



# Toolholders, Boring Bars, and Cartridges

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tool path	insert shape	clamping style	turning	profiling	facing	plunging	chamfering	page(s)
<b>0° Lead Angle</b>								
		C Kenloc™	•	•				C15
		Screw-On	•	•				C50-C52
		Screw-On	•	•				C56
		Screw-On	•	•				C64
		T Kenloc	•	•	•	•	•	C25-C26, C28
		Kenclamp	•	•				C11-C12
		Kendex™	•	•				C42-C43, C46-C49
		Screw-On	•					C61-C63
<b>-3° Lead Angle</b>								
		D Kenloc	•	•				C20
		Kenclamp	•	•				C8
		Screw-On	•	•				C57-C58
		TNT	•	•				-
		V Kenloc	•	•				C30-C31
		Kenclamp	•	•				C13
		Screw-On	•	•				C64-C66
		F Screw-On	•	•				C59
		T Kenloc	•	•				C28-C29
		Kenclamp	•					C12-C13
		Screw-On	•					C63
		Wedglock	•	•				C35

tool path	insert shape	clamping style	turning	profiling	facing	plunging	chamfering	page(s)
<b>-5° Lead Angle</b>								
		C Kenloc	•	•	•			C17, C32
		Kenclamp	•	•	•			C6
		Screw-On	•	•	•			C53-C54
		TNT	•	•	•			C36
		W Kenloc	•	•	•			C32
		Kenclamp	•	•	•			C14
		Screw-On	•	•	•			C66
		TNT	•	•	•			C37
		Wedglock™	•	•	•			C35
<b>15° and -15° Lead Angle</b>								
		C Kenloc	•	•				C16, C19
		Kenclamp	•	•				C6-C7
		Kendex	•					C38
		Screw-On	•	•				C55-C56
		TNT	•					-
		S Kenloc	•	•				C23
		Kenclamp	•	•				C10
		Kendex	•	•				C40-C41, C44-C45
		T Kenloc	•	•				C30
		Kendex	•					C42, C46
		Wedglock	•	•	•			C34
<b>17.5° and -17.5° Lead Angle</b>								
		D Kenloc	•	•				C21
		Kenclamp	•	•				C9
		TNT	•	•				-
		F Screw-On	•	•				-
		V Kenloc	•	•				C31
		Kenclamp	•	•				C14

tool path	insert shape	clamping style	turning	profiling	facing	plunging	chamfering	page(s)	tool path	insert shape	clamping style	turning	profiling	facing	plunging	chamfering	page(s)									
		Kenloc™	•	•				C21			Kenloc	•	•	•			C22, C24									
		Kenclamp™	•	•				C8			Kenclamp	•	•	•				C10-C11								
		Screw-On		•				C58			Kenlex	•	•	•				C40-C41, C44-C45								
<b>27.5° Lead Angle</b>											<b>45° Lead Angle</b>															
		Kenloc	•	•				C26			Kenloc	•	•	•			C16									
		Kenclamp™	•	•				C49			Kenclamp	•	•	•			-									
		Wedgelo™	•	•				C34			Screw-On	•	•	•				C45								
<b>30° Lead Angle</b>											<b>50° Lead Angle</b>															
		Kenloc	•	•	•			C18			Kenloc	•	•				C22									
		Screw-On	•	•	•			C45			Kenclamp	•	•				C9									
<b>40° Lead Angle</b>											<b>Round</b>															
		Kenclamp	•		•			C13					Kenclamp	•	•				C59-C61							
		<b>117.5° Lead Angle</b>											<b>V-Bottom</b>													
									<td>Screw-On</td> <td>•</td> <td>•</td> <td>•</td> <td></td> <td></td> <td>C68-C69</td>									Screw-On	•	•	•			C68-C69		
									<td>V-Bottom</td> <td>•</td> <td>•</td> <td>•</td> <td></td> <td></td> <td>C68-C69</td>									V-Bottom	•	•	•			C68-C69		

**Clamping Styles**

**Kenclamp Style**

- Suitable for Kenloc inserts.
- Unique clamp design provides rigid clamping.
- Ensures insert repeatability and seating.
- Reduced chatter and improved tool life.

**Kenloc Style**

- Suitable for Kenloc inserts.
- Lock pin and top clamp provide rigid clamping.
- Wide variety of insert styles may be used.
- Tools may be used with or without clamp.

**Top Notch™ Turning Style**

- Proven superior system in holding ceramic inserts rigidly in turning and profiling operations.
- Uses standard insert sizes — 80°, 75°, 55°, square, and trigon.
- This system offers the added versatility of using optional hardware to hold standard Kendex and Kenloc inserts.

**Kendex Style**

- Suitable for Kendex inserts.
- Chipbreaker option available for ceramic inserts.
- Wide variety of insert styles may be used.

**Screw-On Style**

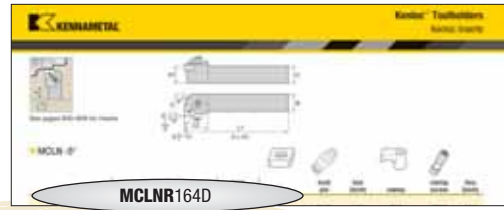
- Top clamping by screw for Screw-On inserts.

**Wedgelo™ Style**

- Top and hole clamping for inserts with hole.

## How Do Catalog Numbers Work?

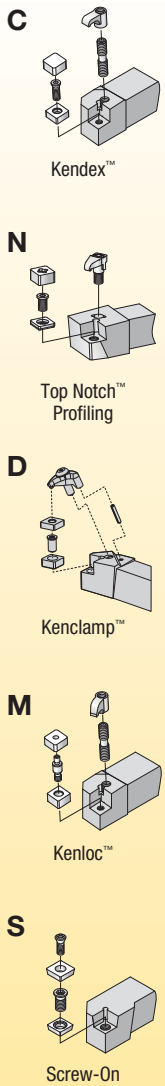
Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



O.D./I.D. Tooling

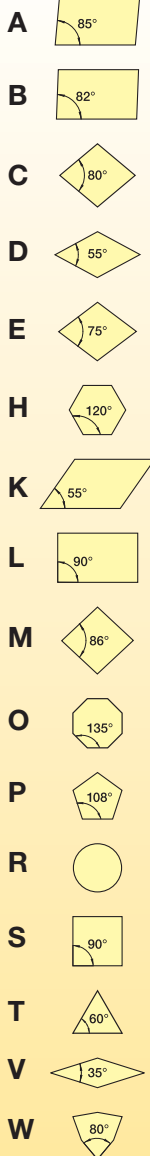
**M**

Insert Holding Method



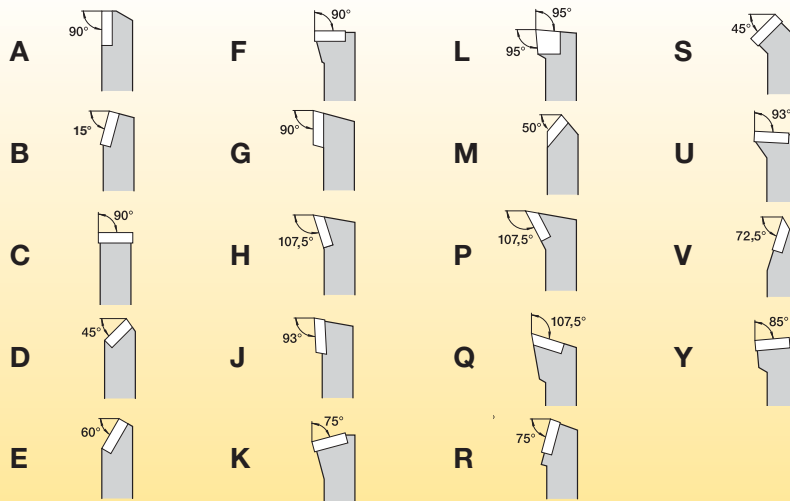
**C**

Insert Shape



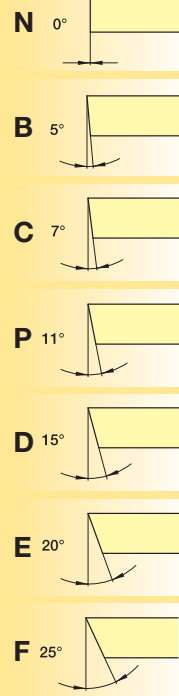
**L**

Tool Style or Lead Angle



**N**

Insert Clearance Angle



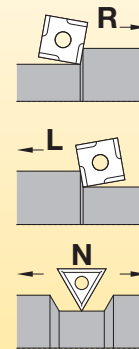
**R**

Hand of Tool

**R** = Right hand

**L** = Left hand

**N** = Neutral



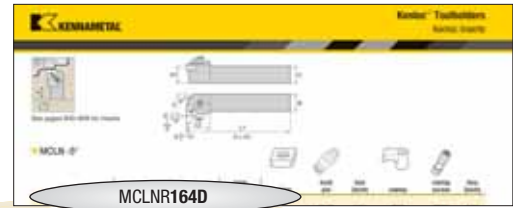
Additional Information

**C** = Deep pocket for ceramic insert

**S** = Single pocket locating wall

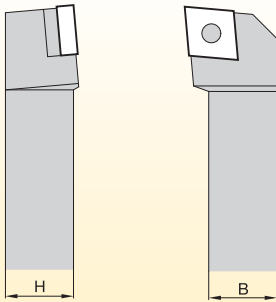
**F** = Straight shank, no offset

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



**1**

Shank Dimensions



The 7th and 8th position shall be a significant two-digit number that indicates the holder cross section. For shanks 5/8" square and over, the number will represent the number of sixteenths of width and height. For shanks under 5/8" square, the number of sixteenths of cross section will be preceded by a zero. For rectangular holders, the first digit represents the number of eighths of width "B" and the second digit the number of quarters of height "H", except for a toolholder 1-1/4" x 1-1/2" which is given the number 91.

**6**

Shank Dimensions

**4**

Insert Size

Insert IC  
Number of  
1/8ths if "D"

**D**

Qualified Surface and Length

Additional Information

- R** = Radial clearance for 4" minimum bore
- S** = 3.00 minimum bore
- KC** = Kenclamp™
- H4** = Wedglock™ clamping system
- M..** = TNT/MTS clamping system for ceramic and PCBN inserts

Insert Thickness (optional)

- 3** = .188"
- 4** = .250"

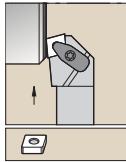


O.D./I.D. Tooling

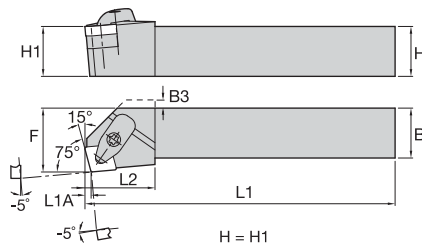
**Qualified Surface and Length**

- A** = Qualified back and end, 4" long
- B** = Qualified back and end, 4.5" long
- C** = Qualified back and end, 5" long
- D** = Qualified back and end, 6" long
- E** = Qualified back and end, 7" long
- F** = Qualified back and end, 8" long
- G\*** = Qualified back and end, 5.5" long
- H\*** = Qualified back and end, 5.625" long
- I\*** = Qualified back and end, 3" long
- J\*** = Qualified back and end, 5.3" long
- K\*** = Qualified back and end, 14" long
- L\*** = Qualified back and end, 6.8" long
- M** = Qualified front and end, 4" long
- N** = Qualified front and end, 4.5" long
- P** = Qualified front and end, 5" long
- R** = Qualified front and end, 6" long
- S** = Qualified front and end, 7" long
- T** = Qualified front and end, 8" long
- U\*** = Qualified front and end, 5.5" long
- V\*** = Qualified back and end, 3.5" long
- W\*** = Qualified front and end, 3.5" long
- Y\*** = Qualified back and end, 3.75" long
- Z\*** = Qualified back and end, 3.250" long

\*Kennametal standard only.



See page B40–B44 for inserts.

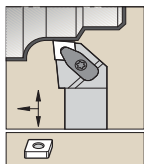


O.D./I.D. Tooling

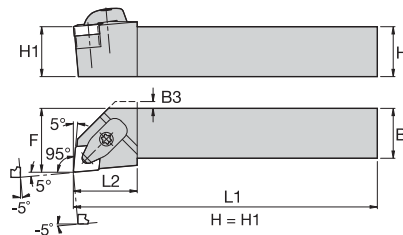
**■ DCKN-KC 15°**



catalog number	H	B	F	L1	L2	L1A	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>														
DCKNR124BKC3	.75	.75	1.000	4.50	1.25	.122	.22	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNR164CKC3	1.00	1.00	1.250	5.00	1.25	.122	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNR164DKC3	1.00	1.00	1.250	6.00	1.25	.122	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNR204DKC3	1.25	1.25	1.500	6.00	1.25	.122	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNR205DKC4	1.25	1.25	1.500	6.00	1.25	.150	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCKNR206DKC4	1.25	1.25	1.500	6.00	1.50	.183	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
<b>left hand</b>														
DCKNL164DKC3	1.00	1.00	1.250	6.00	1.25	.122	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNL204DKC3	1.25	1.25	1.500	6.00	1.25	.122	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCKNL205DKC4	1.25	1.25	1.500	6.00	1.25	.150	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M



See page B40–B44 for inserts.



**■ DCLN-KC -5°**




catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DCLNR123BKC3	.75	.75	1.000	4.50	1.12	.06	CN..332	ICSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR163DKC3	1.00	1.00	1.250	6.00	1.12	—	CN..332	ICSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR124BKC3	.75	.75	1.000	4.50	1.25	.15	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR164CKC3	1.00	1.00	1.250	5.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR164DKC3	1.00	1.00	1.250	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR204DKC3	1.25	1.25	1.500	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR244DKC3	1.50	1.50	2.000	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNR165CKC4	1.00	1.00	1.250	5.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNR165DKC4	1.00	1.00	1.250	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNR205DKC4	1.25	1.25	1.500	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNR245DKC4	1.50	1.50	2.000	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M

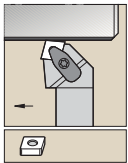
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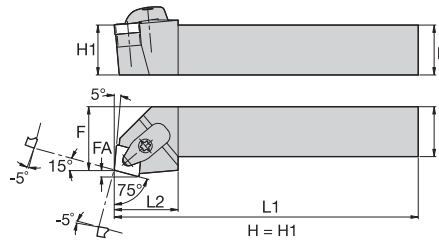
(DCLN-KC -5° continued)


catalog number	H	B	F	L1	L2	B3	gage insert						
								shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
DCLNR166DKC4	1.00	1.00	1.250	6.00	1.62	—	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
DCLNR206DKC4	1.25	1.25	1.500	6.00	1.62	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
DCLNR246DKC4	1.50	1.50	2.000	6.00	1.62	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
DCLNR246EKC4	1.50	1.50	2.000	7.00	1.62	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
<b>left hand</b>													
DCLNL123BKC3	.75	.75	1.000	4.50	1.12	.06	CN..332	ICSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL163DKC3	1.00	1.00	1.250	6.00	1.12	—	CN..332	ICSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL124BKC3	.75	.75	1.000	4.50	1.25	.15	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL164CKC3	1.00	1.00	1.250	5.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL164DKC3	1.00	1.00	1.250	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL854DKC3	1.25	1.00	1.250	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL204DKC3	1.25	1.25	1.500	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL244DKC3	1.50	1.50	2.000	6.00	1.25	—	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCLNL165CKC4	1.00	1.00	1.250	5.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNL165DKC4	1.00	1.00	1.250	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNL205DKC4	1.25	1.25	1.500	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNL245DKC4	1.50	1.50	2.000	6.00	1.38	—	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCLNL166DKC4	1.00	1.00	1.250	6.00	1.62	—	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
DCLNL206DKC4	1.25	1.25	1.500	6.00	1.62	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
DCLNL246DKC4	1.50	1.50	2.000	6.00	1.62	—	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M

O.D./I.D. Tooling

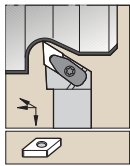


See page B40–B44 for inserts.

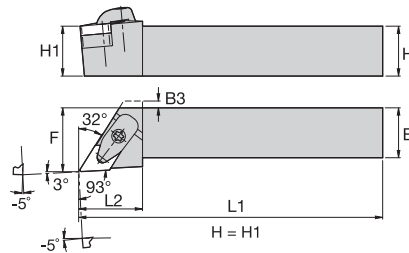

**DCRN-KC 15°**

catalog number	H	B	F	L1	L2	FA	gage insert						
								shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DCRNR124BKC3	.75	.75	.878	4.50	1.25	.12	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCRNR164DKC3	1.00	1.00	1.128	6.00	1.25	.12	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCRNR204DKC3	1.25	1.25	1.378	6.00	1.25	.12	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCRNR245DKC4	1.50	1.50	1.851	6.00	1.38	.15	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCRNR206DKC4	1.25	1.25	1.501	6.00	1.38	.18	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M
<b>left hand</b>													
DCRNL164DKC3	1.00	1.00	1.128	6.00	1.25	.12	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCRNL204DKC3	1.25	1.25	1.378	6.00	1.25	.12	CN..432	ICSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DCRNL245DKC4	1.50	1.50	1.851	6.00	1.38	.15	CN..543	ICSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DCRNL206DKC4	1.25	1.25	1.501	6.00	1.38	.18	CN..643	ICSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M





See page B50–B57 for inserts.

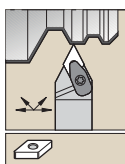


**DDJN-KC -3°**

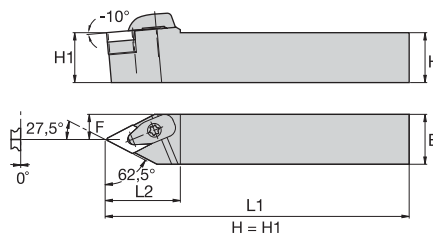
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DDJNR123BKC3	.75	.75	1.000	4.50	1.25	.06	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR163CKC3	1.00	1.00	1.250	5.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR163DKC3	1.00	1.00	1.250	6.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR203DKC3	1.25	1.25	1.500	6.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR164CKC3	1.00	1.00	1.250	5.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR164DKC3	1.00	1.00	1.250	6.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR204DKC3	1.25	1.25	1.500	6.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNR165DKC4	1.00	1.00	1.250	6.00	1.38	.15	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DDJNR205DKC4	1.25	1.25	1.500	6.00	1.38	—	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DDJNR245DKC4	1.50	1.50	2.000	6.00	1.38	—	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
<b>left hand</b>													
DDJNL123BKC3	.75	.75	1.000	4.50	1.25	.06	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL163CKC3	1.00	1.00	1.250	5.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL163DKC3	1.00	1.00	1.250	6.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL203DKC3	1.25	1.25	1.500	6.00	1.25	—	DN..332	IDSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL164CKC3	1.00	1.00	1.250	5.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL164DKC3	1.00	1.00	1.250	6.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL204DKC3	1.25	1.25	1.500	6.00	1.25	—	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDJNL165DKC4	1.00	1.00	1.250	6.00	1.38	.15	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DDJNL205DKC4	1.25	1.25	1.500	6.00	1.38	—	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DDJNL245DKC4	1.50	1.50	2.000	6.00	1.38	—	DN..543	IDSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M



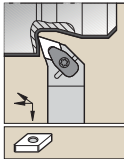
See page B50–B57 for inserts.



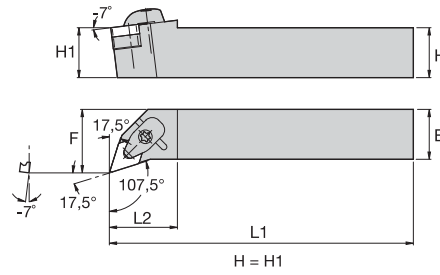
**DDPN-KC 27.5°**



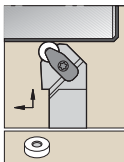
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
DDPNN164DKC3	1.00	1.00	.500	6.00	1.62	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M



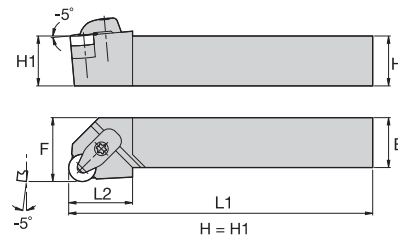
See page B50–B57 for inserts.


**■ DDQN-KC -17.5°**

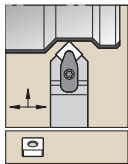

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>												
DDQNR164CKC3	1.00	1.00	1.250	5.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDQNR164DKC3	1.00	1.00	1.250	6.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDQNR204DKC3	1.25	1.25	1.500	6.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>												
DDQNL164CKC3	1.00	1.00	1.250	5.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDQNL164DKC3	1.00	1.00	1.250	6.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DDQNL204DKC3	1.25	1.25	1.500	6.00	1.38	DN..432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M



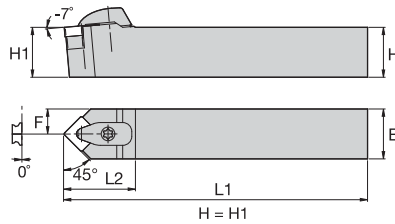
See page B58 for inserts.


**■ DRGN-KC**


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>												
DRGNR124BKC3	.75	.75	1.000	4.50	1.25	RN..43	IRSN43	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DRGNR164DKC3	1.00	1.00	1.250	6.00	1.25	RN..43	IRSN44	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DRGNR204DKC3	1.25	1.25	1.500	6.00	1.25	RN..43	IRSN44	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>												
DRGNL124BKC3	.75	.75	1.000	4.50	1.25	RN..43	IRSN43	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DRGNL164DKC3	1.00	1.00	1.250	6.00	1.25	RN..43	IRSN44	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DRGNL204DKC3	1.25	1.25	1.500	6.00	1.25	RN..43	IRSN44	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DRGNL165DKC4	1.00	1.00	1.250	6.00	1.25	RN..54	IRSN54	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DRGNL206DKC4	1.25	1.25	1.500	6.00	1.38	RN..64	IRSN64	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M



See pages B59–B65 for inserts.

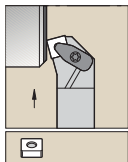


**■ DSDN-KC 45°**

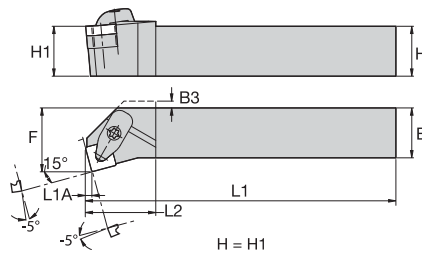
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
DSDNN124KC3	.75	.75	.365	4.50	1.44	SN..432	ISSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSDNN164KC3	1.00	1.00	.500	6.00	1.44	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSDNN204KC3	1.25	1.25	.625	6.00	1.44	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSDNN206KC4	1.25	1.25	.625	6.00	1.75	SN..643	ISSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M



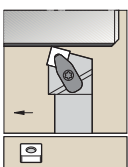
See pages B59–B65 for inserts.



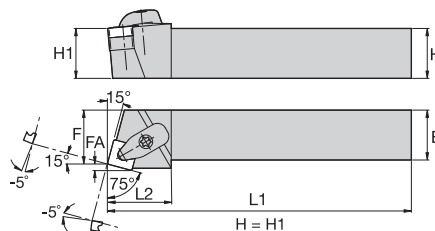
**■ DSKN-KC 15°**



catalog number	H	B	F	L1	L2	L1A	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>														
DSKNR164CKC3	1.00	1.00	1.250	5.00	1.25	.12	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSKNR164DKC3	1.00	1.00	1.250	6.00	1.25	.12	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>														
DSKNL164CKC3	1.00	1.00	1.250	5.00	1.25	.12	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSKNL164DKC3	1.00	1.00	1.250	6.00	1.25	.12	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M



See pages B59–B65 for inserts.



**■ DSRN-KC 15°**

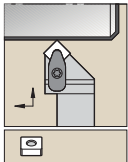


catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DSRNR124BKC3	.75	.75	.880	4.50	1.25	.12	SN..432	ISSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNR164CKC3	1.00	1.00	1.130	5.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNR164DKC3	1.00	1.00	1.130	6.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNR204DKC3	1.25	1.25	1.380	6.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNR206DKC4	1.25	1.25	1.321	6.00	1.50	.18	SN..643	ISSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M

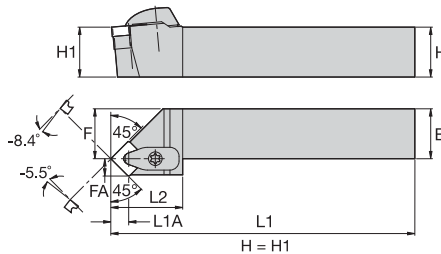
(continued)

(DSRN-KC 15° continued)

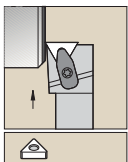
catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>left hand</b>													
DSRNL124BKC3	.75	.75	.880	4.50	1.25	.12	SN..432	ISSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNL164CKC3	1.00	1.00	1.130	5.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNL164DKC3	1.00	1.00	1.130	6.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNL204DKC3	1.25	1.25	1.380	6.00	1.25	.12	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DSRNL165DKC4	1.00	1.00	1.103	6.00	1.50	.15	SN..543	ISSN543	KMSP515IP	15 IP	CM209R ASSY	15 IP	SSP025016M
DSRNL206DKC4	1.25	1.25	1.321	6.00	1.50	.18	SN..643	ISSN643	KMSP625IP	25 IP	CM210R ASSY	25 IP	SSP025016M



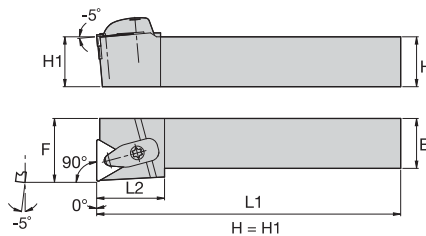
See pages B59–B65 for inserts.


**■ DSSN-KC 45°**

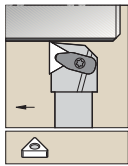
catalog number	H	B	F	L1	L2	FA	L1A	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>														
DSSNR164DKC3	1.00	1.00	.912	6.00	1.50	.34	.33	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>														
DSSNL164DKC3	1.00	1.00	.912	6.00	1.50	.34	.33	SN..432	ISSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M



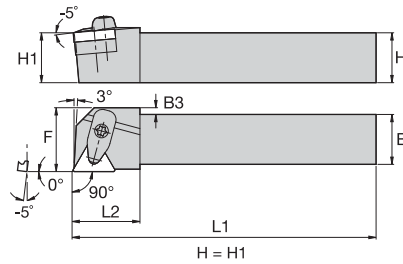
See pages B66–B74 for inserts.


**■ DTFN-KC 0°**

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>												
DTFNR123BKC3	.75	.75	1.000	4.50	1.3	TN..332	ITSN323	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNR163DKC3	1.00	1.00	1.250	6.00	1.3	TN..332	ITSN323	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNR164CKC3	1.00	1.00	1.250	5.00	1.4	TN..432	ITSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNR164DKC3	1.00	1.00	1.250	6.00	1.4	TN..432	ITSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>												
DTFNL123BKC3	.75	.75	1.000	4.50	1.3	TN..332	ITSN323	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNL163DKC3	1.00	1.00	1.250	6.00	1.3	TN..332	ITSN323	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNL164CKC3	1.00	1.00	1.250	5.00	1.4	TN..432	ITSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DTFNL164DKC3	1.00	1.00	1.250	6.00	1.4	TN..432	ITSN443	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M



See pages B66–B74 for inserts.

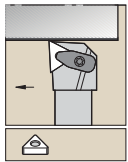


■ **DTGN-KC 0°**

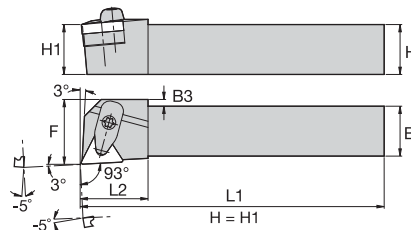
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
<b>DTGNR123BKC3</b>	.75	.75	1.000	4.50	1.12	.25	TN..332	<b>ITSN323</b>	<b>KMSP315IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>
<b>DTGNR163DKC3</b>	1.00	1.00	1.250	6.00	1.12	—	TN..332	<b>ITSN323</b>	<b>KMSP315IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>
<b>DTGNR164DKC3</b>	1.00	1.00	1.250	6.00	1.25	.09	TN..432	<b>ITSN443</b>	<b>KMSP415IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>
<b>left hand</b>													
<b>DTGNL123BKC3</b>	.75	.75	1.000	4.50	1.12	.25	TN..332	<b>ITSN323</b>	<b>KMSP315IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>
<b>DTGNL163DKC3</b>	1.00	1.00	1.250	6.00	1.12	—	TN..332	<b>ITSN323</b>	<b>KMSP315IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>
<b>DTGNL164DKC3</b>	1.00	1.00	1.250	6.00	1.25	.09	TN..432	<b>ITSN443</b>	<b>KMSP415IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>



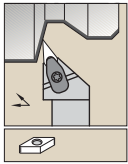
See pages B66–B74 for inserts.



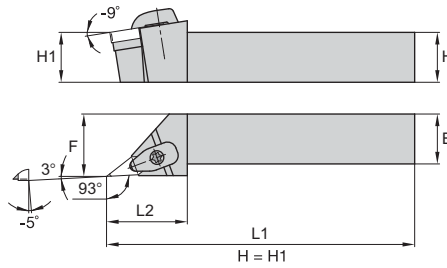
■ **DTJN-KC -3°**



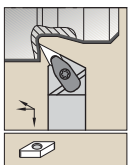
catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
<b>DTJNR164DKC3</b>	1.00	1.00	1.250	6.00	1.25	.12	TN..432	<b>ITSN443</b>	<b>KMSP415IP</b>	15 IP	<b>CM234R ASSY</b>	15 IP	<b>SSP025016M</b>



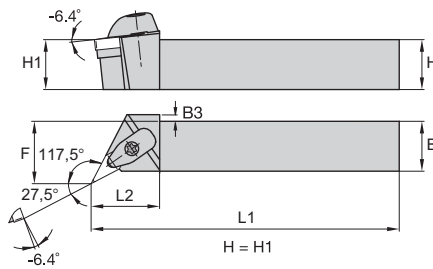
See pages B74–B78 for inserts.


**DVJN-KC -3°**

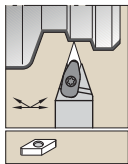

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>												
DVJNR123CKC3	.75	.75	1.000	5.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVJNR163DKC3	1.00	1.00	1.250	6.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVJNR853DKC3	1.25	1.00	1.250	6.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
<b>left hand</b>												
DVJNL123CKC3	.75	.75	1.000	5.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVJNL163DKC3	1.00	1.00	1.250	6.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVJNL853DKC3	1.25	1.00	1.250	6.00	1.82	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVJNL164DKC3	1.00	1.00	1.250	6.00	2.00	VN..432	IVSN432	KMSP415IP	15 IP	CM235R ASSY	15 IP	SSP025016M
DVJNL854DKC3	1.25	1.00	1.250	6.00	2.00	VN..432	IVSN432	KMSP415IP	15 IP	CM235R ASSY	15 IP	SSP025016M



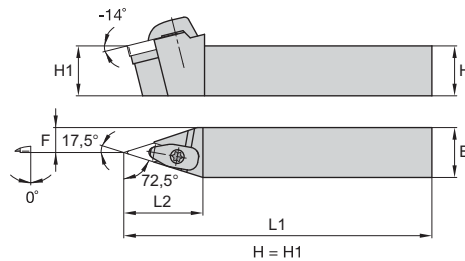
See pages B74–B78 for inserts.


**DVON-KC -117.5°**


catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DVONR123CKC3	.75	.75	1.000	5.00	1.50	.25	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVONR163DKC3	1.00	1.00	1.250	6.00	1.47	—	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVONR853DKC3	1.25	1.00	1.250	6.00	1.47	—	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
<b>left hand</b>													
DVONL123CKC3	.75	.75	1.000	5.00	1.50	.25	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVONL163DKC3	1.00	1.00	1.250	6.00	1.47	—	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVONL853DKC3	1.25	1.00	1.250	6.00	1.47	—	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M



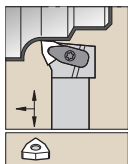
See pages B74–B78 for inserts.



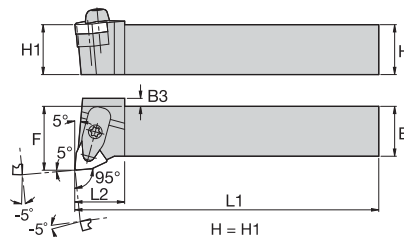
■ **DVVN-KC 17.5°**

O.D./I.D. Tooling

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
DVVNN123CKC3	.75	.75	.371	5.00	1.94	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVVNN163DKC3	1.00	1.00	.496	6.00	1.97	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVVNN853DKC3	1.25	1.00	.496	6.00	1.88	VN..332	IVSN322	KMSP315IP	15 IP	CM215R ASSY	15 IP	SSP025016M
DVVNN164DKC3	1.00	1.00	.496	6.00	2.28	VN..432	IVSN432	KMSP415IP	15 IP	CM235R ASSY	15 IP	SSP025016M
DVVNN854DKC3	1.25	1.00	.496	6.00	2.28	VN..432	IVSN432	KMSP415IP	15 IP	CM235R ASSY	15 IP	SSP025016M



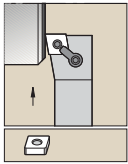
See pages B79–B83 for inserts.



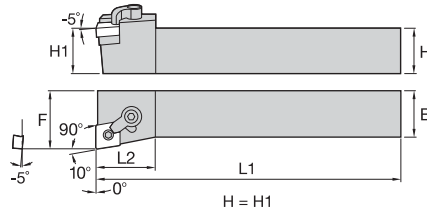
■ **DWLN-KC -5°**

catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	Torx Plus	clamp assembly	Torx Plus	slotted pin
<b>right hand</b>													
DWLN123BKC3	.75	.75	1.000	4.50	1.00	.28	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN163CKC3	1.00	1.00	1.250	5.00	1.00	.06	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN163DKC3	1.00	1.00	1.250	6.00	1.00	.06	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN164CKC3	1.00	1.00	1.250	5.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN164DKC3	1.00	1.00	1.250	6.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN204DKC3	1.25	1.25	1.500	6.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
<b>left hand</b>													
DWLN123BKC3	.75	.75	1.000	4.50	1.00	.28	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN163CKC3	1.00	1.00	1.250	5.00	1.00	.06	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN163DKC3	1.00	1.00	1.250	6.00	1.00	.06	WN..332	IWSN322	KMSP315IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN164CKC3	1.00	1.00	1.250	5.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN164DKC3	1.00	1.00	1.250	6.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M
DWLN204DKC3	1.25	1.25	1.500	6.00	1.00	—	WN..432	IWSN433	KMSP415IP	15 IP	CM234R ASSY	15 IP	SSP025016M





See pages B40–B49 for inserts.



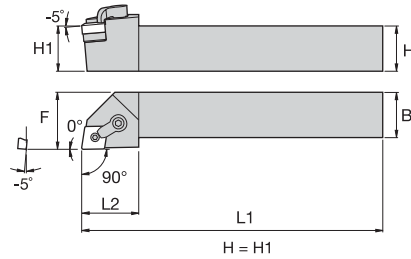
■ **MCFN 0°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MCFNR124B</b>	.75	.75	1.000	4.50	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCFNR164C</b>	1.00	1.00	1.250	5.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCFNR164D</b>	1.00	1.00	1.250	6.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>left hand</b>												
<b>MCFNL164C</b>	1.00	1.00	1.250	5.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCFNL164D</b>	1.00	1.00	1.250	6.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8



See pages B40–B49 for inserts.

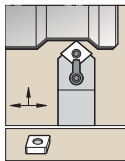


■ **MCGN 0°**

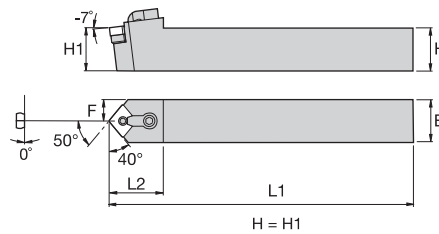


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MCGNR124B</b>	.75	.75	1.000	4.50	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCGNR164C</b>	1.00	1.00	1.250	5.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCGNR164D</b>	1.00	1.00	1.250	6.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>left hand</b>												
<b>MCGNL124B</b>	.75	.75	1.000	4.50	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCGNL164C</b>	1.00	1.00	1.250	5.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCGNL164D</b>	1.00	1.00	1.250	6.00	1.25	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8

O.D./I.D. Tooling



See pages B40–B49 for inserts.



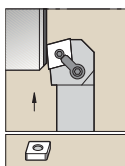
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**MCHN 50°**

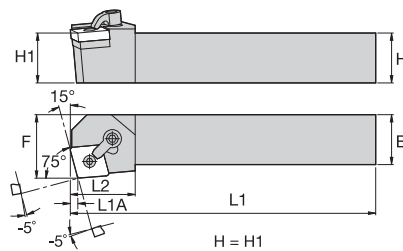
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MCHNN164C	1.00	1.00	.500	5.00	1.25	CN..432	ICSN433	KL46	3/32	CK21	STC20	1/8
MCHNN205D	1.25	1.25	.625	6.00	1.38	CN..543	ICSN533	KL58	1/8	CK21	STC20	1/8
MCHNN246D	1.50	1.50	.750	6.00	1.60	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32



See pages B40–B49 for inserts.

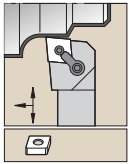


$H = H1$

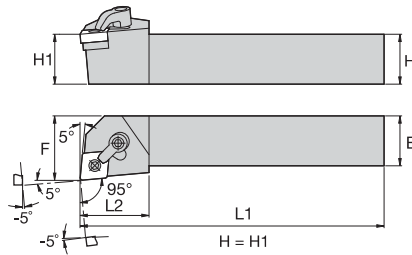
**MCKN 15°**



catalog number	H	B	F	L1	L2	L1A	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand													
MCKNR124B	.75	.75	1.000	4.50	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNR164C	1.00	1.00	1.250	5.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNR164D	1.00	1.00	1.250	6.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNR165C	1.00	1.00	1.250	5.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNR165D	1.00	1.00	1.250	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNR204D	1.25	1.25	1.500	6.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNR205D	1.25	1.25	1.500	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNR206D	1.25	1.25	1.500	6.00	1.47	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCKNR245D	1.50	1.50	2.000	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNR246D	1.50	1.50	2.000	6.00	1.47	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
left hand													
MCKNL124B	.75	.75	1.000	4.50	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNL164C	1.00	1.00	1.250	5.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNL164D	1.00	1.00	1.250	6.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNL165D	1.00	1.00	1.250	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNL204D	1.25	1.25	1.500	6.00	1.21	.12	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCKNL205D	1.25	1.25	1.500	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNL206D	1.25	1.25	1.500	6.00	1.47	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCKNL245D	1.50	1.50	2.000	6.00	1.25	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCKNL246D	1.50	1.50	2.000	6.00	1.47	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32



See pages B40–B49 for inserts.



■ **MCLN -5°**




catalog number right hand	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>MCLNR083A</b>	.50	.50	.750	4.00	1.00	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MCLNR103A</b>	.63	.63	.875	4.00	1.00	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MCLNR123B</b>	.75	.75	1.000	4.50	1.00	CN..322	<b>ICSN332</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MCLNR124A</b>	.75	.75	1.000	4.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR124B</b>	.75	.75	1.000	4.50	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR163C</b>	1.00	1.00	1.250	5.00	1.00	CN..322	<b>ICSN332</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MCLNR163D</b>	1.00	1.00	1.250	6.00	1.00	CN..322	<b>ICSN332</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MCLNR164C</b>	1.00	1.00	1.250	5.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR164D</b>	1.00	1.00	1.250	6.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR165C</b>	1.00	1.00	1.250	5.00	1.37	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR165D</b>	1.00	1.00	1.250	6.00	1.37	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR166C</b>	1.00	1.00	1.250	5.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR166D</b>	1.00	1.00	1.250	6.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR204D</b>	1.25	1.25	1.500	6.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR205D</b>	1.25	1.25	1.500	6.00	1.37	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR206D</b>	1.25	1.25	1.500	6.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR244D</b>	1.50	1.50	2.000	6.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR245D</b>	1.50	1.50	2.000	6.00	1.37	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR245E</b>	1.50	1.50	2.000	7.00	1.37	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR246D</b>	1.50	1.50	2.000	6.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR246E</b>	1.50	1.50	2.000	7.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR248E</b>	1.50	1.50	2.000	7.00	1.49	CN..866	<b>ICSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16
<b>MCLNR326F</b>	2.00	2.00	2.500	8.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR854D</b>	1.25	1.00	1.250	6.00	1.20	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>MCLNR856D</b>	1.25	1.00	1.250	6.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR866D</b>	1.50	1.00	1.250	6.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MCLNR866E</b>	1.50	1.00	1.250	7.00	1.49	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32

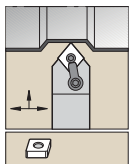
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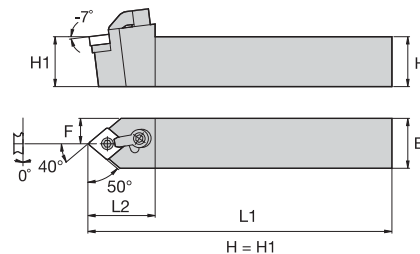
(MCLN -5° continued)

O.D./I.D. Tooling


catalog number	H	B	F	L1	L2	gage insert							
							shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)	
left hand													
MCLNL083A	.50	.50	.750	4.00	1.00	CN..322	—	KL33	5/64	CK6	STC5	3/32	
MCLNL103A	.63	.63	.875	4.00	1.00	CN..322	—	KL33	5/64	CK6	STC5	3/32	
MCLNL123B	.75	.75	1.000	4.50	1.00	CN..322	ICSN332	KL34L	5/64	CK6	STC5	3/32	
MCLNL124A	.75	.75	1.000	4.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL124B	.75	.75	1.000	4.50	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL164C	1.00	1.00	1.250	5.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL164D	1.00	1.00	1.250	6.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL165C	1.00	1.00	1.250	5.00	1.37	CN..543	ICSN533	KL58	1/8	CK12	STC4	5/32	
MCLNL165D	1.00	1.00	1.250	6.00	1.37	CN..543	ICSN533	KL58	1/8	CK12	STC4	5/32	
MCLNL166C	1.00	1.00	1.250	5.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL166D	1.00	1.00	1.250	6.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL204D	1.25	1.25	1.500	6.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL205D	1.25	1.25	1.500	6.00	1.37	CN..543	ICSN533	KL58	1/8	CK12	STC4	5/32	
MCLNL206D	1.25	1.25	1.500	6.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL244D	1.50	1.50	2.000	6.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL245D	1.50	1.50	2.000	6.00	1.37	CN..543	ICSN533	KL58	1/8	CK12	STC4	5/32	
MCLNL245E	1.50	1.50	2.000	7.00	1.37	CN..543	ICSN533	KL58	1/8	CK12	STC4	5/32	
MCLNL246D	1.50	1.50	2.000	6.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL246E	1.50	1.50	2.000	7.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL248E	1.50	1.50	2.000	7.00	1.49	CN..866	ICSN846	KL810	5/32	CK24	STC19	3/16	
MCLNL326F	2.00	2.00	2.500	8.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL854D	1.25	1.00	1.250	6.00	1.20	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8	
MCLNL856D	1.25	1.00	1.250	6.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	
MCLNL866E	1.50	1.00	1.250	7.00	1.49	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32	

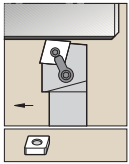


See pages B40–B49 for inserts.

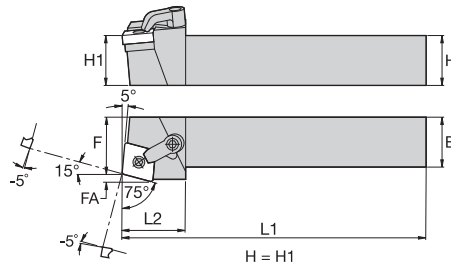


■ MCMN 40°

catalog number	H	B	F	L1	L2	gage insert						
							shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MCMNN124B	.75	.75	.375	4.500	1.39	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCMNN164C	1.00	1.00	.500	5.000	1.39	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCMNN164D	1.00	1.00	.500	6.000	1.39	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCMNN204D	1.25	1.25	.625	6.000	1.39	CN..432	ICSN433	KL46	3/32	CK20	STC20	1/8
MCMNN166D	1.00	1.00	.500	6.000	1.67	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCMNN206D	1.25	1.25	.625	6.000	1.67	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCMNN246D	1.50	1.50	.750	6.000	1.67	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCMNN246E	1.50	1.50	.750	7.000	1.67	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32



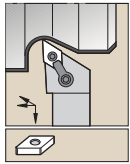
See pages B40–B49 for inserts.


**MCRN 15°**

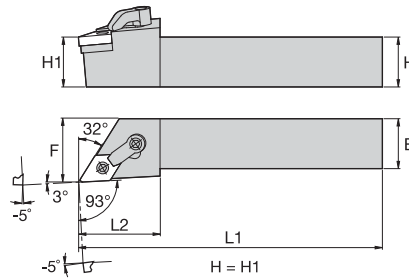

catalog number	H	B	F	L1	L2	FA	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
MCRNR124B	.75	.75	.751	4.50	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNR164C	1.00	1.00	1.251	5.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNR164D	1.00	1.00	1.251	6.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNR165D	1.00	1.00	1.251	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNR166D	1.00	1.00	1.251	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNR204D	1.25	1.25	1.500	6.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNR205D	1.25	1.25	1.501	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNR206D	1.25	1.25	1.501	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNR244D	1.50	1.50	2.001	6.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNR245D	1.50	1.50	2.001	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNR246D	1.50	1.50	2.001	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNR246E	1.50	1.50	2.001	7.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
<b>left hand</b>													
MCRNL124B	.75	.75	.751	4.50	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNL164C	1.00	1.00	1.251	5.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNL164D	1.00	1.00	1.251	6.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNL165D	1.00	1.00	1.251	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNL166D	1.00	1.00	1.251	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNL204D	1.25	1.25	1.500	6.00	1.24	.12	CN..432	ICSN433	KL46	3/32	CK9	STC4	5/32
MCRNL205D	1.25	1.25	1.501	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNL206D	1.25	1.25	1.501	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNL245D	1.50	1.50	2.001	6.00	1.34	.15	CN..543	ICSN533	KL58	1/8	CK9	STC4	5/32
MCRNL246D	1.50	1.50	2.001	6.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32
MCRNL246E	1.50	1.50	2.001	7.00	1.49	.18	CN..643	ICSN633	KL68	9/64	CK12	STC4	5/32



O.D./I.D. Tooling



See pages B50–B57 for inserts.

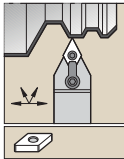


■ MDJN -3°

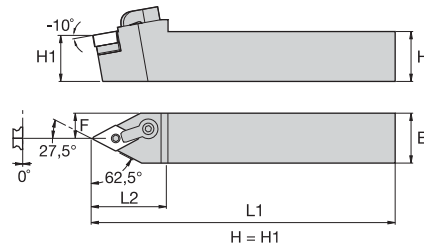
O.D./I.D. Tooling



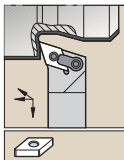
catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MDJNR123B	.75	.75	1.000	4.50	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNR163C	1.00	1.00	1.250	5.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNR163D	1.00	1.00	1.250	6.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNR203D	1.25	1.25	1.500	6.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNR243D	1.50	1.50	2.000	6.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNR124B	.75	.75	1.000	4.50	1.38	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDJNR124A	.75	.75	1.000	4.00	1.38	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDJNR164C	1.00	1.00	1.250	5.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNR164D	1.00	1.00	1.250	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNR854D	1.25	1.00	1.250	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNR204D	1.25	1.25	1.500	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNR165D	1.00	1.00	1.250	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNR205D	1.25	1.25	1.500	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNR245D	1.50	1.50	2.000	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNR245E	1.50	1.50	2.000	7.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
<b>left hand</b>												
MDJNL123B	.75	.75	1.000	4.50	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNL163C	1.00	1.00	1.250	5.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNL163D	1.00	1.00	1.250	6.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNL203D	1.25	1.25	1.500	6.00	1.25	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDJNL124B	.75	.75	1.000	4.50	1.38	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDJNL124A	.75	.75	1.000	4.00	1.38	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDJNL164C	1.00	1.00	1.250	5.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNL164D	1.00	1.00	1.250	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNL854D	1.25	1.00	1.250	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNL204D	1.25	1.25	1.500	6.00	1.24	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDJNL165D	1.00	1.00	1.250	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNL205D	1.25	1.25	1.500	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNL245D	1.50	1.50	2.000	6.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDJNL245E	1.50	1.50	2.000	7.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32



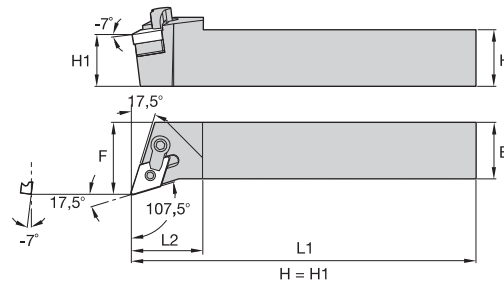
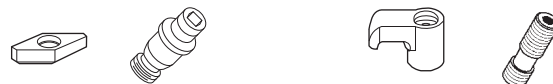
See pages B50–B57 for inserts.


**MDPN 27.5°**


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MDPNN123B	.75	.75	.375	4.50	1.50	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDPNN163C	1.00	1.00	.500	5.00	1.50	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDPNN163D	1.00	1.00	.500	6.00	1.50	DN..332	IDSN322	KL34L	5/64	CK7	STC5	3/32
MDPNN164D	1.00	1.00	.500	6.00	1.63	DN..432	IDSN443	KL46L	3/32	CK12	STC4	5/32
MDPNN855D	1.25	1.00	.500	6.00	1.92	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDPNN205D	1.25	1.25	.625	6.00	1.92	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32
MDPNN245D	1.50	1.50	.750	6.00	1.92	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32

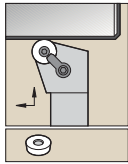


See pages B50–B57 for inserts.

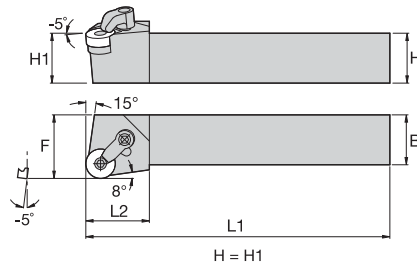

**MDQN -17.5°**


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand												
MDQNR124B	.75	.75	1.000	4.50	1.37	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDQNR164C	1.00	1.00	1.250	5.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNR164D	1.00	1.00	1.250	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNR204D	1.25	1.25	1.500	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNR244D	1.50	1.50	2.000	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNR244E	1.50	1.50	2.000	7.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
left hand												
MDQNL124B	.75	.75	1.000	4.50	1.37	DN..432	IDSN443	KL46L	3/32	CK23	STC20	1/8
MDQNL164C	1.00	1.00	1.250	5.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNL164D	1.00	1.00	1.250	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNL204D	1.25	1.25	1.500	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNL244D	1.50	1.50	2.000	6.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNL244E	1.50	1.50	2.000	7.00	1.37	DN..432	IDSN443	KL46L	3/32	CK20	STC20	1/8
MDQNL245E	1.50	1.50	2.000	7.00	1.47	DN..543	IDSN533	KL58	1/8	CK12	STC4	5/32





See page B58 for inserts.

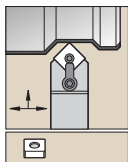


O.D./I.D. Tooling

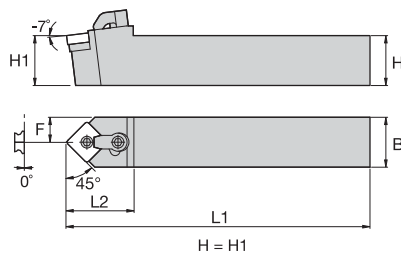
■ **MRGN**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MRGNR123B	.75	.75	1.000	4.50	.88	RN..32	IRSN33	KL34L	5/64	CK6	STC5	3/32
MRGNR124B	.75	.75	1.000	4.50	1.00	RN..43	IRSN43	KL46	3/32	CK21	STC20	1/8
MRGNR163D	1.00	1.00	1.250	6.00	.88	RN..32	IRSN33	KL34L	5/64	CK6	STC5	3/32
MRGNR164C	1.00	1.00	1.250	5.00	1.00	RN..43	IRSN43	KL46	3/32	CK9	STC4	5/32
MRGNR164D	1.00	1.00	1.250	6.00	1.00	RN..43	IRSN43	KL46	3/32	CK9	STC4	5/32
MRGNR165D	1.00	1.00	1.250	6.00	1.25	RN..54	IRSN53	KL58	1/8	CK12	STC4	5/32
MRGNR166D	1.00	1.00	1.250	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNR204D	1.25	1.25	1.500	6.00	1.00	RN..43	IRSN43	KL46	3/32	CK9	STC4	5/32
MRGNR206D	1.25	1.25	1.500	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNR246D	1.50	1.50	2.000	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNR248E	1.50	1.50	2.000	7.00	1.56	RN..86	IRSN84	KL810	5/32	CK24	STC19	3/16
<b>left hand</b>												
MRGNL164D	1.00	1.00	1.250	6.00	1.00	RN..43	IRSN43	KL46	3/32	CK9	STC4	5/32
MRGNL165D	1.00	1.00	1.250	6.00	1.25	RN..54	IRSN53	KL58	1/8	CK12	STC4	5/32
MRGNL166D	1.00	1.00	1.250	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNL204D	1.25	1.25	1.500	6.00	1.00	RN..43	IRSN43	KL46	3/32	CK9	STC4	5/32
MRGNL206D	1.25	1.25	1.500	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNL246D	1.50	1.50	2.000	6.00	1.31	RN..64	IRSN63	KL68	9/64	CK12	STC4	5/32
MRGNL248E	1.50	1.50	2.000	7.00	1.56	RN..86	IRSN84	KL810	5/32	CK24	STC19	3/16



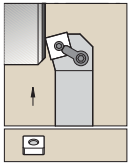
See pages B59–B65 for inserts.



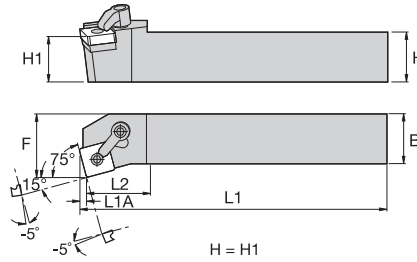
■ **MSDN 45°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MSDNN083	.50	.50	.250	4.500	1.14	SN..322	ISSN322	KL34	5/64	CK6	STC5	3/32
MSDNN103	.63	.63	.312	4.500	1.14	SN..322	ISSN322	KL34	5/64	CK6	STC5	3/32
MSDNN123	.75	.75	.375	4.500	1.14	SN..322	ISSN322	KL34	5/64	CK6	STC5	3/32
MSDNN124	.75	.75	.375	4.500	1.39	SN..432	ISSN433	KL46	3/32	CK9	STC4	5/32
MSDNN164	1.00	1.00	.500	6.000	1.39	SN..432	ISSN433	KL46	3/32	CK9	STC4	5/32
MSDNN854	1.25	1.00	.500	6.000	1.39	SN..432	ISSN433	KL46	3/32	CK9	STC4	5/32
MSDNN855	1.25	1.00	.500	6.000	1.62	SN..543	ISSN533	KL58	1/8	CK12	STC4	5/32
MSDNN856	1.25	1.00	.500	6.000	1.62	SN..643	ISSN633	KL68	9/64	CK12	STC4	5/32
MSDNN206	1.25	1.25	.625	7.000	1.62	SN..643	ISSN633	KL68	9/64	CK12	STC4	5/32
MSDNN866	1.50	1.00	.500	7.000	1.62	SN..643	ISSN633	KL68	9/64	CK12	STC4	5/32
MSDNN246	1.50	1.50	.750	7.000	1.62	SN..643	ISSN633	KL68	9/64	CK12	STC4	5/32



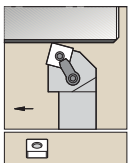
See pages B59–B65 for inserts.



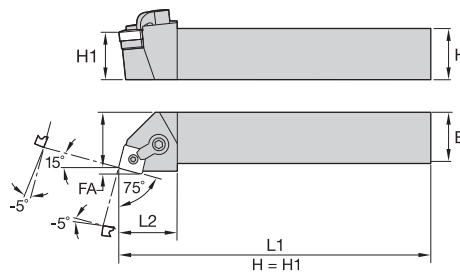
■ **MSKN 15°**



catalog number	H	B	F	L1	L2	L1A	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>MSKNR124B</b>	.75	.75	1.000	4.500	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNR164C</b>	1.00	1.00	1.250	5.000	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNR164D</b>	1.00	1.00	1.250	6.000	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNR204D</b>	1.25	1.25	1.500	6.000	1.13	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNR205D</b>	1.25	1.25	1.500	6.000	1.34	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSKNR206D</b>	1.25	1.25	1.500	6.000	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSKNR246D</b>	1.50	1.50	2.000	6.000	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSKNR248</b>	1.50	1.50	2.000	8.000	1.62	.23	SN..866	<b>ISSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16
<b>left hand</b>													
<b>MSKNL124B</b>	.75	.75	1.000	4.500	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNL164D</b>	1.00	1.00	1.250	6.000	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNL204D</b>	1.25	1.25	1.500	6.000	1.13	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSKNL205D</b>	1.25	1.25	1.500	6.000	1.34	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSKNL206D</b>	1.25	1.25	1.500	6.000	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSKNL246D</b>	1.50	1.50	2.000	6.000	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32



See pages B59–B65 for inserts.



■ **MSRN 15°**



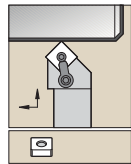
catalog number	H	B	F	L1	L2	FA	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>MSRNR124B</b>	.75	.75	.880	4.50	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNR164C</b>	1.00	1.00	1.130	5.00	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNR164D</b>	1.00	1.00	1.130	6.00	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNR204D</b>	1.25	1.25	1.380	6.00	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNR165C</b>	1.00	1.00	1.103	5.00	1.46	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR855D</b>	1.25	1.00	1.103	6.00	1.46	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR205D</b>	1.25	1.25	1.353	6.00	1.46	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR856D</b>	1.25	1.00	1.071	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR206D</b>	1.25	1.25	1.321	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR246D</b>	1.50	1.50	1.821	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR246E</b>	1.50	1.50	1.821	7.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNR248</b>	1.50	1.50	1.770	8.00	1.62	.23	SN..866	<b>ISSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16
<b>MSRNR328</b>	2.00	2.00	2.270	18.00	1.62	.23	SN..866	<b>ISSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16

(continued)

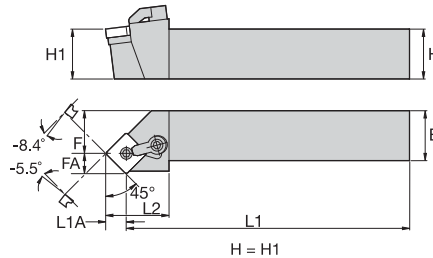
(MSRN 15° continued)

O.D./I.D. Tooling

catalog number	H	B	F	L1	L2	FA	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>left hand</b>													
<b>MSRNL124B</b>	.75	.75	.880	4.50	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNL164C</b>	1.00	1.00	1.130	5.00	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNL164D</b>	1.00	1.00	1.130	6.00	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNL854D</b>	1.25	1.00	1.130	6.00	1.23	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNL204D</b>	1.25	1.25	1.380	6.00	1.25	.12	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSRNL165C</b>	1.00	1.00	1.103	5.00	1.46	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL205D</b>	1.25	1.25	1.353	6.00	1.46	.15	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL856D</b>	1.25	1.00	1.071	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL206D</b>	1.25	1.25	1.321	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL246D</b>	1.50	1.50	1.821	6.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL246E</b>	1.50	1.50	1.821	7.00	1.50	.18	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>MSRNL248</b>	1.50	1.50	1.770	8.00	1.62	.23	SN..866	<b>ISSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16
<b>MSRNL328</b>	2.00	2.00	2.270	18.00	1.62	.23	SN..866	<b>ISSN846</b>	<b>KL810</b>	5/32	<b>CK24</b>	<b>STC19</b>	3/16



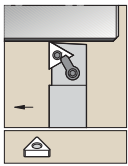
See pages B59–B65 for inserts.



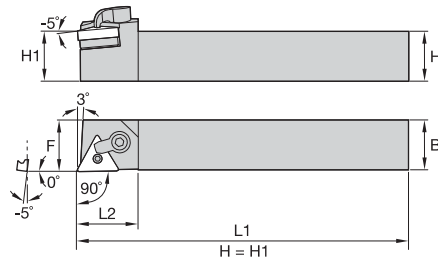
■ **MSSN 45°**

catalog number	H	B	F	L1	L2	F	FA	L1A	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>															
<b>MSSNR123B</b>	.75	.75	.641	4.50	1.12	.64	.25	.25	SN..322	<b>ISSN322</b>	<b>KL34</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MSSNR124B</b>	.75	.75	.662	4.50	1.24	.66	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR164C</b>	1.00	1.00	.912	5.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR164D</b>	1.00	1.00	.912	6.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR854D</b>	1.25	1.00	.912	6.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR165D</b>	1.00	1.00	.828	6.00	1.38	.83	.42	.42	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR205D</b>	1.25	1.25	1.078	6.00	1.38	1.08	.42	.42	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR246D</b>	1.50	1.50	1.511	6.00	1.48	1.51	.52	.53	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNR206D</b>	1.25	1.25	.992	6.00	1.48	.99	.52	.53	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>															
<b>MSSNL083B</b>	.50	.50	.391	4.50	1.12	.39	.25	.25	SN..322	<b>ISSN322</b>	<b>KL34</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MSSNL164C</b>	1.00	1.00	.912	5.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL164D</b>	1.00	1.00	.912	6.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL854D</b>	1.25	1.00	.912	6.00	1.24	.91	.34	.33	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL165D</b>	1.00	1.00	.828	6.00	1.38	.83	.42	.42	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL205D</b>	1.25	1.25	1.078	6.00	1.38	1.08	.42	.42	SN..543	<b>ISSN533</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL246D</b>	1.50	1.50	1.511	6.00	1.48	1.51	.52	.53	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK9</b>	<b>STC4</b>	5/32
<b>MSSNL206D</b>	1.25	1.25	.992	6.00	1.48	.99	.52	.53	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK9</b>	<b>STC4</b>	5/32





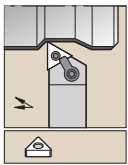
See pages B66–B74 for inserts.



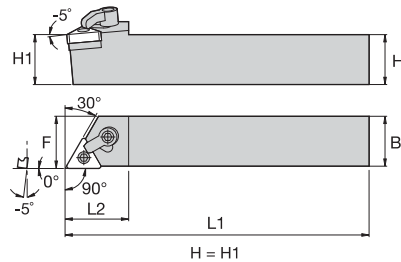
■ **MTAN 0°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MTANR082B</b>	.50	.50	.500	4.50	.96	TN..221	—	<b>KL23</b>	1/16	<b>CK19</b>	<b>STC9</b>	3/32
<b>MTANR103B</b>	.63	.63	.625	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANR123B</b>	.75	.75	.750	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANR164D</b>	1.00	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>MTANL103B</b>	.63	.63	.625	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANL123B</b>	.75	.75	.750	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANL164D</b>	1.00	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



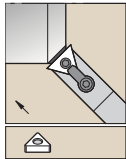
See pages B66–B74 for inserts.



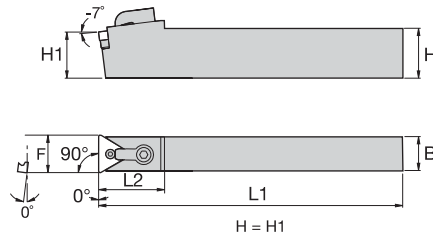
■ **MTAN-S 0°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MTANRS123</b>	.75	.75	.750	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANRS163</b>	1.00	1.00	1.000	6.00	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANRS164</b>	1.00	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTANRS854</b>	1.25	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTANRS205</b>	1.25	1.25	1.250	6.00	1.46	TN..543	<b>ITSN534</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>MTANLS123</b>	.75	.75	.750	4.50	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANLS163</b>	1.00	1.00	1.000	6.00	1.12	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTANLS164</b>	1.00	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTANLS854</b>	1.25	1.00	1.000	6.00	1.21	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTANLS205</b>	1.25	1.25	1.250	6.00	1.46	TN..543	<b>ITSN534</b>	<b>KL58</b>	1/8	<b>CK9</b>	<b>STC4</b>	5/32



See pages B66–B74 for inserts.

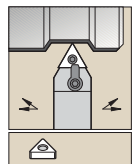


■ **MTCN 0°**

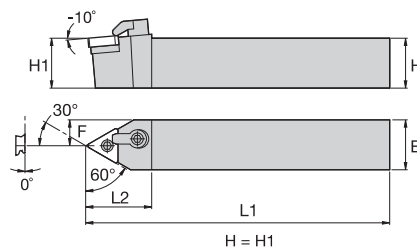
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MTCNN083	.50	.50	.542	4.50	1.13	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
MTCNN443	1.00	.50	.542	8.00	1.13	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
MTCNN124	.75	.75	.775	6.00	1.43	TN..432	ITSN433	KL46	3/32	CK12	STC4	5/32
MTCNN644	1.00	.75	.775	8.00	1.43	TN..432	ITSN433	KL46	3/32	CK12	STC4	5/32



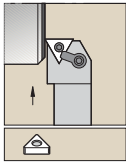
See pages B66–B74 for inserts.



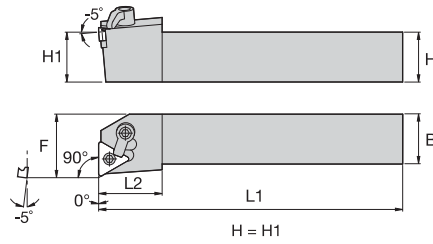
■ **MTEN-S 30°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MTENNS082	.50	.50	.250	4.50	.99	TN..221	—	KL23	1/16	CK6	STC5	3/32
MTENNS103	.63	.63	.312	4.50	1.16	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTENNS123	.75	.75	.375	4.50	1.16	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTENNS163	1.00	1.00	.500	5.00	1.16	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTENNS164	1.00	1.00	.500	6.00	1.40	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTENNS854	1.25	1.00	.500	6.00	1.41	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTENNS205	1.25	1.25	.625	6.00	1.64	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTENNS246	1.50	1.50	.750	7.00	1.95	TN..663	ITSN636	KL68L	9/64	CK12	STC4	5/32

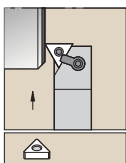


See pages B66–B74 for inserts.

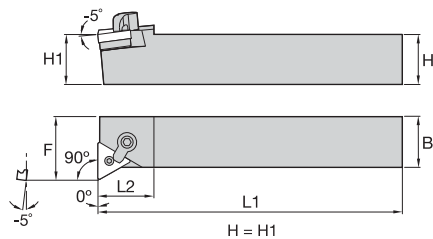

**MTFN 0°**


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MTFNR123B</b>	.75	.75	1.000	4.50	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNR163C</b>	1.00	1.00	1.250	5.00	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNR124B</b>	.75	.75	1.000	4.50	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNR164C</b>	1.00	1.00	1.250	5.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNR164D</b>	1.00	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNR204D</b>	1.25	1.25	1.500	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNR854D</b>	1.25	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNR205D</b>	1.25	1.25	1.500	6.00	1.43	TN..543	<b>ITSN534</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MTFNR245D</b>	1.50	1.50	2.000	6.00	1.43	TN..543	<b>ITSN534</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MTFNR246E</b>	1.50	1.50	2.000	7.00	1.49	TN..663	<b>ITSN636</b>	<b>KL68L</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>MTFNL103B</b>	.63	.63	.875	4.50	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNL163D</b>	1.00	1.00	1.250	6.00	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNL123B</b>	.75	.75	1.000	4.50	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNL164C</b>	1.00	1.00	1.250	5.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNL164D</b>	1.00	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNL204D</b>	1.25	1.25	1.500	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNL854D</b>	1.25	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>MTFNL245D</b>	1.50	1.50	2.000	6.00	1.43	TN..543	<b>ITSN534</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>MTFNL246E</b>	1.50	1.50	2.000	7.00	1.49	TN..663	<b>ITSN636</b>	<b>KL68L</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32

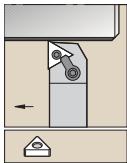
O.D./I.D. Tooling



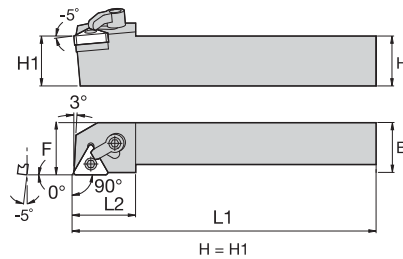
See pages B66–B74 for inserts.


**MTFN-S 0°**


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MTFNRS123</b>	.75	.75	1.000	4.50	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNRS164</b>	1.00	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>MTFNLS123</b>	.75	.75	1.000	4.50	.94	TN..332	<b>ITSN323</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>MTFNLS164</b>	1.00	1.00	1.250	6.00	1.22	TN..432	<b>ITSN433</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



See pages B66–B74 for inserts.

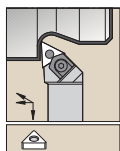


■ **MTGN 0°**

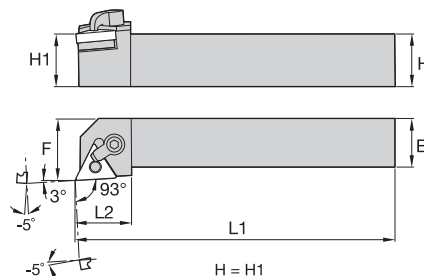
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MTGNR082B	.50	.50	.625	4.50	.96	TN..221	—	KL23	1/16	CK19	STC9	3/32
MTGNR103B	.63	.63	.875	4.50	1.12	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTGNR163C	1.00	1.00	1.250	5.00	1.12	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTGNR163D	1.00	1.00	1.250	6.00	1.12	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTGNR123B	.75	.75	1.000	4.50	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTGNR124B	.75	.75	1.000	4.50	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNR164C	1.00	1.00	1.250	5.00	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNR164D	1.00	1.00	1.250	6.00	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNR204D	1.25	1.25	1.500	6.00	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNR165C	1.00	1.00	1.250	5.00	1.38	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTGNR205D	1.25	1.25	1.500	6.00	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
<b>left hand</b>												
MTGNL103B	.63	.63	.875	4.50	1.12	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTGNL123B	.75	.75	1.000	4.50	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTGNL124B	.75	.75	1.000	4.50	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNL164C	1.00	1.00	1.250	5.00	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNL164D	1.00	1.00	1.250	6.00	1.20	TN..432	ITSN433	KL46	3/32	CK6	STC4	5/32
MTGNL204D	1.25	1.25	1.500	6.00	1.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTGNL205D	1.25	1.25	1.500	6.00	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32



See pages B66–B74 for inserts.



■ **MTJN -3°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MTJNR082B	.50	.50	.625	4.50	.72	TN..221	—	KL23	1/16	CK19	STC9	3/32
MTJNR103B	.63	.63	.875	4.50	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNR123B	.75	.75	1.000	4.50	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNR163C	1.00	1.00	1.250	5.00	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNR163D	1.00	1.00	1.250	6.00	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNR164D	1.00	1.00	1.250	6.00	1.12	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNR204D	1.25	1.25	1.500	6.00	1.12	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNR205D	1.25	1.25	1.500	6.00	1.25	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32

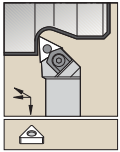
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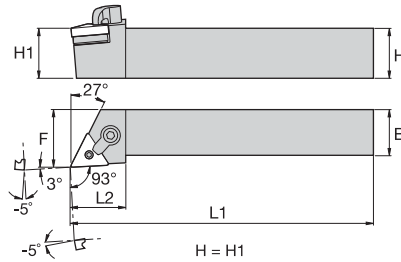
(MTJN -3° continued)

catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>left hand</b>												
MTJNL082B	.50	.50	.625	4.50	.72	TN..221	—	KL23	1/16	CK19	STC9	3/32
MTJNL103B	.63	.63	.875	4.50	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNL123B	.75	.75	1.000	4.50	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNL163C	1.00	1.00	1.250	5.00	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNL163D	1.00	1.00	1.250	6.00	.88	TN..322	ITSN333	KL34L	5/64	CK6	STC5	3/32
MTJNL164D	1.00	1.00	1.250	6.00	1.12	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNL204D	1.25	1.25	1.500	6.00	1.12	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNL205D	1.25	1.25	1.500	6.00	1.25	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32

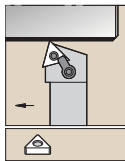
O.D./I.D. Tooling



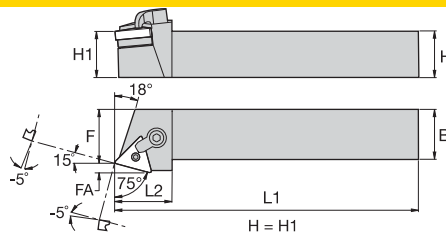
See pages B66–B74 for inserts.


**MTJN-S -3°**

catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MTJNRS123	.75	.75	1.000	4.500	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTJNRS163	1.00	1.00	1.250	6.000	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTJNRS124	.75	.75	1.000	4.500	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNRS204	1.25	1.25	1.250	6.000	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNRS854	1.25	1.00	1.250	6.000	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNRS864	1.50	1.00	1.250	6.000	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNRS164	1.00	1.00	1.250	6.000	1.32	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNRS165	1.00	1.00	1.250	6.000	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTJNRS205	1.25	1.25	1.500	6.000	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTJNRS246	1.50	1.50	2.000	7.000	1.62	TN..663	ITSN636	KL68L	9/64	CK12	STC4	5/32
<b>left hand</b>												
MTJNLS123	.75	.75	1.000	4.500	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTJNLS163	1.00	1.00	1.250	6.000	1.12	TN..332	ITSN323	KL34L	5/64	CK6	STC5	3/32
MTJNLS124	.75	.75	1.000	4.500	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNLS204	1.25	1.25	1.250	6.000	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNLS864	1.50	1.00	1.250	6.000	1.19	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNLS164	1.00	1.00	1.250	6.000	1.32	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
MTJNLS165	1.00	1.00	1.250	6.000	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTJNLS205	1.25	1.25	1.500	6.000	1.44	TN..543	ITSN534	KL58	1/8	CK9	STC4	5/32
MTJNLS246	1.50	1.50	2.000	7.000	1.62	TN..663	ITSN636	KL68L	9/64	CK12	STC4	5/32



See pages B66–B74 for inserts.

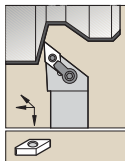


■ **MTRN 15°**

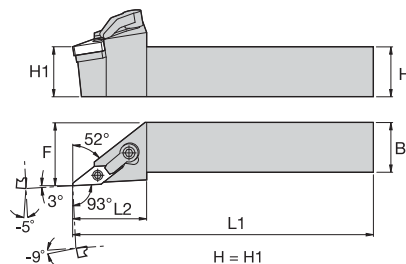
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	FA	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand													
<b>MTRNR103B</b>	.63	.63	.722	4.50	1.20	.15	TN..322	ITSN333	KL34L	5/64	CK20	STC11	1/8
<b>MTRNR164D</b>	1.00	1.00	1.040	6.00	1.24	.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
left hand													
<b>MTRNL164D</b>	1.00	1.00	1.040	6.00	1.24	.20	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32



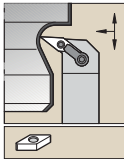
See pages B74–B78 for inserts.



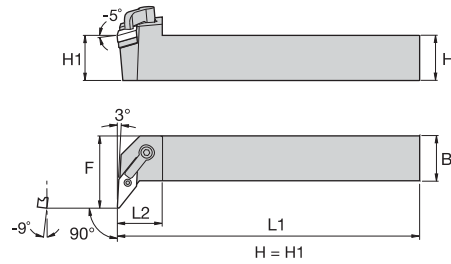
■ **MVJN -3°**



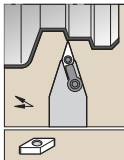
catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand												
<b>MVJNR123A</b>	.75	.75	1.000	4.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR123B</b>	.75	.75	1.000	4.50	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR163C</b>	1.00	1.00	1.250	5.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR163D</b>	1.00	1.00	1.250	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR853D</b>	1.25	1.00	1.250	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR203D</b>	1.25	1.25	1.500	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR243D</b>	1.50	1.50	2.000	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNR124B</b>	.75	.75	1.000	4.50	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNR164C</b>	1.00	1.00	1.250	5.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNR164D</b>	1.00	1.00	1.250	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNR204D</b>	1.25	1.25	1.500	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNR244D</b>	1.50	1.50	2.000	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
left hand												
<b>MVJNL123A</b>	.75	.75	1.000	4.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL123B</b>	.75	.75	1.000	4.50	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL163C</b>	1.00	1.00	1.250	5.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL163D</b>	1.00	1.00	1.250	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL853D</b>	1.25	1.00	1.250	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL203D</b>	1.25	1.25	1.500	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL243D</b>	1.50	1.50	2.000	6.00	1.66	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
<b>MVJNL124B</b>	.75	.75	1.000	4.50	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNL164C</b>	1.00	1.00	1.250	5.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNL164D</b>	1.00	1.00	1.250	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNL204D</b>	1.25	1.25	1.500	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>MVJNL244D</b>	1.50	1.50	2.000	6.00	2.00	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32



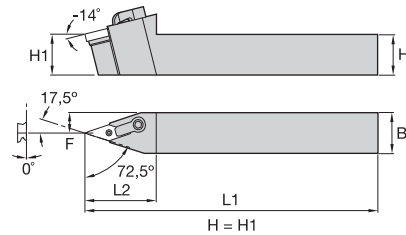
See pages B74–B78 for inserts.


**MVUN -3°**

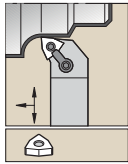

catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MVUNR204C	1.25	1.25	2.000	5.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVUNR204D	1.25	1.25	2.000	6.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVUNR244D	1.50	1.50	2.250	6.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>left hand</b>												
MVUNL204C	1.25	1.25	2.000	5.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVUNL204D	1.25	1.25	2.000	6.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVUNL244D	1.50	1.50	2.250	6.00	1.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32



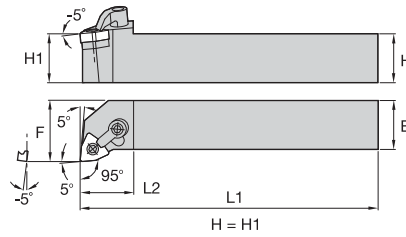
See pages B74–B78 for inserts.


**MVVN 17.5°**


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
MVVNN123B	.75	.75	.375	4.50	1.77	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
MVVNN163C	1.00	1.00	.500	5.00	1.77	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
MVVNN163D	1.00	1.00	.500	6.00	1.77	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
MVVNN853D	1.25	1.00	.500	6.00	1.77	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
MVVNN203D	1.25	1.25	.625	6.00	1.77	VN..332	IVSN322	KL34L	5/64	CK43	STC4	5/32
MVVNN164D	1.00	1.00	.500	6.00	2.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVVNN204D	1.25	1.25	.625	6.00	2.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
MVVNN244E	1.50	1.50	.750	7.00	2.25	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32



See pages B79–B83 for inserts.

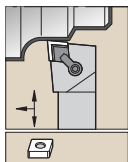


O.D./I.D. Tooling

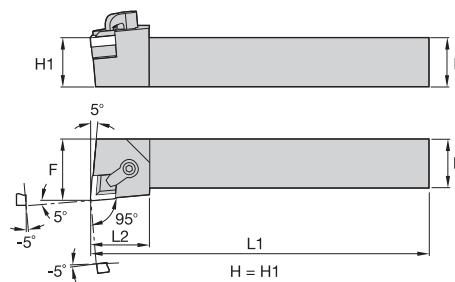
■ **MWLN -5°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MWLN123B	.75	.75	1.000	4.50	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN163C	1.00	1.00	1.250	5.00	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN163D	1.00	1.00	1.250	6.00	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN203D	1.25	1.25	1.500	6.00	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN124B	.75	.75	1.000	4.50	1.13	WN..432	IWSN433	KL46	3/32	CK21	STC20	1/8
MWLN164C	1.00	1.00	1.250	5.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN164D	1.00	1.00	1.250	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN854D	1.25	1.00	1.250	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN204D	1.25	1.25	1.500	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN244D	1.50	1.50	2.000	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
<b>left hand</b>												
MWLN123B	.75	.75	1.000	4.50	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN163C	1.00	1.00	1.250	5.00	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN163D	1.00	1.00	1.250	6.00	1.00	WN..332	IWSN322	KL34L	5/64	CK6	STC5	3/32
MWLN124B	.75	.75	1.000	4.50	1.13	WN..432	IWSN433	KL46	3/32	CK21	STC20	1/8
MWLN164C	1.00	1.00	1.250	5.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN164D	1.00	1.00	1.250	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32
MWLN854D	1.25	1.00	1.250	6.00	1.13	WN..432	IWSN433	KL46	3/32	CK9	STC4	5/32



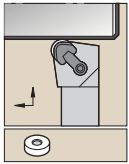
See page B118 for inserts.



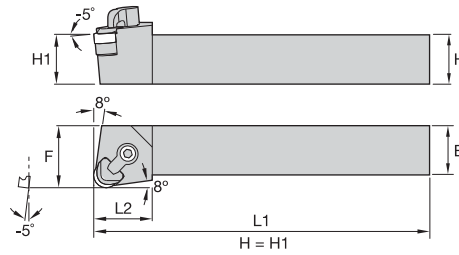
■ **MCLN-C -5°**



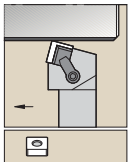
catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
MCLNRC164D	1.00	1.00	1.250	6.00	1.25	CN..432	ICSN442	KL46L	3/32	CK21	STC20	1/8
<b>left hand</b>												
MCLNLC164D	1.00	1.00	1.250	6.00	1.25	CN..432	ICSN442	KL46L	3/32	CK21	STC20	1/8



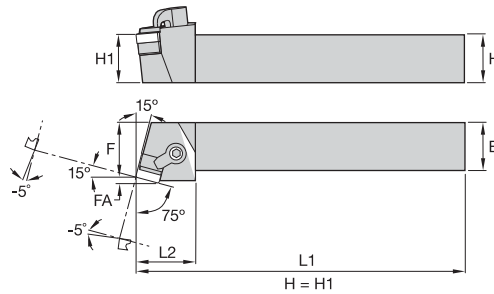
See page B119 for inserts.


**MRGN-C**

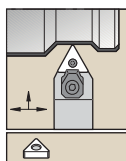

catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>MRGNRC164D</b>	1.00	1.00	1.250	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>MRGNRC204D</b>	1.25	1.25	1.500	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>MRGNRC244D</b>	1.50	1.50	2.000	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>left hand</b>												
<b>MRGNLC164D</b>	1.00	1.00	1.250	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>MRGNLC204D</b>	1.25	1.25	1.500	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>MRGNLC244D</b>	1.50	1.50	2.000	6.00	1.25	RN..43	<b>IRSN44</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8



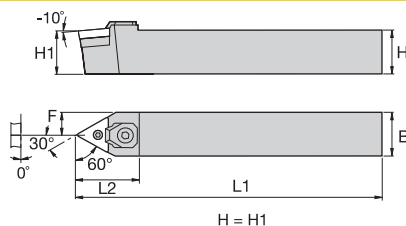
See page B120 for inserts.


**MSRN-C 15°**


catalog number	H	B	F	L1	L2	FA	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>MSRNRC164D</b>	1.00	1.00	1.130	6.00	1.25	.12	SN..432	<b>ISSN442</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>left hand</b>													
<b>MSRNLC164D</b>	1.00	1.00	1.130	6.00	1.25	.12	SN..432	<b>ISSN442</b>	<b>KL46L</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8



See pages B66–B73 for inserts.

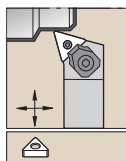


■ **WTEN 30°**

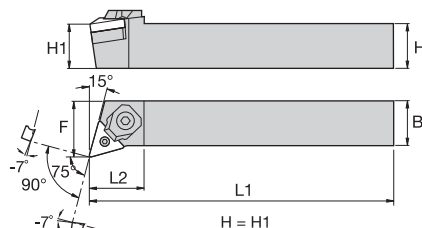
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	retaining ring	clamp screw	hex (inch)
<b>WTENNS164</b>	1.00	1.00	.500	6.00	1.38	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
<b>WTENNS205</b>	1.25	1.25	.625	6.00	1.63	TN..543	<b>SM370</b>	<b>FPE6</b>	3/32	<b>WC6</b>	—	—	5/32 & 3/16



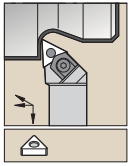
See pages B66–B73 for inserts.



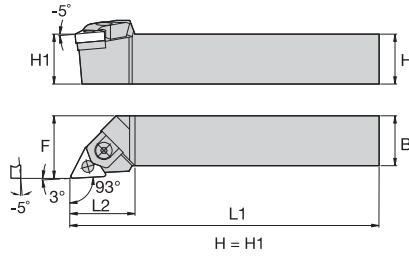
■ **WTIN -15°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	retaining ring	clamp screw	hex (inch)
<b>right hand</b>													
<b>WTINRS164</b>	1.00	1.00	1.250	6.00	1.25	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
<b>WTINRS205</b>	1.25	1.25	1.500	6.00	1.50	TN..543	<b>SM370</b>	<b>FPE6</b>	3/32	<b>WC6</b>	—	—	5/32 & 3/16
<b>left hand</b>													
<b>WTINLS164</b>	1.00	1.00	1.250	6.00	1.25	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
<b>WTINLS205</b>	1.25	1.25	1.500	6.00	1.50	TN..543	<b>SM370</b>	<b>FPE6</b>	3/32	<b>WC6</b>	—	—	5/32 & 3/16



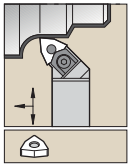
See pages B66–B73 for inserts.



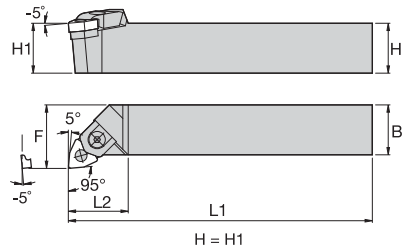
■ **WTJN -3°**



catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	hex (inch)	clamp	retaining ring	clamp screw	hex (inch)
right hand <b>WTJNRS164</b>	1.00	1.00	1.250	6.00	1.38	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
left hand <b>WTJNRS854</b>	1.25	1.00	1.250	6.00	1.38	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
right hand <b>WTJNLS164</b>	1.00	1.00	1.250	6.00	1.38	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8
left hand <b>WTJNLS854</b>	1.25	1.00	1.250	6.00	1.38	TN..432	<b>SM391</b>	<b>FPE5</b>	1/16 & 3/32	<b>WC5</b>	<b>RR5144-21</b>	<b>S986</b>	5/32 & 1/8



See pages B79–B83 for inserts.

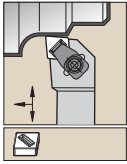


■ **WWLN -5°**

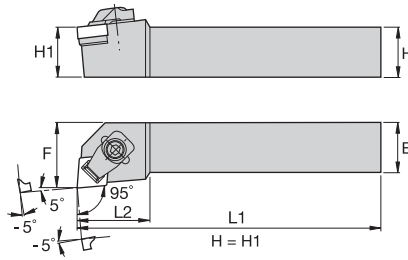


catalog number	H	B	F	L1	L2	gage insert	shim	lock pin	Torx	clamp	clamp screw	E-Clip	Torx
right hand <b>WWLNR124</b>	.75	.75	1.000	4.50	1.25	WN..432	<b>SM443</b>	<b>FP453</b>	T10	<b>MWW4</b>	<b>MS1372</b>	<b>E147</b>	T25
left hand <b>WWLNR164</b>	1.00	1.00	1.250	6.00	1.25	WN..432	<b>SM443</b>	<b>FP477</b>	T10	<b>MWW4</b>	<b>MS1372</b>	<b>E147</b>	T25
right hand <b>WWLNL164</b>	1.00	1.00	1.250	6.00	1.25	WN..432	<b>SM443</b>	<b>FP477</b>	T10	<b>MWW4</b>	<b>MS1372</b>	<b>E147</b>	T25





See page B122 for inserts.

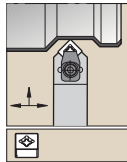


**CCLN-MX -5°**

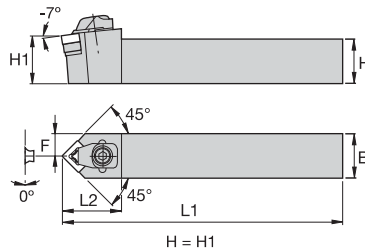
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx	clamp assembly	Torx
right hand											
<b>CCLNR164DMX5</b>	1.00	1.00	1.250	6.00	1.25	CN.X452	<b>552.221</b>	<b>554.260</b>	T20	<b>551.326</b>	T25
<b>CCLNR204DMX5</b>	1.25	1.25	1.500	6.00	1.25	CN.X452	<b>552.221</b>	<b>554.260</b>	T20	<b>551.326</b>	T25
left hand											
<b>CCLNL164DMX5</b>	1.00	1.00	1.250	6.00	1.25	CN.X452	<b>552.221</b>	<b>554.260</b>	T20	<b>551.326</b>	T25
<b>CCLNL204DMX5</b>	1.25	1.25	1.500	6.00	1.25	CN.X452	<b>552.221</b>	<b>554.260</b>	T20	<b>551.326</b>	T25
<b>CCLNL245DMX5</b>	1.50	1.50	2.000	6.00	1.38	CN.X553	<b>552.223</b>	<b>554.261</b>	T25	<b>551.342</b>	T25



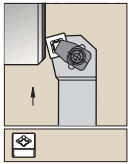
See pages B125–B126 for inserts.



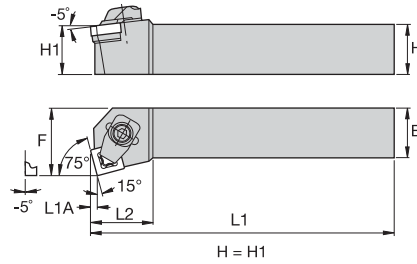
**CSDN-MX 45°**



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx	clamp assembly	Torx
<b>CSDNN164DMX5</b>	1.00	1.00	.500	6.00	1.38	SN.X452	<b>552.232</b>	<b>554.260</b>	T20	<b>551.326</b>	T25

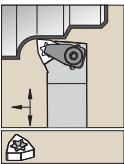


See pages B125–B126 for inserts.

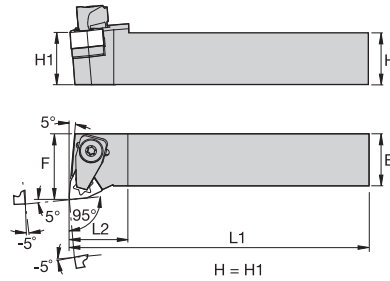


■ CSKN-MX 15°

catalog number	H	B	F	L1	L2	L1A	gage insert	shim	shim screw	Torx	clamp assembly	Torx
right hand												
<b>CSKNR164DMX5</b>	1.00	1.00	1.250	6.00	1.06	.12	SN.X452	552.232	554.260	T20	551.326	T25
left hand												
<b>CSKNL164DMX5</b>	1.00	1.00	1.250	6.00	1.06	.12	SN.X452	552.232	554.260	T20	551.326	T25
<b>CSKNL204DMX5</b>	1.25	1.25	1.500	6.00	1.06	.12	SN.X452	552.232	554.260	T20	551.326	T25



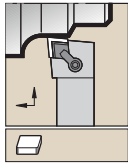
See page B127 for inserts.



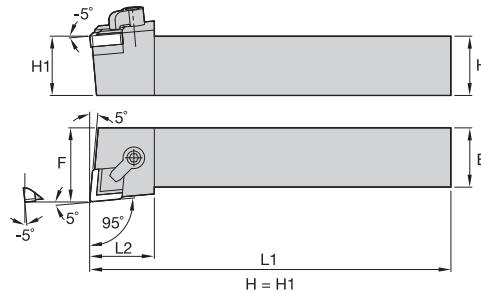
■ CWLN-MX -5°

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	Torx	clamp assembly	Torx
right hand											
<b>CWLN164DMX5</b>	1.00	1.00	1.250	6.00	1.12	WN.X452	552.210	554.260	T20	551.326	T25
<b>CWLN204DMX5</b>	1.25	1.25	1.500	6.00	1.12	WN.X452	552.210	554.260	T20	551.326	T25
left hand											
<b>CWLN164DMX5</b>	1.00	1.00	1.250	6.00	1.12	WN.X452	552.210	554.260	T20	551.326	T25
<b>CWLN204DMX5</b>	1.25	1.25	1.500	6.00	1.12	WN.X452	552.210	554.260	T20	551.326	T25

O.D./I.D. Tooling



See page B122 for inserts.

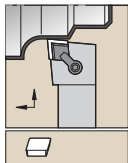


■ **CCLN -5°**

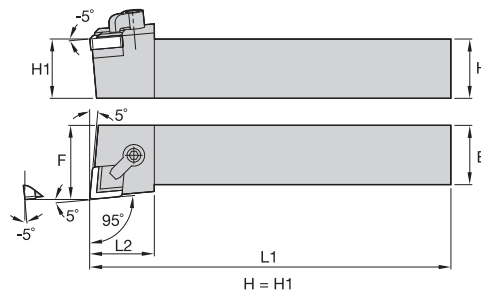


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand <b>CCLNR164</b>	1.00	1.00	1.250	6.00	1.00	CN.422	<b>SM396</b>	<b>S111</b>	1/16	<b>CK21</b>	<b>STC20</b>	1/8
left hand <b>CCLNL164</b>	1.00	1.00	1.250	6.00	1.00	CN.422	<b>SM396</b>	<b>S111</b>	1/16	<b>CK21</b>	<b>STC20</b>	1/8

O.D./I.D. Tooling



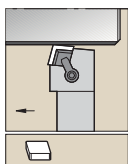
See page B122 for inserts.



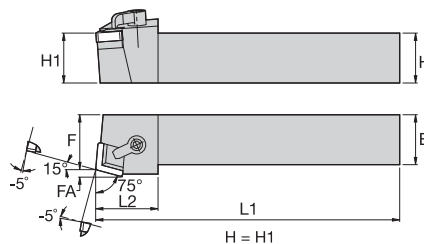
■ **CCLN-P -5°**



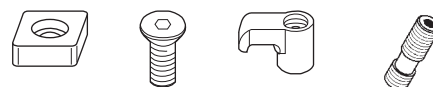
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	clamp	clamp screw	hex (inch)
right hand <b>CCLNRP163D</b>	1.00	1.00	1.250	6.00	1.25	CN.322	<b>SM432</b>	<b>SL344</b>	<b>CK20</b>	<b>STC11</b>	1/8
left hand <b>CCLNLP163D</b>	1.00	1.00	1.250	6.00	1.25	CN.322	<b>SM432</b>	<b>SL344</b>	<b>CK20</b>	<b>STC11</b>	1/8



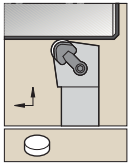
See page B122 for inserts.



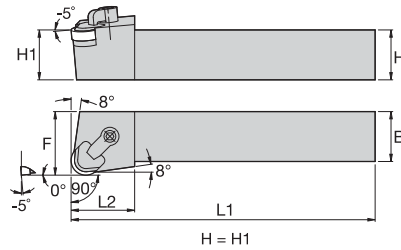
■ **CCRN-P 15°**



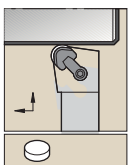
catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	clamp	clamp screw	hex (inch)
right hand <b>CCRNRP163D</b>	1.00	1.00	1.161	6.00	1.25	.09	CN.322	<b>SM432</b>	<b>SL344</b>	<b>CK20</b>	<b>STC11</b>	1/8



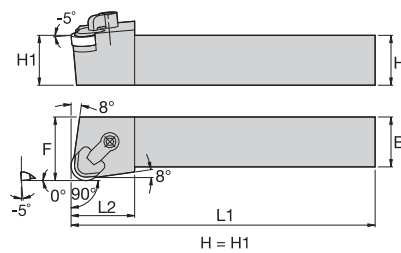
See page B124 for inserts.


**CRGN**

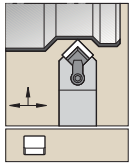

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>CRGNR123</b>	.75	.75	.875	4.50	.75	RN.32	<b>SM46</b>	<b>S111</b>	1/16	<b>CK6</b>	<b>STC5</b>	3/32
<b>CRGNR163</b>	1.00	1.00	1.125	6.00	.75	RN.32	<b>SM46</b>	<b>S111</b>	1/16	<b>CK6</b>	<b>STC5</b>	3/32
<b>CRGNR164</b>	1.00	1.00	1.125	6.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR854</b>	1.25	1.00	1.125	6.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR864</b>	1.50	1.00	1.125	8.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR244F</b>	1.50	1.50	2.000	8.00	1.25	RNG45	<b>SM45</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR206</b>	1.25	1.25	1.500	6.00	1.38	RNG65	<b>SM456</b>	<b>SL344</b>	—	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR246</b>	1.50	1.50	2.000	8.00	1.38	RNG65	<b>SM456</b>	<b>SL344</b>	—	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNR208</b>	1.25	1.25	1.500	6.00	1.56	RNG84	<b>SM444</b>	<b>SL344</b>	—	<b>CK24</b>	<b>STC19</b>	3/16
<b>CRGNR248</b>	1.50	1.50	2.000	8.00	1.56	RNG84	<b>SM444</b>	<b>SL344</b>	—	<b>CK24</b>	<b>STC19</b>	3/16
<b>left hand</b>												
<b>CRGNL123</b>	.75	.75	.875	4.50	.75	RN.32	<b>SM46</b>	<b>S111</b>	1/16	<b>CK6</b>	<b>STC5</b>	3/32
<b>CRGNL163</b>	1.00	1.00	1.125	6.00	.75	RN.32	<b>SM46</b>	<b>S111</b>	1/16	<b>CK6</b>	<b>STC5</b>	3/32
<b>CRGNL164</b>	1.00	1.00	1.125	6.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL854</b>	1.25	1.00	1.125	6.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL864</b>	1.50	1.00	1.125	8.00	1.00	RN.42	<b>SM218</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL244F</b>	1.50	1.50	2.000	8.00	1.25	RNG45	<b>SM45</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL206</b>	1.25	1.25	1.500	6.00	1.38	RNG65	<b>SM456</b>	<b>SL344</b>	—	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL246</b>	1.50	1.50	2.000	8.00	1.38	RNG65	<b>SM456</b>	<b>SL344</b>	—	<b>CK12</b>	<b>STC4</b>	5/32
<b>CRGNL208</b>	1.25	1.25	1.500	6.00	1.56	RNG84	<b>SM444</b>	<b>SL344</b>	—	<b>CK24</b>	<b>STC19</b>	3/16
<b>CRGNL248</b>	1.50	1.50	2.000	8.00	1.56	RNG84	<b>SM444</b>	<b>SL344</b>	—	<b>CK24</b>	<b>STC19</b>	3/16



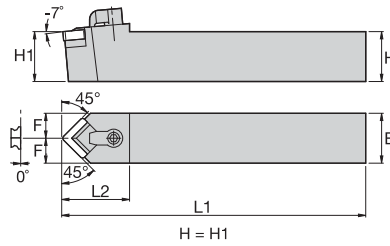
See page B124 for inserts.


**CRGN-P**


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	clamp	clamp screw	hex (inch)
<b>right hand</b>											
<b>CRGNRP163D</b>	1.00	1.00	1.250	6.00	.75	RNM32	<b>SM434</b>	<b>SL344</b>	<b>CK20</b>	<b>STC20</b>	1/8
<b>CRGNRP164D</b>	1.00	1.00	1.250	6.00	1.13	RN.42	<b>SM437</b>	<b>SL344</b>	<b>CK28</b>	<b>STC4</b>	5/32
<b>CRGNRP204D</b>	1.25	1.25	1.500	6.00	1.13	RN.42	<b>SM437</b>	<b>SL344</b>	<b>CK28</b>	<b>STC4</b>	5/32
<b>left hand</b>											
<b>CRGNLP163D</b>	1.00	1.00	1.250	6.00	.75	RNM32	<b>SM434</b>	<b>SL344</b>	<b>CK20</b>	<b>STC20</b>	1/8
<b>CRGNLP164D</b>	1.00	1.00	1.250	6.00	1.13	RN.42	<b>SM437</b>	<b>SL344</b>	<b>CK28</b>	<b>STC4</b>	5/32
<b>CRGNLP204D</b>	1.25	1.25	1.500	6.00	1.13	RN.42	<b>SM437</b>	<b>SL344</b>	<b>CK28</b>	<b>STC4</b>	5/32



See pages B125–B126 for inserts.

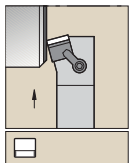


■ **CSDN 45°**

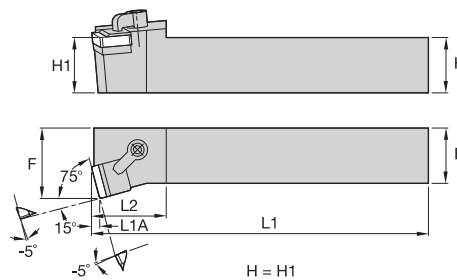
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>CSDNN124</b>	.75	.75	.375	4.50	1.31	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CSDNN164</b>	1.00	1.00	.500	6.00	1.31	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CSDNN866</b>	1.50	1.00	.500	8.00	1.75	SN.633	<b>SM216</b>	<b>S125</b>	3/32	<b>CK24</b>	<b>STC19</b>	3/16



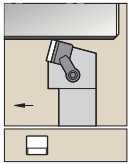
See pages B125–B126 for inserts.



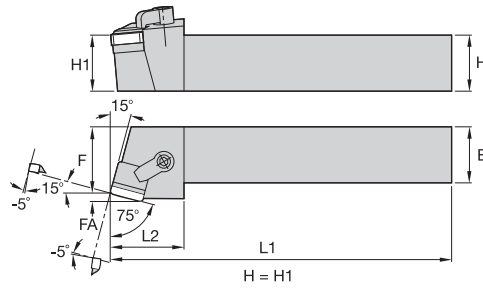
■ **CSKN 15°**



catalog number	H	B	F	L1	L2	L1A	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand													
<b>CSKNR123</b>	.75	.75	.830	4.50	.88	.09	SN.322	<b>SM87</b>	<b>SL344</b>	—	<b>CK7</b>	<b>STC5</b>	3/32
<b>CSKNR856</b>	1.25	1.00	1.190	6.00	1.50	.18	SN.633	<b>SM216</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



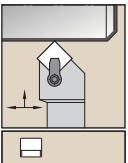
See pages B125–B126 for inserts.



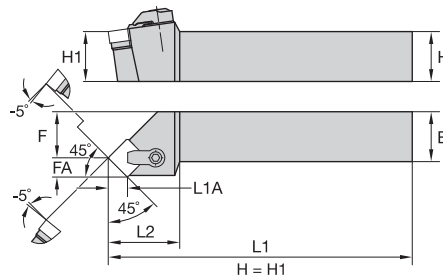
■ **CSRN 15°**



catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand													
<b>CSRNR124</b>	.75	.75	.855	4.50	1.19	.12	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CSRNR164</b>	1.00	1.00	1.048	6.00	1.19	.12	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CSRNR856</b>	1.25	1.00	1.060	6.00	1.44	.18	SN.633	<b>SM216</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



See pages B125–B126 for inserts.

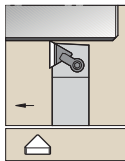


■ **CSSN 45°**

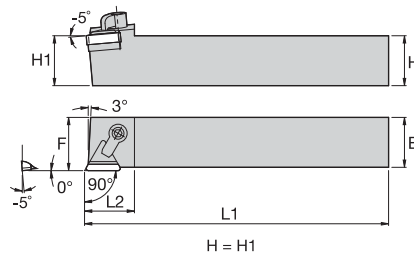


catalog number	H	B	F	L1	L2	FA	L1A	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand														
<b>CSSNR164</b>	1.00	1.00	.720	6.00	1.31	.34	.33	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
left hand														
<b>CSSNL164</b>	1.00	1.00	.720	6.00	1.31	.34	.33	SN.422	<b>SM47</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32

O.D./I.D. Tooling



See page B126 for inserts.

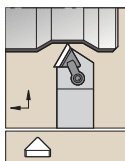


■ **CTAN 0°**

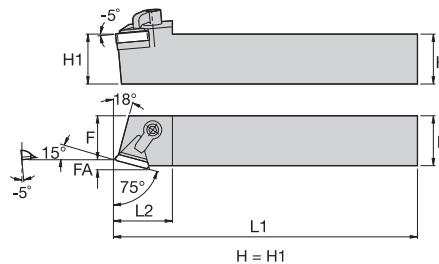
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>CTANR082</b>	.50	.50	.50	4.500	.75	TN.221	<b>SM88</b>	<b>SL344</b>	—	<b>CK19</b>	<b>STC5</b>	3/32
<b>CTANR123</b>	.75	.75	.75	4.500	1.06	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTANR164</b>	1.00	1.00	1.00	6.000	1.19	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>CTANL164</b>	1.00	1.00	1.00	6.000	1.19	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



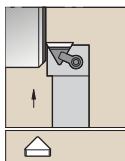
See page B126 for inserts.



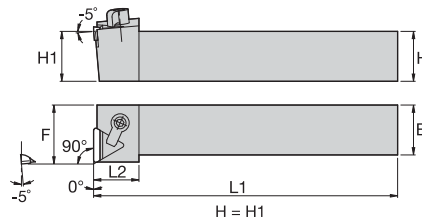
■ **CTBN 15°**



catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>CTBNR123</b>	.75	.75	.600	4.50	1.19	.15	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTBNR204</b>	1.25	1.25	1.040	6.00	1.25	.20	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTBNR864</b>	1.50	1.00	.790	8.00	1.25	.20	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>CTBNL123</b>	.75	.75	.600	4.50	1.19	.15	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTBNL204</b>	1.25	1.25	1.040	6.00	1.25	.20	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



See page B126 for inserts.



■ **CTFN 0°**



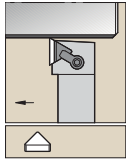
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>CTFN R123</b>	.75	.75	1.000	4.50	.88	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTFN R853</b>	1.25	1.00	1.250	6.00	.88	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32

(continued)

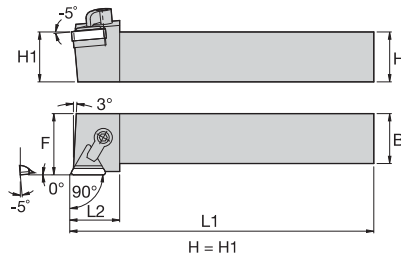


(CTFN 0° continued)

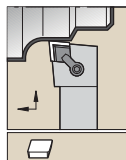
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
left hand												
<b>CTFNL123</b>	.75	.75	1.000	4.50	.88	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTFNL163</b>	1.00	1.00	1.250	6.00	.88	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32



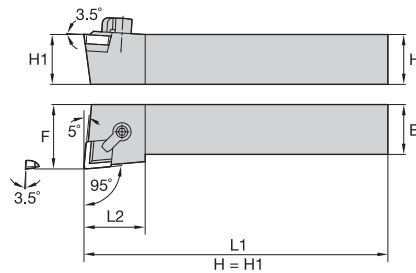
See page B126 for inserts.


**CTGN 0°**

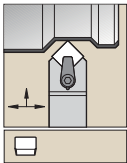
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand												
<b>CTGNR123</b>	.75	.75	1.000	4.50	1.00	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTGNR163</b>	1.00	1.00	1.250	6.00	1.00	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTGNR164</b>	1.00	1.00	1.250	6.00	1.19	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTGNR204</b>	1.25	1.25	1.500	6.00	1.19	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
left hand												
<b>CTGNL123</b>	.75	.75	1.000	4.50	1.00	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC4</b>	5/32
<b>CTGNL163</b>	1.00	1.00	1.250	6.00	1.00	TN.322	<b>SM48</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTGNL164</b>	1.00	1.00	1.250	6.00	1.19	TN.432	<b>SM26</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



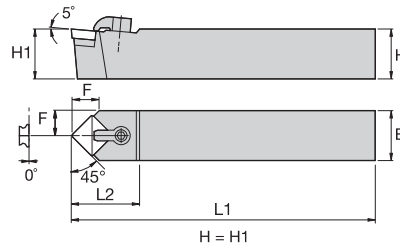
See page B84 for inserts.


**CCLP -5°**

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand												
<b>CCLPR084V</b>	.50	.50	.750	3.50	1.00	CP.422	<b>SM369</b>	<b>S19</b>	1/16	<b>CK7</b>	<b>STC9</b>	3/32
<b>CCLPR124B</b>	.75	.75	1.000	4.50	1.25	CP.422	<b>SM369</b>	<b>S111</b>	1/16	<b>CK13</b>	<b>STC8</b>	5/32
<b>CCLPR164C</b>	1.00	1.00	1.250	5.00	1.25	CP.422	<b>SM369</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
<b>CCLPR164D</b>	1.00	1.00	1.250	6.00	1.25	CP.422	<b>SM369</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32
left hand												
<b>CCLPL124B</b>	.75	.75	1.000	4.50	1.25	CP.422	<b>SM369</b>	<b>S111</b>	1/16	<b>CK13</b>	<b>STC8</b>	5/32
<b>CCLPL164C</b>	1.00	1.00	1.250	5.00	1.25	CP.422	<b>SM369</b>	<b>S111</b>	1/16	<b>CK12</b>	<b>STC4</b>	5/32



See pages B85–B86 and B129–B130 for inserts.

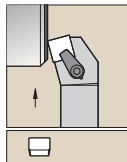


■ **CSDP 45°**

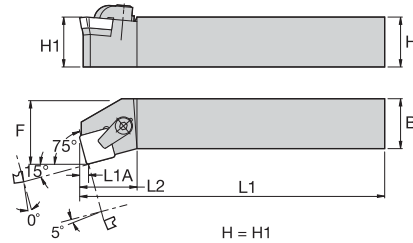
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>CSDPN103</b>	.63	.63	.312	4.50	.94	SP.322	<b>SM120</b>	<b>SL344</b>	—	<b>CK7</b>	<b>STC5</b>	3/32
<b>CSDPN124</b>	.75	.75	.375	4.50	1.38	SP.422	<b>SM40</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>CSDPN644</b>	1.00	.75	.375	6.00	1.38	SP.422	<b>SM40</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CSDPN164</b>	1.00	1.00	.500	6.00	1.38	SP.422	<b>SM40</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CSDPN856</b>	1.25	1.00	.500	6.00	1.82	SP.633	<b>SM36</b>	<b>S125</b>	3/32	<b>CK29</b>	<b>STC19</b>	3/16



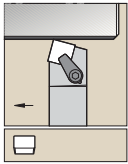
See pages B85–B86 and B129–B130 for inserts.



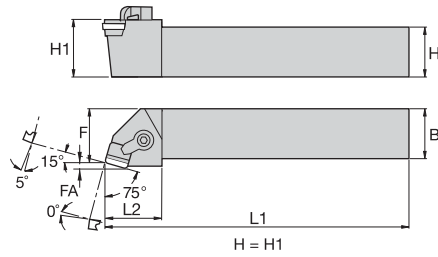
■ **CSKP 15°**



catalog number	H	B	F	L1	L2	L1A	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand <b>CSKPR164D</b>	1.00	1.00	1.250	6.00	1.13	.12	SP.422	<b>SM40</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
left hand <b>CSKPL164D</b>	1.00	1.00	1.250	6.00	1.13	.12	SP.422	<b>SM40</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32



See pages B85–B86 and B129–B130 for inserts.

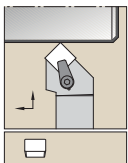


H = H1

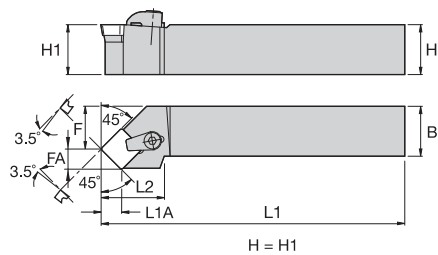
### ■ CSR 15°



catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
CSRPR083B	.50	.50	.605	4.50	.88	.09	SP.322	SM120	SL344	—	CK7	STC9	3/32
CSRPR124B	.75	.75	.855	4.50	1.19	.12	SP.422	SM40	S111	1/16	CK10	STC8	5/32
CSRPR164D	1.00	1.00	1.048	6.00	1.19	.12	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSRPR856D	1.25	1.00	1.060	6.00	1.50	.18	SP.633	SM36	S125	3/32	CK9	STC4	5/32
CSRPR866E	1.50	1.00	1.060	7.00	1.50	.18	SP.633	SM36	S125	3/32	CK9	STC4	5/32
<b>left hand</b>													
CSRPL083B	.50	.50	.605	4.50	.88	.09	SP.322	SM120	SL344	—	CK7	STC9	3/32
CSRPL124B	.75	.75	.855	4.50	1.19	.12	SP.422	SM40	S111	1/16	CK10	STC8	5/32
CSRPL164D	1.00	1.00	1.048	6.00	1.19	.12	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSRPL856D	1.25	1.00	1.060	6.00	1.50	.18	SP.633	SM36	S125	3/32	CK9	STC4	5/32
CSRPL866E	1.50	1.00	1.060	7.00	1.50	.18	SP.633	SM36	S125	3/32	CK9	STC4	5/32



See pages B85–B86 and B129–B130 for inserts.

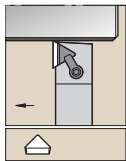


H = H1

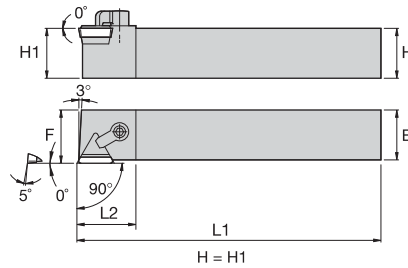
### ■ CSSP 45°



catalog number	H	B	F	L1	L2	FA	L1A	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>														
CSSPR164D	1.00	1.00	1.170	6.00	1.44	.34	.35	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSSPR854D	1.25	1.00	1.170	6.00	1.44	.34	.35	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSSPR856D	1.25	1.00	1.020	6.00	1.50	.48	.53	SP.633	SM36	S125	3/32	CK9	STC4	5/32
<b>left hand</b>														
CSSPL164D	1.00	1.00	1.170	6.00	1.44	.34	.35	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSSPL854D	1.25	1.00	1.170	6.00	1.44	.34	.35	SP.422	SM40	S111	1/16	CK9	STC4	5/32
CSSPL856D	1.25	1.00	1.020	6.00	1.50	.48	.53	SP.633	SM36	S125	3/32	CK9	STC4	5/32



See pages B86–B87 and B130 for inserts.

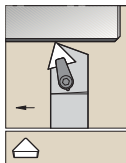


■ **CTAP 0°**

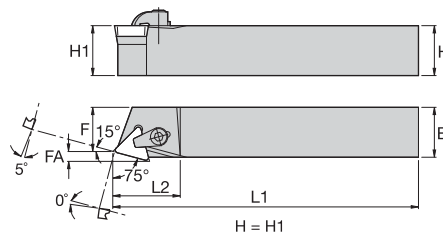
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
CTAPR082B	.50	.50	.500	4.50	.75	TP.221	SM119	SL344	—	CK19	STC9	3/32
CTAPR102B	.63	.63	.625	4.50	.75	TP.221	SM119	SL344	—	CK19	STC5	3/32
CTAPR123B	.75	.75	.750	4.50	1.06	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTAPR163D	1.00	1.00	1.000	6.00	1.06	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTAPR854D	1.25	1.00	1.000	6.00	1.13	TP.432	SM37	S125	3/32	CK9	STC4	5/32
<b>left hand</b>												
CTAPL082B	.50	.50	.500	4.50	.75	TP.221	SM119	SL344	—	CK19	STC9	3/32
CTAPL123B	.75	.75	.750	4.50	1.06	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTAPL163D	1.00	1.00	1.000	6.00	1.06	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTAPL854D	1.25	1.00	1.000	6.00	1.13	TP.432	SM37	S125	3/32	CK9	STC4	5/32



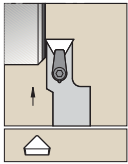
See pages B86–B87 and B130 for inserts.



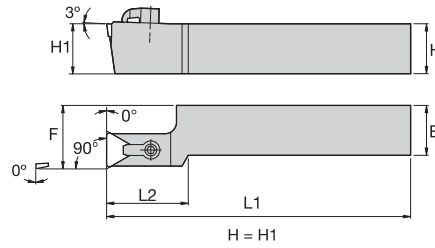
■ **CTBP 15°**



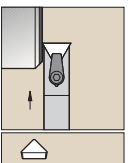
catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
CTBPR123B	.75	.75	.600	4.50	1.19	.15	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTBPR163D	1.00	1.00	.850	6.00	1.19	.15	TP.322	SM41	S111	1/16	CK9	STC4	5/32
<b>left hand</b>													
CTBPL123B	.75	.75	.600	4.50	1.19	.15	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTBPL163D	1.00	1.00	.850	6.00	1.19	.15	TP.322	SM41	S111	1/16	CK9	STC4	5/32



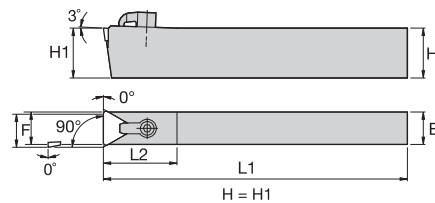
See pages B86–B87 and B130 for inserts.


**CTCP 0°**

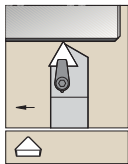

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
CTCPR123B	.75	.75	1.000	4.50	1.50	TP.322	SM41	S111	1/16	CK23	STC11	1/8
CTCPR163C	1.00	1.00	1.250	5.00	1.50	TP.322	SM41	S111	1/16	CK23	STC11	1/8
CTCPR164C	1.00	1.00	1.250	5.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPR164D	1.00	1.00	1.250	6.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPR204D	1.25	1.25	1.500	6.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPR244D	1.50	1.50	2.000	6.00	3.00	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPR205D	1.25	1.25	1.500	6.00	1.75	TP.543	SM99	S132	1/8	CK29	STC19	3/16
<b>left hand</b>												
CTCPL123B	.75	.75	1.000	4.50	1.50	TP.322	SM41	S111	1/16	CK23	STC11	1/8
CTCPL163C	1.00	1.00	1.250	5.00	1.50	TP.322	SM41	S111	1/16	CK23	STC11	1/8
CTCPL164C	1.00	1.00	1.250	5.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPL164D	1.00	1.00	1.250	6.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPL204D	1.25	1.25	1.500	6.00	1.63	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPL244D	1.50	1.50	2.000	6.00	3.00	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPL205D	1.25	1.25	1.500	6.00	1.75	TP.543	SM99	S132	1/8	CK29	STC19	3/16



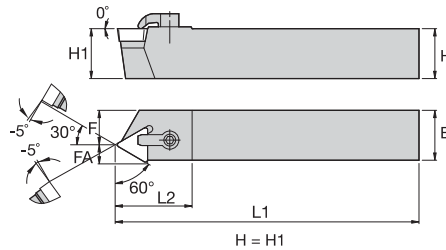
See pages B86–B87 and B130 for inserts.


**CTCPN 0°**


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
CTCPN443	1.00	.50	.542	8.00	1.19	TP.322	SM41	S111	1/16	CK23	STC11	1/8
CTCPN124	.75	.75	.782	6.00	1.31	TP.432	SM37	S125	3/32	CK13	STC8	5/32
CTCPN644	1.00	.75	.782	8.00	1.31	TP.432	SM37	S125	3/32	CK13	STC4	5/32
CTCPN664	1.50	.75	.782	8.00	1.31	TP.432	SM37	S125	3/32	CK13	STC4	5/32



See pages B86–B87 and B130 for inserts.

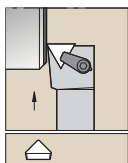


■ **CTEP 30°**

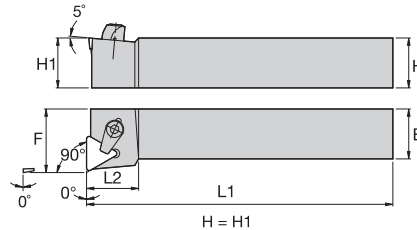
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>CTEPR102B</b>	.63	.63	.450	4.50	.88	.20	TP.221	<b>SM119</b>	<b>SL344</b>	—	<b>CK19</b>	<b>STC5</b>	3/32
<b>CTEPR123B</b>	.75	.75	.460	4.50	1.25	.28	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>CTEPR163D</b>	1.00	1.00	.700	6.00	1.25	.28	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTEPR854D</b>													
	1.25	1.00	.610	6.00	1.31	.39	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>CTEPL102B</b>	.63	.63	.450	4.50	.88	.20	TP.221	<b>SM119</b>	<b>SL344</b>	—	<b>CK19</b>	<b>STC5</b>	3/32
<b>CTEPL123B</b>	.75	.75	.460	4.50	1.25	.28	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>CTEPL163D</b>	1.00	1.00	.700	6.00	1.25	.28	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTEPL854D</b>	1.25	1.00	.610	6.00	1.31	.39	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



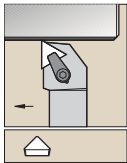
See pages B86–B87 and B130 for inserts.



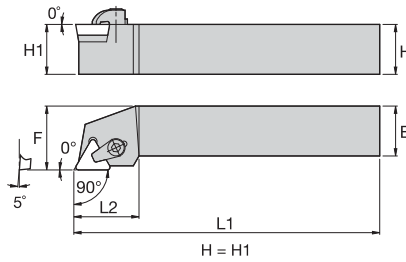
■ **CTFP 0°**



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>CTFPR082V</b>	.50	.50	.750	3.50	.56	TP.221	<b>SM119</b>	<b>SL344</b>	—	<b>CK19</b>	<b>STC9</b>	3/32
<b>CTFPR123B</b>	.75	.75	1.000	4.50	1.13	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>CTFPR163C</b>	1.00	1.00	1.250	5.00	1.13	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPR163D</b>	1.00	1.00	1.250	6.00	1.13	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPR164C</b>	1.00	1.00	1.250	5.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPR164D</b>	1.00	1.00	1.250	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPR854D</b>	1.25	1.00	1.250	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPR204D</b>												
	1.25	1.25	1.500	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>CTFPL082V</b>	.50	.50	.750	3.50	.56	TP.221	<b>SM119</b>	<b>SL344</b>	—	<b>CK19</b>	<b>STC9</b>	3/32
<b>CTFPL123B</b>	.75	.75	1.000	4.50	1.13	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>CTFPL163D</b>	1.00	1.00	1.250	6.00	1.13	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPL164D</b>	1.00	1.00	1.250	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPL854D</b>	1.25	1.00	1.250	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>CTFPL204D</b>	1.25	1.25	1.500	6.00	1.25	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32



See pages B86–B87 and B130 for inserts.



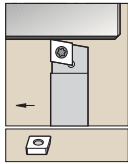
■ CTGP 0°



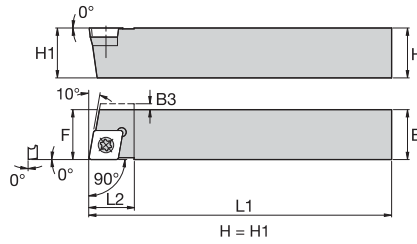
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
CTGPR082B	.50	.50	.750	4.50	.75	TP.221	SM119	SL344	—	CK19	STC9	3/32
CTGPR102B	.63	.63	.875	4.50	.75	TP.221	SM119	SL344	—	CK19	STC9	3/32
CTGPR123A	.75	.75	1.000	4.00	1.13	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTGPR123B	.75	.75	1.000	4.50	1.13	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTGPR163C	1.00	1.00	1.250	5.00	1.13	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTGPR163D	1.00	1.00	1.250	6.00	1.13	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTGPR164C	1.00	1.00	1.250	5.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPR164D	1.00	1.00	1.250	6.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPR854D	1.25	1.00	1.250	6.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPR204D	1.25	1.25	1.500	6.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPR205D	1.25	1.25	1.500	6.00	1.38	TP.543	SM99	S132	1/8	CK24	STC19	3/16
<b>left hand</b>												
CTGPL102B	.63	.63	.875	4.50	.75	TP.221	SM119	SL344	—	CK19	STC9	3/32
CTGPL123B	.75	.75	1.000	4.50	1.13	TP.322	SM41	S111	1/16	CK10	STC8	5/32
CTGPL163C	1.00	1.00	1.250	5.00	1.13	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTGPL163D	1.00	1.00	1.250	6.00	1.13	TP.322	SM41	S111	1/16	CK9	STC4	5/32
CTGPL164C	1.00	1.00	1.250	5.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPL164D	1.00	1.00	1.250	6.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPL204D	1.25	1.25	1.500	6.00	1.25	TP.432	SM37	S125	3/32	CK9	STC4	5/32
CTGPL205D	1.25	1.25	1.500	6.00	1.38	TP.543	SM99	S132	1/8	CK24	STC19	3/16

O.D./I.D. Tooling





See pages B88–B91 for inserts.

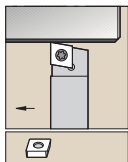


■ SCAC 0°

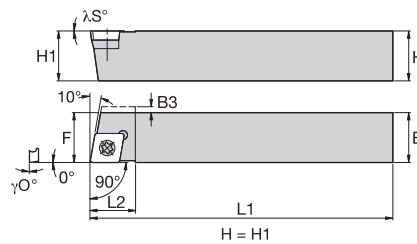
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>												
SCACR052D	.31	.31	.312	6.00	.44	.09	CC..2151	—	—	—	MS1153	T7
SCACR062D	.38	.38	.375	6.00	.44	—	CC..2151	—	—	—	MS1153	T7
SCACR083D	.50	.50	.500	6.00	.62	—	CC..3252	—	—	—	MS1155	T15
<b>left hand</b>												
SCACR103B	.63	.63	.625	4.50	.62	—	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCACL052D	.31	.31	.312	6.00	.44	.09	CC..2151	—	—	—	MS1153	T7
SCACL062D	.38	.38	.375	6.00	.44	—	CC..2151	—	—	—	MS1153	T7
SCACL083D	.50	.50	.500	6.00	.62	—	CC..3252	—	—	—	MS1155	T15
SCACL103B	.63	.63	.625	4.50	.62	—	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15



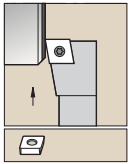
See pages B92–B95 for inserts.



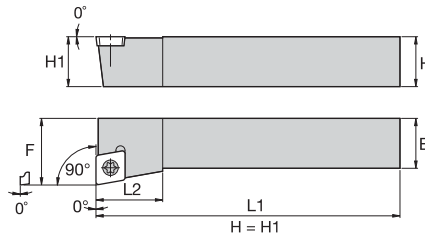
■ SCAP 0°



catalog number	H	B	F	L1	L2	γO°	λS°	B3	gage insert	insert screw	Torx
<b>right hand</b>											
SCAPR052D	.31	.31	.312	6.000	.44	3.50	3.50	.06	CP..2151	MS1153	T7
SCAPR062D	.38	.38	.375	6.000	.44	3.50	3.50	—	CP..2151	MS1153	T7
SCAPR083D	.50	.50	.500	6.000	.62	3.00	4.00	—	CP..3252	MS1027	T9
<b>left hand</b>											
SCAPL052D	.31	.31	.312	6.000	.44	3.50	3.50	.06	CP..2151	MS1153	T7
SCAPL062D	.38	.38	.375	6.000	.44	3.50	3.50	—	CP..2151	MS1153	T7
SCAPL083D	.50	.50	.500	6.000	.62	3.00	4.00	—	CP..3252	MS1027	T9



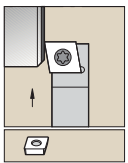
See pages B88–B91 for inserts.



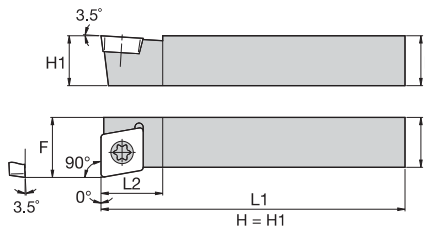
■ SCFC 0°

catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
right hand <b>SCFCR082</b>	.50	.50	.625	3.50	.50	CC..2151	MS1153	T7
left hand <b>SCFCL082</b>	.50	.50	.625	3.50	.50	CC..2151	MS1153	T7

O.D./I.D. Tooling



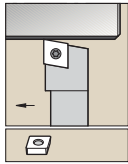
See pages B92–B95 for inserts.



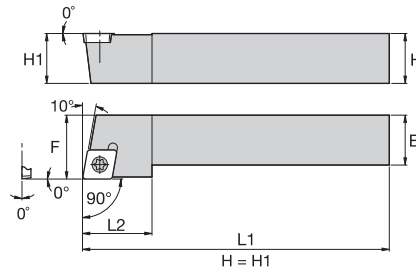
■ SCFP 0°

catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
right hand <b>SCFPR062</b>	.38	.38	.500	2.50	.44	CP..2151	MS1153	T7
<b>SCFPR083V</b>	.50	.50	.625	3.50	.62	CP..3252	MS1027	T9
left hand <b>SCFPL083V</b>	.50	.50	.625	3.50	.62	CP..3252	MS1027	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



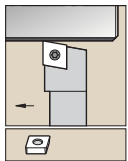
See pages B88–B91 for inserts.



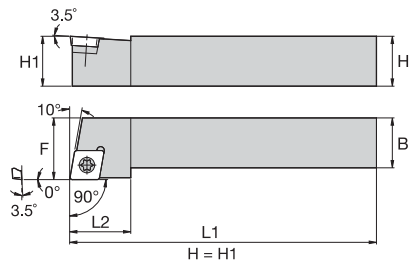
■ SCGC 0°

O.D./I.D. Tooling

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
SCGCR062	.38	.38	.500	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCGCR082	.50	.50	.625	3.50	.50	CC..2151	—	—	—	MS1153	T7
SCGCR102	.63	.63	.750	4.00	.50	CC..2151	—	—	—	MS1153	T7
SCGCR103	.63	.63	.750	4.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCGCR123	.75	.75	1.000	4.50	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCGCR163	1.00	1.00	1.250	6.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
<b>left hand</b>											
SCGCL103	.63	.63	.750	4.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCGCL123	.75	.75	1.000	4.50	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCGCL163	1.00	1.00	1.250	6.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15



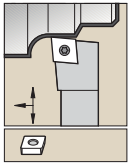
See pages B92–B95 for inserts.



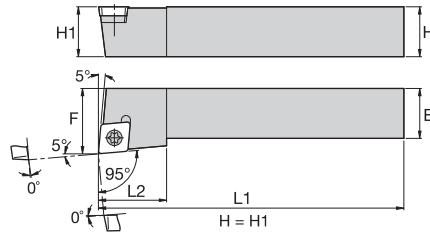
■ SCGP 0°

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
SCGPR062	.38	.38	.500	2.50	.44	CP..2151	—	—	—	MS1153	T7
SCGPR083V	.50	.50	.625	3.50	.62	CP..3252	—	—	—	MS1027	T9
SCGPR123B	.75	.75	1.000	4.50	.62	CP..3252	SM417	MS1028	3/32 IN	MS1027	T9
<b>left hand</b>											
SCGPL062	.38	.38	.500	2.50	.44	CP..2151	—	—	—	MS1153	T7
SCGPL083V	.50	.50	.625	3.50	.62	CP..3252	—	—	—	MS1027	T9
SCGPL123B	.75	.75	1.000	4.50	.62	CP..3252	SM417	MS1028	3/32 IN	MS1027	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
 This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.

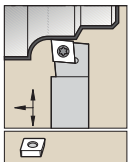


See pages B88–B91 for inserts.

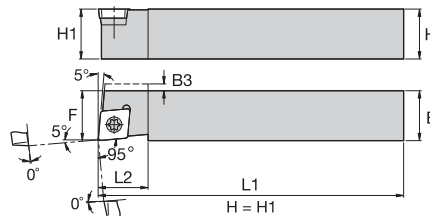


■ SCLC -5°

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
SCLCR052	.31	.31	.375	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCR062	.38	.38	.500	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCR082	.50	.50	.625	3.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCR102	.63	.63	.750	4.00	.50	CC..2151	—	—	—	MS1153	T7
SCLCR103	.63	.63	.750	4.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCR123	.75	.75	1.000	4.50	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCR163	1.00	1.00	1.250	6.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCR124B	.75	.75	1.000	4.50	.75	CC..432	SKCP453	SRS4	4 mm	MS1158	T15
SCLCR164D	1.00	1.00	1.250	6.00	.75	CC..432	SKCP453	SRS4	4 mm	MS1158	T15
<b>left hand</b>											
SCLCL052	.31	.31	.375	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCL062	.38	.38	.500	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCL082	.50	.50	.625	3.50	.50	CC..2151	—	—	—	MS1153	T7
SCLCL102	.63	.63	.750	4.00	.50	CC..2151	—	—	—	MS1153	T7
SCLCL103	.63	.63	.750	4.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCL123	.75	.75	1.000	4.50	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCL163	1.00	1.00	1.250	6.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCLCL124B	.75	.75	1.000	4.50	.75	CC..432	SKCP453	SRS4	4 mm	MS1158	T15
SCLCL164D	1.00	1.00	1.250	6.00	.75	CC..432	SKCP453	SRS4	4 mm	MS1158	T15

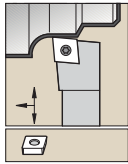


See pages B88–B91 for inserts.

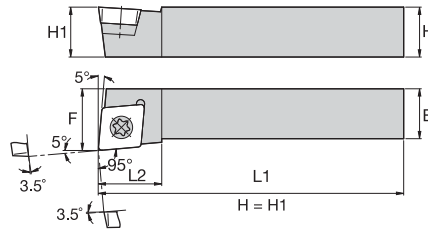


■ SCLC-F -5°

catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>												
SCLCRF062D	.38	.38	.375	6.00	.50	—	CC..2151	—	—	—	MS1153	T7
SCLCRF082D	.50	.50	.500	6.00	.50	—	CC..2151	—	—	—	MS1153	T7
SCLCRF083D	.50	.50	.500	6.00	.62	.09	CC..3252	—	—	—	MS1155	T15
SCLCRF523Z	.50	.63	.625	3.25	.62	—	CC..3252	—	—	—	MS1155	T15
SCLCRF103B	.63	.63	.625	4.50	.62	—	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
<b>left hand</b>												
SCLCLF062D	.38	.38	.375	6.00	.50	—	CC..2151	—	—	—	MS1153	T7
SCLCLF082D	.50	.50	.500	6.00	.50	—	CC..2151	—	—	—	MS1153	T7
SCLCLF083D	.50	.50	.500	6.00	.62	.09	CC..3252	—	—	—	MS1155	T15
SCLCLF523Z	.50	.63	.625	3.25	.62	—	CC..3252	—	—	—	MS1155	T15
SCLCLF103B	.63	.63	.625	4.50	.62	—	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15



See pages B92–B95 for inserts.



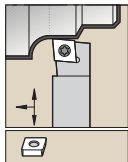
■ SCLP -5°

O.D./I.D. Tooling

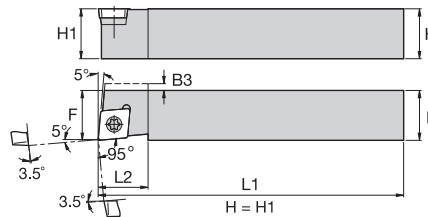


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
<b>SCLPR062</b>	.38	.38	.500	2.50	.44	CP..2151	—	—	—	<b>MS1153</b>	T7
<b>SCLPR083V</b>	.50	.50	.625	3.50	.62	CP..3252	—	—	—	<b>MS1027</b>	T9
<b>SCLPR123B</b>	.75	.75	1.000	4.50	.62	CP..3252	<b>SM417</b>	<b>MS1028</b>	3/32 IN	<b>MS1027</b>	T9
<b>left hand</b>											
<b>SCLPL062</b>	.38	.38	.500	2.50	.44	CP..2151	—	—	—	<b>MS1153</b>	T7
<b>SCLPL083V</b>	.50	.50	.625	3.50	.62	CP..3252	—	—	—	<b>MS1027</b>	T9
<b>SCLPL123B</b>	.75	.75	1.000	4.50	.62	CP..3252	<b>SM417</b>	<b>MS1028</b>	3/32 IN	<b>MS1027</b>	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
 This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



See pages B92–B95 for inserts.

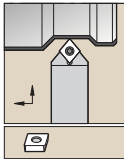


■ SCLP-F -5°

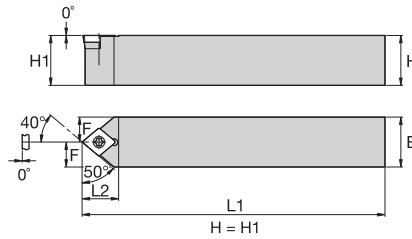


catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
<b>right hand</b>								
<b>SCLPRF062D</b>	.38	.38	.375	6.00	.44	CP..2151	<b>MS1153</b>	T7
<b>SCLPRF083D</b>	.50	.50	.500	6.00	.62	CP..3252	<b>MS1027</b>	T9
<b>left hand</b>								
<b>SCLPLF062D</b>	.38	.38	.375	6.00	.44	CP..2151	<b>MS1153</b>	T7
<b>SCLPLF083D</b>	.50	.50	.500	6.00	.62	CP..3252	<b>MS1027</b>	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
 This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



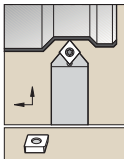
See pages B88–B91 for inserts.



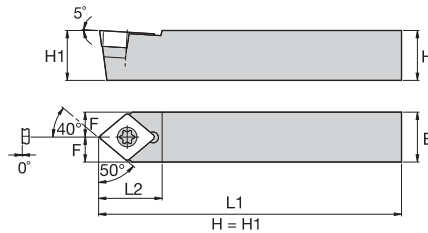
■ SCMC 40°



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
SCMCN062	.38	.38	.188	2.50	.50	CC..2151	—	—	—	MS1153	T7
SCMCN082	.50	.50	.250	3.50	.50	CC..2151	—	—	—	MS1153	T7
SCMCN083	.50	.50	.250	3.50	.62	CC..3252	—	—	—	MS1155	T15
SCMCN103	.63	.63	.312	4.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCMCN123	.75	.75	.375	4.50	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCMCN163	1.00	1.00	.500	6.00	.62	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15



See pages B92–B95 for inserts.

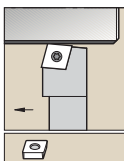


■ SCMP 40°

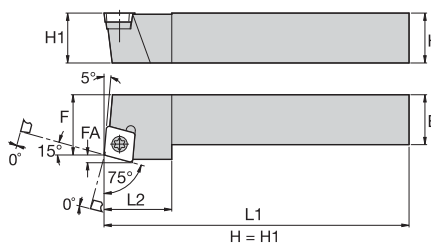


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
SCMPN062	.38	.38	.188	2.50	.44	CP..2151	—	—	—	MS1153	T7
SCMPN083V	.50	.50	.250	3.50	.62	CP..3252	—	—	—	MS1027	T9
SCMPN123B	.75	.75	.375	4.50	.75	CP..3252	SM417	MS1028	3/32 IN	MS1027	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



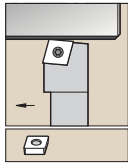
See pages B88–B91 for inserts.



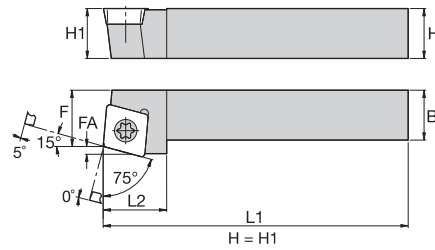
■ SCRC 15°



catalog number	H	B	F	L1	L2	FA	gage insert	shim	shim screw	hex	insert screw	Torx
right hand SCRCR083	.50	.50	.548	3.50	.62	.09	CC..3252	—	—	—	MS1155	T15
SCRCR103 left hand	.63	.63	.673	4.00	.62	.09	CC..3252	SKCP343	SRS3	3.5 mm	MS1156	T15
SCRCL083	.50	.50	.548	3.50	.62	.09	CC..3252	—	—	—	MS1155	T15



See pages B92–B95 for inserts.



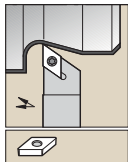
■ SCRP 15°

O.D./I.D. Tooling

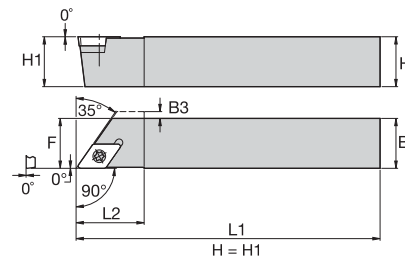


catalog number	H	B	F	L1	L2	FA	gage insert	insert screw	Torx
right hand <b>SCRPR062</b>	.38	.38	.439	2.50	.44	.06	CP..2151	<b>MS1153</b>	T7
<b>SCRPR083V</b> left hand	.50	.50	.537	3.50	.62	.09	CP..3252	<b>MS1027</b>	T9
<b>SCRPL062</b>	.38	.38	.439	2.50	.44	.06	CP..2151	<b>MS1153</b>	T7
<b>SCRPL083V</b>	.50	.50	.537	3.50	.62	.09	CP..3252	<b>MS1027</b>	T9

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
 This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5\_ inserts.  
 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_).  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



See pages B95–B98 for inserts.

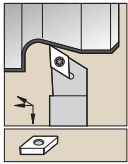


■ SDAC 0°

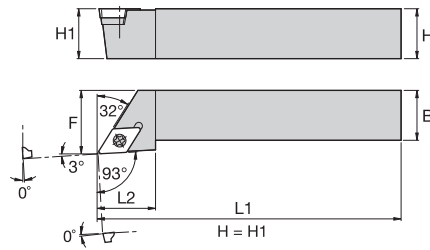


catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	hex	insert screw	Torx
right hand <b>SDACR062D</b>	.38	.38	.375	6.00	.62	—	DC..2151	—	—	—	<b>MS1153</b>	T7
<b>SDACR082D</b>	.50	.50	.500	6.00	.62	—	DC..2151	—	—	—	<b>MS1153</b>	T7
<b>SDACR103B</b>	.63	.63	.625	4.50	.88	—	DC..3252	<b>SKDP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>SDACR083D</b> left hand	.50	.50	.500	6.00	.88	.06	DC..3252	—	—	—	<b>MS1155</b>	T15
<b>SDACL062D</b>	.38	.38	.375	6.00	.62	—	DC..2151	—	—	—	<b>MS1153</b>	T7
<b>SDACL082D</b>	.50	.50	.500	6.00	.62	—	DC..2151	—	—	—	<b>MS1153</b>	T7
<b>SDACL103B</b>	.63	.63	.625	4.50	.88	—	DC..3252	<b>SKDP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>SDACL083D</b>	.50	.50	.500	6.00	.88	.06	DC..3252	—	—	—	<b>MS1155</b>	T15





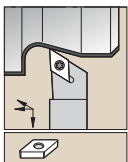
See pages B95–B98 for inserts.



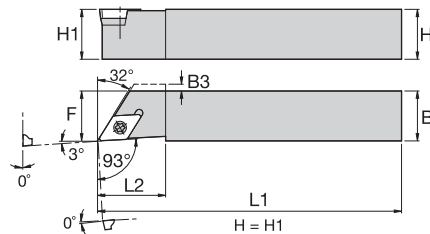
■ SDJC -3°



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
SDJCR062	.38	.38	.500	2.50	.62	DC..2151	—	—	—	MS1153	T7
SDJCR082	.50	.50	.625	3.50	.62	DC..2151	—	—	—	MS1153	T7
SDJCR102	.63	.63	.750	4.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCR083	.50	.50	.625	3.50	.88	DC..3252	—	—	—	MS1155	T15
SDJCR103	.63	.63	.750	4.00	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCR123	.75	.75	1.000	4.50	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCR163	1.00	1.00	1.250	6.00	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
<b>left hand</b>											
SDJCL062	.38	.38	.500	2.50	.62	DC..2151	—	—	—	MS1153	T7
SDJCL082	.50	.50	.625	3.50	.62	DC..2151	—	—	—	MS1153	T7
SDJCL102	.63	.63	.750	4.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCL083	.50	.50	.625	3.50	.88	DC..3252	—	—	—	MS1155	T15
SDJCL103	.63	.63	.750	4.00	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCL123	.75	.75	1.000	4.50	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCL163	1.00	1.00	1.250	6.00	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15



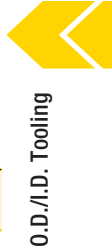
See pages B95–B98 for inserts.

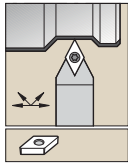


■ SDJC-F -3°

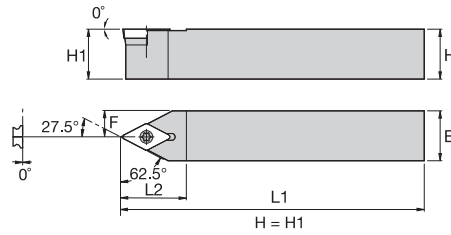


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
SDJCRF062D	.38	.38	.375	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCRF082D	.50	.50	.500	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCRF103B	.63	.63	.625	4.50	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCRF083D	.50	.50	.500	6.00	.88	DC..3252	—	—	—	MS1155	T15
<b>left hand</b>											
SDJCLF062D	.38	.38	.375	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCLF082D	.50	.50	.500	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDJCLF103B	.63	.63	.625	4.50	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDJCLF083D	.50	.50	.500	6.00	.88	DC..3252	—	—	—	MS1155	T15





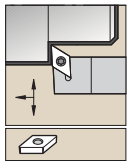
See pages B95–B98 for inserts.



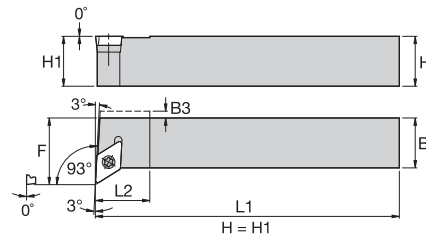
SDPC 27.5°

O.D./I.D. Tooling

catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
SDPCN062D	.38	.38	.188	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDPCN082D	.50	.50	.250	6.00	.62	DC..2151	—	—	—	MS1153	T7
SDPCN103B	.63	.63	.312	4.50	.88	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
SDPCN083D	.50	.50	.250	6.00	.88	DC..3252	—	—	—	MS1155	T15

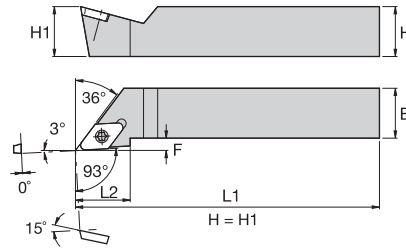
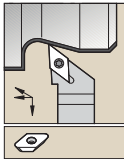


See pages B95–B98 for inserts.



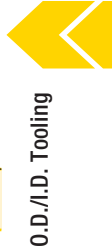
SDUC -3°

catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	hex	insert screw	Torx
right hand												
SDUCR082	.50	.50	.670	3.50	.50	—	DC..2151	—	—	—	MS1153	T7
SDUCR102	.63	.63	.795	4.00	.50	—	DC..2151	—	—	—	MS1153	T7
SDUCR083	.50	.50	.746	3.50	.62	.12	DC..3252	—	—	—	MS1155	T15
SDUCR103	.63	.63	.871	4.00	.62	—	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15
left hand												
SDUCL082	.50	.50	.670	3.50	.50	—	DC..2151	—	—	—	MS1153	T7
SDUCL102	.63	.63	.795	4.00	.50	—	DC..2151	—	—	—	MS1153	T7
SDUCL083	.50	.50	.746	3.50	.62	.12	DC..3252	—	—	—	MS1155	T15
SDUCL103	.63	.63	.871	4.00	.62	—	DC..3252	SKDP343	SRS3	3.5 mm	MS1156	T15

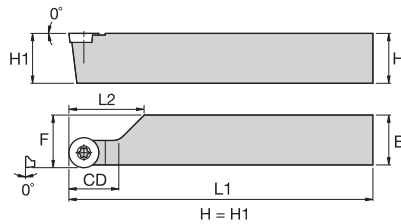
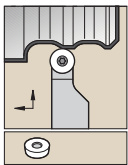


■ SFJF-S -3°

catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
right hand SFJFRA855S	1.25	1.00	.250	7.00	1.25	FF..210430R	MS1129	T15
left hand SFJFLA855S	1.25	1.00	.250	7.00	1.25	FF..210430L	MS1129	T15



O.D./I.D. Tooling

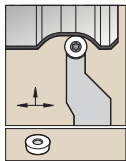


See pages B100–B102 for inserts.

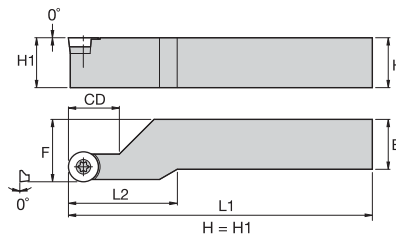
■ SRAC

catalog number	H	B	F	L1	L2	CD	gage insert	shim	insert screw	Torx
right hand SRACR162D	1.00	1.00	1.020	6.00	1.00	1.00	RC..215	—	MS1153	T7
SRACR202D	1.25	1.25	1.270	6.00	1.00	1.00	RC..215	—	MS1153	T7
SRACR163D	1.00	1.00	1.020	6.00	1.00	1.00	RC..325	SR3	MS1156	T15
SRACR203D	1.25	1.25	1.270	6.00	1.00	1.00	RC..325	SR3	MS1156	T15
SRACR164D	1.00	1.00	1.020	6.00	1.00	1.00	RC..43	SR4	MS1158	T15
SRACR204D	1.25	1.25	1.270	6.00	1.00	1.00	RC..43	SR4	MS1158	T15
SRACR244D	1.50	1.50	1.520	6.00	1.00	1.00	RC..43	SR4	MS1158	T15
left hand SRACL162D	1.00	1.00	1.020	6.00	1.00	1.00	RC..215	—	MS1153	T7
SRACL202D	1.25	1.25	1.270	6.00	1.00	1.00	RC..215	—	MS1153	T7
SRACL163D	1.00	1.00	1.020	6.00	1.00	1.00	RC..325	SR3	MS1156	T15
SRACL203D	1.25	1.25	1.270	6.00	1.00	1.00	RC..325	SR3	MS1156	T15
SRACL164D	1.00	1.00	1.020	6.00	1.00	1.00	RC..43	SR4	MS1158	T15
SRACL204D	1.25	1.25	1.270	6.00	1.00	1.00	RC..43	SR4	MS1158	T15
SRACL244D	1.50	1.50	1.520	6.00	1.00	1.00	RC..43	SR4	MS1158	T15





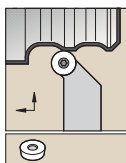
See pages B100–B102 for inserts.



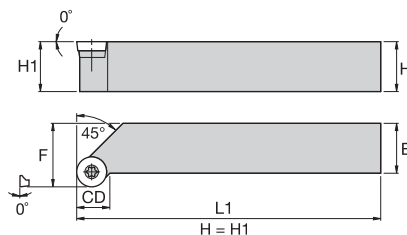
SRCC

O.D./I.D. Tooling

catalog number	CD	H	B	F	L1	L2	gage insert	shim	insert screw	Torx
<b>right hand</b>										
<b>SRCCR122B</b>	.81	.75	.75	1.00	4.50	1.66	RC..215	—	<b>MS1153</b>	T7
<b>SRCCR162D</b>	.81	1.00	1.00	1.25	6.00	1.66	RC..215	—	<b>MS1153</b>	T7
<b>SRCCR123B</b>	1.02	.75	.75	1.00	4.50	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>SRCCR163D</b>	1.02	1.00	1.00	1.25	6.00	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>SRCCR203D</b>	1.02	1.25	1.25	1.50	6.00	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>left hand</b>										
<b>SRCCL162D</b>	.81	1.00	1.00	1.25	6.00	1.66	RC..215	—	<b>MS1153</b>	T7
<b>SRCCL123B</b>	1.02	.75	.75	1.00	4.50	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>SRCCL163D</b>	1.02	1.00	1.00	1.25	6.00	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>SRCCL203D</b>	1.02	1.25	1.25	1.50	6.00	1.88	RC..325	<b>SR3</b>	<b>MS1156</b>	T15

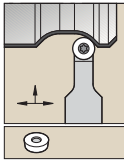


See pages B100–B102 for inserts.

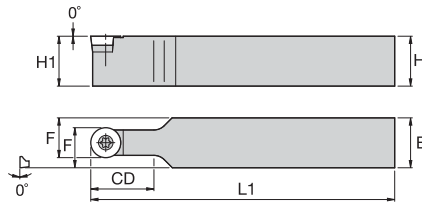


SRGC

catalog number	H	B	F	L1	CD	gage insert	shim	insert screw	Torx
<b>right hand</b>									
<b>SRGCR122</b>	.75	.75	1.000	4.50	.40	RC..215	—	<b>MS1153</b>	T7
<b>SRGCR162</b>	1.00	1.00	1.250	6.00	.40	RC..215	—	<b>MS1153</b>	T7
<b>SRGCR163</b>	1.00	1.00	1.250	6.00	.41	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>SRGCR203</b>	1.25	1.25	1.500	6.00	.43	RC..325	<b>SR3</b>	<b>MS1156</b>	T15
<b>left hand</b>									
<b>SRGCL162</b>	1.00	1.00	1.250	6.00	.40	RC..215	—	<b>MS1153</b>	T7
<b>SRGCL203</b>	1.25	1.25	1.500	6.00	.43	RC..325	<b>SR3</b>	<b>MS1156</b>	T15



See pages B100–B102 for inserts.

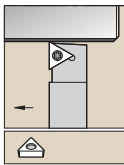


■ SROC

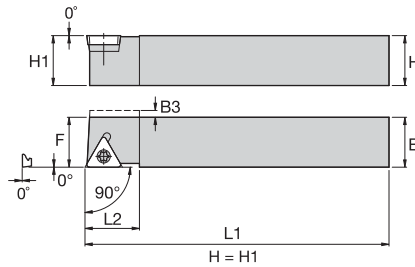
catalog number	H	B	F	L1	CD	gage insert	shim	insert screw	Torx
SROCN102	.63	.63	.438	4.00	.62	RC..215	—	MS1153	T7
SROCN122	.75	.75	.500	4.50	.75	RC..215	—	MS1153	T7
SROCN162	1.00	1.00	.625	6.00	1.00	RC..215	—	MS1153	T7
SROCN123	.75	.75	.562	4.50	.75	RC..325	SR3	MS1156	T15
SROCN163	1.00	1.00	.688	6.00	1.00	RC..325	SR3	MS1156	T15
SROCN203	1.25	1.25	.812	6.00	1.25	RC..325	SR3	MS1156	T15



O.D./I.D. Tooling



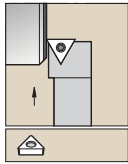
See pages B105–B108 for inserts.



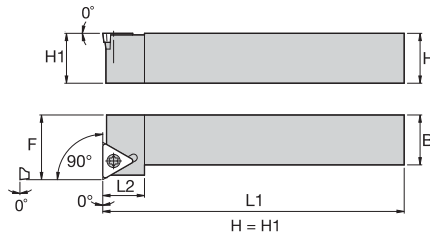
■ STAC 0°

catalog number	H	B	F	L1	L2	B3	gage insert	shim	shim screw	hex	insert screw	Torx
right hand												
STACR062D	.38	.38	.375	6.00	.62	.09	TC..2151	—	—	—	MS1153	T7
STACR082D	.50	.50	.500	6.00	.62	—	TC..2151	—	—	—	MS1153	T7
STACR103B	.63	.63	.625	4.50	.75	—	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15
left hand												
STACL082D	.50	.50	.500	6.00	.62	—	TC..2151	—	—	—	MS1153	T7
STACL103B	.63	.63	.625	4.50	.75	—	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15





See pages B105–B108 for inserts.

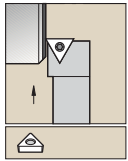


■ STFC 0°

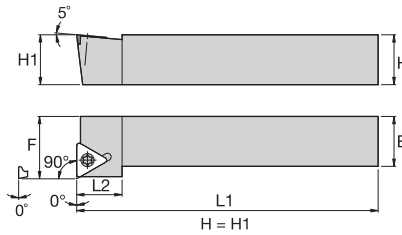
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
<b>STFCR062</b>	.38	.38	.500	2.50	.62	TC..2151	—	—	—	<b>MS1153</b>	T7
<b>STFCR163</b>	1.00	1.00	1.250	6.00	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>left hand</b>											
<b>STFCL062</b>	.38	.38	.500	2.50	.62	TC..2151	—	—	—	<b>MS1153</b>	T7
<b>STFCL123</b>	.75	.75	1.000	4.50	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>STFCL163</b>	1.00	1.00	1.250	6.00	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15



See pages B109–B112 for inserts.

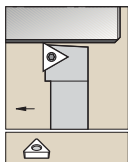


■ STFP 0°

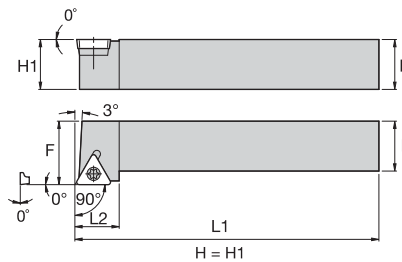


catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
<b>right hand</b>								
<b>STFPR062</b>	.38	.38	.500	2.50	.44	TP..2151	<b>MS1153</b>	T7
<b>left hand</b>								
<b>STFPL062</b>	.38	.38	.500	2.50	.44	TP..2151	<b>MS1153</b>	T7

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPMT/TPGM/TPGT/TPGW-21.5\_ inserts.



See pages B105–B108 for inserts.







■ STGC 0°

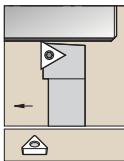


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
<b>STGCR062</b>	.38	.38	.500	2.50	.62	TC..2151	—	—	—	<b>MS1153</b>	T7
<b>STGCR082</b>	.50	.50	.625	3.50	.62	TC..2151	—	—	—	<b>MS1153</b>	T7
<b>STGCR103</b>	.63	.63	.750	4.00	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>STGCR123</b>	.75	.75	1.000	4.50	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>STGCR163</b>	1.00	1.00	1.250	6.00	.75	TC..3252	<b>SKTP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15

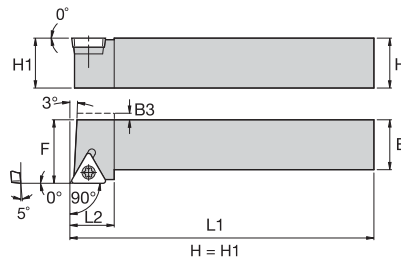
(continued)

(STGC 0° continued)


catalog number	H	B	F	L1	L2	gage insert	   				Torx
							shim	shim screw	hex	insert screw	
<b>left hand</b>											
STGCL062	.38	.38	.500	2.50	.62	TC..2151	—	—	—	MS1153	T7
STGCL082	.50	.50	.625	3.50	.62	TC..2151	—	—	—	MS1153	T7
STGCL103	.63	.63	.750	4.00	.75	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15
STGCL123	.75	.75	1.000	4.50	.75	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15
STGCL163	1.00	1.00	1.250	6.00	.75	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15



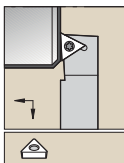
See pages B109–B112 for inserts.



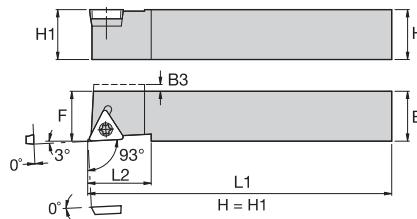
■ STGP 0°

catalog number	H	B	F	L1	L2	gage insert			Torx
							insert screw		
<b>right hand</b>									
STGPR062	.38	.38	.500	2.50	.56	TP..2151	MS1153		T7
STGPR082V	.50	.50	.625	3.50	.56	TP..2151	MS1153		T7
<b>left hand</b>									
STGPL062	.38	.38	.500	2.50	.56	TP..2151	MS1153		T7
STGPL082V	.50	.50	.625	3.50	.56	TP..2151	MS1153		T7





NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPMT/TPGM/TPGT/TPGW-21.5\_ inserts.

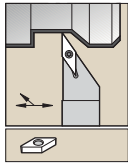


See pages B105–B108 for inserts.

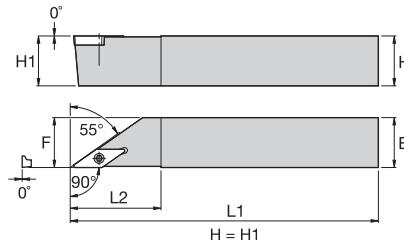


■ STJC-F -3°

catalog number	H	B	F	L1	L2	B3	gage insert	   				Torx
								shim	shim screw	hex	insert screw	
<b>right hand</b>												
STJCRF062D	.38	.38	.375	6.00	.62	.09	TC..2151	—	—	—	MS1153	T7
STJCRF082D	.50	.50	.500	6.00	.62	—	TC..2151	—	—	—	MS1153	T7
STJCRF102B	.63	.63	.625	4.50	.62	—	TC..2151	—	—	—	MS1153	T7
STJCRF103B	.63	.63	.625	4.50	.75	—	TC..3252	SKTP343	SRS3	3.5 mm	MS1156	T15
<b>left hand</b>												
STJCLF062D	.38	.38	.375	6.00	.62	.09	TC..2151	—	—	—	MS1153	T7



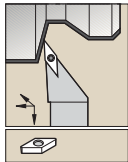
See pages B113–B114 for inserts.



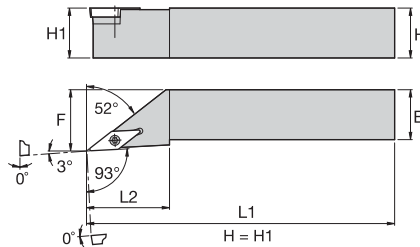
■ SVAB -0°

O.D./I.D. Tooling

catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
<b>right hand</b>								
<b>SVABR062D</b>	.38	.38	.375	6.00	.88	VB..221	<b>MS1153</b>	T7
<b>SVABR082D</b>	.50	.50	.500	6.00	.88	VB..221	<b>MS1153</b>	T7
<b>SVABR103B</b>	.63	.63	.625	4.50	1.38	VB..332	<b>MS1155</b>	T15
<b>left hand</b>								
<b>SVABL062D</b>	.38	.38	.375	6.00	.88	VB..221	<b>MS1153</b>	T7
<b>SVABL082D</b>	.50	.50	.500	6.00	.88	VB..221	<b>MS1153</b>	T7
<b>SVABL103B</b>	.63	.63	.625	4.50	1.38	VB..332	<b>MS1155</b>	T15



See pages B113–B114 for inserts.

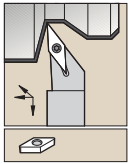


■ SVJB -3°

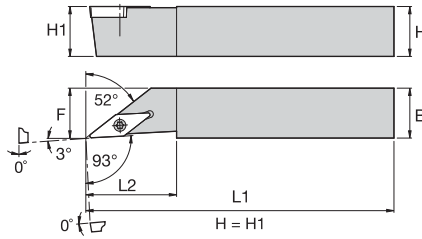
catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
<b>right hand</b>											
<b>SVJBR062</b>	.38	.38	.500	2.50	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBR082</b>	.50	.50	.625	3.50	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBR102</b>	.63	.63	.750	4.00	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBR123</b>	.75	.75	1.000	4.50	1.38	VB..332	<b>SKVN343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>SVJBR163</b>	1.00	1.00	1.250	6.00	1.38	VB..332	<b>SKVN343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>left hand</b>											
<b>SVJBL062</b>	.38	.38	.500	2.50	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBL082</b>	.50	.50	.625	3.50	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBL102</b>	.63	.63	.750	4.00	.88	VB..221	—	—	—	<b>MS1153</b>	T7
<b>SVJBL123</b>	.75	.75	1.000	4.50	1.38	VB..332	<b>SKVN343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
<b>SVJBL163</b>	1.00	1.00	1.250	6.00	1.38	VB..332	<b>SKVN343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15







See pages B113–B114 for inserts.

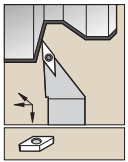


■ SVJB-F -3°

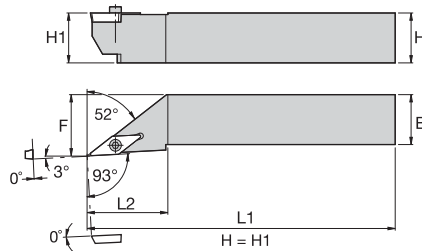
catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
<b>right hand</b>								
SVJBRF062D	.38	.38	.375	6.00	.94	VB..221	MS1153	T7
SVJBRF082D	.50	.50	.500	6.00	.94	VB..221	MS1153	T7
SVJBRF103B	.63	.63	.625	4.50	1.44	VB..332	MS1155	T15
<b>left hand</b>								
SVJBLF062D	.38	.38	.375	6.00	.94	VB..221	MS1153	T7
SVJBLF082D	.50	.50	.500	6.00	.94	VB..221	MS1153	T7
SVJBLF103B	.63	.63	.625	4.50	1.44	VB..332	MS1155	T15



O.D./I.D. Tooling



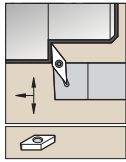
See pages B113–B114 for inserts.



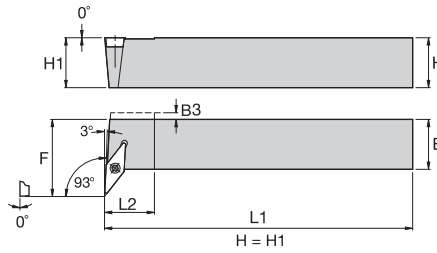
■ SVJP-W -3°

catalog number	H	B	F	L1	L2	gage insert	insert screw	hex
<b>right hand</b>								
SVJPR164EW	1.00	1.00	1.250	7.00	1.62	VP..443	S411	5/32
<b>left hand</b>								
SVJPL164EW	1.00	1.00	1.250	7.00	1.62	VP..443	S411	5/32





See pages B113–B114 for inserts.

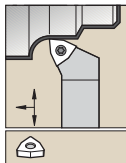


SVUB -3°

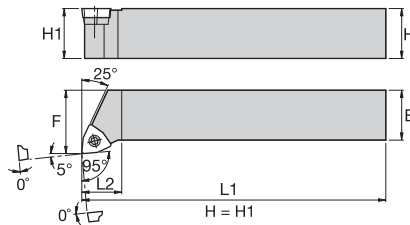
O.D./I.D. Tooling



catalog number	H	B	F	L1	L2	B3	gage insert	insert screw	Torx
right hand SVUBR082	.50	.50	.830	3.50	.50	.12	VB..221	MS1153	T7
SVUBR102	.63	.63	.955	4.00	.50	—	VB..221	MS1153	T7
left hand SVUBL082	.50	.50	.830	3.50	.50	.12	VB..221	MS1153	T7
SVUBL102	.63	.63	.955	4.00	.50	—	VB..221	MS1153	T7



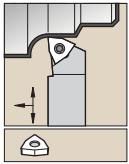
See pages B114–B115 for inserts.



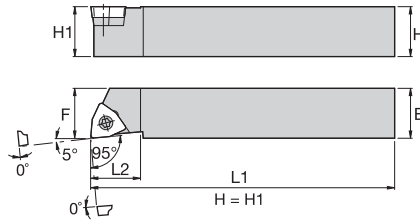
SWLC -5°



catalog number	H	B	F	L1	L2	gage insert	insert screw	Torx
right hand SWLCR082	.50	.50	.625	3.50	.50	WC..2151	MS1153	T7
SWLCR102	.63	.63	.750	4.00	.50	WC..2151	MS1153	T7
left hand SWLCL082	.50	.50	.625	3.50	.50	WC..2151	MS1153	T7
SWLCL102	.63	.63	.750	4.00	.50	WC..2151	MS1153	T7



See pages B114–B115 for inserts.

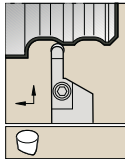


■ SWLC-F -5°

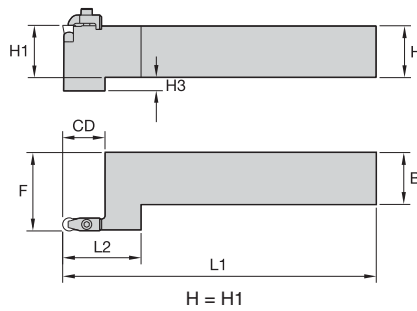


catalog number	H	B	F	L1	L2	gage insert	shim	shim screw	hex	insert screw	Torx
right hand <b>SWLCRF082D</b>	.50	.50	.500	6.00	.50	WC..2151	—	—	—	<b>MS1153</b>	T7
left hand <b>SWLCRF103B</b>	.63	.63	.625	4.50	.62	WC..3252	<b>SKWP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15
right hand <b>SWLCLF082D</b>	.50	.50	.500	6.00	.50	WC..2151	—	—	—	<b>MS1153</b>	T7
left hand <b>SWLCLF103B</b>	.63	.63	.625	4.50	.62	WC..3252	<b>SKWP343</b>	<b>SRS3</b>	3.5 mm	<b>MS1156</b>	T15



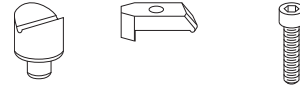


See pages B128–B129 for inserts.

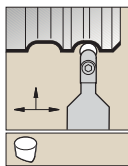


■ 411-VRS

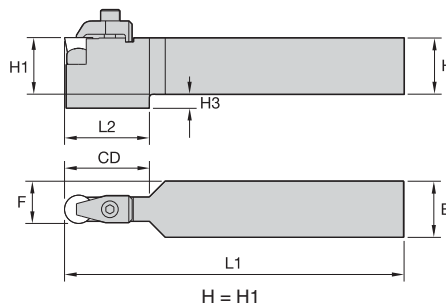
O.D./I.D. Tooling



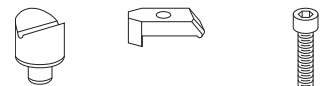
catalog number	H	B	F	L1	L2	CD	H3	gage insert	nest	clamp	clamp screw	hex
<b>right hand</b>												
4111492VRS	1.00	1.00	1.500	6.00	1.50	.75	.25	R..V23	NST1	CM214	MS1321	2.5 mm
4111573VRS	1.00	1.00	1.000	6.00	1.19	1.13	.25	R..V35	NST2	CM219	CS412	3.5 mm
4111593VRS	1.25	1.25	1.250	6.00	1.19	1.13	—	R..V35	NST2	CM219	CS412	3.5 mm
4111613VRS	1.50	1.50	1.500	6.00	1.19	1.10	—	R..V35	NST2	CM219	CS412	3.5 mm
4111654VRS	1.00	1.00	1.000	6.00	1.56	1.50	.25	R..V45	NST3	CM216	CS412	3.5 mm
4111674VRS	1.25	1.25	1.250	6.00	1.56	1.50	—	R..V45	NST3	CM216	CS412	3.5 mm
4111694VRS	1.50	1.50	1.500	6.00	1.56	1.50	—	R..V45	NST3	CM216	CS412	3.5 mm
<b>left hand</b>												
4111603VRS	1.25	1.25	1.250	6.00	1.19	1.13	—	R..V35	NST2	CM219	CS412	3.5 mm
4111664VRS	1.00	1.00	1.000	6.00	1.50	1.50	.25	R..V45	NST3	CM216	CS412	3.5 mm
4111684VRS	1.25	1.25	1.250	6.00	1.56	1.50	—	R..V45	NST3	CM216	CS412	3.5 mm



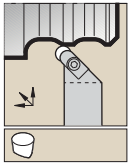
See pages B128–B129 for inserts.



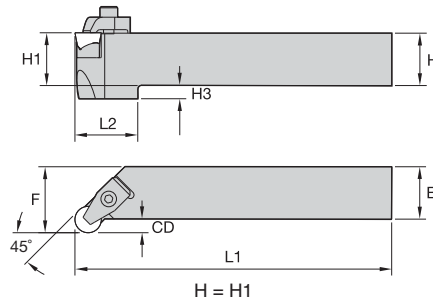
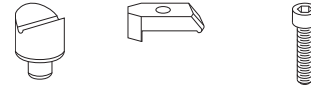
■ CRDP



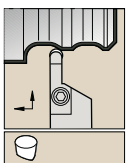
catalog number	H	B	F	L1	CD	H3	gage insert	nest	clamp	clamp screw	hex
CRDPN162DV	1.00	1.00	.496	6.00	.75	—	R..V23	NST1	CM214	MS1321	2.5 mm
CRDPN163DV	1.00	1.00	.496	6.00	1.13	—	R..V35	NST2	CM219	CS412	3.5 mm
CRDPN203DV	1.25	1.25	.621	6.00	1.13	—	R..V35	NST2	CM219	CS412	3.5 mm
CRDPN164DV	1.00	1.00	.496	6.00	1.50	.25	R..V45	NST3	CM216	CS412	3.5 mm
CRDPN204DV	1.25	1.25	.621	6.00	1.50	—	R..V45	NST3	CM216	CS412	3.5 mm
CRDPN205DV	1.25	1.25	.621	6.00	1.50	.25	R..V565	NST4	CM217	MS1294	6 mm
CRDPN206DV	1.25	1.25	.621	6.00	1.50	.25	R..V665	NST5	CM217	MS1294	6 mm
CRDPN246DV	1.50	1.50	.746	6.00	1.50	—	R..V665	NST5	CM217	MS1294	6 mm
CRDPN248DV	1.50	1.50	.746	6.00	1.75	.25	R..V88	NST6	CM218	MS1242	8 mm



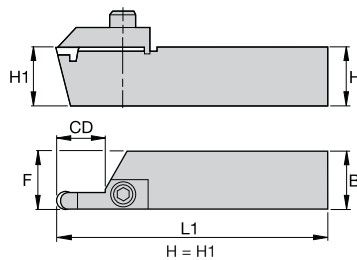
See pages B128–B129 for inserts.


**CRGP**


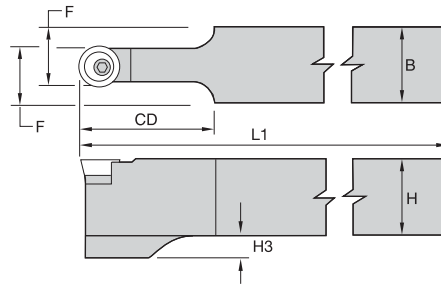
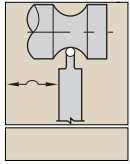
catalog number	H	B	F	L1	CD	H3	gage insert	nest	clamp	clamp screw	hex
<b>right hand</b>											
<b>CRGPR162DV</b>	1.00	1.00	1.250	6.00	.25	—	R..V23	<b>NST1</b>	<b>CM214</b>	<b>MS1321</b>	2.5 mm
<b>CRGPR163DV</b>	1.00	1.00	1.250	6.00	.25	—	R..V35	<b>NST2</b>	<b>CM219</b>	<b>CS412</b>	3.5 mm
<b>CRGPR164DV</b>	1.00	1.00	1.250	6.00	.25	.25	R..V45	<b>NST3</b>	<b>CM216</b>	<b>CS412</b>	3.5 mm
<b>CRGPR203DV</b>	1.25	1.25	1.500	6.00	.25	—	R..V35	<b>NST2</b>	<b>CM219</b>	<b>CS412</b>	3.5 mm
<b>CRGPR204DV</b>	1.25	1.25	1.500	6.00	.25	—	R..V45	<b>NST3</b>	<b>CM216</b>	<b>CS412</b>	3.5 mm
<b>CRGPR205DV</b>	1.25	1.25	1.500	6.00	.25	.25	R..V565	<b>NST4</b>	<b>CM217</b>	<b>MS1294</b>	6 mm
<b>CRGPR206DV</b>	1.25	1.25	1.500	6.00	.25	.25	R..V665	<b>NST5</b>	<b>CM217</b>	<b>MS1294</b>	6 mm
<b>CRGPR246DV</b>	1.50	1.50	1.750	6.00	.25	—	R..V665	<b>NST5</b>	<b>CM217</b>	<b>MS1294</b>	6 mm
<b>left hand</b>											
<b>CRGPL162DV</b>	1.00	1.00	1.250	6.00	.25	—	R..V23	<b>NST1</b>	<b>CM214</b>	<b>MS1321</b>	2.5 mm
<b>CRGPL163DV</b>	1.00	1.00	1.250	6.00	.25	—	R..V35	<b>NST2</b>	<b>CM219</b>	<b>CS412</b>	3.5 mm
<b>CRGPL164DV</b>	1.00	1.00	1.250	6.00	.25	.25	R..V45	<b>NST3</b>	<b>CM216</b>	<b>CS412</b>	3.5 mm
<b>CRGPL203DV</b>	1.25	1.25	1.500	6.00	.25	—	R..V35	<b>NST2</b>	<b>CM219</b>	<b>CS412</b>	3.5 mm
<b>CRGPL204DV</b>	1.25	1.25	1.500	6.00	.25	—	R..V45	<b>NST3</b>	<b>CM216</b>	<b>CS412</b>	3.5 mm
<b>CRGPL205DV</b>	1.25	1.25	1.500	6.00	.25	.25	R..V565	<b>NST4</b>	<b>CM217</b>	<b>MS1294</b>	6 mm
<b>CRGPL206DV</b>	1.25	1.25	1.500	6.00	.25	.25	R..V665	<b>NST5</b>	<b>CM217</b>	<b>MS1294</b>	6 mm
<b>CRGPL246DV</b>	1.50	1.50	1.750	6.00	.25	—	R..V665	<b>NST5</b>	<b>CM217</b>	<b>MS1294</b>	6 mm



See pages B128–B129 for inserts.




**VRAO**


catalog number	H	B	F	L1	CD	gage insert	clamp	clamp screw	hex
<b>right hand</b>									
<b>VRAOR203E</b>	1.25	1.25	1.281	7.00	1.31	R..V35	<b>CM148</b>	<b>S153</b>	3/16
<b>left hand</b>									
<b>VRAOL203E</b>	1.25	1.25	1.281	7.00	1.31	R..V35	<b>CM149</b>	<b>S153</b>	3/16



**Bevel Lock**

O.D./I.D. Tooling

catalog number	H	B	F	L1	CD	H3	gage insert	 		
								shim	lock pin	hex
<b>PROON164D</b>	1.00	1.00	.750	6.00	1.86	—	RC..43	<b>SMRN42B</b>	<b>BP46</b>	3/32
<b>PROON204D</b>	1.25	1.25	.875	6.00	1.88	—	RC..43	<b>SMRN42B</b>	<b>BP46</b>	3/32
<b>PROON244D</b>	1.50	1.50	1.000	6.00	1.88	—	RC..43	<b>SMRN42B</b>	<b>BP46</b>	3/32
<b>PROON206D</b>	1.25	1.25	1.000	6.00	2.36	—	RC..64	<b>SMRN63B</b>	<b>BP68</b>	1/8
<b>PROON246</b>	1.50	1.50	1.125	8.00	2.37	—	RC..64	<b>SMRN63B</b>	<b>BP68</b>	1/8
<b>PROON208D</b>	1.25	1.25	1.125	6.00	2.32	.25	RC..86	<b>SMRN84B</b>	<b>BP812</b>	9/64
<b>PROON248</b>	1.50	1.50	1.250	8.00	2.37	—	RC..86	<b>SMRN84B</b>	<b>BP812</b>	9/64
<b>PROON328</b>	2.00	2.00	1.500	18.00	4.50	—	RC..86	<b>SMRN84B</b>	<b>BP812</b>	9/64
<b>PROON3210</b>	2.00	2.00	1.625	18.00	4.50	—	RC..106	<b>SMRN104B</b>	<b>BP812</b>	9/64

NOTE: These toolholders accept RCGH-43 inserts only. RCMH-43 inserts will not fit.



## Beyond BLAST™ • The First Through-Insert Coolant Delivery System from Kennametal

That's **Beyond BLAST™**   
That's **Different Thinking.**

**We didn't just improve metalcutting technology. We reinvented it.**

Introducing Beyond BLAST, a revolutionary insert platform that delivers many of the benefits of high-pressure systems at conventional coolant pressures. Advanced coolant-application technology makes cutting more efficient and effective — while extending tool life. This tool is specifically designed for titanium and other high-temp alloys.

### Higher Productivity, Extended Tool Life

- Increased tool life up to 300%, depending on the insert geometry and cutting conditions.
- Significant productivity and tool life increase in titanium machining.
- Higher metal removal rates and reduced cycle time.
- Chipbreaker design in combination with PCT provides excellent chip control and workpiece finish.

### Versatility

- Ideal for applications where productivity or tool life is limited due to excess heat generated.
- Offered as a standard item with engineered solution capabilities.
- Provides increased performance with high-pressure or low-pressure coolant delivery systems.



tool path	insert shape	clamping style	boring	back boring	profiling	page(s)	tool path	insert shape	clamping style	boring	back boring	profiling	page(s)		
<b>0° Lead Angle</b>							<b>-5° Lead Angle</b>								
		Kenloc™	•			C80			Kenclamp	•			C76		
		Screw-On	•	•		C94-C97				Screw-On	•	•	•	C111-C113	
		Kenloc	•			C84				Screw-On	•	•		C107	
		Kenclamp	•			C79				Kenloc	•			C85	
		Kendex™	•	•		C91-C93				Screw-On	•	•		C114	
		Screw-On	•	•		C108-C111			TNT	•	•		C87		
<b>-3° Lead Angle</b>							<b>7° Lead Angle</b>								
		Kenloc	•	•		C83			Screw-On	•	•		C99		
		Kenclamp	•	•		C78			<b>-10° Lead Angle</b>						
		Screw-On	•	•		C105-C106					Screw-On	•	•		C114
		TNT	•	•		-					<b>15 and -15° Lead Angle</b>				
		Kenloc	•	•		C85			Kenloc	•			C80		
		Screw-On	•	•		C114				Kenclamp	•			C76	
		Kenloc	•			C84					Kenloc	•			C83
		Screw-On	•			-					Kenclamp	•			C79
		Kenloc	•			C84				Kendex	•			C90	
		Screw-On	•			-			TNT	•			-		
		Screw-On	•	•		C118			Screw-On	•	•		-		
<b>-5° Lead Angle</b>							<b>15 and -15° Lead Angle</b>								
		Kenloc	•	•		C81			Kenclamp	•			C76		
		Kenclamp	•	•		C77				Kenloc	•			C83	
		Kendex	•	•		C87, C90					Kenclamp	•			C79
		Screw-On	•	•		C97-C98 C100-C104					Kendex	•			C90
		TNT	•	•		-				Screw-On	•	•		-	



tool path	insert shape	clamping style	turning	profiling	facing	page(s)	tool path	insert shape	clamping style	turning	profiling	facing	page(s)
		Kenloc™	•	•		C82			Kenloc	•			–
		Kenclamp™	•	•		C78							
		Screw-On	•	•		C114				KenDEX™	•	•	
		TNT	•	•		C87							
		Kenloc	•	•		C82							
		Kenclamp	•	•		C77							

## Clamping Styles

### Kenclamp Style

- Suitable for Kenloc inserts.
- Unique clamp design provides rigid clamping.
- Ensures insert repeatability and seating.
- Reduced chatter and improved tool life.

### Screw-On Style

- Top clamping by screw for Screw-On inserts.

### Top Notch™ Turning Style

- Proven superior system in holding ceramic inserts rigidly in turning and profiling operations.
- Uses standard insert sizes — 80°, 75°, 55°, square, and trigon.
- This system offers the added versatility of using optional hardware to hold standard Kendex and Kenloc inserts.

### Kenloc Style

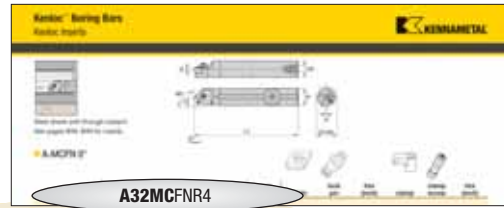
- Suitable for Kenloc inserts.
- Lock pin and top clamp provide rigid clamping.
- Wide variety of insert styles may be used.
- Tools may be used with or without clamp.

### Kendex Style

- Suitable for Kendex inserts.
- Chipbreaker option available for ceramic inserts.
- Wide variety of insert styles may be used.

## How Do Catalog Numbers Work?

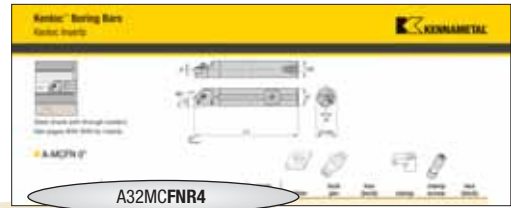
Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



O.D./I.D. Tooling

	<b>A</b> Bar Type	<b>32</b> Bar Diameter		<b>M</b> Insert Holding Method	<b>C</b> Insert Shape	
<b>A</b>	 Steel bar with coolant	<b>Inch:</b> A two-digit number indicates the bar diameter in 1/16" increments	3 = F 3.5 = G 4 = H 4.5 = J 5 = K 5.5 = L 6 = M 6.5 = N 7 = Q 8 = R 10 = S 12 = T 14 = U 16 = V 18 = W 20 = Y	<b>C</b>  Kendex™	<b>A</b>	
<b>S</b>	 Steel bar without coolant			<b>N</b>  Top Notch™ Profiling	<b>B</b>	
<b>C</b>	 Carbide bar			<b>D</b>  Kenclamp™	<b>C</b>	
<b>D</b>	 DeVibrator bar with coolant			** Used only when more than one length is available or a special length is required.	<b>M</b>  Kenloc™	<b>D</b>
<b>D</b>	 Tuneable bar with coolant				<b>S</b>  Screw-On	<b>E</b>
<b>E</b>	 Carbide bar with coolant				<b>P</b>  Kenlever™	<b>H</b>
<b>B</b>	 DeVibrator					<b>K</b>
<b>H</b>	 Interchangeable head					<b>L</b>
<b>L</b>	 Heavy metal bar with coolant					<b>M</b>
						<b>O</b>
			<b>P</b>			
			<b>R</b>			
			<b>S</b>			
			<b>T</b>			
			<b>V</b>			
			<b>W</b>			

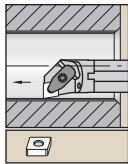
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



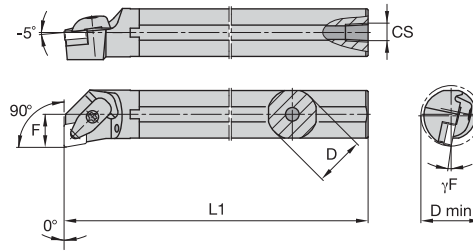
A32MCFNR4

<b>F</b>	<b>N</b>	<b>R</b>	<b>4</b>	
Bar Style or Lead Angle	Insert Clearance Angle	Hand of Tool	Insert Size	Additional Information
<b>E</b>	<b>N</b> 0°	<b>R</b> = Right-hand boring bar 	<b>Inserts IC</b> Number of 1/8ths of "D"	<b>M..</b> = TNT/MTS clamping systems for ceramic and PCBN inserts  <b>D</b> = Dual pocket  <b>AP5</b> = Axil positive  <b>KC</b> = Kenclamp  <b>+</b> = Insert thickness
<b>F</b>	<b>B</b> 5°	<b>L</b> = Left-hand boring bar 		
<b>K</b>	<b>C</b> 7°			
<b>L</b>	<b>P</b> 11°			
<b>L</b> (E-style inserts)	<b>D</b> 15°			
<b>P</b>	<b>E</b> 20°			
<b>Q</b>	<b>F</b> 25°			
<b>S</b>				
<b>U</b>				
<b>X</b>				

O.D./I.D. Tooling



Steel shank with through coolant.  
See pages B40–B49 for inserts.

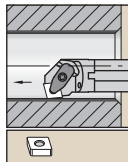


■ **A-DCFN-KC 0°**

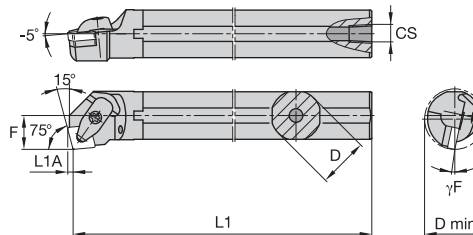
O.D./I.D. Tooling



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>													
A16TDCFN4KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	CN..432	—	—	—	CM234RLP ASSY	SSP025016M	15 IP
A20UDCFNR4KC3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP4S15IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCFNR4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
<b>left hand</b>													
A16TDCFNL4KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	CN..432	—	—	—	CM234RLP ASSY	SSP025016M	15 IP
A20UDCFNL4KC3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP4S15IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCFNL4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP



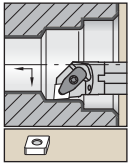
Steel shank with through coolant.  
See pages B40–B49 for inserts.



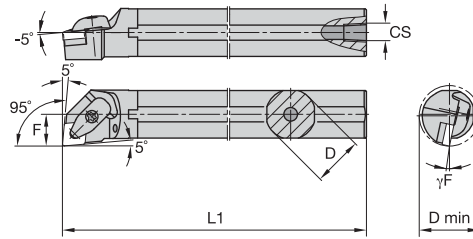
■ **A-DCKN-KC 15°**



catalog number	D	D min	F	L1	L1A	CS	γF°	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>														
A20UDCKNR4KC3	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCKNR4KC3	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCKNR4KC3	2.000	2.400	1.281	16.00	.12	1/4-18 NPT	-8.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCKNR5KC4	2.000	2.400	1.281	16.00	.15	1/4-18 NPT	-10.0	CN..543	ICSN533	KMSP515IP	15 IP	CM209R ASSY	SSP025018M	15 IP
<b>left hand</b>														
A20UDCKNL4KC3	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCKNL4KC3	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCKNL4KC3	2.000	2.400	1.281	16.00	—	1/4-18 NPT	-8.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCKNL5KC4	2.000	2.400	1.281	16.00	—	1/4-18 NPT	-10.0	CN..543	ICSN533	KMSP515IP	15 IP	CM209R ASSY	SSP025018M	15 IP



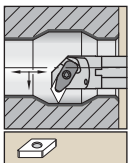
Steel shank with through coolant.  
See pages B40–B49 for inserts.



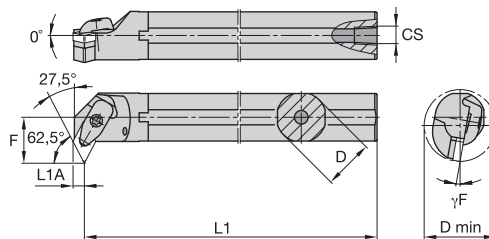
■ **A-DCLN-KC -5°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>													
A16TDCLNR3KC2	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	CN..322	—	—	—	CM234RLP ASSY	SSP025016M	9 IP
A16TDCLNR4KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	CN..432	—	—	—	CM234RLP ASSY	SSP025016M	15 IP
A20UDCLNR4KC3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP4S15IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCLNR4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A28UDCLNR4KC3	1.750	2.010	1.015	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCLNR4KC3	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A40VDCLNR4KC3	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCLNR5KC4	1.500	1.760	.890	14.00	1/4-18 NPT	-14.0	CN..543	ICSN533	KMSP5S15IP	15 IP	CM209R ASSY	SSP025018M	15 IP
A32VDCLNR5KC4	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..543	ICSN533	KMSP515IP	15 IP	CM209R ASSY	SSP025018M	15 IP
A32VDCLNR6KC4	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	SSP025018M	25 IP
A40VDCLNR6KC4	2.500	3.030	1.531	16.00	1/4-18 NPT	-10.0	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	SSP025018M	25 IP
<b>left hand</b>													
A16TDCLNL3KC2	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	CN..322	—	—	—	CM234RLP ASSY	SSP025016M	9 IP
A16TDCLNL4KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	CN..432	—	—	—	CM234RLP ASSY	SSP025016M	15 IP
A20UDCLNL4KC3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP4S15IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCLNL4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A28UDCLNL4KC3	1.750	2.010	1.015	14.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDCLNL4KC3	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A40VDCLNL4KC3	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDCLNL5KC4	1.500	1.760	.890	14.00	1/4-18 NPT	-14.0	CN..543	ICSN533	KMSP5S15IP	15 IP	CM209R ASSY	SSP025018M	15 IP
A32VDCLNL5KC4	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..543	ICSN533	KMSP515IP	15 IP	CM209R ASSY	SSP025018M	15 IP
A32VDCLNL6KC4	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	SSP025018M	25 IP
A40VDCLNL6KC4	2.500	3.030	1.531	16.00	1/4-18 NPT	-10.0	CN..643	ICSN633	KMSP625IP	25 IP	CM210R ASSY	SSP025018M	25 IP



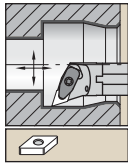
Steel shank with through coolant.  
See pages B50–B57 for inserts.



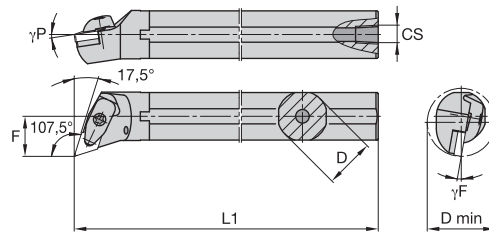
■ **A-DDPN-KC 27.5°**



catalog number	D	D min	F	L1	L1A	CS	γF°	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>														
A20UDDPNR4KC3	1.250	1.705	1.000	14.00	.26	1/4-18 NPT	-13.0	DN.432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDDPNR4KC3	1.500	2.000	1.125	14.00	.26	1/4-18 NPT	-10.0	DN.432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
<b>left hand</b>														
A20UDDPNL4KC3	1.250	1.705	1.000	14.00	.26	1/4-18 NPT	-13.0	DN.432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDDPNL4KC3	1.500	2.000	1.125	14.00	.26	1/4-18 NPT	-10.0	DN.432	IDSN443	KMSP415IP	15 IP	CM234R ASSY	SSP025016M	15 IP



Steel shank with through coolant.  
See pages B50–B57 for inserts.

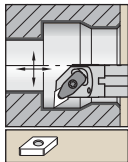


**A-DDQN-KC -17.5°**

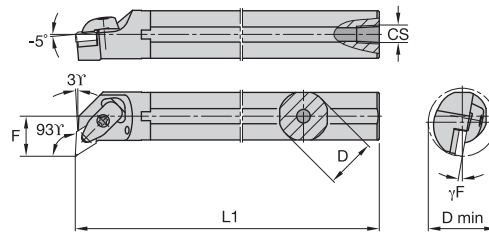
O.D./I.D. Tooling



catalog number	D	D min	F	L1	CS	$\gamma F^\circ$	$\gamma P^\circ$	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>														
A20UDDQNR4KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-10.0	-12.0	DN.432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDDQNR4KC3	1.500	2.000	1.125	14.00	1/4-18 NPT	-8.5	-8.5	DN.432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP
<b>left hand</b>														
A20UDDQNL4KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-10.0	-12.0	DN.432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDDQNL4KC3	1.500	2.000	1.125	14.00	1/4-18 NPT	-8.5	-8.5	DN.432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP



Steel shank with through coolant.  
See pages B50–B57 for inserts.



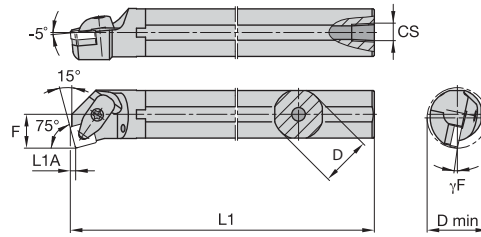
**A-DDUN-KC -3°**



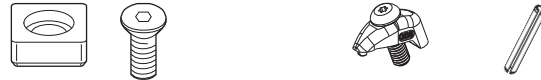
catalog number	D	D min	F	L1	CS	$\gamma F^\circ$	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw	
<b>right hand</b>														
A16TDDUNR3KC3	1.000	1.300	.750	12.00	1/4-18 NPT	-12.0	DN..332	—	—	—	CM234RFP ASSY	SSP025016M	9 IP	
A20UDDUNR3KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-10.0	DN..332	IDSN322 KMSP315IP	9 IP	9 IP	CM234R ASSY	SSP025016M	9 IP	
A20UDDUNR4KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A24UDDUNR4KC3	1.500	2.000	1.125	14.00	1/4-18 NPT	-10.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A28UDDUNR4KC3	1.750	2.250	1.250	14.00	1/4-18 NPT	-10.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A32VDDUNR4KC3	2.000	2.500	1.375	16.00	1/4-18 NPT	-8.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
<b>left hand</b>														
A16TDDUNL3KC3	1.000	1.300	.750	12.00	1/4-18 NPT	-12.0	DN..332	—	—	—	CM234RFP ASSY	SSP025016M	9 IP	
A20UDDUNL3KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-10.0	DN..332	IDSN322 KMSP315IP	9 IP	9 IP	CM234R ASSY	SSP025016M	9 IP	
A20UDDUNL4KC3	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A24UDDUNL4KC3	1.500	2.000	1.125	14.00	1/4-18 NPT	-10.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A28UDDUNL4KC3	1.750	2.250	1.250	14.00	1/4-18 NPT	-10.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	
A32VDDUNL4KC3	2.000	2.500	1.375	16.00	1/4-18 NPT	-8.0	DN..432	IDSN443 KMSP415IP	15 IP	15 IP	CM234R ASSY	SSP025016M	15 IP	



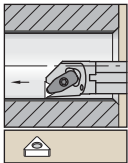
Steel shank with through coolant.  
See pages B59–B65 for inserts.



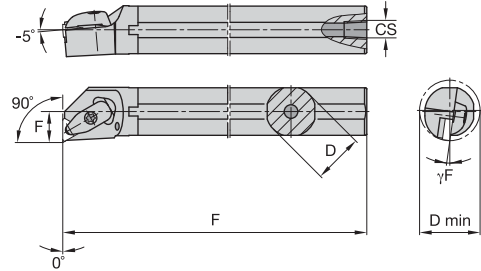
■ **A-DSKN-KC 15°**



catalog number	D	D min	F	L1	L1A	CS	$\gamma F^\circ$	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	pin	wrench size clamp screw
<b>right hand</b>														
A20UDSKNR4KC3	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	SN..432	ISSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDSKNR4KC3	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-10.0	SN..432	ISSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDSKNR6KC4	2.000	2.400	1.281	16.00	.18	1/4-18 NPT	-12.0	SN..643	ISSN633 KMSP625IP		25 IP	CM210R ASSY	SSP025018M	25 IP
<b>left hand</b>														
A16TDSKNL3KC2	1.000	1.200	.640	12.00	.09	1/4-18 NPT	-10.0	SN..322	—	—	—	CM234RLP ASSY	SSP025016M	9 IP
A20UDSKNL3KC2	1.250	1.470	.765	14.00	.09	1/4-18 NPT	-10.0	SN..322	ISSN332 KMSP315IP		9 IP	CM234R ASSY	SSP025016M	9 IP
A20UDSKNL4KC3	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	SN..432	ISSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A24UDSKNL4KC3	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-10.0	SN..432	ISSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDSKNL6KC4	2.000	2.400	1.281	16.00	.18	1/4-18 NPT	-12.0	SN..643	ISSN633 KMSP625IP		25 IP	CM210R ASSY	SSP025018M	25 IP



Steel shank with through coolant.  
See pages B66–B74 for inserts.



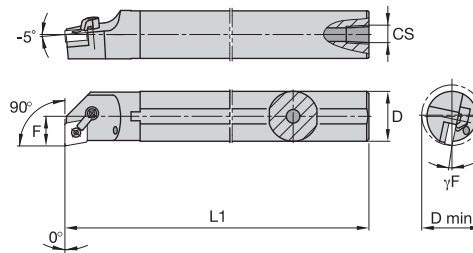
■ **A-DTFN-KC 0°**



catalog number	D	D min	F	L1	CS	$\gamma F^\circ$	gage insert	shim	shim screw	wrench size shim screw	clamp assembly	slotted pin	wrench size clamp screw
<b>right hand</b>													
A16TDTFNR3KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	TN..332	—	—	—	CM234RLP ASSY	SSP025016M	9 IP
A24UDTFNR4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A28UDTFNR3KC3	1.750	2.010	1.015	14.00	1/4-18 NPT	-10.0	TN..332	ITSN323 KMSP315IP		9 IP	CM234R ASSY	SSP025016M	9 IP
A32VDTFNR4KC3	2.000	2.400	1.281	16.00	1/4-18 NPT	-8.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
<b>left hand</b>													
A16TDTFNL3KC3	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	TN..332	—	—	—	CM234RLP ASSY	SSP025016M	9 IP
A20UDTFNL3KC3	1.250	1.470	1.000	14.00	1/4-18 NPT	-12.0	TN..332	—	—	—	CM234R ASSY	SSP025016M	9 IP
A24UDTFNL3KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..332	ITSN323 KMSP315IP		9 IP	CM234R ASSY	SSP025016M	9 IP
A24UDTFNL4KC3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A28UDTFNL4KC3	1.750	2.010	1.015	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A32VDTFNL4KC3	2.000	2.400	1.281	16.00	1/4-18 NPT	-8.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP
A40VDTFNL4KC3	2.500	3.030	1.531	16.00	1/4-18 NPT	-6.0	TN..432	ITSN433 KMSP415IP		15 IP	CM234R ASSY	SSP025016M	15 IP



Steel shank with through coolant.  
See pages B40–B49 for inserts.

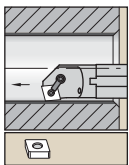


■ **A-MCFN 0°**

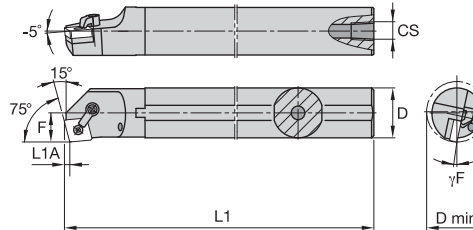
O.D./I.D. Tooling



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A16MCFNR4</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-14.0	CN..432	—	<b>KL44</b>	—	<b>CK7</b>	<b>STC9</b>	3/32
<b>A20MCFNR4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>A24MCFNR4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>A32MCFNR5</b>													
<b>left hand</b>													
<b>A16MCFNL4</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-14.0	CN..432	—	<b>KL44</b>	—	<b>CK7</b>	<b>STC9</b>	3/32
<b>A20MCFNL4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>A24MCFNL4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>A32MCFNL5</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK21</b>	<b>STC20</b>	1/8



Steel shank with through coolant.  
See pages B40–B49 for inserts.

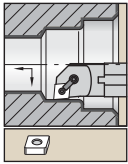


■ **A-MCKN 15°**

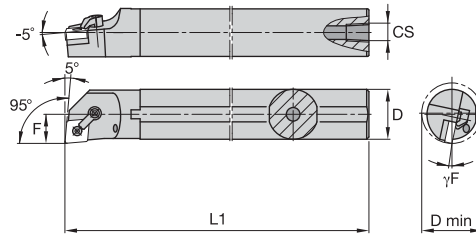


catalog number	D	D min	F	L1	L1A	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>														
<b>A20MCKNR4</b>	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24MCKNR4</b>	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCKNR4</b>	2.000	2.400	1.281	16.00	.12	1/4-18 NPT	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCKNR5</b>														
<b>left hand</b>														
<b>A20MCKNL4</b>	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24MCKNL4</b>	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCKNL4</b>	2.000	2.400	1.281	16.00	.12	1/4-18 NPT	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCKNL5</b>	2.000	2.400	1.281	16.00	.15	1/4-18 NPT	-10.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32





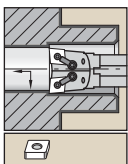
Steel shank with through coolant.  
See pages B40–B49 for inserts.



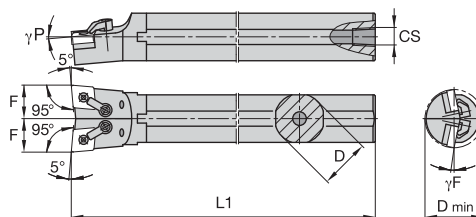
■ **A-MCLN -5°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A16MCLNR3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A16TMCLNR4</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-14.0	CN..432	—	<b>KL44</b>	3/32	<b>CK20</b>	<b>STC11</b>	1/8
<b>A20UMCLNR4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24UMCLNR4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A28UMCLNR4</b>	1.750	2.010	1.015	14.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32VMCLNR4</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A40VMCLNR4</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24MCLNR5</b>	1.500	2.000	.890	14.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32MCLNR5</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40MCLNR5</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32VMCLNR6</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40VMCLNR6</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>A16MCLNL3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A16TMCLNL4</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-14.0	CN..432	—	<b>KL44</b>	3/32	<b>CK20</b>	<b>STC11</b>	1/8
<b>A20UMCLNL4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24UMCLNL4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A28UMCLNL4</b>	1.750	2.010	1.015	14.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCLNL4</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A40MCLNL4</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24MCLNL5</b>	1.500	2.000	.890	14.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32MCLNL5</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40MCLNL5</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-8.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32VMCLNL6</b>	2.000	2.400	1.281	16.00	1/4-18 NPT	-12.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40VMCLNL6</b>	2.500	3.030	1.531	16.00	1/4-18 NPT	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32



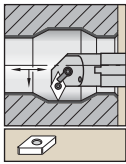
Steel shank with through coolant.  
See pages B40–B49 for inserts.



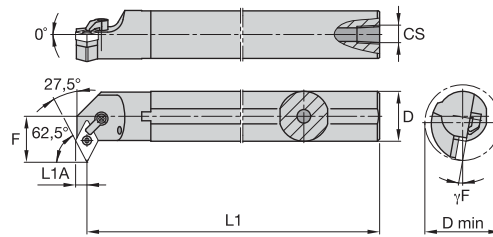
■ **A-MCLN-D -5°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>A16MCLNR4D</b>	1.000	1.625	.640	12.00	1/4-18 NPT	-10.0	CN..432	—	<b>KL44</b>	—	<b>CK7</b>	<b>STC9</b>	3/32
<b>A20MCLNR4D</b>	1.250	1.875	.765	14.00	1/4-18 NPT	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24MCLNR4D</b>	1.500	2.125	.890	14.00	1/4-18 NPT	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCLNR4D</b>	2.000	2.592	1.281	16.00	1/4-18 NPT	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MCLNR5D</b>	2.000	2.592	1.281	16.00	1/4-18 NPT	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32

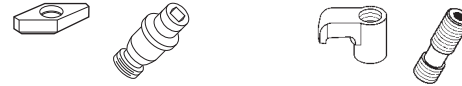


Steel shank with through coolant.  
See pages B50–B57 for inserts.

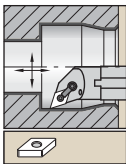


■ **A-MDPN 27.5°**

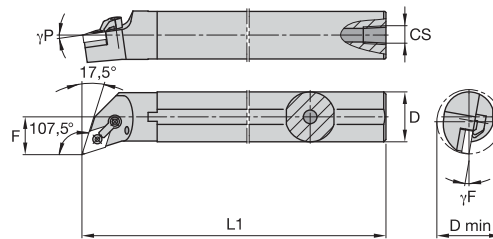
O.D./I.D. Tooling



catalog number	D	D min	F	L1	L1A	CS	$\gamma F^\circ$	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand														
<b>A20MDPNR4</b>	1.250	1.705	1.000	14.00	.26	1/4-18 NPT	-13.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>A24MDPNR4</b>	1.500	2.000	1.125	14.00	.26	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
left hand														
<b>A20MDPNL4</b>	1.250	1.705	1.000	14.00	.26	1/4-18 NPT	-13.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>A24MDPNL4</b>	1.500	2.000	1.125	14.00	.26	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8



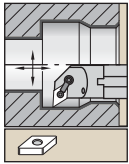
Steel shank with through coolant.  
See pages B50–B57 for inserts.



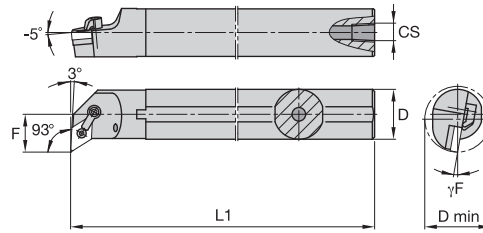
■ **A-MDQN -17.5°**



catalog number	D	D min	F	L1	CS	$\gamma F^\circ$	$\gamma P^\circ$	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand														
<b>A20MDQNR4</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A24MDQNR4</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-8.500	-8.5	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
left hand														
<b>A20MDQNL4</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A24MDQNL4</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-8.500	-8.5	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32



Steel shank with through coolant.  
See pages B50–B57 for inserts.



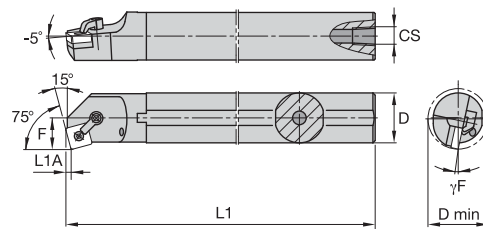
■ **A-MDUN -3°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A16MDUNR3</b>	1.000	1.300	.750	12.00	1/4-18 NPT	-12.0	DN..332	—	<b>KL33L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>A20UMDUNR4</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A24UMDUNR4</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A28MDUNR4</b>	1.750	2.250	1.250	14.00	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32VMDUNR4</b>	2.000	2.500	1.375	16.00	1/4-18 NPT	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>A16MDUNL3</b>	1.000	1.300	.750	12.00	1/4-18 NPT	-12.0	DN..332	—	<b>KL33L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>A20UMDUNL4</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A24UMDUNL4</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A28MDUNL4</b>	1.750	2.250	1.250	14.00	1/4-18 NPT	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>A32VMDUNL4</b>	2.000	2.500	1.375	16.00	1/4-18 NPT	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32



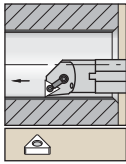
Steel shank with through coolant.  
See pages B59–B65 for inserts.



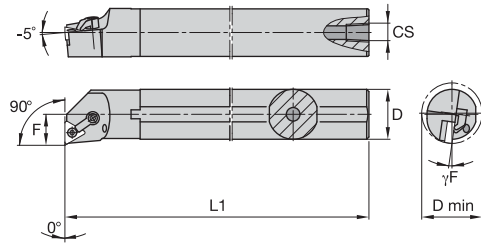
■ **A-MSKN 15°**



catalog number	D	D min	F	L1	L1A	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>														
<b>A20MSKNR4</b>	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	SN..432	—	<b>KL44</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>A24MSKNR4</b>	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-10.0	SN..432	<b>ISSN432</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>A28MSKNR4</b>	1.750	2.010	1.015	14.00	.12	1/4-18 NPT	-10.0	SN..432	<b>ISSN432</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>A32MSKNR6</b>	2.000	2.400	1.281	16.00	.18	1/4-18 NPT	-12.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40MSKNR6</b>	2.500	3.030	1.531	16.00	.18	1/4-18 NPT	-10.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>														
<b>A20MSKNL4</b>	1.250	1.470	.765	14.00	.12	1/4-18 NPT	-14.0	SN..432	—	<b>KL44</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>A24MSKNL4</b>	1.500	1.760	.890	14.00	.12	1/4-18 NPT	-10.0	SN..432	<b>ISSN443</b>	<b>KL46</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32
<b>A32MSKNL6</b>	2.000	2.400	1.281	16.00	.18	1/4-18 NPT	-12.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>A40MSKNL6</b>	2.500	3.030	1.531	16.00	.18	1/4-18 NPT	-10.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32



Steel shank with through coolant.  
See pages B66–B74 for inserts.

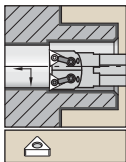


O.D./I.D. Tooling

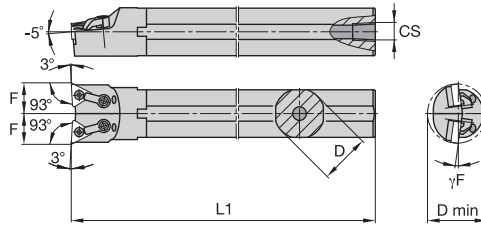
■ **A-MTFN 0°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
A16MTFNR3	1.000	1.220	.640	12.00	1/4-18 NPT	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A20UMTFNR3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A24UMTFNR3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
A28MTFNR3	1.750	2.010	1.015	14.00	1/4-18 NPT	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
A24UMTFNR4	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
A28MTFNR4	1.750	2.010	1.015	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
A32MTFNR4	2.000	2.400	1.281	16.00	1/4-18 NPT	-8.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
A40MTFNR4	2.500	3.030	1.531	16.00	1/4-18 NPT	-6.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
<b>left hand</b>													
A16MTFNL3	1.000	1.220	.640	12.00	1/4-18 NPT	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A20UMTFNL3	1.250	1.470	.765	14.00	1/4-18 NPT	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A24UMTFNL3	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
A24UMTFNL4	1.500	1.760	.890	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
A28MTFNL4	1.750	2.010	1.015	14.00	1/4-18 NPT	-10.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
A40MTFNL4	2.500	3.030	1.531	16.00	1/4-18 NPT	-6.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32



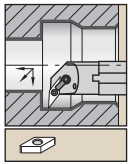
Steel shank with through coolant.  
See pages B66–B74 for inserts.



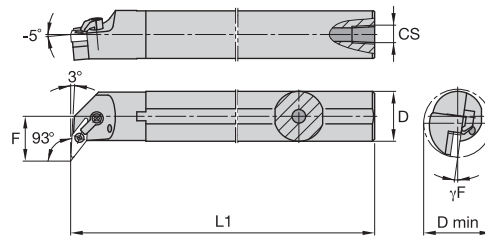
■ **A-MTUN-D -3°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
A16MTUNR3D	1.000	1.312	.640	12.00	1/4-18 NPT	-10.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A20MTUNR3D	1.250	1.550	.765	14.00	1/4-18 NPT	-10.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
A32MTUNR4D	2.000	2.592	1.281	16.00	1/4-18 NPT	-8.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32



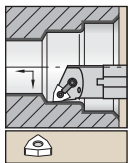
Steel shank with through coolant.  
See pages B74–B78 for inserts.



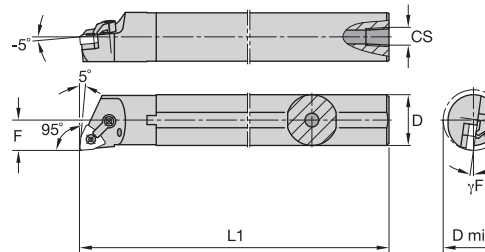
■ **A-MVUN -3°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A20MVUNR3</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	VN..332	<b>IVSN322</b>	<b>KL34L</b>	5/64	<b>CK43</b>	<b>STC4</b>	5/32
<b>A24UMVUNR3</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-12.0	VN..332	<b>IVSN322</b>	<b>KL34L</b>	5/64	<b>CK43</b>	<b>STC4</b>	5/32
<b>A32MVUNR4</b>	2.000	2.500	1.325	16.00	1/4-18 NPT	-10.0	VN..432	<b>IVSN433</b>	<b>KL46</b>	3/32	<b>CK43</b>	<b>STC4</b>	5/32
<b>A40MVUNR4</b>													
<b>A40MVUNR4</b>	2.500	3.250	1.750	16.00	1/4-18 NPT	-10.0	VN..432	<b>IVSN433</b>	<b>KL46</b>	3/32	<b>CK43</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>A20UMVUNL3</b>	1.250	1.705	1.000	14.00	1/4-18 NPT	-12.0	VN..332	<b>IVSN322</b>	<b>KL34L</b>	5/64	<b>CK43</b>	<b>STC4</b>	5/32
<b>A24MVUNL3</b>	1.500	2.000	1.125	14.00	1/4-18 NPT	-12.0	VN..332	<b>IVSN322</b>	<b>KL34L</b>	5/64	<b>CK43</b>	<b>STC4</b>	5/32
<b>A32MVUNL4</b>	2.000	2.500	1.325	16.00	1/4-18 NPT	-10.0	VN..432	<b>IVSN433</b>	<b>KL46</b>	3/32	<b>CK43</b>	<b>STC4</b>	5/32
<b>A40MVUNL4</b>	2.500	3.250	1.750	16.00	1/4-18 NPT	-10.0	VN..432	<b>IVSN433</b>	<b>KL46</b>	3/32	<b>CK43</b>	<b>STC4</b>	5/32



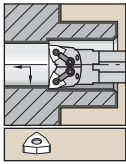
Steel shank with through coolant.  
See pages B79–B83 for inserts.



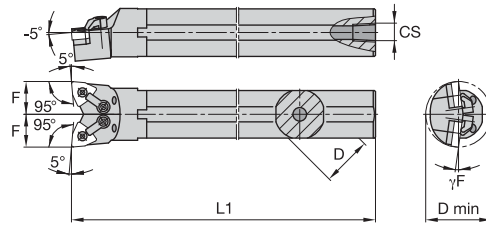
■ **A-MWLN 5°**



catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A16MWLNR3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	WN..332	—	<b>KL33L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A24MWLNR3</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-8.0	WN..332	<b>IWSN322</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A16TMWLN4</b>	1.000	1.220	.640	12.00	1/4-18 NPT	-12.0	WN..432	—	<b>KL44</b>	3/32	<b>CK20</b>	<b>STC11</b>	1/8
<b>A20UMWLN4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24UMWLN4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>left hand</b>													
<b>A16MWLNL3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-12.0	WN..332	—	<b>KL33L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A24MWLNL3</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-8.0	WN..332	<b>IWSN322</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A16MWLNL4</b>	1.000	1.220	.640	12.00	1/4-18 NPT	-12.0	WN..432	—	<b>KL44</b>	3/32	<b>CK20</b>	<b>STC11</b>	1/8
<b>A20UMWLN4</b>	1.250	1.470	.765	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A24UMWLN4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8



Steel shank with through coolant.  
See pages B79–B83 for inserts.

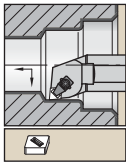


■ **A-MWLN-D 5°**

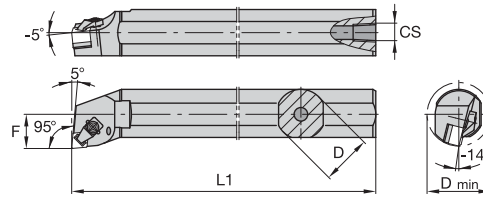
O.D./I.D. Tooling



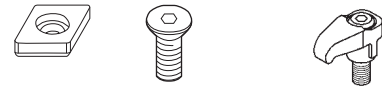
catalog number	D	D min	F	L1	CS	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>A16MWLNR3D</b>	1.000	1.310	.640	12.00	1/4-18 NPT	-11.0	WN..332	—	<b>KL33L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A16MWLNR4D</b>	1.000	1.420	.700	12.00	1/4-18 NPT	-12.0	WN..432	—	<b>KL44</b>	3/32	<b>CK6</b>	<b>STC5</b>	3/32
<b>A20MWLNR3D</b>	1.250	1.560	.765	14.00	1/4-18 NPT	-10.0	WN..332	<b>IWSN322</b>	<b>KL34L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>A20MWLNR4D</b>	1.250	1.550	.765	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK6</b>	<b>STC5</b>	3/32
<b>A24MWLNR4D</b>	1.500	1.810	.890	14.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>A32MWLNR4D</b>	2.000	2.582	1.276	16.00	1/4-18 NPT	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8



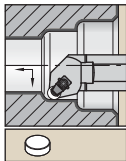
Steel shank with through coolant.  
See page B122 for inserts.



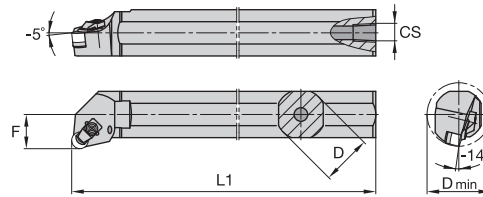
■ A-CCLN-MX -5°



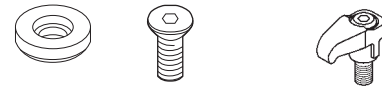
catalog number	D	D min	F	L1	CS	gage insert	shim	shim screw	Torx	clamp assembly	Torx
<b>right hand</b>											
<b>A24CCLNR4MX5</b>	1.500	2.165	.890	14.00	1/4-18 NPT	CN.X452	552.221	554.260	T20	551.326	T25
<b>A32CCLNR4MX5</b>	2.000	2.323	1.281	16.00	1/4-18 NPT	CN.X452	552.221	554.260	T20	551.326	T25
<b>left hand</b>											
<b>A24CCLNL4MX5</b>	1.500	2.165	.890	14.00	1/4-18 NPT	CN.X452	552.221	554.260	T20	551.326	T25
<b>A32CCLNL4MX5</b>	2.000	2.323	1.281	16.00	1/4-18 NPT	CN.X452	552.221	554.260	T20	551.326	T25



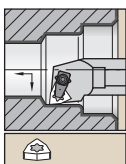
Steel shank with through coolant.  
See page B124 for inserts.



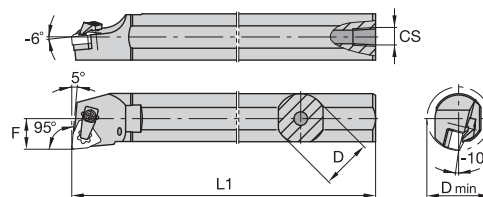
■ A-CRGN-MN



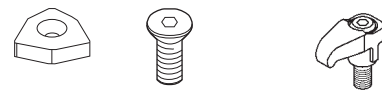
catalog number	D	D min	F	L1	CS	gage insert	shim	shim screw	Torx	clamp assembly	Torx
<b>right hand</b>											
<b>A32CRGNR4MN5</b>	2.000	2.559	1.281	16.00	1/4-18 NPT	RN.45	552.230	554.260	T20	551.343	T25
<b>left hand</b>											
<b>A32CRGNL4MN5</b>	2.000	2.559	1.281	16.00	1/4-18 NPT	RN.45	552.230	554.260	T20	551.343	T25



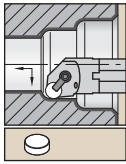
Steel shank with through coolant.  
See page B127 for inserts.



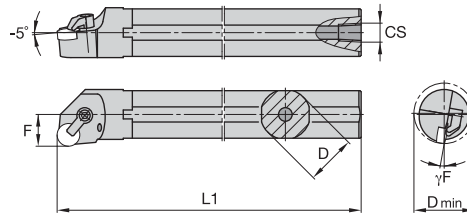
■ A-CWLN-MX -5°



catalog number	D	D min	F	L1	CS	gage insert	shim	shim screw	Torx	clamp assembly	Torx
<b>right hand</b>											
<b>A24CWLN4MX5</b>	1.500	3.150	.890	14.00	1/4-18 NPT	WN.X452	552.210	554.260	T20	551.326	T25
<b>left hand</b>											
<b>A24CWLN4MX5</b>	1.500	3.150	.890	14.00	1/4-18 NPT	WN.X452	552.210	554.260	T20	551.326	T25



Steel shank with through coolant.  
See page B182 for inserts.

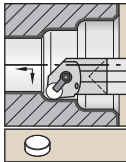


■ **A-CRGN**

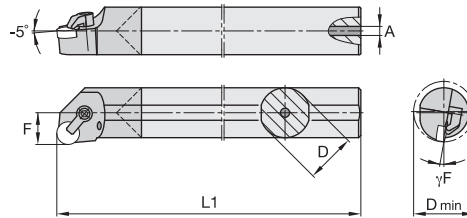
O.D./I.D. Tooling



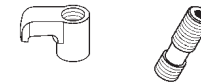
catalog number	D	D min	F	L1	CS	γF°	gage insert	clamp	clamp screw	hex (inch)
right hand										
<b>A16CRGNR3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	RN.32	<b>CK7LP</b>	<b>STC9</b>	3/32
left hand										
<b>A12CRGNL3</b>	.750	.930	.500	10.00	1/8-27 NPT	-11.0	RN.32	<b>CK7LP</b>	<b>STC9</b>	3/32
<b>A16CRGNL3</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-10.0	RN.32	<b>CK7LP</b>	<b>STC9</b>	3/32



Carbide shank with through coolant.  
See page B182 for inserts.

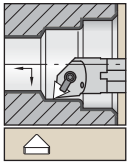


■ **E-CRGN**

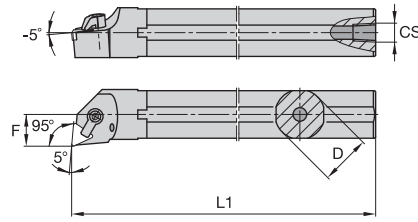


catalog number	D	D min	F	L1	A	γF°	gage insert	clamp	clamp screw	hex (inch)
right hand										
<b>E16CRGNR3</b>	1.000	1.200	.640	12.00	.3120	-10.0	RN.32	<b>CK7LP</b>	<b>STC9</b>	3/32
left hand										
<b>E10CRGNL3</b>	.625	.770	.406	10.00	.2180	-12.0	RN.32	<b>CK7LP</b>	<b>STC9</b>	3/32





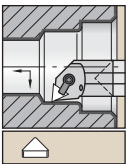
Steel shank with through coolant.  
See page B184 for inserts.



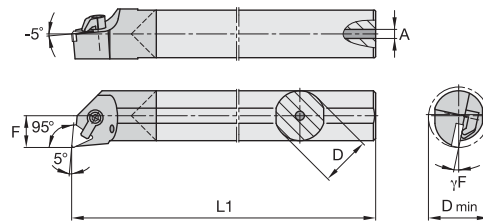
■ **A-CTLN-5°**



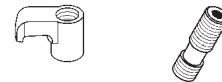
catalog number	D	D min	F	L1	CS	gage insert	clamp	clamp screw	hex (inch)
<b>right hand</b>									
<b>A08CTLNR2</b>	.500	.600	.312	8.00	1/16-27 NPT	TN.221	<b>CK27</b>	<b>STC27</b>	5/64
<b>A10CTLNR2</b>	.625	.770	.406	10.00	1/8-27 NPT	TN.221	<b>CK7LP</b>	<b>STC9</b>	3/32
<b>A16CTLNR2</b>	1.000	1.200	.640	12.00	1/4-18 NPT	TN.221	<b>CK7LP</b>	<b>STC9</b>	3/32
<b>left hand</b>									
<b>A10CTLNL2</b>	.625	.770	.406	10.00	1/8-27 NPT	TN.221	<b>CK7LP</b>	<b>STC9</b>	3/32



Carbide shank with through coolant.  
See page B184 for inserts.



■ **E-CTLN-5°**

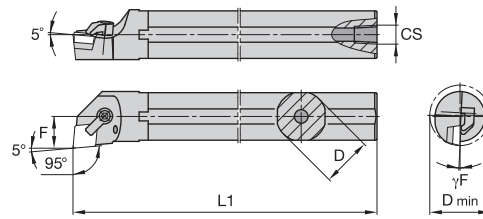


catalog number	D	D min	F	L1	A	gage insert	clamp	clamp screw	hex (inch)
<b>right hand</b>									
<b>E08CTLNR2</b>	.500	.600	.312	8.00	.19	TN.221	<b>CK27</b>	<b>STC27</b>	5/64
<b>E12CTLNR2</b>	.750	.930	.500	10.00	.28	TN.221	<b>CK7LP</b>	<b>STC9</b>	3/32
<b>left hand</b>									
<b>E08CTLNL2</b>	.500	.600	.312	8.00	.19	TN.221	<b>CK27</b>	<b>STC27</b>	5/64

O.D./I.D. Tooling



Steel shank with through coolant.  
See page B84 for inserts.



■ **A-CCLP-5°**

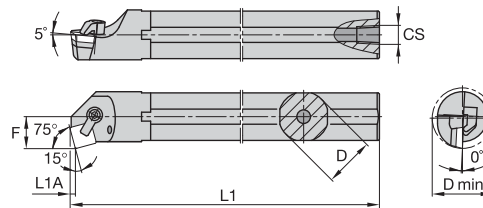
O.D./I.D. Tooling



catalog number	D	D min	F	L1	CS	$\gamma F^\circ$	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>A16CCLPR4</b>	1.000	1.200	.640	12.00	1/4-18 NPT	-3.0	CP.422	<b>SM369</b>	<b>S19</b>	1/16	<b>CK20</b>	<b>STC11</b>	1/8
<b>A24CCLPR4</b>	1.500	1.760	.890	14.00	1/4-18 NPT	0.0	CP.422	<b>SM369</b>	<b>S19</b>	1/16	<b>CK22</b>	<b>STC26</b>	1/8



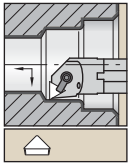
Steel shank with through coolant.  
See pages B85–B86 and B129–B130 for inserts.



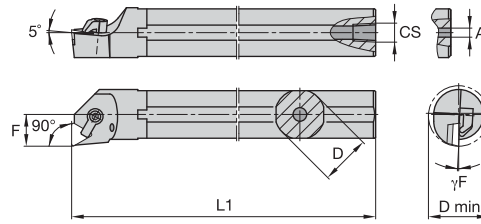
■ **A-CSKP 15°**



catalog number	D	D min	F	L1	L1A	CS	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
<b>A16CSKPR4</b>	1.000	1.200	.640	12.00	.12	1/4-18 NPT	SP.422	—	—	—	<b>CK20</b>	<b>STC11</b>	1/8
<b>A20CSKPR4</b>	1.250	1.470	.765	14.00	.12	1/4-18 NPT	SP.422	<b>SM40</b>	<b>S19</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>A24CSKPR4</b>	1.500	1.760	.890	14.00	.12	1/4-18 NPT	SP.422	<b>SM40</b>	<b>S19</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32



Steel shank with through coolant.  
See pages B86–B87 and  
B130 for inserts.

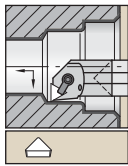


■ **A-CTFP 0°**

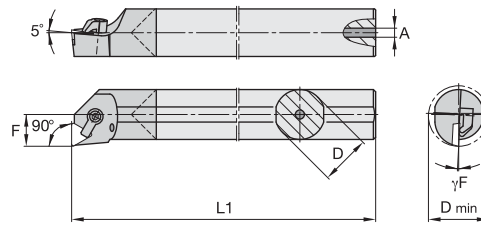


catalog number	D	D min	F	L1	A	CS	γF°	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)	
<b>right hand</b>															
<b>A06CTFPR2</b>	.375	.480	.250	6.00	.13	—	-3.0	TP..2151	—	—	—	<b>CK27</b>	<b>STC27</b>	5/64	
<b>A08CTFPR2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	TP.221	—	—	—	<b>CK27</b>	<b>STC27</b>	5/64	
<b>A10CTFPR2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-4.0	TP.221	—	—	—	<b>CK19</b>	<b>STC9</b>	3/32	
<b>A12CTFPR3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	0.0	TP.322	—	—	—	<b>CK7</b>	<b>STC9</b>	3/32	
<b>A16TCTFPR3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	TP.322	—	—	—	<b>CK20</b>	<b>STC11</b>	1/8	
<b>A20UCTFPR3</b>	1.250	1.470	.765	14.00	—	1/4-18 NPT	-3.0	TP.322	<b>SM41</b>	<b>S19</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32	
<b>A24CTFPR3</b>	1.500	1.760	.890	14.00	—	1/4-18 NPT	-3.0	TP.322	<b>SM41</b>	<b>S19</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32	
<b>A24CTFPR4</b>	1.500	1.760	.890	14.00	—	1/4-18 NPT	-3.0	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC8</b>	5/32	
<b>A32CTFPR4</b>	2.000	2.400	1.281	16.00	—	1/4-18 NPT	-3.0	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32	
<b>A40CTFPR4</b>	2.500	3.030	1.531	16.00	—	1/4-18 NPT	-3.0	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32	
<b>left hand</b>															
<b>A08CTFPL2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	TP.221	—	—	—	<b>CK27</b>	<b>STC27</b>	5/64	
<b>A10CTFPL2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-4.0	TP.221	—	—	—	<b>CK19</b>	<b>STC9</b>	3/32	
<b>A12CTFPL3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	0.0	TP.322	—	—	—	<b>CK7</b>	<b>STC9</b>	3/32	
<b>A16TCTFPL3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	TP.322	—	—	—	<b>CK20</b>	<b>STC11</b>	1/8	
<b>A20UCTFPL3</b>	1.250	1.470	.765	14.00	—	1/4-18 NPT	-3.0	TP.322	<b>SM41</b>	<b>S19</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32	
<b>A24CTFPL4</b>	1.500	1.760	.890	14.00	—	1/4-18 NPT	-3.0	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC8</b>	5/32	
<b>A32CTFPL4</b>	2.000	2.400	1.281	16.00	—	1/4-18 NPT	-3.0	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK9</b>	<b>STC4</b>	5/32	

O.D./I.D. Tooling

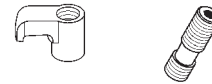


Carbide shank with through coolant.  
See pages B86–B87 and B130 for inserts.

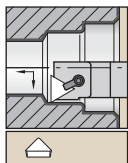


■ **E-CTFP 0°**

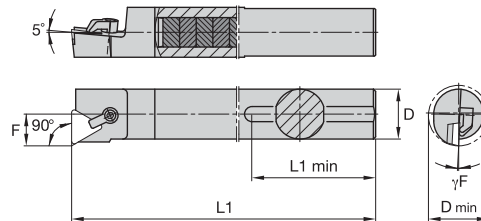
O.D./I.D. Tooling



catalog number	D	D min	F	L1	A	γF°	gage insert	clamp	clamp screw	hex (inch)
<b>right hand</b>										
E08KCTFPR2	.500	.600	.312	5.00	.19	-3.0	TP.221	CK27	STC27	5/64
E08RCTFPR2	.500	.600	.312	8.00	.19	-3.0	TP.221	CK27	STC27	5/64
E10MCTFPR2	.625	.770	.406	6.00	.22	0.0	TP.221	CK19	STC9	3/32
E10SCTFPR2	.625	.770	.406	10.00	.22	0.0	TP.221	CK19	STC9	3/32
E12QCTFPR3	.750	.930	.500	7.00	.28	0.0	TP.322	CK7	STC9	3/32
E12SCTFPR3	.750	.930	.500	10.00	.28	0.0	TP.322	CK7	STC9	3/32
E16TCTFPR3	1.000	1.200	.640	12.00	.31	0.0	TP.322	CK20	STC11	1/8
<b>left hand</b>										
E10MCTFPL2	.625	.770	.406	6.00	.22	0.0	TP.221	CK19	STC9	3/32
E12QCTFPL3	.750	.930	.500	7.00	.28	0.0	TP.322	CK7	STC9	3/32
E12SCTFPL3	.750	.930	.500	10.00	.28	0.0	TP.322	CK7	STC9	3/32
E16TCTFPL3	1.000	1.200	.640	12.00	.31	0.0	TP.322	CK20	STC11	1/8



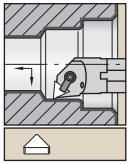
DeVibrator shank.  
See pages B86–B87 and B130 for inserts.



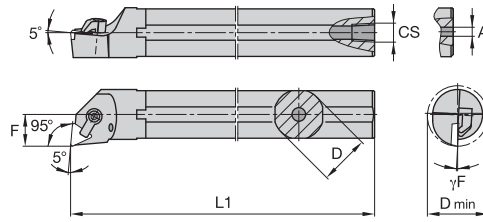
■ **B-CTFP 0°**



catalog number	D	D min	F	L1	L1 min	γF°	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
B10CTFPR2	.625	.770	.406	10.00	5.25	0.0	TP.221	—	—	—	CK19	STC9	3/32
B12CTFPR3	.750	.930	.500	10.00	5.75	0.0	TP.322	—	—	—	CK7	STC9	3/32
B14CTFPR3	.875	1.060	.516	10.00	6.25	0.0	TP.322	—	—	—	CK20	STC11	1/8
B16CTFPR3	1.000	1.200	.640	12.00	6.50	0.0	TP.322	—	—	—	CK20	STC11	1/8
B20CTFPR3	1.250	1.470	.765	14.00	8.25	-3.0	TP.322	SM41	S111	1/16	CK10	STC8	5/32
B24CTFPR4	1.500	1.760	.890	15.50	9.75	-3.0	TP.432	SM37	S125	3/32	CK10	STC8	5/32
B28CTFPR4	1.750	2.010	1.015	18.50	10.75	-3.0	TP.432	SM37	S125	3/32	CK10	STC8	5/32
B32CTFPR4	2.000	2.400	1.281	21.50	12.25	-3.0	TP.432	SM37	S125	3/32	CK9	STC4	5/32



Steel shank with through coolant.  
See pages B86–B87 and B130 for inserts.



■ **A-CTLP -5°**



catalog number	D	D min	F	L1	A	CS	γF°	gage insert	clamp	clamp screw	hex (inch)
<b>right hand</b>											
A06CTLPR2	.375	.480	.250	6.00	.13	—	-3.0	TP.2151	CK27	STC27	5/64
A08CTLPR2	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	TP.221	CK27	STC27	5/64
A12CTLPR3	.750	.930	.500	10.00	—	1/8-27 NPT	0.0	TP.322	CK7	STC9	3/32
<b>left hand</b>											
A16CTLPR3	1.000	1.220	.640	12.00	—	1/4-18 NPT	0.0	TP.322	CK20	STC11	1/8
<b>right hand</b>											
A06CTLPL2	.375	.480	.250	6.00	.13	—	-3.0	TP.2151	CK27	STC27	5/64
A08CTLPL2	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	TP.221	CK27	STC27	5/64
A10CTLPL2	.625	.770	.406	10.00	.16	1/8-27 NPT	-3.0	TP.221	CK19	STC9	3/32
A12CTLPL3	.750	.930	.500	10.00	—	1/8-27 NPT	0.0	TP.322	CK7	STC9	3/32
A16CTLPL3	1.000	1.220	.640	12.00	—	1/4-18 NPT	0.0	TP.322	CK20	STC11	1/8

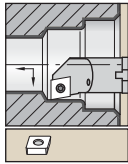
O.D./I.D. Tooling

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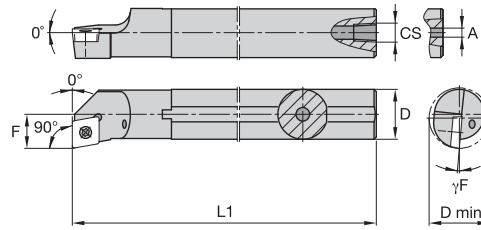


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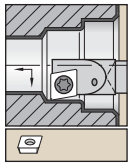
Steel shank with through coolant.  
See pages B88–B91 for inserts.



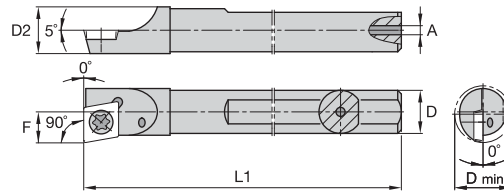
■ A-SCFC 0°

O.D./I.D. Tooling

catalog number	D	D min	D2	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>											
A06MSCFCR2	.375	.480	—	.250	6.00	.13	—	-8.0	CC..2151	MS1153	T7
A08RSCFCR2	.500	.600	—	.312	8.00	—	1/16-27 NPT	-7.0	CC..2151	MS1153	T7
A10SSCFCR2	.625	.770	—	.406	10.00	—	1/8-27 NPT	-5.0	CC..2151	MS1153	T7
<b>left hand</b>											
A08RSCFCL2	.500	.600	—	.312	8.00	—	1/16-27 NPT	-7.0	CC..2151	MS1153	T7
A10SSCFCL2	.625	.770	—	.406	10.00	—	1/8-27 NPT	-5.0	CC..2151	MS1153	T7
A12SSCFCL3	.750	.930	—	.500	10.00	—	1/8-27 NPT	-5.0	CC..3252	MS1155	T15
A16TSCFCL3	1.000	1.200	—	.640	12.00	—	1/4-18 NPT	-4.0	CC..3252	MS1155	T15



Steel shank with through coolant.  
See pages B91–B92 for inserts.



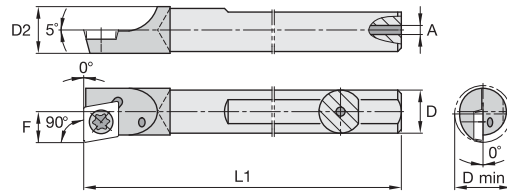
■ A-SCFD 0°

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
A03XSCFDR12	.188	.234	.203	.122	2.50	.040	CD..120605	CC09	T6
A04FSCFDR12	.250	.292	.260	.152	3.00	.040	CD..120605	CC11	T6



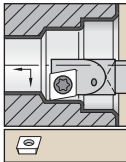
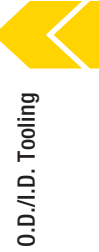


Carbide shank with through coolant.  
See pages B91–B92 for inserts.

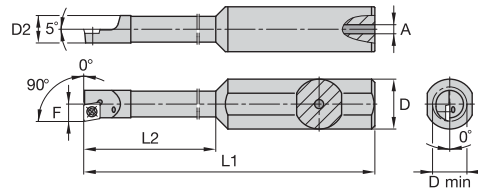


■ E-SCFD 0°

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
<b>right hand</b>									
<b>E03HSCFDR12</b>	.188	.224	.193	.117	4.00	.040	CD..120605	<b>CC11</b>	T6
<b>E03MSCFDR12</b>	.188	.224	.193	.117	6.00	.040	CD..120605	<b>CC11</b>	T6
<b>E04HSCFDR12</b>	.250	.292	.258	.152	4.00	.047	CD..120605	<b>CC11</b>	T6
<b>E04MSCFDR12</b>	.250	.292	.258	.152	6.00	.047	CD..120605	<b>CC11</b>	T6
<b>E05MSCFDR12</b>	.312	.356	.322	.185	6.00	.093	CD..120605	<b>CC11</b>	T6
<b>left hand</b>									
<b>E04HSCFDL12</b>	.250	.292	.258	.152	4.00	.047	CD..120605	<b>CC11</b>	T6



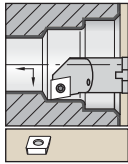
Necked steel shank with through coolant.  
See pages B91–B92 for inserts.



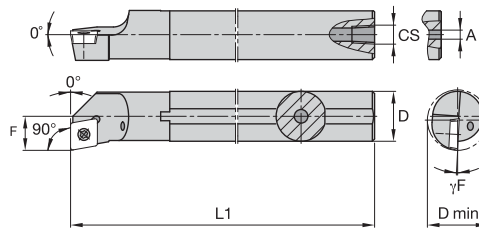
■ A-SCFD 0°

catalog number	D	D min	D2	F	L1	L2	A	gage insert	insert screw	Torx
<b>right hand</b>										
<b>A0406XSCFDR12125</b>	.375	.292	.260	.152	2.50	1.25	.040	CD..120605	<b>CC11</b>	T6
<b>A0408XSCFDR12075</b>	.500	.292	.260	.152	2.75	.75	.040	CD..120605	<b>CC11</b>	T6





Steel shank with through coolant.  
See pages B92–B95 for inserts.



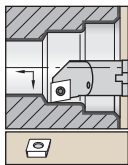
■ A-SCFP 0°

O.D./I.D. Tooling

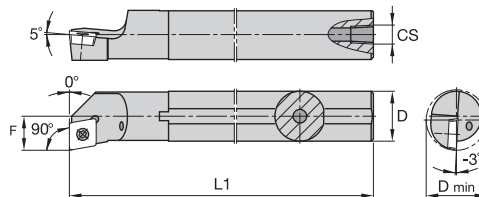
catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
<b>A06SCFPR2</b>	.375	.480	.250	6.00	.13	—	-4.0	CP..2151	<b>MS1153</b>	T7
<b>A08SCFPR2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-2.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCFPR2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	0.0	CP..2151	<b>MS1153</b>	T7
<b>A12SCFPR3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A16SCFPR3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	CP..3252	<b>MS1155</b>	T15
<b>left hand</b>										
<b>A06SCFPL2</b>	.375	.480	.250	6.00	.13	—	-4.0	CP..2151	<b>MS1153</b>	T7
<b>A08SCFPL2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-2.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCFPL2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	0.0	CP..2151	<b>MS1153</b>	T7
<b>A12SCFPL3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A16SCFPL3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	CP..3252	<b>MS1155</b>	T15



NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPGM/CPGT/CPGW-21.5\_ inserts.  
60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.



Steel shank with through coolant.  
See pages B92–B95 for inserts.



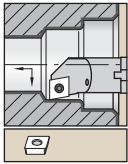
■ A-SCFP-A 0°

catalog number	D	D min	F	L1	CS	gage insert	insert screw	Torx
<b>right hand</b>								
<b>A12SCFPR3AP5</b>	.750	.930	.500	10.000	1/8-27 NPT	CP..3252	<b>MS1027</b>	T9
<b>A16SCFPR3AP5</b>	1.000	1.190	.625	12.000	1/4-18 NPT	CP..3252	<b>MS1027</b>	T9
<b>left hand</b>								
<b>A12SCFPL3AP5</b>	.750	.930	.500	10.000	1/8-27 NPT	CP..3252	<b>MS1027</b>	T9
<b>A16SCFPL3AP5</b>	1.000	1.190	.625	12.000	1/4-18 NPT	CP..3252	—	T9

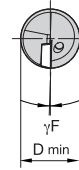
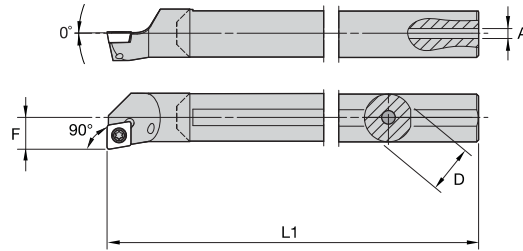


NOTE: 90° countersunk hole insert (i.e., CPGM/CPG1332.5).  
ANSI/ISO compatible 60° countersunk hole.  
Insert (i.e., CPMT/CPGT/CPGW 32.5) does not fit this tool.





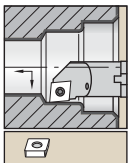
Heavy metal bar with through coolant.  
See pages B92–B95 for inserts.



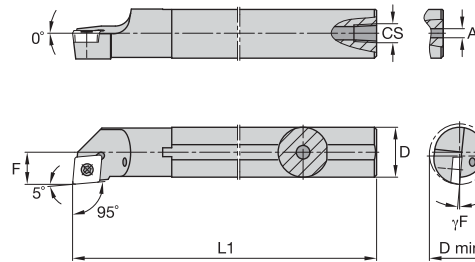
■ L-SCFP 0°

catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
right hand									
L06MSCFPR2	.375	.480	.250	6.059	.125	-4.0	CP..2151..	MS1939	T7
L08RSCFPR2	.500	.600	.312	7.928	.156	-2.0	CP..2151..	MS1153	T7
L10RSCFPR2	.625	.770	.406	7.992	.156	0.0	CP..2151..	MS1153	T7
left hand									
L06MSCFPL2	.375	.480	.250	6.059	.125	-4.0	CP..2151..	MS1939	T7
L08RSCFPL2	.500	.600	.312	7.928	.156	-2.0	CP..2151..	MS1153	T7
L10RSCFPL2	.625	.770	.406	7.992	.156	0.0	CP..2151..	MS1153	T7
L12RSCFPL3	.750	.930	.500	7.960	.156	-2.0	CP..3252..	MS1155	T15
L16SSCFPR3	1.000	1.200	.640	9.941	.250	0.0	CP..3252..	MS1155	T15

NOTE: ANSI/ISO compatible 68° countersunk hole insert.  
This tool will accept CPGM/CPGT/CPGW 21.5° inserts.  
ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW 32.5).  
90° countersunk hole inserts (i.e., CPGM/CPGB 32.5) do not fit this tool.

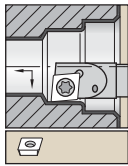


Steel shank with through coolant.  
See pages B88–B91 for inserts.

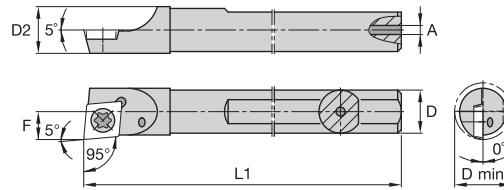


■ A-SCLC -5°

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
right hand										
A06MSCLCR2	.375	.480	.250	6.000	.13	—	-8.0	CC..2151	MS1939	T7
A08RSCLCR2	.500	.600	.312	8.000	—	1/16-27 NPT	-7.0	CC..2151	MS1153	T7
A10SSCLCR2	.625	.770	.406	10.000	—	1/8-27 NPT	-5.0	CC..2151	MS1153	T7
A10SSCLCR3	.625	.770	.406	10.000	—	1/8-27 NPT	-8.0	CC..3252	MS1155	T15
A12SSCLCR3	.750	.930	.500	10.000	—	1/8-27 NPT	-5.0	CC..3252	MS1155	T15
A16TSCLCR3	1.000	1.200	.640	12.000	—	1/4-18 NPT	-4.0	CC..3252	MS1155	T15
left hand										
A06MSCLCL2	.375	.480	.250	6.000	.13	—	-8.0	CC..2151	MS1939	T7
A08RSCLCL2	.500	.600	.312	8.000	—	1/16-27 NPT	-7.0	CC..2151	MS1153	T7
A10SSCLCL2	.625	.770	.406	10.000	—	1/8-27 NPT	-5.0	CC..2151	MS1153	T7
A10SSCLCL3	.625	.770	.406	10.000	—	1/8-27 NPT	-8.0	CC..3252	MS1155	T15
A12SSCLCL3	.750	.930	.500	10.000	—	1/8-27 NPT	-5.0	CC..3252	MS1155	T15
A16TSCLCL3	1.000	1.200	.640	12.000	—	1/4-18 NPT	-4.0	CC..3252	MS1155	T15



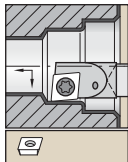
Steel shank with through coolant.  
See pages B91–B92 for inserts.



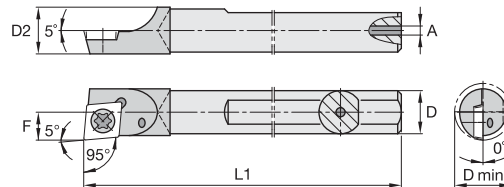
■ **A-SCLD -5°**

O.D./I.D. Tooling

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
<b>right hand</b>									
<b>A03XSCLDR12A</b>	.188	.204	.180	.104	2.50	.040	CD..120605	<b>CC09</b>	T6
<b>A03XSCLDR12</b>	.188	.230	.203	.116	2.50	.040	CD..120605	<b>CC09</b>	T6
<b>A04FSCLDR12</b>	.250	.285	.260	.145	3.00	.040	CD..120605	<b>CC11</b>	T6
<b>left hand</b>									
<b>A03XSCLDL12</b>	.188	.230	.203	.116	2.50	.040	CD..120605	<b>CC09</b>	T6
<b>A04FSCLDL12</b>	.250	.285	.260	.145	3.00	.040	CD..120605	<b>CC11</b>	T6



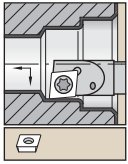
Carbide shank with through coolant.  
See pages B91–B92 for inserts.



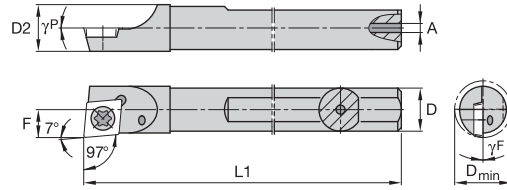
■ **E-SCLD -5°**

catalog number	D	D min	D2	F	L1	L2	A	gage insert	insert screw	Torx
<b>right hand</b>										
<b>E03HSCLDR12A</b>	.187	.218	—	.111	4.00	.42	.040	CD..120605	<b>CC09</b>	T6
<b>E03HSCLDR12</b>	.187	.224	—	.117	4.00	.42	.040	CD..120605	<b>CC09</b>	T6
<b>E03MSCLDR12</b>	.188	.224	.189	.117	6.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E03MSCLDR12A</b>	.188	.218	.193	.111	6.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E04HSCLDR12</b>	.250	.285	.260	.145	4.00	.48	.047	CD..120605	<b>CC11</b>	T6
<b>E04MSCLDR12</b>	.250	.285	—	.145	6.00	.48	.047	CD..120605	<b>CC11</b>	T6
<b>E05MSCLDR12</b>	.312	.356	—	.185	6.00	.54	.093	CD..120605	<b>CC11</b>	T6
<b>left hand</b>										
<b>E03MSCLDL12</b>	.188	.224	.189	.117	6.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E03HSCLDL12A</b>	.188	.218	.193	.111	4.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E03MSCLDL12A</b>	.188	.218	.193	.111	6.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E03HSCLDL12</b>	.188	.224	.193	.117	4.00	—	.040	CD..120605	<b>CC09</b>	T6
<b>E04MSCLDL12</b>	.250	.285	.258	.145	6.00	—	.047	CD..120605	<b>CC11</b>	T6
<b>E04HSCLDL12</b>	.250	.285	.263	.145	4.00	.48	.047	CD..120605	<b>CC11</b>	T6
<b>E05MSCLDL12</b>	.312	.356	.322	.185	6.00	—	.093	CD..120605	<b>CC11</b>	T6




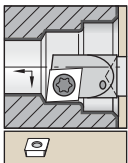


Steel shank with through coolant.  
See page B91 for inserts.

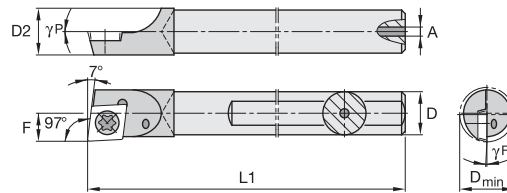


■ A-SC7D -7°


catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand A03XSC7DR12	.188	.180	.165	.095	2.50	.040	CDHB120605	 CC09	T6
left hand A03XSC7DL12	.188	.180	.165	.095	2.50	.040	CDHB120605	CC09	T6



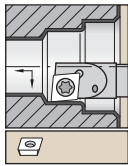
Carbide shank with through coolant.  
See pages B91–B92 for inserts.



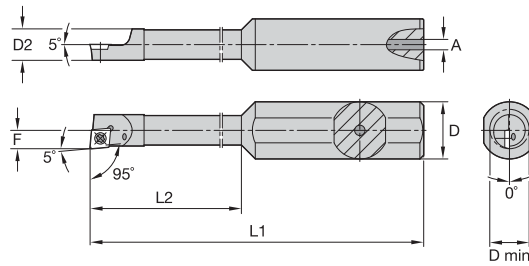
■ E-SC7D -7°

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand E25MSC7DR12	.156	.180	.165	.095	6.00	.039	CD..120605	 CC09	T6
left hand E25MSC7DL12	.156	.180	.165	.095	6.00	.039	CD..120605	CC09	T6

O.D./I.D. Tooling



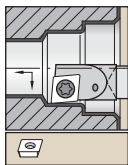
Necked steel shank with through coolant.  
See pages B91–B92 for inserts.



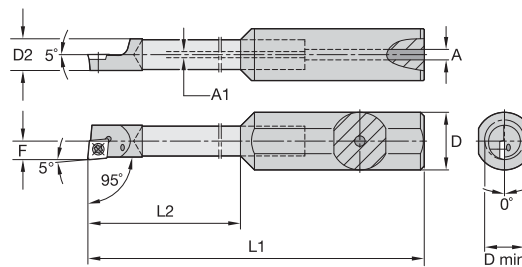
■ A-SCLD -5°

O.D./I.D. Tooling

catalog number	D	D min	D2	F	L1	L2	A	γF°	gage insert	insert screw	Torx
<b>right hand</b>											
A2906XSCLDR1205	.375	.204	.180	.104	2.50	.50	.040	0.0	CD..120605	CC09	T6
A2906XSCLDR121	.375	.204	.180	.104	2.50	1.00	.040	0.0	CD..120605	CC09	T6
A0306XSCLDR12	.375	.243	.193	.126	3.50	1.00	.078	-4.0	CD..12061	MS1454	T5
<b>left hand</b>											
A3206XSCLDR1205	.375	.228	.203	.116	2.50	.50	.040	0.0	CD..120605	CC11	T6
A3206XSCLDR121	.375	.228	.203	.116	2.50	1.00	.040	0.0	CD..120605	CC11	T6
A0406XSCLDR12	.375	.300	.234	.156	4.00	1.25	.078	-1.0	CD..12061	MS1454	T5
A0406XSCLDR12075	.375	.285	.260	.145	2.50	.75	.040	0.0	CD..120605	CC11	T6
A0406XSCLDR12125	.375	.285	.260	.145	2.50	1.25	.040	0.0	CD..120605	CC11	T6
<b>left hand</b>											
A0306XSCLDL12	.375	.243	.193	.126	3.50	1.00	.078	-4.0	CD..12061	MS1454	T5
A0406XSCLDL12	.375	.300	.234	.156	4.00	1.25	.078	-1.0	CD..12061	MS1454	T5



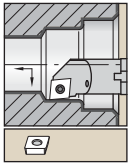
Necked carbide shank with through coolant.  
See pages B91–B92 for inserts.



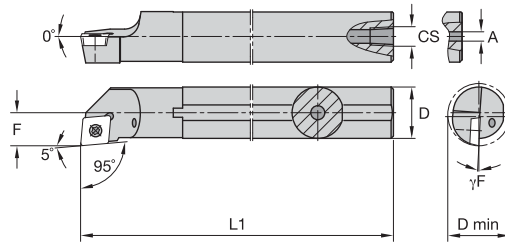
■ E-SCLD -5°

catalog number	D	D min	D2	F	L1	L2	A	A1	gage insert	insert screw	Torx
<b>right hand</b>											
E3208XSCLDR121	.500	.234	.187	.119	2.50	1.00	.13	.047	CD..120605	CC09	T6
E0408XSCLDR1225	.500	.285	.258	.145	4.00	2.50	.13	.047	CD..120605	CC11	T6
E2910XSCLDR12088	.625	.208	.189	.104	3.38	.88	.13	.047	CD..120605	CC09	T6
<b>left hand</b>											
E3210XSCLDR122	.625	.234	.210	.119	4.50	2.00	.13	.047	CD..120605	CC09	T6
E0410XSCLDR12125	.625	.285	.258	.145	3.75	1.25	.13	.047	CD..120605	CC11	T6





Steel shank with through coolant.  
See pages B92–B95 for inserts.



■ A-SCLP -5°

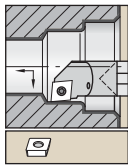


catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
<b>A06SCLPR2</b>	.375	.480	.250	6.00	.13	—	-6.0	CP..2151	<b>MS1153</b>	T7
<b>A08SCLPR2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCLPR2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-2.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCLPR3</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A12SCLPR3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A16SCLPR3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	CP..3252	<b>MS1155</b>	T15
<b>left hand</b>										
<b>A06SCLPL2</b>	.375	.480	.250	6.00	.13	—	-6.0	CP..2151	<b>MS1153</b>	T7
<b>A08SCLPL2</b>	.500	.600	.312	8.00	—	1/16-27 NPT	-3.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCLPL2</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-2.0	CP..2151	<b>MS1153</b>	T7
<b>A10SCLPL3</b>	.625	.770	.406	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A12SCLPL3</b>	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	CP..3252	<b>MS1155</b>	T15
<b>A16SCLPL3</b>	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	CP..3252	<b>MS1155</b>	T15

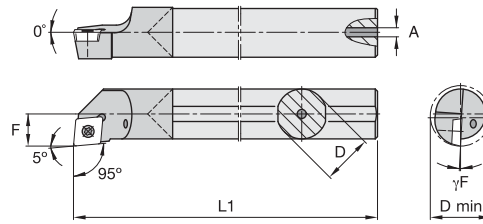
NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPGM/CPGT/CPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.



O.D./I.D. Tooling



Carbide shank with through coolant.  
See pages B92–B95 for inserts.



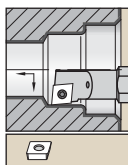
■ E-SCLP -5°

O.D./I.D. Tooling

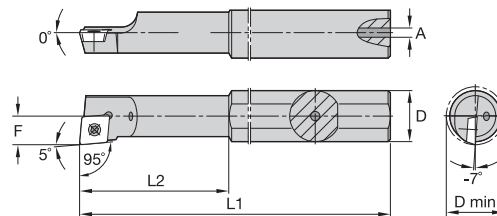


catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
<b>right hand</b>									
<b>E05KSCLP18</b>	.313	.415	.219	5.000	.093	-5.0	CP..18151	<b>MS1933</b>	T7
<b>E06SCLPR2</b>	.375	.480	.250	6.000	.125	-6.0	CP..2151	<b>MS1939</b>	T7
<b>E08SCLPR2</b>	.500	.600	.312	8.000	.187	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E10SCLPR2</b>	.625	.770	.406	10.000	.218	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E10SCLPR3</b>	.625	.770	.406	10.000	.218	-2.0	CP..3252	<b>MS1155</b>	T15
<b>E12SCLPR2</b>	.750	.930	.500	10.000	.281	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E12SCLPR3</b>	.750	.930	.500	10.000	.281	-2.0	CP..3252	<b>MS1155</b>	T15
<b>E16SCLPR3</b>	1.000	1.200	.640	12.000	.312	0.0	CP..3252	<b>MS1155</b>	T15
<b>left hand</b>									
<b>E05KSCLP18</b>	.313	.415	.219	5.000	.093	-5.0	CP..18151	<b>MS1933</b>	T7
<b>E06SCLPL2</b>	.375	.480	.250	6.000	.125	-6.0	CP..2151	<b>MS1939</b>	T7
<b>E08SCLPL2</b>	.500	.600	.312	8.000	.187	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E10SCLPL2</b>	.625	.770	.406	10.000	.218	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E10SCLPL3</b>	.625	.770	.406	10.000	.218	-2.0	CP..3252	<b>MS1155</b>	T15
<b>E12SCLPL2</b>	.750	.930	.500	10.000	.281	-2.0	CP..2151	<b>MS1153</b>	T7
<b>E12SCLPL3</b>	.750	.930	.500	10.000	.281	-2.0	CP..3252	<b>MS1155</b>	T15
<b>E16SCLPL3</b>	1.000	1.200	.640	12.000	.312	0.0	CP..3252	<b>MS1155</b>	T15

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPGM/CPGT/CPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.



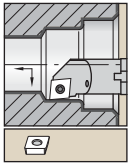
Necked steel shank with through coolant.  
See pages B92–B95 for inserts.



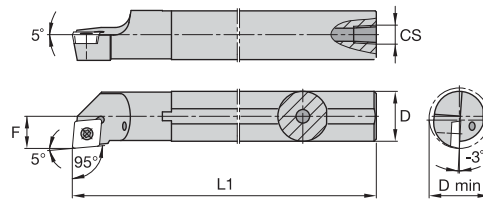
■ A-SCLP -5°



catalog number	D	D min	F	L1	L2	A	gage insert	insert screw	Torx
<b>right hand</b>									
<b>A0506SCLPR18</b>	.375	.415	.219	5.00	1.63	.094	CP..18151	<b>MS1152</b>	T7
<b>left hand</b>									
<b>A0506SCLPL18</b>	.375	.415	.219	5.00	1.63	.094	CP..18151	<b>MS1152</b>	T7



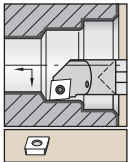
Steel shank with through coolant.  
See pages B92–B95 for inserts.



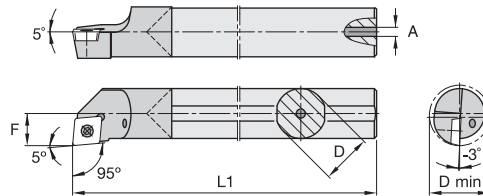
■ A-SCLP-AP -5°

catalog number	D	D min	F	L1	CS	gage insert	insert screw	Torx
<b>right hand</b>								
A10SCLPR3AP5	.625	.770	.406	10.000	1/8-27 NPT	CP..3252	MS1027	T9
A12SCLPR3AP5	.750	.930	.500	10.000	1/8-27 NPT	CP..3252	MS1027	T9
A16SCLPR3AP5	1.000	1.190	.625	12.000	1/4-18 NPT	CP..3252	MS1027	T9
<b>left hand</b>								
A10SCLPL3AP5	.625	.770	.406	10.000	1/8-27 NPT	CP..3252	MS1027	T9
A12SCLPL3AP5	.750	.930	.500	10.000	1/8-27 NPT	CP..3252	MS1027	T9
A16SCLPL3AP5	1.000	1.190	.625	12.000	1/4-18 NPT	CP..3252	MS1027	T9

NOTE: 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_)  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.



Carbide shank with through coolant.  
See pages B92–B95 for inserts.

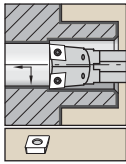


■ E-SCLP-AP -5°

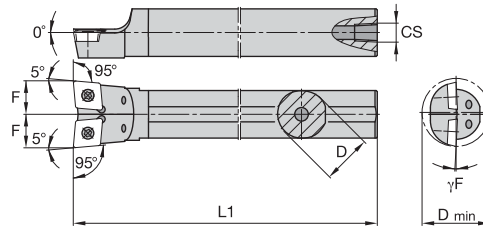
catalog number	D	D min	F	L1	A	gage insert	insert screw	insert screw wrench size
<b>right hand</b>								
E12SCLPR3AP5	.750	1.000	.500	10.000	.281	CP..3252	MS1027	T9
E16SCLPR3AP5	1.000	1.190	.625	12.000	.312	CP..3252	MS1027	T9
<b>left hand</b>								
E12SCLPL3AP5	.750	1.000	.500	10.000	.281	CP..3252	MS1027	T9
E16SCLPL3AP5	1.000	1.190	.625	12.000	.312	CP..3252	MS1027	T9

NOTE: 90° countersunk hole insert (i.e., CPGM/CPGB-32.5\_)  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_) do not fit this tool.





Steel shank with through coolant.  
See pages B92–B95 for inserts.



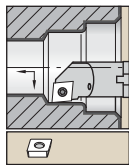
■ A-SCLP-D -5°

O.D./I.D. Tooling

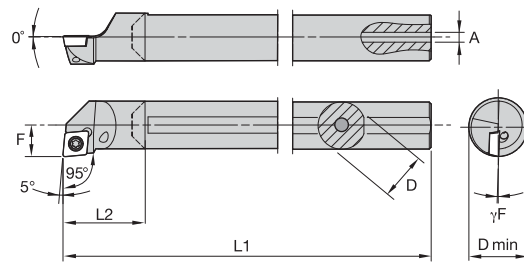
catalog number	D	D min	F	L1	CS	γF°	gage insert	insert screw	Torx
A08SCLPR2D	.500	.650	.312	8.00	1/16-27 NPT	-3.0	CP..2151	MS1153	T7
A10SCLPR2D	.625	.842	.406	10.00	1/8-27 NPT	-2.0	CP..2151	MS1153	T7
A12SCLPR3D	.750	1.030	.500	10.00	1/8-27 NPT	-2.0	CP..3252	MS1155	T15



NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPGM/CPGT/CPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.



Heavy metal bar with through coolant.  
See pages B92–B95 for inserts.



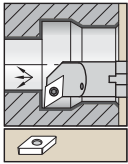
■ L-SCLP -5°

catalog number	D	D min	F	L1	L2	A	γF°	gage insert	insert screw	Torx
right hand										
L05MSCLPR2	.313	.415	.219	5.995	.76	.094	-6.0	CP..2151..	MS1939	T7
L06MSCLPR2	.375	.480	.250	6.059	.91	.125	-6.0	CP..2151..	MS1939	T7
L08RSCCLPR2	.500	.600	.312	7.928	.93	.156	-2.0	CP..2151..	MS1153	T7
L10RSCCLPR2	.625	.770	.406	7.992	1.03	.156	-2.0	CP..2151..	MS1153	T7
L10RSCCLPR3	.625	.770	.406	8.012	1.05	.156	-2.0	CP..3252..	MS1155	T15
L12RSCCLPR3	.750	.930	.500	7.960	1.30	.156	-2.0	CP..3252..	MS1155	T15
L16SSCLPR3	1.000	1.200	.640	9.941	1.41	.250	0.0	CP..3252..	MS1155	T15
left hand										
L05MSCLPL2	.313	.415	.219	5.995	.76	.094	-6.0	CP..2151..	MS1939	T7
L06MSCLPL2	.375	.480	.250	6.059	.91	.125	-6.0	CP..2151..	MS1939	T7
L08RSCCLPL2	.500	.600	.312	7.928	.93	.156	-2.0	CP..2151..	MS1153	T7
L10RSCCLPL2	.625	.770	.406	7.992	1.03	.156	-2.0	CP..2151..	MS1153	T7
L10RSCCLPL3	.625	.770	.406	8.012	1.05	.156	-2.0	CP..3252..	MS1155	T15
L12RSCCLPL3	.750	.930	.500	7.960	1.30	.156	-2.0	CP..3252..	MS1155	T15
L16SSCLPL3	1.000	1.200	.640	9.941	1.41	.250	0.0	CP..3252..	MS1155	T15

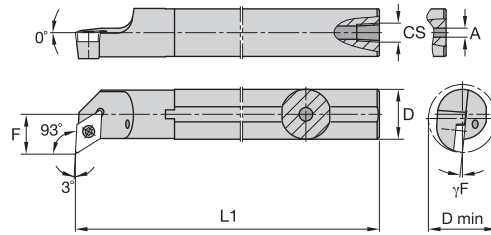


NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept CPGM/CPGT/CPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.





Steel shank with through coolant.  
See pages B95–B98 for inserts.

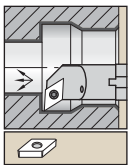


■ A-SDUC -3°

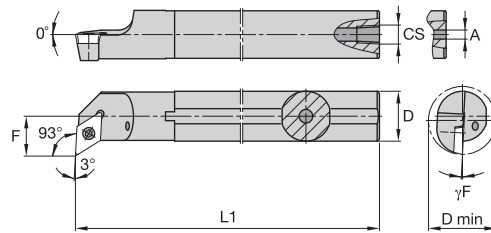
catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
A06MSDUCR2	.375	.600	.375	6.000	.125	—	-7.0	DC..2151	MS1153	T7
A08RSDUCR2	.500	.730	.437	8.000	—	1/16-27 NPT	-5.0	DC..2151	MS1153	T7
A10SSDUCR2	.625	.850	.500	10.000	—	1/8-27 NPT	-4.0	DC..2151	MS1153	T7
A12SSDUCR3	.750	.980	.562	10.000	—	1/8-27 NPT	-5.0	DC..3252	MS1155	T15
A16TSDUCR3	1.000	1.300	.750	12.000	—	1/4-18 NPT	-3.0	DC..3252	MS1155	T15
<b>left hand</b>										
A06MSDUCL2	.375	.600	.375	6.000	.125	—	-7.0	DC..2151	MS1153	T7
A08SDUCL2	.500	.730	.437	8.000	—	1/16-27 NPT	-5.0	DC..2151	MS1153	T7
A10SSDUCL2	.625	.850	.500	10.000	—	1/8-27 NPT	-4.0	DC..2151	MS1153	T7
A12SSDUCL3	.750	.980	.562	10.000	—	1/8-27 NPT	-5.0	DC..3252	MS1155	T15
A16TSDUCL3	1.000	1.300	.750	12.000	—	1/4-18 NPT	-3.0	DC..3252	MS1155	T15



O.D./I.D. Tooling



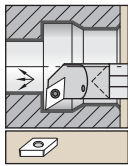
Steel shank with through coolant.  
See pages B98–B100 for inserts.



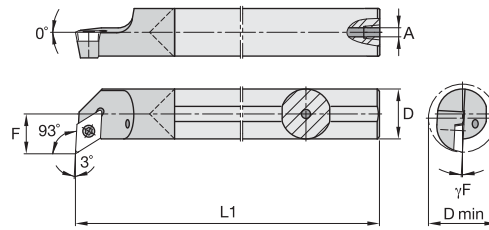
■ A-SDUP -3°

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
A06MSDUPR2	.375	.600	.375	6.000	.125	—	-3.0	DP..2151	MS1153	T7
A08RSDUPR2	.500	.730	.437	8.000	—	1/16-27 NPT	0.0	DP..2151	MS1153	T7
A10SSDUPR2	.625	.850	.500	10.000	—	1/8-27 NPT	0.0	DP..2151	MS1153	T7
A12SSDUPR3	.750	.980	.562	10.000	—	1/8-27 NPT	0.0	DP..3252	MS1155	T15
A16TSDUPR3	1.000	1.300	.750	12.000	—	1/4-18 NPT	0.0	DP..3252	MS1155	T15
<b>left hand</b>										
A06MSDUPL2	.375	.600	.375	6.000	.125	—	-3.0	DP..2151	MS1153	T7
A08RSDUPL2	.500	.730	.437	8.000	—	1/16-27 NPT	0.0	DP..2151	MS1153	T7
A10SSDUPL2	.625	.850	.500	10.000	—	1/8-27 NPT	0.0	DP..2151	MS1153	T7
A12SSDUPL3	.750	.980	.562	10.000	—	1/8-27 NPT	0.0	DP..3252	MS1155	T15
A16TSDUPL3	1.000	1.300	.750	12.000	—	1/4-18 NPT	0.0	DP..3252	MS1155	T15





Carbide shank with through coolant.  
See pages B98–B100 for inserts.

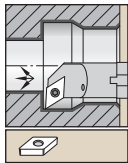


■ E-SDUP -3°

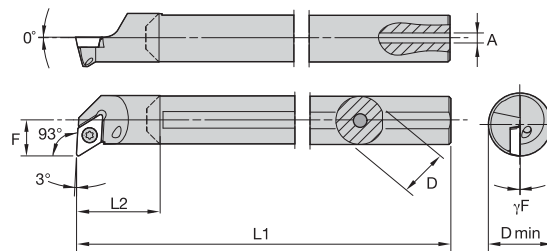
O.D./I.D. Tooling



catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
right hand									
E06SDUPR2	.375	.600	.375	6.000	.125	-2.0	DP..2151	MS1153	T7
E08SDUPR2	.500	.730	.437	8.000	.187	0.0	DP..2151	MS1153	T7
E10SDUPR2	.625	.850	.500	10.000	.218	0.0	DP..2151	MS1153	T7
E12SDUPR2	.750	.980	.562	10.000	.281	0.0	DP..2151	MS1153	T7
E12SSDUPR3	.750	.980	.562	10.000	.281	0.0	DP..3252	MS1155	T15
E16TSDUPR3	1.000	1.300	.750	12.000	.312	0.0	DP..3252	MS1155	T15
left hand									
E06SDUPL2	.375	.600	.375	6.000	.125	-2.0	DP..2151	MS1153	T7
E08SDUPL2	.500	.730	.437	8.000	.187	0.0	DP..2151	MS1153	T7
E10SDUPL2	.625	.850	.500	10.000	.218	0.0	DP..2151	MS1153	T7
E12SDUPL2	.750	.980	.562	10.000	.281	0.0	DP..2151	MS1153	T7
E12SSDUPL3	.750	.980	.562	10.000	.281	0.0	DP..3252	MS1155	T15
E16TSDUPL3	1.000	1.300	.750	12.000	.312	0.0	DP..3252	MS1155	T15



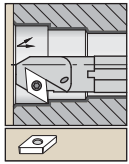
Heavy metal bar with through coolant.  
See pages B98–B100 for inserts.



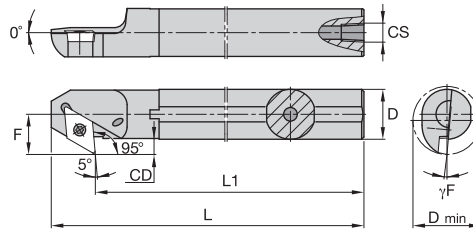
■ L-SDUP -3°



catalog number	D	D min	F	L1	L2	A	γF°	gage insert	insert screw	Torx
right hand										
L06MSDUPR2	.375	.600	.375	6.059	.91	.125	-2.0	DP..2151..	MS1153	T7
L08RSDUPR2	.500	.730	.437	7.928	.93	.156	0.0	DP..2151..	MS1153	T7
L10RSDUPR2	.625	.850	.500	7.992	1.03	.156	0.0	DP..2151..	MS1153	T7
L12RSDUPR3	.750	.980	.562	7.960	1.30	.156	0.0	DP..3252..	MS1155	T15
left hand										
L06MSDUPL2	.375	.600	.375	6.059	.91	.125	-2.0	DP..2151..	MS1153	T7
L08RSDUPL2	.500	.730	.437	7.928	.93	.156	0.0	DP..2151..	MS1153	T7
L10RSDUPL2	.625	.850	.500	7.992	1.03	.156	0.0	DP..2151..	MS1153	T7
L12RSDUPL3	.750	.980	.562	7.960	1.30	.156	0.0	DP..3252..	MS1155	T15

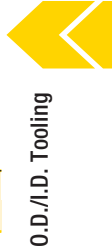


Steel shank with through coolant.  
See pages B95–B98 for inserts.

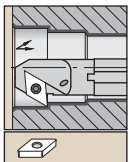


■ A-SDXC -5°

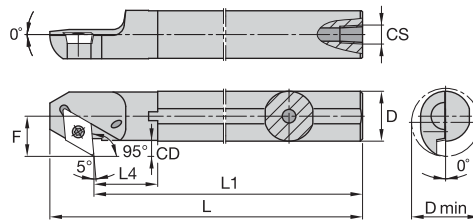
catalog number	D	D min	F	L1	CD	L	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>											
<b>A08RSDXCR2</b>	.500	.730	.437	8.00	.187	8.50	1/16-27 NPT	-6.0	DC..2151	<b>MS1153</b>	T7
<b>A10SSDXCR2</b>	.625	.850	.500	10.00	.187	10.50	1/8-27 NPT	-5.0	DC..2151	<b>MS1153</b>	T7
<b>A12SSDXCR3</b>	.750	.980	.562	10.00	.187	10.63	1/8-27 NPT	-5.0	DC..3252	<b>MS1155</b>	T15
<b>A16TSDXCR3</b>	1.000	1.300	.750	12.00	.250	12.63	1/4-18 NPT	-3.0	DC..3252	<b>MS1155</b>	T15
<b>left hand</b>											
<b>A08RSDXCL2</b>	.500	.730	.437	8.00	.187	8.50	1/16-27 NPT	-6.0	DC..2151	<b>MS1153</b>	T7
<b>A10SSDXCL2</b>	.625	.850	.500	10.00	.187	10.50	1/8-27 NPT	-5.0	DC..2151	<b>MS1153</b>	T7
<b>A12SSDXCL3</b>	.750	.980	.562	10.00	.187	10.63	1/8-27 NPT	-5.0	DC..3252	<b>MS1155</b>	T15
<b>A16TSDXCL3</b>	1.000	1.300	.750	12.00	.250	12.63	1/4-18 NPT	-3.0	DC..3252	<b>MS1155</b>	T15



O.D./I.D. Tooling



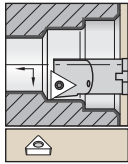
Steel shank with through coolant.  
See pages B98–B100 for inserts.



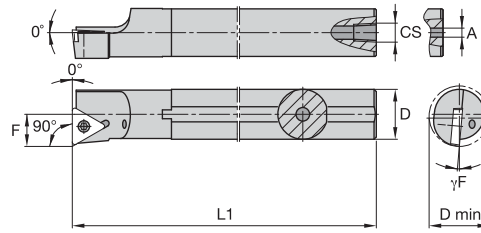
■ A-SDXP-5°

catalog number	D	D min	F	L1	L	L4	CD	CS	gage insert	insert screw	Torx
<b>right hand</b>											
<b>A08RSDXPR2</b>	.500	.730	.437	8.00	8.50	2.79	.187	1/16-27 NPT	DP..2151	<b>MS1153</b>	T7
<b>A10SSDXPR2</b>	.625	.850	.500	10.00	10.50	2.31	.187	1/8-27 NPT	DP..2151	<b>MS1153</b>	T7
<b>A12SSDXPR3</b>	.750	.980	.562	10.00	10.75	2.29	.187	1/8-27 NPT	DP..3252	<b>MS1155</b>	T15
<b>A16TSDXPR3</b>	1.000	1.300	.750	12.00	12.75	4.62	.250	1/4-18 NPT	DP..3252	<b>MS1155</b>	T15
<b>left hand</b>											
<b>A08RSDXPL2</b>	.500	.730	.437	8.00	8.50	2.79	.187	1/16-27 NPT	DP..2151	<b>MS1153</b>	T7
<b>A10SSDXPL2</b>	.625	.850	.500	10.00	10.50	2.31	.187	1/8-27 NPT	DP..2151	<b>MS1153</b>	T7
<b>A12SSDXPL3</b>	.750	.980	.562	10.00	10.75	2.29	.187	1/8-27 NPT	DP..3252	<b>MS1155</b>	T15
<b>A16TSDXPL3</b>	1.000	1.300	.750	12.00	12.75	4.62	.250	1/4-18 NPT	DP..3252	<b>MS1155</b>	T15





Steel shank with through coolant.  
See pages B105–B108 for inserts.

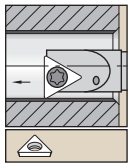


■ A-STFC 0°

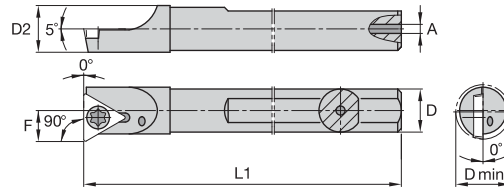
O.D./I.D. Tooling



catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
right hand										
A06MSTFCR2	.375	.480	.250	6.00	.125	—	-8.0	TC..2151	MS1153	T7
A08RSTFCR2	.500	.600	.312	8.00	—	1/16-27 NPT	-7.0	TC..2151	MS1153	T7
A10SSTFCR2	.625	.770	.406	10.00	—	1/8-27 NPT	-5.0	TC..2151	MS1153	T7
left hand										
A08RSTFCL2	.500	.600	.312	8.00	—	1/16-27 NPT	-7.0	TC..2151	MS1153	T7
A10SSTFCL2	.625	.770	.406	10.00	—	1/8-27 NPT	-5.0	TC..2151	MS1153	T7
A12STFCL3	.750	.930	.500	10.00	—	1/8-27 NPT	-5.0	TC..3252	MS1155	T15
A16STFCL3	1.000	1.200	.640	12.00	—	1/4-18 NPT	-4.0	TC..3252	MS1155	T15



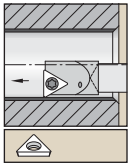
Steel shank with through coolant.  
See page B109 for inserts.



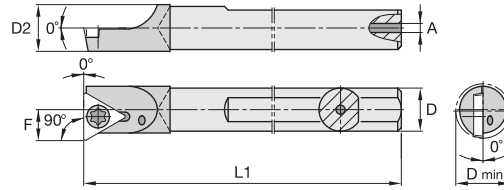
■ A-STFD 0°



catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand									
A04HSTFDR128	.250	.296	.260	.156	4.00	.040	TDHB12807501	FC14	T7
A05HSTFDR128	.312	.358	.322	.187	4.00	.060	TDHB12807501	FC14	T7



Carbide shank with through coolant.  
See page B109 for inserts.

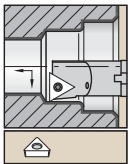


■ E-STFD 0°

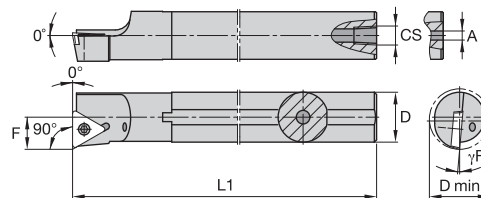
catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
<b>right hand</b>									
<b>E03HSTFDR128</b>	.188	.275	.203	.134	4.00	.040	TD..12807505	<b>FC11</b>	T7
<b>E04HSTFDR128</b>	.250	.300	.260	.156	4.00	.047	TD..12807505	<b>FC11</b>	T7
<b>E04MSTFDR128</b>	.250	.300	.260	.156	6.00	.047	TD..12807505	<b>FC11</b>	T7
<b>E05HSTFDR128</b>	.313	.360	.322	.187	4.00	.093	TD..12807505	<b>FC11</b>	T7
<b>E05MSTFDR128</b>	.313	.360	.322	.187	6.00	.093	TD..12807505	<b>FC11</b>	T7



O.D./I.D. Tooling



Steel shank with through coolant.  
See pages B109–B112 for inserts.

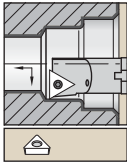


■ A-STFP 0°

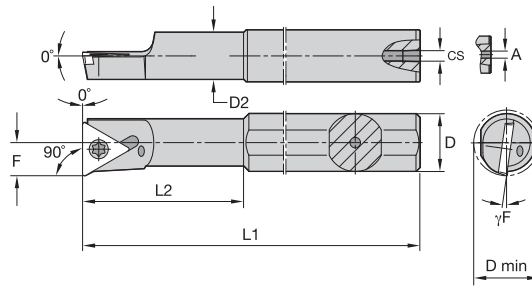
catalog number	D	D min	D2	F	L1	L2	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>												
<b>A05STFPR18</b>	.313	.415	—	.219	5.00	—	.094	—	-8.0	TP..18151	<b>MS1933</b>	T7
<b>A06STFPR2</b>	.375	.480	—	.250	6.00	—	.125	—	-4.0	TP..2151	<b>MS1153</b>	T7
<b>A08RSTFPR2</b>	.500	.600	—	.312	8.00	—	—	1/16-27 NPT	-2.0	TP..2151	<b>MS1153</b>	T7
<b>A10STFPR2</b>	.625	.770	—	.406	10.00	—	—	1/8-27 NPT	0.0	TP..2151	<b>MS1153</b>	T7
<b>A12STFPR3</b>	.750	.930	—	.500	10.00	—	—	1/8-27 NPT	-2.0	TP..3252	<b>MS1155</b>	T15
<b>A16STFPR3</b>	1.000	1.200	—	.640	12.00	—	—	1/4-18 NPT	0.0	TP..3252	<b>MS1155</b>	T15
<b>left hand</b>												
<b>A06STFPL2</b>	.375	.480	—	.250	6.00	—	.125	—	-4.0	TP..2151	<b>MS1153</b>	T7
<b>A08STFPL2</b>	.500	.600	—	.312	8.00	—	—	1/16-27 NPT	-2.0	TP..2151	<b>MS1153</b>	T7
<b>A12STFPL3</b>	.750	.930	—	.500	10.00	—	—	1/8-27 NPT	-2.0	TP..3252	<b>MS1155</b>	T15



NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPGM/TPGT/TPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., TPMT/TPGT/TPGW-32.5\_).  
90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.



Steel shank with through coolant.  
See pages B109–B112 for inserts.



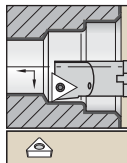
■ A-STFP 0°

O.D./I.D. Tooling

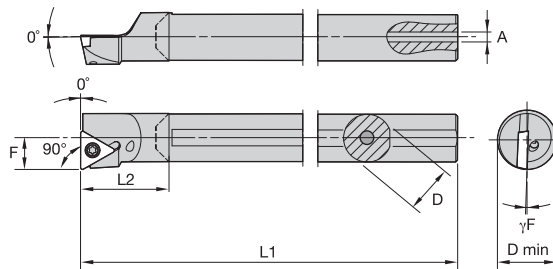


catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
right hand <b>A0506STFPR18</b>	.375	.415	.219	5.000	.094	—	-8.0	TP..18151	<b>MS1152</b>	T7

NOTE: ANSI/ISO compatible 60° countersunk hole insert (i.e., CPMT/CPGT/CPGW32.5).  
90° countersunk hole inserts (i.e., CPGM/CPGB 32.5) do not fit this tool.



Heavy metal bar with through coolant.  
See pages B109–B112 for inserts.

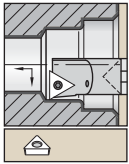


■ L-STFP 0°

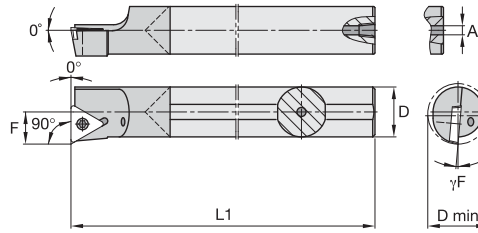


catalog number	D	D min	F	L1	L2	A	γF°	gage insert	insert screw	Torx
right hand <b>L06MSTFPR2</b>	.375	.480	.250	6.059	.91	.125	-4.0	TP..2151	<b>MS1153</b>	T7
<b>L08RSTFPR2</b>	.500	.600	.312	7.928	.93	.156	-2.0	TP..2151	<b>MS1153</b>	T7
<b>L10RSTFPR2</b>	.625	.770	.406	8.082	1.12	.156	0.0	TP..2151	<b>MS1153</b>	T7
<b>L12RSTFPR3</b>	.750	.930	.500	8.050	1.39	.156	-2.0	TP..3252	<b>MS1155</b>	T15
left hand <b>L06MSTFPL2</b>	.375	.480	.250	6.059	.91	.125	-4.0	TP..2151	<b>MS1153</b>	T7
<b>L08RSTFPL2</b>	.500	.600	.312	7.928	.93	.156	-2.0	TP..2151	<b>MS1153</b>	T7
<b>L12RSTFPL3</b>	.750	.930	.500	8.050	1.39	.156	-2.0	TP..3252	<b>MS1155</b>	T15

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPGM/TPGT/TPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., TPMT/TPGT/TPGW-32.5\_).  
90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.



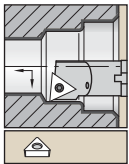
Carbide shank with through coolant.  
See pages B109–B112 for inserts.



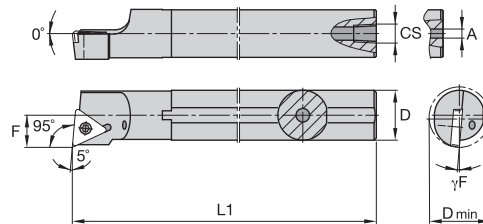
■ E-STFP 0°

catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
<b>right hand</b>									
<b>E05STFPR18</b>	.313	.415	.219	5.000	.093	-5.0	TP..18151	<b>MS1152</b>	T7
<b>E06STFPR2</b>	.375	.480	.250	6.000	.125	-4.0	TP..2151	<b>MS1153</b>	T7
<b>E08STFPR2</b>	.500	.600	.312	8.000	.187	-2.0	TP..2151	<b>MS1153</b>	T7
<b>E10STFPR2</b>	.625	.770	.406	10.000	.218	0.0	TP..2151	<b>MS1153</b>	T7
<b>E12STFPR3</b>	.750	.930	.500	10.000	.281	-2.0	TP..3252	<b>MS1155</b>	T15
<b>E16STFPR3</b>	1.000	1.200	.640	12.000	.312	0.0	TP..3252	<b>MS1155</b>	T15
<b>left hand</b>									
<b>E05STFPL18</b>	.313	.415	.219	5.000	.093	-5.0	TP..18151	<b>MS1152</b>	T7
<b>E06STFPL2</b>	.375	.480	.250	6.000	.125	-4.0	TP..2151	<b>MS1153</b>	T7
<b>E08STFPL2</b>	.500	.600	.312	8.000	.187	-2.0	TP..2151	<b>MS1153</b>	T7
<b>E10STFPL2</b>	.625	.770	.406	10.000	.218	0.0	TP..2151	<b>MS1153</b>	T7
<b>E12STFPL3</b>	.750	.930	.500	10.000	.281	-2.0	TP..3252	<b>MS1155</b>	T15
<b>E16STFPL3</b>	1.000	1.200	.640	12.000	.312	0.0	TP..3252	<b>MS1155</b>	T15

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPGM/TPGT/TPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., TPMT/TPGT/TPGW-32.5\_).  
90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.

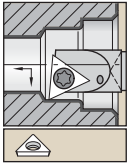


Steel shank with through coolant.  
See pages B105–B108 for inserts.

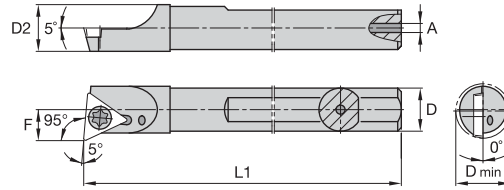


■ A-STLC -5°

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
<b>A06STLCR2</b>	.375	.480	.250	6.000	.125	—	-8.0	TC..2151	<b>MS1153</b>	T7
<b>A08STLCR2</b>	.500	.600	.312	8.000	—	1/16-27 NPT	-7.0	TC..2151	<b>MS1153</b>	T7
<b>A10STLCR2</b>	.625	.770	.406	10.000	—	1/8-27 NPT	-5.0	TC..2151	<b>MS1153</b>	T7
<b>A12STLCR3</b>	.750	.930	.500	10.000	—	1/8-27 NPT	-5.0	TC..3252	<b>MS1155</b>	T15
<b>A16STLCR3</b>	1.000	1.200	.640	12.000	—	1/4-18 NPT	-4.0	TC..3252	<b>MS1155</b>	T15
<b>left hand</b>										
<b>A06STLCL2</b>	.375	.480	.250	6.000	.125	—	-8.0	TC..2151	<b>MS1153</b>	T7
<b>A08STLCL2</b>	.500	.600	.312	8.000	—	1/16-27 NPT	-7.0	TC..2151	<b>MS1153</b>	T7
<b>A10STLCL2</b>	.625	.770	.406	10.000	—	1/8-27 NPT	-5.0	TC..2151	<b>MS1153</b>	T7
<b>A12STLCL3</b>	.750	.930	.500	10.000	—	1/8-27 NPT	-5.0	TC..3252	<b>MS1155</b>	T15
<b>A16STLCL3</b>	1.000	1.200	.640	12.000	—	1/4-18 NPT	-4.0	TC..3252	<b>MS1155</b>	T15



Steel shank with through coolant.  
See page B109 for inserts.

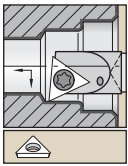


■ A-STLD -5°

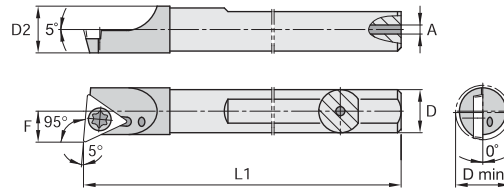
O.D./I.D. Tooling



catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand									
A03GSTLDR128	.187	.275	.197	.126	3.50	.040	TD..12807505	FC11	T7
A04HSTLDR128	.250	.296	.260	.156	4.00	.040	TD..130805	FC14	T7
A05HSTLDR128	.313	.358	.322	.187	4.00	.060	TD..130805	FC14	T7



Carbide shank with through coolant.  
See page B109 for inserts.

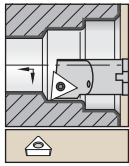


■ E-STLD -5°

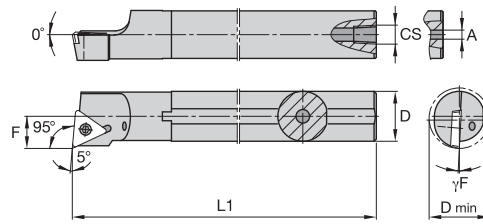


catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand									
E03HSTLDR128	.188	.275	.197	.126	4.000	.040	TD..12807505	FC11	T7
E03MSTLDR128	.188	.275	.197	.126	6.000	.040	TD..12807505	FC11	T7
E04HSTLDR128	.250	.296	.260	.156	4.000	.047	TD..130805	FC14	T7
E04MSTLDR128	.250	.300	.260	.156	6.000	.047	TD..12807505	FC14	T7
E05HSTLDR128	.312	.358	—	.187	4.000	.093	TD..130805	FC14	T7
E05MSTLDR128	.313	.360	.322	.187	6.000	.093	TD..12807505	FC14	T7
left hand									
E03HSTLDL128	.188	.275	.197	.126	4.000	.040	TD..12807505	FC11	T7
E04MSTLDL128	.250	.300	.260	.156	6.000	.047	TD..12807505	FC14	T7
E05MSTLDL128	.313	.360	.322	.187	6.000	.093	TD..12807505	FC14	T7





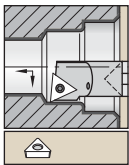
Steel shank with through coolant.  
See pages B109–B112 for inserts.



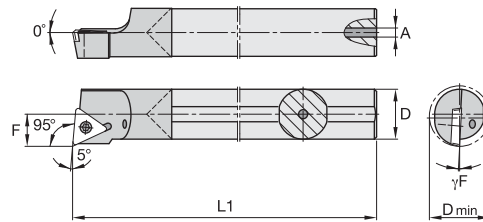
■ A-STLP -5°

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
right hand										
A06STLPR2	.375	.480	.250	6.000	.125	—	-4.0	TP..2151	MS1153	T7
A08STLPR2	.500	.600	.312	8.000	—	1/16-27 NPT	-2.0	TP..2151	MS1153	T7
A10STLPR2	.625	.770	.406	10.000	—	1/8-27 NPT	0.0	TP..2151	MS1153	T7
A12STLPR3	.750	.930	.500	10.000	—	1/8-27 NPT	-2.0	TP..3252	MS1155	T15
A16STLPR3	1.000	1.220	.640	12.000	—	1/4-18 NPT	0.0	TP..3252	MS1155	T15
left hand										
A06STLPL2	.375	.480	.250	6.000	.125	—	-4.0	TP..2151	MS1153	T7
A08STLPL2	.500	.600	.312	8.000	—	1/16-27 NPT	-2.0	TP..2151	MS1153	T7
A10STLPL2	.625	.770	.406	10.000	—	1/8-27 NPT	0.0	TP..2151	MS1153	T7
A12STLPL3	.750	.930	.500	10.000	—	1/8-27 NPT	-2.0	TP..3252	MS1155	T15
A16STLPL3	1.000	1.220	.640	12.000	—	1/4-18 NPT	0.0	TP..3252	MS1155	T15

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPGM/TPGT/TPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., TPMT/TPGT/TPGW-32.5\_).  
90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.



Carbide shank with through coolant.  
See pages B109–B112 for inserts.

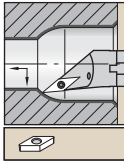


■ E-STLP -5°

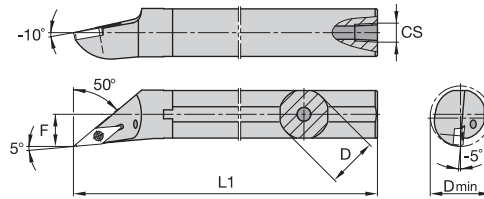
catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
right hand									
E06STLPR2	.375	.480	.250	6.000	.125	-4.0	TP..2151	MS1153	T7
E08STLPR2	.500	.600	.312	8.000	.187	-2.0	TP..2151	MS1153	T7
E10STLPR2	.625	.770	.406	10.000	.218	0.0	TP..2151	MS1153	T7
E12STLPR3	.750	.930	.500	10.000	.281	-2.0	TP..3252	MS1155	T15
E16STLPR3	1.000	1.220	.640	12.000	.312	0.0	TP..3252	MS1155	T15
left hand									
E06STLPL2	.375	.480	.250	6.000	.125	-4.0	TP..2151	MS1153	T7
E08STLPL2	.500	.600	.312	8.000	.187	-2.0	TP..2151	MS1153	T7
E10STLPL2	.625	.770	.406	10.000	.218	0.0	TP..2151	MS1153	T7
E12STLPL3	.750	.930	.500	10.000	.281	-2.0	TP..3252	MS1155	T15
E16STLPL3	1.000	1.220	.640	12.000	.312	0.0	TP..3252	MS1155	T15

NOTE: ANSI/ISO compatible 60° countersunk hole insert.  
This tool will also accept TPGM/TPGT/TPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole insert (i.e., TPMT/TPGT/TPGW-32.5\_).  
90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.





Steel shank with through coolant.  
See pages B113–B114 for inserts.

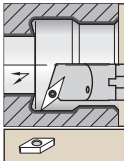


### A-SVMB -5°

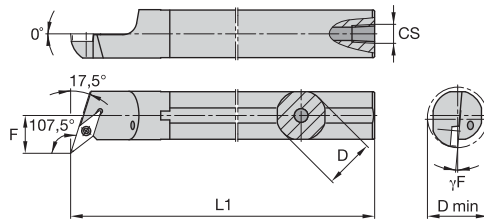
O.D./I.D. Tooling



catalog number	D	D min	F	L1	CS	gage insert	insert screw	Torx
A08RSVMBR2E	.500	.980	.312	8.000	1/16-27 NPT	VB..221	MS1153	T7
A10SSVMBR2E	.625	.980	.406	10.000	1/8-27 NPT	VB..221	MS1153	T7
A12SSVMBR3E	.750	1.286	.500	10.000	1/8-27 NPT	VB..332	MS1155	T15
A16TSVMBR3E	1.000	1.286	.640	12.000	1/4-18 NPT	VB..332	MS1155	T15



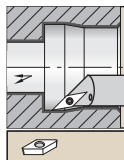
Steel shank with through coolant.  
See pages B113–B114 for inserts.



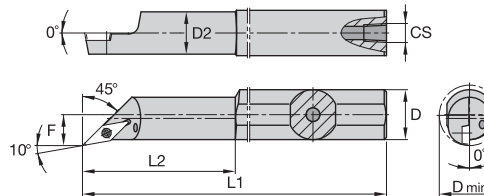
### A-SVQB -17.5°



catalog number	D	D min	F	L1	CS	gage insert	insert screw	Torx
<b>right hand</b>								
A10SSVQBR2	.625	.850	.500	10.00	1/8-27 NPT	VB..221	MS1153	T7
A12SSVQBR2	.750	.980	.562	10.00	1/8-27 NPT	VB..221	MS1153	T7
A16TSVQBR3	1.000	1.300	.750	12.00	1/4-18 NPT	VB..332	MS1155	T15
<b>left hand</b>								
A10SSVQBL2	.625	.850	.500	10.00	1/8-27 NPT	VB..221	MS1153	T7
A12SSVQBL2	.750	.980	.562	10.00	1/8-27 NPT	VB..221	MS1153	T7
A16TSVQBL3	1.000	1.300	.750	12.00	1/4-18 NPT	VB..332	MS1155	T15

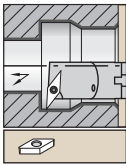


Necked steel shank with through coolant.  
See pages B113–B114 for inserts.

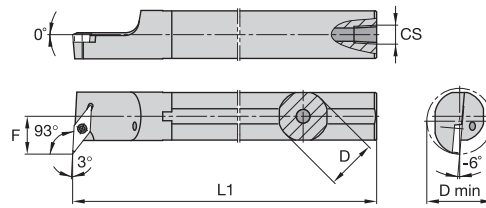


### A-SVSP -10°

catalog number	D	D min	D2	F	L1	L2	CS	gage insert	insert screw	hex (inch)
A2732SVSPRW4	2.000	2.200	1.688	1.080	14.00	5.31	1/4-18 NPT	VP..443K	S411	5/32

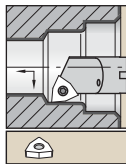


Steel shank with through coolant.  
See pages B113–B114 for inserts.

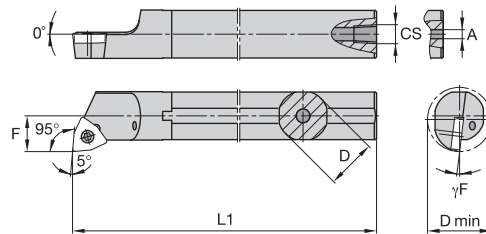


■ A-SVUB -3°

catalog number	D	D min	F	L1	CS	gage insert	insert screw	Torx
<b>right hand</b>								
<b>A12SSVUBR2</b>	.750	.980	.562	10.00	1/8-27 NPT	VB..221	<b>MS1153</b>	T7
<b>A16TSVUBR3</b>	1.000	1.300	.750	12.00	1/4-18 NPT	VB..332	<b>MS1155</b>	T15
<b>left hand</b>								
<b>A12SSVUBL2</b>	.750	.980	.562	10.00	1/8-27 NPT	VB..221	<b>MS1153</b>	T7
<b>A16TSVUBL3</b>	1.000	1.300	.750	12.00	1/4-18 NPT	VB..332	<b>MS1155</b>	T15



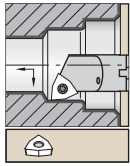
Steel shank with through coolant.  
See pages B114–B115 for inserts.



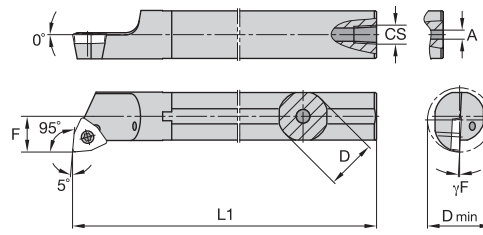
■ A-SWLC -5°

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
<b>right hand</b>										
<b>A06SWLCR2</b>	.375	.480	.250	6.000	.130	—	-8.0	WC..2151	MS1939	T7
<b>A08SWLCR2</b>	.500	.600	.312	8.000	—	1/16-27 NPT	-6.0	WC..2151	MS1153	T7
<b>A10SWLCR3</b>	.625	.770	.406	10.000	—	1/8-27 NPT	-7.0	WC..3252	MS1155	T15
<b>A12SWLCR3</b>	.750	.930	.500	10.000	—	1/8-27 NPT	-5.0	WC..3252	MS1155	T15
<b>left hand</b>										
<b>A06SWLCL2</b>	.375	.480	.250	6.000	.130	—	-8.0	WC..2151	MS1939	T7
<b>A08SWLCL2</b>	.500	.600	.312	8.000	—	1/16-27 NPT	-6.0	WC..2151	MS1153	T7





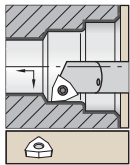
Steel shank with through coolant.  
See page B115 for inserts.



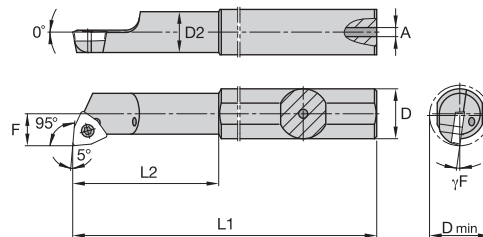
■ A-SWLP -5°

O.D./I.D. Tooling

catalog number	D	D min	F	L1	A	CS	γF°	gage insert	insert screw	Torx
right hand										
A06SWLPR2	.375	.480	.250	6.00	.125	—	-7.0	WP..2151	MS1939	T7
A08SWLPR2	.500	.600	.312	8.00	—	1/16-27 NPT	-2.0	WP..2151	MS1153	T7
A10SWLPR3	.625	.770	.406	10.00	—	1/8-27 NPT	-3.0	WP..3252	MS1155	T15
A12SWLPR3	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	WP..3252	MS1155	T15
A16SWLPR3	1.000	1.200	.640	12.00	—	1/4-18 NPT	0.0	WP..3252	MS1155	T15
left hand										
A06SWLPL2	.375	.480	.250	6.00	.125	—	-7.0	WP..2151	MS1939	T7
A08SWLPL2	.500	.600	.312	8.00	—	1/16-27 NPT	-2.0	WP..2151	MS1153	T7
A10SWLPL3	.625	.770	.406	10.00	—	1/8-27 NPT	-3.0	WP..3252	MS1155	T15
A12SWLPL3	.750	.930	.500	10.00	—	1/8-27 NPT	-2.0	WP..3252	MS1155	T15



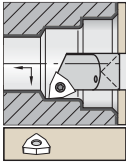
Necked steel shank with through coolant.  
See page B115 for inserts.



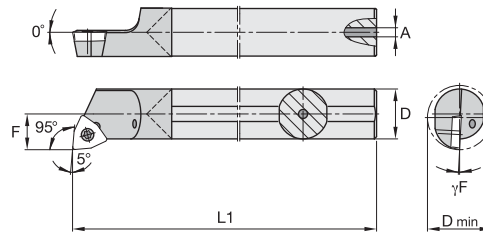
■ A-SWLP -5°

catalog number	D	D min	D2	F	L1	L2	A	γF°	gage insert	insert screw	Torx
right hand											
A0306SWLPR15	.375	.260	.187	.126	3.50	1.00	.078	-10.0	WP..15121	MS1438	T5
A0406SWLPR15	.375	.321	.234	.156	4.00	1.25	.078	-8.0	WP..15121	MS1438	T5
A0506SWLPR15	.375	.415	.299	.219	5.00	1.63	.094	-4.0	WP..15121	MS1438	T5
left hand											
A0306SWLPL15	.375	.260	.187	.126	3.50	1.00	.078	-10.0	WP..15121	MS1438	T5





Carbide shank with through coolant.  
See page B115 for inserts.



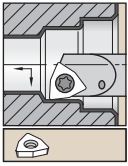
■ E-SWLP -5°



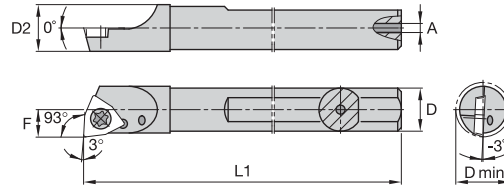
catalog number	D	D min	F	L1	A	γF°	gage insert	insert screw	Torx
<b>right hand</b>									
E03SWLPR15	.188	.260	.260	4.000	.040	-10.0	WP..15121	<b>MS1438</b>	T5
E04SWLPR15	.250	.321	.156	4.015	.047	-8.0	WP..15121	<b>MS1438</b>	T5
E05SWLPR15	.313	.415	.219	5.000	.093	-4.0	WP..15121	<b>MS1438</b>	T5
E06SWLPR2	.375	.480	.250	6.000	.125	-4.0	WP..2151	<b>MS1153</b>	T7
E08SWLPR2	.500	.600	.312	8.000	.187	-2.0	WP..2151	<b>MS1153</b>	T7
E10SWLPR3	.625	.770	.406	10.000	.218	-3.0	WP..3252	<b>MS1155</b>	T15
E12SWLPR3	.750	.930	.500	10.000	.281	-2.0	WP..3252	<b>MS1155</b>	T15
E16SWLPR3	1.000	1.200	.640	12.000	.312	0.0	WP..3252	<b>MS1155</b>	T15
<b>left hand</b>									
E03SWLPL15	.188	.260	.126	4.000	.040	-10.0	WP..15121	<b>MS1438</b>	T5
E04SWLPL15	.250	.321	.156	4.000	.047	-8.0	WP..15121	<b>MS1438</b>	T5
E05SWLPL15	.313	.415	.219	5.000	.093	-4.0	WP..15121	<b>MS1438</b>	T5
E06SWLPL2	.375	.480	.250	6.000	.125	-4.0	WP..2151	<b>MS1153</b>	T7
E08SWLPL2	.500	.600	.312	8.000	.187	-2.0	WP..2151	<b>MS1153</b>	T7
E10SWLPL3	.625	.770	.406	10.000	.218	-3.0	WP..3252	<b>MS1155</b>	T15
E12SWLPL3	.750	.930	.500	10.000	.281	-2.0	WP..3252	<b>MS1155</b>	T15
E16SWLPL3	1.000	1.200	.640	12.000	.312	0.0	WP..3252	<b>MS1155</b>	T15



O.D./I.D. Tooling



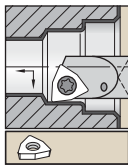
Steel shank with through coolant.  
See page B115 for inserts.



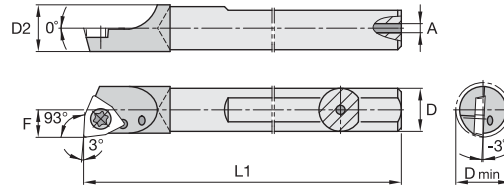
■ A-SWUP -3°

O.D./I.D. Tooling

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand									
A04HSWUPR15	.250	.285	.260	.143	4.00	.040	WP..1511	CT11	T6
A05HSWUPR15	.312	.347	.322	.174	4.00	.040	WP..1511	CT15	T6



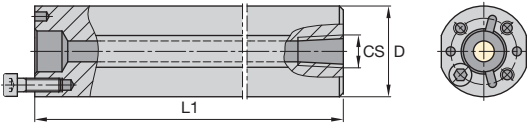
Carbide shank with through coolant.  
See page B115 for inserts.



■ E-SWUP -3°

catalog number	D	D min	D2	F	L1	A	gage insert	insert screw	Torx
right hand									
E03MSWUPR15	.187	.260	.225	.126	6.00	.040	WP..15105	CT15	T6
E04MSWUPR15	.250	.285	—	.143	6.00	.047	WP..S30104	CT11	T6
E05MSWUPR15	.312	.347	.322	.174	6.00	.093	WP..15105	CT15	T6
E06MSWUPR2	.375	.415	.385	.211	6.00	.125	WP..21505	MS1153	T7
E08RSWUPR2	.500	.540	.510	.273	8.00	.500	WP..21505	MS1153	T7



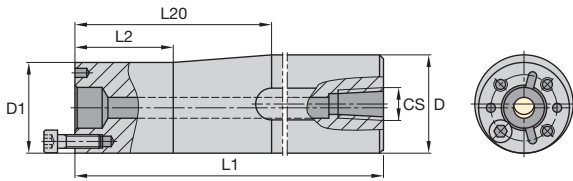


Steel shank with through coolant.  
Max 4:1 overhang ratio.

■ S-4400W

catalog number	D	L1	CS	screw 3 required	screw	hex (inch)
S4416W	1.000	9.00	1/4-18NPT	S319PKG	S322	9/64
S4420W	1.250	9.00	1/4-18NPT	S327	S330	5/32
S4424W	1.500	10.00	1/4-18NPT	S327	S330	5/32
S4428W	1.750	12.00	1/4-18NPT	S337	S340	3/16
S4432W	2.000	13.00	1/4-18NPT	S337	S340	3/16
S4440W	2.500	17.00	1/4-18 NPT	S350	S353	1/4

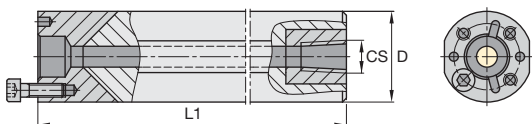
O.D./I.D. Tooling



Steel shank with through coolant.  
Max 4:1 overhang ratio.

■ S-4400W48

catalog number	D	L1	CS	L2	L20	D1	screw 3 required	screw	hex (inch)
S4440W48	3.000	18.00	3/8-18NPT	3.00	6.00	2.50	S350	S353	1/4

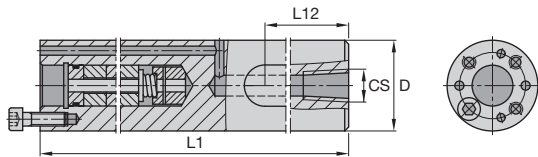


Carbide shank with through coolant.  
Max 6:1 overhang ratio.

■ C-11800W

catalog number	D	L1	CS	screw 3 required	screw	hex (inch)
C11816W	1.000	11.00	1/4-18NPT	S319PKG	S322	9/64
C11820W	1.250	11.00	1/4-18NPT	S412	S415	5/32

O.D./I.D. Tooling

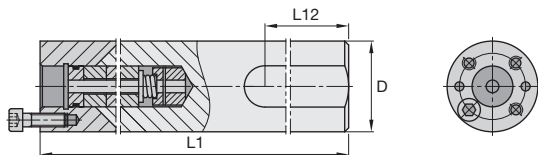


Steel shank DeVibrator with through coolant.

Max 6:1 overhang ratio.

■ D-5400W

catalog number	D	L1	CS	L12	L1 min	screw 3 required	screw	hex (inch)
D5420W	1.250	10.00	3/8-18NPT	7.75	7.00	S327	S330	5/32
D5424W	1.500	12.00	3/8-18NPT	9.25	8.00	S327	S330	5/32
D5428W	1.750	14.00	3/8-18NPT	10.12	9.00	S337	S340	3/16
D5432W	2.000	16.00	3/8-18NPT	12.75	10.00	S337	S340	3/16
D5440W	2.500	20.00	3/8-18NPT	14.87	12.00	S350	S353	1/4

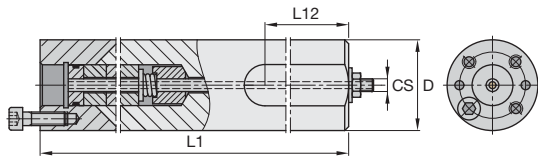


Carbide shank DeVibrator with through coolant.

Max 8:1 overhang ratio.

■ C-6400

catalog number	D	L1	L12	L1 min	screw 3 required	screw	hex (inch)
C6420	1.250	11.00	8.75	7.00	S412	S415	5/32

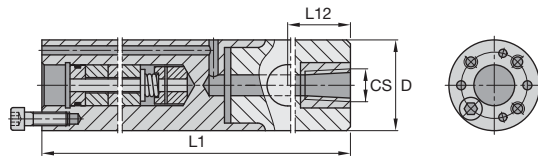


Carbide shank DeVibrator with through coolant.

Max 8:1 overhang ratio.

■ C-6400W

catalog number	D	L1	CS	L12	L1 min	screw 3 required	screw	hex (inch)
C6420W	1.250	11.00	1/4-28UNF	8.75	7.00	S412	S415	5/32
C6424W	1.500	14.00	1/4-28UNF	11.25	8.00	S412	S415	5/32
C6428W	1.750	16.00	3/8-24UNF	11.38	9.00	S422	S425	3/16
C6432W	2.000	19.00	3/8-24UNF	15.75	10.00	S422	S425	3/16
C6440W	2.500	24.00	3/8-24UNF	18.00	12.00	S432	S435	1/4



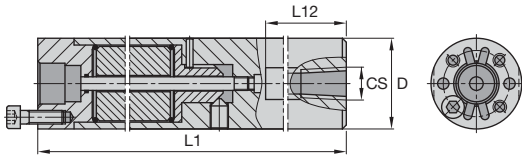
Composite shank DeVibrator with through coolant.

Max 10:1 overhang ratio.

■ C-11900W

catalog number	D	L1	CS	L12	screw 3 required	screw	hex (inch)
C11924W	1.500	15.00	3/8-18NPT	7.75	S327	S330	5/32
C11928W	1.750	17.00	3/8-18NPT	8.25	S337	S340	3/16
C11932W	2.000	20.00	3/8-18NPT	9.75	S337	S340	3/16
C11940W	2.500	25.00	3/8-18NPT	11.75	S350	S353	1/4





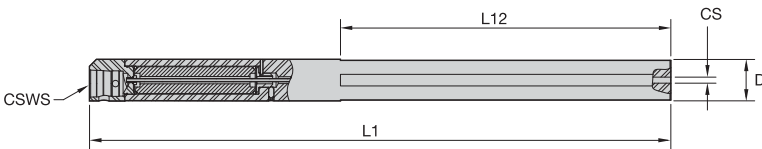
Tunable steel shank with through coolant.

■ D...TTB • Inch

catalog number	D	L1	CS	L12	L1 min	screw 3 required	screw	hex (inch)
D16TTB16	1.000	15.000	1/4-18NPT	8.000	9.086	S316	S321	9/64
D20TTB18	1.250	16.125	1/4-18NPT	10.000	9.590	S325	S329	5/32
D24TTB21	1.500	19.375	1/4-18NPT	12.000	11.038	S327	S330	5/32
D28TTB25	1.750	23.375	1/4-18NPT	15.750	12.350	S337	S340	3/16
D32TTB28	2.000	26.375	1/4-18NPT	18.500	12.266	S337	S340	3/16
D40TTB35	2.500	33.375	1/4-18NPT	24.750	14.880	S350	S353	1/4
D48TTB42	3.000	40.370	1/4-18NPT	24.000	20.000	S350	S353	1/4
D64TTB56	4.000	54.480	3/8-18NPT	20.000	25.760	S350	S353	1/4

O.D./I.D. Tooling

NOTE: Order number 1309256 and order number 1909159 use 2.5" diameter heads.

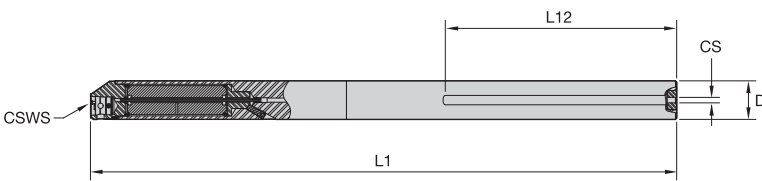


Tunable steel shank with through coolant and front end KM™ clamping unit.

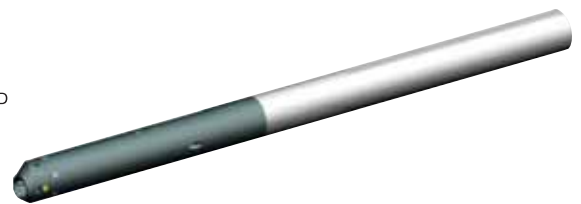


■ D...TTB-KM • Inch

catalog number	D	L1	CS	L12	CSWS system size	L1 min
D28TTB26KM40	1.750	24.440	1/4 - 18 NPT	15.750	KM40	13.500
D32TTB29KM40	2.000	27.440	1/4 - 18 NPT	18.500	KM40	13.380
D40TTB36KM40	2.500	34.450	1/4 - 18 NPT	24.750	KM40	16.000
D48TTB45KM63	3.000	42.230	1/4 - 18 NPT	24.000	KM63	21.700
D64TTB58KM63	4.000	56.240	3/8 - 18 NPT	20.000	KM63	27.620



Carbide tunable boring bar with KM™ Quick Change connection.

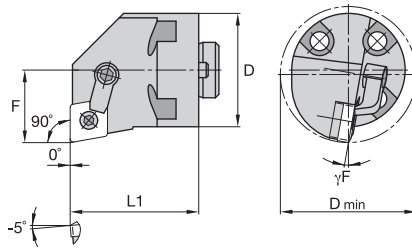


■ G-KM-TTB • Inch

order number	catalog number	D	L1	CS	L12	CSWS system size
3954294	G32TTB41KM40	2.00	39.45	3/8 - 18 NPT	12.00	KM40
3954295	G40TTB51KM40	2.50	49.45	3/8 - 18 NPT	15.00	KM40
3954296	G48TTB63KM63	3.00	58.56	3/8 - 18 NPT	18.00	KM63
3954297	G64TTB83KM63	4.00	76.56	3/8 - 18 NPT	24.00	KM63



With through coolant.  
See pages B40–B49 for inserts.

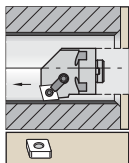


**H-MCFN 0°**

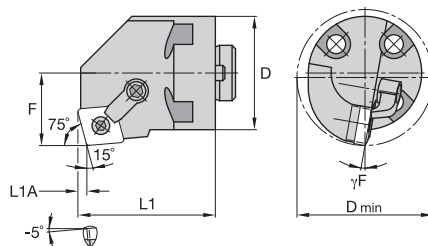
O.D./I.D. Tooling



catalog number	D	F	L1	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>H20MCFNR4</b>	1.250	.765	1.625	1.470	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MCFNR4</b>	1.500	.890	1.625	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCFNR5</b>	2.000	1.281	1.625	2.400	-10.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCFNR6</b>	2.500	1.531	1.625	3.030	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>H24MCFNL4</b>	1.500	.890	1.625	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8



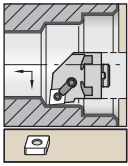
With through coolant.  
See pages B40–B49 for inserts.



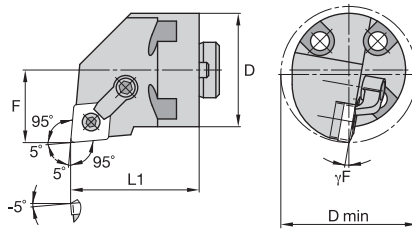
**H-MCKN 15°**



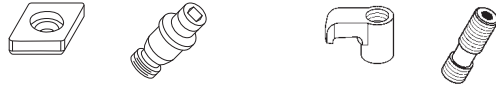
catalog number	D	F	L1	L1A	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>H24MCKNR4</b>	1.500	.890	1.625	.120	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCKNR4</b>	2.000	1.281	1.625	.120	2.400	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCKNR5</b>	2.000	1.281	1.625	.149	2.400	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK21</b>	<b>STC20</b>	1/8
<b>H40MCKNR5</b>	2.500	1.531	1.625	.149	3.030	-10.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCKNR6</b>	2.500	1.531	1.625	.182	3.030	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>H24MCKNL4</b>	1.500	.890	1.625	.120	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCKNL4</b>	2.000	1.281	1.625	.120	2.400	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCKNL5</b>	2.000	1.281	1.625	.149	2.400	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK21</b>	<b>STC20</b>	1/8
<b>H40MCKNL5</b>	2.500	1.531	1.625	.149	3.030	-10.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32



With through coolant.  
 See pages B40–B49 for inserts.



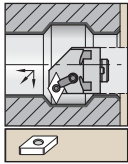
■ **H-MCLN -5°**



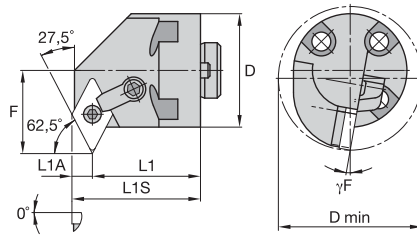
catalog number	D	F	L1	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>H16MCLNR3</b>	1.000	.640	1.625	1.200	-10.0	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>H16MCLNR4</b>	1.000	.640	1.625	1.200	-14.0	CN..432	—	<b>KL44</b>	3/32	<b>CK7</b>	<b>STC9</b>	3/32
<b>H20MCLNR4</b>	1.250	.765	1.625	1.470	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MCLNR4</b>	1.500	.890	1.625	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H28MCLNR4</b>	1.750	1.015	1.625	2.010	-10.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCLNR4</b>	2.000	1.281	1.625	2.400	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H40MCLNR4</b>	2.500	1.531	1.625	3.030	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MCLNR5</b>	1.500	.890	1.625	1.760	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MCLNR5</b>	2.000	1.281	1.625	2.400	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCLNR5</b>	2.500	1.531	1.625	3.030	-8.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MCLNR6</b>	2.000	1.281	1.625	2.400	-12.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>H36MCLNR6</b>	2.250	1.406	1.625	2.650	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCLNR6</b>	2.500	1.531	1.625	3.030	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>												
<b>H16MCLNL3</b>	1.000	.640	1.625	1.200	-10.0	CN..322	—	<b>KL33</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>H16MCLNL4</b>	1.000	.640	1.625	1.200	-14.0	CN..432	—	<b>KL44</b>	3/32	<b>CK7</b>	<b>STC9</b>	3/32
<b>H20MCLNL4</b>	1.250	.765	1.625	1.470	-14.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MCLNL4</b>	1.500	.890	1.625	1.760	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H28MCLNL4</b>	1.750	1.015	1.625	2.010	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MCLNL4</b>	2.000	1.281	1.625	2.400	-12.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H40MCLNL4</b>	2.500	1.531	1.625	3.030	-8.0	CN..432	<b>ICSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MCLNL5</b>	1.500	.890	1.625	1.760	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MCLNL5</b>	2.000	1.281	1.625	2.400	-12.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCLNL5</b>	2.500	1.531	1.625	3.030	-8.0	CN..543	<b>ICSN533</b>	<b>KL58</b>	1/8	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MCLNL6</b>	2.000	1.281	1.625	2.400	-12.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>H36MCLNL6</b>	2.250	1.406	1.625	2.650	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MCLNL6</b>	2.500	1.531	1.625	3.030	-10.0	CN..643	<b>ICSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32



O.D./I.D. Tooling



With through coolant.  
See pages B50–B57 for inserts.

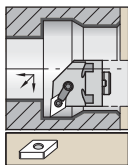


■ **H-MDPN 27.5°**

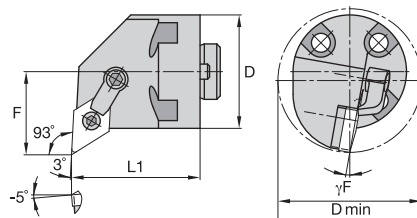
O.D./I.D. Tooling



catalog number	D	F	L1	L1A	L1S	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand														
<b>H20MDPNR4</b>	1.250	1.000	1.367	.258	1.625	1.705	-13.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>H24MDPNR4</b>	1.500	1.125	1.365	.260	1.625	2.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
left hand														
<b>H20MDPNL4</b>	1.250	1.000	1.367	.258	1.625	1.705	-13.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>H24MDPNL4</b>	1.500	1.125	1.365	.260	1.625	2.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8



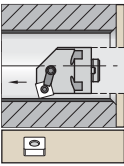
With through coolant.  
See pages B50–B57 for inserts.



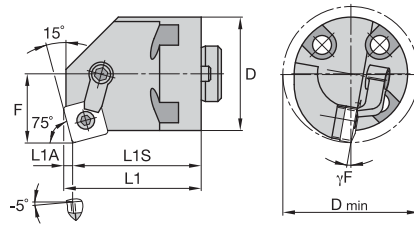
■ **H-MDUN -3°**



catalog number	D	F	L1	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
right hand												
<b>H16MDUNR3</b>	1.000	.750	1.625	1.300	-11.0	DN..332	—	<b>KL33L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H24MDUNR3</b>	1.500	1.125	1.625	2.000	-10.0	DN..332	<b>IDSN322</b>	<b>KL34L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H32MDUNR3</b>	2.000	1.325	1.625	2.500	-8.0	DN..332	<b>IDSN322</b>	<b>KL34L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H20MDUNR4</b>	1.250	1.000	1.625	1.705	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>H24MDUNR4</b>	1.500	1.125	1.625	2.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H28MDUNR4</b>	1.750	1.250	1.625	2.250	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MDUNR4</b>	2.000	1.375	1.625	2.500	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H36MDUNR4</b>	2.250	1.500	1.625	2.870	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MDUNR4</b>	2.500	1.750	1.625	3.250	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
left hand												
<b>H16MDUNL3</b>	1.000	.750	1.625	1.300	-11.0	DN..332	—	<b>KL33L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H24MDUNL3</b>	1.500	1.125	1.625	2.000	-10.0	DN..332	<b>IDSN322</b>	<b>KL34L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H32MDUNL3</b>	2.000	1.325	1.625	2.500	-8.0	DN..332	<b>IDSN322</b>	<b>KL34L</b>	5/64	<b>CK7</b>	<b>STC5</b>	3/32
<b>H20MDUNL4</b>	1.250	1.000	1.625	1.705	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK22</b>	<b>STC20</b>	1/8
<b>H24MDUNL4</b>	1.500	1.125	1.625	2.000	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H28MDUNL4</b>	1.750	1.250	1.625	2.250	-10.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H32MDUNL4</b>	2.000	1.375	1.625	2.500	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H36MDUNL4</b>	2.250	1.500	1.625	2.870	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MDUNL4</b>	2.500	1.750	1.625	3.250	-8.0	DN..432	<b>IDSN443</b>	<b>KL46L</b>	3/32	<b>CK12</b>	<b>STC4</b>	5/32



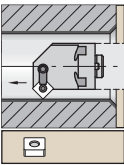
With through coolant.  
See pages B59–B65 for inserts.



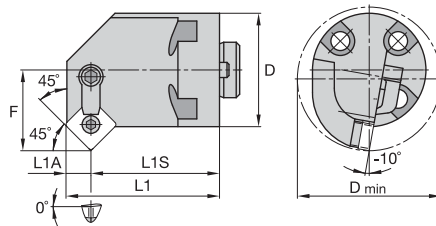
■ **H-MSKN 15°**



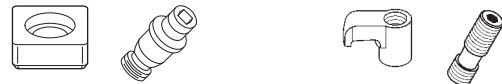
catalog number	D	F	L1	L1A	L1S	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>														
<b>H24MSKNR4</b>	1.500	.890	1.625	.119	1.744	1.760	-10.0	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H28MSKNR4</b>	1.750	1.015	1.625	.119	1.744	2.010	-10.0	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H32MSKNR4</b>	2.000	1.281	1.625	.119	1.744	2.400	-12.0	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H40MSKNR6</b>	2.500	1.531	1.625	.179	1.804	3.030	-10.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>														
<b>H20MSKNL4</b>	1.250	.765	1.625	.118	1.743	1.470	-14.0	SN..432	—	<b>KL44</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H24MSKNL4</b>	1.500	.890	1.625	.119	1.744	1.760	-10.0	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H40MSKNL6</b>	2.500	1.531	1.625	.179	1.804	3.030	-10.0	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32



With through coolant.  
See pages B59–B65 for inserts.

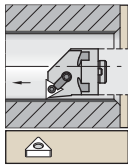


■ **H-MSSN 45°**

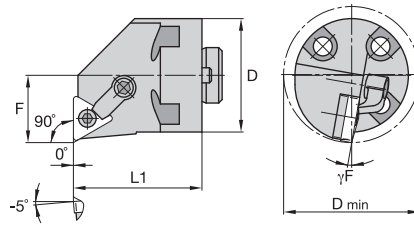


catalog number	D	F	L1	L1A	L1S	D min	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>													
<b>H24MSSNR4</b>	1.500	1.125	1.625	.338	1.287	2.000	SN..432	<b>ISSN433</b>	<b>KL46</b>	3/32	<b>CK21</b>	<b>STC20</b>	1/8
<b>H32MSSNR6</b>	2.000	1.375	1.625	.507	1.118	2.500	SN..633	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>H40MSSNR6</b>	2.500	1.750	1.625	.507	1.118	3.250	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32
<b>left hand</b>													
<b>H40MSSNL6</b>	2.500	1.750	1.625	.507	1.118	3.250	SN..643	<b>ISSN633</b>	<b>KL68</b>	9/64	<b>CK12</b>	<b>STC4</b>	5/32

O.D./I.D. Tooling

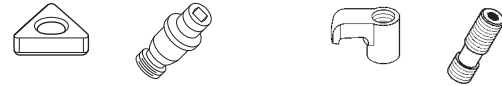


With through coolant.  
See pages B66–B74 for inserts.

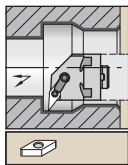


**H-MTFN 0°**

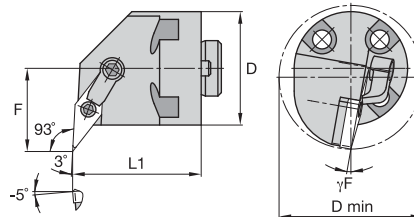
O.D./I.D. Tooling



catalog number	D	F	L1	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>H16MTFNR3</b>	1.000	.640	1.625	1.200	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
<b>H20MTFNR3</b>	1.250	.765	1.625	1.470	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
<b>H24MTFNR3</b>	1.500	.890	1.625	1.760	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
<b>H28MTFNR3</b>	1.750	1.015	1.625	2.010	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
<b>H32MTFNR4</b>	2.000	1.281	1.625	2.400	-8.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
<b>H40MTFNR4</b>	2.500	1.531	1.625	3.030	-6.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
<b>left hand</b>												
<b>H16MTFNL3</b>	1.000	.640	1.625	1.200	-12.0	TN..332	—	KL33L	5/64	CK7	STC9	3/32
<b>H24MTFNL3</b>	1.500	.890	1.625	1.760	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
<b>H28MTFNL3</b>	1.750	1.015	1.625	2.010	-10.0	TN..332	ITSN323	KL34L	5/64	CK7	STC9	3/32
<b>H32MTFNL4</b>	2.000	1.281	1.625	2.400	-8.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32
<b>H40MTFNL4</b>	2.500	1.531	1.625	3.030	-6.0	TN..432	ITSN433	KL46	3/32	CK9	STC4	5/32



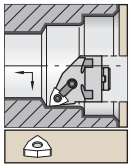
With through coolant.  
See pages B74–B78 for inserts.



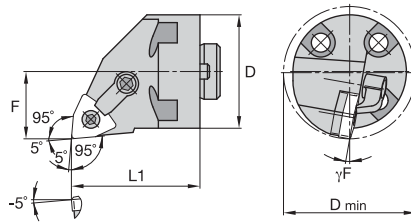
**H-MVUN -3°**



catalog number	D	F	L1	D min	γF°	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>H20MVUNR3</b>	1.250	1.000	1.625	1.705	-12.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H24MVUNR3</b>	1.500	1.125	1.625	2.000	-10.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H32MVUNR3</b>	2.000	1.325	1.625	2.650	-10.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H40MVUNR3</b>	2.500	1.750	1.625	3.250	-10.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H32MVUNR4</b>	2.000	1.375	1.625	2.500	-10.0	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>H40MVUNR4</b>	2.500	1.750	1.625	3.250	-10.0	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>left hand</b>												
<b>H20MVUNL3</b>	1.250	1.000	1.625	1.705	-12.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H24MVUNL3</b>	1.500	1.125	1.625	2.000	-12.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H32MVUNL3</b>	2.000	1.325	1.625	2.650	-10.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H40MVUNL3</b>	2.500	1.750	1.625	3.250	-10.0	VN..332	IVSN322	KL34L	5/64	CK22	STC20	1/8
<b>H32MVUNL4</b>	2.000	1.375	1.625	2.500	-10.0	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32
<b>H40MVUNL4</b>	2.500	1.750	1.625	3.250	-10.0	VN..432	IVSN433	KL46	3/32	CK43	STC4	5/32



With through coolant.  
 See pages B79–B83 for inserts.



■ **H-MWLN -5°**



catalog number	D	F	L1	D min	$\gamma F^\circ$	gage insert	shim	lock pin	hex (inch)	clamp	clamp screw	hex (inch)
<b>right hand</b>												
<b>H16MWLN3</b>	1.000	.640	1.625	1.200	-12.0	WN..332	—	<b>KL33L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>H20MWLN4</b>	1.250	.765	1.625	1.470	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MWLN4</b>	1.500	.890	1.625	1.760	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H28MWLN4</b>	1.750	1.015	1.625	2.010	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MWLN4</b>	2.000	1.281	1.625	2.400	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>left hand</b>												
<b>H16MWLN3</b>	1.000	.640	1.625	1.200	-12.0	WN..332	—	<b>KL33L</b>	5/64	<b>CK6</b>	<b>STC5</b>	3/32
<b>H20MWLN4</b>	1.250	.765	1.625	1.470	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H24MWLN4</b>	1.500	.890	1.625	1.760	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H28MWLN4</b>	1.750	1.015	1.625	2.010	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8
<b>H32MWLN4</b>	2.000	1.281	1.625	2.400	-14.0	WN..432	<b>IWSN433</b>	<b>KL46</b>	3/32	<b>CK20</b>	<b>STC20</b>	1/8

O.D./I.D. Tooling



## Carbide Recycling

Help preserve and protect our planet!

It's easy for your company to be environmentally conscious with the Kennametal Carbide Recycling Program.

By sending us your used carbide tools, you help preserve and protect the environment and ensure that these products are recycled responsibly. Kennametal accepts any coated or non-coated carbide items, including inserts, drills, reamers, and taps.



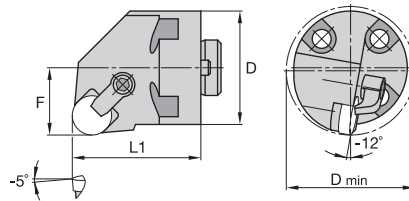
By using the Kennametal Carbide Recycling Program, you will receive:

- A partner who cares about a sustainable environment.
- Easy-to-use web portal to value your used carbide.
- Access to our popular Green Box™ options for carbide collection.
- Systematic and efficient disposal of carbide materials.
- Improved profitability.

Program is not currently available in all geographical areas.  
 For more information, please visit [www.kennametal.com/carbiderecycling](http://www.kennametal.com/carbiderecycling).



With through coolant.  
See page B128 for inserts.

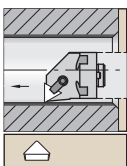


**H-CRGN**

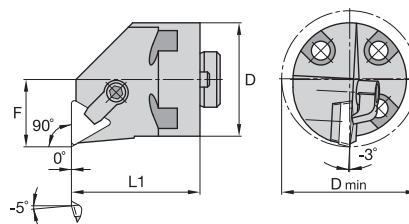
O.D./I.D. Tooling



catalog number	D	F	L1	D min	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand <b>H24CRGNR4</b>	1.500	.890	1.625	1.760	RN.42	<b>SM437</b>	<b>SL344</b>	—	<b>CK7LP</b>	<b>STC9</b>	3/32
<b>H32CRGNR4</b>	2.000	1.281	1.625	2.400	RN.42	<b>SM437</b>	<b>SL344</b>	—	<b>CK7LP</b>	<b>STC9</b>	3/32



With through coolant.  
See pages B86–B87 and B130 for inserts.

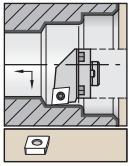


**H-CTFP 0°**

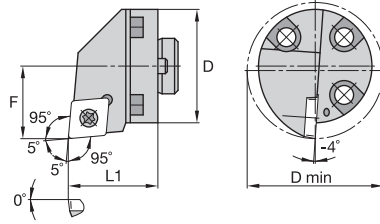


catalog number	D	F	L1	D min	gage insert	shim	shim screw	hex (inch)	clamp	clamp screw	hex (inch)
right hand <b>H20CTFPR3W</b>	1.250	.765	1.625	1.470	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>H24CTFPR3W</b>	1.500	.890	1.625	1.760	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>H32CTFPR4W</b>	2.000	1.281	1.625	2.400	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC4</b>	5/32
<b>H40CTFPR4W</b>	2.500	1.531	1.625	3.030	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC4</b>	5/32
left hand											
<b>H20CTFPL3W</b>	1.250	.765	1.625	1.470	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>H24CTFPL3W</b>	1.500	.890	1.625	1.760	TP.322	<b>SM41</b>	<b>S111</b>	1/16	<b>CK10</b>	<b>STC8</b>	5/32
<b>H32CTFPL4W</b>	2.000	1.281	1.625	2.400	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC4</b>	5/32
<b>H40CTFPL4W</b>	2.500	1.531	1.625	3.030	TP.432	<b>SM37</b>	<b>S125</b>	3/32	<b>CK10</b>	<b>STC4</b>	5/32



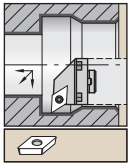


With through coolant.  
See pages B88–B91 for inserts.

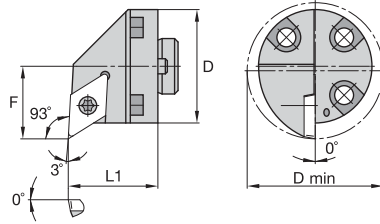


■ H-SCLC -5°

catalog number	D	F	L1	D min	gage insert	insert screw	Torx
right hand <b>H16SCLCR3</b>	1.000	.640	.790	1.2000	CC..3252	<b>MS1155</b>	T15
left hand <b>H16SCLCL3</b>	1.000	.640	.790	1.2000	CC..3252	<b>MS1155</b>	T15

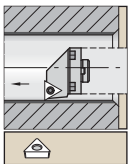


With through coolant.  
See pages B98–B100 for inserts.

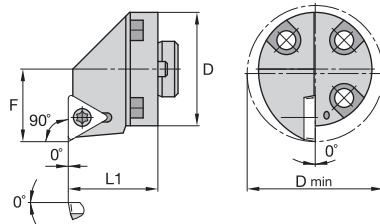


■ H-SDUP -3°

catalog number	D	F	L1	D min	gage insert	insert screw	Torx
right hand <b>H16SDUPR3</b>	1.000	.640	.790	1.200	DP..3252	<b>MS1155</b>	T15
left hand <b>H16SDUPL3</b>	1.000	.640	.790	1.200	DP..3252	<b>MS1155</b>	T15



With through coolant.  
See pages B109–B112 for inserts.



■ H-STFP 0°

catalog number	D	F	L1	D min	gage insert	insert screw	Torx
right hand <b>H16STFPR2</b>	1.000	.640	.790	1.200	TP..2151	<b>MS1153</b>	T7
left hand <b>H16STFPL2</b>	1.000	.640	.790	1.200	TP..2151	<b>MS1153</b>	T7

O.D./I.D. Tooling



## Cartridges

### Primary Application

Modern machining operations demand high-quality, high-performance toolholders that provide straightforward design and application versatility.

Standard Kennametal cartridges are ideal for turning tools with one, or several, cutting edges. A wide range of cartridge sizes and styles provide numerous combinations and application possibilities.

## Features and Benefits

### Kenloc™ Style (M-Clamping)

- Used for Kenloc inserts.
- Lock pin and top clamp provide rigid clamping.
- Wide variety of insert styles may be used.
- Tools may be used with or without top clamp.
- Optional hardware available for thicker inserts.
- Extreme sturdy clamping system, specially designed for interrupted cuts.
- Tool is protected by a carbide shim.

### Kenlever™ Style (P-Clamping\*)

- Proven superior system for holding ceramic inserts rigidly in turning and profiling operations.
- Can be used on Kendex or Kenloc inserts using optional hardware.
- Lever-type clamping system for negative indexable inserts with hole to DIN 4988 and positive round inserts more than 20mm in diameter.
- Inserts with one- and two-side chip control geometries have positive rakes from 6–18°.
- Advantages include fast insert changes and no interference with chip flow.

\*NOTE: P-style available in metric sizes only.



### **Kendex™ Style (C-Clamping)**

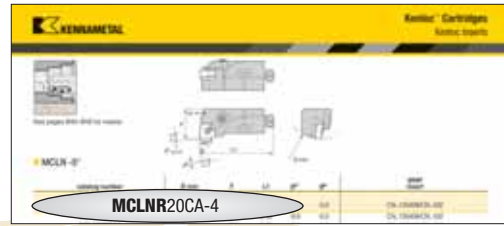
- Suitable for Kendex inserts.
- Chipbreaker option available for ceramic inserts.
- Wide variety of insert styles may be used.
- Top clamping system for negative and positive indexable inserts to DIN 4968.
- Universal clamping system is robust and easy to handle.
- Some height-adjustable clamps enable the use of additional chipbreakers.
- Carbide shim provides additional tool protection.

### **Screw-On Style (S-Clamping)**

- Used for Screw-On inserts.
- Top clamping by screw.
- Screw clamping system for positive indexable inserts with countersunk hole to DIN 4967.
- Compact design using a minimum of spare parts for high reliability and cost efficiency.
- Toolholders with cutting edge heights greater than .625" (16mm) and insert ICs from .375" (9,52mm) are secured by a threaded bushing.
- Carbide shim provides additional tool protection.

## How Do Catalog Numbers Work?

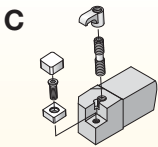
Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



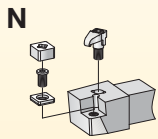
O.D./I.D. Tooling

**M**

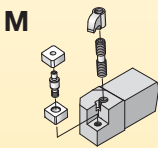
Insert Holding Method



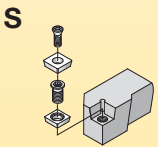
Kendex™



Top Notch™ Profiling



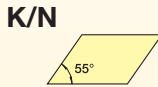
Kenloc™



Screw-On

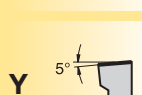
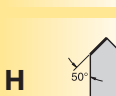
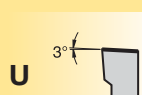
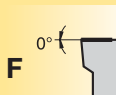
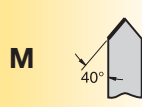
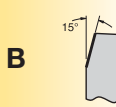
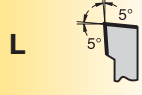
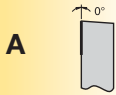
**C**

Insert Shape



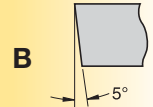
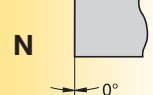
**L**

Tool Style or Lead Angle



**N**

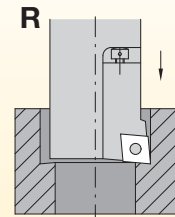
Insert Clearance Angle



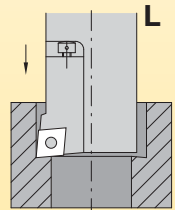
**R**

Hand of Tool

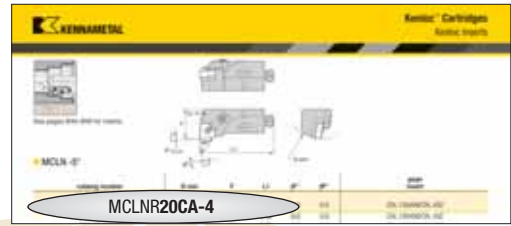
**R** = Right-hand boring bar



**L** = Left-hand boring bar

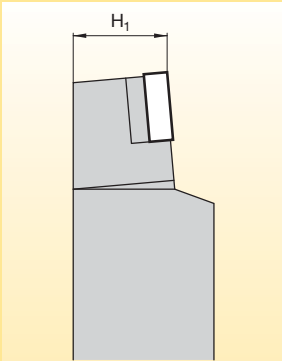


By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



**20**

Cartridge Size



$H_1$  =  
Cutting edge height of cartridge,  
in millimeters

**C**

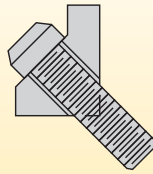
Cartridge Identification

**C** =  
Cartridge

**A**

Cartridge Mounting

**A** =  
Angular acc.  
ISO 5611

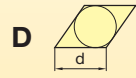
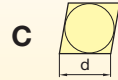


**—**

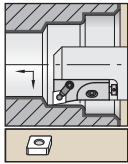
**4**

Insert Size

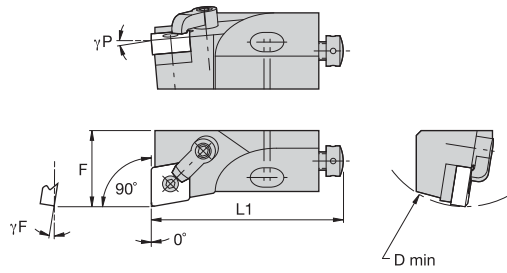
Inserts IC  
Number of 1/8ths of "D"



O.D./I.D. Tooling



See pages B40–B49 for inserts.



O.D./I.D. Tooling

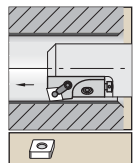
■ **MCFN 0°**

catalog number	D min	F	L1	γF°	γP°	gage insert
right hand						
<b>MCFNR10CA3</b>	1.575	.551	1.97	-9.0	-9.0	CN..090308/CN..322
<b>MCFNR12CA4</b>	1.969	.787	2.17	-9.0	-5.0	CN..120408/CN..432
<b>MCFNR16CA4</b>	2.362	.984	2.48	-9.0	-5.0	CN..120408/CN..432
<b>MCFNR20CA4</b>	2.756	.984	2.76	-9.0	-5.0	CN..120408/CN..432
left hand						
<b>MCFNL10CA3</b>	1.575	.551	1.97	-9.0	-9.0	CN..090308/CN..322
<b>MCFNL12CA4</b>	1.969	.787	2.17	-9.0	-5.0	CN..120408/CN..432
<b>MCFNL16CA4</b>	2.362	.984	2.48	-9.0	-5.0	CN..120408/CN..432

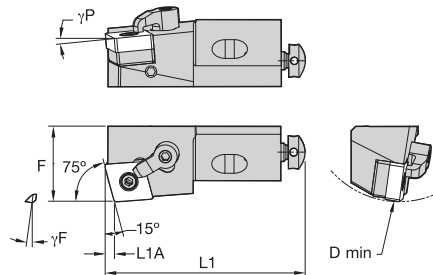
■ **Spare Parts**



D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	<b>KLM33</b>	2 mm	<b>CKM36</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	<b>KLM43</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ICSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>ICSN432</b>	<b>KLM46</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B40–B49 for inserts.



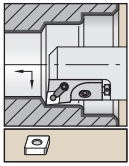
■ **MCKN 15°**

catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
right hand							
<b>MCKNR12CA4</b>	1.969	.787	2.17	.12	-9.0	-5.0	CN..120408/CN..432
<b>MCKNR16CA4</b>	2.362	.984	2.48	.12	-9.0	-5.0	CN..120408/CN..432
left hand							
<b>MCKNL12CA4</b>	1.969	.787	2.17	.12	-9.0	-5.0	CN..120408/CN..432
<b>MCKNL16CA4</b>	2.362	.984	2.48	.12	-9.0	-5.0	CN..120408/CN..432

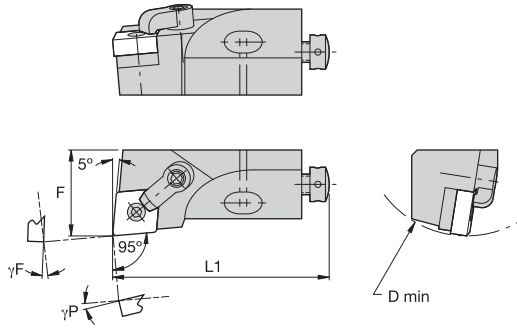
■ **Spare Parts**



D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	<b>KLM43</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ICSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B40–B49 for inserts.


**MCLN -5°**

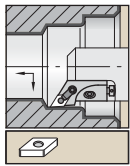
catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
MCLNR12CA4	1.969	.787	2.17	-9.0	-5.0	CN..120408/CN..432
MCLNR16CA4	2.362	.984	2.48	-9.0	-5.0	CN..120408/CN..432
MCLNR20CA4	2.756	.984	2.76	-9.0	-5.0	CN..120408/CN..432
MCLNR25CA4	3.937	1.260	3.94	-9.0	-5.0	CN..120408/CN..432
MCLNR25CA5	3.937	1.260	3.94	-9.0	-5.0	CN..160612/CN..543
MCLNR25CA6	3.937	1.260	3.94	-9.0	-5.0	CN..190612/CN..643
<b>left hand</b>						
MCLNL12CA4	1.969	.787	2.17	-9.0	-5.0	CN..120408/CN..432
MCLNL16CA4	2.362	.984	2.48	-9.0	-5.0	CN..120408/CN..432
MCLNL20CA4	2.756	.984	2.76	-9.0	-5.0	CN..120408/CN..432
MCLNL25CA4	3.937	1.260	3.94	-9.0	-5.0	CN..120408/CN..432
MCLNL25CA5	3.937	1.260	3.94	-9.0	-5.0	CN..160612/CN..543
MCLNL25CA6	3.937	1.260	3.94	-9.0	-5.0	CN..190612/CN..643

O.D./I.D. Tooling

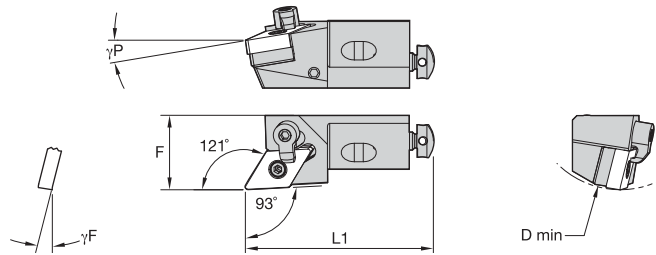
**Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	KLM43	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	ICSN432	KLM46S	2.5 mm	CKM34	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	ICSN432	KLM46	2.5 mm	CKM34	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050
3.937	ICSN432	KLM46	2.5 mm	CKM37	STCM40	2.5 mm	KUAM25	2.5 mm	KUAM32	MS364	8 mm	CSWM 100 080
3.937	ICSN533	KLM58	3 mm	CKM41	STCM20	3 mm	KUAM26	3 mm	KUAM32	MS364	8 mm	CSWM 100 080
3.937	ICSN633	KLM68	4 mm	CKM35	STCM8	4 mm	KUAM27	4 mm	KUAM32	MS364	8 mm	CSWM 100 080

NOTE: Select spare parts based off of D min and insert size selected.



See pages B50–B57 for inserts.



O.D./I.D. Tooling

■ **MDJN-3°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>MDJNR12CA3</b>	1.969	.787	2.17	-9.0	-9.0	DN..110408/DN..322
<b>MDJNR16CA4</b>	2.362	.984	2.48	-9.0	-9.0	DN..150408/DN..3.532
<b>MDJNR20CA4</b>	2.756	.984	2.76	-8.5	-8.5	DN..150408/DN..3.532
<b>left hand</b>						
<b>MDJNL12CA3</b>	1.969	.787	2.17	-9.0	-9.0	DN..110408/DN..322
<b>MDJNL16CA4</b>	2.362	.984	2.48	-9.0	-9.0	DN..150408/DN..3.532
<b>MDJNL20CA4</b>	2.756	.984	2.76	-8.5	-8.5	DN..150408/DN..3.532

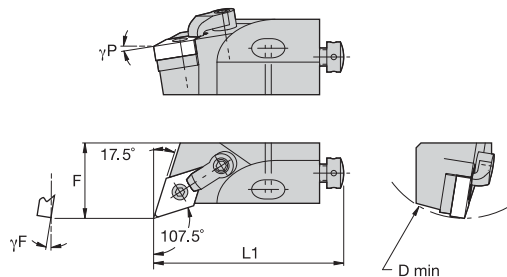
■ **Spare Parts**



D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	KLM33L	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	IDSN432	KLM46S	2.5 mm	CKM36	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	IDSN432	KLM46	2.5 mm	CKM41	STCM40	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050



See pages B50–B57 for inserts.



■ **MDQN -17.5°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>MDQNR16CA4</b>	2.362	.984	2.48	-9.0	-6.0	DN..150408/DN..3.532
<b>MDQNR20CA4</b>	2.756	.984	2.76	-9.0	-8.0	DN..150408/DN..3.532
<b>left hand</b>						
<b>MDQNL16CA4</b>	2.362	.984	2.48	-9.0	-6.0	DN..150408/DN..3.532
<b>MDQNL20CA4</b>	2.756	.984	2.76	-9.0	-8.0	DN..150408/DN..3.532

■ **Spare Parts**

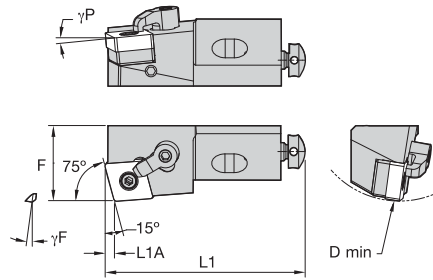


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
2.362	IDSN432	KLM46S	2.5 mm	CKM36	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	IDSN432	KLM46	2.5 mm	CKM34	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050





See pages B59–B65 for inserts.


**MSKN 15°**

catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
<b>right hand</b>							
<b>MSKNR10CA3</b>	1.575	.551	1.97	.09	-9.0	-5.0	SN..090308/SN..322
<b>MSKNR12CA4</b>	1.969	.787	2.17	.12	-9.0	-5.0	SN..120408/SN..432
<b>MSKNR16CA4</b>	2.362	.984	2.48	.12	-9.0	-5.0	SN..120408/SN..432
<b>MSKNR20CA5</b>	2.756	.984	2.76	.15	-9.0	-5.0	SN..150612/SN..543
<b>MSKNR25CA6</b>	3.937	1.260	3.94	.18	-9.0	-5.0	SN..190612/SN..543
<b>left hand</b>							
<b>MSKNL10CA3</b>	1.575	.551	1.97	.09	-9.0	-5.0	SN..090308/SN..322
<b>MSKNL12CA4</b>	1.969	.787	2.17	.12	-9.0	-5.0	SN..120408/SN..432
<b>MSKNL16CA4</b>	2.362	.984	2.48	.12	-9.0	-5.0	SN..120408/SN..432
<b>MSKNL25CA4</b>	3.937	1.260	3.94	.12	-9.0	-5.0	SN..120408/SN..432
<b>MSKNL20CA5</b>	2.756	.984	2.76	.15	-9.0	-5.0	SN..150612/SN..543

O.D./I.D. Tooling

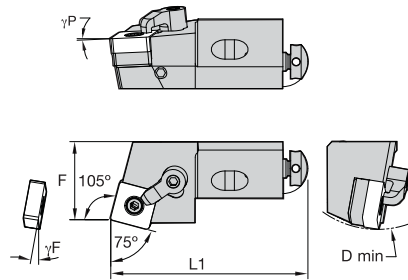
**Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	<b>KLM33</b>	2 mm	<b>CKM36</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	<b>KLM43</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ISSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>SKSN566K</b>	<b>KLM54</b>	2.5 mm	<b>CKM37</b>	<b>STCM40</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
3.937	<b>ICSN432</b>	<b>KLM46</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>MS364</b>	8 mm	<b>CSWM 100 080</b>
3.937	<b>ICSN633</b>	<b>KLM68</b>	4 mm	<b>CKM35</b>	<b>STCM8</b>	4 mm	<b>KUAM27</b>	4 mm	<b>KUAM32</b>	<b>MS364</b>	8 mm	<b>CSWM 100 080</b>

NOTE: Select spare parts based off of D min and insert size selected.



See pages B59–B65 for inserts.



O.D./I.D. Tooling

**MSRN 15°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>MSRNR10CA3</b>	1.575	.551	1.97	-9.0	-5.0	SN..090308/SN..322
<b>MSRNR12CA4</b>	1.969	.787	2.17	-9.0	-5.0	SN..120408/SN..432
<b>MSRNR16CA4</b>	2.362	.984	2.48	-9.0	-5.0	SN..120408/SN..432
<b>MSRNR20CA5</b>	2.756	.984	2.76	-9.0	-5.0	SN..150612/SN..543
<b>left hand</b>						
<b>MSRNL10CA3</b>	1.575	.551	1.97	-9.0	-5.0	SN..090308/SN..322
<b>MSRNL12CA4</b>	1.969	.787	2.17	-9.0	-5.0	SN..120408/SN..432
<b>MSRNL16CA4</b>	2.362	.984	2.48	-9.0	-5.0	SN..120408/SN..432
<b>MSRNL20CA5</b>	2.756	.984	2.76	-9.0	-5.0	SN..150612/SN..543

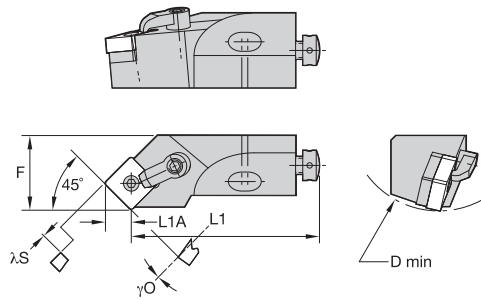
**Spare Parts**



D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	<b>KLM33</b>	2 mm	<b>CKM36</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	<b>KLM43</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ISSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>SKSN566K</b>	<b>KLM54</b>	2.5 mm	<b>CKM37</b>	<b>STCM40</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B59–B65 for inserts.


**■ MSSN 45°**

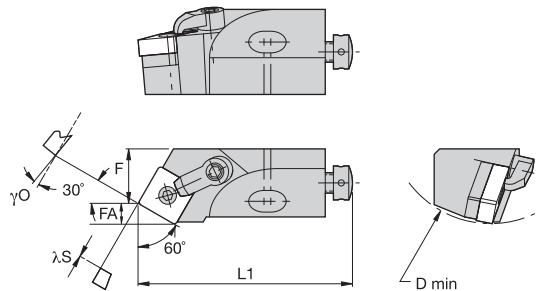
catalog number	D min	F	L1	FA	L1A	λS°	γO°	gage insert
MSSNR10CA3	2	.551	1.73	.25	.24	-13.000	0.0	SN..090308/SN..322
MSSNR12CA4	2	.787	1.85	—	.33	-13.000	0.0	SN..120408/SN..432
MSSNR16CA4	2	.984	2.09	.34	.33	-13.000	0.0	SN..120408/SN..432
MSSNR20CA5	3	.984	2.36	.56	.40	-13.000	0.0	SN..150612/SN..543
MSSNL10CA3	2	.551	1.73	.25	.24	-13.000	0.0	SN..090308/SN..322
MSSNL12CA4	2	.787	1.85	—	.33	-13.000	0.0	SN..120408/SN..432
MSSNL16CA4	2	.984	2.09	.34	.33	-13.000	0.0	SN..120408/SN..432
MSSNL20CA5	3	.984	2.36	.56	.40	-13.000	0.0	SN..150612/SN..543

**■ Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	KLM33	2 mm	CKM36	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	—	KLM43	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	ISSN432	KLM46S	2.5 mm	CKM36	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	SKSN566K	KLM54	2.5 mm	CKM37	STCM40	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050



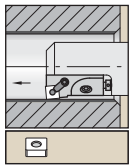
See pages B59–B65 for inserts.


**■ MSTN 30°**

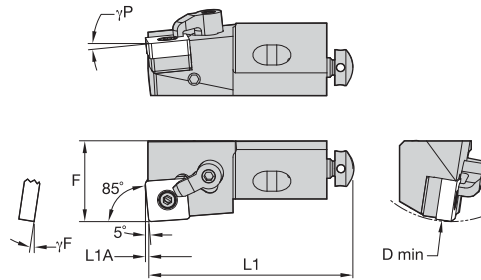
catalog number	D min	F	L1	FA	λS°	γO°	gage insert
right hand							
MSTNR10CA3	1.575	.354	1.97	.52	-11.0	0.0	SN..090308/SN..322
MSTNR12CA4	1.969	.512	2.17	.23	-11.0	0.0	SN..120408/SN..432
left hand							
MSTNL10CA3	1.575	.354	1.97	.52	-11.0	0.0	SN..090308/SN..322
MSTNL16CA4	2.362	.591	2.48	.23	-11.0	0.0	SN..120408/SN..432

**■ Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	KLM33	2 mm	CKM36	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	—	KLM43	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	ISSN432	KLM46S	2.5 mm	CKM34	STCM9	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050



See pages B59–B65 for inserts.



O.D./I.D. Tooling

■ **MSYN 5°**

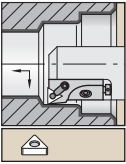
catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
<b>right hand</b>							
<b>MSYNR10CA3</b>	1.575	.551	1.97	.03	-9.0	-5.0	SN..090308/SN..322
<b>MSYNR12CA4</b>	1.969	.787	2.17	.04	-9.0	-5.0	SN..120408/SN..432
<b>MSYNR16CA4</b>	2.362	.984	2.48	.04	-9.0	-5.0	SN..120408/SN..432
<b>MSYNR25CA19</b>	3.937	1.260	3.94	.06	-9.0	-5.0	SN..190612/SN..643
<b>left hand</b>							
<b>MSYNL10CA3</b>	1.575	.551	1.97	.03	-9.0	-5.0	SN..090308/SN..322
<b>MSYNL12CA4</b>	1.969	.787	2.17	.04	-9.0	-5.0	SN..120408/SN..432
<b>MSYNL16CA4</b>	2.362	.984	2.48	.04	-9.0	-5.0	SN..120408/SN..432
<b>MSYNL20CA15</b>	2.756	.984	2.76	.05	-9.0	-5.0	SN..150612/SN..543

■ **Spare Parts**

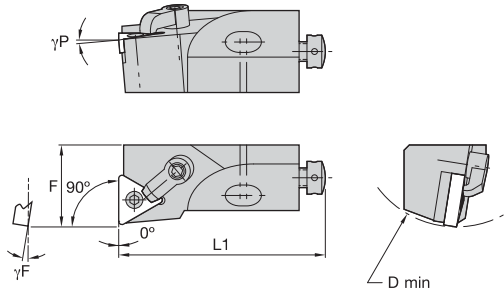


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	<b>KLM33</b>	2 mm	<b>CKM36</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	<b>KLM43</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ISSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM34</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.362	<b>ISSN432</b>	<b>KLM46S</b>	2.5 mm	<b>CKM36</b>	<b>STCM9</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>SKSN566K</b>	<b>KLM54</b>	2.5 mm	<b>CKM37</b>	<b>STCM40</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM33</b>	<b>191.407</b>	6 mm	<b>CSWM 080 050</b>
3.937	<b>ISSN633</b>	<b>KLM68</b>	4 mm	<b>CKM34</b>	<b>STCM8</b>	4 mm	<b>KUAM27</b>	4 mm	<b>KUAM33</b>	<b>MS-364</b>	8 mm	<b>CSWM 100 080</b>

NOTE: Select spare parts based off of D min and insert size selected.



See pages B66–B74 for inserts.


**MTFN 0°**

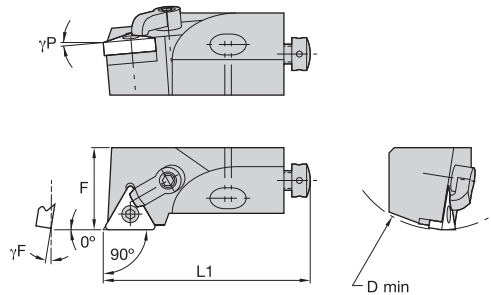
catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
MTFNR12CA3	1.969	.787	2.17	-9.0	-5.0	TN..160408/TN..332
MTFNR16CA3	2.362	.984	2.48	-9.0	-5.0	TN..160408/TN..332
MTFNR20CA4	2.756	.984	2.76	-9.0	-5.0	TN..220408/TN..432
<b>left hand</b>						
MTFNL12CA3	1.969	.787	2.17	-9.0	-5.0	TN..160408/TN..332
MTFNL16CA3	2.362	.984	2.48	-9.0	-5.0	TN..160408/TN..332
MTFNL20CA4	2.756	.984	2.76	-9.0	-5.0	TN..220408/TN..432

**Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	KLM33L	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	ITSN322	KLM34L	2 mm	CKM34	STCM9	2 mm	KUAM25	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	ITSN433	KLM46	2.5 mm	CKM35	STCM37	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050



See pages B66–B74 for inserts.


**MTGN 0°**

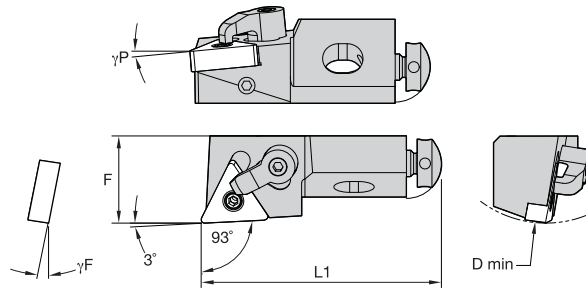
catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
MTGNR12CA3	1.969	.787	2.17	-9.0	-5.0	TN..160408/TN..332
MTGNR16CA3	2.362	.984	2.48	-9.0	-5.0	TN..160408/TN..332
MTGNR20CA4	2.756	.984	2.76	-9.0	-5.0	TN..220408/TN..432
<b>left hand</b>						
MTGNL12CA3	1.969	.787	2.17	-9.0	-5.0	TN..160408/TN..332
MTGNL16CA3	2.362	.984	2.48	-9.0	-5.0	TN..160408/TN..332
MTGNL20CA4	2.756	.984	2.76	-9.0	-5.0	TN..220408/TN..432

**Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	KLM33L	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	ITSN322	KLM34L	2 mm	CKM34	STCM9	2 mm	KUAM25	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	ITSN433	KLM46	2.5 mm	CKM35	STCM37	2.5 mm	KUAM25	2.5 mm	KUAM32	191.407	5 mm	CSWM 080 050



See pages B66–B74 for inserts.



■ **MTJN -3°**

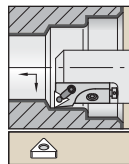
catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>MTJNR12CA3</b>	1.969	.787	2.17	-9.000	-5.000	TN..160408/TN..332
left hand <b>MTJNL12CA3</b>	1.969	.787	2.17	-9.000	-5.000	TN..160408/TN..332

■ **Spare Parts**

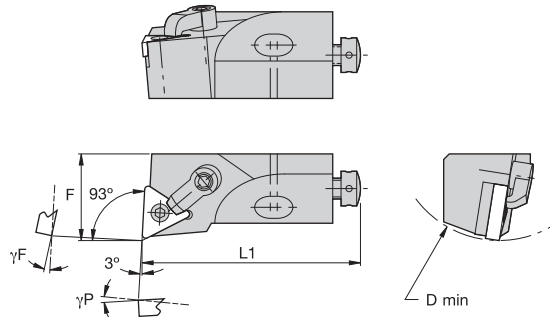


D min	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	<b>KLM33L</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>

O.D./I.D. Tooling



See pages B66–B74 for inserts.



■ **MTUN -3°**

catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>MTUNR16CA3</b>	2.362	.984	2.48	-9.000	-5.0	TN..160408/TN..332
<b>MTUNR20CA4</b>	2.756	.984	2.76	-9.000	-5.0	TN..220408/TN..432
left hand <b>MTUNL12CA3</b>	1.969	.787	2.17	-9.000	-5.0	TN..160408/TN..332
<b>MTUNL16CA3</b>	2.362	.984	2.48	-9.000	-5.0	TN..160408/TN..332
<b>MTUNL20CA4</b>	2.756	.984	2.76	-9.000	-5.0	TN..220408/TN..432

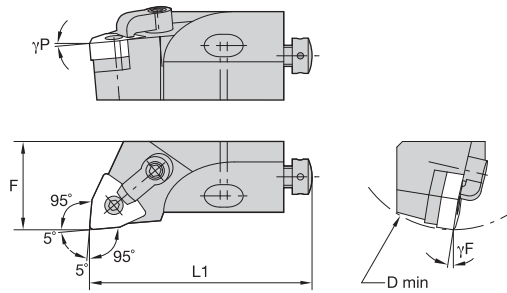
■ **Spare Parts**



D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	<b>KLM33L</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>ITSN322</b>	<b>KLM34L</b>	2 mm	<b>CKM34</b>	<b>STCM9</b>	2 mm	<b>KUAM25</b>	2 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>ITSN433</b>	<b>KLM46</b>	2.5 mm	<b>CKM37</b>	<b>STCM40</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM33</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>ITSN433</b>	<b>KLM46</b>	2.5 mm	<b>CKM35</b>	<b>STCM37</b>	2.5 mm	<b>KUAM25</b>	2.5 mm	<b>KUAM33</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B79–B83 for inserts.

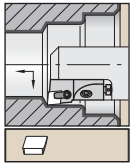

**MWLN-5°**

catalog number right hand	D min	F	L1	γF°	γP°	gage insert
<b>MWLN12CA3</b>	1.969	.787	2.17	-9.0	-5.0	WN..060408/WN..332
<b>MWLN16CA3</b>	2.362	.984	2.48	-9.0	-5.0	WN..060408/WN..332
<b>MWLN20CA3</b>	2.756	.984	2.76	-9.0	-5.0	WN..060408/WN..332
<b>MWLN25CA4</b>	3.937	1.260	3.94	-9.0	-5.0	WN..080408/WN..432

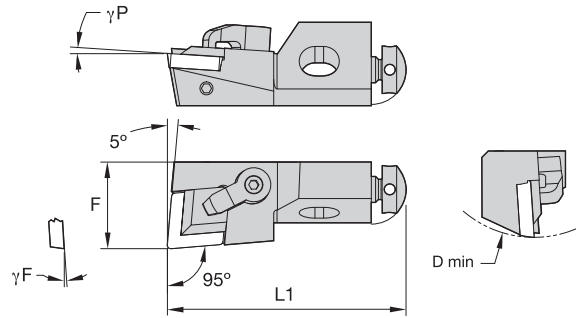
O.D./I.D. Tooling

**Spare Parts**


D min	shim	lock pin	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	—	KLM33L	2 mm	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	IWSN322	KLM34L	2 mm	CKM34	STCM38	2 mm	KUAM24	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	IWSN322	KLM34L	2 mm	CKM34	STCM38	2 mm	KUAM24	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
3.937	IWSN433	KLM46	2.5 mm	CKM37	STCM40	2.5 mm	KUAM25	2.5 mm	KUAM32	MS364	8 mm	CSWM 100 080



See page B84 for inserts.



O.D./I.D. Tooling

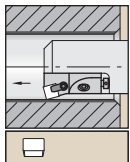
**CCLP -5°**

catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>CCLPR12CA4</b>	1.969	.787	2.17	3.5	3.5	CP..120308/CP..422
left hand <b>CCLPL12CA4</b>	1.969	.787	2.17	3.5	3.5	CP..120308/CP..422

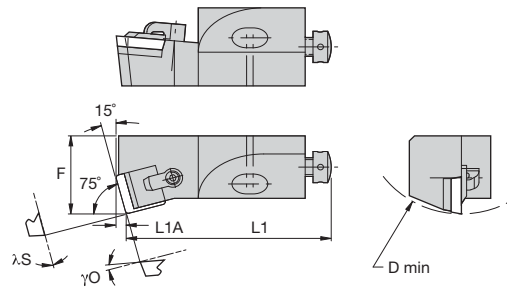
**Spare Parts**



D min	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	hex	mounting screw	hex	washer
1.969	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	2 mm	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>



See pages B85–B86 and B129–B130 for inserts.



**CSKP 15°**

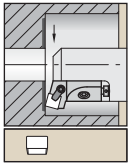
catalog number	D min	F	L1	λS°	γO°	gage insert
right hand <b>CSKPR10CA3</b>	1.575	.551	1.97	0.0	5.0	SP..090308/SP..322
<b>CSKPR12CA4</b>	1.969	.787	2.17	0.0	5.0	SP..120308/SP..422
<b>CSKPR20CA4</b>	2.756	.984	2.76	0.0	5.0	SP..120308/SP..422
left hand <b>CSKPL12CA4</b>	1.969	.787	2.17	0.0	5.0	SP..120308/SP..422
<b>CSKPL20CA4</b>	2.756	.984	2.76	0.0	5.0	SP..120308/SP..422

**Spare Parts**

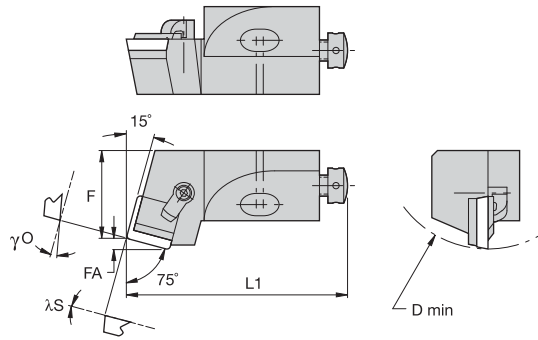


D min	shim	shim screw	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	—	—	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	—	—	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.756	<b>SM840</b>	<b>MS109</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM24</b>	2 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>





See pages B85–B86 and B129–B130 for inserts.



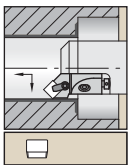
### ■ CSRPR -15°

catalog number	D min	F	L1	FA	λS°	γO°	gage insert
<b>right hand</b>							
<b>CSRPR10CA3</b>	1.575	.551	1.97	.09	0.0	0.0	SP..090308/SP..322
<b>CSRPR12CA4</b>	1.969	.787	2.17	.12	3.0	0.0	SP..120308/SP..422
<b>left hand</b>							
<b>CSRPL10CA3</b>	1.575	.551	1.97	.09	0.0	0.0	SP..090308/SP..322
<b>CSRPL12CA4</b>	1.969	.787	2.17	.12	3.0	0.0	SP..120308/SP..422

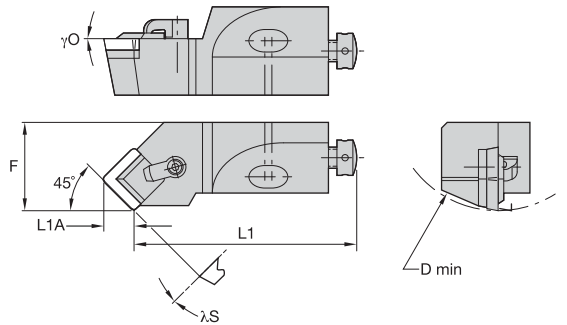
### ■ Spare Parts



D min	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	CKM34	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050



See pages B85–B86 and B129–B130 for inserts.



### ■ CSSPR 45°

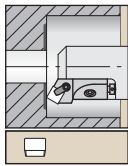
catalog number	D min	F	L1	FA	L1A	λS°	γO°	gage insert
<b>right hand</b>								
<b>CSSPR10CA3</b>	1.575	.551	1.7323	.25	.239	0.0	0.0	SP..090308/SP..322
<b>CSSPR12CA4</b>	1.969	.787	1.8504	.34	.328	0.0	0.0	SP..120308/SP..422
<b>CSSPR16CA4</b>	2.362	.984	2.0866	.34	.328	0.0	0.0	SP..120308/SP..422
<b>left hand</b>								
<b>CSSPL10CA3</b>	1.575	.551	1.7323	.25	.239	0.0	0.0	SP..090308/SP..322
<b>CSSPL12CA4</b>	1.969	.787	1.8504	.34	.328	0.0	0.0	SP..120308/SP..422
<b>CSSPL16CA4</b>	2.362	.984	2.0866	.34	.328	0.0	0.0	SP..120308/SP..422

### ■ Spare Parts

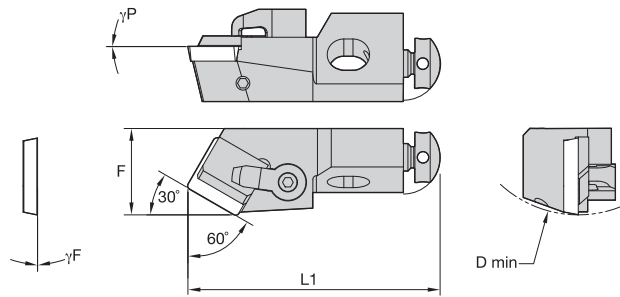


D min	shim	shim screw	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	—	—	CKM34	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	—	—	—	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	SM840	CS109PKG	2 mm	CKM34	STCM9	2.5 mm	KUAM25	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.362	SM840	CS109PKG	2 mm	CKM34	STCM9	2 mm	KUAM25	2 mm	KUAM32	191.407	5 mm	CSWM 080 050

NOTE: Select spare parts based off of D min and insert size selected.



See pages B85–B86 and B129–B130 for inserts.



■ CSTP 30°

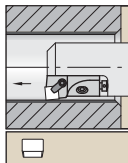
catalog number	D min	F	L1	γF°	γP°	gage insert
right hand CSTPR10CA3	1.575	.354	1.97	0.0	0.0	SP..090308/SP..322

■ Spare Parts

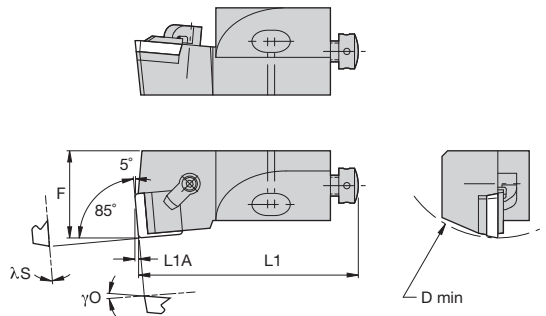


D min	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	CKM34	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050

O.D./I.D. Tooling



See pages B85–B86 and B129–B130 for inserts.



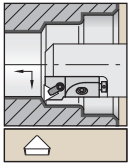
■ CSYP 5°

catalog number	D min	F	L1	L1A	λS°	γO°	gage insert
right hand CSYPR10CA3	1.575	.551	1.97	.030	0.0	5.0	SP..090308/SP..322
left hand CSYPL10CA3	1.575	.551	1.97	.030	0.0	5.0	SP..090308/SP..322

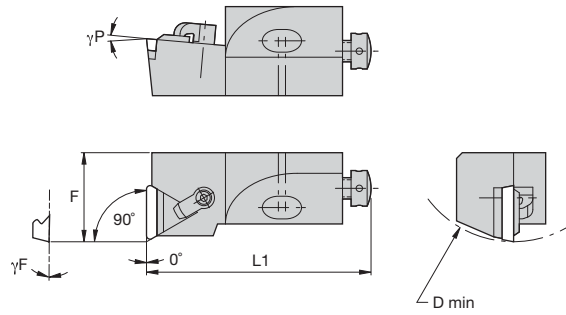
■ Spare Parts



D min	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	CKM34	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050



See pages B86–B87 and B130 for inserts.

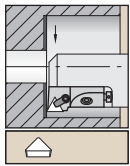

**CTFP 0°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>CTFPR10CA2</b>	1.575	.551	1.97	0.0	5.0	TP..110304/TP..421
<b>CTFPR12CA3</b>	1.969	.787	2.17	0.0	5.0	TP..160308/TP..322
<b>CTFPR16CA3</b>	2.362	.984	2.48	0.0	5.0	TP..160308/TP..322
<b>left hand</b>						
<b>CTFPL10CA2</b>	1.575	.551	1.97	0.0	5.0	TP..110304/TP..421
<b>CTFPL12CA3</b>	1.969	.787	2.17	0.0	5.0	TP..160308/TP..322
<b>CTFPL16CA3</b>	2.362	.984	2.48	0.0	5.0	TP..160308/TP..322

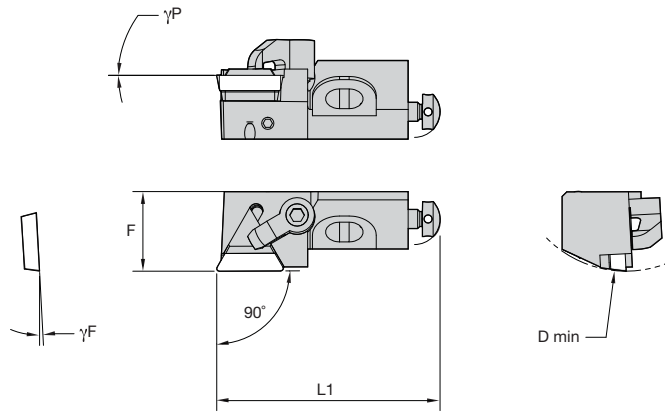
**Spare Parts**


D min	shim	shim screw	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	—	—	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	—	—	—	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM22</b>	2 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>SM841</b>	<b>MS109</b>	2 mm	<b>CKM34</b>	<b>STCM38</b>	2 mm	<b>KUAM24</b>	2 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>
2.756	<b>SM837</b>	<b>MS125</b>	2.5 mm	<b>CKM35</b>	<b>STCM8</b>	2.5 mm	<b>KUAM25</b>	4 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>

O.D./I.D. Tooling



See pages B86–B87 and B130 for inserts.

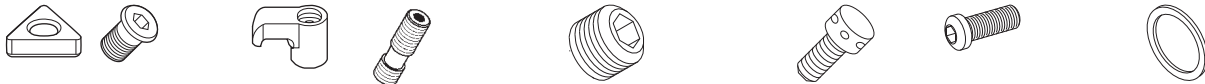


O.D./I.D. Tooling

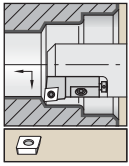
■ **CTGP 0°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
CTGPR10CA2	1.575	.551	1.97	3.0	0.0	TP..110304/TP..421
CTGPR12CA3	1.969	.787	2.17	3.0	0.0	TP..160308/TP..322
CTGPR16CA3	2.362	.984	2.48	3.0	0.0	TP..160308/TP..322
<b>left hand</b>						
CTGPL12CA3	1.969	.787	2.17	3.0	0.0	TP..160308/TP..322
CTGPL20CA4	2.756	.984	2.76	3.0	0.0	TP..220408/TP..432

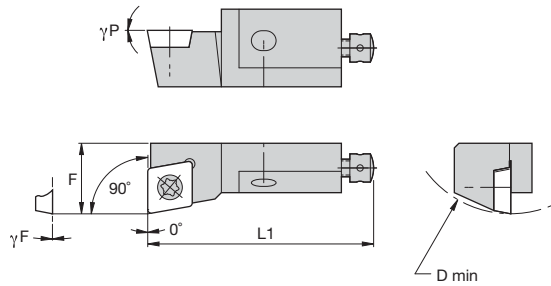
■ **Spare Parts**



D min	shim	shim screw	hex	clamp	clamp screw	hex	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	—	—	—	CKM34	STCM38	2 mm	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	—	—	—	CKM34	STCM38	2 mm	KUAM22	2 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	SM841	MS109	2 mm	CKM34	STCM38	2 mm	KUAM24	2 mm	KUAM32	191.407	5 mm	CSWM 080 050
2.756	SM837	MS125	2.5 mm	CKM35	STCM8	2.5 mm	KUAM25	4 mm	KUAM32	191.407	5 mm	CSWM 080 050



See pages B92–B95 for inserts.



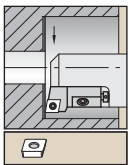
■ **SCFP 0°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
SCFPR06CA05	.787	.315	.98	0.0	0.0	CP..050204/CP..18151
SCFPR08CA06	.984	.394	1.26	0.0	0.0	CP..060204/CP..2151
SCFPR10CA09	1.575	.551	1.97	0.0	0.0	CPMT09T308
<b>left hand</b>						
SCFPL06CA05	.787	.315	.98	0.0	0.0	CP..050204/CP..18151
SCFPL08CA06	.984	.394	1.26	0.0	0.0	CP..060204/CP..2151

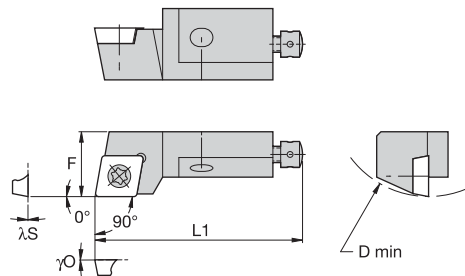
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.787	MS1933	T7	KUAM34	1.5 mm	KUAM35	MS2173	2 mm	CSWM 035 040
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050
1.575	MS1155	T15	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.



See pages B92–B95 for inserts.



■ **SCGP 0°**

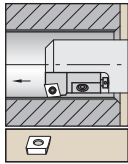
catalog number	D min	F	L1	λS°	γO°	gage insert
<b>right hand</b>						
SCGPR08CA06	.984	.394	1.26	0.0	0.0	CP..060204/CP..2151
<b>left hand</b>						
SCGPL08CA06	.984	.394	1.26	0.0	0.0	CP..060204/CP..2151

■ **Spare Parts**

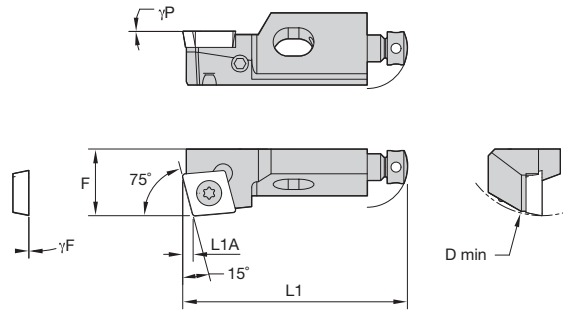
D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.

O.D./I.D. Tooling



See pages B92–B95 for inserts.



**SCKP 15°**

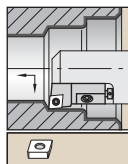
catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
right hand <b>SCKPR08CA06</b>	.984	.394	1.26	.061	0.0	0.0	CP..060204/CP..2151
left hand <b>SCKPL08CA06</b>	.984	.394	1.26	.061	0.0	0.0	CP..060204/CP..2151

**Spare Parts**

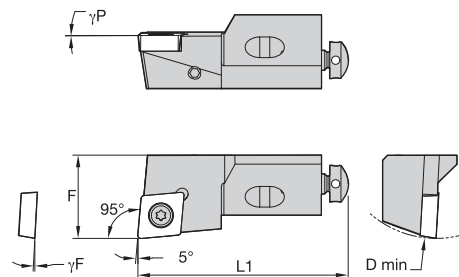
D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	<b>MS1153</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.

O.D./I.D. Tooling



See pages B88–B91 for inserts.

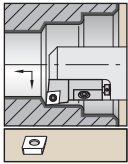


**SCLC -5°**

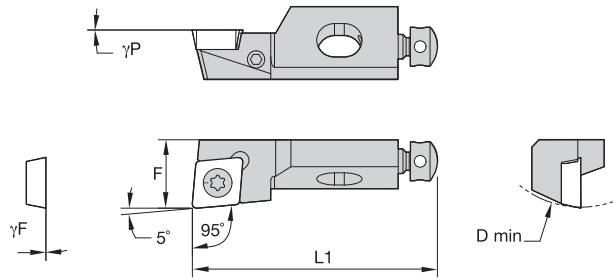
catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>SCLCR12CA12</b>	1.969	.787	2.17	-3.0	0.0	CC..120408/CC..432
<b>SCLCR16CA12</b>	2.362	.984	2.48	-3.0	0.0	CC..120408/CC..432
left hand <b>SCLCL12CA12</b>	1.969	.787	2.17	-3.0	0.0	CC..120408/CC..432
<b>SCLCL16CA12</b>	2.362	.984	2.48	-3.0	0.0	CC..120408/CC..432

**Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	<b>MS1157</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>MS1157</b>	T15	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B92–B95 for inserts.



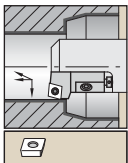
■ **SCLP -5°**

catalog number	D min	F	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
<b>right hand</b>						
<b>SCLPR06CA05</b>	.787	.315	.984	0.0	0.0	CP..050204/CP..18151
<b>SCLPR08CA06</b>	.984	.394	1.260	0.0	0.0	CP..060204/CP..2151
<b>SCLPR10CA09</b>	1.575	.551	1.969	0.0	0.0	CP..09T308/CP..3252
<b>left hand</b>						
<b>SCLPL06CA05</b>	.787	.315	.984	0.0	0.0	CP..050204/CP..18151
<b>SCLPL08CA06</b>	.984	.394	1.260	0.0	0.0	CP..060204/CP..2151
<b>SCLPL10CA09</b>	1.575	.551	1.969	0.0	0.0	CP..09T308/CP..3252

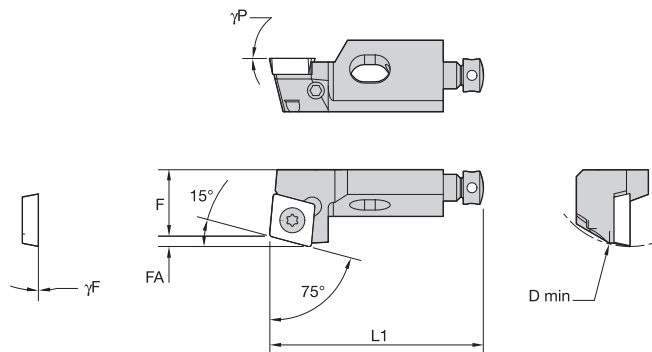
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.787	<b>MS1933</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM35</b>	<b>MS2173</b>	2 mm	<b>CSWM 035 040</b>
.984	<b>MS1153</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>
1.575	<b>MS1155</b>	T15	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.  
ANSI/ISO compatible 60° countersunk hole inserts (i.e., CPMT/CPGT/CPGW-32.5\_).  
90° countersunk hole inserts (i.e., CPGM/CPGB-32.5\_) do not fit this tool.



See pages B92–B95 for inserts.



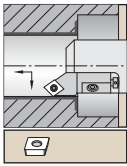
■ **SCR 15°**

catalog number	D min	F	FA	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
<b>right hand</b>							
<b>SCRPR08CA06</b>	.984	.394	.059	1.26	0.0	0.0	CP..060204/CP..2151
<b>left hand</b>							
<b>SCRPL08CA06</b>	.984	.394	.059	1.26	0.0	0.0	CP..060204/CP..2151

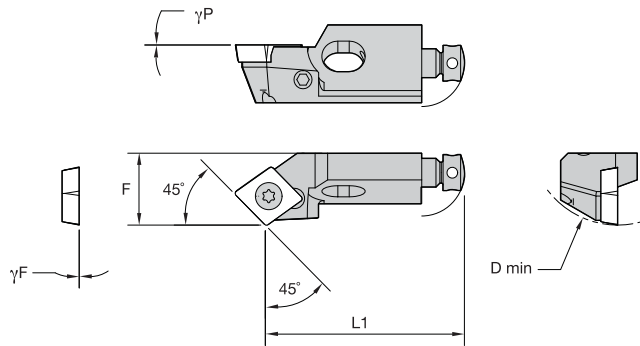
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	<b>MS1153</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.



See pages B92–B95 for inserts.



■ SCSP 45°

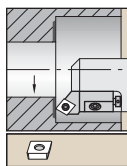
O.D./I.D. Tooling

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
SCSPR06CA05	.787	.315	.83	0.0	0.0	CP..050204/CP..18151
SCSPR08CA06	.984	.394	1.10	0.0	0.0	CP..060204/CP..2151
<b>left hand</b>						
SCSPL06CA05	.787	.315	.83	0.0	0.0	CP..050204/CP..18151
SCSPL08CA06	.984	.394	1.10	0.0	0.0	CP..060204/CP..2151

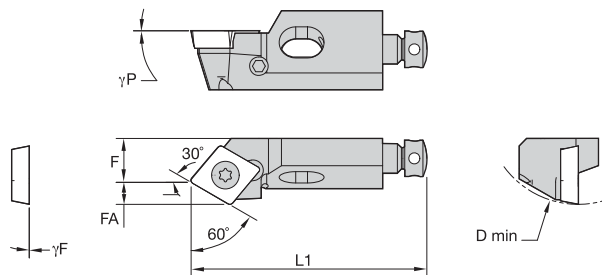
■ Spare Parts

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.787	MS1933	T7	—	—	KUAM35	MS2173	2 mm	CSWM 035 040
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.



See pages B92–B95 for inserts.



■ SCTP 30°

catalog number	D min	F	FA	L1	γF°	γP°	gage insert
<b>right hand</b>							
SCTPR06CA05	.787	.217	.102	.98	0.0	0.0	CP..050204/CP..18151
SCTPR08CA06	.984	.236	.116	1.26	0.0	0.0	CP..060204/CP..2151
<b>left hand</b>							
SCTPL08CA06	.984	.236	.116	1.26	0.0	0.0	CP..060204/CP..2151

■ Spare Parts

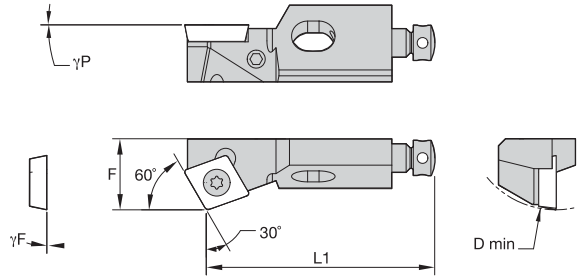
D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.787	MS1933	T7	—	—	KUAM35	MS2173	2 mm	CSWM 035 040
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.





See pages B92–B95 for inserts.



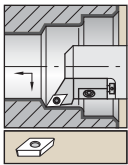
■ **SCWP 30°**

catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
right hand <b>SCWPR08CA06</b>	.984	.394	1.26	.118	0.0	0.0	CP..060204/CP..2151
left hand <b>SCWPL08CA06</b>	.984	.394	1.26	.118	0.0	0.0	CP..060204/CP..2151

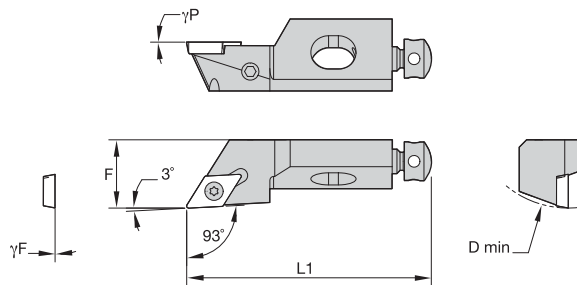
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	<b>MS1153</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts CPGM/CPGT/CPGW-21.5\_ inserts.



See pages B98–B100 for inserts.

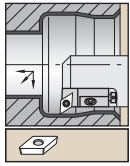


■ **SDJP -3°**

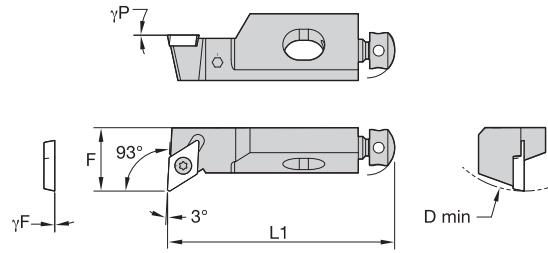
catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>SDJPR10CA07</b>	1.575	.551	1.97	0.0	0.0	DP..070204/DP..2151
left hand <b>SDJPL10CA07</b>	1.575	.551	1.97	0.0	0.0	DP..070204/DP..2151

■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	<b>MS1153</b>	T7	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>



See pages B98–B100 for inserts.



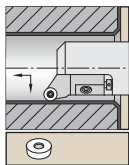
SDUP -3°

catalog number	D min	F	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
right hand SDUPR10CA07	1.575	.551	1.97	0.0	0.0	DP..070204/DP..2151

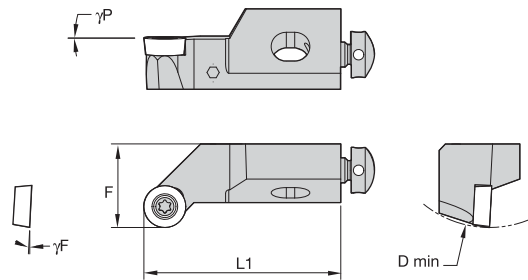
Spare Parts

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	MS1153	T7	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050

O.D./I.D. Tooling



See pages B100–B102 for inserts.

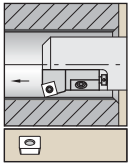


SRGC

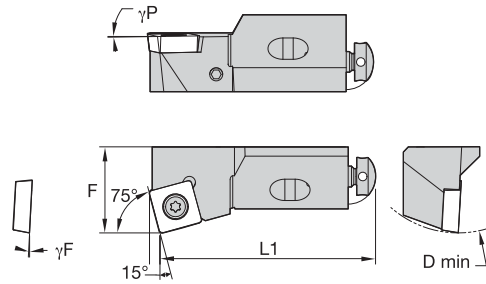
catalog number	D min	F	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
right hand SRGCR08CA06	.984	.394	1.26	-4.0	0.0	RC..0602M0/RC..215
SRGCR10CA08	1.575	.551	1.97	-3.0	0.0	RC..0803M0/RC..0803M0
SRGCR12CA10	1.969	.787	2.17	-3.0	0.0	RC..10T3M0/RC..10T3M0
left hand SRGCL08CA06	.984	.394	1.26	-4.0	0.0	RC..0602M0/RC..215
SRGCL12CA10	1.969	.787	2.17	-3.0	0.0	RC..10T3M0/RC..10T3M0

Spare Parts

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	MS1153	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050
1.575	MS1154	T9	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	MS1155	T15	KUAM23	2.5 mm	KUAM31	191.406	4 mm	CSWM 060 050



See pages B103–B104 for inserts.

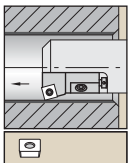


■ **SSKC 15°**

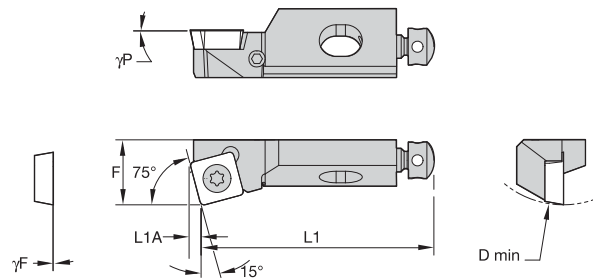
catalog number	D min	F	L1	γF°	γP°	gage insert
right hand <b>SSKCR12CA12</b>	1.969	.787	2.17	-3.0	0.0	SC..120408/SC..432
left hand <b>SSKCR16CA12</b>	2.362	.984	2.48	-3.0	0.0	SC..120408/SC..432
left hand <b>SSKCL12CA12</b>	1.969	.787	2.17	-3.0	0.0	SC..120408/SC..432

■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	<b>MS1157</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>MS1157</b>	T15	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B104–B106 for inserts.



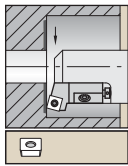
■ **SSKP 15°**

catalog number	D min	F	L1	L1A	γF°	γP°	gage insert
right hand <b>SSKPR10CA09</b>	1.575	.551	1.97	.09	0.0	0.0	SP..09T308/SP..3252
left hand <b>SSKPL10CA09</b>	1.575	.551	1.97	.09	0.0	0.0	SP..09T308/SP..3252

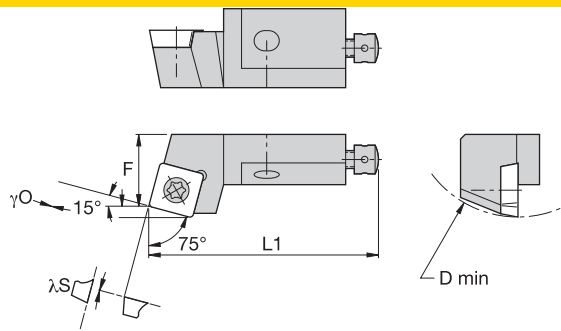
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	<b>MS1155</b>	T15	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>

O.D./I.D. Tooling



See pages B103–B104 for inserts.



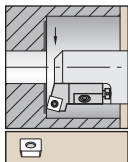
### SSRC 15°

catalog number	D min	F	L1	γO°	λS°	gage insert
right hand SSRCR12CA12	1.969	.787	2.17	0.0	-3.0	SC..120408/SC..432
left hand SSRCL12CA12	1.969	.787	2.17	0.0	-3.0	SC..120408/SC..432

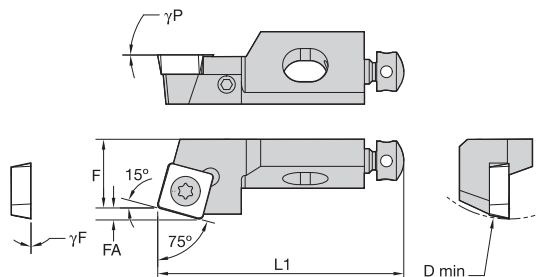
### Spare Parts

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	MS1157	T15	KUAM23	2.5 mm	KUAM31	191.406	4 mm	CSWM 060 050

O.D./I.D. Tooling



See pages B104–B106 for inserts.

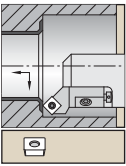


### SSRP 15°

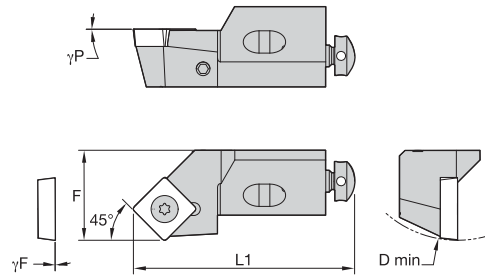
catalog number	D min	F	FA	L1	γF°	γP°	gage insert
right hand SSRPR10CA09	1.575	.551	.09	1.97	0.0	0.0	SP..09T308/SP..3252
left hand SSRPL10CA09	1.575	.551	.09	1.97	0.0	0.0	SP..09T308/SP..3252

### Spare Parts

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	MS1155	T15	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050



See pages B103–B104 for inserts.

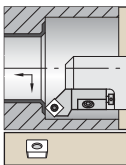


■ **SSSC 45°**

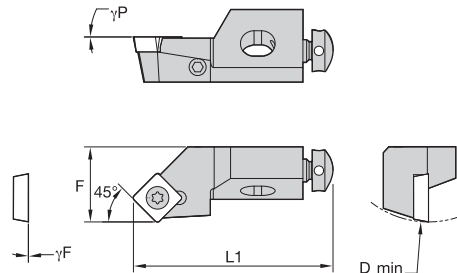
catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>SSSCR12CA12</b>	1.969	.787	1.85	-3.0	0.0	SC..120408/SC..432
<b>SSSCR16CA12</b>	2.362	.984	2.09	0.0	0.0	SC..120408/SC..432
<b>left hand</b>						
<b>SSSCL12CA12</b>	1.969	.787	1.85	-3.0	0.0	SC..120408/SC..432

■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.969	<b>MS1157</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>MS1157</b>	T15	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>



See pages B104–B106 for inserts.



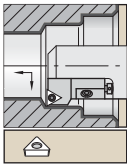
■ **SSSP 45°**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>SSSPR10CA09</b>	1.575	.551	1.73	0.0	0.0	SP..09T308/SP..3252
<b>SSSPR12CA09</b>	1.969	.787	1.85	0.0	0.0	SP..09T308/SP..3252
<b>left hand</b>						
<b>SSSPL10CA09</b>	1.575	.551	1.73	0.0	0.0	SP..09T308/SP..3252

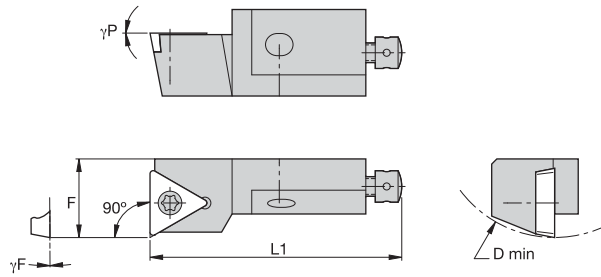
■ **Spare Parts**

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
1.575	<b>MS1155</b>	T15	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	<b>MS1155</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>

O.D./I.D. Tooling



See pages B109–B112 for inserts.



O.D./I.D. Tooling

STFP

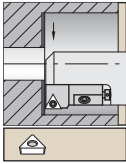
catalog number	D min	F	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
<b>right hand</b>						
STFPR08CA09	.984	.394	1.26	0.0	0.0	TP..090204/TP..18151
STFPR10CA11	1.575	.551	1.97	0.0	0.0	TP..110204/TP..2151
STFPR12CA16	1.969	.787	2.17	0.0	0.0	TP..16T308/TP..3252
<b>left hand</b>						
STFPL08CA09	.984	.394	1.26	0.0	0.0	TP..090204/TP..18151
STFPL10CA11	1.575	.551	1.97	0.0	0.0	TP..110204/TP..2151
STFPL12CA16	1.969	.787	2.17	0.0	0.0	TP..16T308/TP..3252

Spare Parts

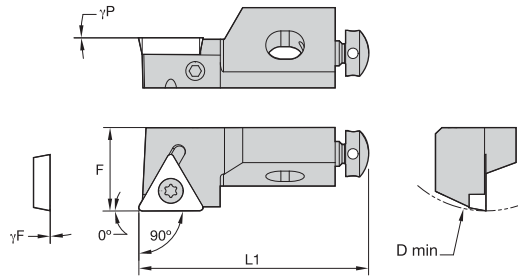


D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	MS1152	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050
1.575	MS1153	T7	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	MS1155	T15	KUAM23	2.5 mm	KUAM31	191.406	4 mm	CSWM 060 050
2.362	MS1155	T15	KUAM25	4 mm	KUAM32	191.407	5 mm	CSWM 080 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
 This tool also accepts TPGM/TPGT/TPGW-21.5\_ inserts.  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., TPMT/TPGT/TPGW-32.5\_).  
 90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.



See pages B109–B112 for inserts.



■ **STGP**

catalog number	D min	F	L1	γF°	γP°	gage insert
<b>right hand</b>						
<b>STGPR08CA09</b>	.984	.394	1.26	0.0	0.0	TP..090204/TP..18151
<b>STGPR10CA11</b>	1.575	.551	1.97	0.0	0.0	TP..110204/TP..2151
<b>STGPR12CA16</b>	1.969	.787	2.17	0.0	0.0	TP..16T308/TP..3252
<b>left hand</b>						
<b>STGPL08CA09</b>	.984	.394	1.26	0.0	0.0	TP..090204/TP..18151
<b>STGPL10CA11</b>	1.575	.551	1.97	0.0	0.0	TP..110204/TP..2151

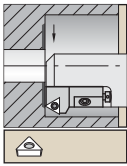
O.D./I.D. Tooling

■ **Spare Parts**

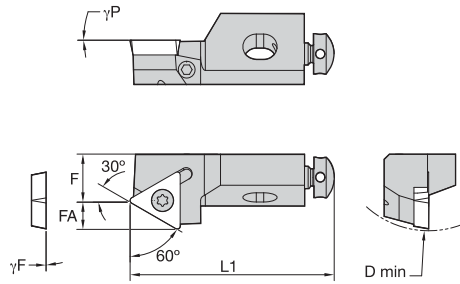


D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	<b>MS1152</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>
1.575	<b>MS1153</b>	T7	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	<b>MS1155</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
 This tool also accepts TPGM/TPGT/TPGW-21.5\_ inserts.  
 ANSI/ISO compatible 60° countersunk hole inserts (i.e., TPMT/TPGT/TPGW-32.5\_).  
 90° countersunk hole inserts (i.e., TPGM/TPGB-32.5\_) do not fit this tool.



See pages B109–B112 for inserts.



■ STTP 30°

catalog number	D min	F	FA	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
right hand							
STTPR08CA09	.984	.236	.167	1.26	0.0	0.0	TP..090204/TP..18151
STTPR10CA11	1.575	.354	.195	1.97	0.0	0.0	TP..110204/TP..2151
STTPR12CA16	1.969	.512	.282	2.17	0.0	0.0	TP..16T308/TP..3252

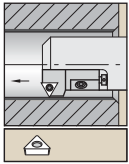
O.D./I.D. Tooling

■ Spare Parts

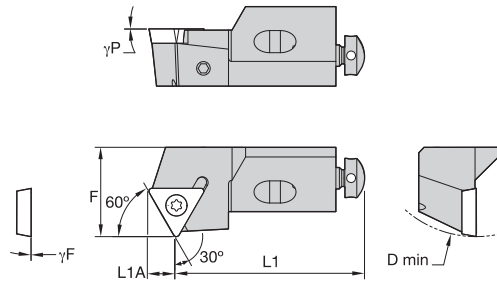
D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	MS1152	T7	KUAM34	1.5 mm	KUAM20	MS2175	2.5 mm	CSWM 040 050
1.575	MS1153	T7	KUAM28	2 mm	KUAM30	191.405	4 mm	CSWM 060 050
1.969	MS1155	T15	KUAM23	2.5 mm	KUAM31	191.406	4 mm	CSWM 060 050

NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
This tool also accepts TPGM/TPGT/TPGW-21.5\_ inserts.





See pages B109–B112 for inserts.


**STWP 30°**

catalog number	D min	F	L1	$\gamma F^\circ$	$\gamma P^\circ$	gage insert
right hand						
<b>STWPR08CA09</b>	.984	.394	1.10	0.0	0.0	TP..090204/TP..18151
<b>STWPR10CA11</b>	1.575	.551	1.73	0.0	0.0	TP..110204/TP..2151
<b>STWPR12CA16</b>	1.969	.787	1.85	0.0	0.0	TP..16T308/TP..3252
<b>STWPR16CA16</b>	2.362	.984	2.09	0.0	0.0	TP..16T308/TP..3252

**Spare Parts**


insert screw

Torx



radial adjusting screw

hex



axial adjusting screw



mounting screw

hex



washer

D min	insert screw	Torx	radial adjusting screw	hex	axial adjusting screw	mounting screw	hex	washer
.984	<b>MS1152</b>	T7	<b>KUAM34</b>	1.5 mm	<b>KUAM20</b>	<b>MS2175</b>	2.5 mm	<b>CSWM 040 050</b>
1.575	<b>MS1153</b>	T7	<b>KUAM28</b>	2 mm	<b>KUAM30</b>	<b>191.405</b>	4 mm	<b>CSWM 060 050</b>
1.969	<b>MS1155</b>	T15	<b>KUAM23</b>	2.5 mm	<b>KUAM31</b>	<b>191.406</b>	4 mm	<b>CSWM 060 050</b>
2.362	<b>MS1155</b>	T15	<b>KUAM25</b>	2.5 mm	<b>KUAM32</b>	<b>191.407</b>	5 mm	<b>CSWM 080 050</b>

 NOTE: ANSI/ISO compatible 60° countersunk hole inserts.  
 This tool also accepts TPGM/TPGT/TPGW-21.5\_ inserts.