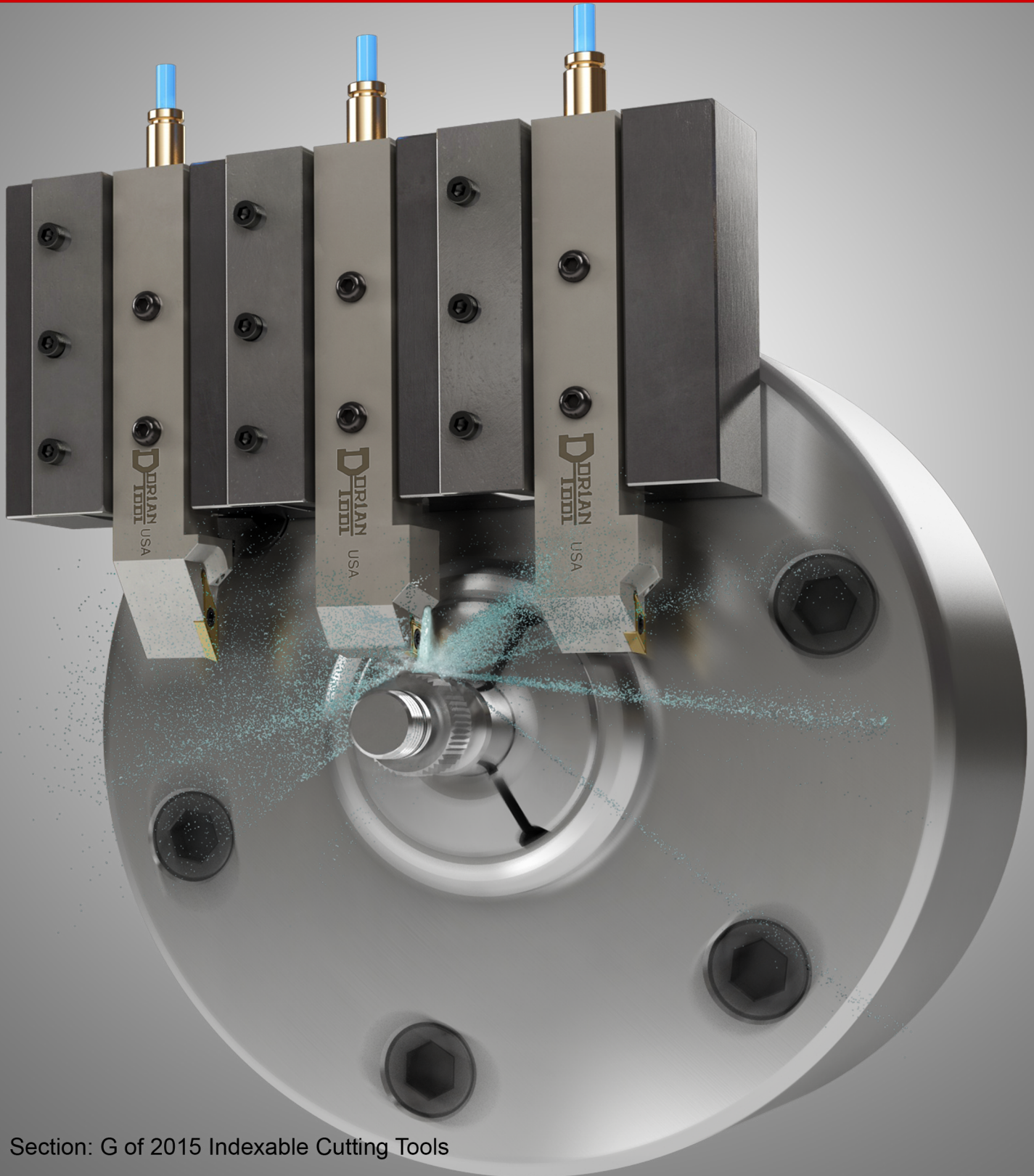




*The First Choice™*  
TECHNOLOGY

# Swiss

Screw Machine Turning Tools with the  
Advanced Thru Coolant Jet-Stream™



Section: G of 2015 Indexable Cutting Tools

## Swiss Screw Machine Tools

### Technical Support

Customized Dorian Thru Coolant Gangtool Slide

Page G-4

High Pressure Coolant Quick Connection

Page G-5

Jet-Stream™ Thru Coolant Technology

Page G-8

### Turning Tools for Swiss Screw Machines

Graphic Index

Page G-3

Jet-Stream™ Thru-Coolant Turning Tools for Swiss Screw Machines (Inch & Metric System)

Page G-10 - G-17

Dry Turning Tools for Swiss Screw Machines (Inch & Metric System)

Page G-18 - G-21

### Turning, Grooving & Cut-off Tools for Swiss Screw Machines

Jet-Stream™ Thru-Coolant Cut-off Tools for Swiss Screw Machines (Inch & Metric System)

Page G-22 - G-23

Jet-Stream™ Thru Coolant Turning, Grooving & Cut-off Tools for Swiss Screw Machines (Inch & Metric System)

Page G-24 - G-27

### Threading Tools for Swiss Screw Machines

Jet-Stream™ Thru-Coolant Threading Tools for Swiss Screw Machines (Inch & Metric System)

Page G-25 - G-27

Dry Threading Tools for Swiss Screw Machines (Inch & Metric System)

Page G-28

### Knurling Tools Tools for Swiss Screw Machines

Graphic Index

Page G-33

Thru-Coolant Knurling Tools for Swiss Screw Machines (Inch & Metric System)

Page G-34 - G-37

Dry Knurling Tools for Swiss Screw Machines (Inch & Metric System)

Page G-38 - G-49

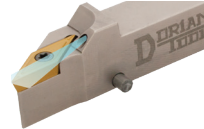


**ASCAC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
80° diamond CC\_W inserts



Page G-10

**ASVNB- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 5° positive  
35° diamond VB\_W inserts



Page G-14

**SCAC-Inch**  
Dry Turning Tool -  
for 7° Positive  
80° diamond CC\_W inserts



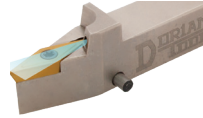
Page G-18

**ASNC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
80° diamond CC\_W inserts



Page G-10

**ASVVB- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 5° positive  
35° diamond VB\_W inserts



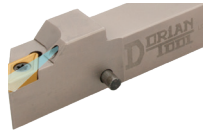
Page G-14

**SCNC- Inch**  
Dry Turning Tool -  
for 7° Positive  
80° diamond CC\_W inserts



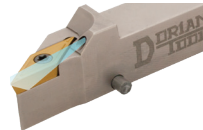
Page G-18

**ASDAC - Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° positive  
55° diamond DC\_W inserts



Page G-11

**ASVAC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
35° diamond VC\_W inserts



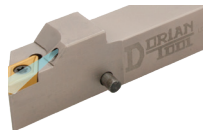
Page G-15

**SDAC- Inch**  
Dry Turning Tool -  
for 7° positive  
55° diamond DC\_W inserts



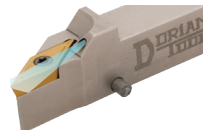
Page G-19

**ASDNC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
55° diamond DC\_W inserts



Page G-11

**ASVNC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
35° diamond VC\_W inserts



Page G-15

**SDNC- Inch**  
Dry Turning Tool -  
for 7° Positive 55°  
diamond DC\_W inserts



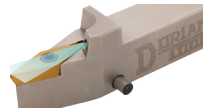
Page G-19

**ASDPC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
55° diamond DC\_W inserts



Page G-12

**ASVVC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
35° diamond VC\_W inserts



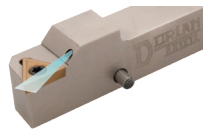
Page G-16

**SDPC- Inch**  
Dry Turning Tool -  
for 7° Positive 55°  
diamond DC\_W inserts



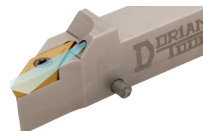
Page G-20

**ASTAC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
Triangle TC\_W inserts



Page G-12

**ASVNP- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 11° Positive  
35° diamond VP\_W inserts



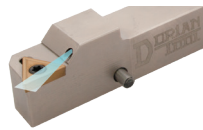
Page G-16

**STAC- Inch**  
Dry Turning Tool -  
for 7° Positive  
Triangle TC\_W inserts



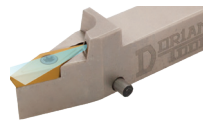
Page G-20

**ASTNC- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
Triangle TC\_W inserts



Page G-13

**ASVVP- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 11° Positive  
35° diamond VP\_W inserts



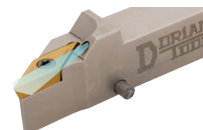
Page G-17

**SVNB- Inch**  
Dry Turning Tool -  
for 5° Positive  
35° diamond VB\_W inserts



Page G-21

**ASVAB- Metric / Inch**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 5° Positive  
35° diamond VB\_W inserts



Page G-13

**ASWNC- Metric**  
Jet-Stream™ Thru Coolant  
Turning Tool - for 7° Positive  
80° trigon WC\_W inserts



Page G-17

**SWNC- Inch**  
Dry Turning Tool -  
for 7° positive  
80° trigon WC\_W inserts



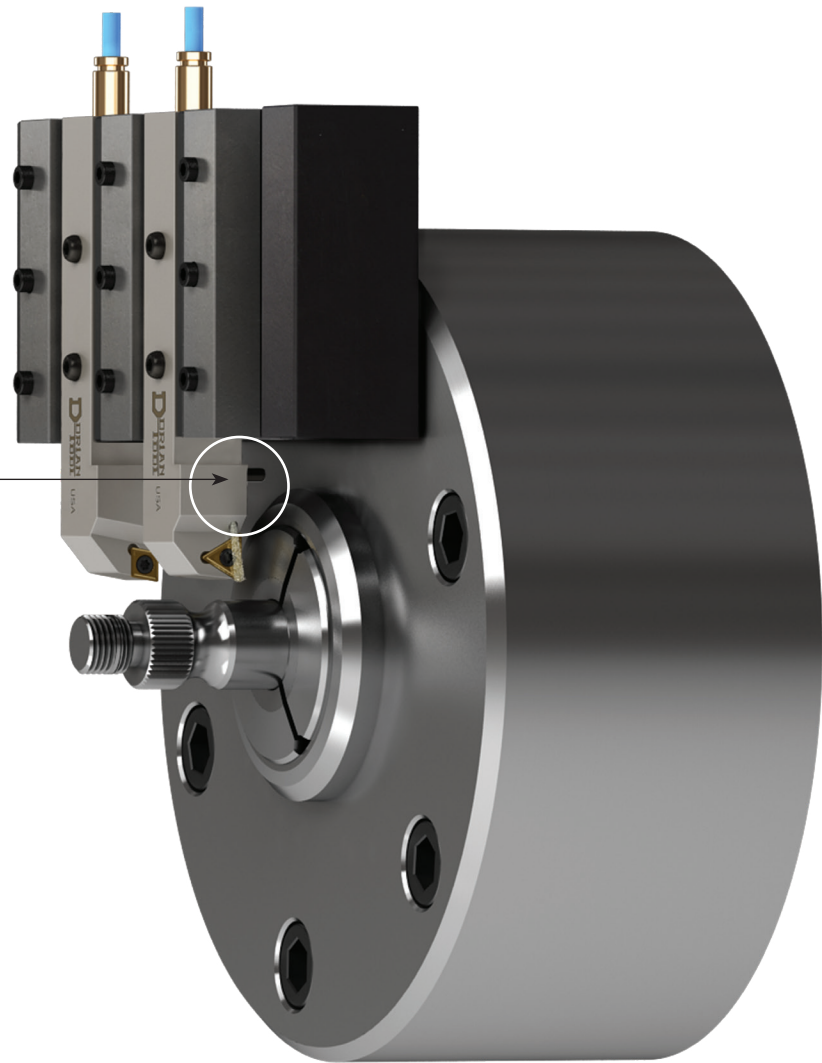
Page G-21

## Dorian Toolholders for Swiss Screw Machines Feature:

### Zero Tolerance Repeatability with a Qualified Toolholder Stop!

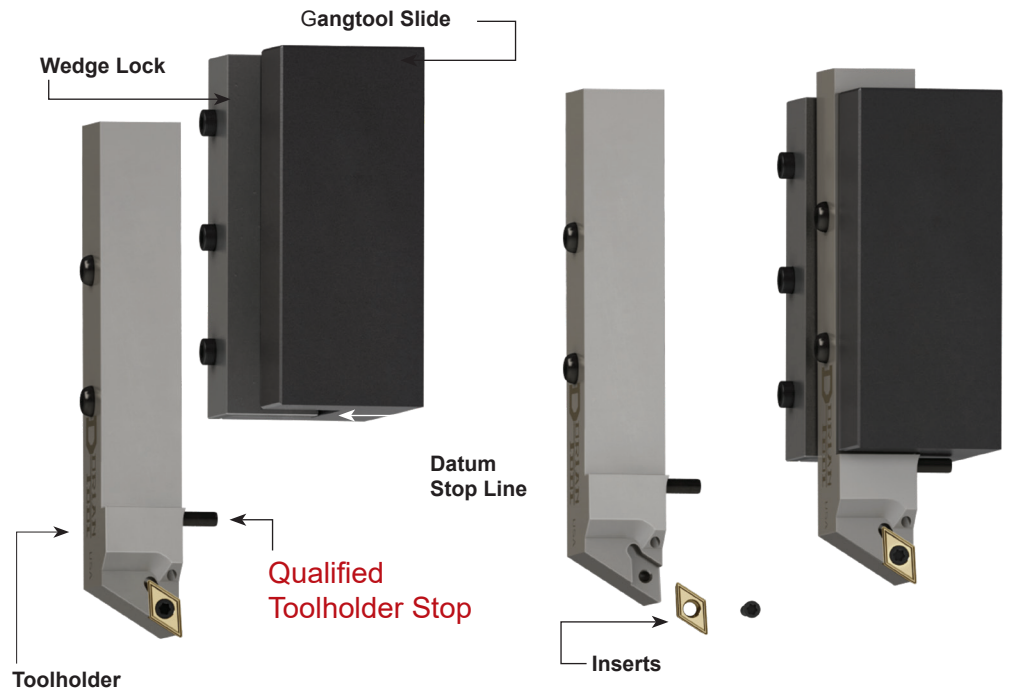
Dorian Toolholders for Swiss Screw Machines are provided with a precision **qualified toolholder stop**  $\pm .025\text{mm}$  (.001").

Toolholders can be moved, repositioned and locked with a **ZERO** tolerance for precise machining repeatability.

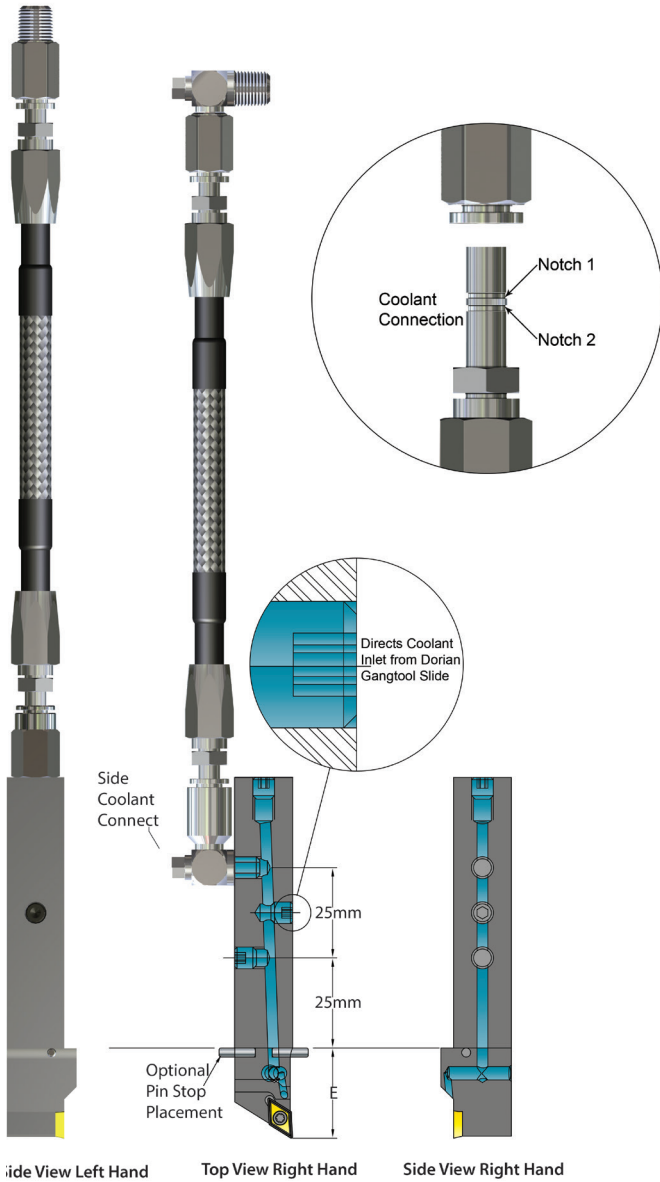


### Simple and Easy Insert Change!

1. Remove the **toolholder** from the **gangtool slide**
2. **Change Inserts**
3. Place toolholder back into the **gangtool slide**
4. Push the **qualified toolholder stop** against the **datum stop line**
5. Lock the **wedge lock** on the **gangtool slide**



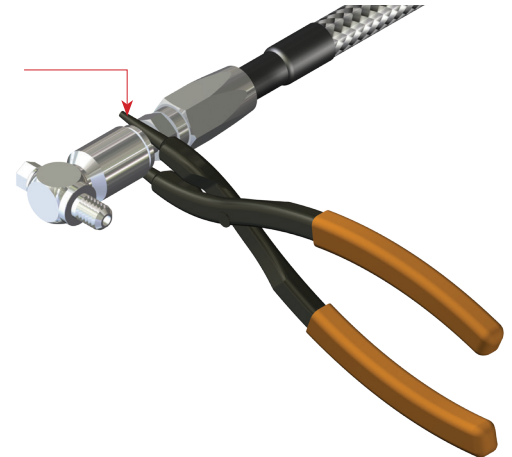
Item	Part Number	UPC No 733101-	Description
			<b>High Pressure Coolant Quick Connection</b> for Standard or High Pressure Applications with Side or End Coolant Connection



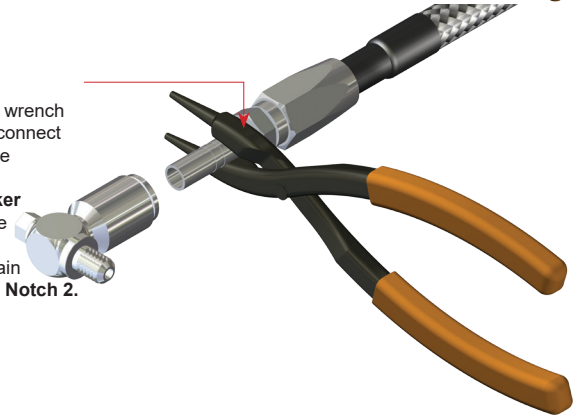
Item	Part Number	UPC No 733101-	Description
1	TD-HP-WRENCH	60076	High Pressure Disconnecting Payer

To Disconnect the Hydraulic Coolant Hose  
Follow Two Safe & Easy Steps:

1. Place the **thinner section** of the wrench-nose between the coolant hose and the connector.



2. Close the wrench and it will disconnect **Notch 1** of the coolant hose. Use the **thicker section** of the wrench-nose and close again to disconnect **Notch 2**.



Swiss Toolholders-High Pressure Coolant Connection 7 Pcs. Kit

Working Pressure

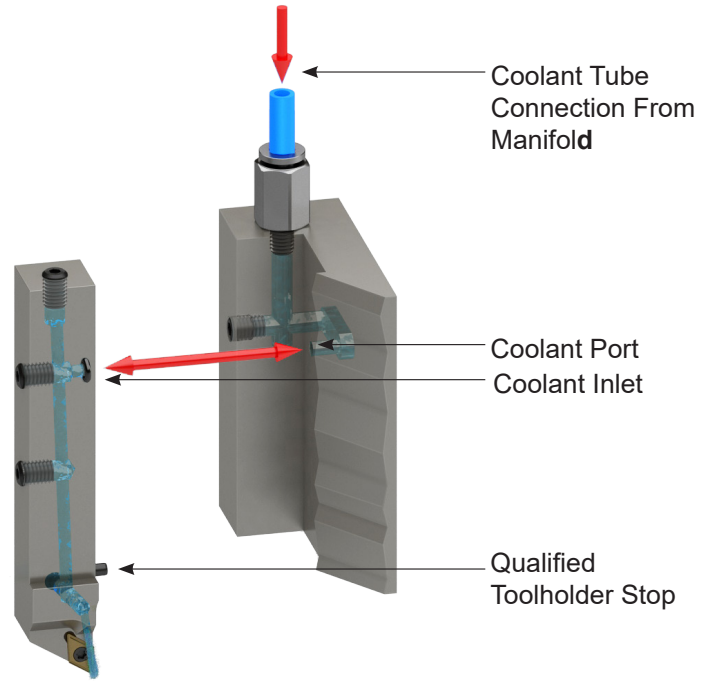


New Hydraulic Coolant Hose  
For Safe & Easy Disconnection

Item	Part Number	UPC No 733101-	Description	Bar	PSI
1	DT-HPTU-ASSY DT-HPTU-8X4	60480 60477	Swiss High Pressure Quick Release Coolant 7 pcs. Kit 8mm High Pressure 8mm Coolant Tubing Only	200	2800
2	DT-HP90C-1/8x6	60479	High Pressure Quick Release Straight Intec		
3	DT-HP90C-1/8x6	60479	High Pressure Quick Release Straight Intec		
4	DT-HP90C-1/8x6	60490	1/8" NPT Straight High Pressure Quick Release Connector		
5	DT-HP90C-1/8x6	60489	1/8" NPT 90° Elbow High Pressure Quick Release Connector		
6	DT-HP90C-1/8x6	60487	6mm Straight High Pressure Quick Release Connector		
7	DT-HPTU-8X4	60486	6mm 90° Banjio High Pressure Quick Release Connector		

## Lock and Cool With the Dorian Thru Coolant Gangtool Slide for Swiss Screw Machine!

- Customized GangTool slide for specific machines
- Customized GangTool slide for specific jobs
- Quick toolholder set-up
- Qualified toolholder stop
- Precision tool change repeatability
- Quick and easy insert change
- Locks the toolholder into position and cool
- Coolant will flow direct from the GangTool slide to the toolholder
- No coolant hoses or connectors required
- Clean, Easy and precise tooling set-up



## Custom Dorian Gangtool for Swiss Screw Machines

The customized Dorian Gangtool slide will simplify tooling set-up and direct coolant connection to the toolholders from the Dorian Gangtool.

The Dorian Gangtool slides are built for specific machine models and applications.

The removal and quick set-up of the Dorian Gangtool expands tooling flexibility and job application.

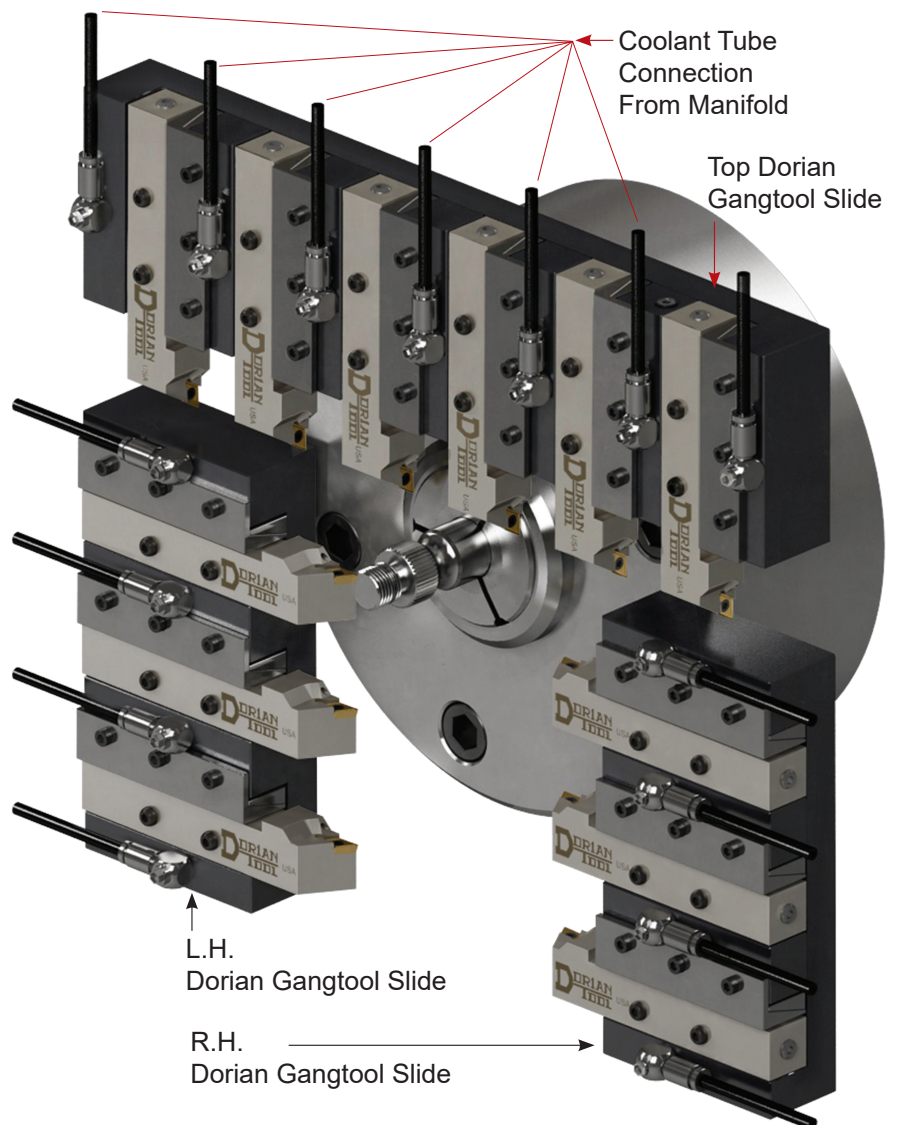
No hoses or fittings are required to cool the insert.

Once the toolholder is locked in the Dorian Gangtool, the coolant flows directly from the manifold; thru the Dorian Gangtool; and into the toolholder, aiming the coolant to the insert cutting edge at high speeds.

The coolant port between the Dorian Gangtool and the toolholder is sealed with an "O" ring.

The toolholders are provided with a qualified tool stop to simplify the removal and repositioning of the toolholders with extreme precision every time the insert is changed.

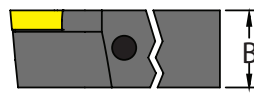
In order for Dorian Tool to build a customized Dorian Gangtool Slide for your machine and needs, fill out the form on page G-7.



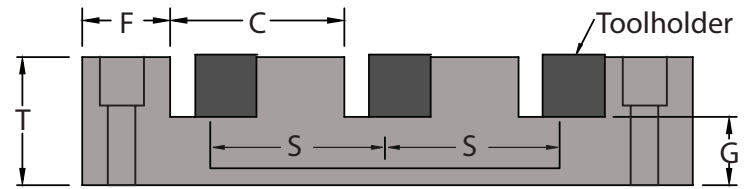
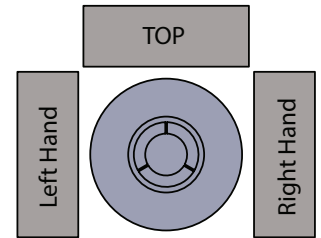
<b>Customized Dorian Gangtool Form</b>	
Complete and Fax to Dorian Tool at 979-282-2951 or email: sales@doriantool.com	
Company Name:	
Contact Name:	
Email:	
Phone No: (    )	
Fax No: (    )	
Address:	

Use Diagram on Right To Complete Table	
Make of Swiss machine:	
Model of Swiss machine:	
Shank size (B):	
Position of Gangtool:	
Bottom thickness (G):	
Spacing between tools (C):	
First station location (F):	
Overall Thickness (T):	
Number of stations (S):	
Overall width (W):	
Overall length (L):	
Bolt hole pattern:	
Bolt size and thread	
Pin location:	
Pin size:	

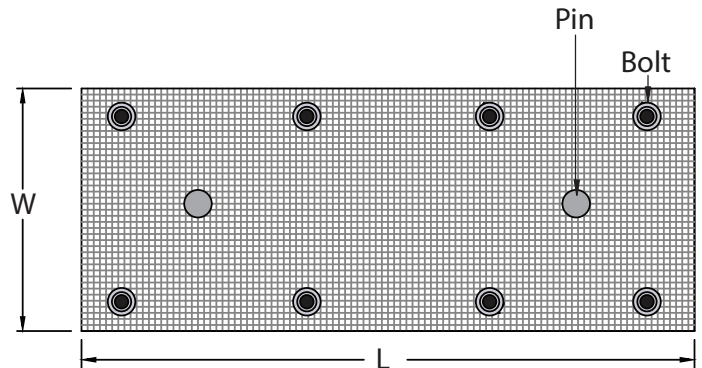
Right Hand Toolholder



Position of Gangtool



Dorian Gangtool



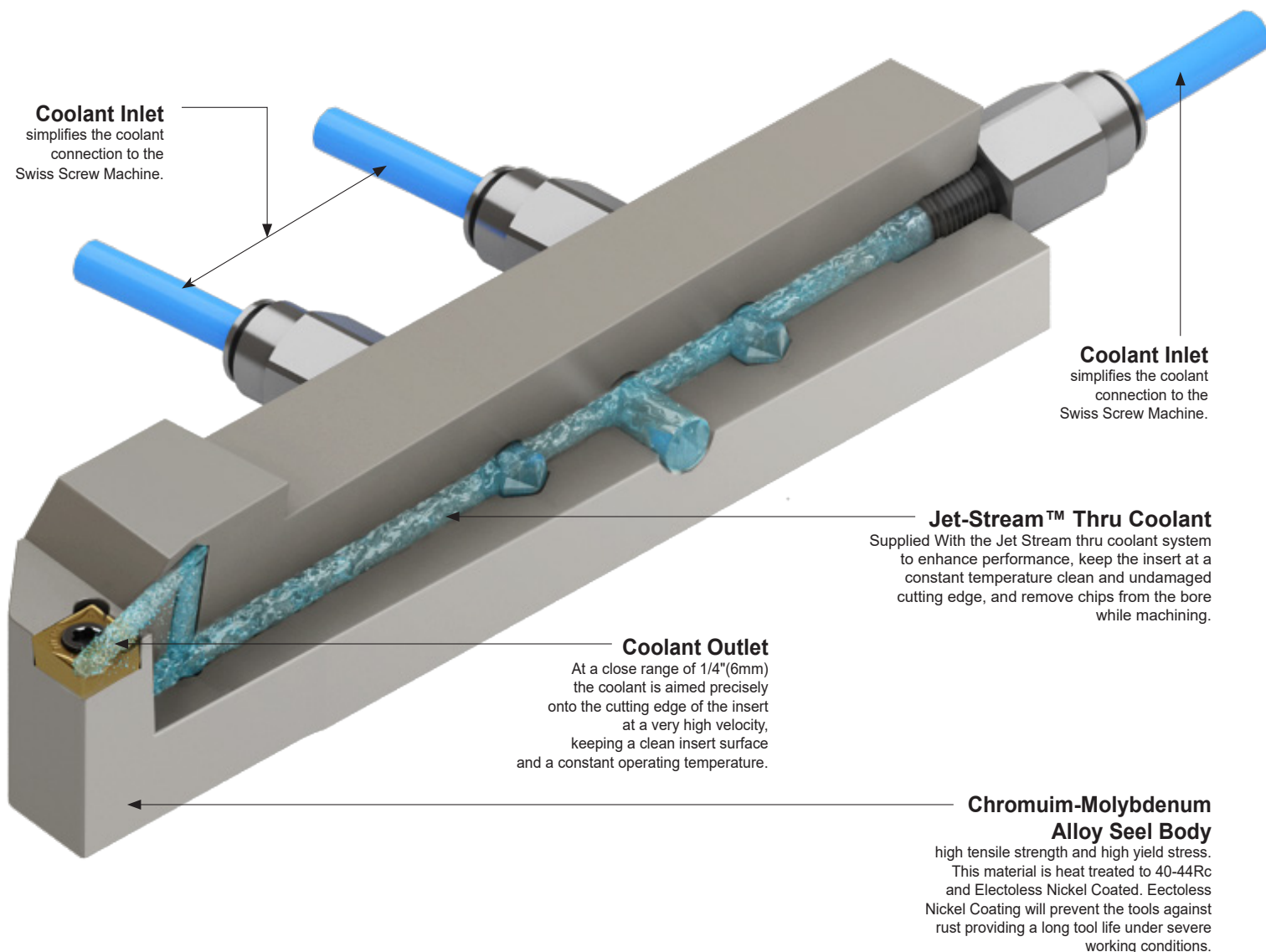
The New Patented Jet-Stream™ System will

## Increase Machining Performance and Insert Life Up to 200%

**When you combine the Dorian Jet-Stream™ tools with a high pressure pump you gain real control of your machining process.**

Damage from heat and chips is eliminated and tools can cut until they wear out. Controlled high-pressure coolant keeps the temperature low; changing the way metal is cut. Tools last longer, chips can't weld to the insert and metal can be cut at much higher surface speeds than ever before. Dangerous decomposition of the chemicals mixed in coolants do not occur at low temperatures. Combining a properly designed high pressure and high volume pumping system and the Dorian Jet Stream tooling system allows surface speed to be increased a minimum of 30%, with some operations improving by 300%!

High-pressure coolant also provides lubricity by blasting lubricating fluid between the chip and the insert at a very high velocity. This increased lubricity combined with much lower temperature and the evacuation of chips often causes surface finishes to have a RMA twice as good as traditional methods.



**Coolant Inlet**  
simplifies the coolant connection to the Swiss Screw Machine.

**Coolant Inlet**  
simplifies the coolant connection to the Swiss Screw Machine.

**Jet-Stream™ Thru Coolant**  
Supplied With the Jet Stream thru coolant system to enhance performance, keep the insert at a constant temperature clean and undamaged cutting edge, and remove chips from the bore while machining.

**Coolant Outlet**  
At a close range of 1/4"(6mm) the coolant is aimed precisely onto the cutting edge of the insert at a very high velocity, keeping a clean insert surface and a constant operating temperature.

**Chromium-Molybdenum Alloy Seel Body**  
high tensile strength and high yield stress. This material is heat treated to 40-44Rc and Electroless Nickel Coated. Electroless Nickel Coating will prevent the tools against rust providing a long tool life under severe working conditions.

**The Jet-Stream™ Pressure**

**Forces the Hot Chips to Hydroplane**

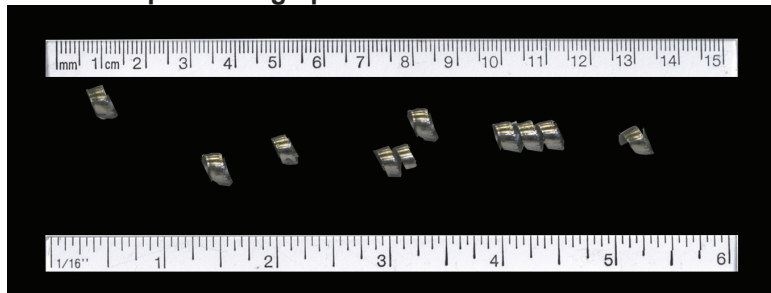
away from the cutting edge of the insert, keeping a clean insert surface and a constant operating temperature.

**Chip damage from long stringy chips:**

Chips cause unpredictable damage. In general, the longer the chips, the harder it is to control and the more damage they cause. Long, stringy chips wrap around boring bars, fill the bottoms of holes, catch on the chucks, cause mechanical problems with loaders, and in many cases require manual removal. All of these slow down the production process and eat away at your profitability. Broken chips that can fall away, or that can be blown out of the cutting zone with coolant force and away from the part and tool are always more desirable.

Many people don't understand the difference between wear and damage. Wear is a predictable part of any mechanical process. Damage, on the other hand, is random, producing the same bell shaped curve that any random. When inserts wear out you can control your production process, when they fail you can not.

**Short chips with high pressure Jet-Stream™ Tools**



**High Pressure**

High Pressure and volume directed into the chip-tool interface never lets the temperature get out of control. The shear zone is short and the chips break over the base material. The part itself is acting as a chip breaker.

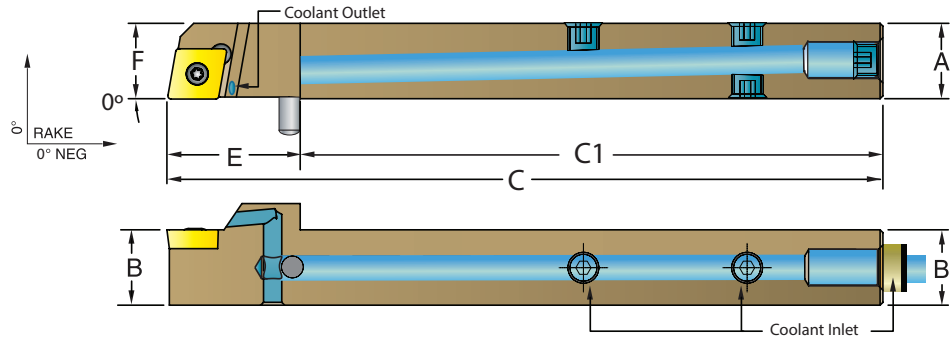
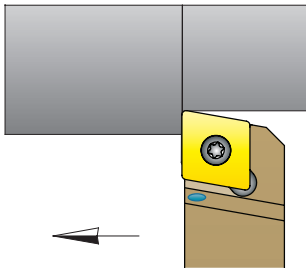
**Long chips made with low pressure standard**



**Standard Pressure**

Low-pressure coolant allows a long shear zone that does not break chips in many materials. The result is long uncontrollable chips.

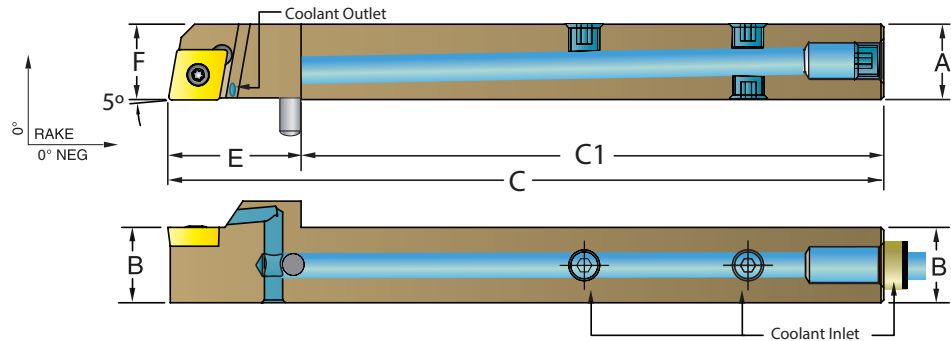
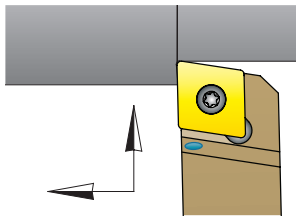
**ASCAC Jet-Stream™ Thru Coolant R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive 80° diamond CC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	CC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASCACR/L 1010-H06	<a href="#">60754</a>	<a href="#">60755</a>	mm	10	10	100	75	25	10	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	CCGW-21.51		
ASCACR/L 1212-H06	<a href="#">60756</a>	<a href="#">60757</a>	mm	12	12	100	75	25	12	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	CCGW-21.51		
ASCACR/L 1616-H06	<a href="#">60758</a>	<a href="#">60759</a>	mm	16	16	100	75	25	16	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.630	0.630	3.937	2.953	0.984	0.630	CCGW-21.51		
ASCACR/L 1212-H09	<a href="#">60760</a>	<a href="#">60761</a>	mm	12	12	100	75	25	12	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.472	0.472	3.937	2.953	0.984	0.472	CCGW-32.52		
ASCACR/L 1616-H09	<a href="#">60762</a>	<a href="#">60763</a>	mm	16	16	100	75	25	16	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.630	0.630	3.937	2.953	0.984	0.630	CCGW-32.52		
ASCACR/L 2020-K09	<a href="#">60764</a>	<a href="#">60765</a>	mm	20	20	125	100	25	20	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.787	0.787	4.921	3.937	0.984	0.787	CCGW-32.52		
<b>Inch</b>												
Description												
ASCACR/L 08-2A	<a href="#">60692</a>	60693	inch	0.500	0.500	4.000	3.00	1.000	0.500	CCGW-21.51	TS-25.45-6M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	CCGW-060204		
ASCACR/L 08-3A	<a href="#">60695</a>	60696	inch	0.500	0.500	4.000	3.00	1.000	0.500	CCGW-32.52	TS-4.7-10M1	T-15
			mm	12.70	12.70	101.60	76.2	25.40	12.70	CCGW-09T308		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

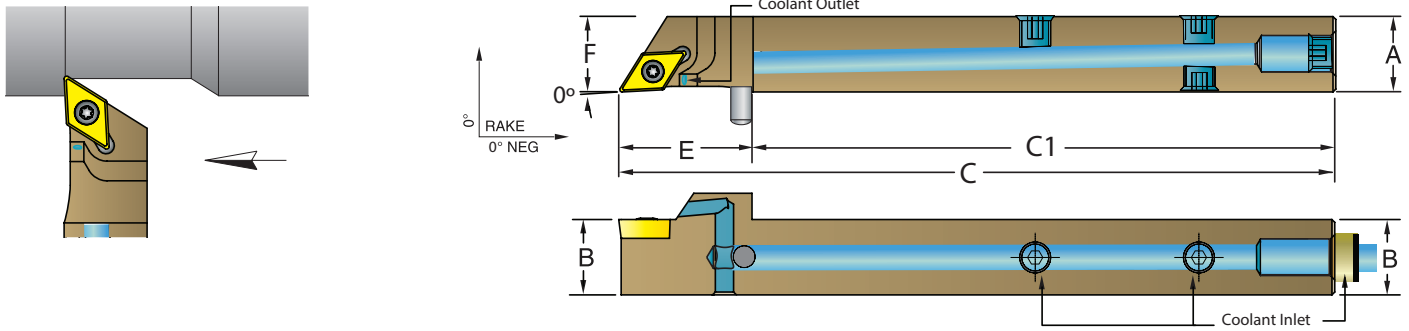
**ASCNC Jet-Stream™ Thru Coolant R/L Toolholder Style N - Negative 5° End or Side Cutting Edge Angle for 7° positive 80° diamond CC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	CC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASCNCR/L 1010-H06	<a href="#">60770</a>	<a href="#">60771</a>	mm	10	10	100	75	25	10	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	CCGW-21.51		
ASCNCR/L 1212-H06	<a href="#">60772</a>	<a href="#">60773</a>	mm	12	12	100	75	25	12	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	CCGW-21.51		
ASCNCR/L 1616-H06	<a href="#">60774</a>	<a href="#">60775</a>	mm	16	16	100	75	25	16	CCGW-060204	TS-25.45-6M2	T-8
			inch	0.630	0.630	3.937	2.953	0.984	0.630	CCGW-21.51		
ASCNCR/L 1212-H09	<a href="#">60776</a>	<a href="#">60777</a>	mm	12	12	100	75	25	12	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.472	0.472	3.937	2.953	0.984	0.472	CCGW-32.52		
ASCNCR/L 1616-H09	<a href="#">60778</a>	<a href="#">60779</a>	mm	16	16	100	75	25	16	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.630	0.630	3.937	2.953	0.984	0.630	CCGW-32.52		
ASCNCR/L 2020-K09	<a href="#">60780</a>	<a href="#">60781</a>	mm	20	20	125	100	25	20	CCGW-09T308	TS-35.6-9M1	T-15
			inch	0.787	0.787	4.921	3.937	0.984	0.787	CCGW-32.52		
<b>Inch</b>												
Description												
ASCNCR/L 08-2A	<a href="#">60698</a>	<a href="#">60699</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	CCGW-21.51	TS-25.45-6M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	CCGW-060204		
ASCNCR/L 08-3A	<a href="#">60701</a>	<a href="#">60702</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	CCGW-32.52	TS-4.7-10M1	T-15
			mm	12.70	12.70	101.60	76.2	25.40	12.70	CCGW-09T308		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

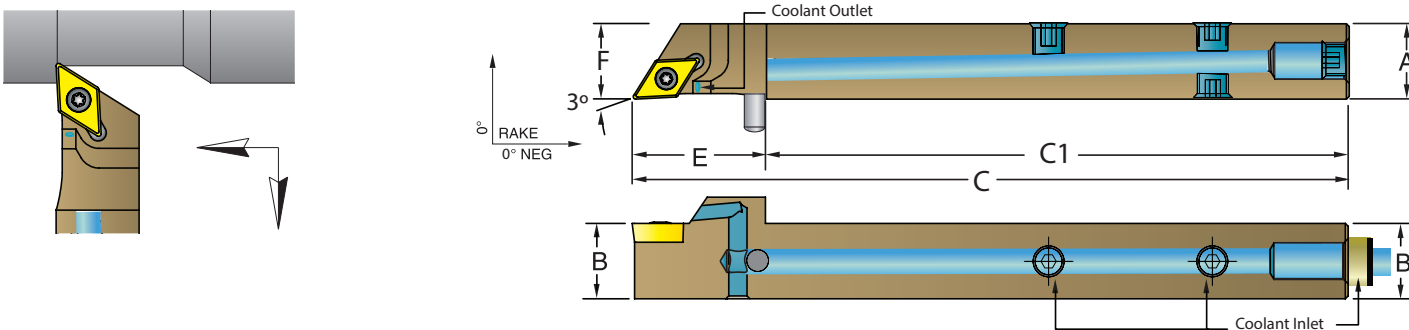
**ASDAC Jet-Stream™ Thru Coolant R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	DC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASDACR/L 1010-H07	<a href="#">60798</a>	<a href="#">60799</a>	mm inch	10 0.394	10 0.394	100 3.937	75 2.953	25 0.984	10 0.394	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDACR/L 1212-H07	<a href="#">60800</a>	<a href="#">60801</a>	mm inch	12 0.472	12 0.472	100 3.937	75 2.953	25 0.984	12 0.472	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDACR/L 1616-H07	<a href="#">60802</a>	<a href="#">60803</a>	mm inch	16 0.630	16 0.630	100 3.937	75 2.953	25 0.984	16 0.630	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDACR/L 1212-H11	<a href="#">60804</a>	<a href="#">60805</a>	mm inch	12 0.472	12 0.472	100 3.937	75 2.953	25 0.984	12 0.472	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
ASDACR/L 1616-H11	<a href="#">60806</a>	<a href="#">60807</a>	mm inch	16 0.630	16 0.630	100 3.937	75 2.953	25 0.984	16 0.630	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
ASDACR/L 2020-K11	<a href="#">60808</a>	60809	mm inch	20 0.787	20 0.787	125 4.921	100 3.937	25 0.984	20 0.787	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
<b>Inch</b>												
Description												
ASDACR/L 08-2A	<a href="#">60703</a>	60704	inch mm	0.500 12.70	0.500 12.70	4.000 101.60	3.00 76.2	1.000 25.40	0.500 12.70	DCGW-21.51 DCGW-070204	TS-25.45-6M2	T-8
ASDACR/L 08-3A	<a href="#">60705</a>	60706	inch mm	0.500 12.70	0.500 12.70	4.000 101.60	3.00 76.2	1.000 25.40	0.500 12.70	DCGW-32.52 DCGW-11T308	TS-4.7-10M1	T-15

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

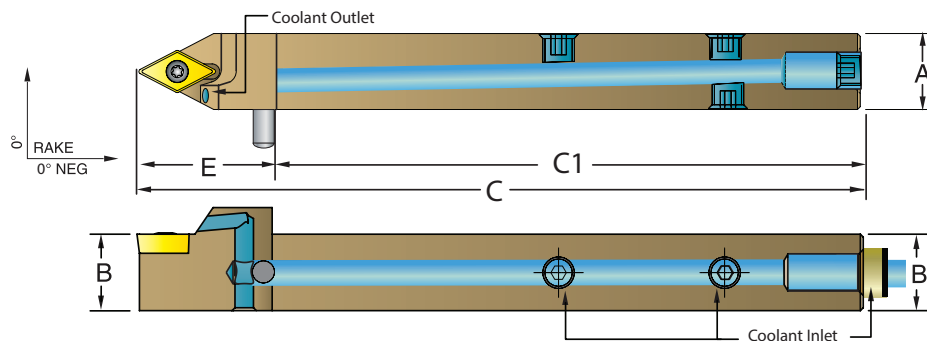
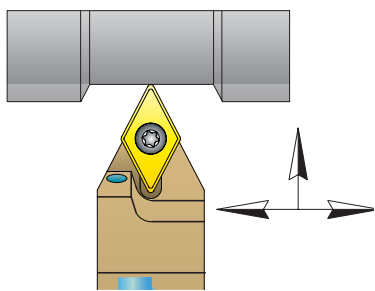
**ASDNC Jet-Stream™ Thru Coolant R/L Toolholder Style N - 3° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	DC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASDNCR/L 1010-H07	<a href="#">60810</a>	60811	mm inch	10 0.394	10 0.394	100 3.937	75 2.953	25 0.984	10 0.394	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDNCR/L 1212-H07	<a href="#">60812</a>	<a href="#">60813</a>	mm inch	12 0.472	12 0.472	100 3.937	75 2.953	25 0.984	12 0.472	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDNCR/L 1616-H07	<a href="#">60814</a>	<a href="#">60815</a>	mm inch	16 0.630	16 0.630	100 3.937	75 2.953	25 0.984	16 0.630	DCGW-070204 DCGW-21.51	TS-25.45-6M2	T-8
ASDNCR/L 1212-H11	<a href="#">60816</a>	<a href="#">60817</a>	mm inch	12 0.472	12 0.472	100 3.937	75 2.953	25 0.984	12 0.472	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
ASDNCR/L 1616-H11	<a href="#">60818</a>	<a href="#">60819</a>	mm inch	16 0.630	16 0.630	100 3.937	75 2.953	25 0.984	16 0.630	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
ASDNCR/L 2020-K11	<a href="#">60820</a>	<a href="#">60821</a>	mm inch	20 0.787	20 0.787	125 4.921	100 3.937	25 0.984	20 0.787	DCGW-11T308 DCGW-32.52	TS-4.7-10M1	T-15
<b>Inch</b>												
Description												
ASDNCR/L 08-2A	<a href="#">60708</a>	<a href="#">60709</a>	inch mm	0.500 12.70	0.500 12.70	4.000 101.60	3.00 76.2	1.000 25.40	0.500 12.70	DCGW-21.51 DCGW-070204	TS-25.45-6M2	T-8
ASDNCR/L 08-3A	60711	<a href="#">60712</a>	inch mm	0.500 12.70	0.500 12.70	4.000 101.60	3.00 76.2	1.000 25.40	0.500 12.70	DCGW-32.52 DCGW-11T308	TS-4.7-10M1	T-15

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

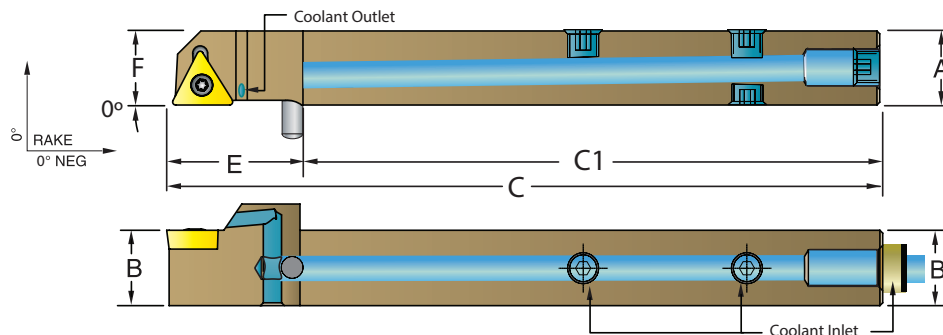
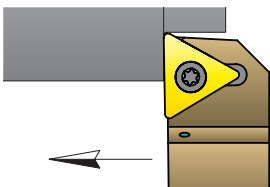
**ASDPC Jet-Stream™ Thru Coolant Neutral Toolholder Style P - 27.5° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric Description	UPC No. 733101- Neutral Hand	System	A	B	C	C1	E (Tool Stop)	DC_W Gage Insert	Insert Torx Screw	Torx Key
ASDPCN 1010-H07	<a href="#">60824</a>	mm	10	10	100	75	25	DCGW-070204	TS-25.45-6M2	T-8
		inch	0.394	0.394	3.937	2.953	0.984	DCGW-21.51		
ASDPCN 1212-H07	<a href="#">60825</a>	mm	12	12	100	75	25	DCGW-070204	TS-25.45-6M2	T-8
		inch	0.472	0.472	3.937	2.953	0.984	DCGW-21.51		
ASDPCN 1212-H11	<a href="#">60826</a>	mm	12	12	100	75	25	DCGW-11T308	TS-4.7-10M1	T-15
		inch	0.472	0.472	3.937	2.953	0.984	DCGW-32.52		
ASDPCN 1616-H11	<a href="#">60827</a>	mm	16	16	100	75	25	DCGW-11T308	TS-4.7-10M1	T-15
		inch	0.630	0.630	3.937	2.953	0.984	DCGW-32.52		
ASDPCN 2020-K11	60828	mm	20	20	125	100	25	DCGW-11T308	TS-4.7-10M1	T-15
		inch	0.787	0.787	4.921	3.937	0.984	DCGW-32.52		
<b>Inch</b>										
Description										
ASDPCN 08-2A	<a href="#">60713</a>	inch	0.500	0.500	4.000	3.00	1.000	DCGW-21.51	TS-25.45-6M2	T-8
		mm	12.70	12.70	101.60	76.2	25.40	DCGW-070204		
ASDPCN 08-3A	<a href="#">60714</a>	inch	0.500	0.500	4.000	3.00	1.000	DCGW-32.52	TS-4.7-10M1	T-15
		mm	12.70	12.70	101.60	76.2	25.40	DCGW-11T308		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

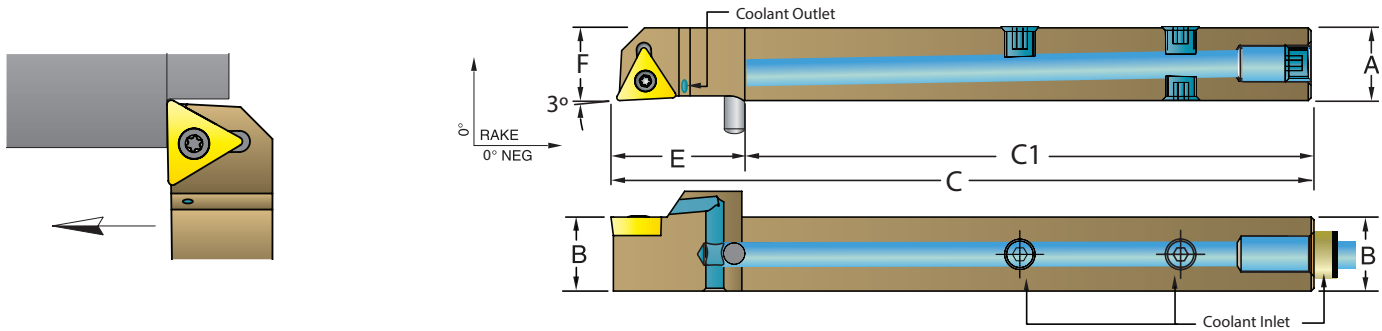
**ASTAC Jet-Stream™ Thru Coolant R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive triangle TC\_W inserts**



Metric Description	UPC No. 733101- R.H. L.H.		System	A	B	C	C1	E (Tool Stop)	F	TC_W Gage Insert	Insert Torx Screw	Torx Key
ASTACR/L 1010-H11	<a href="#">60846</a>	<a href="#">60847</a>	mm	10	10	100	75	25	10	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	TCGW-21.51		
ASTACR/L 1212-H11	<a href="#">60848</a>	<a href="#">60849</a>	mm	12	12	100	75	25	12	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	TCGW-21.51		
ASTACR/L 1616-H11	<a href="#">60850</a>	<a href="#">60851</a>	mm	16	16	100	75	25	16	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.630	0.630	3.937	2.953	0.984	0.630	TCGW-21.51		
ASTACR/L 2020-K11	<a href="#">60852</a>	<a href="#">60853</a>	mm	20	20	125	100	25	20	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.787	0.787	4.921	3.937	0.984	0.787	TCGW-21.51		
<b>Inch</b>												
Description												
ASTACR/L 08-2A	<a href="#">60716</a>	60717	inch	0.500	0.500	4.000	3.00	1.000	0.500	TCGW-21.51	TS-25.45-6M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	TCGW-110204		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

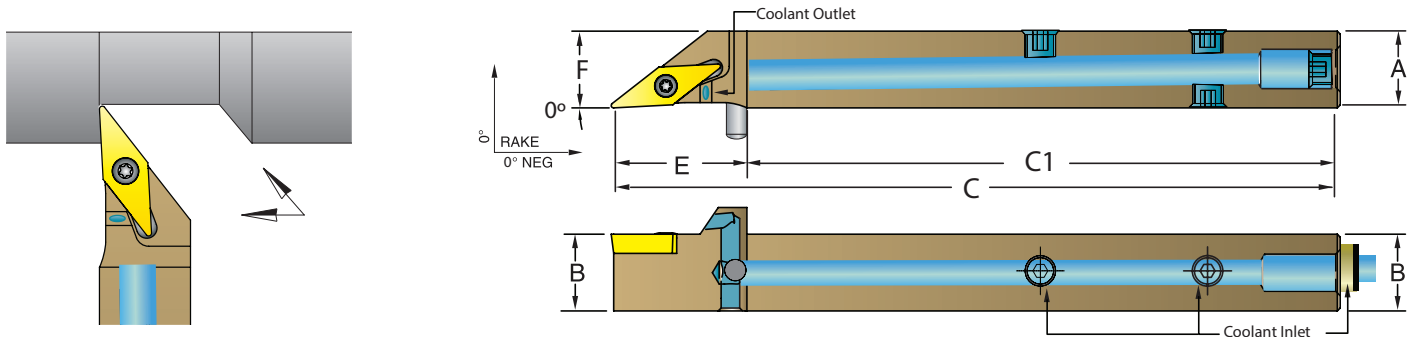
**ASTNC Jet-Stream™ Thru Coolant R/L Toolholder Style N - 3° Side Cutting Edge Angle for 7° positive triangle TC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	TC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASTNCR/L 1010-H11	<a href="#">60858</a>	<a href="#">60859</a>	mm	10	10	100	75	25	10	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	TCGW-21.51		
ASTNCR/L 1212-H11	<a href="#">60860</a>	<a href="#">60861</a>	mm	12	12	100	75	25	12	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	TCGW-21.51		
ASTNCR/L 1616-H11	<a href="#">60862</a>	<a href="#">60863</a>	mm	16	16	100	75	25	16	TCGW-110204	TS-25.45-6M2	T-8
			inch	0.630	0.630	3.937	2.953	0.984	0.630	TCGW-21.51		
ASTNCR/L 1616-H16	<a href="#">60864</a>	<a href="#">60865</a>	mm	16	16	100	75	25	16	TCGW-16T308	TS-35.6-9M1	T-15
			inch	0.630	0.630	3.937	2.953	0.984	0.630	TCGW-32.52		
ASTNCR/L 2020-K16	<a href="#">60866</a>	<a href="#">60867</a>	mm	20	20	125	100	25	20	TCGW-16T308	TS-35.6-9M1	T-15
			inch	0.787	0.787	4.921	3.937	0.984	0.787	TCGW-32.52		
<b>Inch</b>												
Description												
ASTNCR/L 08-2A	<a href="#">60720</a>	<a href="#">60721</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	TCGW-21.51	TS-25.45-6M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	TCGW-110204		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

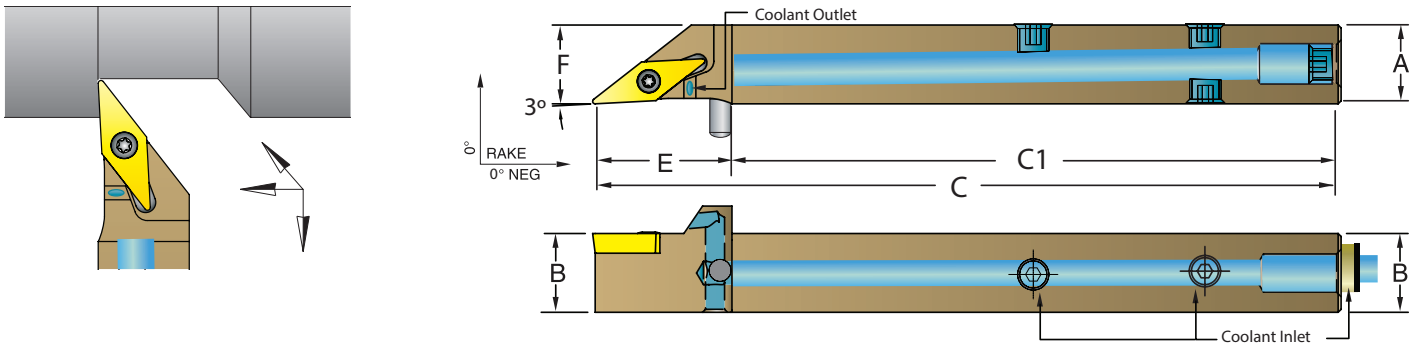
**ASVAB Jet-Stream™ Thru Coolant R/L Toolholder Style A - 0° Side Cutting Edge Angle for 5° positive 35° diamond VB\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	VB_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.										
ASVABR/L 1010-H11	<a href="#">60870</a>	<a href="#">60871</a>	mm	10	10	100	75	25	10	VBGW-110304	TS-25.45-8M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	VBGW-221		
ASVABR/L 1212-H11	<a href="#">60872</a>	<a href="#">60873</a>	mm	12	12	100	75	25	12	VBGW-110304	TS-25.45-8M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	VBGW-221		
ASVABR/L 1212-K16	<a href="#">60874</a>	<a href="#">60875</a>	mm	12	12	107	75	32	12	VBGW-160408	TS-35.6-9M1	T-15
			inch	0.472	0.472	4.213	2.953	1.260	0.472	VBGW-332		
ASVABR/L 1616-K16	<a href="#">60876</a>	<a href="#">60877</a>	mm	16	16	107	75	32	16	VBGW-160408	TS-35.6-9M1	T-15
			inch	0.630	0.630	4.213	2.953	1.260	0.630	VBGW-332		
ASVABR/L 2020-K16	<a href="#">60878</a>	<a href="#">60879</a>	mm	20	20	132	100	32	20	VBGW-160408	TS-35.6-9M1	T-15
			inch	0.787	0.787	5.197	3.937	1.260	0.787	VBGW-332		
<b>Inch</b>												
Description												
ASVABR/L 08-2A	<a href="#">60723</a>	<a href="#">60724</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	VBGW-110304	TS-25.45-8M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	VBGW-221		
ASVABR/L 08-3A	<a href="#">60725</a>	<a href="#">60726</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	VBGW-332	TS-4.7-10M1	T-15
			mm	12.70	12.70	101.60	76.2	25.40	12.70	VBGW-160408		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

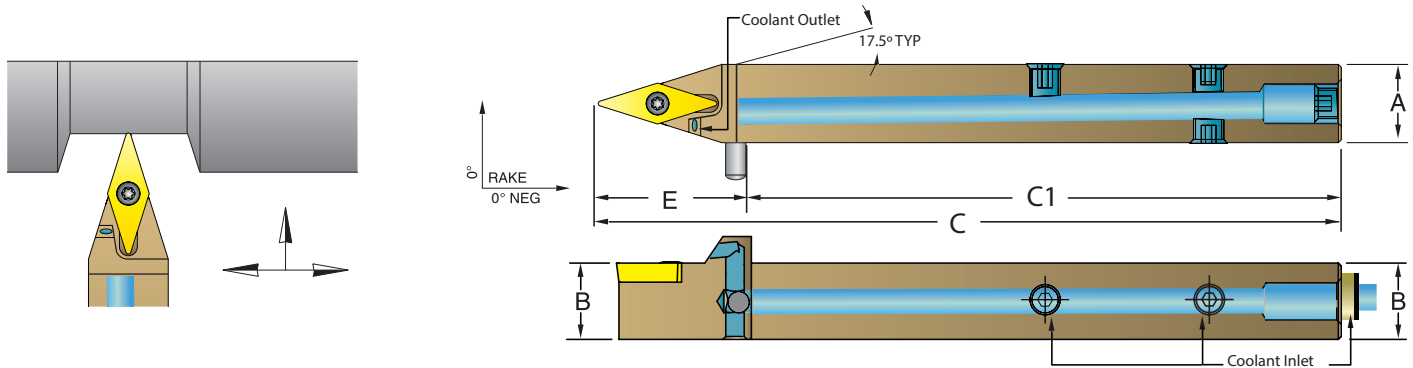
**ASVNB Jet-Stream™ Thru Coolant R/L Toolholder Style N - 3° Side Cutting Edge Angle for 5° positive 35° diamond VB\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	VB_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.											
ASVNB/R/L 1010-H11	<a href="#">60882</a>	<a href="#">60883</a>	mm	10	10	100	75	25	10	10	VBGW-110304 <b>VBGW-221</b>	TS-25.45-8M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	0.394			
ASVNB/R/L 1212-H11	<a href="#">60884</a>	<a href="#">60885</a>	mm	12	12	100	75	25	12	12	VBGW-110304 <b>VBGW-221</b>	TS-25.45-8M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	0.472			
ASVNB/R/L 1212-K16	<a href="#">60886</a>	<a href="#">60887</a>	mm	12	12	107	75	32	12	12	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.472	0.472	4.213	2.953	1.260	0.472	0.472			
ASVNB/R/L 1616-K16	<a href="#">60888</a>	<a href="#">60889</a>	mm	16	16	107	75	32	16	16	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.630	0.630	4.213	2.953	1.260	0.630	0.630			
ASVNB/R/L 2020-K16	<a href="#">60890</a>	<a href="#">60891</a>	mm	20	20	132	100	32	20	20	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.787	0.787	5.197	3.937	1.260	0.787	0.787			
<b>Inch</b>													
Description													
ASVNB/R/L 08-2A	<a href="#">60727</a>	<a href="#">60728</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	0.500	<b>VBGW-221</b>	TS-25.45-8M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	12.70	VBGW-110304		
ASVNB/R/L 08-3A	<a href="#">60729</a>	<a href="#">60730</a>	inch	0.500	0.500	4.250	3.00	1.250	0.500	0.500	<b>VBGW-332</b>	TS-4.7-10M1	T-15
			mm	12.70	12.70	107.95	76.2	31.75	12.70	12.70	VBGW-160408		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

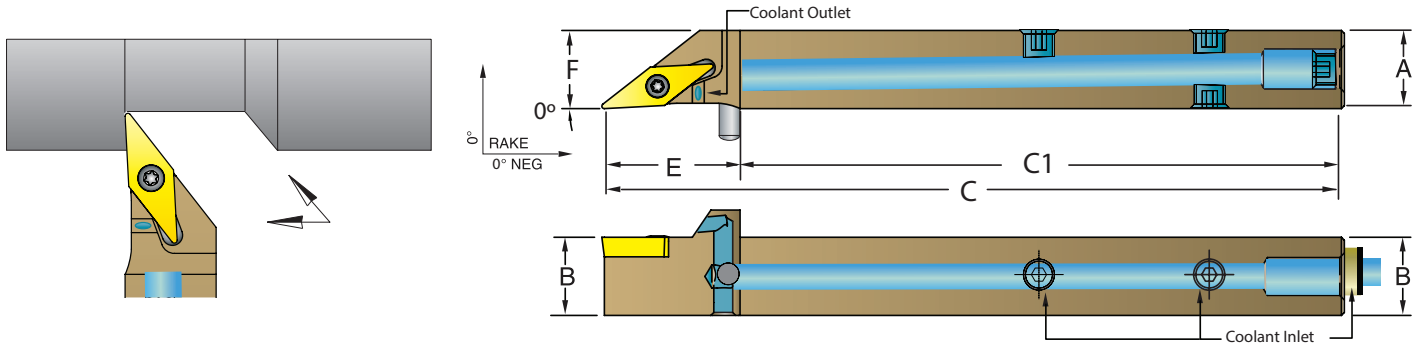
**ASVVB Jet-Stream™ Thru Coolant Neutral Toolholder Style V- 17.5° Side Cutting Edge Angle for 5° positive 35° diamond VB\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	VB_W Gage Insert	Insert Torx Screw	Torx Key	
Description	Neutral												
ASVVBN 1010-H11	<a href="#">60893</a>		mm	10	10	100	75	25	25	VBGW-110304 <b>VBGW-221</b>	TS-25.45-8M2	T-8	
			inch	0.394	0.394	3.937	2.953	0.984	0.984				
ASVVBN 1212-H11	<a href="#">60894</a>		mm	12	12	100	75	25	25	VBGW-110304 <b>VBGW-221</b>	TS-25.45-8M2	T-8	
			inch	0.472	0.472	3.937	2.953	0.984	0.984				
ASVVBN 1212-K16	<a href="#">60895</a>		mm	12	12	107	75	32	12	12	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.472	0.472	4.213	2.953	1.260	0.472	0.472			
ASVVBN 1616-K16	<a href="#">60896</a>		mm	16	16	107	75	32	16	16	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.630	0.630	4.213	2.953	1.260	0.630	0.630			
ASVVBN 2020-K16	<a href="#">60897</a>		mm	20	20	132	100	32	20	20	VBGW-160408 <b>VBGW-332</b>	TS-35.6-9M1	T-15
			inch	0.787	0.787	5.197	3.937	1.260	0.787	0.787			
<b>Inch</b>													
Description													
ASVVBN 08-2A	<a href="#">60731</a>		inch	0.500	0.500	4.000	3.00	1.000	0.500	0.500	<b>VBGW-221</b>	TS-25.45-8M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	12.70	VBGW-110304		
ASVVBN 08-3A	<a href="#">60732</a>		inch	0.500	0.500	4.250	3.00	1.250	0.500	0.500	<b>VBGW-332</b>	TS-4.7-10M1	T-15
			mm	12.70	12.70	107.95	76.2	31.75	12.70	12.70	VBGW-160408		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

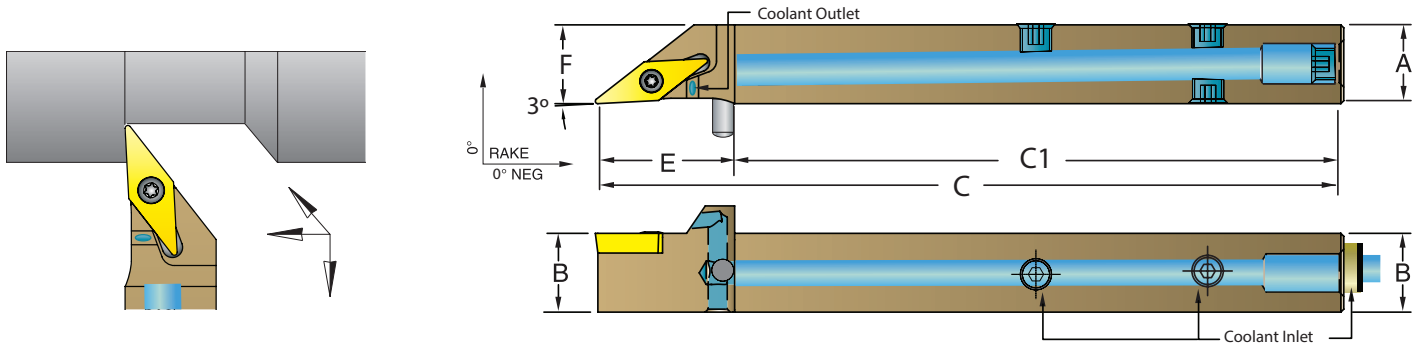
**ASVAC Jet-Stream™ Thru Coolant R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive 35° diamond VC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	VC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.											
ASVACR/L 1010-H11	<a href="#">60902</a>	<a href="#">60903</a>	mm	10	10	100	75	25	25	10	VCGW-110304	TS-25.45-8M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	0.394	VCGW-221		
ASVACR/L 1212-H11	<a href="#">60904</a>	<a href="#">60905</a>	mm	12	12	100	75	25	25	12	VCGW-110304	TS-25.45-8M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	0.472	VCGW-221		
ASVACR/L 1212-K16	<a href="#">60906</a>	<a href="#">60907</a>	mm	12	12	107	75	32	32	12	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.472	0.472	4.213	2.953	1.260	0.472	0.472	VCGW-332		
ASVACR/L 1616-K16	<a href="#">60908</a>	<a href="#">60909</a>	mm	16	16	107	75	32	32	16	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.630	0.630	4.213	2.953	1.260	0.630	0.630	VCGW-332		
ASVACR/L 2020-K16	60910	60911	mm	20	20	132	100	32	32	20	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.787	0.787	5.197	3.937	1.260	0.787	0.787	VCGW-332		
<b>Inch</b>													
Description													
ASVACR/L 08-2A	60733	60734	inch	0.500	0.500	4.000	3.00	1.000	0.500	0.500	VCGW-221	TS-25.45-8M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	12.70	VCGW-110304		
ASVACR/L 08-3A	60735	<a href="#">60736</a>	inch	0.500	0.500	4.250	3.00	1.250	0.500	0.500	VCGW-332	TS-4.7-10M1	T-15
			mm	12.70	12.70	107.95	76.2	31.75	12.70	12.70	VCGW-160408		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

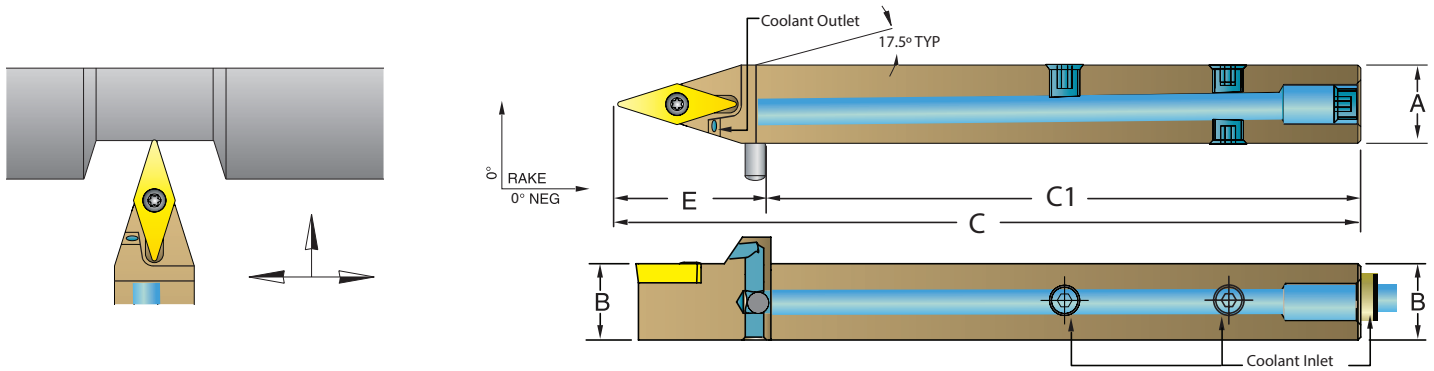
**ASVNC Jet-Stream™ Thru Coolant R/L Toolholder Style N - 3° Side Cutting Edge Angle for 7° positive 35° diamond VC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	VC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.											
ASVNCR/L 1010-H11	<a href="#">60914</a>	<a href="#">60915</a>	mm	10	10	100	75	25	25	10	VCGW-110304	TS-25.45-8M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394	0.394	VCGW-221		
ASVNCR/L 1212-H11	<a href="#">60916</a>	<a href="#">60917</a>	mm	12	12	100	75	25	25	12	VCGW-110304	TS-25.45-8M2	T-8
			inch	0.472	0.472	3.937	2.953	0.984	0.472	0.472	VCGW-221		
ASVNCR/L 1616-H11	<a href="#">60918</a>	<a href="#">60919</a>	mm	16	16	100	75	25	25	16	VCGW-110304	TS-25.45-8M2	T-8
			inch	0.630	0.630	3.937	2.953	0.984	0.630	0.630	VCGW-221		
ASVNCR/L 1212-K16	<a href="#">60920</a>	<a href="#">60921</a>	mm	12	12	107	75	32	32	12	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.472	0.472	4.213	2.953	1.260	0.472	0.472	VCGW-332		
ASVNCR/L 1616-K16	<a href="#">60922</a>	<a href="#">60923</a>	mm	16	16	107	75	32	32	16	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.630	0.630	4.213	2.953	1.260	0.630	0.630	VCGW-332		
ASVNCR/L 2020-K16	<a href="#">60924</a>	<a href="#">60925</a>	mm	20	20	132	100	32	32	20	VCGW-160408	TS-35.6-9M1	T-15
			inch	0.787	0.787	5.197	3.937	1.260	0.787	0.787	VCGW-332		
<b>Inch</b>													
Description													
ASVNCR/L 08-2A	<a href="#">60738</a>	<a href="#">60739</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	0.500	VCGW-221	TS-25.45-8M2	T-8
			mm	12.70	12.70	101.60	76.2	25.40	12.70	12.70	VCGW-110304		
ASVNCR/L 08-3A	<a href="#">60741</a>	<a href="#">60742</a>	inch	0.500	0.500	4.250	3.00	1.250	0.500	0.500	VCGW-332	TS-4.7-10M1	T-15
			mm	12.70	12.70	107.95	76.2	31.75	12.70	12.70	VCGW-160408		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

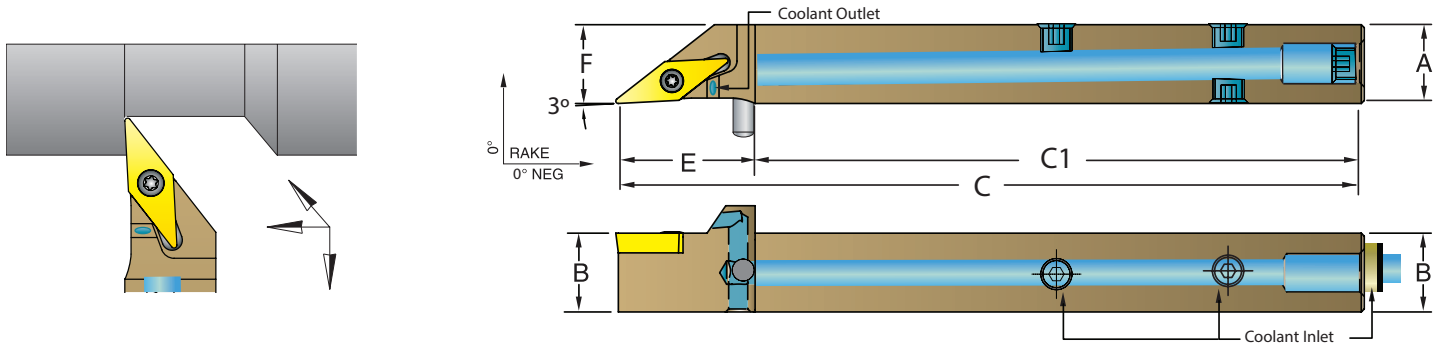
**ASVVC Jet-Stream™ Thru Coolant Neutral Toolholder Style V - 17.5° Side Cutting Edge Angle for 7° positive 35° diamond VC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	VC_W Gage Insert	Insert Torx Screw	Torx Key
Description	Neutral											
ASVVCN 1010-H11	<a href="#">60927</a>	mm	10	10	100	75	25	VCGW-110304 <b>VCGW-221</b>	TS-25.45-8M2	T-8		
ASVVCN 1212-H11	<a href="#">60928</a>	mm	12	12	100	75	25	VCGW-110304 <b>VCGW-221</b>	TS-25.45-8M2	T-8		
ASVVCN 1212-K16	<a href="#">60929</a>	mm	12	12	107	75	32	VCGW-160408 <b>VCGW-332</b>	TS-35.6-9M1	T-15		
ASVVCN 1616-K16	<a href="#">60930</a>	mm	16	16	107	75	32	VCGW-160408 <b>VCGW-332</b>	TS-35.6-9M1	T-15		
ASVVCN 2020-K16	<a href="#">60931</a>	mm	20	20	132	100	32	VCGW-160408 <b>VCGW-332</b>	TS-35.6-9M1	T-15		
<b>Inch</b>		Description										
ASVVCN 08-2A	<a href="#">60743</a>	inch	0.500	0.500	4.000	3.00	1.000	VCGW-221 VCGW-110304	TS-25.45-8M2	T-8		
ASVVCN 08-3A	60744	inch	0.500	0.500	4.250	3.00	1.250	VCGW-332 VCGW-160408	TS-4.7-10M1	T-15		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

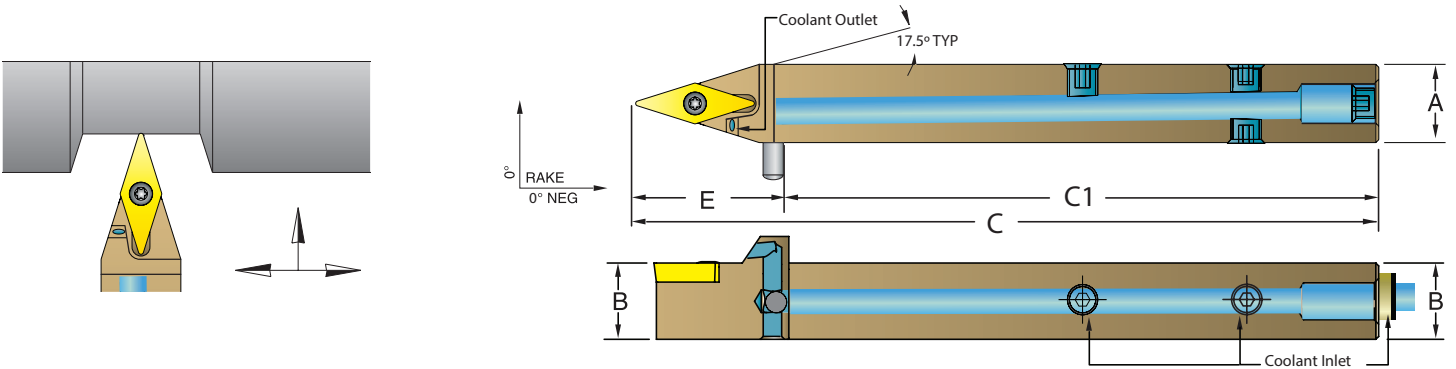
**ASVNP Jet-Stream™ Thru Coolant R/L Toolholder Style N - 3° Side Cutting Edge Angle for 11° positive 35° diamond VP\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	VP_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.											
ASVNP/R/L 1010-H11	<a href="#">60948</a>	60649	mm	10	10	100	75	25	10	VPGW-110304 <b>VPGW-221</b>	TS-25.45-8M2	T-8	
ASVNP/R/L 1212-H11	<a href="#">60950</a>	<a href="#">60951</a>	mm	12	12	100	75	25	12	VPGW-110304 <b>VPGW-221</b>	TS-25.45-8M2	T-8	
ASVNP/R/L 1212-K16	<a href="#">60952</a>	<a href="#">60953</a>	mm	12	12	107	75	32	12	VPGW-160408 <b>VPGW-332</b>	TS-35.6-9M1	T-15	
ASVNP/R/L 1616-K16	<a href="#">60954</a>	<a href="#">60955</a>	mm	16	16	107	75	32	16	VPGW-160408 <b>VPGW-332</b>	TS-35.6-9M1	T-15	
ASVNP/R/L 2020-K16	<a href="#">60956</a>	<a href="#">60957</a>	mm	20	20	132	100	32	20	VPGW-160408 <b>VPGW-332</b>	TS-35.6-9M1	T-15	
<b>Inch</b>		Description											
ASVNP/R/L 08-2A	<a href="#">60745</a>	<a href="#">60746</a>	inch	0.500	0.500	4.000	3.00	1.000	0.500	VPGW-221 VPGW-110304	TS-25.45-8M2	T-8	
ASVNP/R/L 08-3A	<a href="#">60747</a>	<a href="#">60748</a>	inch	0.500	0.500	4.250	3.00	1.250	0.500	VPGW-332 VPGW-160408	TS-4.7-10M1	T-15	

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

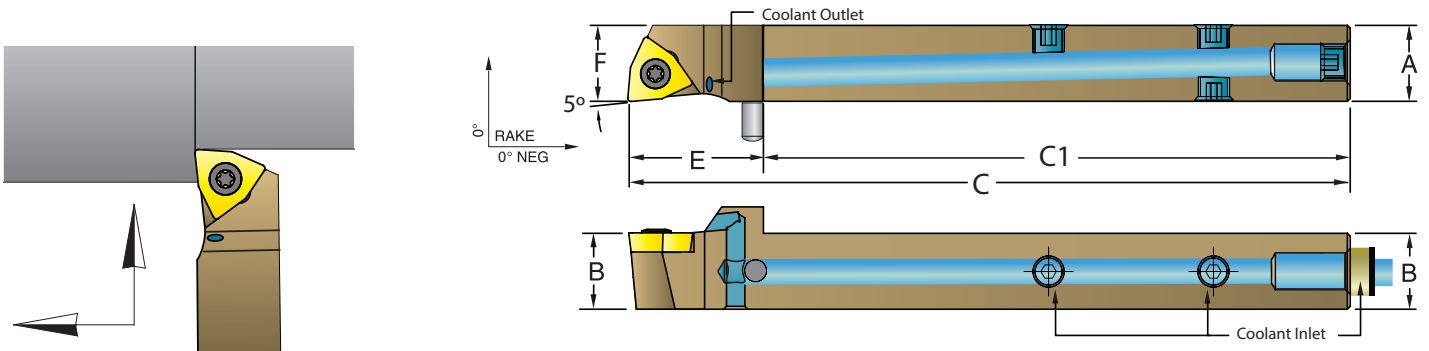
**ASVVP Jet-Stream™ Thru Coolant Neutral Toolholder Style V - 17.5° Side Cutting Edge Angle for 11° positive 35° diamond VP\_W inserts**



<b>Metric</b>		UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	VP_W Gage Insert	Insert Torx Screw	Torx Key
Description	Neutral											
ASVVPN 1010-H11	60959			mm	10	10	100	75	25	VPGW-110304 VPGW-221	TS-25.45-8M2	T-8
				inch	0.394	0.394	3.937	2.953	0.984			
ASVVPN 1212-H11	60960			mm	12	12	100	75	25	VPGW-110304 VPGW-221	TS-25.45-8M2	T-8
				inch	0.472	0.472	3.937	2.953	0.984			
ASVVPN 1212-K16	60961			mm	12	12	107	75	32	VPGW-160408 VPGW-332	TS-35.6-9M1	T-15
				inch	0.472	0.472	4.213	2.953	1.260			
ASVVPN 1616-K16	60962			mm	16	16	107	75	32	VPGW-160408 VPGW-332	TS-35.6-9M1	T-15
				inch	0.630	0.630	4.213	2.953	1.260			
ASVVPN 2020-K16	60963			mm	20	20	132	100	32	VPGW-160408 VPGW-332	TS-35.6-9M1	T-15
				inch	0.787	0.787	5.197	3.937	1.260			
<b>Inch</b>												
Description												
ASVVPN 08-2A	60749			inch	0.500	0.500	4.000	3.00	1.000	VPGW-221 VPGW-110304	TS-25.45-8M2	T-8
				mm	12.70	12.70	101.60	76.2	25.40			
ASVVPN 08-3A	60750			inch	0.500	0.500	4.250	3.00	1.250	VPGW-332 VPGW-160408	TS-4.7-10M1	T-15
				mm	12.70	12.70	107.95	76.2	31.75			

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

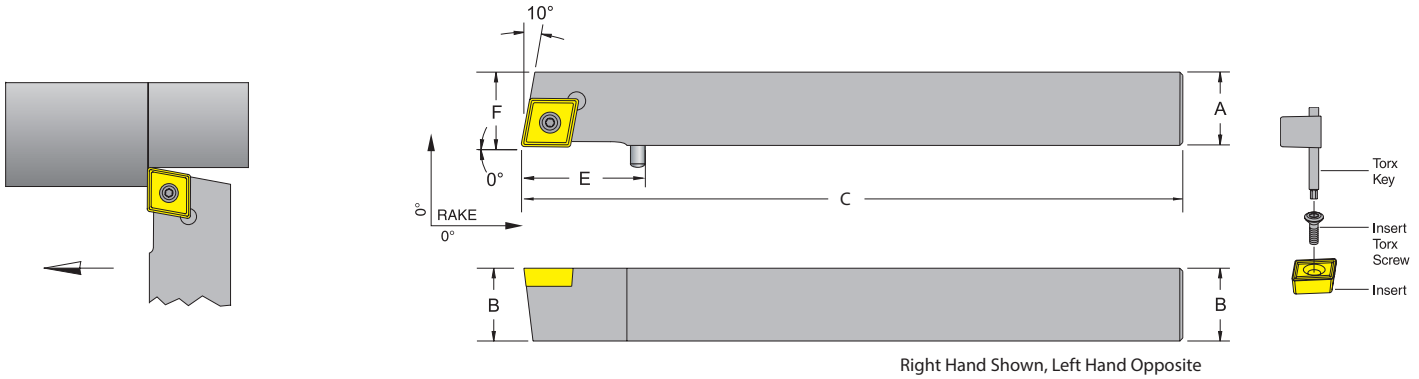
**ASWNC Jet-Stream™ Thru Coolant R/L Toolholder Style N - Negative 5° End or Side Cutting Edge Angle for 7° positive 80° trigon WC\_W inserts**



<b>Metric</b>		UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	WC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.										
ASWNCR/L 1616-H06	60974	60975		mm	16	16	100	25	16	WCGW-06T308 WCGW-32.52	TS-35.6-9M1	T-15
				inch	0.630	0.630	3.937	0.984	0.630			
ASWNCR/L 2020-K06	60976	60977		mm	20	20	125	25	20	WCGW-06T308 WCGW-32.52	TS-35.6-9M1	T-15
				inch	0.787	0.787	4.921	0.984	0.787			

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For turning inserts see pages IV - A-89.

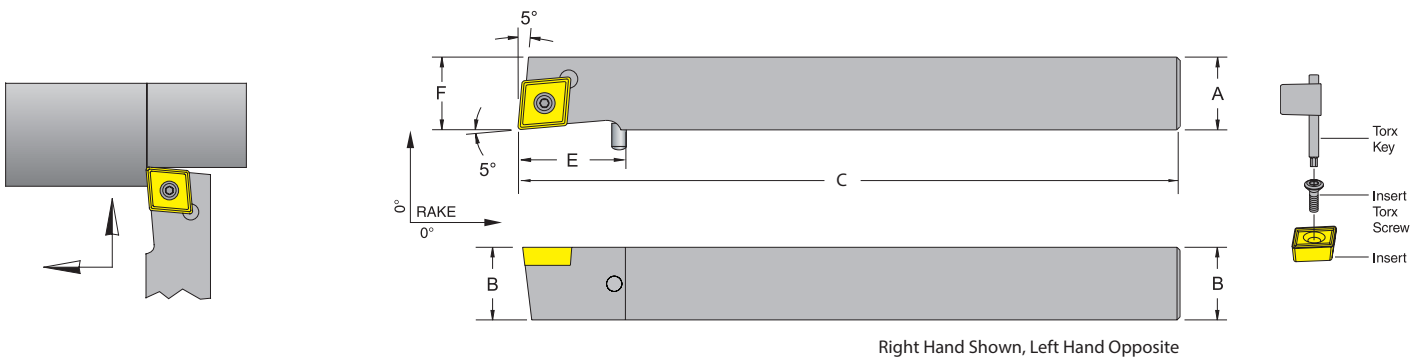
**SCAC R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive 80° diamond CC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	CC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.										
SCACR/L 1010-M06	60500	60501	mm	10	10	150	25	10	CCGW-060204	TS-25.45-6M2	T-8	
SCACR/L 1212-M09	60502	60503	mm	12	12	150	25	12	CCGW-09T308	TS-4.7-10M1	T-15	
SCACR/L 1616-M09	60504	60505	mm	16	16	150	25	16				
SCACR/L 2020-M09	60506	60507	mm	20	20	150	25	20				
Inch		Description		System	A	B	C	E (Tool Stop)	F	CCGW-21.51	TS-25.45-6M2	T-8
Description	R.H.	L.H.										
SCACR/L 06-2D	<a href="#">51780</a>	<a href="#">51781</a>	inch	0.375	0.375	6.000	1.000	0.375	CCGW-32.52	TS-4.7-10M1	T-15	
SCACR/L 08-3D	<a href="#">51782</a>	<a href="#">51783</a>	inch	0.500	0.500	6.000	1.000	0.500				
SCACR/L 10-3D	<a href="#">51786</a>	<a href="#">51787</a>	inch	0.625	0.625	6.000	1.000	0.625				
SCACR/L 12-3D	51758	51760	inch	0.750	0.750	6.000	1.000	0.750				

For turning inserts see pages IV - A-89.

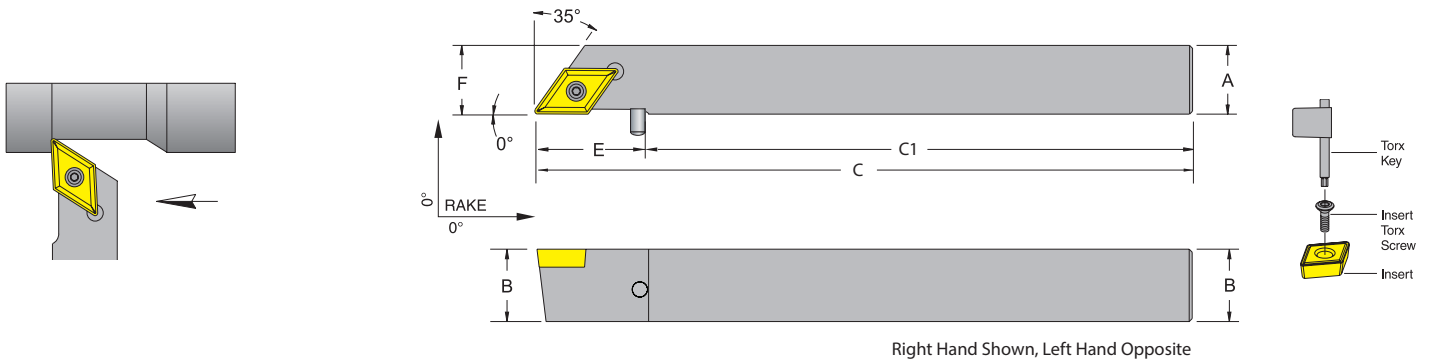
**SCNC R/L Toolholder Style N - Negative 5° End or Side Cutting Edge Angle for 7° positive 80° diamond CC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	CC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.										
SCNCR/L 1010-M06	60508	60509	mm	10	10	150	25	10	CCGW-060204	TS-25.45-6M2	T-8	
SCNCR/L 1212-M06	60510	60511	mm	12	12	150	25	12	CCGW-09T308	TS-4.7-10M1	T-15	
SCNCR/L 1212-M09	60513	60514	mm	12	12	150	25	12				
SCNCR/L 1616-M09	60515	60516	mm	16	16	150	25	16				
SCNCR/L 2020-M09	60517	60518	mm	20	20	150	25	20				
Inch		Description		System	A	B	C	E (Tool Stop)	F	CCGW-21.51	TS-25.45-6M2	T-8
Description	R.H.	L.H.										
SCNCR/L 06-2D	<a href="#">51843</a>	<a href="#">51845</a>	inch	0.375	0.375	6.000	1.000	0.375	CCGW-32.52	TS-4.7-10M1	T-15	
SCNCR/L 08-2D	51847	51849	inch	0.500	0.500	6.000	1.000	0.500				
SCNCR/L 08-3D	<a href="#">51850</a>	<a href="#">51851</a>	inch	0.500	0.500	6.000	1.000	0.500				
SCNCR/L 10-3D	<a href="#">51855</a>	<a href="#">51857</a>	inch	0.625	0.625	6.000	1.000	0.625				
SCNCR/L 12-3D	52238	52239	inch	0.750	0.750	6.000	1.000	0.750				

For turning inserts see pages IV - A-89.

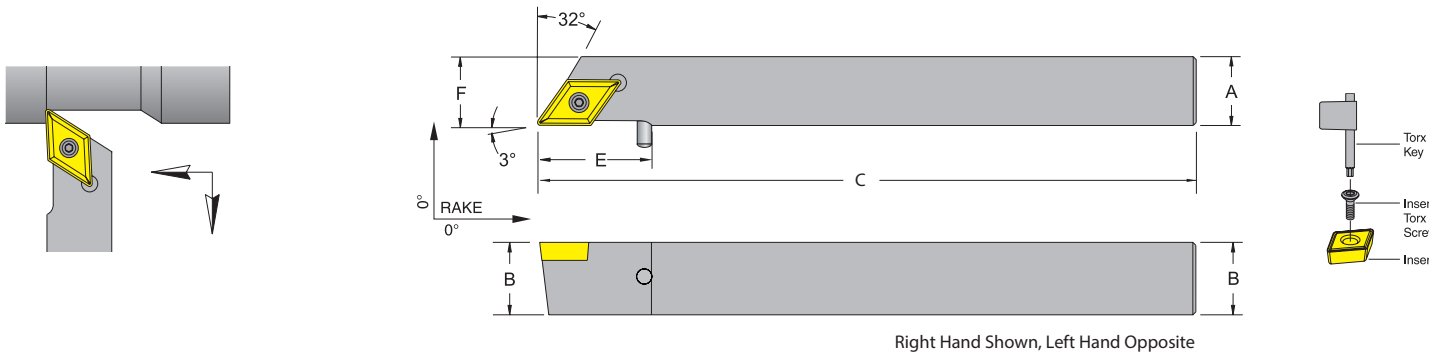
**SDAC R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	DC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.										
SDACR/L 1010-M07	60519	60520	mm	10	10	150	25	10	DCGW-070204	TS-25.45-6M2	T-8	
SDACR/L 1212-M07	60521	60522	mm	12	12	150	25	12				
SDACR/L 1212-M11	60523	60524	mm	12	12	150	25	12	DCGW-11T308	TS-4.7-10M1	T-15	
SDACR/L 1616-M11	60525	60526	mm	16	16	150	25	16				
SDACR/L 2020-M11	60527	60528	mm	20	20	150	25	20				
Inch												
Description												
SDACR/L 06-2D	<a href="#">51917</a>	<a href="#">51919</a>	inch	0.375	0.375	6.000	1.000	0.375	DCGW-21.51	TS-25.45-6M2	T-8	
SDACR/L 08-2D	<a href="#">51921</a>	<a href="#">51923</a>	inch	0.500	0.500	6.000	1.000	0.500				
SDACR/L 08-3D	51925	51926	inch	0.500	0.500	6.000	1.000	0.500	DCGW-32.52	TS-4.7-10M1	T-15	
SDACR/L 10-3D	<a href="#">51927</a>	<a href="#">51928</a>	inch	0.625	0.625	6.000	1.000	0.625				
SDACR/L 12-3D	52240	52241	inch	0.750	0.750	6.000	1.000	0.750				

For turning inserts see pages IV - A-89.

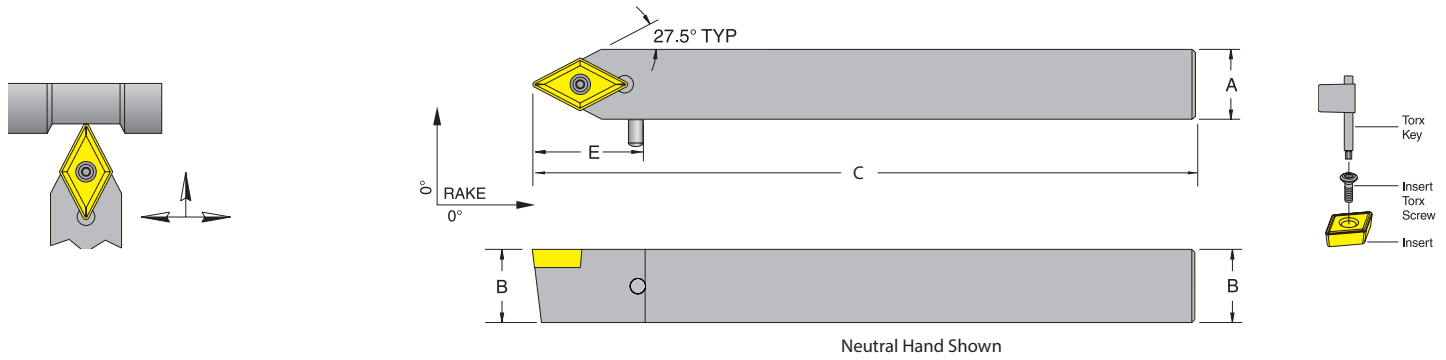
**SDNC R/L Toolholder Style N - 3° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric		UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	DC_W Gage Insert	Insert Torx Screw	Torx Key
Description	R.H.	L.H.										
SDNCR/L 1010-M07	60529	60530	mm	10	10	150	25	10	DCGW-070204	TS-25.45-6M2	T-8	
SDNCR/L 1212-M07	60531	60532	mm	12	12	150	25	12				
SDNCR/L 1616-M11	60533	60534	mm	16	16	150	25	16	DCGW-11T308	TS-4.7-10M1	T-15	
SDNCR/L 2020-M11	60535	60536	mm	20	20	150	25	20				
Inch												
Description												
SDNCR/L 06-2D	51929	51930	inch	0.375	0.375	6.000	1.000	0.375	DCGW-21.51	TS-25.45-6M2	T-8	
SDNCR/L 08-2D	51931	51933	inch	0.500	0.500	6.000	1.000	0.500				
SDNCR/L 10-3D	52256	52257	inch	0.625	0.625	6.000	1.000	0.625	DCGW-32.52	TS-4.7-10M1	T-15	
SDNCR/L 12-3D	52242	52243	inch	0.750	0.750	6.000	1.000	0.750				

For turning inserts see pages IV - A-89.

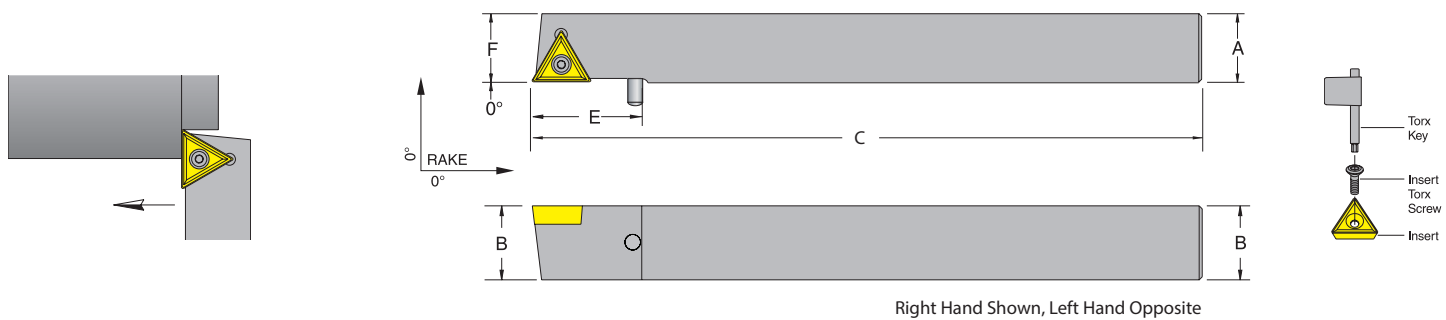
**SDPC Neutral Toolholder Style P - 27.5° Side Cutting Edge Angle for 7° positive 55° diamond DC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	E (Tool Stop)	DC_W Gage Insert	Insert Torx Screw	Torx Key
	Neutral									
SDPCN 1010-M07	60537		mm	10	10	150	25	DCGW-070204	TS-25.45-6M2	T-8
SDPCN 1212-M07	60538		mm	12	12	150	25			
SDPCN 1212-M11	60539		mm	12	12	150	25			
SDPCN 1616-M11	60540		mm	16	16	150	25	DCGW-11T308	TS-4.7-10M1	T-15
SDPCN 2020-M11	60541		mm	20	20	150	25			
<b>Inch</b>										
Description										
SDPCN 06-2D	<a href="#">51942</a>		inch	0.375	0.375	6.000	1.000	DCGW-21.51	TS-25.45-6M2	T-8
SDPCN 08-2D	51943		inch	0.500	0.500	6.000	1.000			
SDPCN 08-3D	<a href="#">51944</a>		inch	0.500	0.500	6.000	1.000			
SDPCN 10-3D	<a href="#">51945</a>		inch	0.625	0.625	6.000	1.000	DCGW-32.52	TS-4.7-10M1	T-15
SDPCN 12-3D	52244		inch	0.750	0.750	6.000	1.000			

For turning inserts see pages IV - A-89.

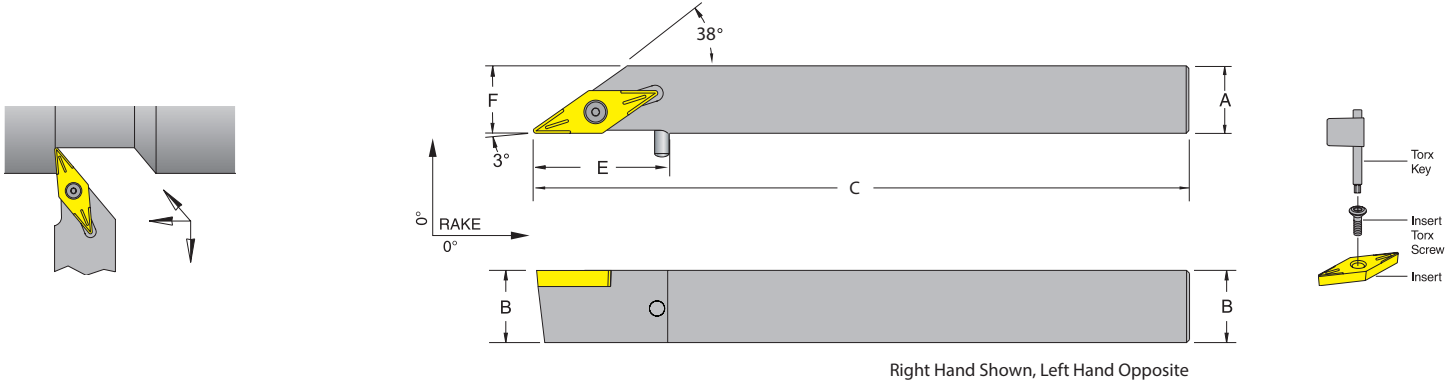
**STAC R/L Toolholder Style A - 0° Side Cutting Edge Angle for 7° positive triangle TC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	TC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.									
STACR/L 1010-M11	60542	60543	mm	10	10	150	25	10	TCGW-110204	TS-25.45-6M2	T-8
STACR/L 1212-M11	60544	60545	mm	12	12	150	25	12			
STACR/L 1616-M16	60547	60548	mm	16	16	150	25	16			
STACR/L 2020-M16	60549	60550	mm	20	20	150	25	20	TCGW-16T308	TS-4.7-10M1	T-15
<b>Inch</b>											
Description											
STACR/L 06-2D	<a href="#">51548</a>	<a href="#">51549</a>	inch	0.375	0.375	6.000	1.000	0.375	TCGW-21.51	TS-25.45-6M2	T-8
STACR/L 08-2D	<a href="#">51550</a>	<a href="#">51551</a>	inch	0.500	0.500	6.000	1.000	0.500			
STACR/L 10-3D	<a href="#">51554</a>	<a href="#">51555</a>	inch	0.625	0.625	6.000	1.000	0.625			
STACR/L 12-3D	52245	52246	inch	0.750	0.750	6.000	1.000	0.750	TCGW-32.52	TS-4.7-10M1	T-15

For turning inserts see pages IV - A-89.

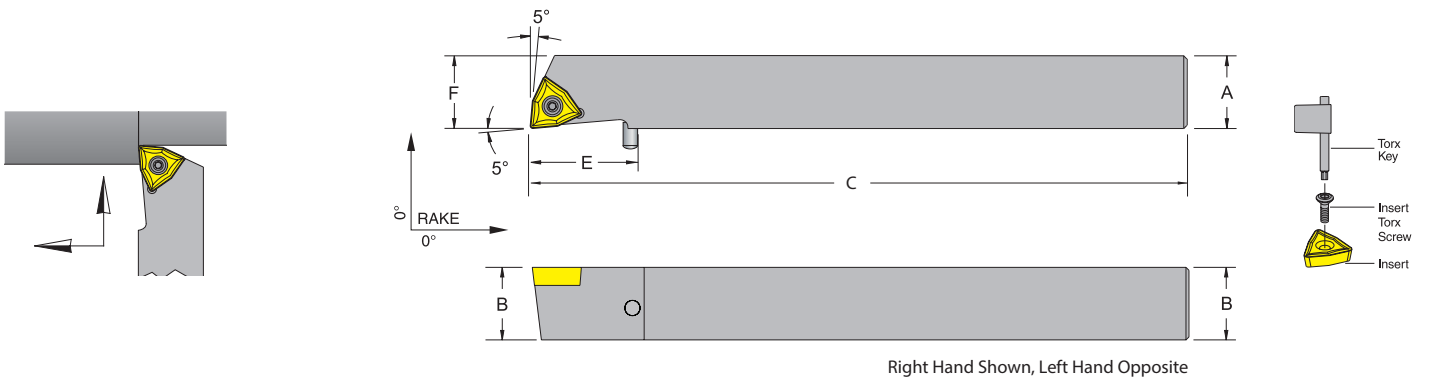
**SVNB R/L Toolholder Style N - 3° Side Cutting Edge Angle for 5° positive 35° diamond VB\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	VB_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.									
SVNBR/L 1010-M11	60551	60552	mm	10	10	150	25	10	VBGW-110304	TS-25.45-8M2	T-8
SVNBR/L 1212-M11	60553	60554	mm	12	12	150	25	12			
SVNBR/L 1616-M16	60555	60556	mm	16	16	150	32	16	VBGW-160408	TS-4.7-10M1	T-15
SVNBR/L 2020-M16	60557	60558	mm	20	20	150	32	20			
<b>Inch Description</b>											
SVNBR/L 06-2D	<a href="#">51990</a>	<a href="#">51991</a>	inch	0.375	0.375	6.000	1.000	0.375	VBGW-221	TS-25.45-8M2	T-8
SVNBR/L 08-2D	<a href="#">51992</a>	51993	inch	0.500	0.500	6.000	1.000	0.500			
SVNBR/L 10-3D	<a href="#">51994</a>	<a href="#">51995</a>	inch	0.625	0.625	6.000	1.250	0.625	VBGW-332	TS-4.7-10M1	T-15
SVNBR/L 12-3D	52252	52253	inch	0.750	0.750	6.000	1.250	0.750			

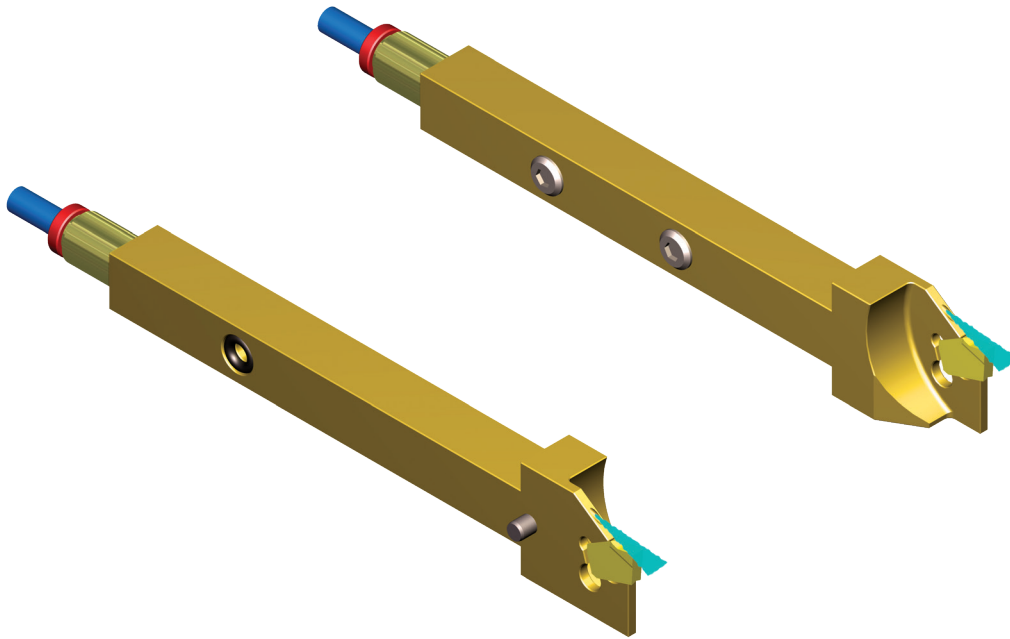
For turning inserts see pages IV - A-89.

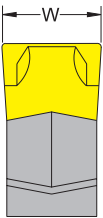
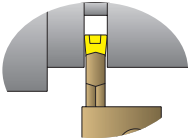
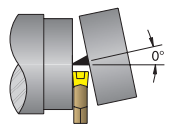
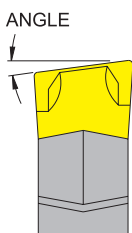
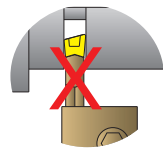
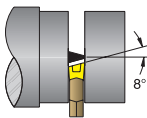
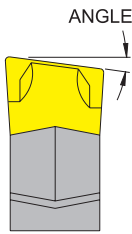
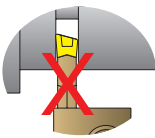
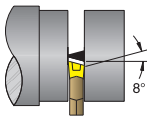
**SWNC R/L Toolholder Style N - Negative 5° End or Side Cutting Edge Angle for 7° positive 80° trigon WC\_W inserts**



Metric Description	UPC No. 733101-		System	A	B	C	E (Tool Stop)	F	WC_W Gage Insert	Insert Torx Screw	Torx Key
	R.H.	L.H.									
SWNCR/L 1616-M06	60559	60560	mm	16	16	150	25	16	WCGW-06T308	TS-4.7-10M1	T-15
SWNCR/L 2020-M06	60561	60562	mm	20	20	150	25	20			
<b>Inch Description</b>											
SWNCR/L 10-3D	51132	51133	inch	0.625	0.625	6.000	1.000	0.625	WCGW-32.52	TS-4.7-10M1	T-15
SWNCR/L 12-3D	52254	52255	inch	0.750	0.750	6.000	1.000	0.750			

For turning inserts see pages IV - A-89.

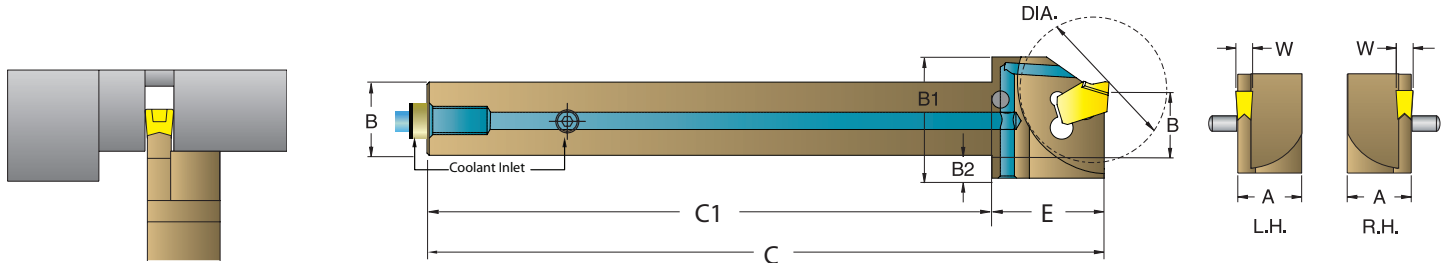


Insert Lead Angle	Application	Pros	Cons
 <p>NEUTRAL</p>	<p>Grooving</p> 	<ul style="list-style-type: none"> <li>• Flat diameter</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot turn</li> </ul>
	<p>Parting Off</p> 	<ul style="list-style-type: none"> <li>• Long insert life</li> <li>• Straight cut</li> </ul>	<ul style="list-style-type: none"> <li>• Parting part will have a center nipple.</li> <li>• The neutral insert will not be able to cut on the center nipple, because the part will fall off before the center nipple is removed.</li> </ul>
 <p>RIGHT HAND</p>	<p>NO Grooving</p> 	<ul style="list-style-type: none"> <li>• None, cannot groove</li> </ul>	<ul style="list-style-type: none"> <li>• Grooving diameter will not be straight</li> <li>• Cannot turn</li> </ul>
	<p>Parting Off</p> 	<ul style="list-style-type: none"> <li>• Clean cut on the part-off part</li> </ul>	<ul style="list-style-type: none"> <li>• The blade will have the tendency to move away, moving toward the leading angle creating a concave surface to the part-off part.</li> </ul>
 <p>LEFT HAND</p>	<p>NO Grooving</p> 	<ul style="list-style-type: none"> <li>• None, cannot groove</li> </ul>	<ul style="list-style-type: none"> <li>• Grooving diameter will not be straight</li> <li>• Cannot turn</li> </ul>
	<p>Parting Off</p> 	<ul style="list-style-type: none"> <li>• Clean cut on the chuck part</li> </ul>	<ul style="list-style-type: none"> <li>• The blade will have the tendency to move away, moving toward the leading angle creating a concave surface to the part-off part.</li> </ul>

Left angle insert to be used when the cutting rotation is L.H.

**ASGTH Jet-Stream™ Thru Coolant Cut-Off Toolholder** - Right and Left Hand for SGTN Cut-Off Inserts for Swiss Screw Machines

The square shank design of the Cut-Off toolholder ensures a precise center line of the insert with respect to the center of the work-piece, when the toolholder is mounted directly on the CNC turret. Inserts are securely held in Slot Grip toolholders by a tapered locking system. No additional clamping devices are required. Slot Grip Cut-Off toolholders come in a broad selection of shank sizes.



Metric Description	UPC No. 733101-		System	A (th)	B	B1	B2	C	C1	E (Tool Stop)	F	Max. Diameter	W		Gage Insert
	R.H.	L.H.													
ASGTHR/L 1010-H02	<a href="#">62922</a>	<a href="#">62923</a>	mm	10	10	20	5	100	75	25	10	28	2.0	2.5	SGTN-2.0
			inch	0.394	0.394	0.787	0.197	3.937	2.953	0.984	0.394	1.102	0.079	0.098	
ASGTHR/L 1212-H02	<a href="#">62924</a>	<a href="#">62925</a>	mm	12	12	20	3	100	75	25	12	28	2.0	2.5	
			inch	0.472	0.472	0.787	0.118	3.937	2.953	0.984	0.472	1.102	0.079	0.098	
ASGTHR/L 1616-H02	<a href="#">62926</a>	<a href="#">62927</a>	mm	16	16	21	0	100	75	25	16	28	2.0	2.5	
			inch	0.630	0.630	0.826	0.000	3.937	2.953	0.984	0.630	1.102	0.079	0.098	
ASGTHR/L 2020-K02	<a href="#">62928</a>	<a href="#">62929</a>	mm	20	20	25	0	125	100	25	20	32	2.0	2.5	SGTN-2.0
			inch	0.787	0.787	0.984	0.000	4.921	3.937	0.984	0.787	1.260	0.079	0.098	
ASGTHR/L 2525-K02	<a href="#">62930</a>	<a href="#">62931</a>	mm	25	25	30	0	132	100	32	25	40	2.0	2.5	SGTN-2.0
			inch	0.984	0.984	1.181	0.000	5.197	3.937	1.260	0.984	1.575	0.079	0.098	
ASGTHR/L 1010-H03	<a href="#">62932</a>	<a href="#">62933</a>	mm	10	10	20	5	100	75	25	10	28	3.0		SGTN-3.0
			inch	0.394	0.394	0.787	0.197	3.937	2.953	0.984	0.394	1.102	0.118		
ASGTHR/L 1212-H03	<a href="#">62934</a>	<a href="#">62935</a>	mm	12	12	20	3	100	75	25	12	32	3.0		
			inch	0.472	0.472	0.787	0.118	3.937	2.953	0.984	0.472	1.260	0.118		
ASGTHR/L 1616-H03	<a href="#">62936</a>	<a href="#">62937</a>	mm	16	16	24	3	100	75	25	16	32	3.0		
			inch	0.630	0.630	0.945	0.118	3.937	2.953	0.984	0.630	1.260	0.118		
ASGTHR/L 2020-K03	<a href="#">62938</a>	<a href="#">62939</a>	mm	20	20	25	0	125	100	25	20	36	3.0		SGTN-3.0
			inch	0.787	0.787	0.984	0.000	4.921	3.937	0.984	0.787	1.417	0.118		
ASGTHR/L 2525-K03	<a href="#">62940</a>	<a href="#">62941</a>	mm	25	25	31	0	132	100	32	25	52	3.0		SGTN-3.0
			inch	0.984	0.984	1.220	0.000	5.197	3.937	1.260	0.984	2.047	0.118		
Inch Description	UPC No. 733101-		System	A (th)	B	B1	B2	C	C1	E (Tool Stop)	F	Max. Diameter	W		Gage Insert
	R.H.	L.H.													
ASGTHR/L 08-2A	<a href="#">62942</a>	<a href="#">62943</a>	inch	0.500	0.500	0.787	.090	4.000	3.000	1.000	0.500	1.102	0.079	0.098	SGTN-2.0
			mm	12.7	12.7	20.0	2.28	101.6	76.2	25.4	12.7	28.0	2.0	2.5	
ASGTHR/L 16-2C	<a href="#">62944</a>	<a href="#">62945</a>	inch	1.000	1.000	1.181	0.000	5.000	3.750	1.250	1.000	1.575	0.079	0.098	
			mm	25.40	25.40	30.00	0.00	127.00	95.25	31.75	25.40	40.0	2.0	2.5	
ASGTHR/L 08-3A	<a href="#">62946</a>	<a href="#">62947</a>	inch	0.500	0.500	0.787	.090	4.000	3.000	1.000	0.500	1.260	3.0		SGTN-3.0
			mm	12.7	12.7	20.0	2.28	101.6	76.2	25.4	12.7	32.0	0.118		
ASGTHR/L 16-3C	<a href="#">62948</a>	<a href="#">62949</a>	inch	1.000	1.000	1.181	0.000	5.000	3.750	1.250	1.000	2.047	3.0		
			mm	25.40	25.40	30.00	0.00	127.00	95.25	31.75	25.40	51.99	0.118		

Optional high pressure coolant connectors are sold separate, see page G-5 for details. For cut-off inserts see pages F-78 - F-79.

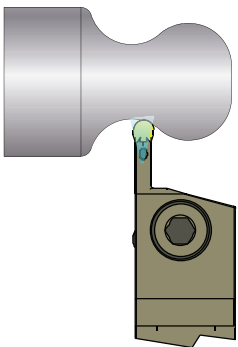
## Three Depths of Cut

1. **SHORT** Depth of Cut : Grooving Max 12mm to 18mm
2. **MEDIUM** Depth of Cut : Grooving Max 24.mm to 28mm
3. **LONG** Depth of Cut : Grooving Max 36mm to 40mm

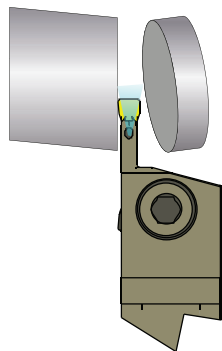


## For 5 Different Applications!

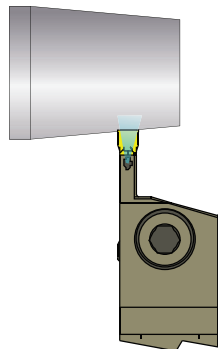
**Profiling**  
Application



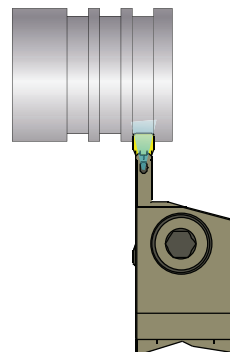
**Part-off**  
Application



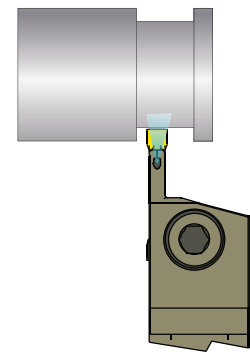
**Turning**  
Application



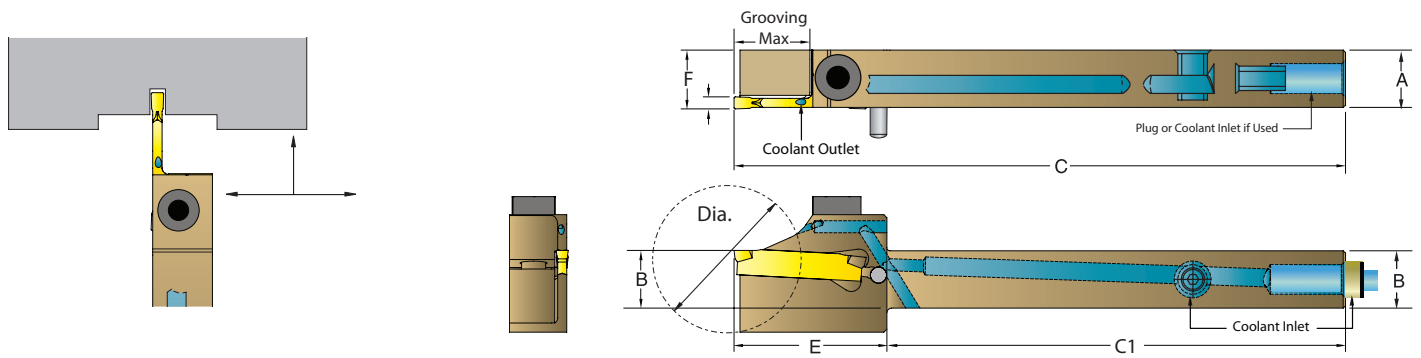
**Grooving**  
Application



**Turning & Grooving**  
Application



**ADDN Jet-Stream™ Thru Coolant External Turning, Grooving & Cut-off Toolholders**

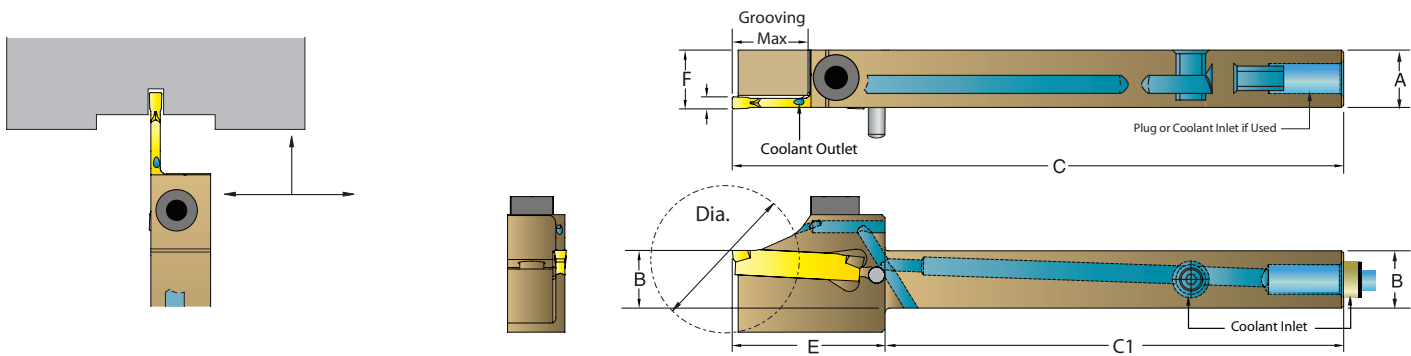


**SHORT Depth of Cut :**  
Grooving Max 12 to 18mm (0.236" to 0.354")

Metric Description	UPC No. 733101- R.H. L.H.		Insert Size	A	B	E (Tool Stop)	C	C1	F	Grooving Max	Dia. Max.	Insert	Lock Screw	Hex Key
ADDN-TFR/L-1010-H20-06	<a href="#">61000</a>	<a href="#">61001</a>	2/2.5 mm .079/0.098 inch	10 0.394	10 0.394	32 1.260	107 4.213	75 2.953	10 0.394	6 0.236	12 0.472	DN_-22_N-20	CS-M0416	AHK-3M
ADDN-TFR/L-1212-H20-06	<a href="#">61002</a>	<a href="#">61003</a>	2/2.5 mm .079/0.098 inch	12 0.472	12 0.472	32 1.260	107 4.213	75 2.953	12 0.472	6 0.236	12 0.472	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-1212-H30-09	<a href="#">61008</a>	<a href="#">61009</a>	3 mm 0.118 inch	12 0.472	12 0.472	32 1.260	107 4.213	75 2.953	12 0.472	9 0.354	18 0.709	DN_-22_N-30-	CS-M0520	AHK-4M
ADDN-TFR/L-1616-H20-06	<a href="#">61004</a>	<a href="#">61005</a>	2/2.5 mm .079/0.098 inch	16 0.630	16 0.630	32 1.260	107 4.213	75 2.953	16 0.630	6 0.236	12 0.472	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-1616-H30-09	<a href="#">61006</a>	<a href="#">61007</a>	3 mm 0.118 inch	16 0.630	16 0.630	32 1.260	107 4.213	75 2.953	16 0.630	9 0.354	18 0.709	DN_-22_N-30-	CS-M0520	AHK-4M
ADDN-TFR/L-2020-K20-06	<a href="#">61028</a>	<a href="#">61029</a>	2/2.5 mm .079/0.098 inch	20 0.787	20 0.787	32 1.260	132 5.197	100 3.937	20 0.787	6 0.236	12 0.472	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-2020-K30-09	<a href="#">61030</a>	<a href="#">61031</a>	3 mm 0.118 inch	20 0.787	20 0.787	32 1.260	132 5.197	100 3.937	20 0.787	9 0.354	18 0.709	DN_-22_N-30-	CS-M0520	AHK-4M
<b>Inch</b>														
Description														
ADDN-TFR/L-08-20A-06	<a href="#">61040</a>	<a href="#">61041</a>	.079/0.098 inch 2/2.5 mm	12.7 0.500	12.7 0.500	32 1.250	108 4.250	76 3.000	12.7 0.500	6 0.236	12 0.472	DN_-22_N-20	CS-M0416	AHK-3M
ADDN-TFR/L-08-30A-09	<a href="#">61042</a>	<a href="#">61043</a>	0.118 inch 3 mm	12.7 0.500	12.7 0.500	32 1.250	108 4.250	76 3.000	12.7 0.500	9 0.354	18 0.709	DN_-22_N-30-	CS-M0520	AHK-4M

For turning, grooving and parting off see pages F-4 - F-6.

ADDN Jet-Stream™ Thru Coolant External Turning, Grooving & Cut-off Toolholders

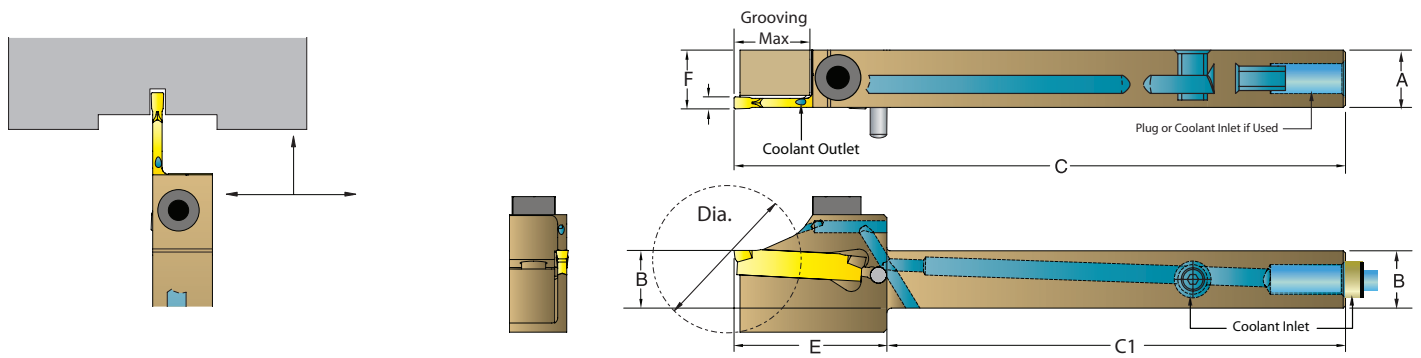


**MEDIUM Depth of Cut :**  
**Grooving Max 24 to 28mm (0.472" to 0.551")**

Metric Description	UPC No. 733101-		Insert Size	A	B	E (Tool Stop)	C	C1	F	Grooving Max	Dia. Max.	Insert	Lock Screw	Hex Key
	R.H.	L.H.												
ADDN-TFR/L-1010-H20-12	<a href="#">61010</a>	61011	2/2.5 mm .079/0.098 inch	10 0.394	10 0.394	32 1.260	107 4.213	75 2.953	10 0.394	12 0.472	24 0.945	DN_-22_N-20	CS-M0416	AHK-3M
ADDN-TFR/L-1212-H20-12	<a href="#">61012</a>	<a href="#">61013</a>	2/2.5 mm .079/0.098 inch	12 0.472	12 0.472	32 1.260	107 4.213	75 2.953	12 0.472	12 0.472	24 0.945	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-1212-H30-14	<a href="#">61018</a>	<a href="#">61019</a>	3 mm 0.118 inch	12 0.472	12 0.472	32 1.260	107 4.213	75 2.953	12 0.472	14 0.551	28 1.102	DN_-22_N-30-	CS-M0520	AHK-4M
ADDN-TFR/L-1616-H20-12	<a href="#">61014</a>	<a href="#">61015</a>	2/2.5 mm .079/0.098 inch	16 0.630	16 0.630	32 1.260	107 4.213	75 2.953	16 0.630	12 0.472	24 0.945	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-1616-H30-14	<a href="#">61016</a>	<a href="#">61017</a>	3 mm 0.118 inch	16 0.630	16 0.630	32 1.260	107 4.213	75 2.953	16 0.630	14 0.551	28 1.102	DN_-22_N-30-	CS-M0520	AHK-4M
ADDN-TFR/L-2020-K20-12	<a href="#">61032</a>	<a href="#">61033</a>	2/2.5 mm .079/0.098 inch	20 0.787	20 0.787	32 1.260	132 5.197	100 3.937	20 0.787	12 0.472	24 0.945	DN_-22_N-20	CS-M0520	AHK-4M
ADDN-TFR/L-2020-K30-14	<a href="#">61034</a>	<a href="#">61035</a>	3 mm 0.118 inch	20 0.787	20 0.787	32 1.260	132 5.197	100 3.937	20 0.787	14 0.551	28 1.102	DN_-22_N-30-	CS-M0520	AHK-4M
<b>Inch</b>														
Description														
ADDN-TFR/L-08-20A-12	<a href="#">61044</a>	<a href="#">61045</a>	0.079/0.098 inch 2/2.5 mm	0.500 12.7	0.500 12.7	1.250 32	4.250 108	3.000 76	0.500 12.7	0.472 12	0.945 24	DN_-22_N-20	CS-M0416	AHK-3M
ADDN-TFR/L-08-30A-14	<a href="#">61046</a>	<a href="#">61047</a>	0.118 inch 3 mm	0.500 12.7	0.500 12.7	1.250 32	4.250 108	3.000 76	0.500 12.7	0.551 14	1.102 28	DN_-22_N-30-	CS-M0520	AHK-4M

For turning, grooving and parting off see pages F-4 - F-6.

**ADDN Jet-Stream™ Thru Coolant External Turning, Grooving & Cut-off Toolholders**



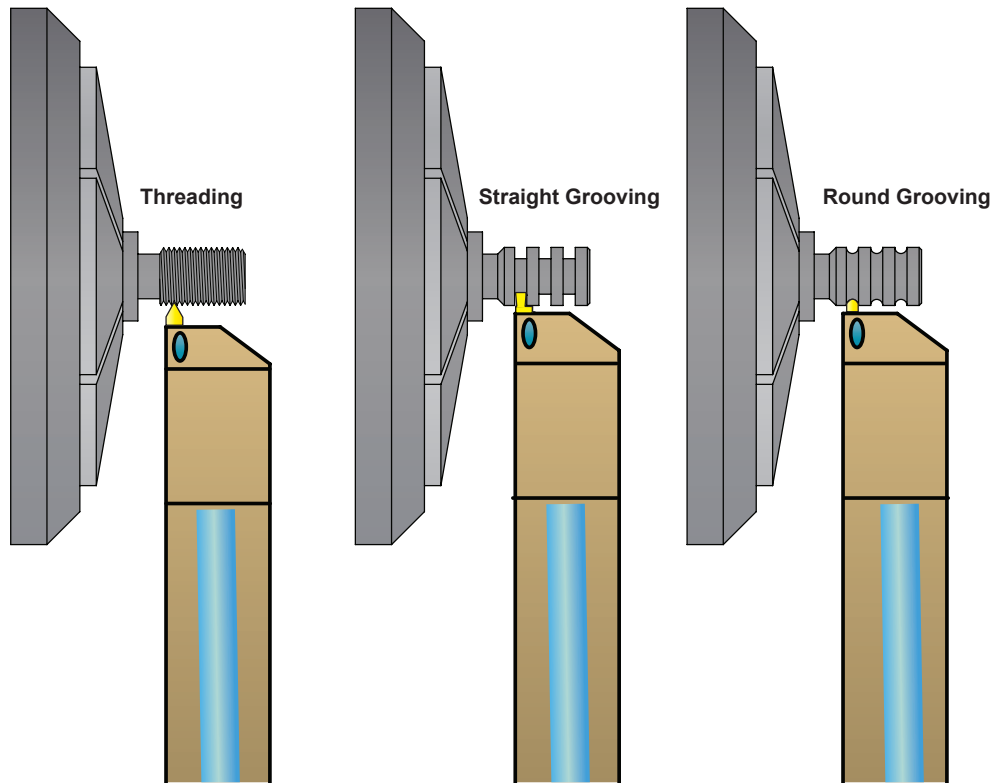
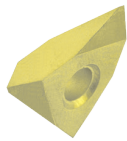
**LONG Depth of Cut :  
Grooving Max 36 to 40mm (0.709")**

<b>Metric</b>		UPC No. 733101-		Insert Size	A	B	E (Tool Stop)	C	C1	F	Grooving Max	Dia. Max.	Insert	Lock Screw	Hex Key	
Description	R.H.	L.H.														
ADDN-TFR/L-1010-H20-18	<a href="#">61020</a>	<a href="#">61021</a>	2/2.5 mm .079/0.098 inch	10	10	32	107	75	10	18	36	1.417	DN_-22_N-20	CS-M0416	AHK-4M	
ADDN-TFR/L-1212-H20-18	<a href="#">61022</a>	<a href="#">61023</a>	2/2.5 mm .079/0.098 inch	12	12	32	107	75	12	18	36	1.417	DN_-22_N-20	CS-M0520	AHK-4M	
ADDN-TFR/L-1616-H20-18	<a href="#">61024</a>	<a href="#">61025</a>	2/2.5 mm .079/0.098 inch	16	16	32	107	75	16	18	36	1.417	DN_-22_N-20	CS-M0520	AHK-4M	
ADDN-TFR/L-1616-H30-20	<a href="#">61026</a>	<a href="#">61027</a>	3 mm 0.118 inch	16	16	32	107	75	16	20	40	1.575	DN_-22_N-30-	CS-M0520	AHK-4M	
ADDN-TFR/L-2020-K20-18	<a href="#">61036</a>	<a href="#">61037</a>	2/2.5 mm .079/0.098 inch	20	20	32	132	100	20	18	36	1.417	DN_-22_N-20	CS-M0520	AHK-4M	
ADDN-TFR/L-2020-K30-20	<a href="#">61038</a>	<a href="#">61039</a>	3 mm 0.118 inch	20	20	32	132	100	20	20	40	1.575	DN_-22_N-30-	CS-M0520	AHK-4M	
<b>Inch</b>																
Description																
ADDN-TFR/L-08-20A-18	<a href="#">61048</a>	<a href="#">61049</a>	.079/0.098 inch 2/2.5 mm	0.500	0.500	1.250	4.250	3.000	0.500	0.709	1.417	1.417	36	DN_-22_N-30-	CS-M0520	AHK-4M

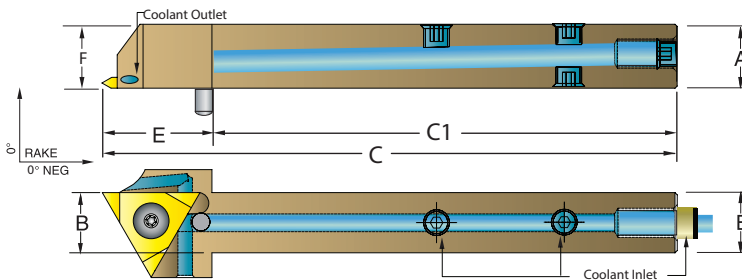
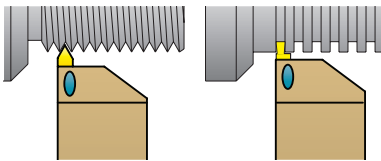
For turning, grooving and parting off see pages F-4 - F-6.

**On Edge**  
Threading  
& Grooving  
for Swiss Screw Machines

3 Cutting Edges



**ASTVO Jet-Stream™ Thru Coolant Threading Toolholder- Right and Left Hand for On Edge TNMC Inserts**



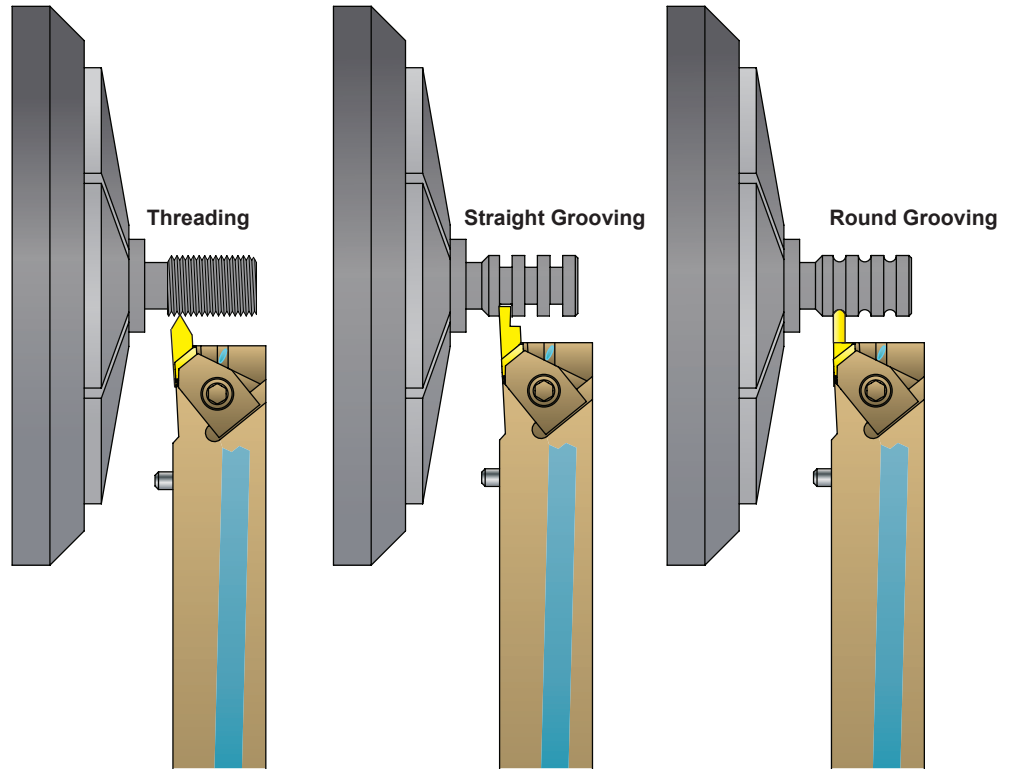
Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Gage Stop)	F	Insert Gage	Insert Screw	Torx Key
	R.H.	L.H.										
ASTVOR/L 1010-H16	<a href="#">61098</a>	61099	mm	10	10	100	75	25	10	TNMC-322	GTS-1M	T-10
			inch	0.394	0.394	3.937	2.953	0.984	0.394			
ASTVOR/L 1212-H16	61100	61101	mm	12	12	100	75	25	12			
			inch	0.472	0.472	3.937	2.953	0.984	0.472			
ASTVOR/L 1616-H16	61102	61103	mm	16	16	100	75	25	16	TNMC-322	GTS-1M	T-10
			inch	0.630	0.630	3.937	2.953	0.984	0.630			
ASTVOR/L 2020-K16	61104	61105	mm	20	20	125	100	25	20			
			inch	0.787	0.787	4.921	3.937	0.984	0.787			
<b>Inch</b>												
Description												
ASTVOR/L 08-3A	61112	61113	inch	0.500	0.500	4.000	3.000	1.000	0.500	TNMC-322	GTS-1M	T-10
			mm	12.7	12.7	101.6	76.2	25.4	12.7			

For threading inserts see pages E-13 - E-50.

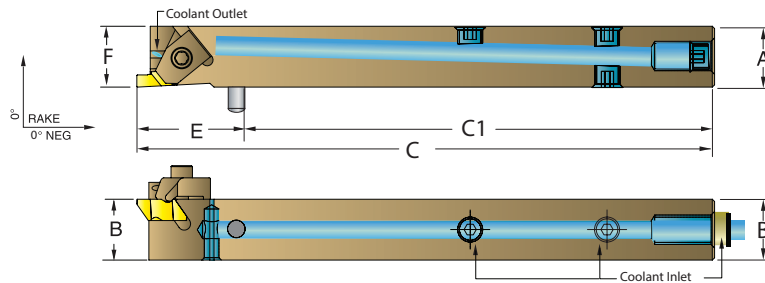
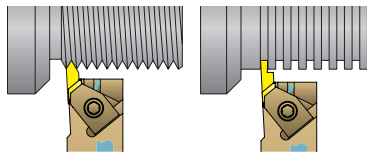
# DorNotch

Threading & Grooving  
for Swiss Screw Machines

2 Cutting Edges



**ANS Jet-Stream™ Thru Coolant Threading Toolholder - Right and Left Hand for DorNotch V Thread Inserts**



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Tool Stop)	F	Insert Gage	Clamp	Clamp Screw
	R.H.	L.H.										
ANSR/L 1010-H02	61086	61087	mm	10	10	100	75	25	10	NG-2R* NG-2L**	CM-74* CM-75**	S-310M
			inch	0.394	0.394	3.937	2.953	0.984	0.394			
ANSR/L 1212-H02	<a href="#">61088</a>	<a href="#">61089</a>	mm	12	12	100	75	25	12			
			inch	0.472	0.472	3.937	2.953	0.984	0.472			
ANSR/L 1616-H02	<a href="#">61090</a>	<a href="#">61091</a>	mm	16	16	100	75	25	16			
			inch	0.630	0.630	3.937	2.953	0.984	0.630			
ANSR/L 1212-H03	<a href="#">61092</a>	<a href="#">61093</a>	mm	12	12	100	75	25	12	NG-3R* NG-3L**	CM-72* CM-73**	S-412M
			inch	0.472	0.472	3.937	2.953	0.984	0.472			
ANSR/L 1616-H03	<a href="#">61094</a>	<a href="#">61095</a>	mm	16	16	100	75	25	16			
			inch	0.630	0.630	3.937	2.953	0.984	0.630			
ANSR/L 2020-K03	61096	61097	mm	20	20	125	100	25	20			
			inch	0.787	0.787	4.921	3.937	0.984	0.787			
<b>Inch</b>												
Description												
ANSR/L 08-2A	61108	61109	inch	0.500	0.500	4.000	3.000	1.000	0.500	NG-2R* NG-2L**	CM-74* CM-75**	S-310M
			mm	12.7	12.7	101.6	76.2	25.4	12.7			
ANSR/L 08-3A	61110	61111	inch	0.500	0.500	4.000	3.000	1.000	0.500	NG-3R* NG-3L**	CM-72* CM-73**	S-412M
			mm	12.7	12.7	101.6	76.2	25.4	12.7			

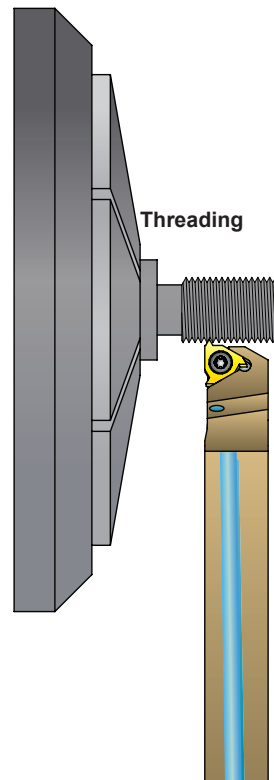
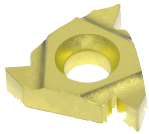
For threading inserts see pages E-13 - E-50.

\*For R.H. tool. \*\*For L.H. tool.

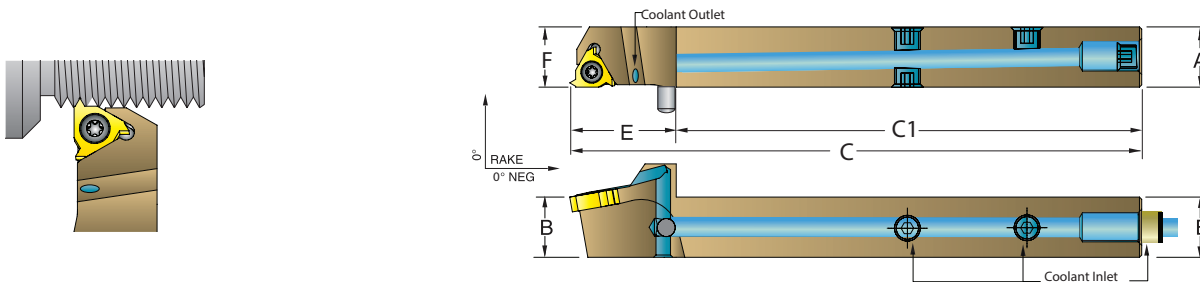
# Laydown Threading

for Swiss Screw Machines

## 3 Cutting Edges



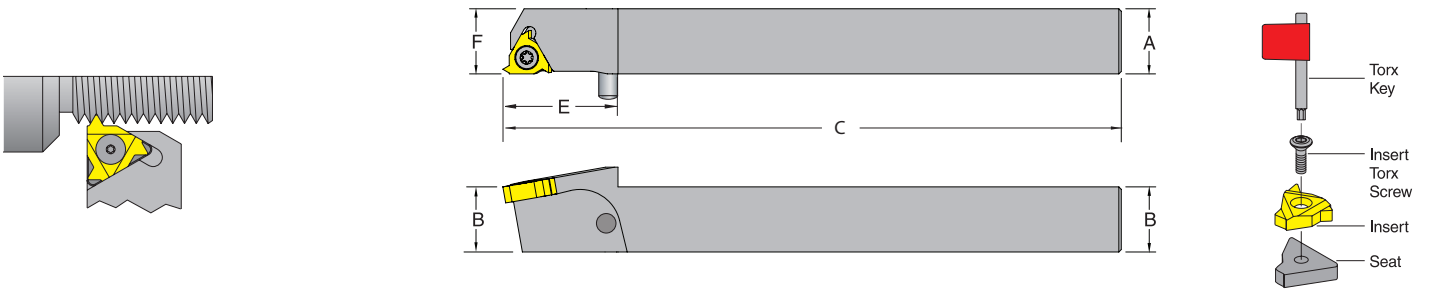
ASE Jet-Stream™ Thru Coolant Threading Toolholder - Right and Left Hand for LayDown Insert



Metric Description	UPC No. 733101-		System	A	B	C	C1	E (Gage Stop)	F	Insert Gage	Shim Seat	Insert Screw	Torx Key
	R.H.	L.H.											
ASER/L 1010-H11	61078	61079	mm	10	10	100	75	25	10	11-A60	None	TS-25.45-6M2	T-8
			inch	0.394	0.394	3.937	2.953	0.984	0.394				
ASER/L 1212-H11	<a href="#">61080</a>	61081	mm	12	12	100	75	25	12	16-G60	GXE/I-16	TS-3.5-14M1	T-15
			inch	0.472	0.472	3.937	2.953	0.984	0.472				
ASER/L 1616-H16	<a href="#">61082</a>	<a href="#">61083</a>	mm	16	16	100	75	25	16	16-G60	GXE/I-16	TS-3.5-14M1	T-15
			inch	0.630	0.630	3.937	2.953	0.984	0.630				
ASER/L 2020-K16	61084	61085	mm	20	20	125	100	25	20	11-A60	None	TS-25.45-6M2	T-8
			inch	0.787	0.787	4.921	3.937	0.984	0.787				
<b>Inch</b>													
Description													
ASER/L 08-11A	61106	61107	inch	0.500	0.500	4.000	3.000	1.000	0.500	11-A60	None	TS-25.45-6M2	T-8
			mm	12.7	12.7	101.6	76.2	25.4	12.7				

For threading inserts see pages E-13 - E-50.

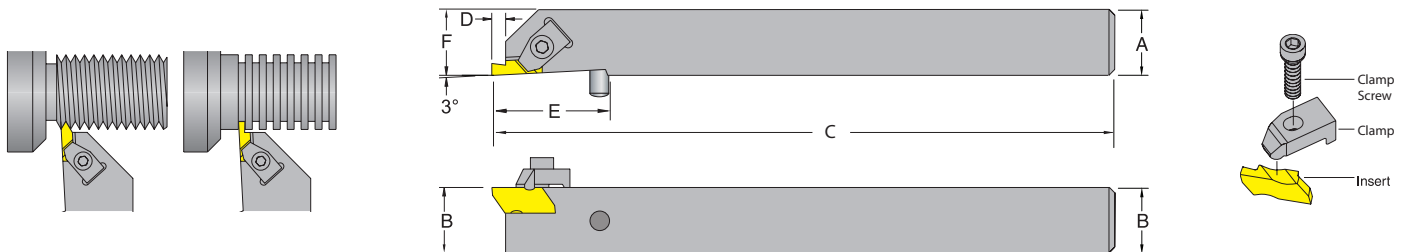
**SE Threading Toolholder Right and Left Hand for LayDown Insert**



Metric Description	UPC No. 733101-		System	A	B	C	E (Gage Stop)	F	Insert Gage	Shim Seat	Insert Screw	Torx Key
	R.H.	L.H.										
SER/L 1010-M11	60563	60564	mm	10	10	150	25	10	11-A60	None	TS-25.45-6M2	T-8
SER/L 1212-M11	60565	60566	mm	12	12	150	25	12	11-A60	None	TS-25.45-6M2	T-8
SER/L 1616-M16	60567	60568	mm	16	16	150	25	16	16-G60	GXE/I-16	TS-3.5-14M1	T-10
SER/L 2020-M16	60569	60570	mm	20	20	150	25	20	16-G60	GXE/I-16	TS-3.5-14M1	T-10
<b>Inch</b>												
Description												
SER/L 06-11D	58422	58423	inch	0.375	0.375	6.000	1.000	0.375	11-A60	None	TS-25.45-6M2	T-8
SER/L 08-11D	58426	58427	inch	0.500	0.500	6.000	1.000	0.500	11-A60	None	TS-25.45-6M2	T-8
SER/L 10-16D	58430	58431	inch	0.625	0.625	6.000	1.000	0.625	16-G60	GXE/I-16	TS-3.5-14M1	T-15
SER/L 12-16D	58434	58435	inch	0.750	0.750	6.000	1.000	0.750	16-G60	GXE/I-16	TS-3.5-14M1	T-15

For threading inserts see pages E-13 - E-50.

**NS Threading Toolholder Right and Left Hand for DorNotch V Thread Inserts**



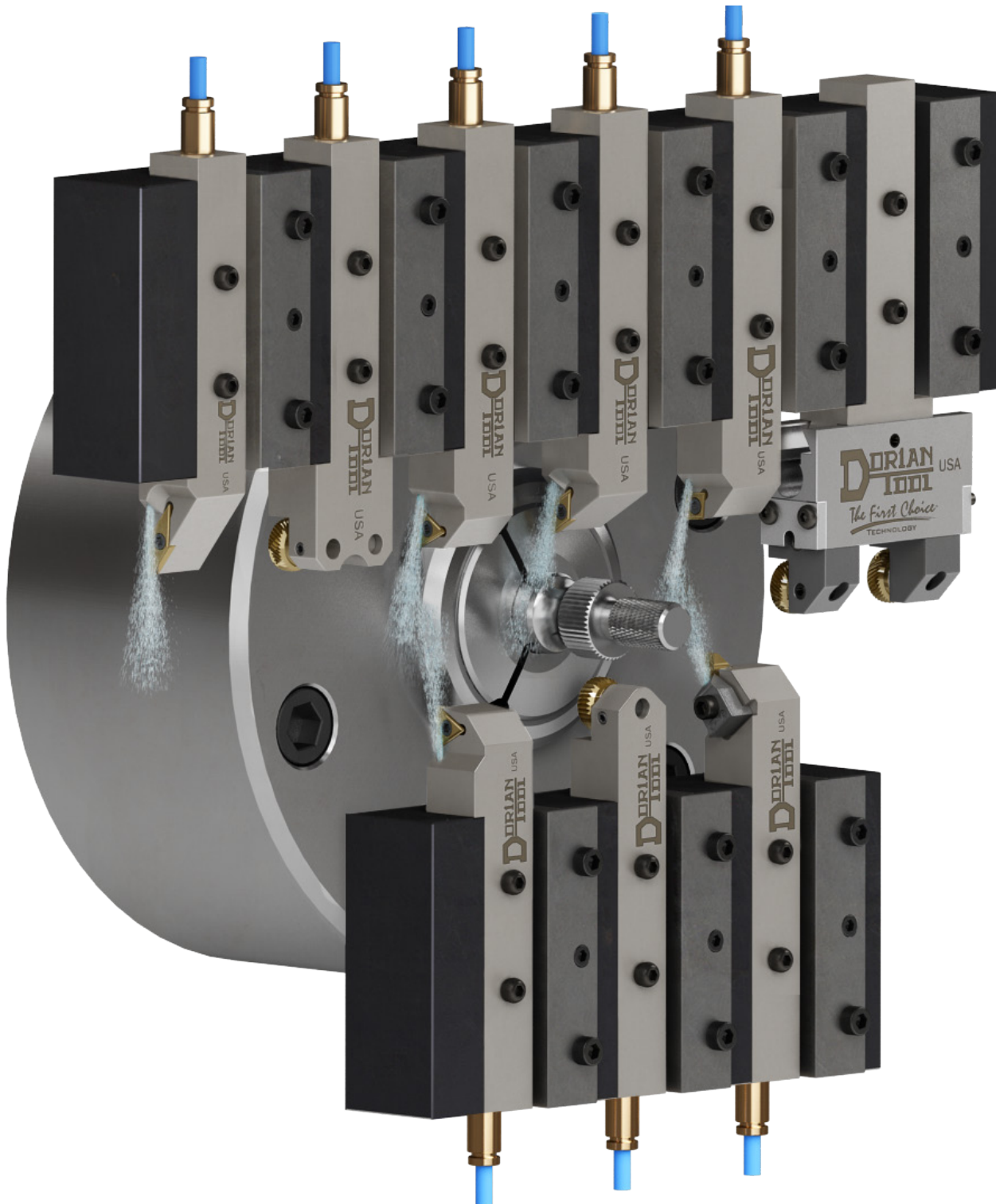
Metric Description	UPC No. 733101-		System	A	B	C	E (Gage Stop)	F	Insert Gage	Clamp	Clamp Screw
	R.H.	L.H.									
NSR/L 1010-M02	60571	60572	mm	10	10	150	25	10	NG-2R* NG-2L**	CM-182* CM-183**	S-310M
NSR/L 1212-M02	60573	60574	mm	12	12	150	25	12			
NSR/L 1616-M02	60575	60576	mm	16	16	150	25	16	NG-2R* NG-2L**	CM-74* CM-75**	S-310M
NSR/L 2020-M02	60577	60578	mm	20	20	150	25	20			
NSR/L 2020-M03	60579	60580	mm	20	20	150	32	20	NG-3R* NG-3L**	CM-72* CM-73**	S-412M
<b>Inch</b>											
Description											
NSR/L 06-2D	58772	58773	inch	0.375	0.375	6.000	1.000	0.375	NG-2R* NG-2L**	CM-182* CM-183**	S-310M
NSR/L 08-2D	58776	58777	inch	0.500	0.500	6.000	1.000	0.500			
NSR/L 10-2D	58780	58781	inch	0.625	0.625	6.000	1.000	0.625	NG-2R* NG-2L**	CM-74* CM-75**	S-310M
NSR/L 12-2D	58438	58439	inch	0.750	0.750	6.000	1.000	0.750			
NSR/L 12-3D	58442	58443	inch	0.750	0.750	6.000	1.250	0.750	NG-3R* NG-3L**	CM-72* CM-73**	S-412M

For threading inserts see pages E-13 - E-50.

\*For R.H. tool. \*\*For L.H. tool.

# Swiss Screw Machine Knurling Tools

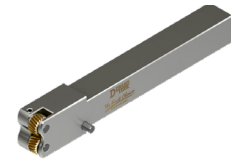
Featuring The New Jet-Stream™ Thru Coolant System



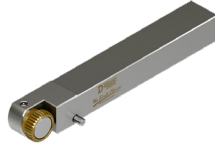
**SWTCFKT\_B :**  
Single wheel  
thru coolant fixed knurling tool  
for swiss screw machines  
(Page G-34)



**DWTCFKT\_B :**  
Double wheel  
thru coolant fixed knurling tool  
for swiss screw machines  
(Page G-35)



**SSWTCFKT :**  
Shoulder single wheel  
thru coolant fixed knurling tool  
for swiss screw machines  
(Page G-36)



**SDWTCFKT :**  
Shoulder double wheel  
thru coolant fixed knurling tool  
for swiss screw machines  
(Page G-37)



**SSWFKT :**  
Shoulder single wheel knurl tool  
for turret style machines  
(Page G-39)



**SWFKT :**  
Single wheel fixed knurling tool  
for turret style machines  
(Page G-38)



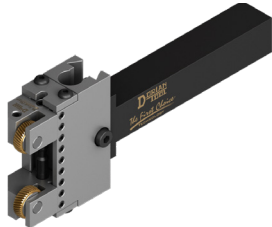
**SSCK-DW-SW2/4:**  
Shoulder self-centering knurling tool  
for swiss screw machines  
(Page G-41)



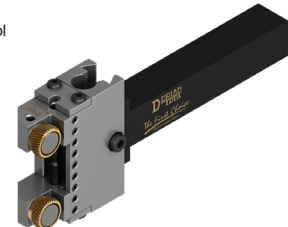
**SCKN-DW-D/M:**  
Self-Centering knurling tool  
for swiss screw machines  
(Page G-40)



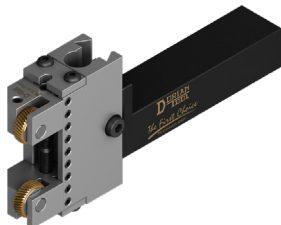
**SMSCNC-7-D-0CL :**  
Straddle CNC- Forming knurling tool  
with a symmetrical center line  
for swiss screw machines  
(Page G-42)



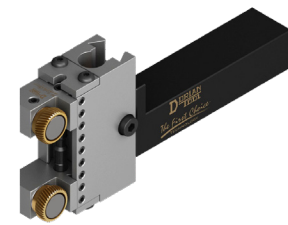
**SMCNC 7-2-0CL :**  
Straddle CNC-Shoulder knurling tool  
with a symmetrical center line  
for swiss screw machines  
(Page G-43)



**SCNC-7-D :**  
Straddle CNC forming knurl tool  
for turret style machines  
(Page G-44)



**SCNC-7-2 :**  
Shoulder CNC straddle  
knurl tool for turret style machines  
(Page G-45)



**CNC109\_M :**  
Side mount shoulder  
style square shank knurling tool  
for swiss screw machines  
(Page G-46)



**CNC109\_4 :**  
Side Mount flange style  
square shank knurling tool  
for swiss screw machines  
(Page G-47)



**3WSKT :**  
Three wheel knurling tool  
with optional square shanks  
for swiss screw machines  
(Page G-49)



**3WRKT :**  
Three wheel knurling tool  
with optional round shanks  
for swiss screw machines  
(Page G-49)



## SWTCFKT\_B : Single wheel thru coolant fixed knurling tool



- Specifically designed for Swiss style screw machines
- Single wheel knurling tool for general purposes applications.
- Knurl wheel is mounted between thrust washers to ensure a smooth and even rotation of the knurl while knurling is performed.
- Straight and Diamond knurl pattern
- TiN coated knurling wheels.

## Resulting Knurl Pattern

## Recommended Use:

Straight pattern with straight wheel.



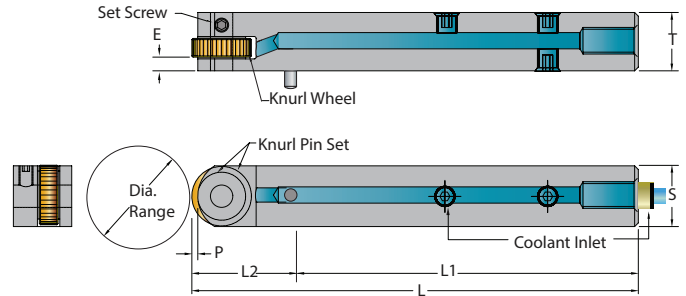
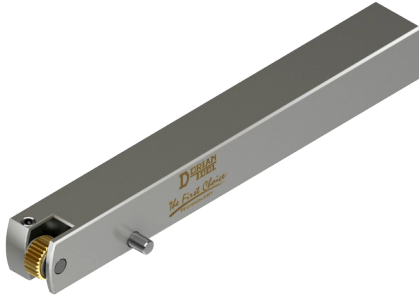
Male 60° diamond pattern with female wheel.



Female 60° diamond pattern with male wheel.



Best for straight pattern



Metric Description	UPC No. 733101-	S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw	DIA. Range	E	L	L1	L2 (Tool Stop)	P	T
SWTCFKT-8-B	<a href="#">22925</a>	8mm 0.315"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	2.0 0.08"	95 3.740"	75 2.953"	20.0 0.787"	1.0 0.040"	12.0 0.472"
SWTCFKT-10-B	<a href="#">22926</a>	10mm 0.394"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	2.0 0.08"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	12.0 0.472"
SWTCFKT-12-B	<a href="#">22927</a>	12mm 0.472"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	2.0 0.08"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	12.0 0.472"
SWTCFKT-16-B	<a href="#">22928</a>	16mm 0.630"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	2.0 0.08"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	15.9 0.625"
SWTCFKT-20-B	22929	20mm 0.787"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	2.0 0.08"	125 4.921"	100 3.937"	25.0 0.984"	1.0 0.040"	20.0 0.787"
<b>Inch</b>													
Description													
SWTCFKT-50-B	22930	0.500" 12.70mm	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	Unlimited	0.08" 2.0	4.000" 101.6	3.000" 76.2	1.000" 25.4	0.040" 1.0	0.500" 12.7

Supplied with 1 straight beveled TiN coated knurl wheel, \* 30 TPI. **Warning:** may cause deflection on small diameters, and too much pressure on large diameters.

## DWTCFKT\_B : Double wheel thru coolant fixed knurling tool



- Specifically designed for Swiss style screw machines
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted between thrust washers to ensure a smooth and even rotation of the knurl while knurling is performed.
- TiN coated knurling wheels.

### Resulting Knurl Pattern

Straight pattern with straight wheel.

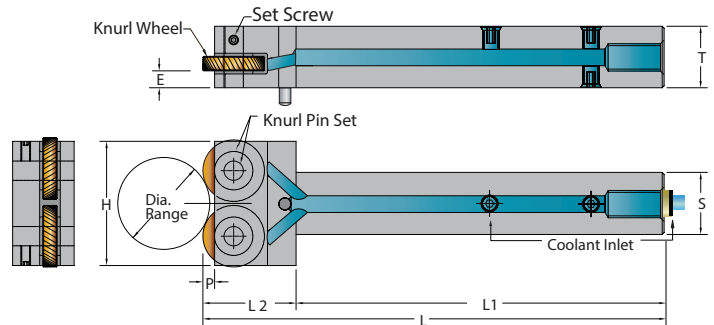
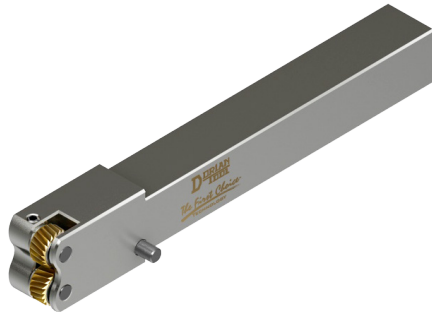


Male 60° diamond pattern with diagonal wheel.



### Recommended Use:

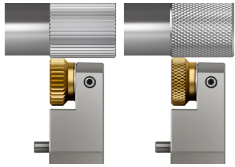
Best for diamond pattern



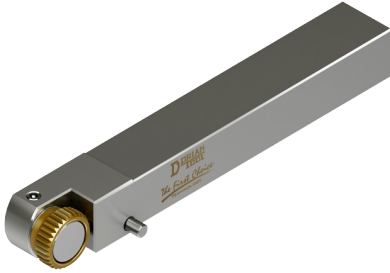
Metric Description	UPC No. 733101-	S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw	DIA. Range	E	H	L	L1	L2 (Tool Stop)	P	T
DWTCFKT-8-B	<a href="#">22935</a>	8mm 0.315"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	3.0 & UP .118" & UP	2.0 0.08"	16.5 0.650"	95 3.740"	75 2.953"	20.0 0.787"	1.0 0.040"	12.0 0.472"
DWTCFKT-10-B	<a href="#">22936</a>	10mm 0.394"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	3.0 & UP .118" & UP	2.0 0.08"	16.5 0.650"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	12.0 0.472"
DWTCFKT-12-B	<a href="#">22937</a>	12mm 0.472"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	3.0 & UP .118" & UP	2.0 0.08"	16.5 0.650"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	12.0 0.472"
DWTCFKT-16-B	<a href="#">22938</a>	16mm 0.630"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	3.0 & UP .118" & UP	2.0 0.08"	16.5 0.650"	100 3.937"	75 2.953"	25.0 0.984"	1.0 0.040"	15.9 0.625"
DWTCFKT-20-B	22939	20mm 0.787"	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	3.0 & UP .118" & UP	2.0 0.08"	20.0 0.787"	125 4.921"	100 3.937"	25.0 0.984"	1.0 0.040"	20.0 0.787"
<b>Inch</b>														
Description														
DWTCFKT-50-B	22940	0.500" 12.70mm	B *	KPS-12-38-C	<a href="#">28900</a>	M2.5-.45	.118" & UP 3.0 & UP	0.08" 2	0.500" 12.7	4.000" 101.6	3.000" 76.2	1.000" 25.4	0.040" 1.0	0.500" 12.7

Supplied with 1 set of diagonal beveled TiN coated knurl wheels, \* 30 TPI. **Warning**, may cause deflection on small diameters, and too much pressure on large diameters.

## SSWTCFKT : Shoulder single wheel thru coolant fixed knurling tool



- Specifically designed for Swiss style screw machines
- Designed to knurl up to a shoulder and up against the guide bushing
- Precision square shank
- Single knurl wheel for general purpose
- Knurl wheel is mounted on a thrust washer to ensure a smooth and even rotation of the knurl while knurling is performed
- TiN coated knurling wheels.



### Resulting Knurl Pattern

Straight pattern with straight wheel.

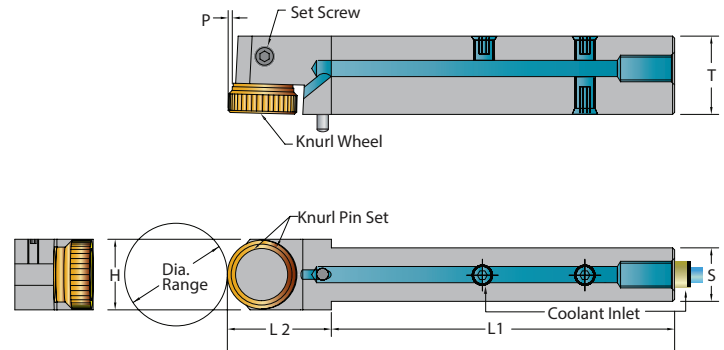


Male 60° diamond pattern with female wheel.



### Recommended Use:

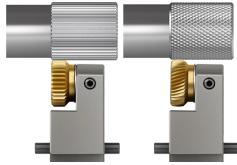
Best for straight pattern with straight wheel.



Metric Description	UPC No. 733101-	S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw	DIA. Range	H	L	L1	Tool Stop L2	P	T
SSWTCFKT-10-2	<a href="#">22945</a>	10mm 0.394"	SW2	SW2.0P-1S	<a href="#">29050</a>	M3x.5	Unlimited	12.7 0.500"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	14.3 0.562"
SSWTCFKT-12-2	<a href="#">22946</a>	12mm 0.472"	SW2	SW2.0P-1S	<a href="#">29050</a>	M3x.5	Unlimited	12.7 0.500"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	14.3 0.562"
SSWTCFKT-16-2	<a href="#">22947</a>	16mm 0.630"	SW2	SW2.0P-1S	<a href="#">29050</a>	M3x.5	Unlimited	16.0 0.630"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	16.0 0.630"
SSWTCFKT-20-2	22948	20mm 0.787"	SW2	SW2.0P-1S	<a href="#">29050</a>	M3x.5	Unlimited	20.0 0.787"	125 4.921"	100 3.937"	25.0 0.984"	1.3 0.050"	20.0 0.787"
<b>Inch</b>													
Description													
SSWTCFKT-50-2	22949	0.500" 12.70mm	SW2	SW2.0P-1S	<a href="#">29050</a>	M3x.5	Unlimited	0.500" 12.7	4.000" 101.6	3.000" 76.2	1.000" 25.4	0.050" 1.3	0.562" 14.3

Supplied with 1 straight beveled TiN coated knurl wheel, \* 30 TPI. **Warning**, may cause deflection on small diameters, and too much pressure on large diameters.

## SDWTCFKT : Shoulder double wheel thru coolant fixed knurling tool



- Specifically designed for Swiss style screw machines
- Designed to knurl up to a shoulder and up against the guide bushing
- Precision square shank
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted on a thrust washer to ensure a smooth and even rotation of the knurl while knurling is performed.
- TiN coated knurling wheels.



### Resulting Knurl Pattern

Straight pattern with straight wheel.

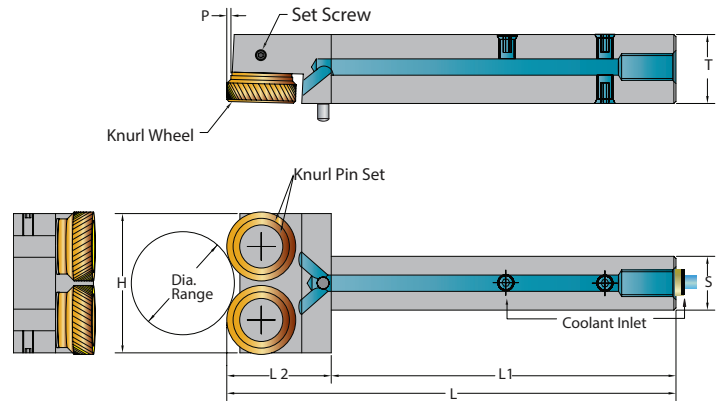


Male 60° diamond pattern with diagonal wheels.



### Recommended Use:

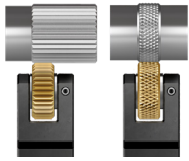
Best for diamond pattern



Metric Description	UPC No. 733101-	S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw	DIA. Range	H	L	L1	Tool Stop L2	P	T
SDWTCFKT-10-2	<a href="#">22955</a>	10mm 0.394"	SW2	SW2.0P-2S	<a href="#">29055</a>	M3x.5	6.35 & UP .250" & UP	26.4 1.04"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	14.3 0.562"
SDWTCFKT-12-2	<a href="#">22956</a>	12mm 0.472"	SW2	SW2.0P-2S	<a href="#">29055</a>	M3x.5	6.35 & UP .250" & UP	26.4 1.04"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	14.3 0.562"
SDWTCFKT-16-2	<a href="#">22957</a>	16mm 0.630"	SW2	SW2.0P-2S	<a href="#">29055</a>	M3x.5	6.35 & UP .250" & UP	26.4 1.04"	100 3.937"	75 2.953"	25.0 0.984"	1.3 0.050"	16.0 0.630"
SDWTCFKT-20-2	22958	20mm 0.787"	SW2	SW2.0P-2S	<a href="#">29055</a>	M3x.5	6.35 & UP .250" & UP	26.4 1.04"	125 4.921"	100 3.937"	25.0 0.984"	1.3 0.050"	20.0 0.787"
<b>Inch</b>													
Description													
SDWTCFKT-50-2	22959	0.500" 12.70mm	SW2	SW2.0P-2S	<a href="#">29055</a>	M3x.5	.250" & UP 6.35 & UP	1.04" 26.4	4.000" 101.6	3.000" 76.2	1.000" 25.4	0.050" 1.3	0.562" 14.3

Supplied with 1 set of diagonal beveled TiN coated knurl wheels , \* 30 TPI, **Warning**, may cause deflection on small diameters, and too much pressure on large diameters.

## SWFKT : Single wheel fixed knurling tool for turret style machines



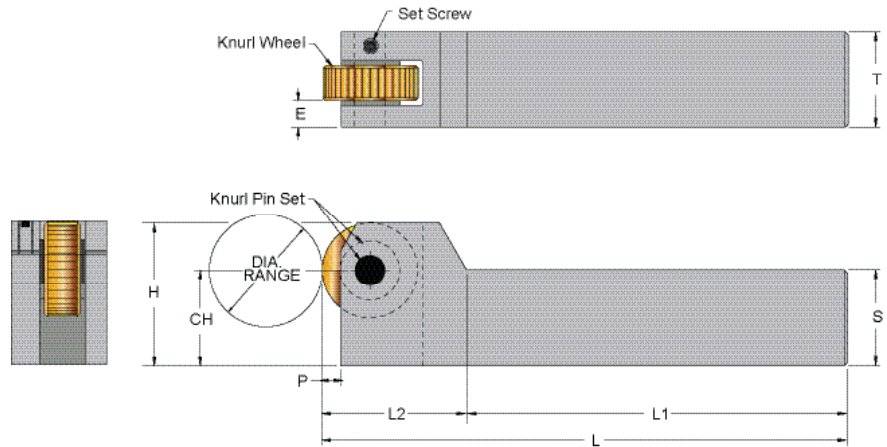
- For Turret Style Machines
- Precision square shank with preset center height.
- Single wheel knurling tool for general purposes applications.
- Knurl wheel is mounted between thrust washers to ensure a smooth and even rotation of the knurls while knurling is performed.
- Straight and Diamond knurl pattern.

## Resulting Knurl Pattern

## Recommended Use:

- Straight pattern with straight wheel.
- Male 60° diamond pattern with female wheel.
- Female 60° diamond pattern with male wheel.

Best for straight pattern



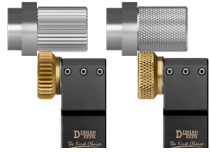
Inch Description	UPC No. 733101-	CH & S inch	Dia. Range	E	H	L	L1	L2	P	T	Knurl Wheel Style	Knurl Pin Set		Set Screw
												Desc.	UPC No. 733101-	
SWFKT-50-D	<a href="#">21730</a>	0.500	Unlimited	0.150	0.750	3.625	2.750	0.875	0.060	0.500	D *	KPS-18-50	<a href="#">28805</a>	M3x.5x3
SWFKT-100-O	<a href="#">21750</a>	1.000	Unlimited	0.280	1.500	5.500	4.000	1.500	0.190	1.000	O **	KPS-31-100	<a href="#">28845</a>	M4x.7x8

Metric Description	UPC No. 733101-	CH & S mm	Dia. Range	E	H	L	L1	L2	P	T	Knurl Wheel Style	Knurl Pin Set		Set Screw
												Desc.	UPC No. 733101-	
SWFKT-831-B	<a href="#">21705</a>	8	Unlimited	2.0	12.7	66.7	50.8	15.9	0.8	9.5	B *	KPS-12-38	<a href="#">28800</a>	M3x.5x3
SWFKT-10-D	<a href="#">21715</a>	10	Unlimited	3.8	15.9	85.7	63.5	22.2	1.5	12.7	D *	KPS-18-50	<a href="#">28805</a>	M3x.5x3
SWFKT-12-D	<a href="#">21725</a>	12	Unlimited	3.8	19.1	92.1	69.9	22.2	1.5	12.7	D *	KPS-18-50	<a href="#">28805</a>	M3x.5x3
SWFKT-162-D	<a href="#">21765</a>	16	Unlimited	3.8	22.2	101.6	76.2	25.4	1.5	15.9	D *	KPS-18-62	<a href="#">28810</a>	M3x.5x3
SWFKT-20-M	<a href="#">21735</a>	20	Unlimited	6.4	31.8	120.7	82.6	38.1	4.8	19.1	M **	KPS-31-75	<a href="#">28840</a>	M3x.5x5
SWFKT-25-O	<a href="#">21745</a>	25	Unlimited	7.1	38.1	139.7	101.6	38.1	4.8	25.4	O **	KPS-31-100	<a href="#">28845</a>	M4x.7x8

\* SUPPLIED WITH ONE (1) STRAIGHT HIGH SPEED BEVELED TIN COATED KNURL WHEEL, \*30 TPI (0.8mm), \*\*25 TPI (1.0mm). WARNING: MAY CAUSE DEFLECTION ON SMALL PART DIAMETERS, AND TOO MUCH PRESSURE ON LARGE DIAMETERS.

## SSWFKT : Double wheel fixed thru coolant shoulder knurl tool



- For Turret Style Machines
- Designed to knurl up to a shoulder
- Precision square shank
- Single knurl wheel for general purpose
- Knurl wheel is mounted on a thrust washer to ensure a smooth and even rotation of the knurl while knurling is performed



## Resulting Knurl Pattern

Straight pattern with straight wheel.

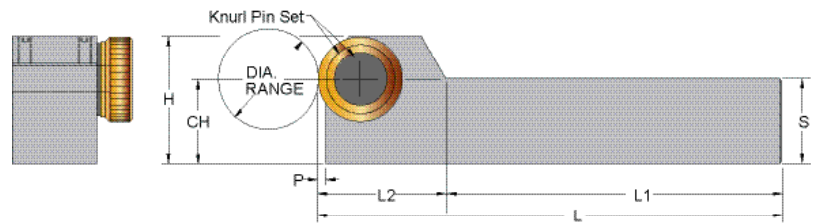
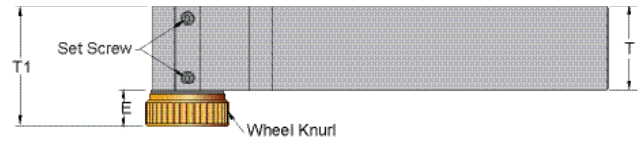


Male 60° diamond pattern with female wheel.



## Recommended Use:

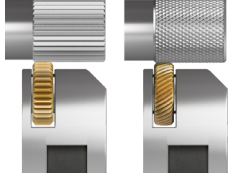
Best for straight pattern



Inch Description	UPC No. 733101-	CH & S inch	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw
													Desc.	UPC No. 733101-	
SSWFKT-50-2	<a href="#">21781</a>	0.500	Unlimited	0.265	0.750	3.375	2.750	0.625	0.050	0.500	0.765	SW2 *	SW2.0P-1S	<a href="#">29050</a>	M3x.5x3
SSWFKT-100-4	<a href="#">21793</a>	1.000	Unlimited	0.410	1.500	5.250	4.000	1.250	0.050	1.000	1.410	SW4 **	SW4.0P-1S	<a href="#">29080</a>	M4x.7x5
Metric Description	UPC No. 733101-	CH & S mm	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw
SSWFKT-10-2	<a href="#">21775</a>	10	Unlimited	6.7	15.9	79.4	63.5	15.9	1.3	12.7	19.4	SW2 *	SW2.0P-1S	<a href="#">29050</a>	M3x.5x3
SSWFKT-12-2	<a href="#">21779</a>	12	Unlimited	6.7	19.1	85.7	69.9	15.9	1.3	12.7	19.4	SW2 *	SW2.0P-1S	<a href="#">29050</a>	M3x.5x3
SSWFKT-162-2	<a href="#">21783</a>	16	Unlimited	6.7	22.2	92.1	76.2	15.9	1.3	15.9	22.6	SW2 *	SW2.0P-1S	<a href="#">29050</a>	M3x.5x3
SSWFKT-20-4	<a href="#">21787</a>	20	Unlimited	10.4	31.8	114.3	82.6	31.8	1.3	19.1	29.5	SW4 **	SW4.0P-1S	<a href="#">29080</a>	M4x.7x5
SSWFKT-25-4	<a href="#">21791</a>	25	Unlimited	10.4	38.1	133.4	101.6	31.8	1.3	25.4	35.8	SW4 **	SW4.0P-1S	<a href="#">29080</a>	M4x.7x5

SUPPLIED WITH ONE (1) BEVELED STRAIGHT HIGH SPEED TIN COATED KNURL WHEEL, \* 30 TPI (0.8mm), \*\* 25 TPI (1.00mm). WARNING: MAY CAUSE DEFLECTION ON SMALL PART DIAMETERS, AND TOO MUCH PRESSURE ON LARGE DIAMETERS.

## SCKN-DW-D/M - Self-Centering Knurling Tool



- For Turret Style Machines
- Precision square shank with preset center height.
- Twin knurl wheels for Straight and Diamond pattern.
- Knurl wheels are mounted between thrust washers to ensure smooth & even rotation of knurls while knurling is performed.
- Self-centering knurling head for a precise alignment.

### Resulting Knurl Pattern

Straight pattern with straight wheel.

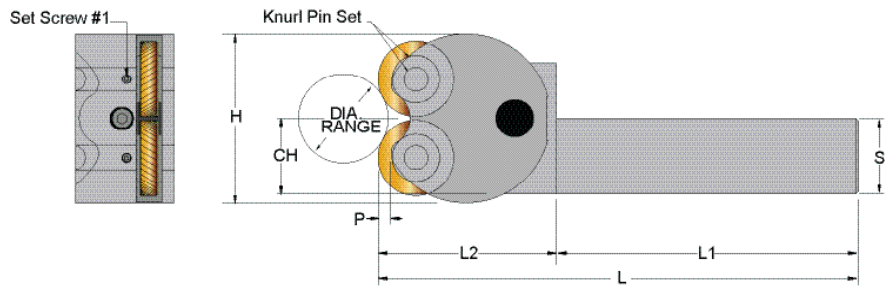
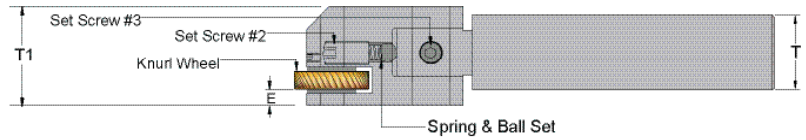


Male 60° diamond pattern with diagonal wheel.



### Recommended Use:

For best results, use beveled knurl wheels. In Feed the knurling tool into the blank until the right pattern is generated, then End Feed.



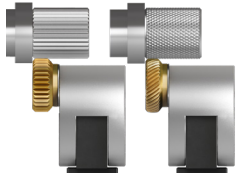
Inch Description	UPC No. 733101-	CH & S inch	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw			Spring & Ball Set	UPC No. 733101-
													Desc.	UPC No. 733101-	No. 1	No. 2	No. 2		
SCKN-50-DW-D	22111	0.500	1/4" & up	.115	1.375	4.125	2.75	1.375	.030	0.625	0.750	D *	KPS-18-50	28805	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	28525
SCKN-100-DW-M	22131	1.000	5/16" & up	.211	2.250	6.375	4.00	2.375	.170	1.000	1.312	M **	KPS-31-100	28845	M3x.5x3	M8x1.25x8	M6x1.0x12	STBL-25	28530

Metric Description	UPC No. 733101-	CH & S mm	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw			Spring & Ball Set	UPC No. 733101-
													Desc.	UPC No. 733101-	No. 1	No. 2	No. 2		
SCKN-10-DW-D	22161	10	6,4 & up	2.9	34.9	98.4	63.5	34.9	0.8	12.7	19.1	D *	KPS-18-50	28805	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	28525
SCKN-12-DW-D	22106	12		2.9	34.9	104.8	69.9	34.9	0.8	15.9	19.1	D *	KPS-18-50	28805	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	28525
SCKN-162-DW-D	22115	16		2.9	34.9	111.1	76.2	34.9	0.8	15.9	19.1	D *	KPS-18-50	28805	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	28525
SCKN-20-DW-M	22116	20	8 & up	5.4	57.2	142.9	82.6	60.3	4.3	19.1	33.3	M **	KPS-31-100	28845	M3x.5x3	M8x1.25x8	M6x1.0x12	STBL-25	28530
SCKN-25-DW-M	22126	25		5.4	57.2	161.9	101.6	60.3	4.3	25.4	33.3	M **	KPS-31-100	28845	M3x.5x3	M8x1.25x8	M6x1.0x12	STBL-25	28530

SUPPLIED WITH ONE (1) SET OF BEVELED DIAGONAL HIGH SPEED KNURL WHEELS, \*30 TPI (0.8mm), \*\*25 TPI (1.0mm). WARNING: MAY CAUSE DEFLECTION ON SMALL PART DIAMETERS, AND TOO MUCH PRESSURE ON LARGE DIAMETERS

## SSCK-DW-SW2/4 - Shoulder Self-Centering Knurling Tool



- For Turret Style Machines
- Designed to knurl against a square shoulder.
- Precision square shank with preset center height.
- Twin knurl wheels for Straight and Diamond pattern.
- Knurl wheels are mounted between thrust washers to ensure smooth & even rotation of knurls while knurling is performed.
- Self-centering knurling head for a precise alignment

### Resulting Knurl Pattern

Straight pattern with straight wheel.

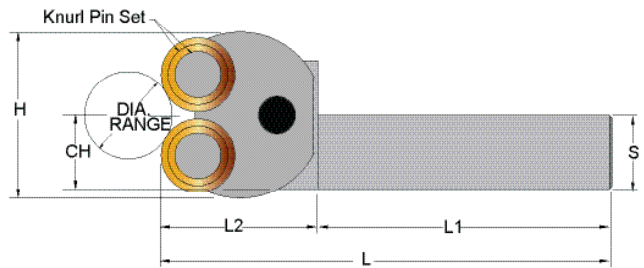
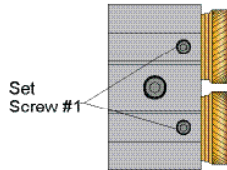
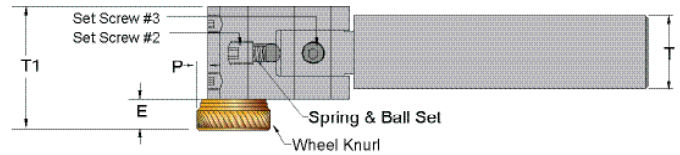


Male 60° diamond pattern with diagonal wheels.



### Recommended Use:

For best results, use beveled knurl wheels. In Feed the knurling tool into the blank until the right pattern is generated, then End Feed.



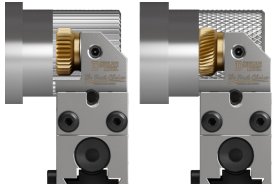
Inch Description	UPC No. 733101-	CH & S inch	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw			Spring & Ball Set	UPC No. 733101-
													Desc.	UPC No. 733101-	No. 1	No. 2	No. 2		
SSCK-50-DW-2	<a href="#">22220</a>	0.500	1/4" & up	.265	1.375	4.125	2.75	1.375	.050	0.625	1.015	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	<a href="#">28525</a>
SSCK-100-DW-4	<a href="#">22250</a>	1.000	5/16" & up	.410	2.250	6.125	4.00	2.125	.050	1.000	1.660	SW4 **	SW4.0P-2S	<a href="#">29085</a>	M5x.8x5	M8x1.25x8	M6x1.0x12	STBL-25	<a href="#">28530</a>

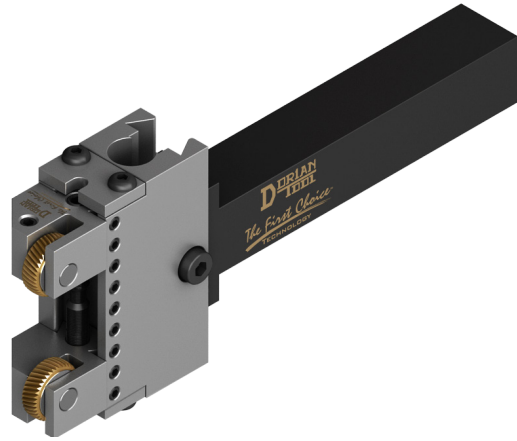
Metric Description	UPC No. 733101-	CH & S mm	Dia. Range	E	H	L	L1	L2	P	T	T1	Knurl Wheel Style	Knurl Pin Set		Set Screw			Spring & Ball Set	UPC No. 733101-
													Desc.	UPC No. 733101-	No. 1	No. 2	No. 2		
SSCK-10-DW-2	<a href="#">22205</a>	10	6.4 & up	6.7	34.9	98.4	63.5	34.9	1.3	12.7	22.6	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	<a href="#">28525</a>
SSCK-12-DW-2	<a href="#">22215</a>	12		6.7	34.9	104.8	69.9	34.9	1.3	15.9	22.6	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	<a href="#">28525</a>
SSCK-162-DW-2	<a href="#">22218</a>	16		6.7	34.9	111.1	76.2	34.9	1.3	15.9	22.6	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5x3	M6x1.0x6	M5x.8x5	STBL-18	<a href="#">28525</a>
SSCK-20-DW-4	<a href="#">22235</a>	20	8 & up	10.4	57.2	136.5	82.6	54.0	1.3	19.1	42.2	SW4 **	SW4.0P-2S	<a href="#">29085</a>	M5x.8x5	M8x1.25x8	M6x1.0x12	STBL-25	<a href="#">28530</a>
SSCK-25-DW-4	<a href="#">22245</a>	25		10.4	57.2	155.6	101.6	54.0	1.3	25.4	42.2	SW4 **	SW4.0P-2S	<a href="#">29085</a>	M5x.8x5	M8x1.25x8	M6x1.0x12	STBL-25	<a href="#">28530</a>

SUPPLIED WITH ONE (1) SET OF BEVELED DIAGONAL HIGH SPEED TIN COATED KNURL WHEELS, \*30 TPI (.8mm), \*\*25 TPI (1.0mm). WARNING: MAY CAUSE DEFLECTION ON SMALL PART DIAMETERS, AND TOO MUCH PRESSURE ON LARGE DIAMETERS.

## SMSCNC-7-D-OCL : Straddle CNC- Forming knurling tool with a symmetrical center line



- Specifically designed for Swiss style screw machines
- Precision square shank
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted between thrust washers to ensure a smooth and even rotation of the knurl while knurling is performed.
- Forked style holding arms hold the wheel with maximum rigidity while knurling is performed during heavy knurling
- Straddle style application is best for very small diameters where the opposing wheels offer more support on the part



### Resulting Knurl Pattern

Straight pattern with straight wheel.

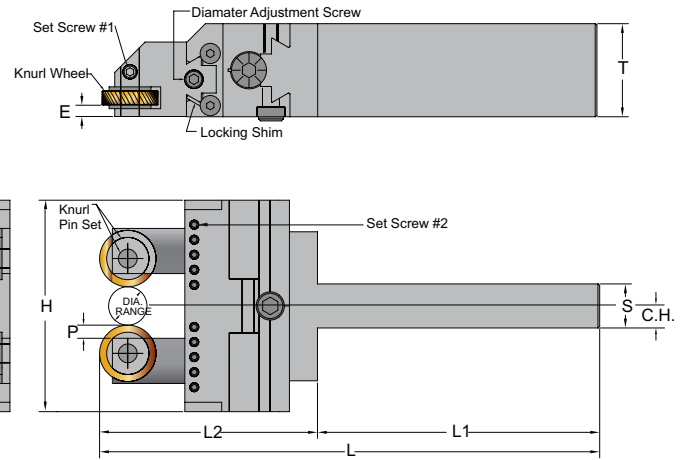


Male 60° diamond pattern with diagonal wheel.



### Recommended Use:

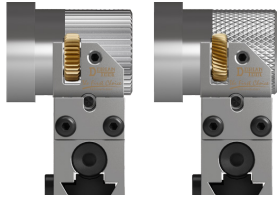
Best for heavy duty knurling and/or when deflection of the material is a concern.



Metric Description	UPC No. 733101-S	S	Knurl Wheel Style	Knurl Pin Set		Set Screw		** Dia. Range	E	H	L	L1	Tool Stop L2	P	T
				Desc.	UPC No. 733101-	#1	#2								
SMSCNC-10-7-D-OCL	20230	10mm 0.394"	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	114.3 4.500"	63.5 2.500"	50.8 2.000"	2.5 0.098"	19.1 .750"
SMSCNC-12-7-D-OCL	20235	12mm 0.472"	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	2.5 0.098"	19.1 .750"
SMSCNC-16-7-D-OCL	20240	16mm 0.630"	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	2.5 0.098"	19.1 .750"
SMSCNC-20-7-D-OCL	20245	20mm 0.787"	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	2.5 0.098"	19.1 .750"
<b>Inch</b>															
Description															
SMSCNC-50-7-D-OCL	20231	0.500" 12.70mm	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.062" 52.4	4.750" 120.7	2.750" 69.9	2.000" 50.8	0.098" 2.5	0.750" 19.1
SMSCNC-100-7-D-OCL	20246	1.000" 25.4mm	D *	KPS-18-50-C	28905	M4x.7	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.062" 52.4	5.500" 139.7	3.500" 88.9	2.000" 50.8	0.098" 2.5	1.000" 25.4

\* Supplied with 1 set of diagonal beveled TiN coated knurl wheels, 30 TPI. The tool has the capability to adjust the wheels to touching (Ø Dia.). But, physically applying a knurl on the smallest diameters may not be possible.

## SMCNC-7-2-OCL : Straddle CNC-Shoulder knurling tool with a symmetrical center line



- Specifically designed for Swiss style screw machines
- Designed to knurl up to a shoulder and up against the guide bushing
- Precision square shank
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted on a thrust washer to ensure a smooth and even rotation of the knurl while knurling is performed.
- Straddle style application is best for very small diameters where the opposing wheels offer more support on the part.

### Resulting Knurl Pattern

Straight pattern with straight wheel.

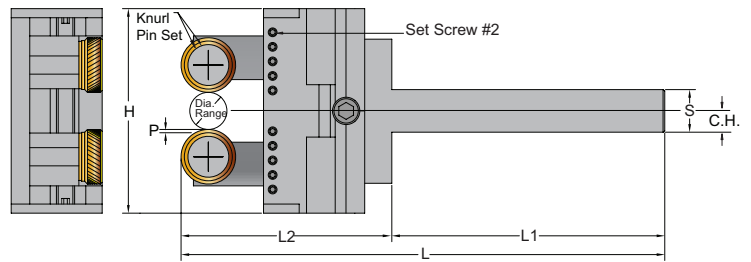
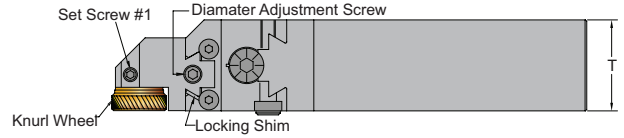
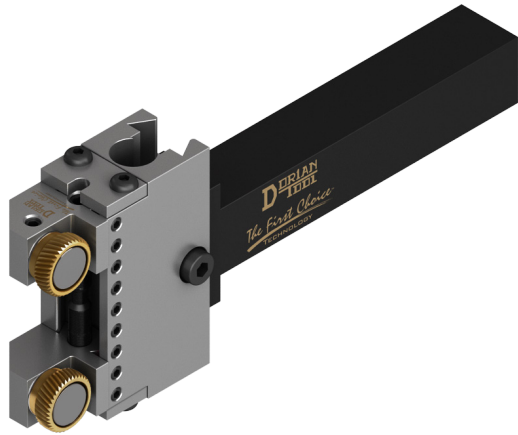


Male 60° diamond pattern with diagonal wheels.



### Recommended Use:

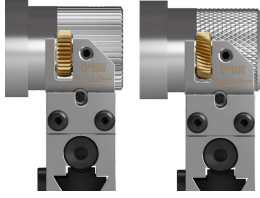
Best for knurling up to a shoulder and/or when deflection of the material is a concern.



Metric Description	UPC No. 733101-S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw		** Dia. Range	H	L	L1	Tool Stop L2	P	T	
					#1	#2								
SMCNC-10-7-2-OCL	<a href="#">20255</a>	10mm 0.394"	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to 12 Up to .500"	52.4 2.062"	114.3 4.500"	63.5 2.500"	50.8 2.000"	1.3 0.050"	19.1 .750"
SMCNC-12-7-2-OCL	<a href="#">20260</a>	12mm 0.472"	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to 12 Up to .500"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	1.3 0.050"	19.1 .750"
SMCNC-16-7-2-OCL	<a href="#">20265</a>	16mm 0.630"	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to 12 Up to .500"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	1.3 0.050"	19.1 .750"
SMCNC-20-7-2-OCL	<a href="#">20270</a>	20mm 0.787"	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to 12 Up to .500"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	1.3 0.050"	19.1 .750"
<b>Inch</b>														
Description														
SMCNC-50-7-2-OCL	<a href="#">20256</a>	0.500" 12.70mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to .500" Up to 12	2.062" 52.4	4.750" 120.7	2.750" 69.9	2.000" 50.8	0.050" 1.3	0.750" 19.1
SMCNC-100-7-2-OCL	20261	1.000" 25.4mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M4x.7	M3x.5	Up to .500" Up to 12	2.062" 52.4	5.50" 139.7	3.500" 88.9	2.000" 50.8	0.050" 1.3	1.000" 25.4

\* Supplied with 1 set of diagonal beveled TiN coated knurl wheels, 30 TPI \*\*The tool has the capability to adjust wheels to touching, but physically applying a knurl on the smallest diameters may not be possible.

## SCNC-7-D - Straddle CNC - Forming knurling tool



- For Turret Style Machines
- Precision square shank
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted between thrust washers to ensure a smooth and even rotation of the knurl while knurling is performed.
- Forked style holding arms hold the wheel with maximum rigidity while knurling is performed during heavy knurling
- Straddle style application best for very small diameters where the opposing wheels offer more support on the part

## Resulting Knurl Pattern

Straight pattern with straight wheel.

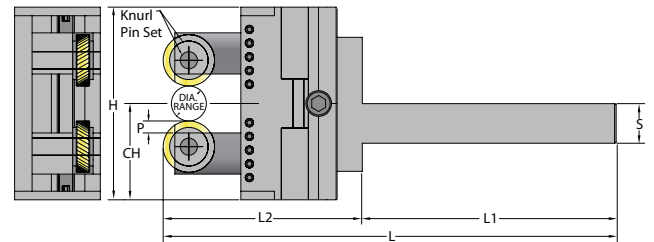
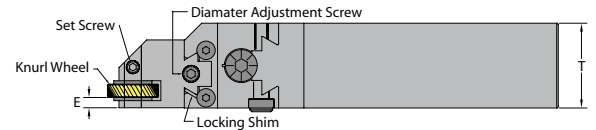
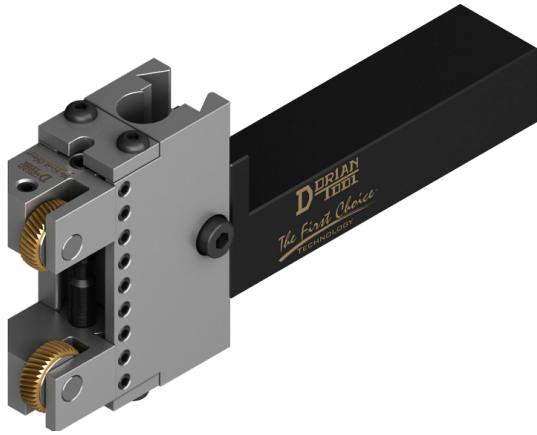


Male 60° diamond pattern with diagonal wheel.



## Recommended Use:

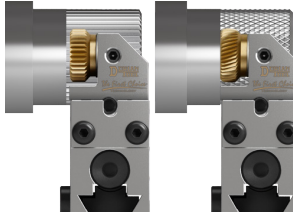
Application, best for heavy duty knurling and/or when deflection of the material is a concern.



Metric Description	UPC No. 733101-	C.H. & S	Knurl Wheel Style	Knurl Pin Set Desc.	UPC No. 733101-	Set Screw	** Dia. Range	E	H	L	L1	Tool Stop L2	P	T
SCNC-10-7-D	<a href="#">20205</a>	10mm 0.394"	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	114.3 4.500"	63.5 2.500"	50.8 2.000"	2.5 0.098"	19.1 .750"
SCNC-12-7-D	<a href="#">20215</a>	12mm 0.472"	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	2.5 0.098"	19.1 .750"
SCNC-162-7-D	<a href="#">20225</a>	16mm 0.630"	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to 12 Up to .500"	3.2 0.125"	52.4 2.062"	120.7 4.750"	69.9 2.750"	50.8 2.000"	2.5 0.098"	19.1 .750"
SCNC-20-7-D	20216	20mm 0.787"	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to 12 Up to .500"	3.2 0.125"	73.0 2.875"	161.9 6.375"	88.9 3.500"	73.0 2.875"	2.5 0.098"	25.4 1.0"
SCNC-25-7-D	20218	25mm 1.000"	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to 12 Up to .500"	3.2 0.125"	73.0 2.875"	161.9 6.375"	101.6 4.000"	73.0 2.875"	2.5 0.098"	25.4 1.0"
<b>Inch</b>														
SCNC-37-7-D	<a href="#">20210</a>	0.375" 9.5mm	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.062" 52.4	4.500" 114.3	2.500" 63.5	2.000" 50.8	0.098" 2.5	0.750" 19.1
SCNC-50-7-D	<a href="#">20220</a>	0.500" 12.7mm	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.062" 52.4	4.750" 120.7	2.750" 69.9	2.000" 50.8	0.098" 2.5	0.750" 19.1
SCNC-162-7-D	<a href="#">20225</a>	0.625" 15.9mm	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.062" 52.4	4.750" 120.7	2.750" 69.9	2.000" 50.8	0.098" 2.5	0.750" 19.1
SCNC-75-7-D	20211	0.750" 19.1mm	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.875" 73.0	6.375" 161.9	3.500" 88.9	2.875" 73.0	0.098" 2.5	1.000" 25.4
SCNC-100-7-D	20221	1.000" 25.4mm	D *	KPS-18-50-C	<a href="#">28905</a>	M3x.5	Up to .500" Up to 12	0.125" 3.2	2.875" 73.0	6.375" 161.9	4.000" 101.6	2.875" 73.0	0.098" 2.5	1.000" 25.4

\* Supplied with 1 set of diagonal beveled TiN coated knurl wheels, 25 TPI \*\*The tool has the capability to adjust wheels to touching, but physically applying a knurl on the smallest diameters may not be possible.

## SCNC-7-2 - Shoulder CNC- Straddle knurling tool



- For Turret Style Machines
- Specifically designed for Swiss style screw machines
- Designed to knurl up to a shoulder and up against the guide bushing
- Precision square shank
- Twin knurl wheels for straight or diamond pattern
- Knurl wheels are mounted on a thrust washer to ensure a smooth and even rotation of the knurl while knurling is performed.
- Straddle style application is best for very small diameters where the opposing wheels offer more support on the part.

## Resulting Knurl Pattern

Straight pattern with straight wheel.

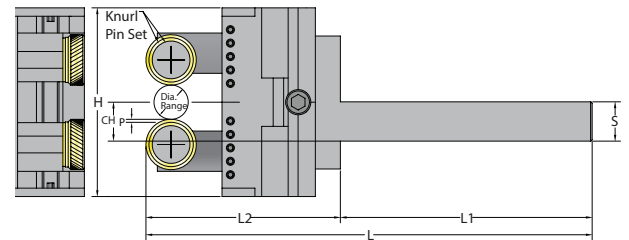
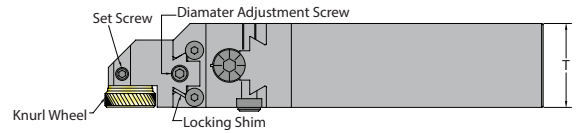
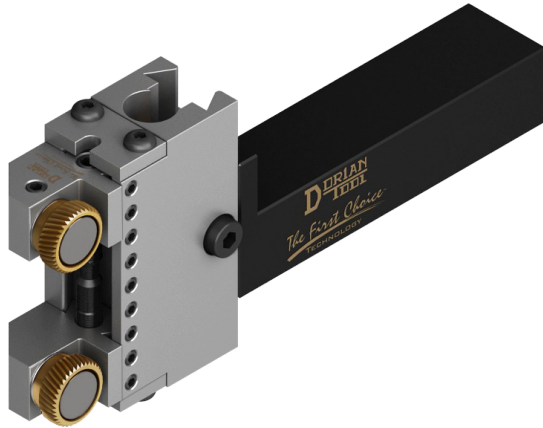


Male 60° diamond pattern with diagonal wheels.



## Recommended Use:

Application, best for knurling up to a shoulder and/or when deflection of the material is a concern.



Metric Description	UPC No. 733101-	C.H. & S	Knurl Wheel Style	Knurl Pin Set		Set Screw	** Dia. Range	H	L	L1	Tool Stop L2	P	T
				Desc.	UPC No. 733101-								
SCNC-10-7-2	20180	10mm <b>0.394"</b>	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	Up to 12 <b>Up to .500"</b>	52.4 <b>2.062"</b>	114.3 <b>4.500"</b>	63.5 <b>2.500"</b>	50.8 <b>2.000"</b>	1.3 <b>.050"</b>	19.1 <b>.750"</b>
SCNC-12-7-2	20185	12mm <b>0.472"</b>	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	Up to 12 <b>Up to .500"</b>	52.4 <b>2.062"</b>	120.7 <b>4.750"</b>	69.9 <b>2.750"</b>	50.8 <b>2.000"</b>	1.3 <b>.050"</b>	19.1 <b>.750"</b>
SCNC-162-7-2	20190	16mm <b>0.630"</b>	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	Up to 12 <b>Up to .500"</b>	52.4 <b>2.062"</b>	120.7 <b>4.750"</b>	69.9 <b>2.750"</b>	50.8 <b>2.000"</b>	1.3 <b>.050"</b>	19.1 <b>.750"</b>
SCNC-20-7-2	20191	20mm <b>0.787"</b>	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	Up to 25 <b>Up to 1.00"</b>	73.0 <b>2.875"</b>	161.9 <b>6.375"</b>	88.9 <b>3.500"</b>	73.0 <b>2.875"</b>	1.3 <b>.050"</b>	25.4 <b>1.000"</b>
SCNC-25-7-2	20192	25mm <b>1.000"</b>	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	Up to 25 <b>Up to 1.00"</b>	73.0 <b>2.875"</b>	161.9 <b>6.375"</b>	101.6 <b>4.000"</b>	73.0 <b>2.875"</b>	1.3 <b>.050"</b>	25.4 <b>1.000"</b>
<b>Inch</b>													
SCNC-37-7-2	20195	<b>0.375"</b> 9.5mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	<b>Up to .500"</b> Up to 12	<b>2.062"</b> 52.4	<b>4.500"</b> 114.3	<b>2.500"</b> 63.5	<b>2.000"</b> 50.8	<b>.050"</b> 1.3	<b>0.750"</b> 19.1
SCNC-50-7-2	20200	<b>0.500"</b> 12.7mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	<b>Up to .500"</b> Up to 12	<b>2.062"</b> 52.4	<b>4.750"</b> 120.7	<b>2.750"</b> 69.9	<b>2.000"</b> 50.8	<b>.050"</b> 1.3	<b>0.750"</b> 19.1
SCNC-162-7-2	20190	<b>0.625"</b> 15.9mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	<b>Up to .500"</b> Up to 12	<b>2.062"</b> 52.4	<b>4.750"</b> 120.7	<b>2.750"</b> 69.9	<b>2.000"</b> 50.8	<b>.050"</b> 1.3	<b>0.750"</b> 19.1
SCNC-75-7-2	20196	<b>0.750"</b> 19.1mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	<b>Up to 1.00"</b> Up to 25	<b>2.875"</b> 73.0	<b>6.375"</b> 161.9	<b>3.500"</b> 88.9	<b>2.875"</b> 73.0	<b>.050"</b> 1.3	<b>1.000"</b> 25.4
SCNC-100-7-2	20201	<b>1.000"</b> 25.4mm	SW2 *	SW2.0P-2S	<a href="#">29055</a>	M3x.5	<b>Up to 1.00"</b> Up to 25	<b>2.875"</b> 73.0	<b>6.375"</b> 161.9	<b>4.000"</b> 101.6	<b>2.875"</b> 73.0	<b>.050"</b> 1.3	<b>1.000"</b> 25.4

\* Supplied with 1 set of diagonal beveled TIN coated knurl wheels, 30 TPI \*\*The tool has the capability to adjust wheels to touching, but physically applying a knurl on the smallest diameters may not be possible.

## CNC109\_M - Side Mount Flange Style Square Shank Knurling Tool



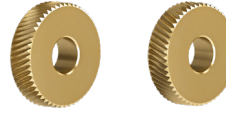
- Precision square shank with preset center height is offset to the side of the tool to allow for better indexing clearance.
- Self-Centering knurling head for a precise alignment to the working part.
- Wheels are held in a flange for heavy duty knurling
- Twin knurl wheels for Straight and Diamond pattern.
- Knurl wheels are mounted between the thrust washer to ensure a smooth and even rotation of the knurls while knurling is performed.

## Resulting Knurl Pattern

Straight pattern with straight wheel.

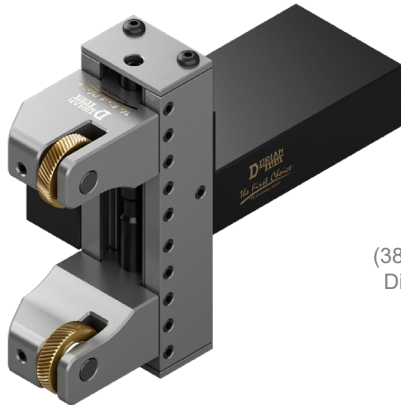


Male 60° diamond pattern with diagonal wheel.

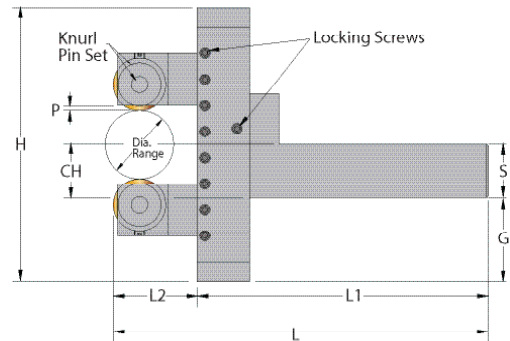
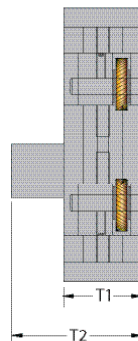
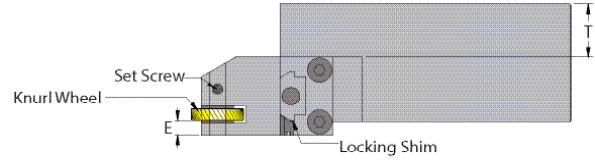


## Recommended Use:

For best results, use beveled knurl wheels. In Feed the knurling tool into blank until the right pattern is created, then End Feed.



1.5" & 2.5"  
(38mm & 63,5mm)  
Diameter Range



Inch Description	UPC No. 733101-			CH & S inch	Dia. Range	E	G	H	L	L1	L2	P	T	T1	T2	Knurl Wheel Style	Knurl Arm Set **		Set Screw	
	R.H.	L.H.															Supplied	Optional		
<b>1.5 Diameter Range</b>																				
CNC109-75-15-M-R/L	<a href="#">21449</a>	<a href="#">21452</a>		0.75	0-1.50"	0.250	1.250	4.000	5.875	4.250	1.625	0.188	1.00	1.50	2.50	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-100-15-M-R/L	<a href="#">21450</a>	<a href="#">21453</a>		1.00		0.250	1.000	4.000	6.625	5.000	1.625	0.188	1.00	1.50	2.50	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-125-15-M-R/L	<a href="#">21451</a>	<a href="#">21454</a>		1.25		0.250	0.750	4.000	6.625	5.000	1.625	0.188	1.25	1.50	2.75	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
<b>2.5 Diameter Range</b>																				
CNC109-75-25-M-R/L	<a href="#">21461</a>	<a href="#">21464</a>		0.75	.125-2.50"	0.250	1.688	4.875	6.062	4.250	1.812	0.188	1.00	1.50	2.50	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-100-25-M-R/L	<a href="#">21462</a>	<a href="#">21465</a>		1.00		0.250	1.437	4.875	6.812	5.000	1.812	0.188	1.00	1.50	2.50	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-125-25-M-R/L	<a href="#">21463</a>	<a href="#">21466</a>		1.25		0.250	1.188	4.875	6.812	5.000	1.812	0.188	1.25	1.50	2.75	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
Metric Description	UPC No. 733101-			CH & S mm	Dia. Range	E	G	H	L	L1	L2	P	T	T1	T2	Knurl Wheel Style	Knurl Arm Set **		Set Screw	
R.H.	L.H.		Supplied														Optional			
<b>1.5 Diameter Range</b>																				
CNC109-20-15-M-R/L	<a href="#">21443</a>	<a href="#">21446</a>		20	0-38	6.4	31.8	101.6	154.0	108.0	46.0	4.8	25.4	38.1	63.5	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-25-15-M-R/L	<a href="#">21444</a>	<a href="#">21447</a>		25		6.4	25.4	101.6	173.0	127.0	46.0	4.8	25.4	38.1	63.5	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-32-15-M-R/L	<a href="#">21445</a>	<a href="#">21448</a>		32		6.4	19.1	101.6	173.0	127.0	46.0	4.8	31.8	38.1	69.9	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
<b>2.5 Diameter Range</b>																				
CNC109-20-25-M-R/L	<a href="#">21455</a>	<a href="#">21458</a>		20	3.2-63.5	6.4	42.9	123.8	154.0	108.0	46.0	4.8	25.4	38.1	63.5	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-25-25-M-R/L	<a href="#">21456</a>	<a href="#">21459</a>		25		6.4	36.5	123.8	173.0	127.0	46.0	4.8	25.4	38.1	63.5	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	
CNC109-32-25-M-R/L	<a href="#">21457</a>	<a href="#">21460</a>		32		6.4	30.2	123.8	173.0	127.0	46.0	4.8	31.8	38.1	69.9	M*	W109-3-25-M	W109-3-25-4	M5x.8x5	

\* SUPPLIED WITH ONE (1) SET OF BEVELED DIAGONAL HIGH SPEED TIN COATED KNURL WHEELS, 25 TPI (1.00mm). \*\* THIS TOOL HAS THE CAPABILITY TO ADJUST THE WHEELS UNTIL THEY TOUCH, BUT PHYSICALLY APPLYING A KNURL ON SMALL DIAMETERS MAY NOT BE POSSIBLE. \*\* See Page G-48 for optional arms and specifications.

## CNC109\_4 - Side Mount Shoulder Style Square Shank Knurling Tool



- Precision square shank with preset center height is offset to the side of the tool to allow for better indexing clearance.
- Self-Centering knurling head for a precise alignment to the working part.
- Twin knurl wheels for Straight and Diamond pattern.
- Knurl wheels are mounted between the thrust washers to ensure a smooth and even rotation of the knurls while knurling is performed.

## Resulting Knurl Pattern

Straight pattern with straight wheel.



Male 60° diamond pattern with diagonal wheels.

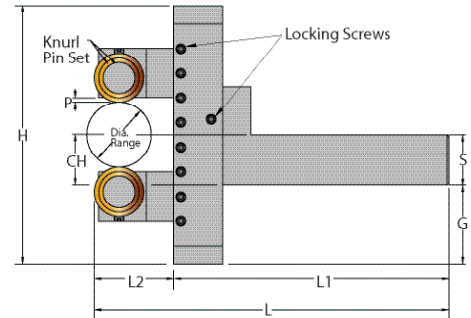
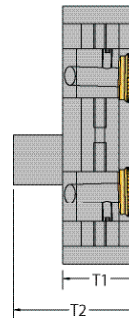
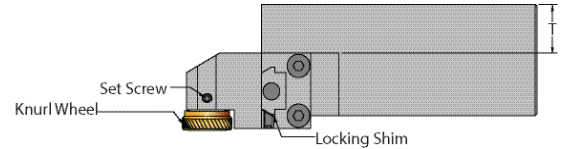


## Recommended Use:

For best results, use beveled knurl wheels. In Feed the knurling tool into the blank until the right pattern is generated, then End Feed.



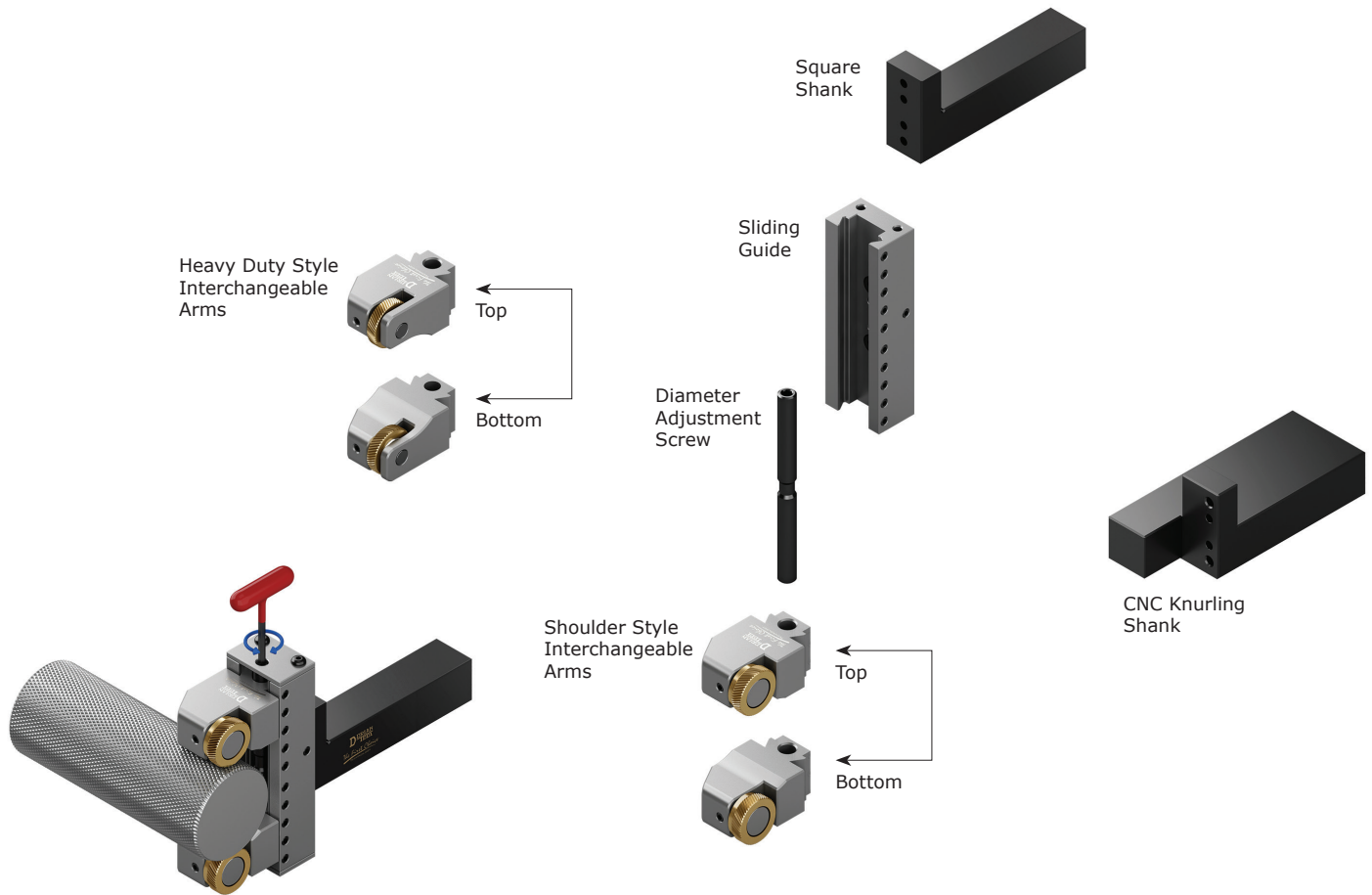
1.5" & 2.5"  
(38mm & 63,5mm)  
Diameter Range



Inch Description	UPC No. 733101-			Dia. Range	G	H	L	L1	L2	P	T	T1	T2	Knurl Wheel Style	Knurl Arm Set **		Set Screw
	R.H.	L.H.	CH & S inch												Supplied	Optional	
<b>1.5 Diameter Range</b>																	
CNC109-75-15-4-R/L	<a href="#">21473</a>	<a href="#">21476</a>	0.75	0-1.50"	1.250	4.000	6.062	4.250	1.812	0.050	1.000	1.500	2.500	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-100-15-4-R/L	<a href="#">21474</a>	<a href="#">21477</a>	1.00		1.000	4.000	6.812	5.000	1.812	0.050	1.000	1.500	2.500	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-125-15-4-R/L	<a href="#">21475</a>	<a href="#">21478</a>	1.25		0.750	4.000	6.812	5.000	1.812	0.050	1.250	1.500	2.750	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
<b>2.5 Diameter Range</b>																	
CNC109-75-25-4-R/L	<a href="#">21485</a>	<a href="#">21488</a>	0.75	.125-2.50 "	1.688	4.875	6.062	4.250	1.812	0.050	1.00	1.500	2.50	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-100-25-4-R/L	<a href="#">21486</a>	<a href="#">21489</a>	1.00		1.437	4.875	6.812	5.000	1.812	0.050	1.00	1.500	2.50	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-125-25-4-R/L	<a href="#">21487</a>	<a href="#">21490</a>	1.25		1.188	4.875	6.812	5.000	1.812	0.050	1.25	1.500	2.75	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
<b>Metric</b>																	
Metric Description	UPC No. 733101-			Dia. Range	G	H	L	L1	L2	P	T	T1	T2	Knurl Wheel Style	Knurl Arm Set **		Set Screw
	R.H.	L.H.	CH & S mm												Supplied	Optional	
<b>1.5 Diameter Range</b>																	
CNC109-20-15-4-R/L	<a href="#">21467</a>	<a href="#">21470</a>	20	0-38	31.8	101.6	154.0	108.0	46.0	1.3	25.4	38.1	63.5	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-25-15-4-R/L	<a href="#">21468</a>	<a href="#">21471</a>	25		25.4	101.6	173.0	127.0	46.0	1.3	25.4	38.1	63.5	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-32-15-4-R/L	<a href="#">21469</a>	<a href="#">21472</a>	32		19.1	101.6	173.0	127.0	46.0	1.3	31.8	38.1	69.9	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
<b>2.5 Diameter Range</b>																	
CNC109-20-25-4-R/L	<a href="#">21479</a>	<a href="#">21482</a>	20	3.2-63.5	42.9	123.8	154.0	108.0	46.0	1.3	25.4	38.1	63.5	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-25-25-4-R/L	<a href="#">21480</a>	<a href="#">21483</a>	25		36.5	123.8	173.0	127.0	46.0	1.3	25.4	38.1	63.5	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5
CNC109-32-25-4-R/L	<a href="#">21481</a>	<a href="#">21484</a>	32		30.2	123.8	173.0	127.0	46.0	1.3	31.8	38.1	69.9	SW4*	W109-3-25-4	W109-3-25-M	M5x.8x5

\* SUPPLIED WITH ONE (1) SET OF BEVELED DIAGONAL HIGH SPEED TIN COATED KNURL WHEELS, 25 TPI (1.00mm). \*\* THIS TOOL HAS THE CAPABILITY TO ADJUST THE WHEELS UNTIL THEY TOUCH, BUT PHYSICALLY APPLYING A KNURL ON SMALL DIAMETERS MAY NOT BE POSSIBLE. \*\* See Page G-48 for optional arms and specifications.

## Heavy Duty & Shoulder Style Interchangeable Arms For Diametral Knurling Tools



### Interchangeable W109 Arms Sets for 1.5 Diameter Capacity Tools

<b>Heavy Duty Style Set</b>						<b>Heavy Duty Style</b>	<b>Shoulder Style</b>
Description	UPC No. 733101-	Knurl Wheel Style	Knurl Pin Set	Part No.733101-	All Set Screws		
W109-3-15-M	22844	M*	KPS-31-100	<a href="#">28845</a>	M5-.8		
<b>Shoulder Style Set</b>							
Description	UPC No. 733101-	Knurl Wheel Style	Knurl Pin Set	Part No.733101-	All Set Screws		
W109-3-15-4	22846	SW4*	SW4.0P-2S	<a href="#">29085</a>	M5-.8		

### Interchangeable W109 Arms Sets for 2.5 Diameter Capacity Tools

<b>Heavy Duty Style Set</b>						<b>Heavy Duty Style</b>	<b>Shoulder Style</b>
Description	UPC No. 733101-	Knurl Wheel Style	Knurl Pin Set	Part No.733101-	All Set Screws		
W109-3-25-M	<a href="#">22848</a>	M*	KPS-31-100	<a href="#">28845</a>	M5-.8		
<b>Shoulder Style Set</b>							
Description	UPC No. 733101-	Knurl Wheel Style	Knurl Pin Set	Part No.733101-	All Set Screws		
W109-3-25-4	<a href="#">22849</a>	SW4*	SW4.0P-2S	<a href="#">29085</a>	M5-.8		

\* Knurl wheels sold separately.

## 3WSKT -Three wheel knurling tool with optional round or square shanks

- Made of Heat Treated precision ground alloy steel.
- The dovetail guide and adjustable arms insure the most possible accuracy and rigidity.
- A precise scroll gear allows for infinite diameter settings.
- Scaled dial makes setting the diameter easy.
- This tool is engineered for most required knurling jobs in Screw Machine, C.N.C. Lathe, and Turret Lathe Applications.
- Square shank can be reversed for right hand or left hand operation.
- Square shank with preset center height.

## Resulting Knurl Pattern

**Straight** pattern with straight wheel.



**Male 60° diamond** pattern with diagonal wheels.



## Recommended Use:

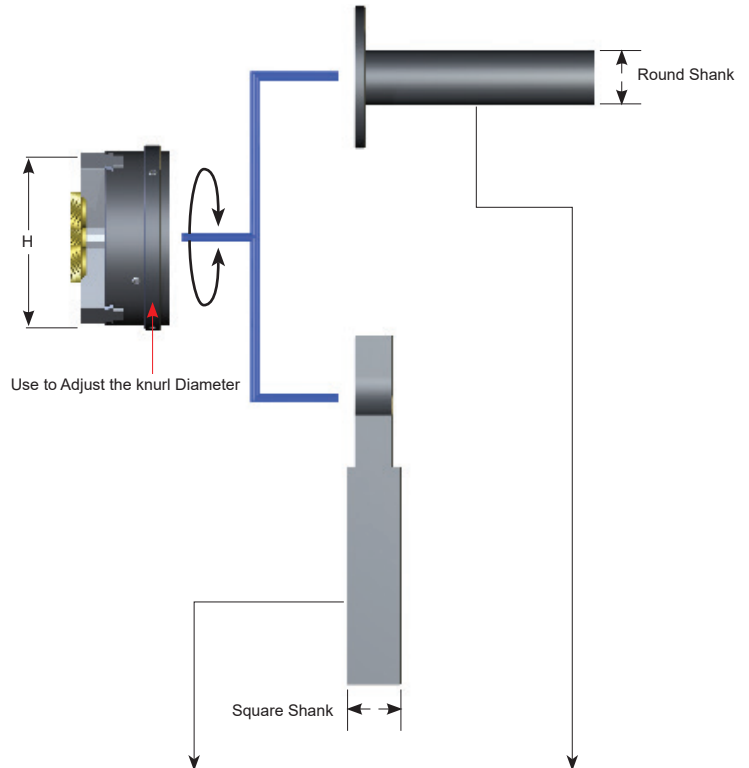
For best results, use beveled knurl wheels. End Feed the knurling tool into the blank until the desired length of the knurl is done.

**The Three Wheel Knurling Tools can knurl up to a shoulder, minimum diameter of .085" (2.16mm) up to 1-1/2" (38,1mm) diameter, and infinite lengths. For Screw Machine, C.N.C. Lathe, and Turret Lathe Applications**

### Optional 3WRKT Round Shank



### Optional 3WSKT Square Shank



3 Wheels Knurling Tool Head Specification						
Desc.	UPC No. 733101-	Capacity	H	Knurl Wheel Style	Knurl Pin Set	UPC No. 733101-
3WKT-06-2	<a href="#">23004</a>	2.16mm to 6.4mm .085" to 0.250"	44.5mm 1.75"	SW2 *	SW2.0P-3S	<a href="#">29060</a>
3WKT-12-2	<a href="#">23009</a>	2.16mm to 12.7mm .085" to 0.50"	57.2mm 2.25"	SW2 *	SW2.0P-3S	<a href="#">29060</a>
3WKT-25-2	<a href="#">23024</a>	3.2mm to 25.4mm 0.125" to 1.00"	76.2mm 3.00"	SW2 *	SW2.0P-3S	<a href="#">29060</a>
3WKT-40-2	23034	4.75mm to 38.1mm .187" to 1.50"	108mm 4.25"	SW2 *	SW2.0P-3S	<a href="#">29060</a>

Optional Square Shank			
Desc.	UPC No. 733101-	Shank Size	
		Square	Length
3WSKT-06-12	<a href="#">23096</a>	12mm	75mm
3WSKT-06-50	<a href="#">23095</a>	.500"	3.00"
3WSKT-06-162	<a href="#">23097</a>	16mm	88mm
		.625"	3.50"
3WSKT-06-20	<a href="#">23098</a>	20mm	100mm
3WSKT-06-75	<a href="#">23099</a>	.750"	4.00"
3WSKT-12-162	<a href="#">23082</a>	16mm	88mm
		.625"	3.50"
3WSKT-12-20	<a href="#">23100</a>	20mm	100mm
3WSKT-12-75	<a href="#">23102</a>	.750"	4.00"
3WSKT-12-25	<a href="#">23101</a>	25mm	125mm
3WSKT-12-100	<a href="#">23078</a>	1.00"	5.00"
3WSKT-25-20	<a href="#">23103</a>	20mm	100mm
3WSKT-25-75	<a href="#">23079</a>	.750"	4.00"
3WSKT-25-25	<a href="#">23104</a>	25mm	125mm
3WSKT-25-100	<a href="#">23080</a>	1.00"	5.00"
3WSKT-40-25	23113	25mm	125mm
3WSKT-40-100	<a href="#">23081</a>	1.00"	5.00"

Optional Round Shank			
Desc.	UPC No. 733101-	Shank Size	
		Dia.	Length
3WRKT-06-12	<a href="#">23105</a>	12mm	75mm
3WRKT-06-50	23110	.500"	3.00"
3WRKT-06-162	<a href="#">23106</a>	16mm	88mm
		.625"	3.50"
3WRKT-06-20	<a href="#">23107</a>	20mm	100mm
3WRKT-06-75	23111	.750"	4.00"
3WRKT-12-162	23115	16mm	88mm
		.625"	3.50"
3WRKT-12-20	23116	20mm	100mm
3WRKT-12-75	23112	.750"	4.00"
3WRKT-12-25	23117	25mm	125mm
3WRKT-12-100	23114	1.00"	5.00"
3WRKT-25-20	<a href="#">23125</a>	20mm	100mm
3WRKT-25-75	<a href="#">23130</a>	.750"	4.00"
3WRKT-25-25	<a href="#">23126</a>	25mm	125mm
3WRKT-25-100	<a href="#">23124</a>	1.00"	5.00"
3WRKT-40-25	<a href="#">23135</a>	25mm	125mm
3WRKT-40-100	<a href="#">23140</a>	1.00"	5.00"

Knurl Tool Head and Optional Shanks are Sold Separately.  
Supplied with 1 set of Beveled diagonal high speed knurl wheels, 30 TPI (.8mm)

