium Cutting	490—820	.002—.006	—.079	490—820	.002—.006	.059

VC○○ type inserts ➤ **A184—A186**
WC○○ type inserts ➤ **A190**
CBN & PCD inserts ➤ **B054, B055, B068, B069**

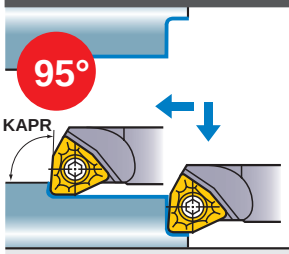
SPARE PARTS ➤ **N001**
TECHNICAL DATA ➤ **P001**

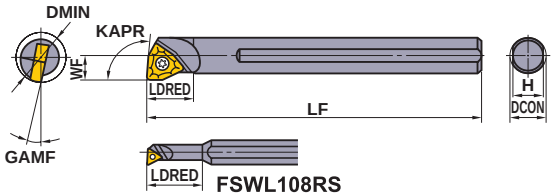
SCREW CLAMP TYPE

- Two wall pocket.
- 7º positive insert, low cutting force.
- Screw-on type.
- Steel and carbide shanks are stocked in various diameters.

FSWL1

Steel shank — **WC○○inserts**





Right hand tool holder only.

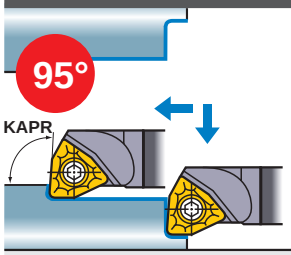
Finish	Finish	Light
FJ-P	R/L	MJ
		
(2,3)	(1.2,1.5)	(2,3)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2,3)	(1.2,1.5,2,3)	(2,3)

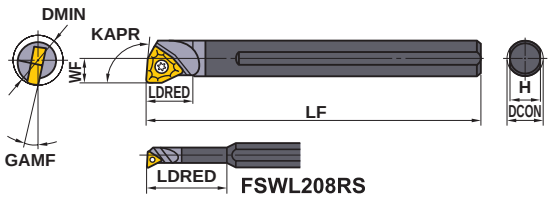
Order Number	Stock R	Insert Number		Dimensions (mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
FSWL108RS	★	WCMT WCGT	1.21○	8	100	19	2.9	7	17°	**5.8**	TS21	TKY06F
FSWL108RM	★	WCMT WCGT WCMW	1.51.5○	8	100	25	4	7	15°	**8**	TS2	TKY06F
FSWL108R	★	WCMT WCGW	21.5○	8	125	10	5	7	15°	**10**	TS25	TKY08F
FSWL110R	★		21.5○	10	150	12	6	9	13°	**12**	TS25	TKY08F
FSWL112R	★		32.5○	12	180	15	8	11	13°	**16**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS21=5.3, TS25=8.9, TS4=31

FSWL2

Carbide shank — **WC○○inserts**





Right hand tool holder only.

Finish	Finish	Light
FJ-P	R/L	MJ
		
(2,3)	(1.2,1.5)	(2,3)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2,3)	(1.2,1.5,2,3)	(2,3)

Order Number	Stock R	L	Insert Number		Dimensions (mm) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
FSWL208RS	★		WCMT WCGT	1.21○	8	122	25	2.9	7	17°	**5.8**	TS21	TKY06F
FSWL208R/LM	★	★		1.51.5○	8	125	33	4	7	15°	**8**	TS2	TKY06F
FSWL208R	★			21.5○	8	125	10	5	7	15°	**10**	TS25	TKY08F
FSWL210R/L	★	★	WCMT	21.5○	10	150	12	6	9	13°	**12**	TS25	TKY08F
FSWL212R/L	★	★	WCGW	32.5○	12	180	15	8	11	13°	**16**	TS4	TKY15F
FSWL216R/L	★	★	WCMT	32.5○	16	200	20	11	14	7°	**22**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS21=5.3, TS2=5.3, TS25=8.9, TS4=31

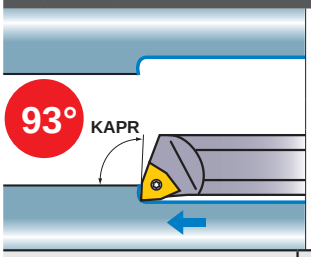
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

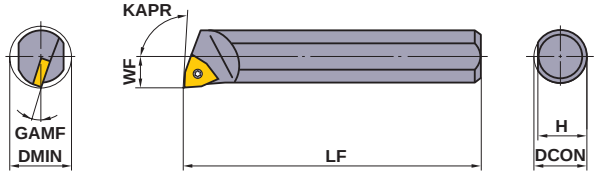
● : USA Stock ★ : Stocked in Japan □ : Made to Order

WC○○ type inserts	**➢ A190**
CBN & PCD inserts	**➢ B055, B069**

S-SWUC

Steel shank — **WC○○inserts**





Right hand tool holder shown.

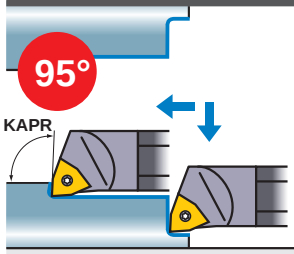
Finish	Finish	Light
FJ-P	R/L	MJ
		
(2,3)	(1.2,1.5)	(2,3)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2,3)	(1.2,1.5,2,3)	(2,3)

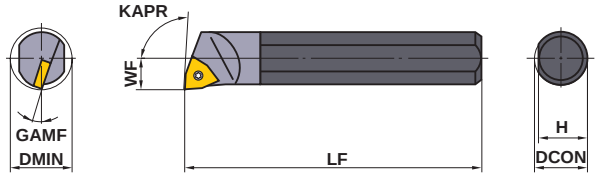
Order Number	Stock		Insert Number		Dimensions (inch)						*	
	R	L			DCON	LF	WF	H	GAMF	DMIN	Clamp Screw	Wrench
S-SWUCR/L-055	●	●	WCMT WCMW WCGT WCGW	1.21○	.188	4.000	.114	.172	17°	**.228**	TS21	TKY06F
S-SWUCR/L-065	●	●		1.21○	.250	4.000	.156	.235	17°	**.312**	TS2	TKY06F
S-SWUCR/L-066	●	●		1.51.5○	.313	6.000	.188	.295	15°	**.375**	TS2	TKY06F
S-SWUCR/L-062	●	●		21.5○	.375	6.000	.250	.358	15°	**.500**	TS25	TKY08F
S-SWUCR/L-082	●	●		21.5○	.500	6.000	.312	.480	13°	**.625**	TS25	TKY08F
S-SWUCR/L-103	●	●		32.5○	.625	8.000	.375	.593	10°	**.750**	TS4	TKY15F
S-SWUCR/L-123	●	●		32.5○	.750	10.000	.500	.725	8°	**1.000**	TS4	TKY15F
S-SWUCR/L-163	●	●		32.5○	1.000	12.000	.640	.975	7°	**1.250**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS21=5.3, TS2=5.3, TS25=8.9, TS4=31

C-SWLO

Carbide shank — **WC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light
FJ-P	R/L	MJ
		
(2)	(1.2,1.5)	(2)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2)	(1.2,1.5,2)	(1.5,2)

Order Number	Stock		Insert Number		Dimensions (inch)						*	
	R	L			DCON	LF	WF	H	GAMF	DMIN	Clamp Screw	Wrench
C-SWLOR/L-055	●	□	WCMT WCMW WCGT WCGW	1.21○	.188	4.000	.114	.172	17°	**.228**	TS21	TKY06F
C-SWLOR/L-065	●	□		1.21○	.250	4.000	.156	.235	17°	**.313**	TS2	TKY06F
C-SWLOR/L-066	●	□		1.51.5○	.313	6.000	.188	.295	15°	**.375**	TS2	TKY06F
C-SWLOR/L-070	●	□		21.5○	.375	6.000	.218	.358	15°	**.438**	TS25	TKY08F
C-SWLOR/L-062	●	□		21.5○	.375	6.000	.250	.358	15°	**.500**	TS25	TKY08F

* Clamp Torque (lbf-in) : TS21=5.3, TS2=5.3, TS25=8.9

RECOMMENDED CUTTING CONDITIONS

Steel Shank	l/d ≤ 3	3 < l/d ≤ 4 (Shank Diameter ≥ 1.000 inch)
Heavy Metal Shank	l/d ≤ 3	3 < l/d ≤ 6
Carbide Shank	l/d ≤ 5	5 < l/d ≤ 7

	Work Material	Hardness	Cutting Mode	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Carbon Steel Alloy Steel	180−280HB	Light Cutting	295−525	.002−.006	.008	260−490	.002−.006	.008
			Medium Cutting	195−395	.006−.014	−.118	165−360	.004−.008	.059
M	Stainless Steel	≤200HB	Light Cutting	330−590	.002−.006	.008	330−590	.002−.006	.008
			Medium Cutting	165−295	.006−.010	−.079	130−260	.004−.008	.039
N	Aluminum Alloy	−	Light Cutting	655−1310	.002−.006	.008	655−1310	.002−.006	.008
			Medium Cutting	490−820	.002−.006	−.079	490−820	.002−.006	.059

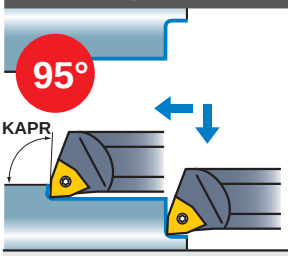
WC○○ type inserts ➤ A190
CBN & PCD inserts ➤ B055, B069
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

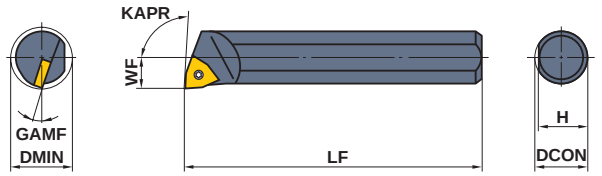
SCREW CLAMP TYPE

- Two wall pocket.
- 7° positive insert, low cutting force.
- Screw-on type.
- Steel and carbide shanks are stocked in various diameters.

M-SWLO

Heavy metal shank — **WC○○inserts**





Right hand tool holder shown.

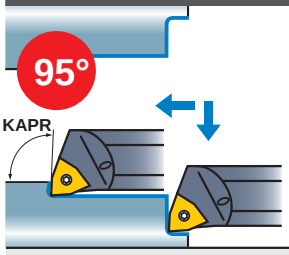
Finish	Finish	Light
FJ-P	R/L	MJ
		
(2,3)	(1.2,1.5)	(2,3)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2,3)	(1.2,1.5,2,3)	(2,3)

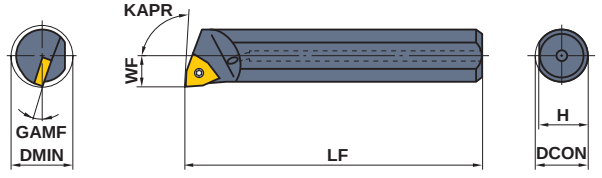
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
M-SWLOR/L-055	●	●	WCMT WCGT WCMW WCGW	1.21○	.188	4.000	.114	.172	17°	**.228**	TS21	TKY06F
M-SWLOR/L-065	●	●		1.21○	.250	4.000	.156	.235	17°	**.313**	TS2	TKY06F
M-SWLOR/L-066	●	●		1.51.5○	.313	6.000	.188	.295	15°	**.375**	TS2	TKY06F
M-SWLOR/L-070	●	●		21.5○	.375	6.000	.218	.358	15°	**.438**	TS25	TKY08F
M-SWLOR/L-062	●	●		21.5○	.375	6.000	.250	.358	15°	**.500**	TS25	TKY08F
M-SWLOR/L-082	●	●		21.5○	.500	6.000	.312	.480	13°	**.625**	TS25	TKY08F
M-SWLOR/L-103	●	●		32.5○	.625	8.000	.375	.600	10°	**.750**	TS4	TKY15F
M-SWLOR/L-123	●	●		32.5○	.750	10.000	.500	.725	8°	**1.000**	TS4	TKY15F
M-SWLOR/L-163	●			32.5○	1.000	12.000	.640	.975	7°	**1.250**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS21=5.3, TS2=5.3, TS25=8.9, TS4=31

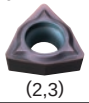
M-SWLO

Heavy metal shank coolant through — **WC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light
FJ-P	R/L	MJ
		
(2,3)	(1.2,1.5)	(2,3)
Light	**Medium**	**CBN**
MJ-P	Standard	
		
(2,3)	(1.5,2,3)	(2,3)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
M-SWLOR/L-066-C	●	●	WCMT WCGT WCMW WCGW	1.51.5○	.313	6.000	.188	.295	15°	**.375**	TS2	TKY06F
M-SWLOR/L-070-C	●	●		21.5○	.375	6.000	.218	.358	15°	**.438**	TS25	TKY08F
M-SWLOR/L-062-C	●	●		21.5○	.375	6.000	.250	.358	15°	**.500**	TS25	TKY08F
M-SWLOR/L-082-C	●	●		21.5○	.500	6.000	.312	.480	13°	**.625**	TS25	TKY08F
M-SWLOR/L-103-C	●	●		32.5○	.625	8.000	.375	.600	10°	**.750**	TS4	TKY15F
M-SWLOR/L-123-C	●	●		32.5○	.750	10.000	.500	.725	8°	**1.000**	TS4	TKY15F
M-SWLOR/L-163-C	●	●		32.5○	1.000	12.000	.640	.975	7°	**1.250**	TS4	TKY15F

* Clamp Torque (lbf-in) : TS2=5.3, TS25=8.9, TS4=31

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

Note 2) 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.

● : USA Stock

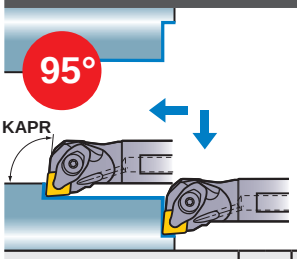
CUTTING CONDITIONS	➤ E023
WC○○ type inserts	➤ A190
CBN & PCD inserts	➤ B055, B069

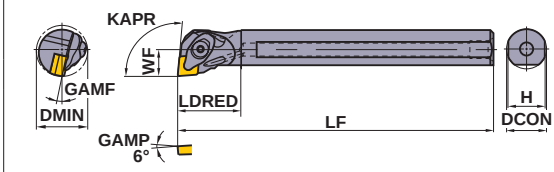
DOUBLE CLAMP DIMPLE BAR

- Negative rake.
- New double clamp type.
- Holds inserts securely.
- Excellent cutting edge repeatability.

S-DCLN

Steel shank coolant through — **CN○○ inserts**





Right hand tool holder shown.

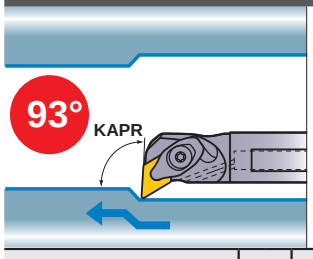
Finish	Light	Light	Light
FP	SA	LP	LM
			
(4)	(4)	(4)	(4)
Medium	**Medium**	**Stainless**	**CBN/PCD**
MP	Standard	MM	
			
(4)	(3,4)	(4)	(4)

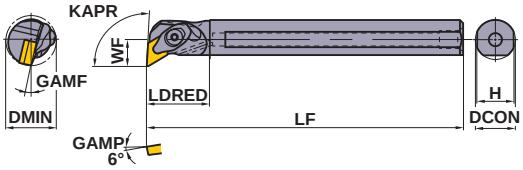
Order Number	Stock		Insert Number		Dimensions (inch)							Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN						
S-DCLNR/L-123-C	●	●	CNMA CNMG	32○	.750	10.000	1.219	.500	.711	12°	1.000	LLSCP32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DCLNR/L-163-C	●	●		32○	1.000	12.000	1.625	.641	.922	11°	1.281	LLSCP32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DCLNR/L-164-C	●	●	CNMA CNMG CNMM CNGG	43○	1.000	12.000	1.625	.641	.922	11°	1.281	LLSCP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DCLNR/L-204-C	●	●		43○	1.250	14.000	2.000	.766	1.171	13°	1.532	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DCLNR/L-244-C	●	●		43○	1.500	14.000	2.000	.891	1.382	12°	1.782	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DCLNR/L-284-C	●	●		43○	1.750	14.000	2.500	1.016	1.632	10°	2.032	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DCLNR/L-324-C	●	●		43○	2.000	14.000	2.500	1.281	1.882	10°	2.562	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (lbf-in) : DC0520T=31, DC0621T=44

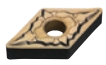
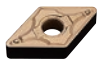
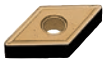
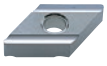
S-DDUN

Steel shank coolant through — **DN○○ inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(4)	(4)	(4)	(4)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
			
(4)	(4)	(4)	(4)

Order Number	Stock		Insert Number		Dimensions (inch)							Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
	R	L			DCON	LF	LDRED	WF	H	GAMF	DMIN						
S-DDUNR/L-164-C	●	●	DNMA DNMG DNMX DNGA DNGG	43○	1.000	12.000	1.625	.657	.922	13°	1.314	LLSDP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DDUNR/L-204-C	●	●		43○	1.250	14.000	2.000	1.000	1.171	11°	2.000	LLSDN43	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DDUNR/L-244-C	●	●		43○	1.500	14.000	2.000	1.125	1.382	10°	2.250	LLSDN43	LLP24	DCK2613	DCS1	DC0621T	TKY20F
S-DDUNR/L-284-C	●	●		43○	1.750	14.000	2.500	1.250	1.632	9°	2.500	LLSDN43	LLP24	DCK2613	DCS1	DC0621T	TKY20F
S-DDUNR/L-324-C	●	●		43○	2.000	14.000	2.500	1.375	1.882	8°	2.750	LLSDN43	LLP24	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (lbf-in) : DC0621T=44

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	l/d≤3			3<l/d≤4		
				Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Carbon Steel, Alloy Steel	180—280HB	Medium Cutting	360 (260—460)	.010 (.004—.016)	—.197	360 (260—460)	.008 (.004—.012)	—.157
M	Stainless Steel	≤200HB	Medium Cutting	260 (195—330)	.008 (.004—.012)	—.157	230 (165—330)	.006 (.004—.015)	—.118
K	Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	260 (195—330)	.010 (.004—.016)	—.197	260 (195—330)	.008 (.004—.012)	—.157

CN○○ type inserts ➤ A104—A111
DN○○ type inserts ➤ A112—A118
CBN & PCD inserts ➤ B028—B034, B059

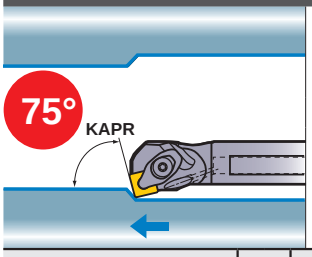
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

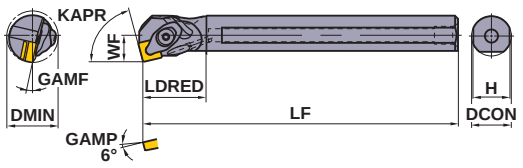
DOUBLE CLAMP DIMPLE BAR

- Negative rake.
- New double clamp type.
- Holds inserts securely.
- Excellent cutting edge repeatability.

S-DSKN

Steel shank coolant through — **SN○○ inserts**





Right hand tool holder shown.

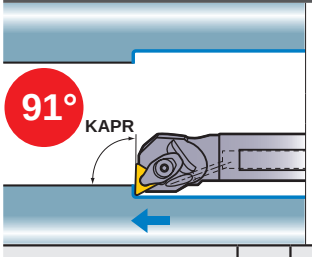
Finish	Light	Medium	Medium
FP	LP	MP	MH
 (4)	 (4)	 (4)	 (4)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
 (4)	 (4)	 (4)	 (4)

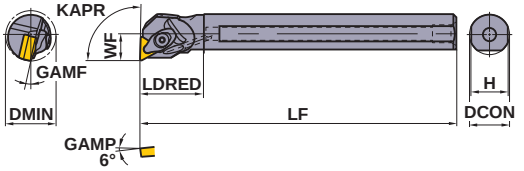
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
S-DSKNR/L-164-C	●	●	SNMA SNMG SNMM SNGA SNGG	43○	1.000	12.000	1.625	.641	.922	13°	1.282	LLSSP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DSKNR/L-204-C	●	●		43○	1.250	14.000	2.000	.766	1.171	13°	1.532	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DSKNR/L-244-C	●	●		43○	1.500	14.000	2.000	.891	1.382	11°	1.782	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DSKNR/L-284-C	●	●		43○	1.750	14.000	2.500	1.016	1.632	10°	2.032	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DSKNR/L-324-C	●	●		43○	2.000	14.000	2.500	1.281	1.882	9°	2.562	LLSSN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (lbf-in) : DC0621T=44

S-DTFN

Steel shank coolant through — **TN○○ inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
 (3)	 (3,4)	 (3,4)	 (3,4)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
 (3,4)	 (3,4)	 (3,4)	 (3)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
S-DTFNR/L-123-C	●	●	TNMA TNMG TNMM TNGA TNGG	33○	.750	10.000	1.250	.500	.711	13°	1.000	—	—	DCK2211	DCS2	DC0520T	TKY15F
S-DTFNR/L-163-C	●	●		33○	1.000	12.000	1.625	.641	.922	13°	1.282	LLSTP32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DTFNR/L-203-C	●	●		33○	1.250	14.000	2.000	.766	1.171	13°	1.532	LLSTN32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DTFNR/L-243-C	●	●		33○	1.500	14.000	2.000	.891	1.382	12°	1.782	LLSTN32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DTFNR/L-244-C	●	●		43○	1.500	14.000	2.000	.891	1.382	12°	1.782	LLSTN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DTFNR/L-283-C	●	●		33○	1.750	14.000	2.500	1.016	1.632	11°	2.032	LLSTN32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DTFNR/L-284-C	●	●		43○	1.750	14.000	2.500	1.016	1.632	11°	2.032	LLSTN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DTFNR/L-324-C	●	●		43○	2.000	14.000	2.500	1.125	1.882	10°	2.250	LLSTN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (lbf-in) : DC0520T=31, DC0621T=44

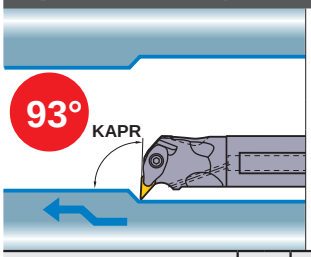
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

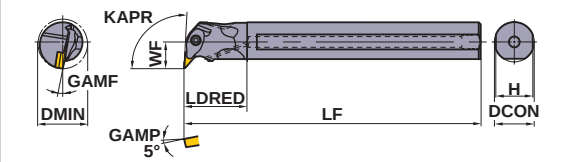
● : USA Stock

SN○○ type inserts	**➤ A120–A125**
TN○○ type inserts	**➤ A126–A133**
CBN & PCD inserts	**➤ B035–B037, B060**

S-DVUN

Steel shank coolant through **VN○○inserts**





Right hand tool holder shown.

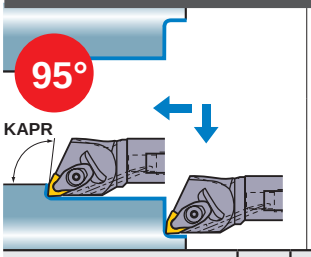
Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(3)	(3)	(3)	(3)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
			
(3)	(3)	(3)	(3)

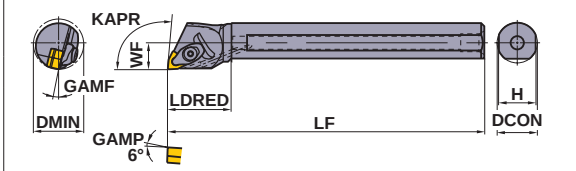
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
S-DVUNR/L-203-C	●	●	VNMA VNMG VNMM VNGA VNGM	33○	1.250	14.000	2.000	1.000	1.171	10°	2.000	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F
S-DVUNR/L-243-C	●	●		33○	1.500	14.000	2.500	1.125	1.382	9°	2.250	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F

* Clamp Torque (lbf-in) : DC0520T=31

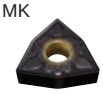
S-DWLN

Steel shank coolant through **WN○○inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MK
			
(4)	(3,4)	(3,4)	(4)
Medium	**Medium — Rough**	**Stainless**	
Standard	RP	MM	
			
(4)	(4)	(3,4)	

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw *	Wrench
S-DWLNR/L-123-C	●	●	WNMA WNMG	33○	.750	10.000	1.250	.500	.711	12°	1.000	—	—	DCK2211	DCS2	DC0520T	TKY15F
S-DWLNR/L-163-C	●	●		33○	1.000	12.000	1.750	.641	.922	13°	1.282	LLSWP32	LLP13	DCK2211	DCS2	DC0520T	TKY15F
S-DWLNR/L-164-C	●	●	WNMA WNMG WNGA	43○	1.000	12.000	2.000	.641	.922	13°	1.282	LLSWP42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DWLNR/L-204-C	●	●		43○	1.250	14.000	2.000	.766	1.171	13°	1.532	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DWLNR/L-244-C	●	●		43○	1.500	14.000	2.500	.891	1.382	12°	1.782	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DWLNR/L-284-C	●	●		43○	1.750	14.000	2.500	1.125	1.632	11°	2.250	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F
S-DWLNR/L-324-C	●	●		43○	2.000	14.000	2.500	1.281	1.882	10°	2.562	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F

* Clamp Torque (lbf-in) : DC0520T=31, DC0621T=44

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	l/d≤3 Cutting Speed (SFM)	l/d≤3 Feed (IPR)	l/d≤3 Depth of Cut (inch)	3<l/d≤4 Cutting Speed (SFM)	3<l/d≤4 Feed (IPR)	3<l/d≤4 Depth of Cut (inch)
P	Carbon Steel, Alloy Steel	180—280HB	Medium Cutting	360 (260—460)	.010 (.004—.016)	—.197	360 (260—460)	.008 (.004—.012)	—.157
M	Stainless Steel	≤200HB	Medium Cutting	260 (195—330)	.008 (.004—.012)	—.157	230 (165—330)	.006 (.004—.015)	—.118
K	Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	260 (195—330)	.010 (.004—.016)	—.197	260 (195—330)	.008 (.004—.012)	—.157

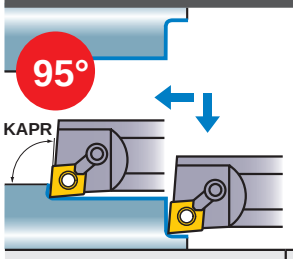
VN○○ type inserts ➤ A134—A137
WN○○ type inserts ➤ A138—A142
CBN & PCD inserts ➤ B038—B040, B061
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

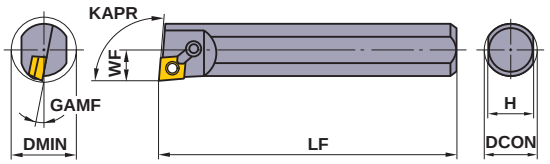
MULTIPLE CLAMP TYPE

- Negative rake.
- Two wall pocket.
- Pin lock and top clamp retention.

S-MCLN

Steel shank — **CN○○inserts**





Right hand tool holder shown.

Finish	Light	Light	Light
FP	SA	LP	LM
 (4)	 (4)	 (4)	 (4)
Medium	**Medium**	**Stainless**	**CBN/PCD**
MP	Standard	MM	
 (4)	 (3,4,6)	 (4,6)	 (4)

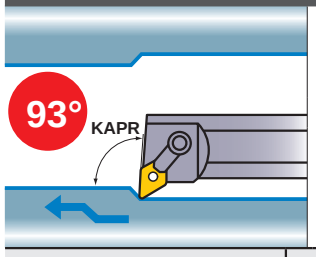
Order Number	Stock R	Stock L	Insert Number		DCON	LF	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Clamp Screw
S-MCLNR/L-123	●	●	CNMA CNMG CNMM CNGG	32○	.750	10.000	.500	.700	14°	**1.000**	—	NL33	CL7	XNS36
S-MCLNR/L-163	●	●		32○	1.000	12.000	.640	.910	14°	**1.280**	—	NL33	CL7	XNS36
S-MCLNR/L-164	●	●		43○ ★2	1.000	12.000	.640	.910	14°	**1.280**	—	NL44	CL20	XNS47
S-MCLNR/L-204	●	●		43○ ★2	1.250	12.000	.765	1.160	14°	**1.530**	ICSN433 ★1	NL46	CL20	XNS47
S-MCLNR/L-244	●	●		43○ ★2	1.500	14.000	.890	1.410	14°	**1.780**	ICSN433 ★1	NL46	CL20	XNS47
S-MCLNR/L-284	●	●		43○ ★2	1.750	14.000	1.015	1.660	12°	**2.030**	ICSN433 ★1	NL46	CL20	XNS47
S-MCLNR/L-326	●	●		64○	2.000	14.000	1.281	1.910	12°	**2.562**	ICSN633	NL68	CL12	XNS510

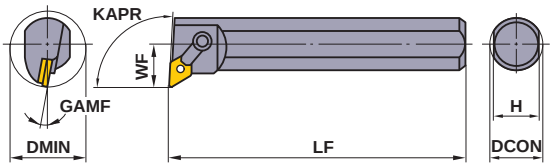
★1 (Opt.) See page N010 for different radius.
★2 For inserts without hole, remove shim pin and add below.
★3 Clamp Torque (lbf-in) : NL33=13, NL44=19, NL46=19, NL68=43, XNS36=30, XNS47=45, XNS510=70

Shim Screw	S46	Chipbreaker	CBC4

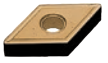
S-MDUN

Steel shank — **DN○○inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
 (4)	 (4)	 (4)	 (4)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
 (4)	 (4)	 (4)	 (4)

Order Number	Stock R	Stock L	Insert Number		DCON	LF	WF	H	GAMF	DMIN	Shim	Shim Pin	Clamp Bridge	Clamp Screw
S-MDUNR/L-204	●	●	DNMA DNMG DNMM DNGA DNGG DNGM	43○	1.250	12.000	1.000	1.160	10°	**2.000**	IDSN433	NL46	CL12	XNS59
S-MDUNR/L-244	●	●		43○	1.500	14.000	1.125	1.410	10°	**2.250**	IDSN433	NL46	CL12	XNS59
S-MDUNR/L-284	●	●		43○	1.750	14.000	1.250	1.660	10°	**2.500**	IDSN433	NL46	CL12	XNS59
S-MDUNR/L-285	●			54○ ★1	1.750	14.000	1.375	1.660	10°	**2.750**	IDSN533 ★1	NL58	CL30	XNS510
S-MDUNR/L-324	●	●		43○	2.000	14.000	1.375	1.910	10°	**2.750**	IDSN433	NL46	CL12	XNS59
S-MDUNR/L-325	●			54○ ★1	2.000	14.000	1.500	1.910	10°	**3.000**	IDSN533 ★1	NL58	CL30	XNS510

★1 (Opt.) See page N010 for different thickness.
★2 Clamp Torque (lbf-in) : NL46=19, NL58=29, XNS59=70, XNS510=70

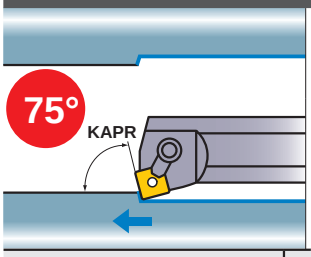
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

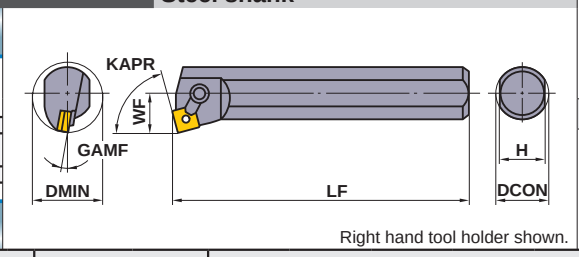
● : USA Stock □ : Made to Order

CN○○ type inserts	**➤ A104–A111**
DN○○ type inserts	**➤ A112–A118**
CBN & PCD inserts	**➤ B028–B034, B059**

S-MSKN

Steel shank — **SN○○inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(4)	(4)	(4)	(4,6)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
			
(4,6)	(4,6)	(4,6)	(4)

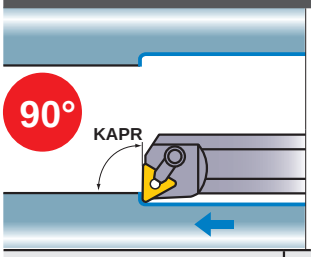
Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	WF	H	GAMF	DMIN	Shim	Shim Pin ★3	Clamp Bridge	Clamp Screw ★3
S-MSKNR/L-204	●	●	SNMA SNMG SNMM SNGA	43○ ★1 ★2	1.250	12.000	.765	1.160	14°	**1.530**	ISSN433 ★1	NL46	CL9	XNS59
S-MSKNR/L-244	●	●		43○ ★1 ★2	1.500	14.000	.890	1.410	14°	**1.780**	ISSN433 ★1	NL46	CL9	XNS59
S-MSKNR/L-284	●	●		43○ ★1 ★2	1.750	14.000	1.015	1.660	12°	**2.030**	ISSN433 ★1	NL46	CL9	XNS59
S-MSKNR/L-326	●	●	SNGG	64○ ★1	2.000	14.000	1.281	1.910	12°	**2.562**	ISSN633 ★1	NL68	CL12	XNS58

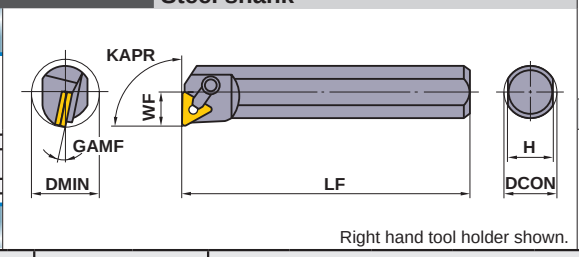
★1 (Opt.) See page N010 for different thickness or radius.
★2 For inserts without hole, remove shim pin and add below.
★3 Clamp Torque (lbf-in) : NL46=19, NL68=43, XNS58=70, XNS59=70

Shim Screw	S34	Chipbreaker	CBS4

S-MTFN

Steel shank — **TN○○inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(3)	(3,4)	(3,4)	(3,4)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
			
(3,4)	(3,4)	(3,4)	(3)

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	WF	H	GAMF	DMIN	Shim	Shim Pin ★3	Clamp Bridge	Clamp Screw ★3
S-MTFNR/L-163X	●	●	TNMA TNMG TNMM TNGA TNGG	33○ ★1 ★2	1.000	12.000	.640	.910	15°	**1.280**	ITSN323 ★1	NL34L	CL7	XNS35
S-MTFNR/L-203X	●	●		33○ ★1 ★2	1.250	12.000	.765	1.160	12°	**1.530**	ITSN323 ★1	NL34L	CL7	XNS35
S-MTFNR/L-243X	●	●		33○ ★1 ★2	1.500	14.000	.890	1.410	10°	**1.780**	ITSN323 ★1	NL34L	CL7	XNS35
S-MTFNR/L-244	●	●		43○ ★1	1.500	14.000	1.031	1.410	10°	**2.062**	ITSN432 ★1	NL46	CL9	XNS59
S-MTFNR/L-283X	□			33○ ★1 ★2	1.750	14.000	1.015	1.660	10°	**2.030**	ITSN323 ★1	NL34L	CL7	XNS35
S-MTFNR/L-284	●	●		43○ ★1	1.750	14.000	1.156	1.660	8°	**2.312**	ITSN432 ★1	NL46	CL9	XNS59
S-MTFNR/L-324	●	●		43○ ★1	2.000	14.000	1.281	1.910	8°	**2.562**	ITSN432 ★1	NL46	CL9	XNS59

★1 (Opt.) See page N010 for different thickness or radius.
★2 For inserts without hole, remove shim pin and add below.
★3 Clamp Torque (lbf-in) : NL34L=13, NL46=19, XNS35=30, XNS59=70

Shim Screw	S34	Chipbreaker	CBT3

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	l/d≤3 Cutting Speed (SFM)	l/d≤3 Feed (IPR)	l/d≤3 Depth of Cut (inch)	3<l/d≤4 Cutting Speed (SFM)	3<l/d≤4 Feed (IPR)	3<l/d≤4 Depth of Cut (inch)
P	Carbon Steel, Alloy Steel	180—280HB	Medium Cutting	260—460	.004—.016	—.20	260—460	.004—.012	—.16
M	Stainless Steel	≤200HB	Medium Cutting	200—330	.008—.012	—.16	165—330	.004—.015	—.12
K	Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	200—330	.004—.016	—.20	200—330	.004—.012	—.16

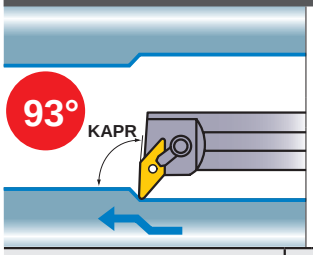
SN○○ type inserts ➤ A120—A125
TN○○ type inserts ➤ A126—A133
CBN & PCD inserts ➤ B035—B037, B060
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

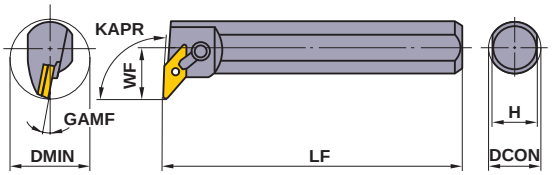
MULTIPLE CLAMP TYPE

- Negative rake.
- Two wall pocket.
- Pin lock and top clamp retension.

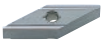
S-MVUN

Steel shank — **VN○○inserts**





Right hand tool holder shown.

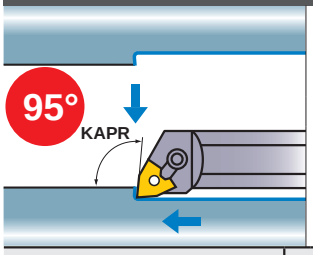
Finish	Light	Medium	Medium
FP	LP	MP	MH
			
(3)	(3)	(3)	(3)
Medium	**Stainless**	**G Class**	**CBN/PCD**
Standard	MM	R/L	
			
(3)	(3)	(3)	(3)

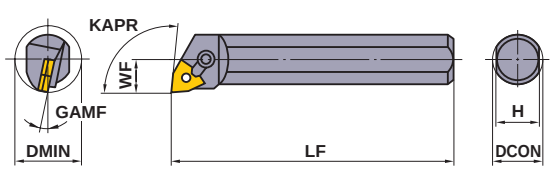
Order Number	Stock		Insert Number		Dimensions (inch)						Shim	Shim Pin *2	Clamp Bridge	Clamp Screw *2
	R	L			DCON	LF	WF	H	GAMF	DMIN				
S-MVUNR/L-203	●	□	VNMG VNMM VNGA VNGG VNGM	33○	1.250	14.000	1.125	1.16	12°	**2.250**	IVSN322	NL34L	CL12	XNS58
S-MVUNR/L-243	●	●		33○	1.500	14.000	1.250	1.41	12°	**2.500**	IVSN322	NL34L	CL12	XNS58
S-MVUNR/L-284	●			43○ *1	1.750	14.000	1.500	1.66	12°	**3.000**	IVSN432 *1	NL46	CL12	XNS59
S-MVUNR/L-324	●			43○ *1	2.000	16.000	1.625	1.91	12°	**3.250**	IVSN432 *1	NL46	CL12	XNS59

*1 (Opt.) See page N010 for different radius.
*2 Clamp Torque (lbf-in) : NL34L=13, NL46=19, XNS58=70, XNS59=70

S-MWLN

Steel shank — **WN○○inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MK
			
(4)	(3,4)	(3,4)	(4)
Medium	**Medium — Rough**	**Stainless**	
Standard	RP	MM	
			
(4)	(4)	(3,4)	

Order Number	Stock		Insert Number		Dimensions (inch)						Shim	Shim Pin *	Clamp Bridge	Clamp Screw *
	R	L			DCON	LF	WF	H	GAMF	DMIN				
S-MWLNR/L-123	●	●	WNMA WNMG WNGA	32○	.750	10.000	.500	.700	14°	**1.000**	—	NL33	CL7	XNS36
S-MWLNR/L-163	●	●		32○	1.000	12.000	.640	.910	14°	**1.280**	—	NL33	CL7	XNS36
S-MWLNR/L-164	●	●		43○	1.000	12.000	.640	.910	14°	**1.280**	—	NL44	CL20	XNS47
S-MWLNR/L-204	●	●		43○	1.250	12.000	.765	1.160	14°	**1.530**	IWSN432	NL46	CL20	XNS48
S-MWLNR/L-244	●	●		43○	1.500	14.000	.890	1.410	14°	**1.780**	IWSN432	NL46	CL20	XNS48

* Clamp Torque (lbf-in) : NL33=13, NL44=19, NL46=19, XNS36=30, XNS47=45, XNS48=45

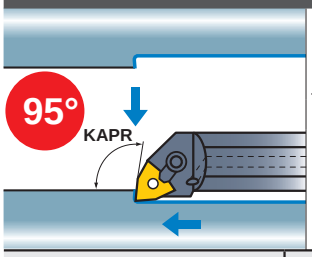
Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) When using insert with right and left hand chip breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

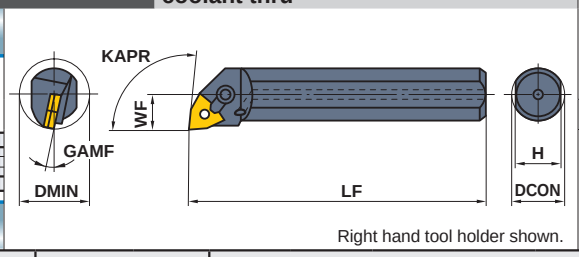
● : USA Stock □ : Made to Order

VN○○ type inserts	**➤ A134–A137**
WN○○ type inserts	**➤ A138–A142**
CBN & PCD inserts	**➤ B038–B040, B061**

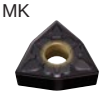
M-MWLN

Heavy metal shank coolant thru **WN○○ inserts**





Right hand tool holder shown.

Finish	Light	Medium	Medium
FP	LP	MP	MK
 (4)	 (4)	 (4)	 (4)
Medium	**Medium – Rough**	**Stainless**	
Standard	RP	MM	
 (4)	 (4)	 (4)	

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	WF	H	GAMF	DMIN	 Shim	 * Shim Pin	 Clamp Bridge	 * Clamp Screw
M-MWLNR/L-164-C	●	●	WNMA WNMG WNGA	43○	1.000	12.000	.640	.955	14°	**1.280**	–	NL44	CL20	XNS47
M-MWLNR/L-204-C	●	●		43○	1.250	12.000	.765	1.205	14°	**1.530**	IWSN432	NL46	CL20	XNS48
M-MWLNR/L-244-C	●	●		43○	1.500	14.000	.890	1.455	14°	**1.780**	IWSN432	NL46	CL20	XNS48

* Clamp Torque (lbf-in) : NL44=19, NL46=19, XNS47=45, XNS48=45

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	l/d≤3 Cutting Speed (SFM)	l/d≤3 Feed (IPR)	l/d≤3 Depth of Cut (inch)	3<l/d≤4 Cutting Speed (SFM)	3<l/d≤4 Feed (IPR)	3<l/d≤4 Depth of Cut (inch)
P	Carbon Steel, Alloy Steel	180–280HB	Medium Cutting	260–460	.004–.016	–.20	260–460	.004–.012	–.16
M	Stainless Steel	≤200HB	Medium Cutting	200–330	.008–.012	–.16	165–330	.004–.010	–.12
K	Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	200–330	.004–.016	–.20	200–330	.004–.012	–.16

WN○○ type inserts ➤ A138–A142
CBN inserts ➤ B040
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

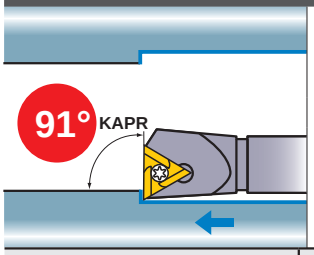
AL TYPE BORING BARS

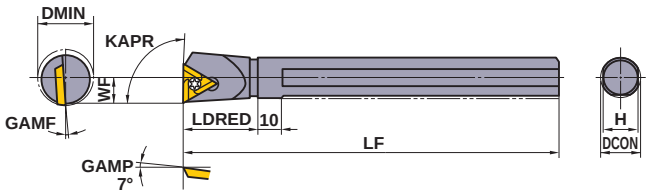
- Shank sizes ϕ.625 inch thru ϕ1.000 inch.
- Screw-on type.
- Recommended for aluminum, nonferrous metals and plastics.

S-STFE

Steel shank

TE○○inserts





Right hand tool holder shown.

Medium	PCD
R/L  (3)	R/L  (3)
PCD  (3)	

Order Number	Stock R	Stock L	Insert Number		Dimensions (inch) DCON	LF	LDRED	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
S-STFER/L-103	●	●	TEGX	32○	.625	8.000	1.250	.406	.560	3°	**.813**	FC400890T	TKY10F
S-STFER/L-123	●	●		32○	.750	10.000	1.500	.500	.700	3°	**1.000**	FC400890T	TKY10F
S-STFER/L-163	●	●		32○	1.000	12.000	1.625	.641	.910	3°	**1.281**	FC400890T	TKY10F

* Clamp Torque (lbf-in) : FC400890T=22

RECOMMENDED CUTTING CONDITIONS

	Work Material	Grade	Cutting Speed (SFM)	l/d=3 Feed (IPR)	l/d=3 D.O.C (inch)	l/d=4 Feed (IPR)	l/d=4 D.O.C (inch)	l/d=5 Feed (IPR)	l/d=5 D.O.C (inch)	l/d=6 Feed (IPR)	l/d=6 D.O.C (inch)
N	Aluminum Alloy	**HTi10**	655—1970	.002—.010	—.118	.002—.010	—.118	.002—.008	—.098	.002—.008	—.039
		MD220	655—4920	.002—.010	—.118	.002—.010	—.118	.002—.008	—.098	.002—.008	—.039

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

Note 2) 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.

● : USA Stock

TE○○ type inserts ➤ A175
PCD inserts ➤ B070

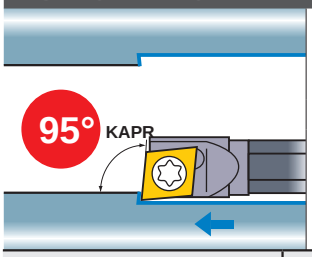
MICRO-DEX

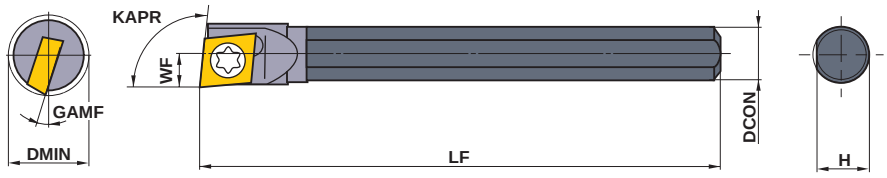
- The minimum cutting diameter is ϕ5 mm (.197 inch).
- 7°positive insert.
- Carbide shank type.
- Easy-to-use tool geometries.
- Suitable for small workpiece.
- l/d is 5 times the diameter.

SCLC

Carbide shank — **CC○○inserts**

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





Right hand tool holder only.

Order Number	Stock R	Insert Number		Dimensions (mm) DCON	LF	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
C04GSCLCR03	●	*1 CCGT CCGW CCMW	03S1○○	4	90	2.5	3.7	15°	**5**	TS16	TKY06F
C05HSCLCR03	●		03S1○○	5	100	3.0	4.7	13°	**6**	TS16	TKY06F
C06JSCLCR04	●		04T0○○	6	110	3.5	5.7	13°	**7**	TS21	TKY06F
C07KSCLCR04	●		04T0○○	7	125	4.0	6.7	11°	**8**	TS21	TKY06F

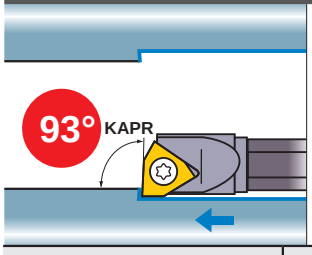
∗ Clamp Torque (lbf-in) : TS16=5.3, TS21=5.3

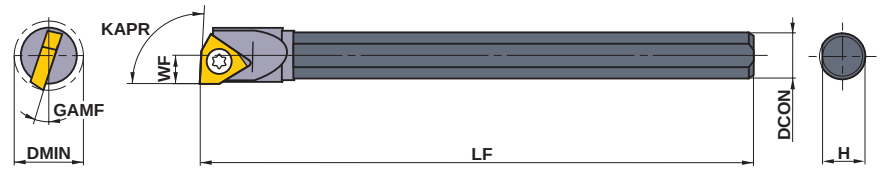
Note 1) Diameter of inscribed circle is non-ISO standard. (For SCLC type)

SWUB

Carbide shank — **WB○○ inserts**

Finish: L-F (1.2,1.5)





Right hand tool holder only.

Order Number	Stock R	Insert Number		Dimensions (mm) DCON	LF	WF	H	GAMF	DMIN	* Clamp Screw	Wrench
C05HSWUBR02	●	WBGT WBMT	1.21○○LF	5	100	3.0	4.7	15°	**6**	TS21	TKY06F
C06JSWUBR02	●		1.21○○LF	6	110	3.5	5.7	13°	**7**	TS2C	TKY06F
C07KSWUBRL3	●		1.51.5○○LF	7	125	4.0	6.7	15°	**8**	TS2	TKY06F

∗ Clamp Torque (lbf-in) : TS21=5.3, TS2C=5.3, TS2=5.3

RECOMMENDED CUTTING CONDITIONS

	Work Material	Grade	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	l/d
P	General Steel	**NX2525**	130—395	.0004—.002	.004—.012	3—5
M	Stainless Steel	**VP15TF**	130—395	.0004—.002	.004—.012	3—5
K	Cast Iron	**VP15TF**	130—395	.0004—.002	.004—.012	3—5
N	Non-Ferrous Material	**VP15TF**	260—525	.0004—.002	.004—.024	3—5
		MD220	260—525	.0004—.002	.004—.024	3—5
H	Hardened Steel 35—65HRC	**MB8110**	130—395	.0004—.002	.001—.008	3—5

CCGT type inserts ➤ A148
WBGT type inserts ➤ A189
CBN inserts ➤ B046
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

MICRO-DEX

- The minimum cutting diameter is ϕ8 mm (.315 inch).
- 7°positive insert.
- Carbide shank type.
- Easy-to-use tool geometries.
- Suitable for small workpiece.
- l/d is 5 times the diameter.

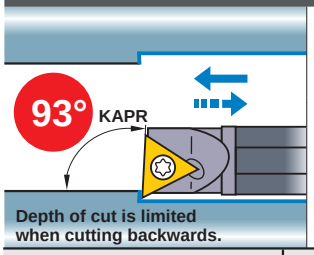
STUC

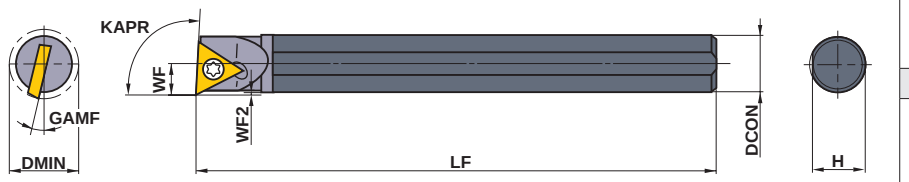
Carbide shank — **TCGT inserts**

Finish R/L-F



(1.2)





Right hand tool holder only.

Order Number	Stock R	Insert Number		Dimensions (mm) DCON	LF	WF	WF2	H	GAMF	DMIN	* Clamp Screw	Wrench
C07KSTUCR06	●	TCGT	1.21○○LF	7	125	4.0	0.35	6.7	12°	**8**	TS2C	TKY06F

∗ Clamp Torque (lbf-in) : TS2C=5.3

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

Note 2) 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.

E

BORING BARS

RECOMMENDED CUTTING CONDITIONS

	Work Material	Grade	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	l/d
P	General Steel	**NX2525**	130—395	.0004—.002	.004—.012	3—5
M	Stainless Steel	**VP15TF**	130—395	.0004—.002	.004—.012	3—5
K	Cast Iron	**VP15TF**	130—395	.0004—.002	.004—.012	3—5
N	Non-Ferrous Material	**VP15TF**	260—525	.0004—.003	.004—.024	3—5
		MD220	260—525	.0004—.003	.004—.024	3—5
H	Hardened Steel 35—65HRC	**MB8110**	130—395	.0004—.002	.001—.008	3—5

● : **USA Stock**
<1 MICRO-MINI in one case>

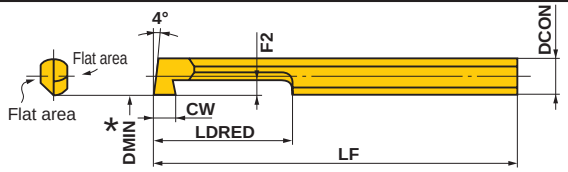
TCGT type inserts ➤ A172

MICRO-MINI

- 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.).

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

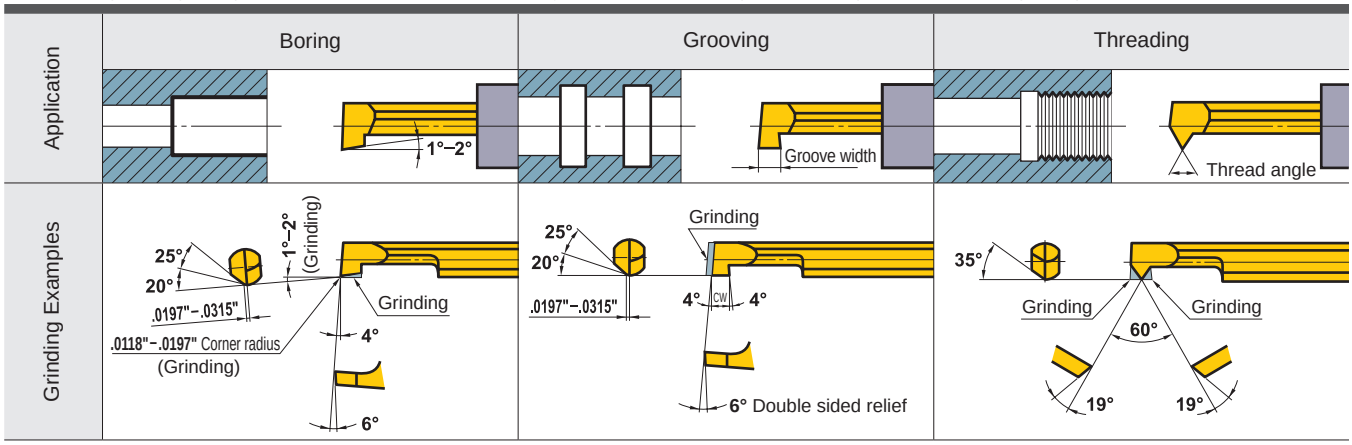
RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	l/d	Cutting Edge Preparation	
						* Corner Radius or BCH	* Honing
P	Carbon Steel, Alloy Steel 180–350HB	100–165	–.004	.004–.012	5	.004–.020	.0004–.002
M	Stainless Steel ≤200HB	100–165	–.004	.004–.012	5	≤.016	≤.001 (Honing not required)
K	Gray Cast Iron ≤350MPa	100–165	–.002	.004–.012	5	.004–.020	.0004–.002
N	Non-Ferrous Meterial	200–330	–.004	.004–.020	5	.004–.020	≤.001 (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 diamond wet stone approximately #250 - #400. Please grind according to application using the figure below as a reference.

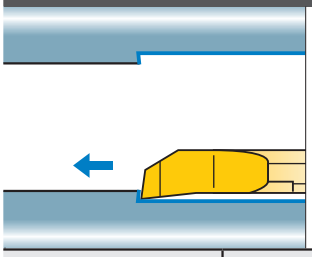


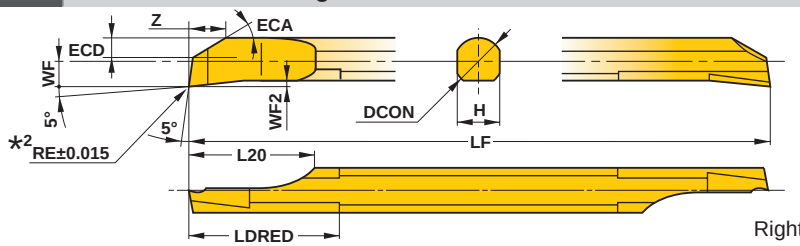
SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

MICRO-MINI TWIN

CB

For internal machining





Right hand tool only.

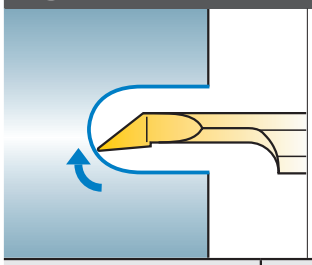
Order Number	Stock		Breaker	Dimensions(mm)										
	Micro Grain	Coated		DMIN*1		RE	DCON	LF	L20	LDRED	WF	WF2	H	Z
	TF15	VP15TF		l/d ≤ 3	l/d > 3									
CB02RS	●	●	without	**2.2**	**3.6**	0.05	2	50	5	6	1	0.25	1.8	1.4
CB02RS-B	●	●	with	**2.2**	**3.9**	0.05	2	50	5	6	1	0.25	1.8	1.4
CB02RS-01	●	●	without	**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

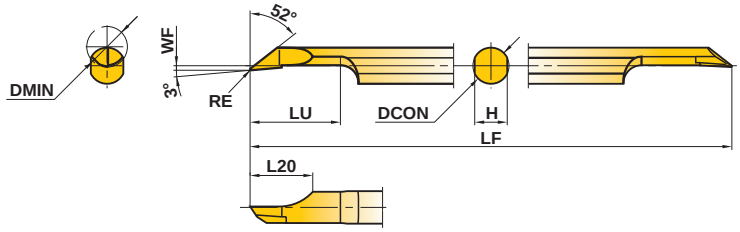
*1 DMIN : Min. Cutting Diameter
*2 The Re dimension represents the size before grinding a chip breaker.

● : USA Stock ★ : Stocked in Japan
<1 MICRO-MINI TWIN in one case>

CR

For internal copying

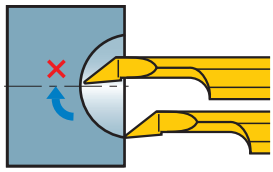
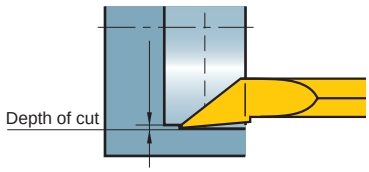




Right hand tool only.

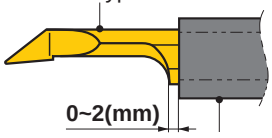
Order Number	Stock		Breaker	Dimensions(mm)							
	Micro Grain	Coated		DMIN	RE	DCON	LF	LU	L20	WF	H
	TF15	VP15TF									
CR03RS-01	●	●	without	**3.5**	0.1	3	50	8	6	0.15	2.7
CR03RS-01B	●	●	with	**3.5**	0.1	3	50	8	6	0.15	2.7
CR04RS-01	●	●	without	**4.5**	0.1	4	60	10	7	0.15	3.6
CR04RS-01B	●	●	with	**4.5**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

NOTES

Profile turning, Inner end facing	Copying
The cutting edge should not be cross the center line of the workpiece. 	**The depth of cut should be smaller than the corner radius value.** 
If the cutting edge crosses the center line of a workpiece, the cutting edge can fracture.	With depths of cut larger than the corner radius value, burrs will be formed.

RECOMMENDED TOOL OVERHANG

MICRO-MINI TWIN
CR type



RECOMMENDED CUTTING CONDITIONS

	Work Material	CB Type				CR Type		
		Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)	Overhang (l/d)	Cutting Speed (SFM)	Feed (IPR) 03RS/04RS	Feed (IPR) 05RS
P	Carbon Steel Alloy Steel 180–350HB	130–395	.0004–.002	.004–.012	3–5	130–395	.0004–.001	.0004–.002
M	Stainless Steel ≤200HB	130–395	.0004–.002	.004–.012	3–5	130–395	.0004–.001	.0004–.002
K	Gray Cast Iron ≤350MPa	130–395	.0004–.002	.004–.012	3–5	130–395	.0004–.002	.0004–.002
N	Non-Ferrous Meterial	260–525	.0004–.003	.004–.020	3–5	260–525	.0004–.002	.0004–.003

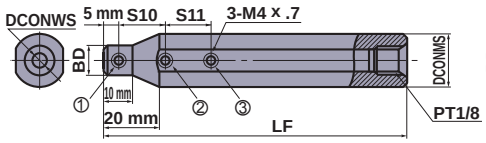
Note 1) Recommend wet machining.
Note 2) The recommended tool overhang of CR type is LU+2 mm.

SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

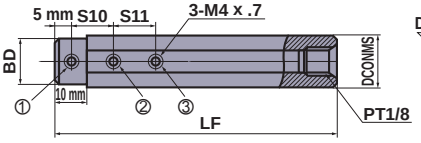
HOLDER (INCH SHANK STANDARD)

RBH

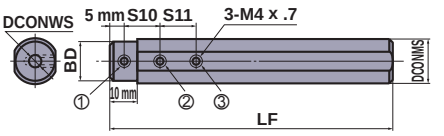
Round type holder



RBH16□□□A
(Coolant thru)



RBH10□□□A, RBH12□□□A
(Coolant thru)



RBH190□□N

■ID (DCONWS) : INCH TYPE

Order Number	Stock	Dimensions						Clamp Screw *			Wrench	Torque (lbf-in)
		DCONMS (inch)	DCONWS (inch)	BD (mm)	LF (mm)	S10 (mm)	S11 (mm)	①	②	③		
RBH10300A	●	.625	.187	15	100	15	15	A	A	A	HKY20F	18 (2.0 N·m)
RBH10350A	●	.625	.219	15	100	15	15	A	A	A	HKY20F	18 (2.0 N·m)
RBH10400A	●	.625	.250	15	100	20	20	A	A	A	HKY20F	18 (2.0 N·m)
RBH10500A	●	.625	.313	15	100	20	20	D	D	D	HKY20F	18 (2.0 N·m)
RBH12300A	●	.750	.187	18	125	15	15	B	B	B	HKY20F	18 (2.0 N·m)
RBH12350A	●	.750	.219	18	125	15	15	B	B	B	HKY20F	18 (2.0 N·m)
RBH12400A	●	.750	.250	18	125	20	20	B	B	B	HKY20F	18 (2.0 N·m)
RBH12500A	●	.750	.313	18	125	20	20	A	A	A	HKY20F	18 (2.0 N·m)
RBH16300A	●	1.000	.187	14	150	15	15	A	C	C	HKY20F	18 (2.0 N·m)
RBH16350A	●	1.000	.219	15	150	15	15	A	C	C	HKY20F	18 (2.0 N·m)
RBH16400A	●	1.000	.250	16	150	20	20	A	C	C	HKY20F	18 (2.0 N·m)
RBH16500A	●	1.000	.313	17	150	20	20	A	C	C	HKY20F	18 (2.0 N·m)

■ID (DCONWS) : METRIC TYPE

Order Number	Stock	Dimensions						Clamp Screw *			Wrench	Torque (lbf-in)
		DCONMS (inch)	DCONWS (mm)	BD (mm)	LF (mm)	S10 (mm)	S11 (mm)	①	②	③		
RBH10126A	●	.625	2	15	100	10	—	B	B	—	HKY20F	18 (2.0 N·m)
RBH10189A	●	.625	3	15	100	10	10	A	A	A	HKY20F	18 (2.0 N·m)
RBH10252A	●	.625	4	15	100	15	15	A	A	A	HKY20F	18 (2.0 N·m)
RBH10315A	●	.625	5	15	100	15	15	A	A	A	HKY20F	18 (2.0 N·m)
RBH10378A	●	.625	6	15	100	20	20	A	A	A	HKY20F	18 (2.0 N·m)
RBH10441A	●	.625	7	15	100	20	20	A	A	A	HKY20F	18 (2.0 N·m)
RBH19020N	●	.750	2	18	125	10	—	C	C	—	HKY20F	18 (2.0 N·m)
RBH19030N	●	.750	3	18	125	10	10	B	B	B	HKY20F	18 (2.0 N·m)
RBH19040N	●	.750	4	18	125	15	15	B	B	B	HKY20F	18 (2.0 N·m)
RBH19050N	●	.750	5	18	125	15	15	B	B	B	HKY20F	18 (2.0 N·m)
RBH19060N	●	.750	6	18	125	15	15	B	B	B	HKY20F	18 (2.0 N·m)
RBH19070N	●	.750	7	18	125	20	20	B	B	B	HKY20F	18 (2.0 N·m)
RBH19080N	★	.750	8	18	125	20	20	A	A	A	HKY20F	18 (2.0 N·m)
RBH16126A	●	1.000	2	11	150	10	—	A	B	—	HKY20F	18 (2.0 N·m)
RBH16189A	●	1.000	3	12	150	10	10	A	B	C	HKY20F	18 (2.0 N·m)
RBH16252A	●	1.000	4	13	150	15	15	A	C	C	HKY20F	18 (2.0 N·m)
RBH16315A	●	1.000	5	14	150	15	15	A	C	C	HKY20F	18 (2.0 N·m)
RBH16378A	●	1.000	6	15	150	20	20	A	C	C	HKY20F	18 (2.0 N·m)
RBH16441A	●	1.000	7	16	150	20	20	A	C	C	HKY20F	18 (2.0 N·m)

* Order number of clamp screw A=HSS04004, B=HSS04006, C=HSS04008, D=HSS04003

● : USA Stock ★ : Stocked in Japan

HOLDER CROSS REFERENCE LIST OF INCH SHANK STANDARD

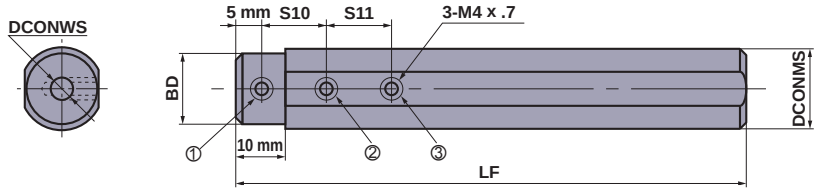
Holder			MICRO-MINI TWIN		MICRO-DEX	MICRO-MINI	Machine Makers
Type	Order Number		CB	CR		C	
Round Type Holder ϕ.625 inch	ID : Metric Type	**RBH10126A**	02RS(-B) 02RS-0□(B)	–	–	–	Citizen Precision Machinery Co., Ltd. NC lathes
		RBH10189A	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
		RBH10252A	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
		RBH10315A	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
		RBH10378A	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
		RBH10441A	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
	ID : Inch Type	**RBH10300A**	For DIMPLE BAR and SCREW CLAMP TYPE				
		RBH10350A					
		RBH10400A					
		RBH10500A					
Round Type Holder ϕ.750 inch	ID : Metric Type	**RBH19020N**	02RS(-B) 02RS-0□(B)	–	–	–	Citizen Precision Machinery Co., Ltd.
		RBH19030N	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
		RBH19040N	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
		RBH19050N	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
		RBH19060N	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
		RBH19070N	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
		RBH19080N	08RS(-B) 08RS-0□(B)	–	–	–	
	ID : Inch Type	**RBH12300A**	For DIMPLE BAR and SCREW CLAMP TYPE				
		RBH12350A					
		RBH12400A					
		RBH12500A					
Round Type Holder ϕ1.000 inch	ID : Metric Type	**RBH16126A**	02RS(-B) 02RS-0□(B)	–	–	–	Citizen Precision Machinery Co., Ltd. NC lathes
		RBH16189A	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
		RBH16252A	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
		RBH16315A	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
		RBH16378A	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
		RBH16441A	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
	ID : Inch Type	**RBH16300A**	For DIMPLE BAR and SCREW CLAMP TYPE				
		RBH16350A					
		RBH16400A					
		RBH16500A					

∗ Mitsubishi Materials obtained the makers' approval before entering their names in the list.

HOLDER (METRIC SHANK STANDARD)

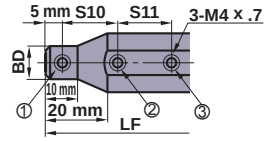
RBH

Round type holder

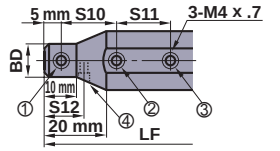


RBH16○○N

RBH20○○N
RBH25○○N



RBH22○○N



Order Number	Stock	Dimensions (mm)							Clamp Screw *				Wrench	Torque (lbf-in)
		DCONMS	DCONWS	BD	LF	S10	S11	S12	①	②	③	④		
RBH1620N	●	16	2	15	100	10	—	—	B	B	—	—	HKY20F	18 (2.0 N·m)
RBH1630N	●	16	3	15	100	10	10	—	A	A	A	—	HKY20F	18 (2.0 N·m)
RBH1640N	●	16	4	15	100	15	15	—	A	A	A	—	HKY20F	18 (2.0 N·m)
RBH1650N	●	16	5	15	100	15	15	—	A	A	A	—	HKY20F	18 (2.0 N·m)
RBH1660N	●	16	6	15	100	15	15	—	A	A	A	—	HKY20F	18 (2.0 N·m)
RBH1670N	●	16	7	15	100	20	20	—	A	A	A	—	HKY20F	18 (2.0 N·m)
RBH2020N	●	20	2	11	125	10	—	—	A	A	—	—	HKY20F	18 (2.0 N·m)
RBH2030N	●	20	3	12	125	10	10	—	A	A	B	—	HKY20F	18 (2.0 N·m)
RBH2040N	●	20	4	13	125	15	15	—	A	B	B	—	HKY20F	18 (2.0 N·m)
RBH2050N	●	20	5	14	125	15	15	—	A	B	B	—	HKY20F	18 (2.0 N·m)
RBH2060N	●	20	6	15	125	15	15	—	A	B	B	—	HKY20F	18 (2.0 N·m)
RBH2070N	●	20	7	16	125	20	20	—	A	B	B	—	HKY20F	18 (2.0 N·m)
RBH2220N	●	22	2	11	125	10	—	10	A	B	—	A	HKY20F	18 (2.0 N·m)
RBH2230N	●	22	3	12	125	10	10	10	A	B	C	A	HKY20F	18 (2.0 N·m)
RBH2240N	●	22	4	13	125	15	15	12.5	A	B	B	A	HKY20F	18 (2.0 N·m)
RBH2250N	●	22	5	14	125	15	15	12.5	A	B	B	A	HKY20F	18 (2.0 N·m)
RBH2260N	●	22	6	15	125	15	15	15	A	B	B	A	HKY20F	18 (2.0 N·m)
RBH2270N	●	22	7	16	125	20	20	15	A	B	B	A	HKY20F	18 (2.0 N·m)
RBH2520N	●	25	2	11	150	10	—	—	A	B	—	—	HKY20F	18 (2.0 N·m)
RBH2530N	●	25	3	12	150	10	10	—	A	B	C	—	HKY20F	18 (2.0 N·m)
RBH2540N	●	25	4	13	150	15	15	—	A	C	C	—	HKY20F	18 (2.0 N·m)
RBH2550N	●	25	5	14	150	15	15	—	A	C	C	—	HKY20F	18 (2.0 N·m)
RBH2560N	●	25	6	15	150	15	15	—	A	C	C	—	HKY20F	18 (2.0 N·m)
RBH2570N	●	25	7	16	150	20	20	—	A	C	C	—	HKY20F	18 (2.0 N·m)

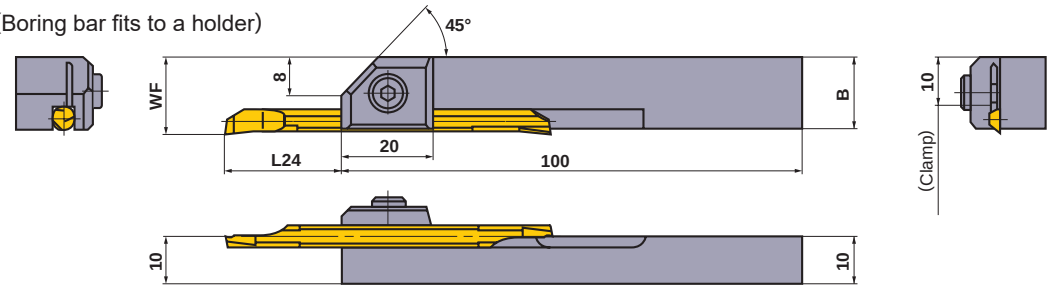
* Order number of clamp screw A=HSS04004, B=HSS04006, C=HSS04008

● : USA Stock ★ : Stocked in Japan

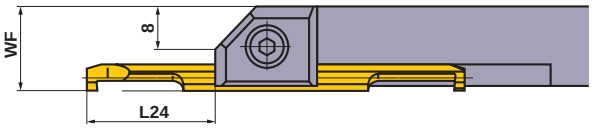
SBH

Square type holder

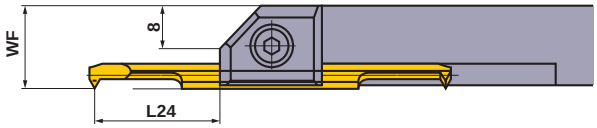
CB type (Boring bar fits to a holder)



CG type (Boring bar fits to a holder)



CT type (Boring bar fits to a holder)



Order Number	Stock	Dimensions (mm) WF			Maximum Tool Overhang **L24** (Recommended tool overhang when machining general steels)					B		MICRO-MINI TWIN				Clamp Screw	Wrench	Torque (lbf-in)
		CB type	CG type	CT type	CB type	CG..RS-10 CG..RS-10B	CG..RS-20 CG..RS-20B	CT type	CR type	CG CT·CR type	CB·CG CT·CR type	CB type	CG type	CT type	CR type			
SBH1020R	★	13	—	—	6—24 (6—10)	—	—	—	—	—	12.9	02RS(-B) 02RS-0□(B)	—	—	—	HSC 04010	HKY30R	42 (4.8N·m)
SBH1030R	★	14	13.8	13.8	8.5—22 (9—15)	13—17.5 (14)	14—16.5 (15)	13—17.5 (14)	11—19.5 (12)	14	13.8	03RS(-B) 03RS-0□(B)	030□RS-□□(B) 03RS-□□(B)	0305RS-M4 03RS-M4(B)	03RS-01 03RS-01B	HSC 05012	HKY40R	84 (9.5N·m)
SBH1040R	★	15	14.8	14.8	11—29.5 (12—20)	18—22.5 (19)	19—21.5 (20)	18.5—22 (19.5)	13—27.5 (14)	15	14.7	04RS(-B) 04RS-0□(B)	040□RS-□□(B) 04RS-□□(B)	0407RS-M6 04RS-M6(B)	04RS-01 04RS-01B	HSC 05012	HKY40R	84 (9.5N·m)
SBH1050R	★	16	15.8	15.8	13.5—37 (15—25)	23—27.5 (24)	24—26.5 (25)	24—26.5 (25)	15—35.5 (16)	16	15.6	05RS(-B) 05RS-0□(B)	051□RS-□□(B) 05RS-□□(B)	0510RS-M8 05RS-M8(B)	05RS-01 05RS-01B	HSC 05012	HKY40R	84 (9.5N·m)
SBH1060R	★	17	16.8	16.8	13.5—42 (18—30)	23—32.5 (24)	24—31.5 (25)	24—31.5 (25)	—	17	16.5	06RS(-B) 06RS-0□(B)	061□RS-□□(B) 06RS-□□(B)	0610RS-M10 06RS-M10(B)	—	HSC 05012	HKY40R	84 (9.5N·m)
SBH1070R	★	18	17.8	—	13.5—52 (21—35)	28—38 (29)	29—37 (30)	—	—	18	17.4	07RS(-B) 07RS-0□(B)	071□RS-□□(B) 07RS-□□(B)	—	—	HSC 05012	HKY40R	84 (9.5N·m)

★ The MICRO-DEX and the MICRO-MINI cannot be fit to square holders.

HOLDER

HOLDER CROSS REFERENCE LIST OF METRIC SHANK STANDARD

Holder		MICRO-MINI TWIN		MICRO-DEX	MICRO-MINI	Machine Makers
Type	Order Number	CB	CR		C	
Round Type Holder ϕ16 mm	**RBH1620N**	02RS(-B) 02RS-0□(B)	–	–	–	MIYANO MACHINERY JAPAN INC. NC lathes
	RBH1630N	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
	RBH1640N	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
	RBH1650N	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
	RBH1660N	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
	RBH1670N	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
Round Type Holder ϕ20 mm	**RBH2020N**	02RS(-B) 02RS-0□(B)	–	–	–	Citizen Precision Machinery Co., Ltd. Tsugami Corporation MIYANO MACHINERY JAPAN INC. NC lathes
	RBH2030N	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
	RBH2040N	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
	RBH2050N	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
	RBH2060N	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
	RBH2070N	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
Round Type Holder ϕ22 mm	**RBH2220N**	02RS(-B) 02RS-0□(B)	–	–	–	STAR MICRONICS CO., LTD.
	RBH2230N	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
	RBH2240N	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
	RBH2250N	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
	RBH2260N	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
	RBH2270N	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
Round Type Holder ϕ25 mm	**RBH2520N**	02RS(-B) 02RS-0□(B)	–	–	–	Tsugami Corporation MIYANO MACHINERY JAPAN INC. NC lathes
	RBH2530N	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	03FR-BLS	
	RBH2540N	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	C04GS□□□R□□	04FR-BLS	
	RBH2550N	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	C05GS□□□R□□	05FR-BLS	
	RBH2560N	06RS(-B) 06RS-0□(B)	–	C06GS□□□R□□	–	
	RBH2570N	07RS(-B) 07RS-0□(B)	–	C07GS□□□R□□	–	
Square Type Holder □10 mm	**SBH1020R**	02RS(-B) 02RS-0□(B)	–	–	–	NC lathes
	SBH1030R	03RS(-B) 03RS-0□(B)	03RS-01 03RS-01B	–	–	
	SBH1040R	04RS(-B) 04RS-0□(B)	04RS-01 04RS-01B	–	–	
	SBH1050R	05RS(-B) 05RS-0□(B)	05RS-01 05RS-01B	–	–	
	SBH1060R	06RS(-B) 06RS-0□(B)	–	–	–	
	SBH1070R	07RS(-B) 07RS-0□(B)	–	–	–	

∗ Mitsubishi Materials obtained the makers' approval before entering their names in the list.

SPARE PARTS ➤ N001
TECHNICAL DATA ➤ P001

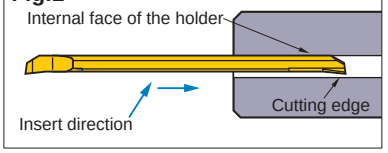
PRECAUTION IN USING THE MICRO-MINI TWIN

■PRECAUTIONS IN 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.

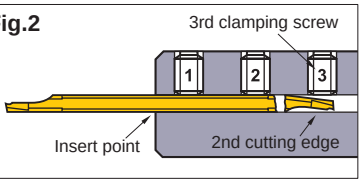
Fig.1



2 When clamping the boring bar into the 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.

◎When using Mitsubishi holders with a tool overhang of5 lxd, ensure that the 3rd clamping screw is removed prior to machining. (For RBH1620N, RBH19020N there are no 3rd clamping screws). The set torque value for clamping screw is 18 lbf-in. (2.0 N • m)

Fig.2



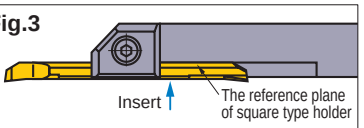
●When using a square type holder

1 When installing the boring bar into the holder, tighten the clamping screw making the micro-mini twin boring bars in contact with the reference plane of square type holder.

2 Make sure that the clamp screw is tightened. The recommended set torque value is shown in the table of holder.

3 Don't tighten the clamp screw without a micro-mini twin boring bar, otherwise the clamp bridge can be deformed.

Fig.3



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

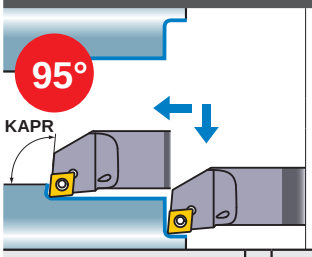
COOLANT THROUGH CARBIDE

- Two wall pocket.
- 7° and 11° positive insert, low cutting force.
- Screw-on type.
- Carbide shanks are stocked in various diameters.

(inch)

E-SCLC

Carbide Shank Coolant Through **CC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Flat top**	**CBN/PCD**
MP	MM		
			
(2,3,4)	(2,3,4)	(2,3,4)	(2,3,4)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	* Clamp Screw	Wrench
E05K-SCLCL2	●	CCMT CCGB CCGT CCMH CCGH CCET CCMW CCGW	21.5○	.313	5.00	.385	.219	.295	15°	.094	.21	TS253	TKY08F
E05K-SCLCR2	●		21.5○	.313	5.00	.385	.219	.295	15°	.094	.21	TS253	TKY08F
E06M-SCLCL2	●		21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E06M-SCLCR2	●		21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E08M-SCLCL2	●		21.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS25	TKY08F
E08M-SCLCR2	●		21.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS25	TKY08F
E10R-SCLCL2	●		21.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS25	TKY08F
E10R-SCLCR2	●		21.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS25	TKY08F
E12S-SCLCL2	●		21.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS25	TKY08F
E12S-SCLCR2	●		21.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS25	TKY08F
E08M-SCLCL3	●		32.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS4	TKY15F
E08M-SCLCR3	●		32.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS4	TKY15F
E10R-SCLCL3	●		32.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS4	TKY15F
E10R-SCLCR3	●		32.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS4	TKY15F
E12S-SCLCL3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E12S-SCLCR3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E16T-SCLCL3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS4	TKY15F
E16T-SCLCR3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS4	TKY15F
E16T-SCLCL4	●		43○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS5	TKY25F
E16T-SCLCR4	●		43○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS5	TKY25F

* Clamp Torque (lbf-in) : TS25 = 8.9, TS253 = 8.9, TS4 = 31, TS5 = 66

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) 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.

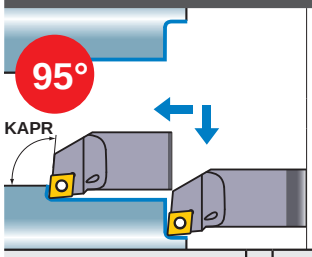
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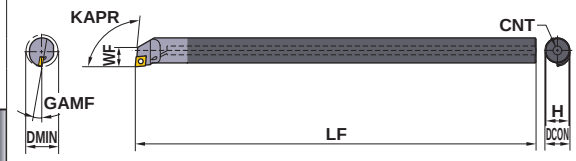
CC○○ type inserts ➤ A147–A155
CBN & PCD inserts ➤ B044–B046, B063

(inch)

E-SCLP

Carbide Shank Coolant Through **CP○○inserts**





Right hand tool holder shown.

Finish	Finish	Finish	Light
FV	R/L F	Standard	SV
 (2.5,3)	 (2.5,3)	 (2.5,3)	 (2.5,3)
Medium	CBN/PCD		
MV			
 (2.5,3)	 (2.5,3)		

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	* Clamp Screw	Wrench
E06M-SCLPL2	●	CPMT CPGB CPGT CPMH	21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E06M-SCLPR2	●		21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E08R-SCLPL2	●		21.5○	.500	8.00	.602	.313	.485	6°	.188	.71	TS25	TKY08F
E08R-SCLPR2	●		21.5○	.500	8.00	.602	.313	.485	6°	.188	.71	TS25	TKY08F
E10S-SCLPL2	●		21.5○	.625	10.00	.797	.406	.600	10°	.219	1.3	TS25	TKY08F
E10S-SCLPR2	●		21.5○	.625	10.00	.797	.406	.600	10°	.219	1.3	TS25	TKY08F
E12S-SCLPL2	●		21.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS25	TKY08F
E12S-SCLPR2	●		21.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS25	TKY08F
E08R-SCLPL2.5	●		2.51.5○	.500	8.00	.602	.313	.485	6°	.188	.71	TS3D	TKY10F
E08R-SCLPR2.5	●		2.51.5○	.500	8.00	.602	.313	.485	6°	.188	.71	TS3D	TKY10F
E08R-SCLPL3	●		32.5○	.500	8.00	.602	.313	.485	8°	.188	.71	TS4S	TKY15F
E08R-SCLPR3	●		32.5○	.500	8.00	.602	.313	.485	8°	.188	.71	TS4S	TKY15F
E10S-SCLPL3	●		32.5○	.625	10.00	.797	.406	.600	10°	.219	1.3	TS4	TKY15F
E10S-SCLPR3	●		32.5○	.625	10.00	.797	.406	.600	10°	.219	1.3	TS4	TKY15F
E12S-SCLPL3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E12S-SCLPR3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E16T-SCLPL3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5	TS4	TKY15F
E16T-SCLPR3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5	TS4	TKY15F

* Clamp Torque (lbf-in) : TS25 = 8.9, TS3D = 22, TS4S = 31, TS4 = 31

CP○○ type inserts	➤ A156, A157
CBN & PCD inserts	➤ B047, B063

CUTTING CONDITIONS	➤ E048
SPARE PARTS	➤ N001
TECHNICAL DATA	➤ P001

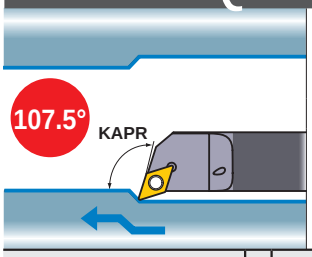
COOLANT THROUGH CARBIDE

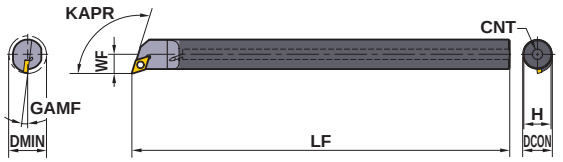
- Two wall pocket.
- 7° positive insert, low cutting force.
- Screw-on type.
- Carbide shanks are stocked in various diameters.

(inch)

E-SDQC

Carbide Shank Coolant Through **DC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L F	
			
(2,3)	(2,3)	(2,3)	(2,3)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	✶ Clamp Screw	Wrench
E06M-SDQCL2	●	DCET DCGT DCGW DCMT DCMW	21.5○	.375	6.00	.488	.290	.360	8°	.109	.31	TS25	TKY08F
E06M-SDQCR2	●		21.5○	.375	6.00	.488	.290	.360	8°	.109	.31	TS25	TKY08F
E08M-SDQCL2	●		21.5○	.500	6.00	.665	.375	.485	10°	.188	.51	TS25	TKY08F
E08M-SDQCR2	●		21.5○	.500	6.00	.665	.375	.485	10°	.188	.51	TS25	TKY08F
E10R-SDQCL2	●		21.5○	.625	8.00	.797	.406	.600	7°	.219	1.2	TS25	TKY08F
E10R-SDQCR2	●		21.5○	.625	8.00	.797	.406	.600	7°	.219	1.2	TS25	TKY08F
E12S-SDQCL3	●		32.5○	.750	10.00	.954	.500	.725	7°	.281	2.2	TS4	TKY15F
E12S-SDQCR3	●		32.5○	.750	10.00	.954	.500	.725	7°	.281	2.2	TS4	TKY15F

✶ Clamp Torque (lbf-in) : TS25 = 8.9, TS4 = 31

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) 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.

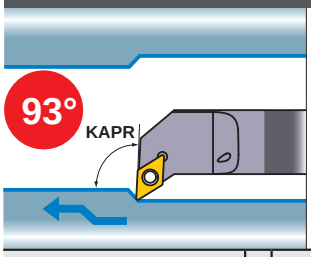
● : USA Stock

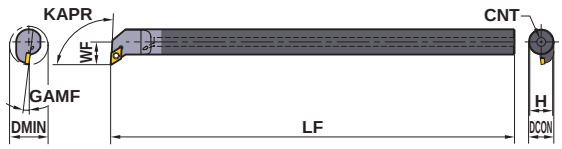
DC○○ type inserts ➢ A158–A165
CBN & PCD inserts ➢ B048, B049, B064

(inch)

E-SDUC

Carbide Shank
Coolant Through
DC○○inserts





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**PCD**	**CBN**
MP	MM	R/L F	
			
(2,3,4)	(2,3,4)	(2,3)	(2,3)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	✶ Clamp Screw	Wrench
E06M-SDUCL2	●	DCET DCGT DCGW DCMT DCMW	21.5○	.375	6.00	.664	.437	.360	7°	.109	.31	TS25	TKY08F
E06M-SDUCR2	●		21.5○	.375	6.00	.664	.437	.360	7°	.109	.31	TS25	TKY08F
E08R-SDUCL2	●		21.5○	.500	8.00	.789	.500	.485	7°	.188	.71	TS25	TKY08F
E08R-SDUCR2	●		21.5○	.500	8.00	.789	.500	.485	7°	.188	.71	TS25	TKY08F
E10S-SDUCL2	●		21.5○	.625	10.00	.954	.563	.600	7°	.219	1.6	TS25	TKY08F
E10S-SDUCR2	●		21.5○	.625	10.00	.954	.563	.600	7°	.219	1.6	TS25	TKY08F
E12S-SDUCL3	●		32.5○	.750	10.00	1.079	.625	.725	7°	.281	2.2	TS4	TKY15F
E12S-SDUCR3	●		32.5○	.750	10.00	1.079	.625	.725	7°	.281	2.2	TS4	TKY15F
E16T-SDUCL4	●		43○	1.000	12.00	1.329	.750	.975	5°	.313	5.0	TS5	TKY15F
E16T-SDUCR4	●		43○	1.000	12.00	1.329	.750	.975	5°	.313	5.0	TS5	TKY15F

✶ Clamp Torque (lbf-in) : TS25 = 8.9, TS4 = 31, TS5 = 66

DC○○ type inserts	**➤ A158–A165**
CBN & PCD inserts	**➤ B048, B049, B064**

CUTTING CONDITIONS	**➤ E048**
SPARE PARTS	**➤ N001**
TECHNICAL DATA	**➤ P001**

COOLANT THROUGH CARBIDE

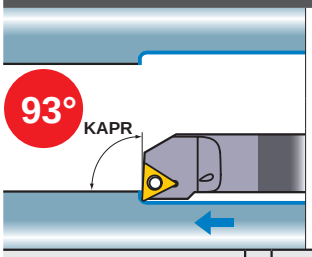
- Two wall pocket.
- 7° and 11° positive insert, low cutting force.
- Screw-on type.
- Carbide shanks are stocked in various diameters.

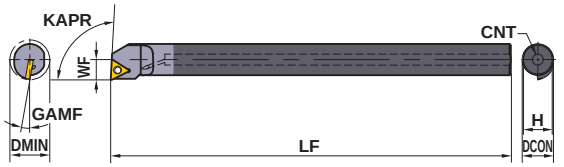
(inch)

E-STUC

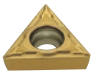
Carbide Shank
Coolant Through

TC○○inserts





Right hand tool holder shown.

Finish	Finish
FV	FJ-P
	
(2,3)	(2,3)
Medium	CBN/PCD
Standard	
	
(2,3)	(2,3)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	* Clamp Screw	Wrench
E06M-STUCL2	●	TCGT TCGW TCMT TCMW	21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E06M-STUCR2	●		21.5○	.375	6.00	.477	.250	.360	15°	.109	.31	TS25	TKY08F
E08M-STUCL2	●		21.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS25	TKY08F
E08M-STUCR2	●		21.5○	.500	6.00	.602	.313	.485	13°	.188	.51	TS25	TKY08F
E10R-STUCL2	●		21.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS25	TKY08F
E10R-STUCR2	●		21.5○	.625	8.00	.797	.406	.600	10°	.219	1.2	TS25	TKY08F
E12S-STUCL3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E12S-STUCR3	●		32.5○	.750	10.00	.954	.500	.725	8°	.281	2.2	TS4	TKY15F
E16T-STUCL3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS4	TKY15F
E16T-STUCR3	●		32.5○	1.000	12.00	1.219	.641	.975	7°	.313	5.0	TS4	TKY15F

★ Clamp Torque (lbf-in) : TS25 = 8.9, TS4 = 31

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) 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.

● : USA Stock

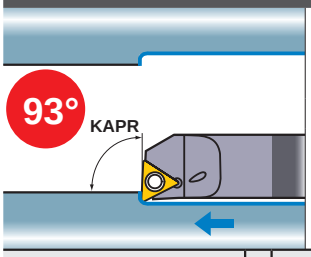
TC○○ type inserts ➤ A171–A174
CBN & PCD inserts ➤ B050, B065

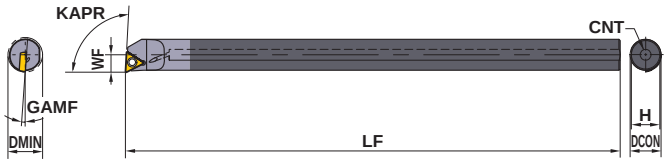
(inch)

E-STUP

Carbide Shank
Coolant Through

TP○○inserts





Right hand tool holder shown.

Finish	Light	Medium
FV	SV	MV
		
(1.5,1.8,2)	(1.5,1.8,2)	(1.5,1.8,2)
PCD	CBN	
R/L F		
		
(1.5,1.8,2)	(1.5,1.8,2)	

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	* Clamp Screw	Wrench
E05K-STUPL1.5	●	TPMH TPMX TPGB TPGH TPGX	1.51.5○	.313	5.00	.402	.196	.295	10°	.094	.21	TS2D	TKY06F
E05K-STUPR1.5	●		1.51.5○	.313	5.00	.402	.196	.295	10°	.094	.21	TS2D	TKY06F
E06M-STUPL1.8	●		1.81.5○	.375	6.00	.450	.227	.360	8°	.109	.31	TS25D	TKY08F
E06M-STUPR1.8	●		1.81.5○	.375	6.00	.450	.227	.360	8°	.109	.31	TS25D	TKY08F
E08R-STUPL1.8	●		1.81.5○	.500	8.00	.580	.290	.485	7°	.188	.71	TS25D	TKY08F
E08R-STUPR1.8	●		1.81.5○	.500	8.00	.580	.290	.485	7°	.188	.71	TS25D	TKY08F
E10S-STUPL2	●		22○	.625	10.00	.700	.352	.600	4°	.219	1.6	TS31D	TKY10F
E10S-STUPR2	●		22○	.625	10.00	.700	.352	.600	4°	.219	1.6	TS31D	TKY10F
E12S-STUPL2	●		22○	.750	10.00	.825	.414	.725	0°	.281	2.2	TS31D	TKY10F
E12S-STUPR2	●		22○	.750	10.00	.825	.414	.725	0°	.281	2.2	TS31D	TKY10F
E16T-STUPL2	●		22○	1.000	12.00	1.280	.638	.975	0°	.313	5.0	TS31D	TKY10F
E16T-STUPR2	●		22○	1.000	12.00	1.280	.638	.975	0°	.313	5.0	TS31D	TKY10F

* Clamp Torque (lbf-in) : TS2D = 5.3, TS25D = 8.9, TS31D = 22

TP○○ type inserts	➤ A176–A178
CBN & PCD inserts	➤ B051, B052, B066, B067

CUTTING CONDITIONS	➤ E048
SPARE PARTS	➤ N001
TECHNICAL DATA	➤ P001

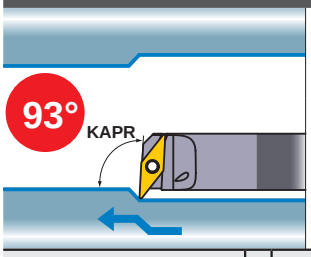
COOLANT THROUGH CARBIDE

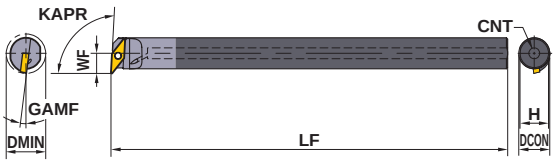
- Two wall pocket.
- 7° positive insert, low cutting force.
- Screw-on type.
- Carbide shanks are stocked in various diameters.

(inch)

E-SVUC

Carbide Shank Coolant Through **VC○○inserts**





Right hand tool holder shown.

Finish	Finish	Light	Light
FP	FM	LP	LM
			
(2,3)	(2,3)	(2,3)	(2,3)
Medium	**Medium**	**Medium**	**Flat top**
MP	MM	Standard	
			
(3)	(3)	(2,3)	(2,3)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	✶ Clamp Screw	Wrench
E10R-SVUCL2	●	VCMT VCGT VCGW VCMW	22○	.625	8.00	.831	.508	.600	7°	.219	1.2	TS25	TKY08F
E10R-SVUCR2	●		22○	.625	8.00	.831	.508	.600	7°	.219	1.2	TS25	TKY08F
E12S-SVUCL2	●		22○	.750	10.00	.985	.600	.725	7°	.281	2.2	TS25	TKY08F
E12S-SVUCR2	●		22○	.750	10.00	.985	.600	.725	7°	.281	2.2	TS25	TKY08F
E16T-SVUCL3	●		33○	1.000	12.00	1.340	.830	.975	6°	.312	5.0	TS4	TKY15F
E16T-SVUCR3	●		33○	1.000	12.00	1.340	.830	.975	6°	.312	5.0	TS4	TKY15F

✶ Clamp Torque (lbf-in) : TS25 = 8.9, TS4 = 31

Note 1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.
Note 2) 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.

● : USA Stock

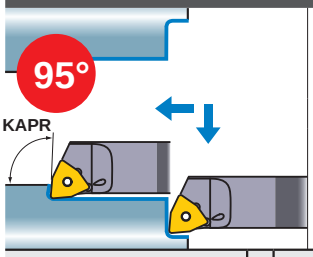
VC○○ type inserts ➤ A184–A186
CBN & PCD inserts ➤ B054, B068

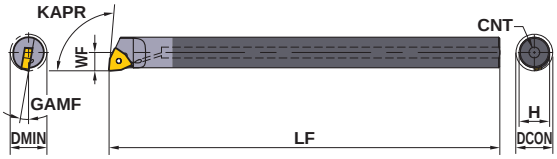
(inch)

E-SWLO

Carbide Shank
Coolant Through

WC○○inserts





Right hand tool holder shown.

Finish	Finish	Light
FJ-P	R/L	Standard
		
(2,3)	(1.2,1.5)	(1.2,1.5,2,3)
Medium	**CBN**	**PCD**
MJ		
		
(2,3)	(1.5,2,3)	(1.5,2,3)

Order Number	Stock	Insert Number		DCON	LF	DMIN	WF	H	GAMF	CNT	WT (lbs)	✶ Clamp Screw	Wrench
E04H-SWLOL1.2	●	WCMT WCMW WCGT WCGW	1.21○	.250	4.00	.313	.156	.235	17°	.078	.11	TS2	TKY06F
E04H-SWLOR1.2	●		1.21○	.250	4.00	.313	.156	.235	17°	.078	.11	TS2	TKY06F
E05M-SWLOL1.2	●		1.21○	.313	6.00	.375	.188	.295	15°	.094	.26	TS21	TKY06F
E05M-SWLOR1.2	●		1.21○	.313	6.00	.375	.188	.295	15°	.094	.26	TS21	TKY06F
E05M-SWLOL1.5	●		1.51.5○	.313	6.00	.375	.188	.295	15°	.094	.26	TS2	TKY06F
E05M-SWLOR1.5	●		1.51.5○	.313	6.00	.375	.188	.295	15°	.094	.26	TS2	TKY06F
E05K-SWLOL2	●		21.5○	.313	5.00	.406	.203	.295	15°	.094	.21	TS25	TKT08F
E05K-SWLOR2	●		21.5○	.313	5.00	.406	.203	.295	15°	.094	.21	TS25	TKT08F
E06M-SWLOL2	●		21.5○	.375	6.00	.438	.218	.358	15°	.109	.31	TS25	TKT08F
E06M-SWLOR2	●		21.5○	.375	6.00	.438	.218	.358	15°	.109	.31	TS25	TKT08F
E08M-SWLOL2	●		21.5○	.500	6.00	.625	.312	.480	13°	.188	.51	TS25	TKT08F
E08M-SWLOR2	●		21.5○	.500	6.00	.625	.312	.480	13°	.188	.51	TS25	TKT08F
E10R-SWLOL3	●		32.5○	.625	8.00	.750	.375	.600	10°	.219	1.0	TS4	TKY15F
E10R-SWLOR3	●		32.5○	.625	8.00	.750	.375	.600	10°	.219	1.0	TS4	TKY15F
E12S-SWLOL3	●		32.5○	.750	10.00	1.000	.500	.725	8°	.281	1.7	TS4	TKY15F
E12S-SWLOR3	●		32.5○	.750	10.00	1.000	.500	.725	8°	.281	1.7	TS4	TKY15F
E16T-SWLOL3	●		32.5○	1.000	12.00	1.250	.640	.975	7°	.313	4.1	TS4	TKY15F
E16T-SWLOR3	●		32.5○	1.000	12.00	1.250	.640	.975	7°	.313	4.1	TS4	TKY15F

✶ Clamp Torque (lbf-in) : TS2 = 5.3, TS21 = 5.3, TS25 = 8.9, TS4 = 31

WC○○ type inserts	**➤ A190**
CBN & PCD inserts	**➤ B055, B069**

CUTTING CONDITIONS	**➤ E048**
SPARE PARTS	**➤ N001**
TECHNICAL DATA	**➤ P001**

RECOMMENDED CUTTING CONDITIONS

(inch)

				Case 1			Case 2		
Heavy Metal Shank				L/D ≤ 3			3 < L/D ≤ 4		
Steel Shank				L/D ≤ 3			3 < L/D ≤ 4		
Carbide Shank				L/D ≤ 5			5 < L/D ≤ 8		
	Work Material	Hardness	Cutting Mode	**vc** (SFM)	**f** (IPR)	**ap**	**vc** (SFM)	**f** (IPR)	**ap**
P	Carbon Steel Alloy Steel	180 — 280 HB	Light Cutting	295 — 525	.002 — .006	.008	260 — 490	.002 — .006	.008
			Medium Cutting	195 — 395	.006 — .014	.118	165 — 360	.004 — .008	.059
M	Stainless Steel	≤ 200 HB	Light Cutting	330 — 590	.002 — .006	.008	330 — 590	.002 — .006	.008
			Medium Cutting	165 — 295	.006 — .010	.079	130 — 260	.004 — .008	.039
K	Cast Iron	Tensile Strength ≤ 350 MPa	Light Cutting	295 — 525	.002 — .006	.020	330 — 590	.004 — .006	.020
			Medium Cutting	195 — 390	.006 — .010	.079	130 — 260	.006 — .010	.060
N	Aluminum Alloy	—	Light Cutting	655 — 1310	.002 — .006	.008	665 — 1310	.002 — .006	.008
			Medium Cutting	490 — 820	.002 — .006	.079	490 — 820	.002 — .006	.059

Memo