

Carmex Tool Wizard

Carmex offers an online software for Thread Turning and Mill-Thread to assist threading tools users to select and apply the correct tools to machine threads on CNC machining centers.

Both programs will find tools that are suitable for your application, calculate or adjust cutting data depending on the machining capability, and generate CNC program for a variety of controls.

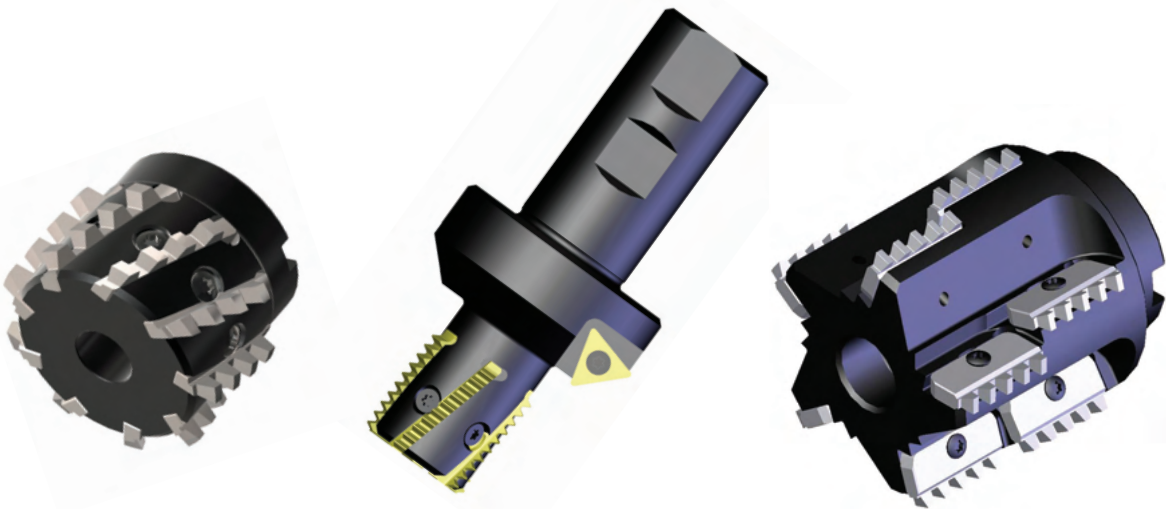
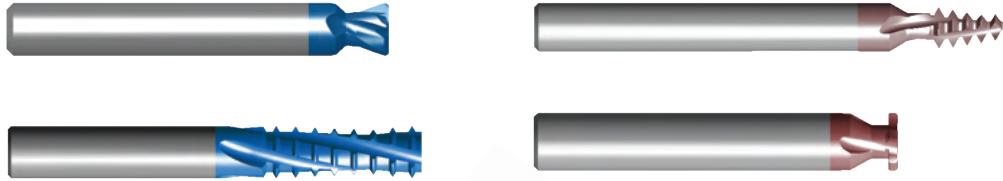
The software is available on our website carmex.com
Click on "Tool Wizard".



Special Tools

In addition to standard products, Carmex has a worldwide reputation for the design and manufacture of special tools according to customers' application.

Special tools are supplied in short delivery times.



Carmex and the Environment

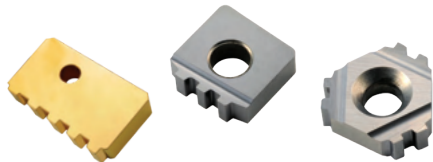
Carmex is fully committed to sustainable production methods. Our green central filtration and waste management system is a good example. This not only maximizes resource use, but also enables us to dispose of our waste in an environmentally responsible way. Carmex is an ISO 14001: 2015 certified manufacturer for its Environmental Management Systems.



Thread - Turning

Oil & Gas

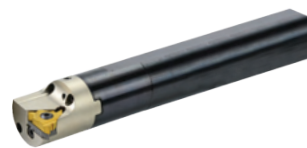
Threading Tools for the Oil & Gas industries



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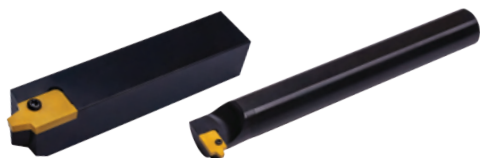
Modular Line

Turning adaptors and boring bars for internal threading and grooving applications



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Large Profile Inserts and Toolholders



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New Inserts for most of the existing applications

Tiny Tools

MFR

New inserts for Face Grooving with chip former



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CIM

Fast clamping system



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New Inserts for most of the existing applications & new Toolholders

Square Shank Toolholders

For internal machining



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New Products for this Catalog

Mini Tools

New Inserts

- Threading - Acme & Trapez DIN 103
- Grooving, Circlip Ring Grooves DIN 471/472

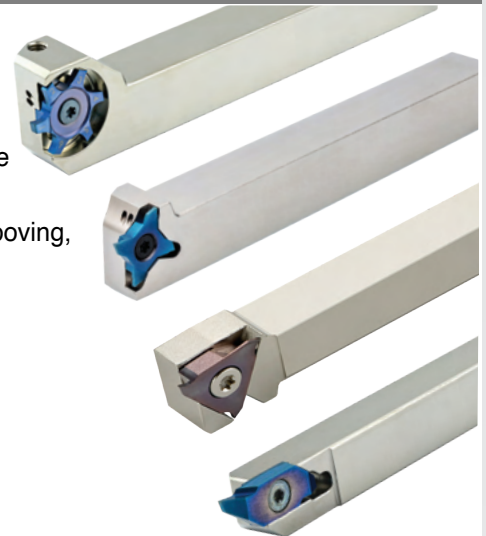


New Inserts for most of the existing applications & new Toolholders

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Swiss Line

- New line of polygon inserts and toolholders
- New 25 and 40 mm sized polygon inserts
- New GX7 advanced grade - high toughness for optimized performance
- New line of 16 mm sized 3 cutting edges inserts and toolholders
- G4 - New line of 4 cutting edges turning inserts and toolholders for grooving, parting-off and threading applications
- G6 - New line of 6 cutting edges inserts and toolholders for grooving, parting, turning and threading



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Carbide Shank Turning Toolholders and Inserts

Expanded range of Carbide Shank Turning Toolholders

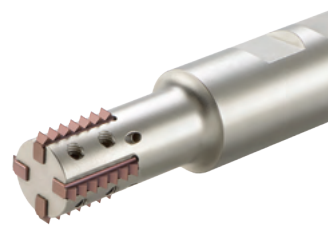


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Slim MT

High productivity, Slim cost

A new product line of indexable Mill-Thread inserts and toolholders including multiple straight flutes for machining long threads from small to large diameters



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Spiral Mill-Thread

New H21 and H27 inserts with corresponding Toolholders



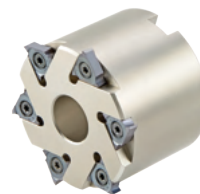
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CMT - Vertical Milling

New Inserts

- Dovetail 45°
- Groove Milling DIN 471/472
- Groove Milling Multi - Flute DIN 471/472
- Front and back corner rounding
- Front and back corner rounding - Multi Flute



New Shell Mill Cutter

New inserts for most of the existing profiles

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Mill - Thread Solid Carbide

MTB

New Thread-Mills for Whitworth, MJ and UNJ profiles



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EMT - External Thread Mills

New Thread-Mills for MJ and UNJ profiles for Aerospace



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New Products for this Catalog

Mini Mill - Thread

MTS Dental

New Thread-Mills for the Dental Implants Industry



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MTSB

Solid Carbide Thread-Mills with internal coolant bore and increased number of flutes for high performance, shorter cycle time and improved tool life



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FMTI Multi Flute

Solid Carbide Thread-Mills with a large number of flutes, for increased productivity and high performance



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Multi - Function Thread Mills 3 in 1 Operations

DMT

Thread-Mills for G (BSP) and NPT profiles



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MT Drill - MTD

Designed to drill, chamfer and thread mill the hole in one operation



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Hardcut

MTSH

Thread-Mills for MJ and UNJ profiles



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FSH

High productive Solid Carbide Thread-Mills with a large number of flutes for machining hard materials up to 65 HRC



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Supercut Solid Carbide Mills

High Performance CR - Supercut End - Mills

- Designed for high feed machining and high metal removal rate
- Compatible for a wide range of materials

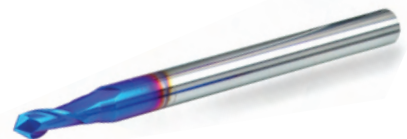


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Multi - Function Milling Tools

Performs multiple operations with one tool

- Spotting and Drilling
- Side Milling
- Chamfering
- Slotting
- Grooving
- Engraving



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CR - Supercut High Feed End-Mills

High performance milling tools, designed for high feed rates with shallow cutting depths

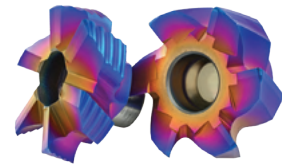


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Indexable CMT Roughers and Finishers

For excellent performance

Modular system using the standard CMT tool holders with various shank options

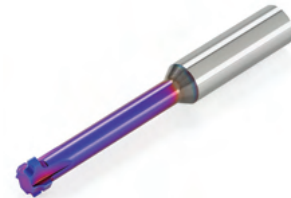


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Mini Chamfer and Countersink

Solid Carbide Radius Fillet End-Mills

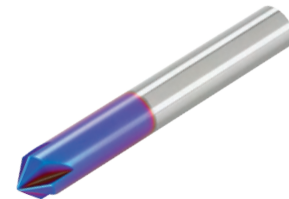
- Tools for different radius filleting
- Two, three and four flutes
- Cylindrical shank DIN6535-HA



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Countersink - Solid Carbide Chamfering End-Mills

- Tools for 45° and 60° chamfering and deburring
- Four flutes
- Cylindrical shank DIN6535-HA (Weldon shank available upon request)



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Gear Milling

Innovative tools for gear, spline, and rack manufacturing



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Main Content

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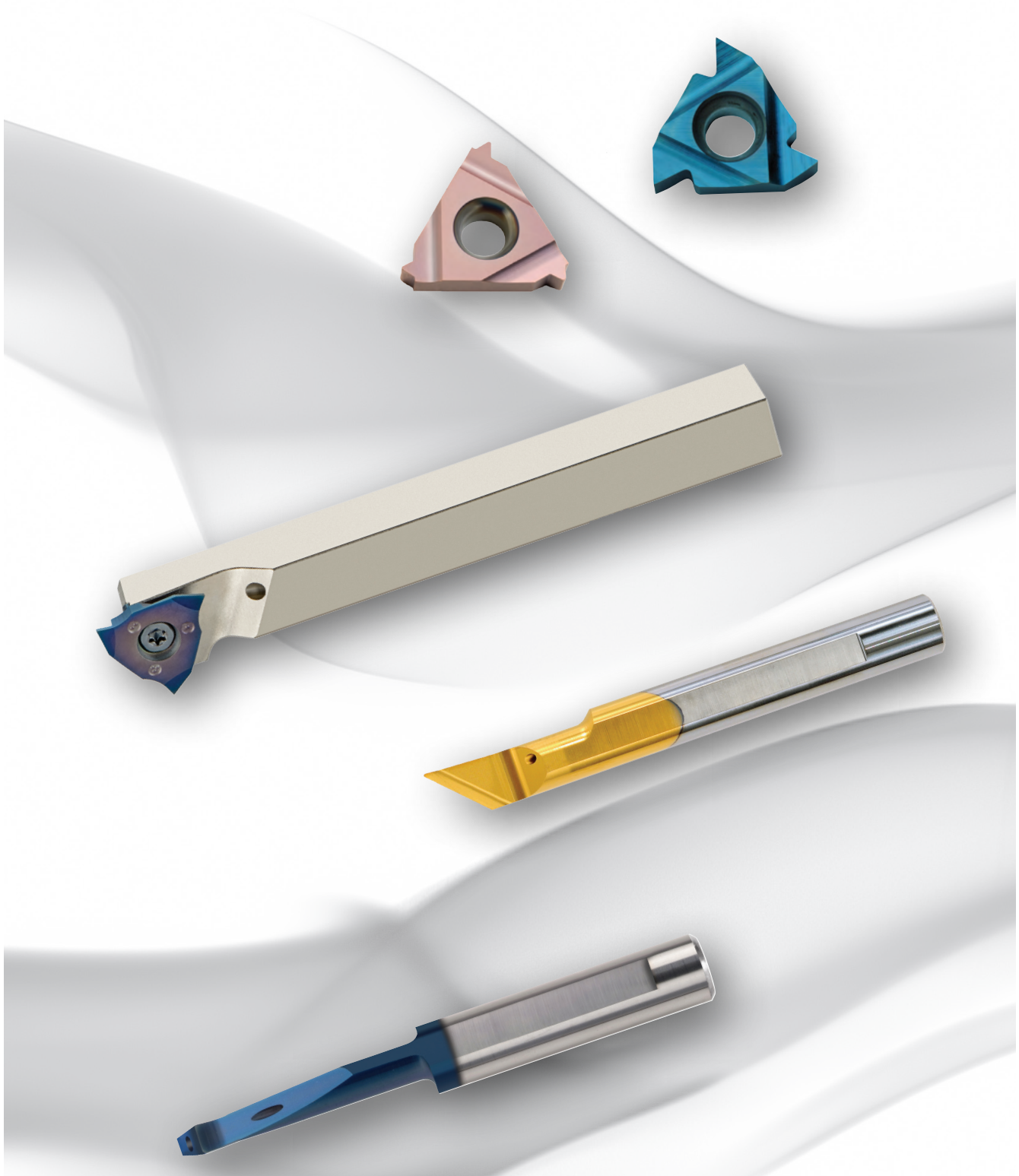
Turning Tools

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Milling Tools

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Turning Tools



A - Turning Tools

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A09 | Carbide Shank Turning Toolholders and Inserts

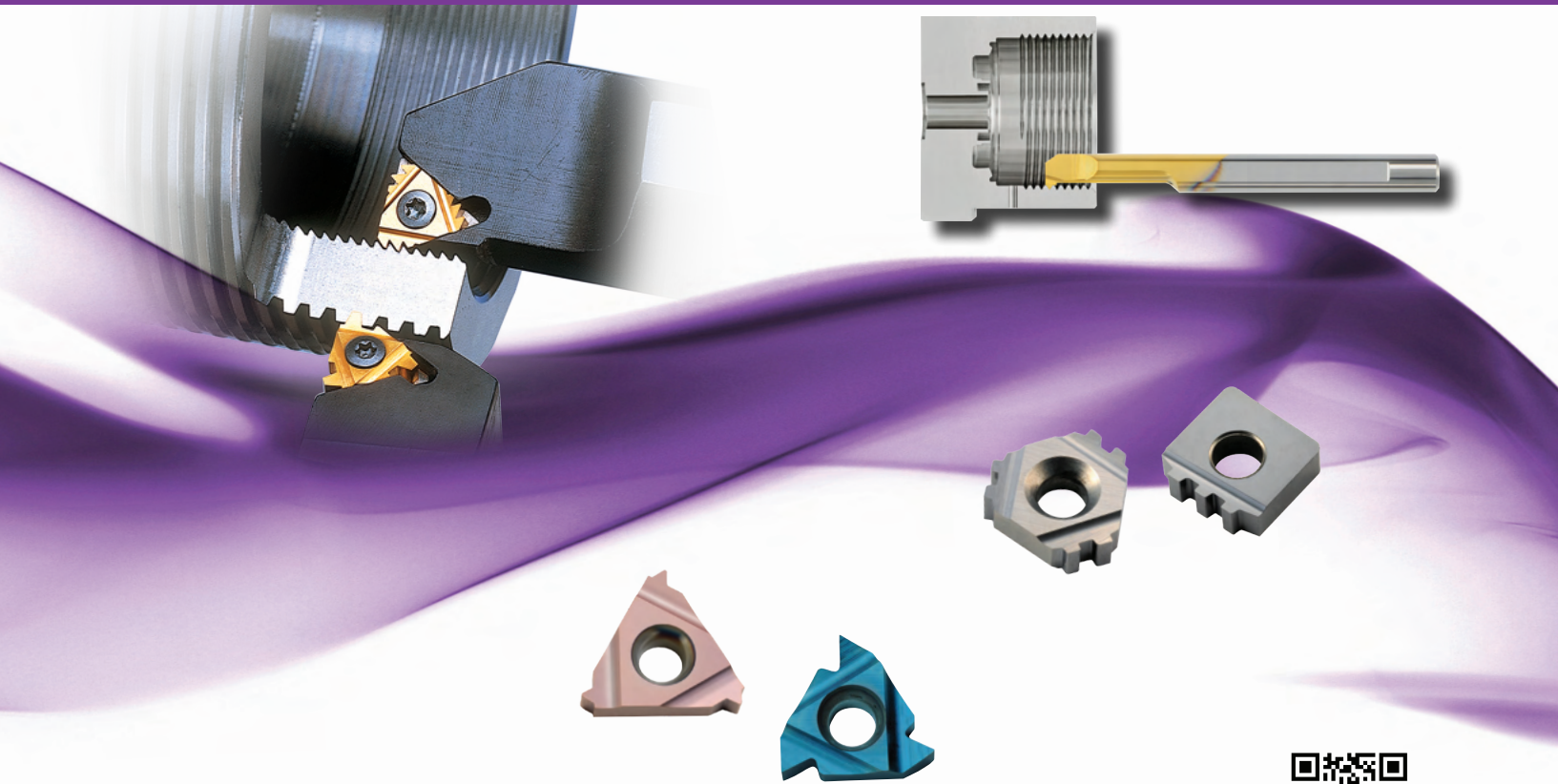
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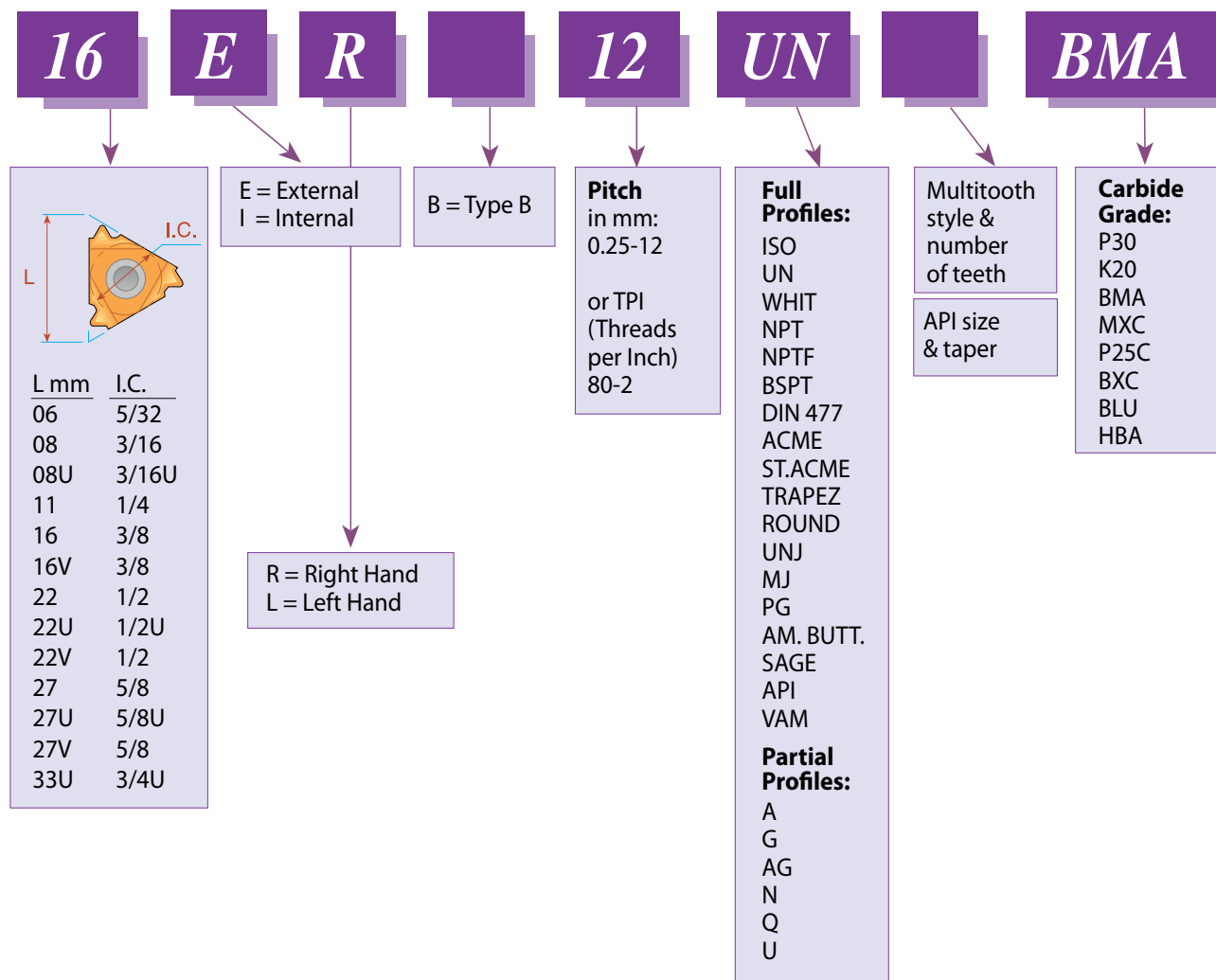


Type B
Demonstration

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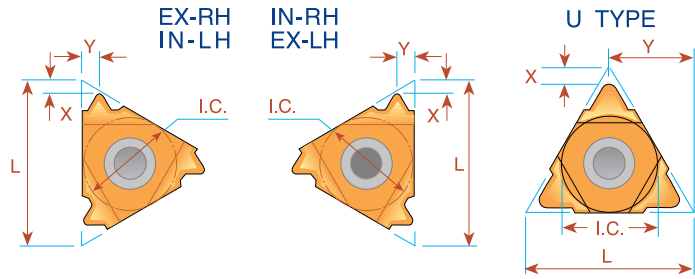
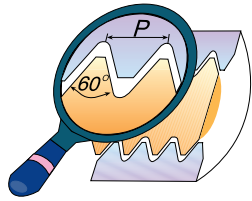
Product Identification

Thread Turning Inserts Ordering Codes



Thread Turning Inserts

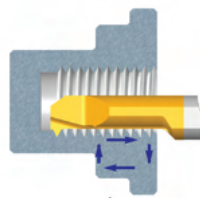
Partial Profile 60°



L mm	I.C.	Pitch Range		EXTERNAL		INTERNAL		X	Y
		mm	TPI	Ordering Code Right Hand	Ordering Code Left Hand	Ordering Code Right Hand	Ordering Code Left Hand		
6	5/32	0.5 - 1.25	48 - 20	ULTRA MINIATURE →		06 IR A60	06 IL A60	.02	.02
8	3/16	0.5 - 1.5	48 - 16	MINIATURE →		08 IR A60	08 IL A60	.02	.03
8U	3/16U	1.75 - 2.0	14 - 11	"U" MINIATURE →		08U IR/L U60		.03	.16
11	1/4	0.5 - 1.5	48 - 16	11 ER A60	11 EL A60	11 IR A60	11 IL A60	.03	.04
16	3/8	0.5 - 1.5	48 - 16	16 ER A60	16 EL A60	16 IR A60	16 IL A60	.03	.04
16	3/8	1.75 - 3.0	14 - 8	16 ER G60	16 EL G60	16 IR G60	16 IL G60	.05	.07
16	3/8	0.5 - 3.0	48 - 8	16 ER AG60	16 EL AG60	16 IR AG60	16 IL AG60	.05	.07
22	1/2	3.5 - 5.0	7 - 5	22 ER N60	22 EL N60	22 IR N60	22 IL N60	.07	.10
22U	1/2U	5.5 - 8.0	4.5 - 3.25	22U E/R/L U60				.02	.43
27	5/8	5.5 - 6.0	4.5 - 4	27 ER Q60	27 EL Q60	27 IR Q60	27 IL Q60	.08	.12
27U	5/8U	6.5 - 9.0	4 - 2.75	27U E/R/L U60				.04	.54

Order example: 16 ER G60 MXC

For small bore threading see page A06-12



Type B

Ground profile with sintered chip-breaker

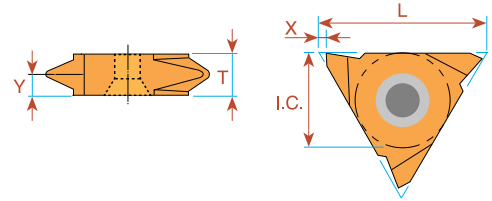


L mm	I.C.	Pitch Range		EXTERNAL	INTERNAL	X	Y
		mm	TPI	Ordering Code Right Hand	Ordering Code Right Hand		
16	3/8	0.5 - 1.5	48 - 16	16 ER B A60	16 IR B A60	.03	.04
16	3/8	1.75 - 3.0	14 - 8	16 ER B G60	16 IR B G60	.05	.07
16	3/8	0.5 - 3.0	48 - 8	16 ER B AG60	16 IR B AG60	.05	.07

Order example: 16 ER B G60 BMA

For carbide grade and cutting speed see page A04-2 and 3

Partial Profile 60° Vertical



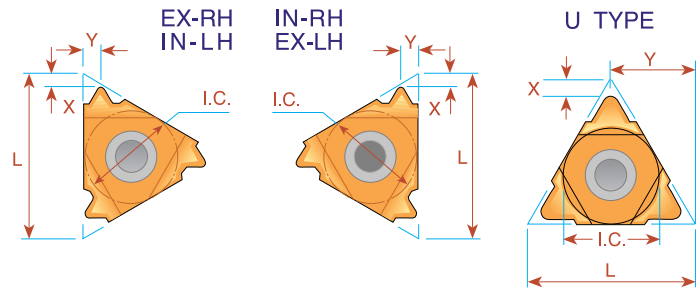
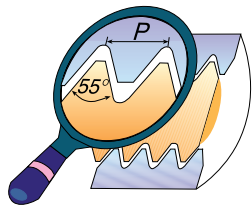
L mm	I.C.	Pitch Range		EXTERNAL Ordering Code		INTERNAL Ordering Code		X	Y	T
		mm	TPI	Right Hand	Left Hand	Right Hand	Left Hand			
16	3/8	0.5 - 1.5	48 - 16	16V ER A60	16V EL A60			.04	.04	.14
16	3/8	1.75 - 3.0	14 - 8	16V ER G60	16V EL G60			.04	.07	.14
16	3/8	0.5 - 3.0	48 - 8	16V ER AG60	16V EL AG60			.04	.07	.14
22	1/2	1.75 - 3.0	14 - 8	22V ER G60	22V EL G60			.05	.07	.16
22	1/2	0.5 - 5.0	7 - 5	22V ER N60	22V EL N60			.05	.10	.19
27	5/8	6.0 - 10.0	4 - 2.5	27V ER V60	27V EL V60	27V IR V60	27V IL V60	.07	.20	.41

Order example: 16V ER G60 BMA

For carbide grade and cutting speed see page A04-2 and 3

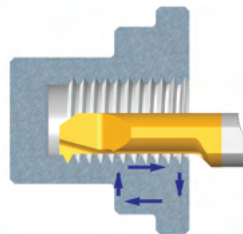
Thread Turning Inserts

Partial Profile 55°



L mm	I.C.	Pitch Range		EXTERNAL		INTERNAL		X	Y
		mm	TPI	Ordering Code	Ordering Code	Ordering Code	Ordering Code		
				Right Hand	Left Hand	Right Hand	Left Hand		
6	5/32	0.5 - 1.25	48 - 20	ULTRA MINIATURE →		06 IR A55	06 IL A55	.02	.02
8	3/16	0.5 - 1.5	48 - 16	MINIATURE →		08 IR A55	08 IL A55	.02	.03
8U	3/16U	1.75 - 2.0	14 - 11	"U" MINIATURE →		08U IR/L U55		.03	.16
11	1/4	0.5 - 1.5	48 - 16	11 ER A55	11 EL A55	11 IR A55	11 IL A55	.03	.04
16	3/8	0.5 - 1.5	48 - 16	16 ER A55	16 EL A55	16 IR A55	16 IL A55	.03	.04
16	3/8	1.75 - 3.0	14 - 8	16 ER G55	16 EL G55	16 IR G55	16 IL G55	.05	.07
16	3/8	0.5 - 3.0	48 - 8	16 ER AG55	16 EL AG55	16 IR AG55	16 IL AG55	.05	.07
22	1/2	3.5 - 5.0	7 - 5	22 ER N55	22 EL N55	22 IR N55	22 IL N55	.07	.10
22U	1/2U	5.5 - 8.0	4.5 - 3.25	22U E/R/L U55				.04	.43
27	5/8	5.5 - 6.0	4.5 - 4	27 ER Q55	27 EL Q55	27 IR Q55	27 IL Q55	.08	.11
27U	5/8U	6.5 - 9.0	4 - 2.75	27U E/R/L U55				.05	.54

Order example: 16 ER G55 MXC
For small bore threading see page A06-12



Type B

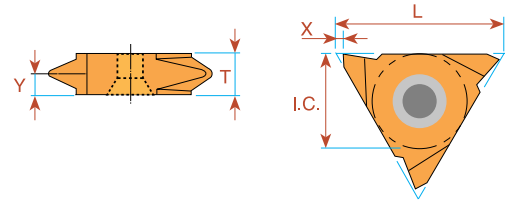
Ground Profile with Sintered Chip-breaker



L mm	I.C.	Pitch Range		EXTERNAL		INTERNAL		X	Y
		mm	TPI	Ordering Code	Ordering Code	Ordering Code	Ordering Code		
				Right Hand	Right Hand	Right Hand	Right Hand		
16	3/8	1.75 - 3.0	14 - 8	16 ER B G55	16 IR B G55	16 IR B G55	16 IR B G55	.05	.07
16	3/8	0.5 - 3.0	48 - 8	16 ER B AG55	16 IR B AG55	16 IR B AG55	16 IR B AG55	.05	.07

Order example: 16 ER B G55 BMA
For carbide grade and cutting speed see page A04-2 and 3

Partial Profile 55° Vertical



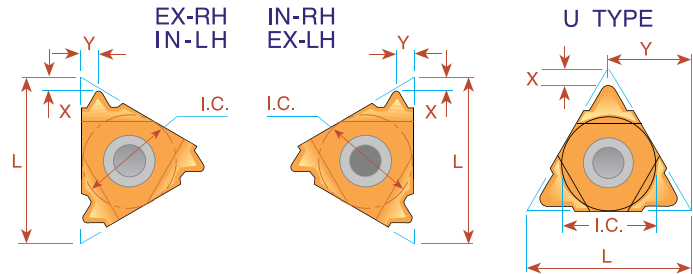
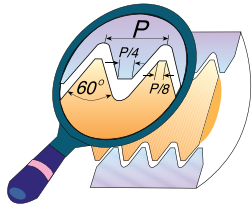
L mm	I.C.	Pitch Range		EXTERNAL Ordering Code		INTERNAL Ordering Code		X	Y	T
		mm	TPI	Right Hand	Left Hand	Right Hand	Left Hand			
16	3/8	0.5 - 1.5	48 - 16	16V ER A55	16V EL A55			.04	.04	.14
16	3/8	1.75 - 3.0	14 - 8	16V ER G55	16V EL G55			.04	.07	.14
16	3/8	0.5 - 3.0	48 - 8	16V ER AG55	16V EL AG55			.04	.07	.14
22	1/2	3.5 - 5.0	7 - 5	22V ER N55	22V EL N55			.05	.10	.19
27	5/8	6.0 - 10.0	4 - 2.5	27V ER V55	27V EL V55	27V IR V55	27V IL V55	.07	.20	.41

Order example: 22V ER N55 BMA

For carbide grade and cutting speed see page A04-2 and 3

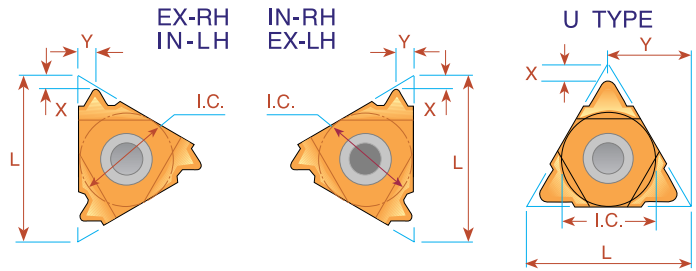
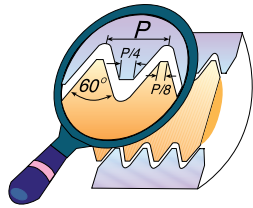
Thread Turning Inserts

ISO - metric



Pitch mm	L mm	I.C.	EXTERNAL		X	Y	INTERNAL		X	Y
			Right Hand	Left Hand			Right Hand	Left Hand		
0.25	6	5/32					06 IR 0.25 ISO	06 IL 0.25 ISO	.03	.01
0.5	6	5/32					06 IR 0.5 ISO	06 IL 0.5 ISO	.04	.02
0.75	6	5/32	<i>ULTRA MINIATURE</i> →				06 IR 0.75 ISO	06 IL 0.75 ISO	.03	.02
1.0	6	5/32					06 IR 1.0 ISO	06 IL 1.0 ISO	.03	.02
1.25	6	5/32					06 IR 1.25 ISO	06 IL 1.25 ISO	.02	.02
0.25	8	3/16					08 IR 0.25 ISO	08 IL 0.25 ISO	.03	.01
0.5	8	3/16					08 IR 0.5 ISO	08 IL 0.5 ISO	.02	.02
0.75	8	3/16	<i>MINIATURE</i> →				08 IR 0.75 ISO	08 IL 0.75 ISO	.02	.02
1.0	8	3/16					08 IR 1.0 ISO	08 IL 1.0 ISO	.02	.02
1.25	8	3/16					08 IR 1.25 ISO	08 IL 1.25 ISO	.02	.03
1.5	8	3/16					08 IR 1.5 ISO	08 IL 1.5 ISO	.02	.03
1.75	8	3/16					08 IR 1.75 ISO	08 IL 1.75 ISO	.02	.03
2.0	8U	3/16U	<i>"U" MINIATURE</i> →				08U IR/L 2.0 ISO		.04	.16
0.25	11	1/4	11 ER 0.25 ISO	11 EL 0.25 ISO	.03	.01				
0.3	11	1/4	11 ER 0.3 ISO	11 EL 0.3 ISO	.02	.01				
0.35	11	1/4	11 ER 0.35 ISO	11 EL 0.35 ISO	.03	.02	11 IR 0.35 ISO	11 IL 0.35 ISO	.03	.01
0.4	11	1/4	11 ER 0.4 ISO	11 EL 0.4 ISO	.03	.02	11 IR 0.4 ISO	11 IL 0.4 ISO	.03	.02
0.45	11	1/4	11 ER 0.45 ISO	11 EL 0.45 ISO	.03	.02	11 IR 0.45 ISO	11 IL 0.45 ISO	.03	.02
0.5	11	1/4	11 ER 0.5 ISO	11 EL 0.5 ISO	.02	.02	11 IR 0.5 ISO	11 IL 0.5 ISO	.02	.02
0.6	11	1/4	11 ER 0.6 ISO	11 EL 0.6 ISO	.02	.02	11 IR 0.6 ISO	11 IL 0.6 ISO	.02	.02
0.7	11	1/4	11 ER 0.7 ISO	11 EL 0.7 ISO	.02	.02	11 IR 0.7 ISO	11 IL 0.7 ISO	.02	.02
0.75	11	1/4	11 ER 0.75 ISO	11 EL 0.75 ISO	.02	.02	11 IR 0.75 ISO	11 IL 0.75 ISO	.02	.02
0.8	11	1/4	11 ER 0.8 ISO	11 EL 0.8 ISO	.02	.02	11 IR 0.8 ISO	11 IL 0.8 ISO	.02	.02
1.0	11	1/4	11 ER 1.0 ISO	11 EL 1.0 ISO	.03	.03	11 IR 1.0 ISO	11 IL 1.0 ISO	.02	.03
1.25	11	1/4	11 ER 1.25 ISO	11 EL 1.25 ISO	.03	.04	11 IR 1.25 ISO	11 IL 1.25 ISO	.03	.03
1.5	11	1/4	11 ER 1.5 ISO	11 EL 1.5 ISO	.03	.04	11 IR 1.5 ISO	11 IL 1.5 ISO	.03	.04
1.75	11	1/4	11 ER 1.75 ISO	11 EL 1.75 ISO	.03	.04	11 IR 1.75 ISO	11 IL 1.75 ISO	.03	.04
2.0	11	1/4	11 ER 2.0 ISO	11 EL 2.0 ISO	.03	.04	11 IR 2.0 ISO	11 IL 2.0 ISO	.03	.04
2.5	11	1/4					11 IR 2.5 ISO	11 IL 2.5 ISO	.03	.05
0.25	16	3/8	16 ER 0.25 ISO	16 EL 0.25 ISO	.03	.01				
0.3	16	3/8	16 ER 0.3 ISO	16 EL 0.3 ISO	.02	.01				
0.35	16	3/8	16 ER 0.35 ISO	16 EL 0.35 ISO	.03	.02	16 IR 0.35 ISO	16 IL 0.35 ISO	.03	.01
0.4	16	3/8	16 ER 0.4 ISO	16 EL 0.4 ISO	.03	.02	16 IR 0.4 ISO	16 IL 0.4 ISO	.03	.02
0.45	16	3/8	16 ER 0.45 ISO	16 EL 0.45 ISO	.03	.02	16 IR 0.45 ISO	16 IL 0.45 ISO	.03	.02
0.5	16	3/8	16 ER 0.5 ISO	16 EL 0.5 ISO	.02	.02	16 IR 0.5 ISO	16 IL 0.5 ISO	.02	.02
0.6	16	3/8	16 ER 0.6 ISO	16 EL 0.6 ISO	.02	.02	16 IR 0.6 ISO	16 IL 0.6 ISO	.02	.02
0.7	16	3/8	16 ER 0.7 ISO	16 EL 0.7 ISO	.02	.02	16 IR 0.7 ISO	16 IL 0.7 ISO	.02	.02
0.75	16	3/8	16 ER 0.75 ISO	16 EL 0.75 ISO	.02	.02	16 IR 0.75 ISO	16 IL 0.75 ISO	.02	.02
0.8	16	3/8	16 ER 0.8 ISO	16 EL 0.8 ISO	.02	.02	16 IR 0.8 ISO	16 IL 0.8 ISO	.02	.02
1.0	16	3/8	16 ER 1.0 ISO	16 EL 1.0 ISO	.03	.03	16 IR 1.0 ISO	16 IL 1.0 ISO	.02	.03
1.25	16	3/8	16 ER 1.25 ISO	16 EL 1.25 ISO	.03	.04	16 IR 1.25 ISO	16 IL 1.25 ISO	.03	.03
1.5	16	3/8	16 ER 1.5 ISO	16 EL 1.5 ISO	.03	.04	16 IR 1.5 ISO	16 IL 1.5 ISO	.03	.04
1.75	16	3/8	16 ER 1.75 ISO	16 EL 1.75 ISO	.04	.05	16 IR 1.75 ISO	16 IL 1.75 ISO	.04	.05
2.0	16	3/8	16 ER 2.0 ISO	16 EL 2.0 ISO	.04	.05	16 IR 2.0 ISO	16 IL 2.0 ISO	.04	.05
2.5	16	3/8	16 ER 2.5 ISO	16 EL 2.5 ISO	.04	.06	16 IR 2.5 ISO	16 IL 2.5 ISO	.04	.06
3.0	16	3/8	16 ER 3.0 ISO	16 EL 3.0 ISO	.05	.06	16 IR 3.0 ISO	16 IL 3.0 ISO	.04	.06
3.5	16	3/8	16 ER 3.5 ISO	16 EL 3.5 ISO	.05	.06	16 IR 3.5 ISO	16 IL 3.5 ISO	.05	.07

ISO - metric

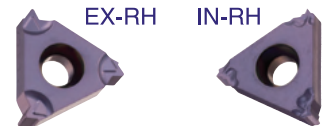
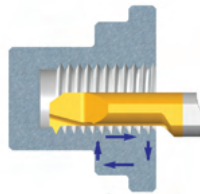


Pitch mm	L mm	I.C.	EXTERNAL				INTERNAL			
			Ordering Code		X	Y	Ordering Code		X	Y
			Right Hand	Left Hand			Right Hand	Left Hand		
3.5	22	1/2	22 ER 3.5 ISO	22 EL 3.5 ISO	.06	.09	22 IR 3.5 ISO	22 IL 3.5 ISO	.06	.09
4.0	22	1/2	22 ER 4.0 ISO	22 EL 4.0 ISO	.06	.09	22 IR 4.0 ISO	22 IL 4.0 ISO	.06	.09
4.5	22	1/2	22 ER 4.5 ISO	22 EL 4.5 ISO	.07	.09	22 IR 4.5 ISO	22 IL 4.5 ISO	.06	.09
5.0	22	1/2	22 ER 5.0 ISO	22 EL 5.0 ISO	.07	.10	22 IR 5.0 ISO	22 IL 5.0 ISO	.06	.09
5.5	22	1/2	22 ER 5.5 ISO	22 EL 5.5 ISO	.07	.10	22 IR 5.5 ISO	22 IL 5.5 ISO	.06	.09
6.0	22	1/2	*22 ER 6.0 ISO	*22 EL 6.0 ISO	.07	.11	22 IR 6.0 ISO	22 IL 6.0 ISO	.06	.09
5.5	22U	1/2U	22U ER/L 5.5 ISO		.09	.43	22U IR/L 5.5 ISO		.09	.43
6.0	22U	1/2U	22U ER/L 6.0 ISO		.10	.43	22U IR/L 6.0 ISO		.08	.43
5.5	27	5/8	27 ER 5.5 ISO	27 EL 5.5 ISO	.07	.11	27 IR 5.5 ISO	27 IL 5.5 ISO	.06	.09
6.0	27	5/8	27 ER 6.0 ISO	27 EL 6.0 ISO	.08	.11	27 IR 6.0 ISO	27 IL 6.0 ISO	.07	.10
8.0	27U	5/8U	27U ER/L 8.0 ISO		.09	.54	27U IR/L 8.0 ISO		.09	.54
12.0	33U	3/4U	33U ER/L 12.0 ISO		.10	.65	33U IR/L 12.0 ISO		.14	.67

* Special holder required

Order example: 22 IR 3.5 ISO BMA

For small bore threading see page A06-13



Type B

Ground Profile with Sintered Chip-breaker

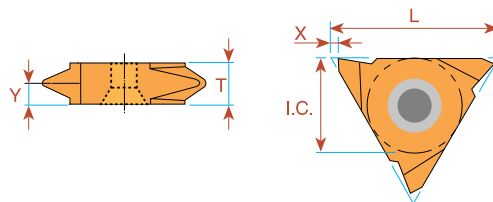
Pitch mm	L mm	I.C.	EXTERNAL		X	Y	INTERNAL		X	Y
			Ordering Code	Right Hand			Ordering Code	Right Hand		
0.5	11	1/4					11 IR B 0.5 ISO		.02	.02
0.75	11	1/4					11 IR B 0.75 ISO		.02	.02
0.8	11	1/4					11 IR B 0.8 ISO		.02	.02
1.0	11	1/4					11 IR B 1.0 ISO		.02	.02
1.25	11	1/4					11 IR B 1.25 ISO		.03	.04
1.5	11	1/4					11 IR B 1.5 ISO		.03	.04
1.75	11	1/4					11 IR B 1.75 ISO		.03	.04
2.0	11	1/4					11 IR B 2.0 ISO		.03	.04
0.8	16	3/8	16 ER B 0.8 ISO		.02	.02				
1.0	16	3/8	16 ER B 1.0 ISO		.03	.03	16 IR B 1.0 ISO		.02	.03
1.25	16	3/8	16 ER B 1.25 ISO		.03	.04	16 IR B 1.25 ISO		.03	.03
1.5	16	3/8	16 ER B 1.5 ISO		.03	.04	16 IR B 1.5 ISO		.03	.04
1.75	16	3/8	16 ER B 1.75 ISO		.04	.05	16 IR B 1.75 ISO		.04	.05
2.0	16	3/8	16 ER B 2.0 ISO		.04	.05	16 IR B 2.0 ISO		.04	.05
2.5	16	3/8	16 ER B 2.5 ISO		.04	.06	16 IR B 2.5 ISO		.04	.06
3.0	16	3/8	16 ER B 3.0 ISO		.05	.06	16 IR B 3.0 ISO		.04	.06

Order example: 16 IR B 1.5 ISO BMA

For carbide grade and cutting speed see page A04-2 and 3

Thread Turning Inserts

ISO - metric Vertical



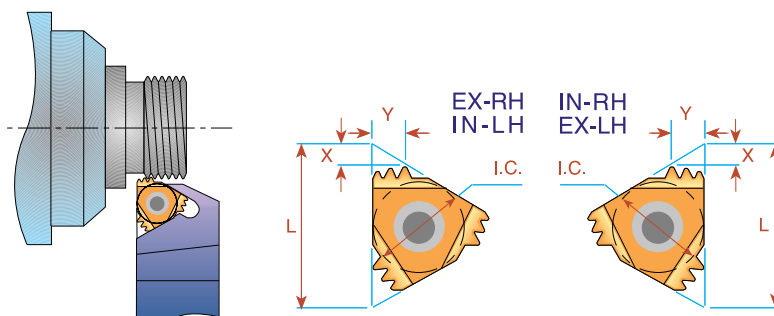
Pitch mm	L mm	I.C.	EXTERNAL		INTERNAL		X	Y	T
			Right Hand	Left Hand	Right Hand	Left Hand			
0.5	16	3/8	16V ER 0.5 ISO	16V EL 0.5 ISO			.04	.02	.14
0.75	16	3/8	16V ER 0.75 ISO	16V EL 0.75 ISO			.04	.02	.14
0.8	16	3/8	16V ER 0.8 ISO	16V EL 0.8 ISO			.04	.02	.14
1.0	16	3/8	16V ER 1.0 ISO	16V EL 1.0 ISO			.04	.03	.14
1.25	16	3/8	16V ER 1.25 ISO	16V EL 1.25 ISO			.04	.04	.14
1.5	16	3/8	16V ER 1.5 ISO	16V EL 1.5 ISO			.04	.04	.14
1.75	16	3/8	16V ER 1.75 ISO	16V EL 1.75 ISO			.04	.05	.14
2.0	16	3/8	16V ER 2.0 ISO	16V EL 2.0 ISO			.04	.05	.14
2.5	16	3/8	16V ER 2.5 ISO	16V EL 2.5 ISO			.04	.06	.14
3.0	16	3/8	16V ER 3.0 ISO	16V EL 3.0 ISO			.04	.07	.14
* 8.0	27	5/8	27V ER 8.0 ISO	27V EL 8.0 ISO	27V IR 8.0 ISO	27 IL 8.0 ISO	.07	.20	.41
** 10.0	27	5/8	27V ER 10.0 ISO	27V EL 10.0 ISO	27V IR 10.0 ISO	27 IL 10.0 ISO	.07	.20	.41

Order example: 16V ER 1.5 ISO BMA

* Minimum bore: 2.36

** Minimum bore: 2.83

Multitooth



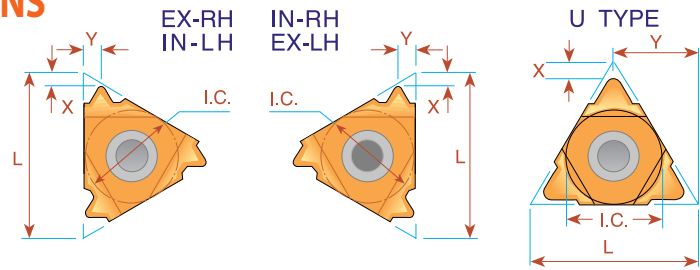
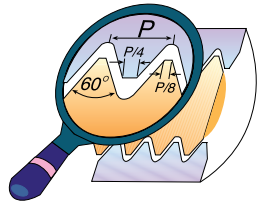
Pitch mm	L mm	I.C.	Number of Teeth	EXTERNAL		INTERNAL		X	Y
				Ordering Code	Anvil	Ordering Code	Anvil		
1.0	16	3/8	3	16 ER 1.0 ISO 3M	AE16M	16 IR 1.0 ISO 3M	AI16M	.07	.10
1.5	16	3/8	2	16 ER 1.5 ISO 2M	AE16M	16 IR 1.5 ISO 2M	AI16M	.06	.09
2.0	16	3/8	2	16 ER 2.0 ISO 2M	AE16M	16 IR 2.0 ISO 2M	AI16M	.06	.09
1.5	22	1/2	3	22 ER 1.5 ISO 3M	AE22M	22 IR 1.5 ISO 3M	AI22M	.09	.15
2.0	22	1/2	2	22 ER 2.0 ISO 2M	AE22M	22 IR 2.0 ISO 2M	AI22M	.08	.12
2.0	22	1/2	3	22 ER 2.0 ISO 3M	AE22M	22 IR 2.0 ISO 3M	AI22M	.12	.20
2.5	22	1/2	2	22 ER 2.5 ISO 2M	AE22M	22 IR 2.5 ISO 2M	AI22M	.09	.15
2.5	22	1/2	3	22 ER 2.5 ISO 3M	AE22M	22 IR 2.5 ISO 3M	AI22M	.15	.24
3.0	27	5/8	2	27 ER 3.0 ISO 2M	AE27M	27 IR 3.0 ISO 2M	AI27M	.11	.18

Order example: 22 IR 2.0 ISO 2M BMA

For recommended number of passes see page A04-4

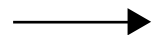
For carbide grade and cutting speed see page A04-2 and 3

UN - Unified UNC, UNF, UNEF, UNS



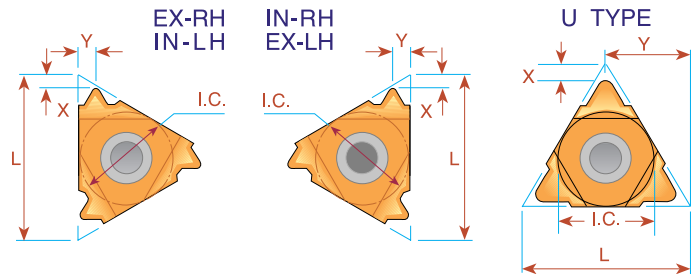
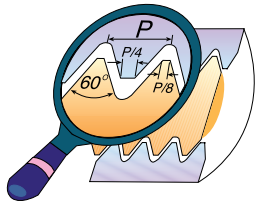
Pitch TPI	L mm	I.C.	EXTERNAL			INTERNAL				
			Ordering Code Right Hand	Ordering Code Left Hand	X	Y	Ordering Code Right Hand	Ordering Code Left Hand	X	Y
32	6	5/32	<i>ULTRA MINIATURE</i> →				06 IR 32 UN	06 IL 32 UN	.03	.02
28	6	5/32					06 IR 28 UN	06 IL 28 UN	.03	.02
24	6	5/32					06 IR 24 UN	06 IL 24 UN	.03	.02
20	6	5/32					06 IR 20 UN	06 IL 20 UN	.02	.02
18	6	5/32					06 IR 18 UN	06 IL 18 UN	.02	.03
32	8	3/16	<i>MINIATURE</i> →				08 IR 32 UN	08 IL 32 UN	.02	.02
28	8	3/16					08 IR 28 UN	08 IL 28 UN	.02	.02
24	8	3/16					08 IR 24 UN	08 IL 24 UN	.02	.02
20	8	3/16					08 IR 20 UN	08 IL 20 UN	.02	.03
18	8	3/16					08 IR 18 UN	08 IL 18 UN	.02	.03
16	8	3/16					08 IR 16 UN	08 IL 16 UN	.02	.03
14	8	3/16					08 IR 14 UN	08 IL 14 UN	.02	.03
13	8	3/16				**08 IR 13 UN		.03	.04	
13	8U	3/16U	<i>"U" MINIATURE</i> →				08U IR/L 13 UN		.04	.16
12	8U	3/16U					08U IR/L 12 UN		.04	.16
11	8U	3/16U					08U IR/L 11 UN		.04	.16
80	11	1/4	11 ER 80 UN	11 EL 80 UN	.03	.02	11 IR 80 UN	11 IL 80 UN	.03	.02
72	11	1/4	11 ER 72 UN	11 EL 72 UN	.03	.02	11 IR 72 UN	11 IL 72 UN	.03	.01
64	11	1/4	11 ER 64 UN	11 EL 64 UN	.03	.02	11 IR 64 UN	11 IL 64 UN	.03	.02
56	11	1/4	11 ER 56 UN	11 EL 56 UN	.03	.02	11 IR 56 UN	11 IL 56 UN	.03	.02
48	11	1/4	11 ER 48 UN	11 EL 48 UN	.02	.02	11 IR 48 UN	11 IL 48 UN	.02	.02
44	11	1/4	11 ER 44 UN	11 EL 44 UN	.02	.02	11 IR 44 UN	11 IL 44 UN	.02	.02
40	11	1/4	11 ER 40 UN	11 EL 40 UN	.02	.02	11 IR 40 UN	11 IL 40 UN	.02	.02
36	11	1/4	11 ER 36 UN	11 EL 36 UN	.02	.02	11 IR 36 UN	11 IL 36 UN	.02	.02
32	11	1/4	11 ER 32 UN	11 EL 32 UN	.02	.02	11 IR 32 UN	11 IL 32 UN	.02	.02
28	11	1/4	11 ER 28 UN	11 EL 28 UN	.02	.03	11 IR 28 UN	11 IL 28 UN	.02	.03
27	11	1/4	11 ER 27 UN	11 EL 27 UN	.03	.03	11 IR 27 UN	11 IL 27 UN	.03	.03
24	11	1/4	11 ER 24 UN	11 EL 24 UN	.03	.03	11 IR 24 UN	11 IL 24 UN	.03	.03
20	11	1/4	11 ER 20 UN	11 EL 20 UN	.03	.04	11 IR 20 UN	11 IL 20 UN	.03	.04
18	11	1/4	11 ER 18 UN	11 EL 18 UN	.03	.04	11 IR 18 UN	11 IL 18 UN	.03	.04
16	11	1/4	11 ER 16 UN	11 EL 16 UN	.04	.04	11 IR 16 UN	11 IL 16 UN	.04	.04
14	11	1/4	11 ER 14 UN	11 EL 14 UN	.04	.04	11 IR 14 UN	11 IL 14 UN	.04	.04
13	11	1/4					11 IR 13 UN	11 IL 13 UN	.03	.04
12	11	1/4					11 IR 12 UN	11 IL 12 UN	.04	.04
11	11	1/4					11 IR 11 UN	11 IL 11 UN	.03	.04
80	16	3/8	16 ER 80 UN	16 EL 80 UN	.03	.02	16 IR 80 UN	16 IL 80 UN	.03	.02
72	16	3/8	16 ER 72 UN	16 EL 72 UN	.03	.02	16 IR 72 UN	16 IL 72 UN	.03	.01
64	16	3/8	16 ER 64 UN	16 EL 64 UN	.03	.02	16 IR 64 UN	16 IL 64 UN	.03	.02
56	16	3/8	16 ER 56 UN	16 EL 56 UN	.03	.02	16 IR 56 UN	16 IL 56 UN	.03	.02
48	16	3/8	16 ER 48 UN	16 EL 48 UN	.02	.02	16 IR 48 UN	16 IL 48 UN	.02	.02
44	16	3/8	16 ER 44 UN	16 EL 44 UN	.02	.02	16 IR 44 UN	16 IL 44 UN	.02	.02
40	16	3/8	16 ER 40 UN	16 EL 40 UN	.02	.02	16 IR 40 UN	16 IL 40 UN	.02	.02
36	16	3/8	16 ER 36 UN	16 EL 36 UN	.02	.02	16 IR 36 UN	16 IL 36 UN	.02	.02

** To be used with Holder SIR 0009 K08 on page A02-10



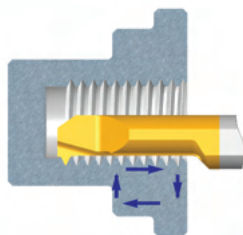
Thread Turning Inserts

UN - Unified **UNC, UNF, UNEF, UNS**



Pitch TPI	L mm	I.C.	EXTERNAL				INTERNAL			
			Ordering Code		X	Y	Ordering Code		X	Y
			Right Hand	Left Hand			Right Hand	Left Hand		
32	16	3/8	16 ER 32 UN	16 EL 32 UN	.02	.02	16 IR 32 UN	16 IL 32 UN	.02	.02
28	16	3/8	16 ER 28 UN	16 EL 28 UN	.02	.03	16 IR 28 UN	16 IL 28 UN	.02	.03
27	16	3/8	16 ER 27 UN	16 EL 27 UN	.03	.03	16 IR 27 UN	16 IL 27 UN	.03	.03
24	16	3/8	16 ER 24 UN	16 EL 24 UN	.03	.03	16 IR 24 UN	16 IL 24 UN	.03	.03
20	16	3/8	16 ER 20 UN	16 EL 20 UN	.03	.04	16 IR 20 UN	16 IL 20 UN	.03	.04
18	16	3/8	16 ER 18 UN	16 EL 18 UN	.03	.04	16 IR 18 UN	16 IL 18 UN	.03	.04
16	16	3/8	16 ER 16 UN	16 EL 16 UN	.04	.04	16 IR 16 UN	16 IL 16 UN	.04	.04
14	16	3/8	16 ER 14 UN	16 EL 14 UN	.04	.05	16 IR 14 UN	16 IL 14 UN	.04	.05
13	16	3/8	16 ER 13 UN	16 EL 13 UN	.04	.05	16 IR 13 UN	16 IL 13 UN	.04	.05
12	16	3/8	16 ER 12 UN	16 EL 12 UN	.04	.06	16 IR 12 UN	16 IL 12 UN	.04	.06
11.5	16	3/8	16 ER 11.5 UN	16 EL 11.5 UN	.04	.06	16 IR 11.5 UN	16 IL 11.5 UN	.04	.06
11	16	3/8	16 ER 11 UN	16 EL 11 UN	.04	.06	16 IR 11 UN	16 IL 11 UN	.04	.06
10	16	3/8	16 ER 10 UN	16 EL 10 UN	.04	.06	16 IR 10 UN	16 IL 10 UN	.04	.06
9	16	3/8	16 ER 9 UN	16 EL 9 UN	.05	.07	16 IR 9 UN	16 IL 9 UN	.05	.07
8	16	3/8	16 ER 8 UN	16 EL 8 UN	.05	.06	16 IR 8 UN	16 IL 8 UN	.04	.06
7	22	1/2	22 ER 7 UN	22 EL 7 UN	.06	.09	22 IR 7 UN	22 IL 7 UN	.06	.09
6	22	1/2	22 ER 6 UN	22 EL 6 UN	.06	.09	22 IR 6 UN	22 IL 6 UN	.06	.09
5	22	1/2	22 ER 5 UN	22 EL 5 UN	.07	.10	22 IR 5 UN	22 IL 5 UN	.06	.09
4.5	22U	1/2U	22U ER/L 4.5 UN		.08	.43	22U IR/L 4.5 UN		.09	.43
4	22U	1/2U	22U ER/L 4 UN		.08	.43	22U IR/L 4 UN		.09	.43
4.5	27	5/8	27 ER 4.5 UN	27 EL 4.5 UN	.07	.11	27 IR 4.5 UN	27 IL 4.5 UN	.07	.09
4	27	5/8	27 ER 4 UN	27 EL 4 UN	.08	.12	27 IR 4 UN	27 IL 4 UN	.07	.11
3	27U	5/8U	27U ER/L 3 UN		.10	.54	27U IR/L 3 UN		.11	.54
2	33U	3/4U	33U ER/L 2 UN		.11	.65	33U IR/L 2 UN		.14	.67

Order example: 22ER 7 UN BMA
 For small bore threading see page A06-13

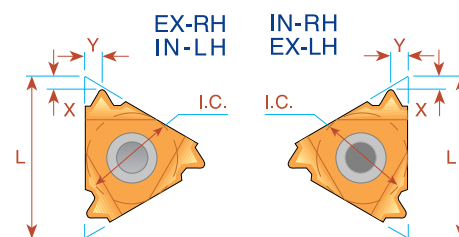
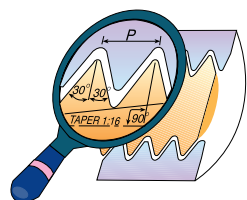


For carbide grade and cutting speed see page A04-2 and 3

Thread Turning Inserts

Threading Tools for the Oil & Gas Industries

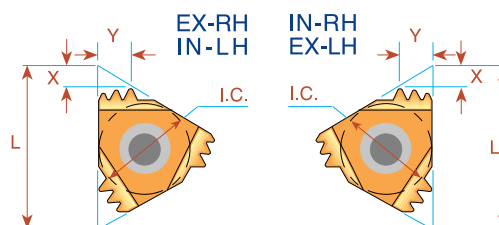
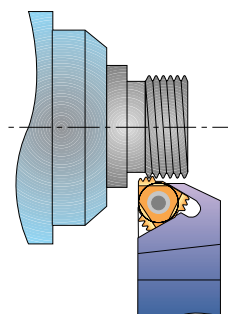
API Round



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL Ordering Code Right Hand	INTERNAL Ordering Code Right Hand	X	Y
10	16	3/8	.75	16 ER 10 API RD	16 IR 10 API RD	.06	.06
8	16	3/8	.75	16 ER 8 API RD	16 IR 8 API RD	.05	.06

Order example: 16 ER 10 API RD BMA

Multitooth



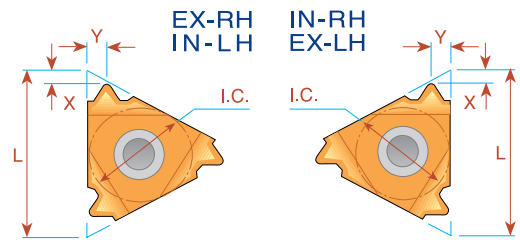
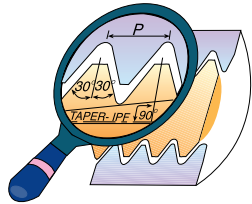
Pitch TPI	L mm	I.C.	Number of Teeth	EXTERNAL Ordering Code	Anvil	INTERNAL Ordering Code	Anvil	X	Y
10	22	1/2	2	22 ER 10API RD 2M	AE22M	22 IR 10API RD 2M	AI22M	.09	.15
10	27	5/8	3	27 ER 10API RD 3M	AE27M	27 IR 10API RD 3M	AI27M	.15	.24
8	27	5/8	2	27 ER 8API RD 2M	AE27M	27 IR 8API RD 2M	AI27M	.12	.18

Order example: 27 IR 10 API RD 3M MXC

For recommended number of passes see page A04-4

For carbide grade and cutting speed see page A04-2 and 3

OIL Threads



V-0.040

Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
5	22	1/2	3	22 ER 5 API 403	22 IR 5 API 403	.07	.10	23/8-4 1/2 REG

(1) V-0.038R

Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
4	27	5/8	2	27 ER 4 API 382	27 IR 4 API 382	.08	.08	NC23-NC50
4	27	5/8	3	27 ER 4 API 383	27 IR 4 API 383	.08	.11	NC56-NC77
4	22	1/2	2	22 ER 4 API 382	22 IR 4 API 382	.08	.10	NC23-NC50
4	22	1/2	3	22 ER 4 API 383	22 IR 4 API 383	.08	.10	NC56-NC77

Order example: 27 ER 4 API 383 MXC

(1) V-0.050

Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
4	27	5/8	2	27 ER 4 API 502	27 IR 4 API 502	.08	.12	65/8 REG
4	27	5/8	3	27 ER 4 API 503	27 IR 4 API 503	.08	.12	5 1/2, 7 5/8, 8 5/8 REG
4	22	1/2	2	22 ER 4 API 502	22 IR 4 API 502	.075	.11	65/8 REG
4	22	1/2	3	22 ER 4 API 503	22 IR 4 API 503	.075	.11	5 1/2, 7 5/8, 8 5/8 REG

Order example: 22 ER 4 API 502 BMA

V-0.055

Macaroni Tubing (MT)

American Macaroni Tubing (AMT)

American Mining Macaroni Tubing (AMMT)

Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
6	22	1/2	1.5	22 ER 6 API 551.5	-	.08	.07	NC10,NC12,NC13,NC16
6	16	3/8	1.5	-	16 IR 6 API 551.5	.08	.07	NC10,NC12,NC13 *
6	22	1/2	1.5	-	22 IR 6 API 551.5	.08	.07	NC16 **

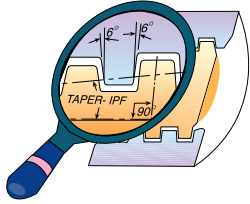
* For NC10,NC12 use holder SIR062516CB
For NC13 use holders SIR0750P16/SIR0750P16B/SIR0750S16CB

** For NC16 use holder SIR1000R22

For Carbide Grade and Cutting Speed see page A04-2 and 3

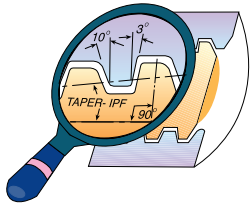
Thread Turning Inserts

OIL Threads Extreme - Line Casing



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
6	22	1/2	1.50	22 ER 6 EL 1.5	22 IR 6 EL 1.5	.07	.07	5-7 ⁵ / ₈
5	22	1/2	1.25	22 ER 5 EL 1.25	22 IR 5 EL 1.25	.09	.09	8 ⁵ / ₈ -10 ³ / ₄

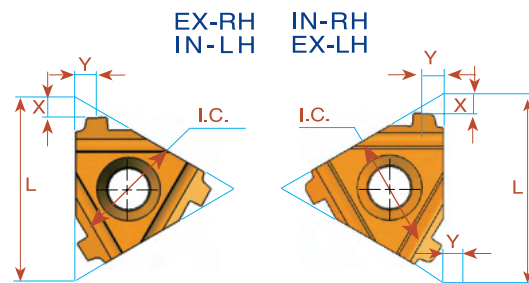
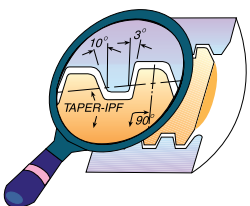
Buttress Casing



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
5	22	1/2	.75	22 ER 5 BUT 0.75	22 IR 5 BUT 0.75	.09	.09	4 ¹ / ₂ -13 ³ / ₈
5	22	1/2	1.00	22 ER 5 BUT 1.0	22 IR 5 BUT 1.0	.09	.09	16-20

Order example: 22 ER 5 BUT 0.75 MXC

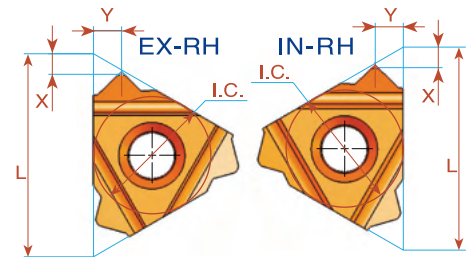
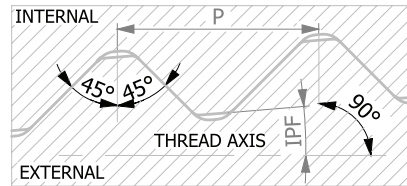
VAM



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	X	Y	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand			Ordering Code Right Hand			
8	16	3/8	.75	16 ER 8 VAM	.07	.07	16 IR 8 VAM	.07	.07	2 3/8 - 2 7/8
6	22	1/2	.75	22 ER 6 VAM	.09	.09	22 IR 6 VAM	.10	.10	3 1/2 - 4 1/2
5	22	1/2	.75	22 ER 5 VAM	.09	.11	22 IR 5 VAM	.09	.10	5 - 13 3/8

For carbide grade and cutting speed see page A04-2 and 3

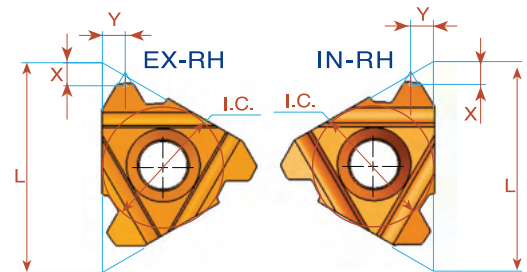
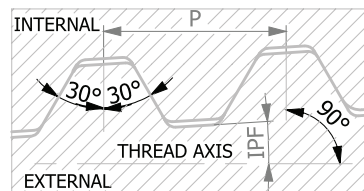
HUGHES



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
3.5	27	5/8	2	27 ER 3.5 H 902	27 IR 3.5 H 902	.11	.15	3 1/2 - 65/8
3.5	27	5/8	3	27 ER 3.5 H 903	27 IR 3.5 H 903	.11	.15	7 - 85/8
3	27	5/8	1.25	27 ER 3 SLH 90	27 IR 3 SLH 90	.13	.18	2 3/8 - 3 1/2

Order example: 27 ER 3.5 H-903 BMA

PAC

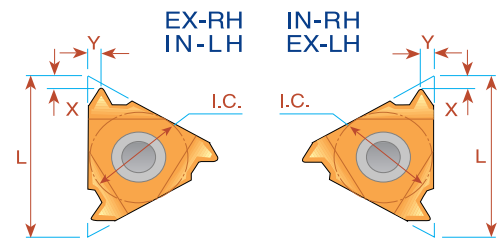
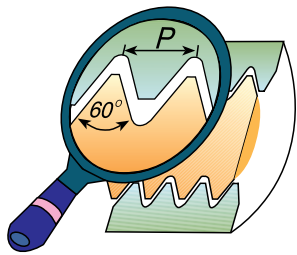


Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL	INTERNAL	X	Y	Connection No. or Size
				Ordering Code Right Hand	Ordering Code Right Hand			
4	22	1/2	1.5	22 ER 4 PAC	22 IR 4 PAC	.09	.09	2 1/2 - 27/8
4	27	5/8	1.5	27 ER 4 PAC	27 IR 4 PAC	.09	.09	2 1/2 - 27/8

Order example: 22 ER 4 PAC MXC

Thread Turning Inserts

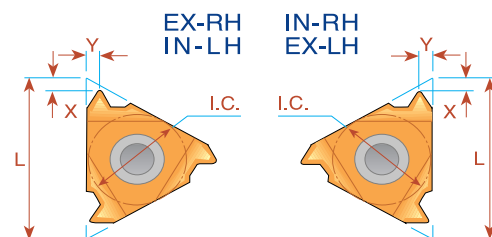
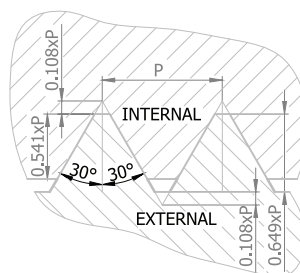
NPS



Pitch TPI	L mm	I.C.	EXTERNAL		INTERNAL		X	Y
			Ordering Code Right Hand	Ordering Code Left Hand	Ordering Code Right Hand	Ordering Code Left Hand		
18	16	3/8	16 ER 18 NPS	16 EL 18 NPS	16 IR 18 NPS	16 IL 18 NPS	.03	.04
14	16	3/8	16 ER 14 NPS	16 EL 14 NPS	16 IR 14 NPS	16 IL 14 NPS	.04	.05
11.5	16	3/8	16 ER 11.5 NPS	16 EL 11.5 NPS	16 IR 11.5 NPS	16 IL 11.5 NPS	.04	.06
8	16	3/8	16 ER 8 NPS	16 EL 8 NPS	16 IR 8 NPS	16 IL 8 NPS	.05	.07

Order example: 16 ER 18 NPS BMA

NPSM



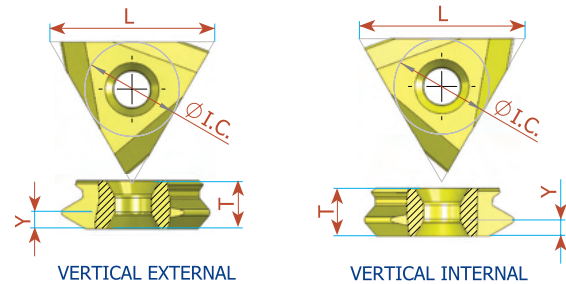
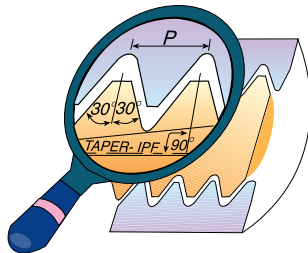
Pitch TPI	L mm	I.C.	EXTERNAL	X	Y	INTERNAL	X	Y
			Ordering Code Right Hand			Ordering Code Right Hand		
18	8	3/16				08 IR 18 NPSM	.03	.03
18	11	1/4				11 IR 18 NPSM	.03	.04
18	16	3/8	16 ER 18 NPSM	.03	.04			
14	16	3/8	16 ER 14 NPSM	.04	.05	16 IR 14 NPSM	.04	.05
11.5	16	3/8	16 ER 11.5 NPSM	.05	.06	16 IR 11.5 NPSM	.05	.06
8	16	3/8	16 ER 8 NPSM	.05	.06	16 IR 8 NPSM	.05	.06

Order example: 16 IR 14 NPSM MXC

For Carbide Grade and Cutting Speed see page A04 - 2-3

Vertical

API



Thread Form	Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL Ordering Code	Y	T	Connection No. or Size
V-0.040	5	27	5/8	3	TNMB 54 ER 5 API 403	.10	.25	23/8-4 1/2 REG
V-0.038R	4	27	5/8	2	TNMC 55 ER 4 API 382	.11	.31	NC23-NC50
V-0.038R	4	27	5/8	3	TNMC 55 ER 4 API 383	.11	.31	NC56-NC77
V-0.050	4	27	5/8	2	TNMC 55 ER 4 API 502	.12	.31	6 5/8 REG
V-0.050	4	27	5/8	3	TNMC 55 ER 4 API 503	.12	.31	5 1/2, 7 5/8, 8 5/8 REG

Vertical inserts to be used with compatible holders on the market

Order example: TNMC 55 ER 4 API 503 BMA

Thread Form	Pitch TPI	L mm	I.C.	Taper IPF	INTERNAL Ordering Code	Y	T	Connection No. or Size
V-0.040	5	27	5/8	3	TNMB 54 IR 5 API 403	.10	.25	23/8-4 1/2 REG
V-0.038R	4	27	5/8	2	TNMC 55 IR 4 API 382	.11	.31	NC23-NC50
V-0.038R	4	27	5/8	3	TNMC 55 IR 4 API 383	.11	.31	NC56-NC77
V-0.050	4	27	5/8	2	TNMC 55 IR 4 API 502	.12	.31	6 5/8 REG
V-0.050	4	27	5/8	3	TNMC 55 IR 4 API 503	.12	.31	5 1/2, 7 5/8, 8 5/8 REG

Vertical inserts to be used with compatible holders on the market

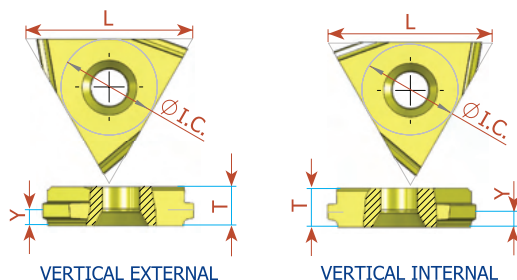
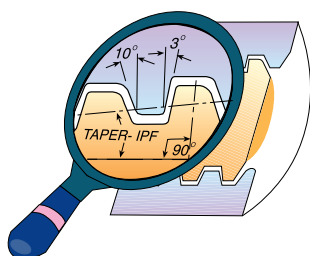
Order example: TNMC 55 IR 4 API 502 BMA

For carbide grade and cutting speed see page A04-2 and 3

Thread Turning Inserts

Vertical

API Buttress Casing



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL Ordering Code	Y	T	Connection No. or Size
5	27	5/8	.75	TNMB 54 ER 5 BUT 0.75	.9	.25	4 1/2 - 13 3/8
5	27	5/8	1.00	TNMB 54 ER 5 BUT 1.0	.9	.25	16-20

Order example: TNMB 54 ER 5 BUT 1.0 BMA

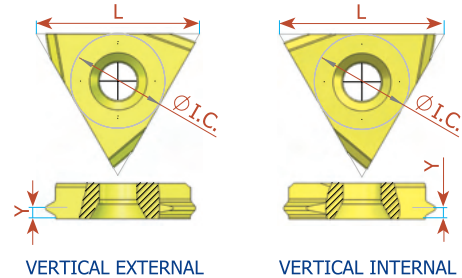
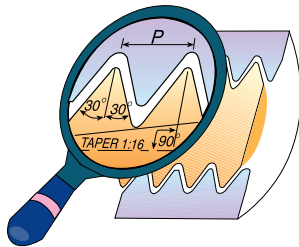
Pitch TPI	L mm	I.C.	Taper IPF	INTERNAL Ordering Code	Y	T	Connection No. or Size
5	27	5/8	.75	TNMB 54 IR 5 BUT 0.75	.9	.25	4 1/2 - 13 3/8
5	27	5/8	1.00	TNMB 54 IR 5 BUT 1.0	.9	.25	16-20

Vertical inserts to be used with compatible holders on the market

Order example: TNMB 54 IR 5 BUT 0.75 BMA

For carbide grade and cutting speed see page A04-2 and 3

Vertical API Round



Pitch TPI	L mm	I.C.	Taper IPF	EXTERNAL Ordering Code	Y	T
10	22	1/2	.75	TNMB 43 ER 10 API RD	.057	.19
8	22	1/2	.75	TNMB 43 ER 8 API RD	.065	.19

Order example: TNMB 43 ER 10 API RD BMA

Pitch TPI	L mm	I.C.	Taper IPF	INTERNAL Ordering Code	Y	T
10	22	1/2	.75	TNMB 43 IR 10 API RD	.057	.19
8	22	1/2	.75	TNMB 43 IR 8 API RD	.065	.19

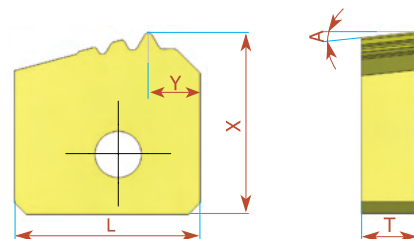
Vertical inserts to be used with compatible holders on the market

Order example: TNMB 43 IR 8 API RD BMA

Thread Turning Inserts

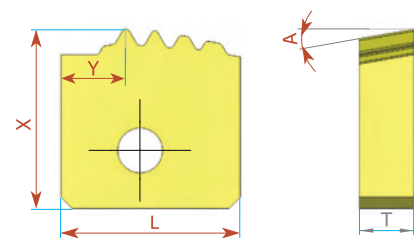
Chasers

API Round



Pitch TPI	L mm	Taper IPF	EXTERNAL Ordering Code	X	Y	T	A	No. of Teeth
10	15.75	.75	15.75 ER 10 API RD 3T	.61	.17	.19	6°	3
8	15.75	.75	15.75 ER 8 API RD 3T	.62	.17	.19	6°	3

Order example: 15.75 ER 10 API RD 3T BMA



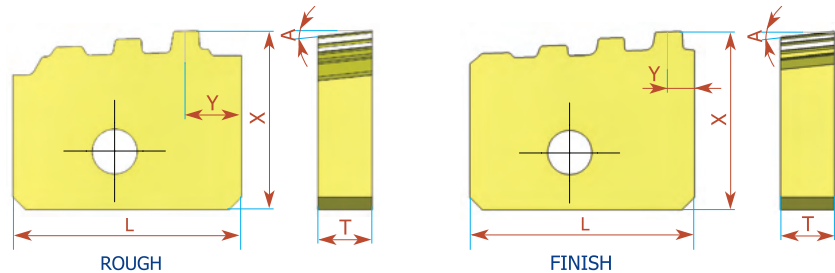
Pitch TPI	L mm	Taper IPF	INTERNAL Ordering Code	X	Y	T	A	No. of Teeth
10	15.75	.75	15.75 IR 10 API RD 4T	.62	.22	.19	10°	4
8	15.875	.75	15.875 IR 8 API RD 4T	.62	.165	.19	10°	4

Chasers to be used with compatible holders on the market

Order example: 15.75 IR 10 API RD 4T BMA

Chasers

API Buttress Casing



Pitch TPI	L mm	Taper IPF	EXTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	20	.75	20 ER 5 BUT 0.75R	.62	.19	.19	6°	3
5	20	.75	20 ER 5 BUT 0.75F	.625	.09	.19	6°	4

Order example: 20 ER 5 BUT 0.75F BMA

Chasers

OTTM Buttress Casing

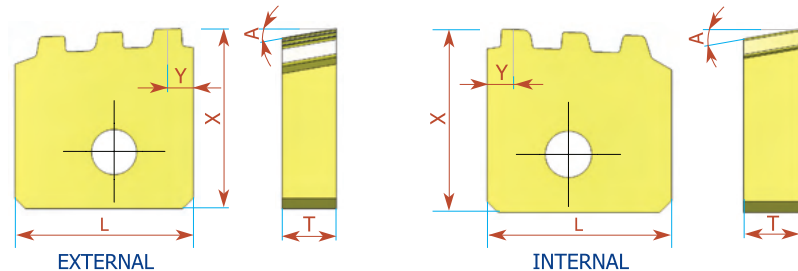
Pitch TPI	L mm	Taper IPF	EXTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	20	.75	20 ER 5 OTTM 0.75R	.62	.19	.19	6°	3
5	20	.75	20 ER 5 OTTM 0.75F	.625	.09	.19	6°	4

Chasers to be used with compatible holders on the market

Order example: 20 ER 5 OTTM 0.75F BMA

Chasers

API Buttress Casing



Pitch TPI	L mm	Taper IPF	EXTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	15.75	.75	15.75 ER 5 BUT 0.75 3T	.625	.09	.19	10°	3

Pitch TPI	L mm	Taper IPF	INTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	15.875	.75	15.875 IR 5 BUT 0.75 3T	.62	.1	.19	10°	3

Order example: 15.75 ER 5 BUT 0.75 3T BMA

Chasers

OTTM Buttress Casing

Pitch TPI	L mm	Taper IPF	EXTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	15.75	.75	15.75 ER 5 OTTM 0.75 3T	.62	.12	.19	6°	3

Pitch TPI	L mm	Taper IPF	INTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	15.875	.75	15.875 IR 5 OTTM 0.75 3T	.625	.10	.19	10°	3

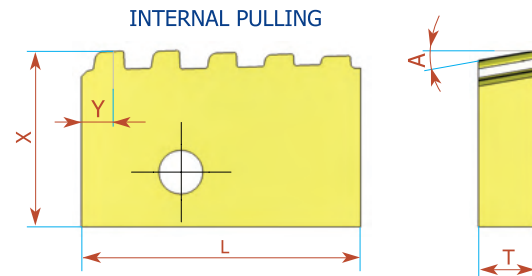
Chasers to be used with compatible holders on the market

Order example: 15.75 ER 5 OTTM 0.75 3T BMA

For carbide grade see page A04-2

Chasers

API Buttress Casing



Pitch TPI	L mm	Taper IPF	INTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	25	.75	25 IRP 5 BUT 0.75 5T	.62	.10	.20	10°	5

Order example: 25 IRP 5 BUT 0.75 5T BMA

Chasers

OTTM Buttress Casing

Pitch TPI	L mm	Taper IPF	INTERNAL Ordering Code	X	Y	T	A	No. of Teeth
5	25	.75	25 IRP 5 OTTM 0.75 5T	.62	.10	.20	10°	5

Chasers to be used with compatible holders on the market

Order example: 25 IRP 5 OTTM 0.75 5T BMA

Large Profile Inserts and Toolholders

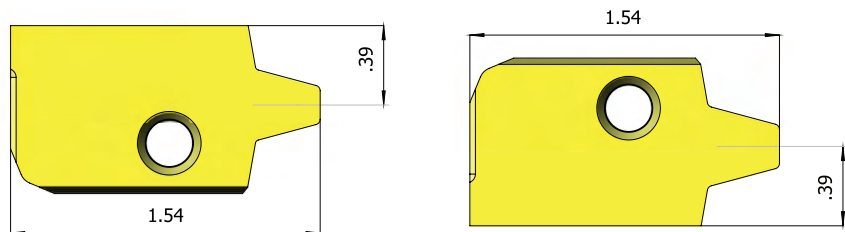
- Wide range of pitches
- Rigid clamping
- Tailor made profiles according to customer's request are possible



External

Internal

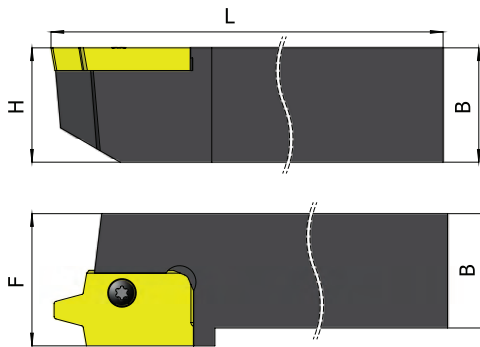
Large profile -Acme



Pitch TPI	Ordering Code EX RH	Holder Code	Ordering Code EX LH	Holder Code	Ordering Code IN RH	Holder Code	Ordering Code IN LH	Holder No.
1 1/2	40 ER 1.5 ACME	AC1	40 EL 1.5 ACME	AC2	40 IR 1.5 ACME	AC6,AC7	40 IL 1.5 ACME	AC5,AC8
1 1/3	40 ER 1.3 ACME	AC1	40 EL 1.3 ACME	AC2	40 IR 1.3 ACME	AC6,AC7	40 IL 1.3 ACME	AC5,AC8
1	40 ER 1 ACME	AC3	40 EL 1 ACME	AC4	40 IR 1 ACME	AC9	40 IL 1 ACME	AC10

Carbide Grade: BMA or MXC

External Holders-Acme



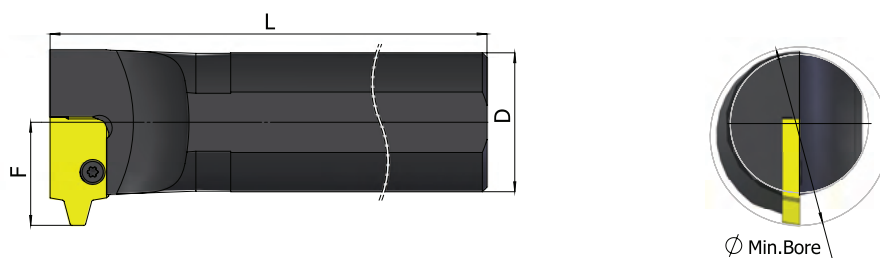
Pitch Range (TPI) 1 1/3-1 1/2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	SER 1250 P40 AC1	1.25	7	1.25	S40	K40	AC1
EX-LH	SEL 1250 P40 AC2	1.25	7	1.25	S40	K40	AC2

Pitch Range (TPI) 1 Ordering Code		B=H	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
EX-RH	SER 1250 P40 AC3	1.25	7	1.25	S40	A27	K40	AC3
EX-LH	SEL 1250 P40 AC4	1.25	7	1.25	S40	A27	K40	AC4

Pitch Range (TPI) 1 1/3-1 1/2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	*SER 1000 M40 AC5	1.00	6	1.25	S40	K40	AC5
EX-LH	*SEL 1000 M40 AC6	1.00	6	1.25	S40	K40	AC6

* toolholders to be used with toolbar provided by the customer

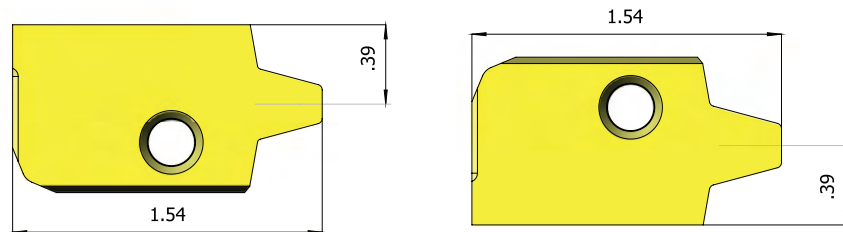
Internal Holders-Acme



Pitch Range (TPI) 1 1/2-1 1/3 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Torx Screw	Holder No.
IN-RH	SIR 2000 V40 AC7	2.00	2.56	16	1.44	S40	K40	AC7
IN-LH	SIL 2000 V40 AC8	2.00	2.56	16	1.44	S40	K40	AC8

Pitch Range (TPI) 1 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
IN-RH	SIR 2000 V40 AC9	2.00	2.75	16	1.58	S40	A27	K40	AC9
IN-LH	SIL 2000 V40 AC10	2.00	2.75	16	1.58	S40	A27	K40	AC10

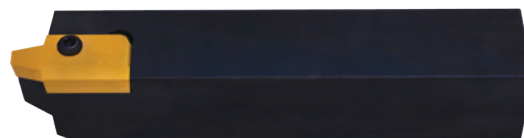
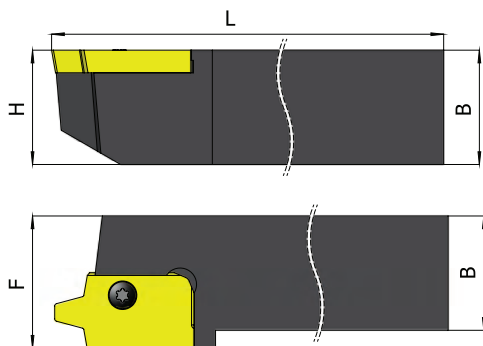
Large profile- Stub Acme



Pitch TPI	Ordering Code EX RH	Holder Code	Ordering Code EX LH	Holder No.	Ordering Code IN RH	Holder Code	Ordering Code IN LH	Holder No.
1 1/2	40 ER 1.5 STACME	SA1	40 EL 1.5 STACME	SA2	40 IR 1.5 STACME	SA6,SA7	40 IL 1.5 STACME	SA5,SA8
1 1/3	40 ER 1.3 STACME	SA1	40 EL 1.3 STACME	SA2	40 IR 1.3 STACME	SA6,SA7	40 IL 1.3 STACME	SA5,SA8
1	40 ER 1 STACME	SA3	40 EL 1 STACME	SA4	40 IR 1 STACME	SA9	40 IL 1 STACME	SA10

Thread Turning Inserts

External Holders- Stub Acme



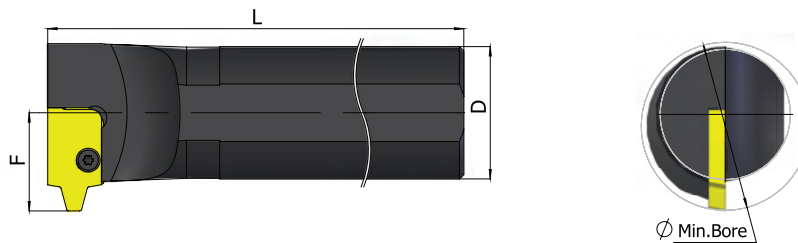
Pitch Range (TPI) 1 1/3 - 1 1/2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	SER 1250 P40 SA1	1.25	7	1.25	S40	K40	SA1
EX-LH	SEL 1250 P40 SA2	1.25	7	1.25	S40	K40	SA2

Pitch Range (TPI) 1 Ordering Code		B=H	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
EX-RH	SER 1250 P40R SA3	1.25	7	1.25	S40	A27	K40	SA3
EX-LH	SEL 1250 P40R SA4	1.25	7	1.25	S40	A27	K40	SA4

Pitch Range (TPI) 1 1/3 - 1 1/2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	*SER 1000 M40 SA5	1.00	6	1.25	S40	K40	SA5
EX-LH	*SEL 1000 M40 SA6	1.00	6	1.25	S40	K40	SA6

* toolholders to be used with toolbar provided by the customer

Internal Holders- Stub Acme

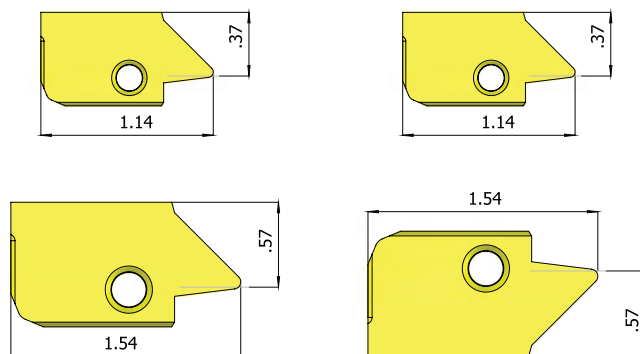


Pitch Range (TPI) 1 1/3-1 1/2 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Torx Screw	Holder No.
IN-RH	SIR 2000 V40 SA7	2.00	2.36	16	1.26	S40	K40	SA7
IN-LH	SIL 2000 V40 SA8	2.00	2.36	16	1.26	S40	K40	SA8

Pitch Range (TPI) 1 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
IN-RH	SIR 2000 V40R SA9	2.00	2.44	16	1.34	S40	A27	K40	SA9
IN-LH	SIL 2000 V40R SA10	2.00	2.44	16	1.34	S40	A27	K40	SA10

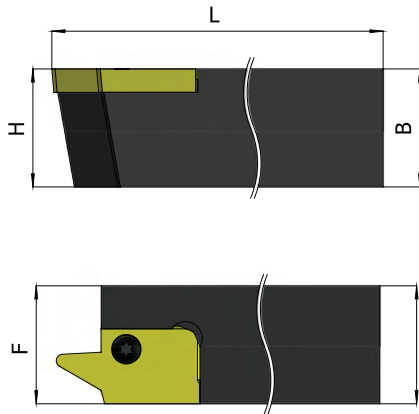
Thread Turning Inserts

Large profile -American Buttress



Pitch TPI	Ordering Code EX RH	Holder No.	Ordering Code EX LH	Holder Code	Ordering Code IN RH	Holder No.	Ordering Code IN LH	Holder No.
2 1/2	30 ER 2.5 ABUT	AB1,AB3	30 EL 2.5 ABUT	AB2,AB4	30 IR 2.5 ABUT	AB11	30 IL 2.5 ABUT	AB12
2	40 ER 2 ABUT	AB5,AB7	40 EL 2 ABUT	AB6,AB8	40 IR 2 ABUT	AB13, AB15	40 IL 2 ABUT	AB14, AB16
1 1/2	40 ER 1.5 ABUT	AB9	40 EL 1.5 ABUT	AB10	40 IR 1.5 ABUT	AB17, AB19	40 IL 1.5 ABUT	AB18, AB20
1 1/4	40 ER 1.25 ABUT	AB9	40 EL 1.25 ABUT	AB10	40 IR 1.25 ABUT	AB17, AB19	40 IL 1.25 ABUT	AB18, AB20

External Holders- American Buttress



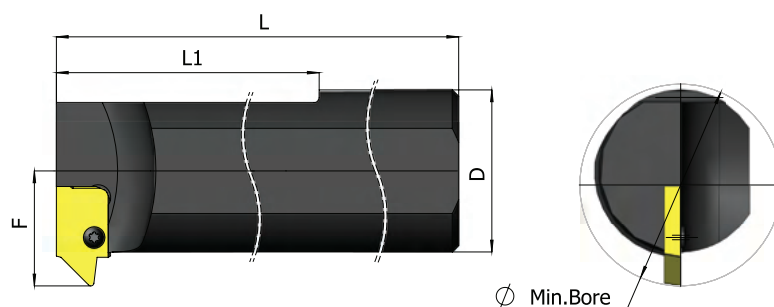
Pitch Range (TPI) 2 1/2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	SER 1000 P30 AB1	1.00	6	1.00	S30	K30	AB1
EX-LH	SEL 1000 P30 AB2	1.00	6	1.00	S30	K30	AB2
EX-RH	SER 1250 P30 AB3	1.25	7	1.25	S30	K30	AB3
EX-LH	SEL 1250 P30 AB4	1.25	7	1.25	S30	K30	AB4

Pitch Range (TPI) 2 Ordering Code		B=H	L	F	Insert Screw	Torx Screw	Holder No.
EX-RH	SER 1000 M40 AB5	1.00	6	1.25	S40	K40	AB5
EX-LH	SEL 1000 M40 AB6	1.00	6	1.25	S40	K40	AB6
EX-RH	SER 1250 P40 AB7	1.25	7	1.25	S40	K40	AB7
EX-LH	SEL 1250 P40 AB8	1.25	7	1.25	S40	K40	AB8

Pitch Range (TPI) 1 1/4 - 1 1/2 Ordering Code		B=H	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
EX-RH	SER 1250 P40 AB9	1.25	7	1.25	S40	A27	K40	AB9
EX-LH	SEL 1250 P40 AB10	1.25	7	1.25	S40	A27	K40	AB10

Thread Turning Inserts

Internal Holders- American Buttress



Pitch Range (TPI) 2 1/2 Ordering Code		D	Min Bore Diam.	L	L1	F	Insert Screw	Torx Screw	Holder No.
IN-RH	SIR 1250 S30 AB11	1.25	1.57	10	4.72	24	S30	K30	AB11
IN-LH	SIL 1250 S30 AB12	1.25	1.57	10	4.72	24	S30	K30	AB12

Pitch Range (TPI) 2 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Torx Screw	Holder No.
IN-RH	SIR 1500 T40 AB13	1.5	1.97	12	1.1	S40	K40	AB13
IN-LH	SIL 1500 T40 AB14	1.5	1.97	12	1.1	S40	K40	AB14
IN-RH	SIR 2000 U40 AB15	2.0	2.56	14	1.38	S40	K40	AB15
IN-LH	SIL 2000 U40 AB16	2.0	2.56	14	1.38	S40	K40	AB16

Pitch Range (TPI) 1.5-1.25 Ordering Code		D	Min Bore Diam.	L	F	Insert Screw	Side Screw	Torx Screw	Holder No.
IN-RH	SIR 2000 U40 AB17	2.0	2.76	14	1.5	S40	A27	K40	AB17
IN-LH	SIL 2000 U40 AB18	2.0	2.76	14	1.5	S40	A27	K40	AB18
IN-RH	SIR 2500 V40 AB19	2.5	3.23	16	1.77	S40	A27	K40	AB19
IN-LH	SIL 2500 V40 AB20	2.5	3.23	16	1.77	S40	A27	K40	AB20





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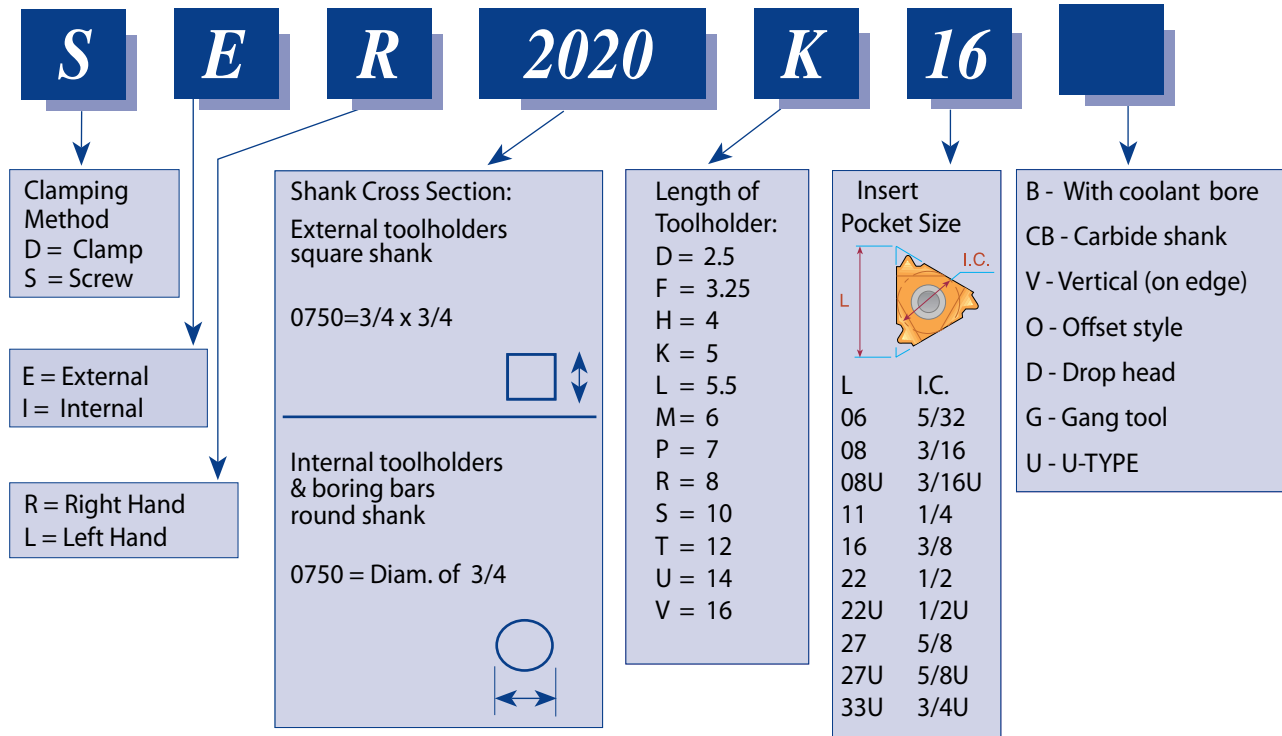
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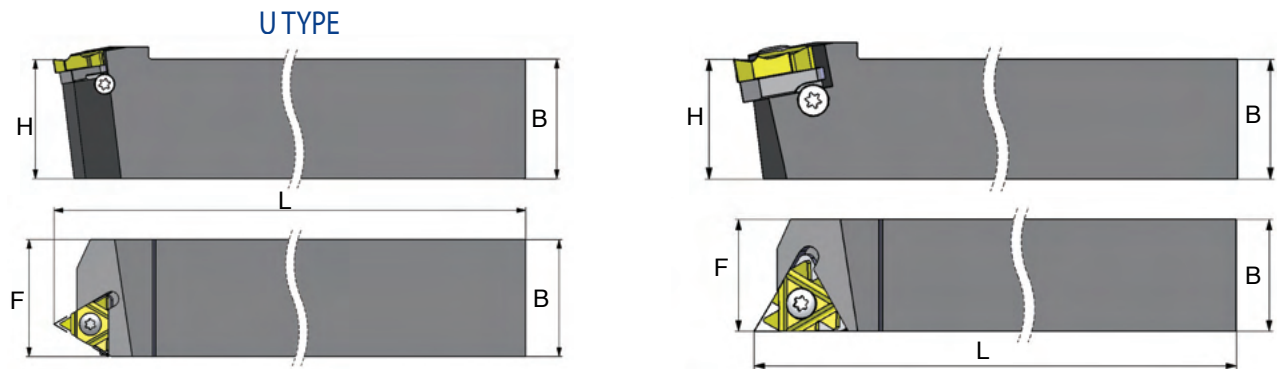
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Product Identification

Threading Toolholders Ordering Codes



External Toolholders



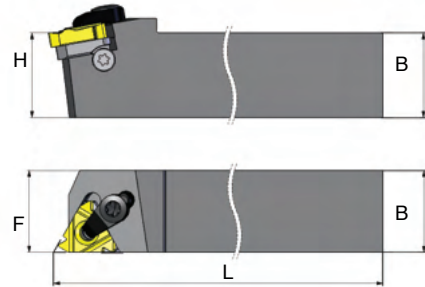
Ordering Code Right Hand	 L mm	B=H	L	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
*SER 0310 H11	11	.31	4.00	.43	S11	-	K11	-	-
*SER 0375 H11	11	.38	4.00	.43	S11	-	K11	-	-
*SER 0375 M11	11	.38	6.00	.43	S11	-	K11	-	-
*SER 0500 K11	11	.50	5.00	.50	S11	-	K11	-	-
*SER 0500 M11	11	.50	6.00	.50	S11	-	K11	-	-
SER 0375 D16	16	.38	2.50	.63	S16	A16	K16	AE16	AI16
SER 0500 F16	16	.50	3.25	.63	S16	A16	K16	AE16	AI16
SER 0625 H16	16	.63	4.00	.63	S16	A16	K16	AE16	AI16
SER 0750 K16	16	.75	5.00	.75	S16	A16	K16	AE16	AI16
SER 1000 M16	16	1.00	6.00	1.00	S16	A16	K16	AE16	AI16
SER 1250 P16	16	1.25	7.00	1.25	S16	A16	K16	AE16	AI16
SER 1000 M22	22	1.00	6.00	1.00	S22	A22	K22	AE22	AI22
SER 1250 P22	22	1.25	7.00	1.25	S22	A22	K22	AE22	AI22
SER 1500 R22	22	1.50	8.00	1.50	S22	A22	K22	AE22	AI22
SER 1000 M22U	22U	1.00	6.00	1.10	S22	A22	K22	AE22U	AI22U
SER 1250 P22U	22U	1.25	7.00	1.25	S22	A22	K22	AE22U	AI22U
SER 1500 R22U	22U	1.50	8.00	1.50	S22	A22	K22	AE22U	AI22U
SER 1000 M27	27	1.00	6.00	1.25	S27	A27	K27	AE27	AI27
SER 1250 P27	27	1.25	7.00	1.25	S27	A27	K27	AE27	AI27
SER 1500 R27	27	1.50	8.00	1.50	S27	A27	K27	AE27	AI27
SER 1000 M27U	27U	1.00	6.00	1.25	S27	A27	K27	AE27U	AI27U
SER 1250 P27U	27U	1.25	7.00	1.25	S27	A27	K27	AE27U	AI27U
SER 1500 R27U	27U	1.50	8.00	1.50	S27	A27	K27	AE27U	AI27U
SER 1000 M33U	33U	1.00	6.00	1.45	S33	-	K33	-	-
SER 1250 P33U	33U	1.25	7.00	1.45	S33	-	K33	-	-


*Toolholders with no anvil

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Toolholders are made with a **1.5° Helix Angle**. For other Helix Angles please see helix angle chart (page A04-7) in the technical section of this catalog

External toolholders with top clamp



Ordering Code Right Hand	 L mm	B=H	L	F	Insert Screw	Clamp	Anvil Screw	Torx Key	RH Anvil	LH Anvil
DER 0500 H16	16	.50	4.0	.63	S16	C16	A16S	K16	AE16	AI16
DER 0625 H16	16	.63	4.0	.63	S16	C16	A16S	K16	AE16	AI16
DER 0750 K16	16	.75	5.0	.75	S16	C16	A16S	K16	AE16	AI16
DER 1000 M16	16	1.00	6.0	1.00	S16	C16	A16S	K16	AE16	AI16
*DER 1000 M22	22	1.00	6.0	1.00	S22	C22	A22	K22	AE22	AI22

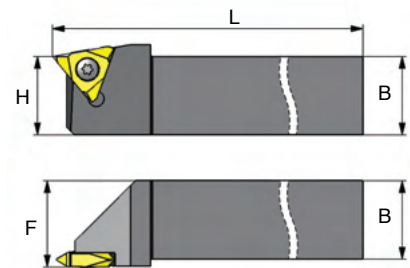
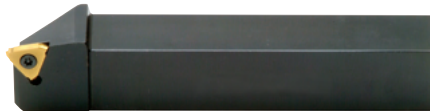
For **LEFT HAND** toolholders specify **DEL** instead of **DER**


Toolholders are made with a **1.5° Helix Angle**. For other Helix Angles please see helix angle chart in the technical section of this catalog.

Two clamping methods can be used: screw or top clamp.

*Use K21 torx key for C22 clamp

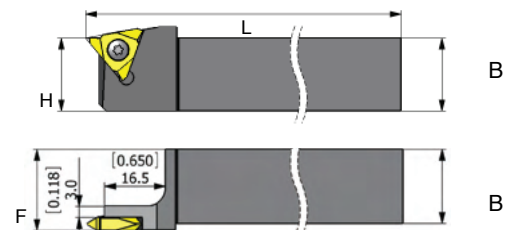
Vertical toolholders




Ordering Code Right Hand	 mm	B=H	L	F	Insert Screw	Torx Key
SER 0750 K16V	16	.75	5.0	.87	S16S	K16
SER 1000 M16V	16	1.00	6.0	1.06	S16S	K16
SER 1000 M22V	22	1.00	6.0	1.08	S22S	K22
SER 1000 M27V-T10	27	1.00	6.0	1.42	S27	K27
SER 1000 M27V-ABUT 4/3-T10	27	1.00	6.0	1.42	S27	K27
SER 1250 P27V-T10	27	1.25	7.0	1.42	S27	K27
SER 1250 P27V-ABUT 4/3-T10	27	1.25	7.0	1.42	S27	K27

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Slim Throat toolholders

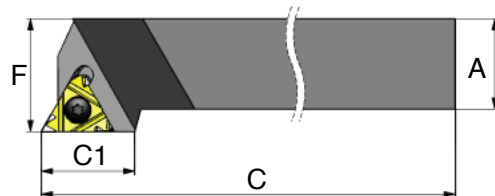
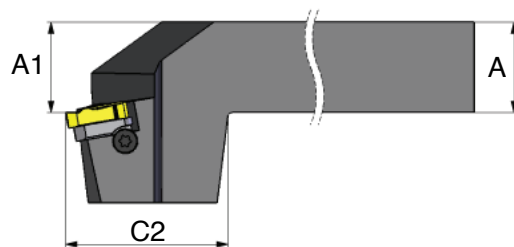


Ordering Code Right Hand	 mm	B=H	L	F	Insert Screw	Torx Key
SER 0625 H16VS	16	.63	4.0	.71	S16S	K16
SER 0750 K16VS	16	.75	5.0	.87	S16S	K16
SER 1000 M16VS	16	1.00	6.0	1.06	S16S	K16
SER 1000 M22VS	22	1.00	6.0	1.06	S22S	K22

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Thread Turning Toolholders

Drophead Toolholders

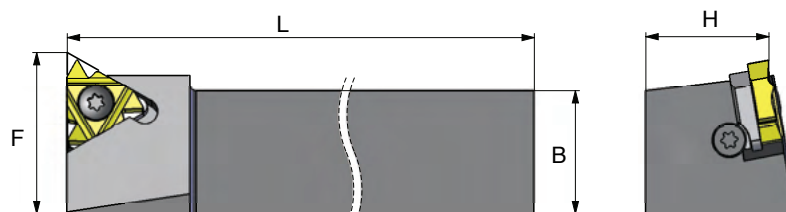
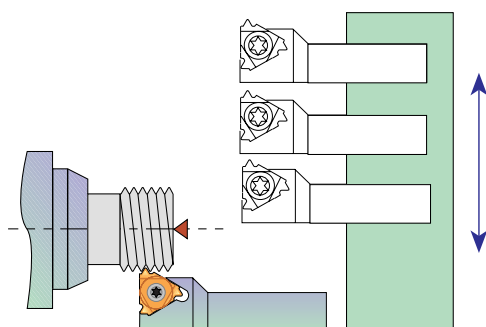


Ordering Code Right Hand	L mm	A	A1	C	C1	F	C2	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
SER 0750 K16D	16	.75	.75	5.0	.84	1.00	1.5	S16	A16	K16	AE16	AI16
SER 1000 M16D	16	1.00	1.00	6.0	.84	1.25	1.5	S16	A16	K16	AE16	AI16
SER 1000 M22D	22	1.00	1.00	6.0	1.00	1.25	1.5	S22	A22	K22	AE22	AI22

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Gang Toolholders

Gang Toolholders are External Holders, used in small automatic machines with a gangtool post.



RIGHT HAND SHOWN



Ordering Code Right Hand	L mm	B=H mm	L	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
*SER 8 8 H11G	11	8	3.9	.47	S11	-	K11	-	-
*SER 10 10 H11G	11	10	3.9	.55	S11	-	K11	-	-
SER 16 16 K16G	16	16	4.9	.85	S16	A16	K16	AE16	AI16
SER 20 20 K16G	16	20	4.9	1.03	S16	A16	K16	AE16	AI16

*Toolholders with no anvil

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

x-tream Jet

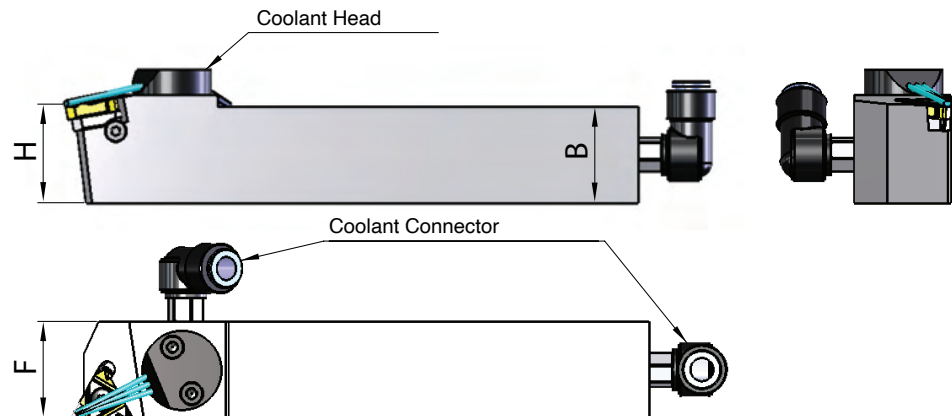
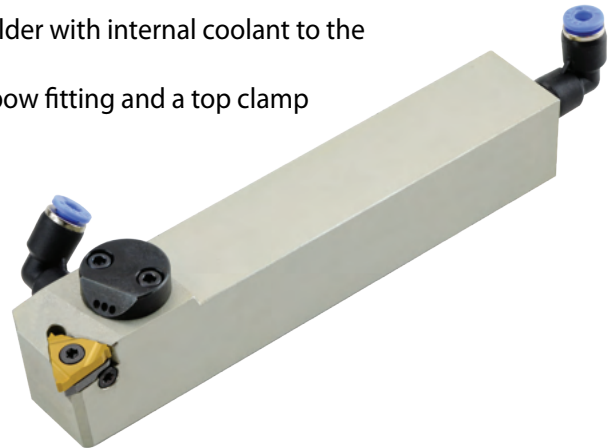
External Toolholder with Internal Coolant


Carmex has developed a unique external thread turning holder with internal coolant to the cutting edge.

The holder includes two connecting options through an elbow fitting and a top clamp directing the coolant flow to the cutting edge.

The coolant flow provides:

- Better chip control, and chip flow
- Longer tool life and high performance
- Reduces the cutting edge temperature
- Available RH and LH tool holders
- Coated holders provide abrasive resistance



Ordering Code	 L mm	B=H	L	F	Torx + Insert Screw	Torx + Anvil Screw	Torx + Key	RH Anvil	LH Anvil	Coolant* Connector mm
SER 0625 H16B	16	.63	4.0	.63	S16P	A16P	K16P	AE16	AI16	Ø4 / Ø6
SER 0750 K16B	16	.75	5.0	.75	S16P	A16P	K16P	AE16	AI16	Ø4 / Ø6
SER 1000 M16B	16	1.00	6.0	1.00	S16P	A16P	K16P	AE16	AI16	Ø4 / Ø6
SER 1000 M22B	22	1.00	6.0	1.00	S22P	A22P	K22P	AE22	AI16	Ø4 / Ø6
SER 1000 M27B	27	1.00	6.0	1.25	S27P	A27P	K27P	AE27	AI27	Ø4 / Ø6
SER 1250 P16B	16	1.25	7.0	1.25	S16P	A16P	K16P	AE16	AI16	Ø4 / Ø6
SER 1250 P22B	22	1.25	7.0	1.25	S22P	A22P	K22P	AE22	AI22	Ø4 / Ø6
SER 1250 P27B	27	1.25	7.0	1.25	S27P	A27P	K27P	AE27	AI27	Ø4 / Ø6

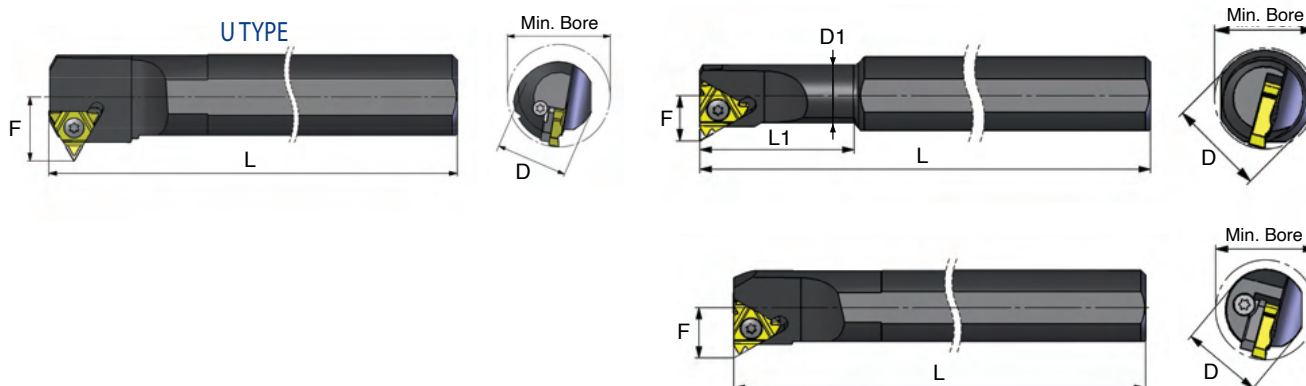
For **LEFT HAND** toolholders specify **SEL** instead of **SER**


Toolholders made with 1.5° helix angle

Please consult the helix angle chart page A04-7 in the technical section of this catalog

* Standard packing with ø6 mm

Internal Toolholders



Ordering Code Right Hand	 L mm	D	D1	Min Bore Diam.	L	L1	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
*SIR 0205 H06	6	.50	.20	.24	4.0	.47	.17	S06	-	K06	-	-
*SIR 0265 K08	8	.62	.26	.31	5.0	.70	.21	S08	-	K08	-	-
*SIR 0310 K08U	8U	.62	.29	.35	5.0	.83	.26	S08	-	K08	-	-
*SIR 0375 H11	11	.38	.38	.47	4.0	-	.28	S11	-	K11	-	-
*SIR 0375 K11	11	.62	.38	.47	5.0	1.00	.28	S11	-	K11	-	-
*SIR 0500 L11	11	.62	.50	.58	5.5	1.25	.34	S11	-	K11	-	-
*SIR 0500 M16	16	.62	.50	.64	6.0	1.25	.39	S16S	-	K16	-	-
*SIR 0625 P16	16	.75	.62	.75	7.0	1.57	.45	S16S	-	K16	-	-
SIR 0750 P16	16	.75	.75	.90	7.0	-	.51	S16	A16	K16	AI16	AE16
SIR 1000 R16	16	1.00	1.00	1.16	8.0	-	.65	S16	A16	K16	AI16	AE16
SIR 1250 S16	16	1.25	1.25	1.40	10.0	-	.77	S16	A16	K16	AI16	AE16
SIR 1500 T16	16	1.50	1.50	1.65	12.0	-	.90	S16	A16	K16	AI16	AE16
SIR 2000 U16	16	2.00	2.00	2.30	14.0	-	1.20	S16	A16	K16	AI16	AE16
*SIR 0750 P22	22	.75	.75	.90	7.0	-	.59	S22S	-	K22	-	-
SIR 1000 R22	22	1.00	1.00	1.16	8.0	-	.71	S22	A22	K22	AI22	AE22
SIR 1250 S22	22	1.25	1.25	1.50	10.0	-	.85	S22	A22	K22	AI22	AE22
SIR 1500 T22	22	1.50	1.50	1.75	12.0	-	.98	S22	A22	K22	AI22	AE22
SIR 2000 U22	22	2.00	2.00	2.25	14.0	-	1.25	S22	A22	K22	AI22	AE22
SIR 1250 S22U	22U	1.25	1.25	1.50	10.0	-	.95	S22	A22	K22	AI22U	AE22U
SIR 1500 T22U	22U	1.50	1.50	1.75	12.0	-	1.08	S22	A22	K22	AI22U	AE22U
SIR 1250 S27	27	1.25	1.25	1.56	10.0	-	.88	S27	A27	K27	AI27	AE27
SIR 1500 T27	27	1.50	1.50	1.80	12.0	-	1.00	S27	A27	K27	AI27	AE27
SIR 2000 U27	27	2.00	2.00	2.30	14.0	-	1.25	S27	A27	K27	AI27	AE27
SIR 2500 V27	27	2.50	2.50	2.80	16.0	-	1.50	S27	A27	K27	AI27	AE27
SIR 1250 S27U	27U	1.25	1.25	1.56	10.0	-	1.00	S27	A27	K27	AI27U	AE27U
SIR 1500 T27U	27U	1.50	1.50	1.80	12.0	-	1.13	S27	A27	K27	AI27U	AE27U
SIR 2000 U27U	27U	2.00	2.00	2.30	14.0	-	1.37	S27	A27	K27	AI27U	AE27U
SIR 2500 V27U	27U	2.50	2.50	2.80	16.0	-	1.61	S27	A27	K27	AI27U	AE27U
*SIR 2000 U33U	33U	2.00	2.00	2.50	14.0	-	1.50	S33	-	K33	-	-

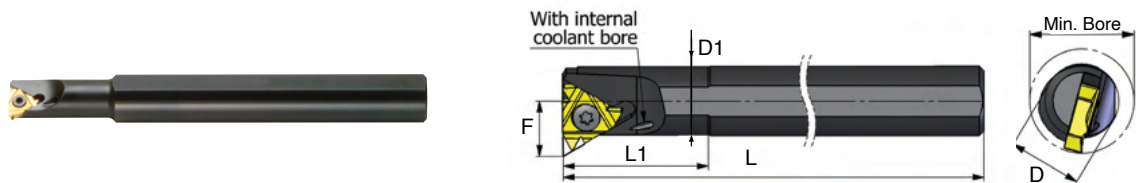
*Toolholders with no anvil


For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

Toolholders are made with a **1.5° Helix Angle**. For other Helix Angles please consult helix angle chart (page A04-7) in the technical section of this catalog.

For "U" type inserts Tr,Acme,Stub Acme, see our software or contact main office for holder use.

Internal toolholders with Coolant Bore



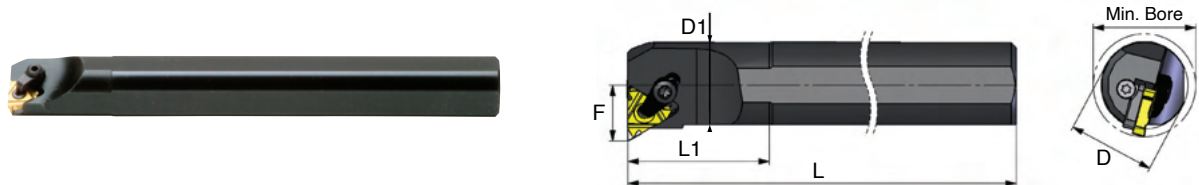
Ordering Code Right Hand	 L mm	D	D1	Min Bore Diam.	L	L1	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
*SIR 0375 K11B	11	.62	.38	.47	5.0	.98	.28	S11	-	K11	-	-
*SIR 0500 M16B	16	.62	.50	.64	6.0	1.26	.39	S16S	-	K16	-	-
*SIR 0625 P16B	16	.75	.63	.75	7.0	1.57	.45	S16S	-	K16	-	-
SIR 0750 P16B	16	.75	.75	.90	7.0	-	.90	S16	A16	K16	AI16	AE16
SIR 1000 R16B	16	1.00	1.00	1.16	8.0	-	.65	S16	A16	K16	AI16	AE16
SIR 1000 R22B	22	1.00	1.00	1.16	8.0	-	.71	S22	A22	K22	AI22	AE22
SIR 1225 S16B	16	1.25	1.25	1.4	10.0	-	.77	S16	A16	K16	AI16	AE16


*Toolholders with no anvil

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

Toolholders are made with a **1.5° Helix Angle**. For other Helix Angles please see helix angle chart (page A04-7) in the technical section of this catalog.

Internal toolholders with Top Clamp




Ordering Code Right Hand	 L mm	D	D1	Min Bore Diam.	L	L1	F	Insert Screw	Clamp	Anvil Screw	Torx Key	RH Anvil	LH Anvil
DIR 0750 P16	16	.75	.75	.90	7.0	-	.51	S16	C16	A16S	K16	AI16	AE16
DIR 1000 R16	16	1.00	1.00	1.16	8.0	-	.65	S16	C16	A16S	K16	AI16	AE16
DIR 1250 S16	16	1.25	1.25	1.40	10.0	-	.77	S16	C16	A16S	K16	AI16	AE16
* DIR 1000 R22	22	1.00	1.00	1.16	8.0	-	.71	S22	C22	A22	K22	AI22	AE22

For **LEFT HAND** toolholders specify **DIL** instead of **DIR**

Two clamping methods can be used: screw or top clamp.

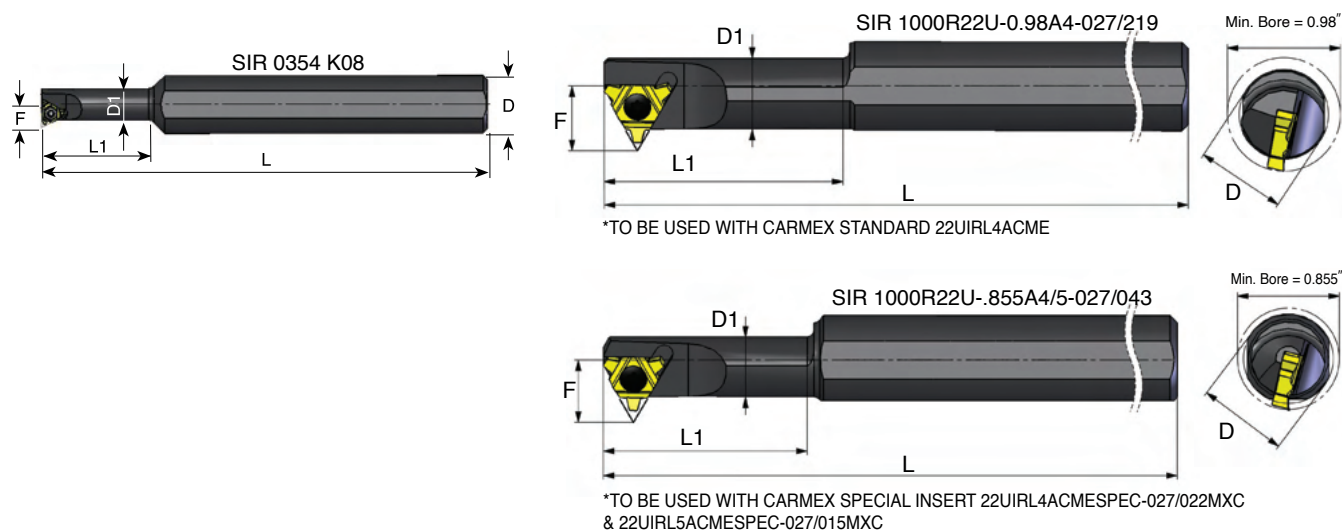
*Use K21 torx key for C22 clamp


Toolholders with 3.5° Helix Angle

Ordering Code Right Hand	 L mm	D mm	D1	Min Bore Diam.	L	L1	F	Insert Screw	Torx Key
SIR 0016 P16B-3.5	16	20	.630	.748	6.7	1.58	.540	S16S	K16
SIR 0020 P22B-3.5	22	20	.787	.945	6.7	-	.614	S22S	K22

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

Special Thread Turning Applications



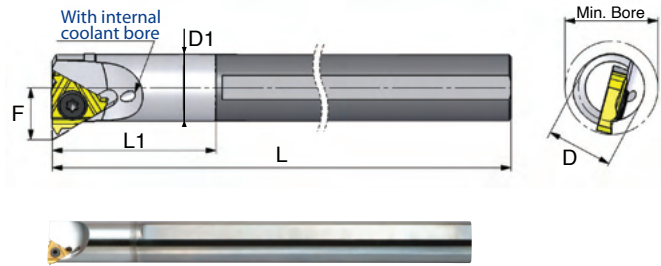
Ordering Code Right Hand	 mm	D	D1	L	L1	F	Thread	Insert Screw	Torx Key
*SIR 0354 K08	8	.63	.34	5.0	1.18	.25	1/2 - 13UNC	S08	K08
SIR 1000 R22U-0.98A4-027/219	22U	1.00	.79	8.0	2.75	.72	—	S22	K22
SIR 1000 R22U-855A4/5-027/043	22U	1.00	.67	8.0	2.00	.70	—	S22	K22


For LH holders call Carmex

* Only right hand available

Carbide Shank Threading Bars With coolant bore

Carbide Shank Threading Bars are used when Chatter and deflection are expected due to long overhang in deep small bores.



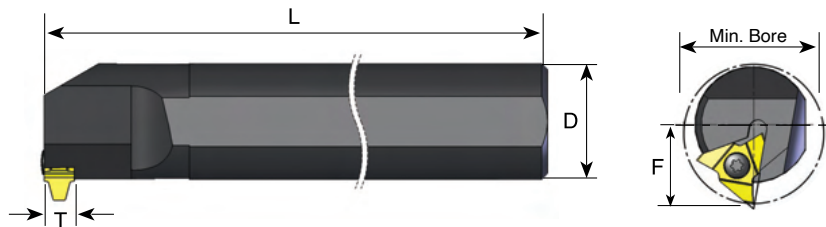
Ordering Code Right Hand	 L mm	D	D1	Min Bore Diam.	L	L1	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
SIR 0205 H06CB	6	.25	.20	.24	4.0	1.02	.17	S06	-	K06	-	-
SIR 0265 K08CB	8	.31	.26	.31	5.0	1.22	.21	S08	-	K08	-	-
SIR 0310K08UCB	8U	.31	.29	.35	5.0	1.38	.26	S08	-	K08	-	-
SIR 0375 M11CB	11	.38	.38	.47	6.0	-	.28	S11	-	K11	-	-
SIR 0500 P11CB	11	.50	.50	.58	7.0	-	.34	S11	-	K11	-	-
SIR 0500 P16CB	16	.50	.50	.64	7.0	-	.40	S16S	-	K16	-	-
SIR 0625 R16CB	16	.62	.62	.75	8.0	-	.46	S16S	-	K16	-	-
* SIR 0750 S16CB	16	.75	.75	.90	10.0	-	.54	S16	A16	K16	AI16	AE16
* SIR 1000 S16CB	16	1.00	1.00	1.10	10.0	-	.64	S16	A16	K16	AI16	AE16
SIR 0750 S22CB	22	.75	.76	.95	10.0	4.00	.61	S22	-	K22	-	-


* Carbide shank Threading bars with anvil

** Helix angle: 3.5°

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

Vertical Toolholders

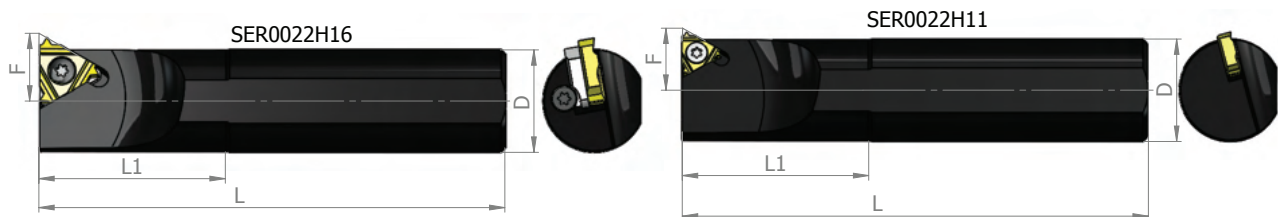



Ordering Code Right Hand	 L mm	D	* Min Bore Diam.	L	F	T	Insert Screw	Torx Key
SIR 1250 S27V-T10	27	1.25	1.65	10	.94	.41	S27	K27
SIR 1500 T27V-T10	27	1.5	1.80	12	1.05	.41	S27	K27
SIR 2000 U27V-T10	27	2.0	2.32	14	1.31	.41	S27	K27
SIR 2500 V27V-T10	27	2.5	2.85	16	1.51	.41	S27	K27

* To be compared with given minimum bore profile.

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

Star Toolholders



Ordering Code Right Hand	 L	D mm	L	L1	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
SER 0022 H11	11	22	3.94	1.57	.52	S11	-	K11	-	-
SER 0022 H16	16	22	3.94	1.57	.52	S16	A16	K16	AE16	AI16

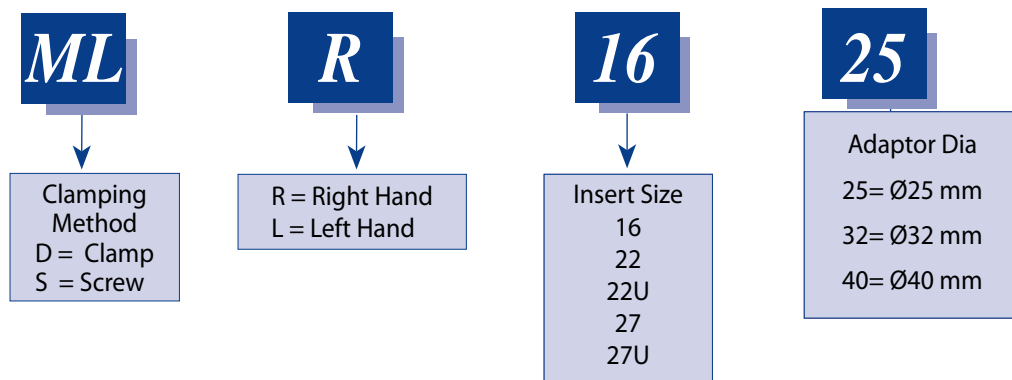
High pressure coolant

The boring bars and the ML adaptors are design with internal coolant allowing a high pressure up to 120 Bar. A high pressure coolant helps to reduce the cutting edge temperature, provides a better chip evacuation and improves the insert tool life.

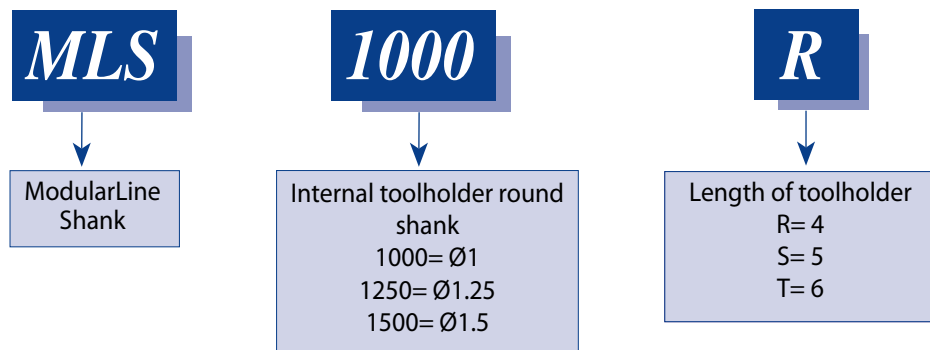
The tools can be used also with normal coolant pressure available on the customer machine.

Product Identification

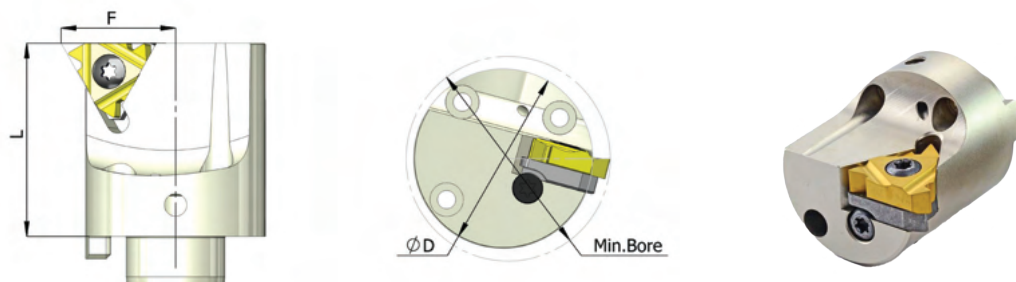
Ordering Codes: ML Turning adaptors



Ordering Codes: Boring Bars



ML Turning adaptors

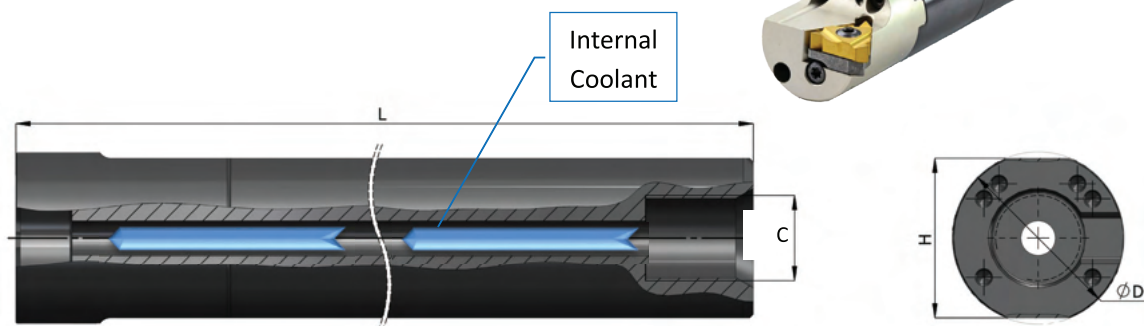


D	Ordering Code Right Hand	L	I.C.	Min Bore Diam.	L	F	Insert Screw Torx+	Anvil Screw Torx+	Torx+ key	RH Anvil	LH Anvil
25	*MLR 16-25	16	3/8	1.14	1.2	.65	S16P	---	K16P	---	---
25	*MLR 22-25	22	1/2	1.22	1.2	.71	S22P	---	K22P	---	---
32	MLR 16-32	16	3/8	1.42	1.7	.78	S16P	A16P	K16P	AI16	AE16
32	MLR 22-32	22	1/2	1.50	1.7	.85	S22P	A22P	K22P	AI22	AE22
32	MLR 22U-32	22U	1/2U	1.62	1.7	.96	S22P	A22P	K22P	AI22U	AE22U
40	MLR 16-40	16	3/8	1.73	1.7	.93	S16P	A16P	K16P	AI16	AE16
40	MLR 22-40	22	1/2	1.81	1.7	1.01	S22P	A22P	K22P	AI22	AE22
40	MLR 22U-40	22U	1/2U	1.81	1.7	1.12	S22P	A22P	K22P	AI22U	AE22U
40	MLR 27-40	27	5/8	1.90	1.7	1.05	S27P	A27P	K27P	AI27	AE27
40	MLR 27U-40	27U	5/8U	1.90	1.7	1.16	S27P	A27P	K27P	AI27U	AE27U

*Toolholders with no anvil

For left hand specify MLL... instead of MLR...

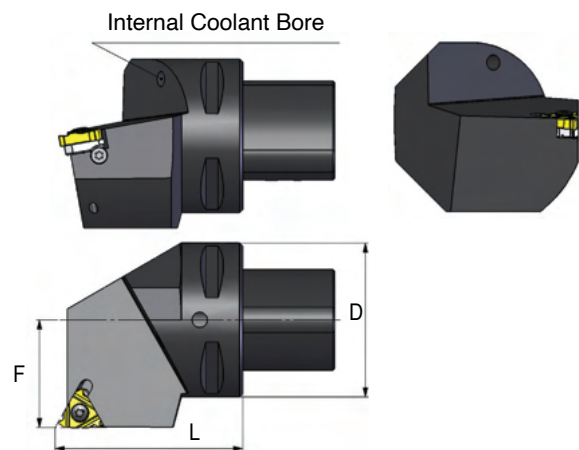
Boring Bars




D	Ordering Code	L	H	C	Screw	Key
1.00	MLS 1000 R	8.0	.905	1/4 - 18NPT	S420, S435	K3
1.25	MLS 1250 S	10.0	1.12	3/8 - 18NPT	S520, S550	K4
1.50	MLS 1500 T	12.0	1.34	1/2 - 14NPT	S520, S550	K4

- Polygon shank
- ISO standard (26623) compliant for toolholding systems
- Polygon taper ensures automatic radial centering and even pressure around the coupling
- ISO standard coupling system with a 1.4 degree tapered polygon shank design enables quick tool changes
- Interchangeable with leading manufacturers

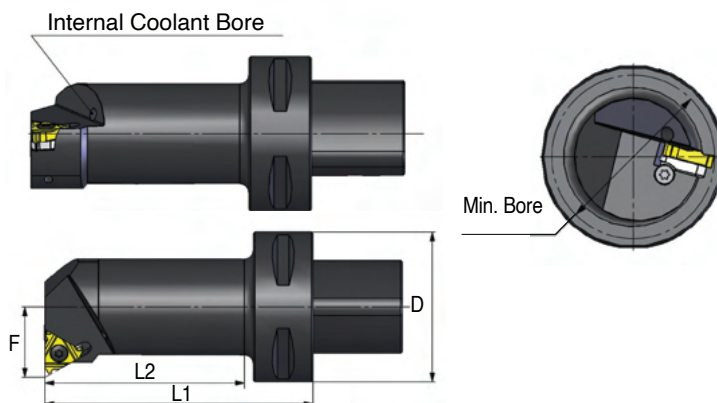
External Toolholders




Equivalent to...	Ordering Code	 mm	D mm	F	L	Insert Screw	Anvil Screw	Torx key	RH Anvil	LH Anvil
C4	P40-SER 27050-16	16	40	1.06	2.0	S16	A16	K16	AE16	AI16
C5	P50-SER 35060-16	16	50	1.38	2.4	S16	A16	K16	AE16	AI16
C6	P63-SER 45065-16	16	63	1.77	2.6	S16	A16	K16	AE16	AI16
C4	P40-SER 27050-22	22	40	1.06	2.0	S22	A22	K22	AE22	AI22
C5	P50-SER 35060-22	22	50	1.38	2.4	S22	A22	K22	AE22	AI22
C6	P63-SER 45065-22	22	63	1.77	2.6	S22	A22	K22	AE22	AI22
C8	P80-SER 55080-16	16	80	2.17	3.1	S16	A16	K16	AE16	AI16
C8	P80-SER 55080-22	22	80	2.17	3.1	S22	A22	K22	AE22	AI22
C6	P63-SER 45065-27	27	63	1.772	2.6	S27	A27	K27	AE27	AI27

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Internal Toolholders

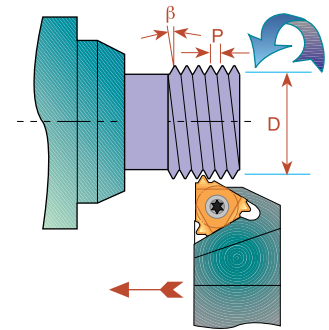
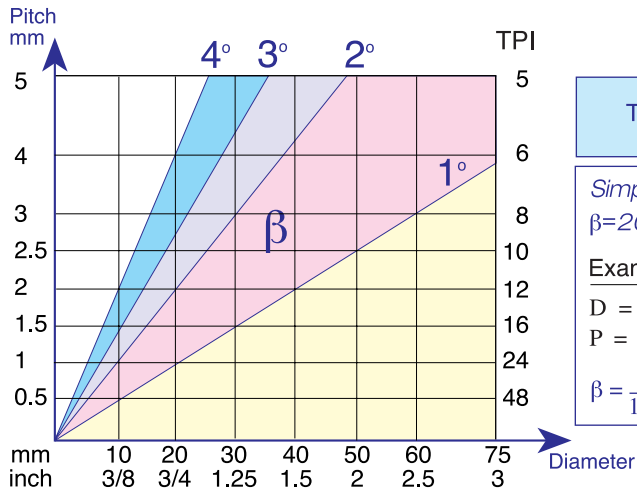


Equivalent to...	Ordering Code	 mm	D mm	F	Min. Bore Dia.	L1	L2	Insert Screw	Anvil Screw	Torx key	RH Anvil	LH Anvil
C4	* P40-SIR 12060-16	16	40	.46	.79	2.36	1.46	S16	-	K16	-	-
	P40-SIR 14060-16	16	40	.53	.98	2.36	1.50	S16	A16	K16	AI16	AE16
	P40-SIR 17070-16	16	40	.63	1.14	2.76	1.89	S16	A16	K16	AI16	AE16
	P40-SIR 22090-16	16	40	.77	1.42	3.54	2.72	S16	A16	K16	AI16	AE16
	P40-SIR 27080-16	16	40	.93	1.73	3.15	2.36	S16	A16	K16	AI16	AE16
C5	* P50-SIR 12060-16	16	50	.46	.79	2.36	1.38	S16	-	K16	-	-
	P50-SIR 14060-16	16	50	.53	.98	2.36	1.42	S16	A16	K16	AI16	AE16
	P50-SIR 17070-16	16	50	.63	1.14	2.76	1.85	S16	A16	K16	AI16	AE16
	P50-SIR 22090-16	16	50	.77	1.42	3.54	2.68	S16	A16	K16	AI16	AE16
	P50-SIR 27105-16	16	50	.93	1.73	4.13	3.31	S16	A16	K16	AI16	AE16
C6	P63-SIR 14070-16	16	63	.53	.984	2.76	1.65	S16	A16	K16	AI16	AE16
	P63-SIR 17075-16	16	63	.63	1.14	2.95	1.89	S16	A16	K16	AI16	AE16
	P63-SIR 22090-16	16	63	.77	1.50	3.54	2.52	S16	A16	K16	AI16	AE16
	P63-SIR 27105-16	16	63	.93	1.81	4.13	3.15	S16	A16	K16	AI16	AE16
C4	* P40-SIR 15065-22	22	40	.61	.98	2.56	1.65	S22	-	K22	-	-
	P40-SIR 19070-22	22	40	.70	1.14	2.76	1.89	S22	A22	K22	AI22	AE22
	P40-SIR 22090-22	22	40	.84	1.50	3.54	2.72	S22	A22	K22	AI22	AE22
	P40-SIR 27080-22	22	40	1.00	1.81	3.15	2.36	S22	A22	K22	AI22	AE22
C5	* P50-SIR 15065-22	22	50	.61	.98	2.56	1.61	S22	-	K22	-	-
	P50-SIR 19070-22	22	50	.70	1.14	2.76	1.85	S22	A22	K22	AI22	AE22
	P50-SIR 22090-22	22	50	.84	1.50	3.54	2.68	S22	A22	K22	AI22	AE22
	P50-SIR 27105-22	22	50	1.00	1.81	4.13	3.31	S22	A22	K22	AI22	AE22
C6	P63-SIR 19075-22	22	63	.70	1.14	2.95	1.89	S22	A22	K22	AI22	AE22
	P63-SIR 22090-22	22	63	.84	1.47	3.54	2.52	S22	A22	K22	AI22	AE22
	P63-SIR 27105-22	63	63	1.00	1.81	4.13	3.15	S22	A22	K22	AI22	AE22

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**

* Holders without anvil

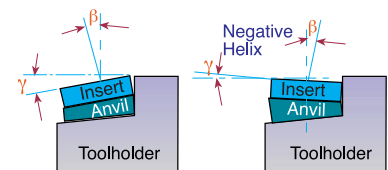
Thread Helix Angle



Standard and Slanted Anvils

CARMEX Toolholder Pockets have a built in 1.5° helix angle. This angle may be adjusted to better match the thread helix angle by simply changing the anvil.

Negative helix is usually used when threading RH thread with LH Holder or LH thread with RH Holder.



L mm	IC	Pocket Angle γ	4.5°	3.5°	2.5°	1.5° Standard	0.5°	-0.5°	-1.5°
16	3/8	EX-RH OR IN-LH	AE16+4.5	AE16+3.5	AE16+2.5	AE16	AE16+0.5	AE16-0.5	AE16-1.5
16	3/8	EX-LH OR IN-RH	AI 16+4.5	AI 16+3.5	AI 16+2.5	AI 16	AI 16+0.5	AI 16-0.5	AI 16-1.5
22	1/2	EX-RH OR IN-LH	AE22+4.5	AE22+3.5	AE22+2.5	AE22	AE22+0.5	AE22-0.5	AE22-1.5
22	1/2	EX-LH OR IN-RH	AI 22+4.5	AI 22+3.5	AI 22+2.5	AI 22	AI 22+0.5	AI 22-0.5	AI 22-1.5
22U	1/2U	EX-RH OR IN-LH	AE22U+4.5	AE22U+3.5	AE22U+2.5	AE22U	AE22U+0.5	AE22U-0.5	AE22U-1.5
22U	1/2U	EX-LH OR IN-RH	AI 22U+4.5	AI 22U+3.5	AI 22U+2.5	AI 22U	AI 22U+0.5	AI 22U-0.5	AI 22U-1.5
27	5/8	EX-RH OR IN-LH	AE27+4.5	AE27+3.5	AE27+2.5	AE27	AE27+0.5	AE27-0.5	AE27-1.5
27	5/8	EX-LH OR IN-RH	AI 27+4.5	AI 27+3.5	AI 27+2.5	AI 27	AI 27+0.5	AI 27-0.5	AI 27-1.5
27U	5/8U	EX-RH OR IN-LH	AE27U+4.5	AE27U+3.5	AE27U+2.5	AE27U	AE27U+0.5	AE27U-0.5	AE27U-1.5
27U	5/8U	EX-LH OR IN-RH	AI 27U+4.5	AI 27U+3.5	AI 27U+2.5	AI 27U	AI 27U+0.5	AI 27U-0.5	AI 27U-1.5

Anvil Kits

5 AE and 5 AI anvils with various helix angles



AE (FOR EX.RH. & IN.LH.)



AI (FOR IN.RH. & EX.LH.)



Ordering Code	Contents				
KA16	AE16+4.5 AI 16+4.5	AE16+3.5 AI 16+3.5	AE16+2.5 AI 16+2.5	AE16+0.5 AI 16+0.5	AE16-1.5 AI 16-1.5
KA22	AE22+4.5 AI 22+4.5	AE22+3.5 AI 22+3.5	AE22+2.5 AI 22+2.5	AE22+0.5 AI 22+0.5	AE22-1.5 AI 22-1.5
KA22U	AE22U+4.5 AI 22U+4.5	AE22U+3.5 AI 22U+3.5	AE22U+2.5 AI 22U+2.5	AE22U+0.5 AI 22U+0.5	AE22U-1.5 AI 22U-1.5
KA27	AE27+4.5 AI 27+4.5		AE27+2.5 AI 27+2.5		AE27-1.5 AI 27-1.5
KA27U	AE27U+4.5 AI 27U+4.5		AE27U+2.5 AI 27U+2.5		AE27U-1.5 AI 27U-1.5

Standard Kits

Threading Kits are a versatile solution for users that cut a variety of thread types in limited quantity and do not want to sacrifice thread quality.

External UN Kit Ordering Code:KEU

INSERTS

16 ER A60 P25C
 16 ER G60 P25C
 16 ER AG60 P25C
 16 ER 8 UN P25C
 16 ER 12 UN P25C
 16 ER 14 UN P25C
 16 ER 16 UN P25C
 16 ER 18 UN P25C
 16 ER 20 UN P25C
 16 ER 24 UN P25C

TOOLHOLDERS

SER 0750 K16

KEY

K16

SCREW

S16

Internal UN Kit Ordering Code:KIU

INSERTS

16 IR A60 P25C
 16 IR G60 P25C
 16 IR AG60 P25C
 16 IR 8 UN P25C
 16 IR 12 UN P25C
 16 IR 14 UN P25C
 16 IR 16 UN P25C
 16 IR 18 UN P25C
 16 IR 20 UN P25C
 16 IR 24 UN P25C

TOOLHOLDERS

SIR 0750 P16

KEY

K16

SCREW

S16



If a larger toolholders with a 1.0 inch shank is required, add to the kit 1.0. For example: KIU - 1.0

Miniature & Ultra-miniature Kits

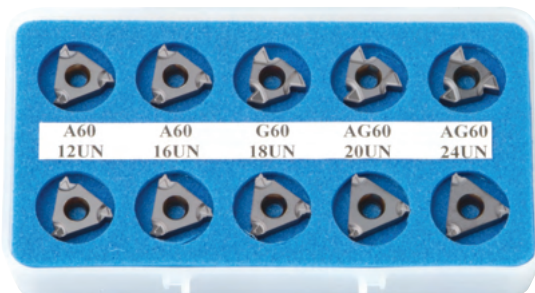


Ordering Code	Type	No. of Inserts	Inserts	Contents Boring Bar	Key
KU60I - BXC	ULTRA	10	06 IR A60 BXC	SIR 0205 H06	K6
KM60I - BXC	MINI	10	08 IR A60 BXC	SIR 0265 K08	K8

Inserts Kits

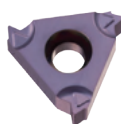
Type B Kits

Type B threading inserts.
A combination of ground profile and sintered chip-breaker threading inserts.
BMA Grade: Sub-Micron carbide grade with TiAlN multi-Layer Coating.



EXTERNAL UN KIT KEUB - BMA

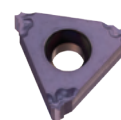
16 ER B A60 BMA-2 Pcs
16 ER B G60 BMA-1 Pcs
16 ER B AG60 BMA-2 Pcs
16 ER B 12 UN BMA-1 Pcs
16 ER B 16 UN BMA-1 Pcs
16 ER B 18 UN BMA-1 Pcs
16 ER B 20 UN BMA-1 Pcs
16 ER B 24 UN BMA-1 Pcs



EX-RH

INTERNAL UN KIT KIUB - BMA

16 IR B A60 BMA-2 Pcs
16 IR B G60 BMA-1 Pcs
16 IR B AG60 BMA-2 Pcs
16 IR B 12 UN BMA-1 Pcs
16 IR B 16 UN BMA-1 Pcs
16 IR B 18 UN BMA-1 Pcs
16 IR B 20 UN BMA-1 Pcs
16 IR B 24 UN BMA-1 Pcs



IN-RH

Standard Inserts Kits

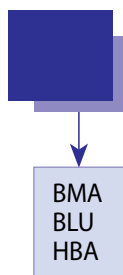
EXTERNAL ISO KIT

16 ER 1.0 ISO-2 Pcs
16 ER 1.25 ISO-2 Pcs
16 ER 1.5 ISO-2 Pcs
16 ER 1.75 ISO-2 Pcs
16 ER 2.0 ISO-2 Pcs

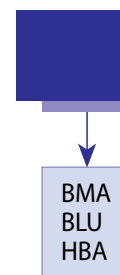
INTERNAL ISO KIT

16 IR 1.0 ISO-2 Pcs
16 IR 1.25 ISO-2 Pcs
16 IR 1.5 ISO-2 Pcs
16 IR 1.75 ISO-2 Pcs
16 IR 2.0 ISO-2 Pcs

Ordering Code: KEM



Ordering Code: KIM



Threading & Boring Combination Kit

A practical and convenient combination kit for **Ultra Miniature** Threading and Boring. It enables Boring and Threading of mini bores as small as $\varnothing 1/4$ with just one deep reaching CARBIDE shank ultra mini Boring Bar.



Ordering Code	Contents			Key
	Threading Insert	Turning Inserts	Boring Bar	
KC6TI	06 IR A60 BXC 10Pcs	06 IR TURN BMA 10Pcs	SIR 0205 H06CB	K6

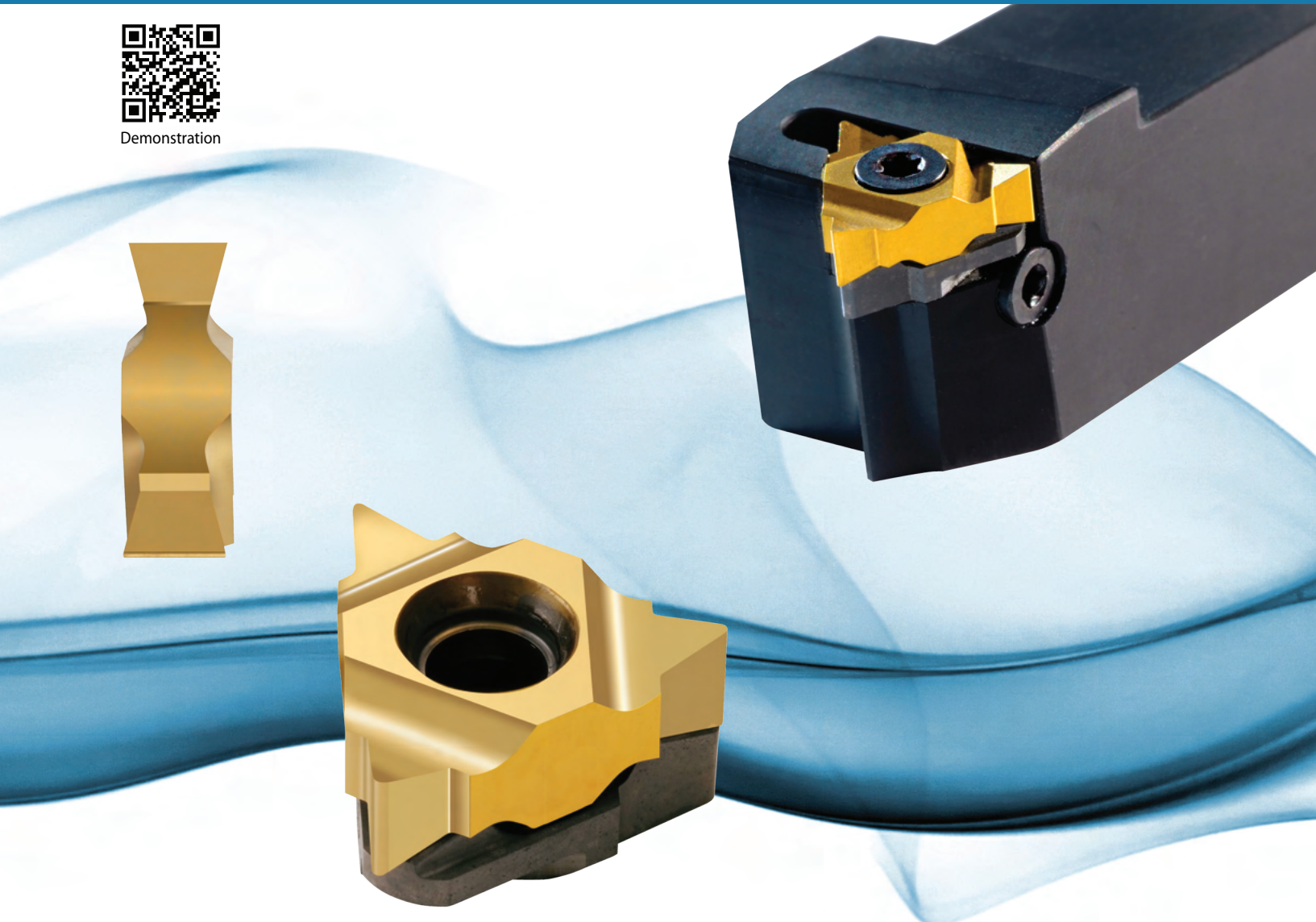
BMA - Coated carbide grade for medium to high cutting speeds

BXC - Coated carbide grade for low cutting speed - 130 to 300 ft/min

CB - Carbide shank boring bar with coolant bore



Demonstration



A unique line of 2 sided inserts including 6 cutting edges, a cost saving tool.

Advantages of DSI-Thread Turning Inserts

- Increased productivity thanks to the six cutting edges.
- U-Style inserts for a wide range of full or partial profile standard threads.
- Same insert for right hand or left hand thread.
- Saving on tooling costs.
- Unique anti-vibration anvil designed for clamping the insert and supporting the cutting edge.
- Simple insert's mounting and cutting edge indexing.
- Heavy duty toolholders designed specially for this line.

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 UN 4

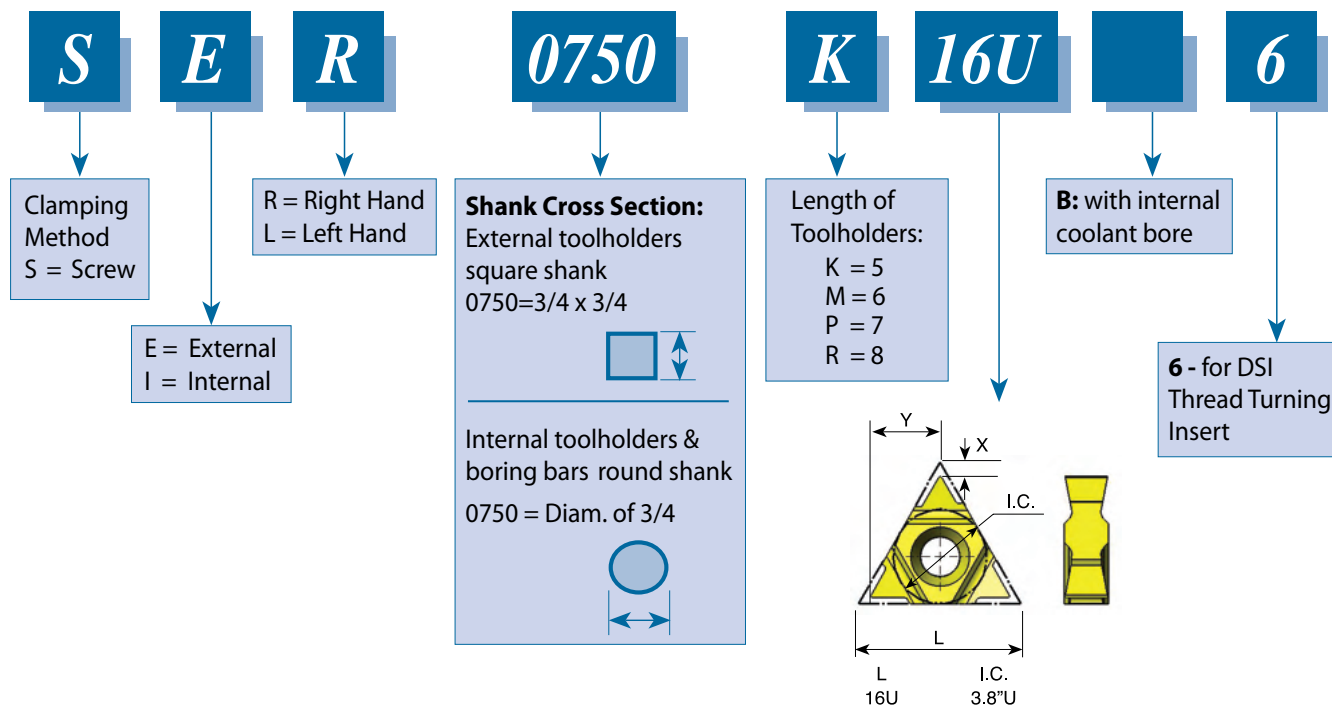
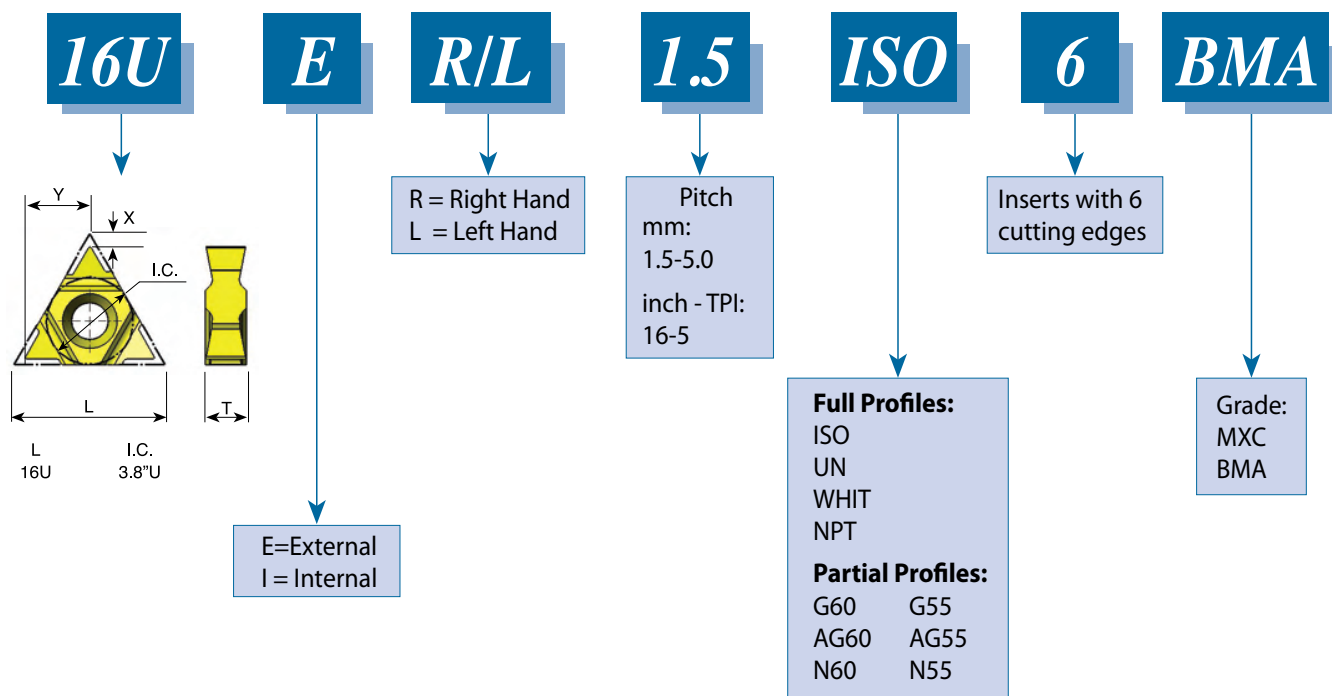
Contents:

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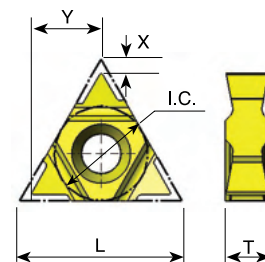
Whitworth 55° 5
 NPT 5
 Heavy Duty Thread Turning Toolholders - External 6
 Heavy Duty Thread Turning Toolholders - Internal 6

Product Identification

DSI Ordering Code



Partial Profile 60°

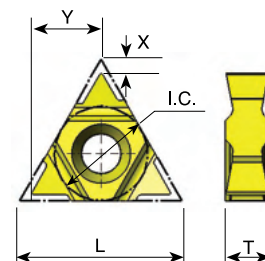


Pitch Range mm	Pitch Range TPI	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
1.75 - 3.0	14-8	16U	3/8U	16U ER/L G60-6	16U IR/L G60-6	.06	.28	.18
0.5 - 3.0	48-8	16U	3/8U	16U ER/L AG60-6	16U IR/L AG60-6	.06	.28	.18
3.5 - 5.0	7-5	16U	3/8U	16U ER/L N60-6	16U IR/L N60-6	.05	.29	.18

Available coating grades: BMA or MXC

Order example: 16U ER/L G60-6 BMA

Partial Profile 55°

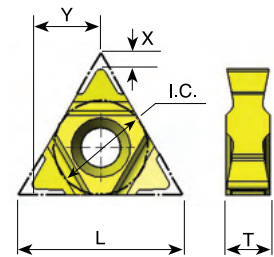


Pitch Range mm	Pitch Range TPI	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
1.75 - 3.0	14-8	16U	3/8U	16U ER/L G55-6	16U IR/L G55-6	.06	.28	.18
0.5 - 3.0	48-8	16U	3/8U	16U ER/L AG55-6	16U IR/L AG55-6	.06	.28	.18
3.5 - 5.0	7-5	16U	3/8U	16U ER/L N55-6	16U IR/L N55-6	.05	.29	.18

Available coating grades: BMA or MXC

For carbide grade and cutting speed see page A04-2 and 3

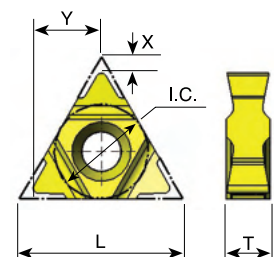
ISO



Pitch mm	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
1.5	16U	3/8U	16U ER/L 1.5 ISO-6	16U IR/L 1.5 ISO-6	.06	.27	.18
1.75	16U	3/8U	16U ER/L 1.75 ISO-6	16U IR/L 1.75 ISO-6	.06	.27	.18
2.0	16U	3/8U	16U ER/L 2.0 ISO-6	16U IR/L 2.0 ISO-6	.06	.27	.18
2.5	16U	3/8U	16U ER/L 2.5 ISO-6	16U IR/L 2.5 ISO-6	.06	.27	.18
3.0	16U	3/8U	16U ER/L 3.0 ISO-6	16U IR/L 3.0 ISO-6	.06	.27	.18
3.5	16U	3/8U	16U ER/L 3.5 ISO-6	16U IR/L 3.5 ISO-6	.06	.27	.18
4.0	16U	3/8U	16U ER/L 4.0 ISO-6	16U IR/L 4.0 ISO-6	.06	.27	.18
4.5	16U	3/8U	16U ER/L 4.5 ISO-6	16U IR/L 4.5 ISO-6	.06	.27	.18
5.0	16U	3/8U	16U ER/L 5.0 ISO-6	16U IR/L 5.0 ISO-6	.06	.27	.18

Available coating grades: BMA or MXC
 Order example: 16U ER/L 1.75 ISO-6 BMA

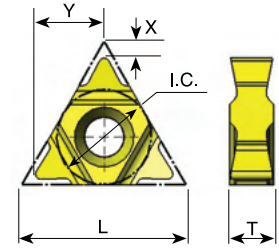
UN - Unified **UNC, UNF, UNEF, UNS**



Pitch TPI	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
16	16U	3/8U	16U ER/L 16 UN-6	16U IR/L 16 UN-6	.06	.27	.18
14	16U	3/8U	16U ER/L 14 UN-6	16U IR/L 14 UN-6	.06	.27	.18
13	16U	3/8U	16U ER/L 13 UN-6	16U IR/L 13 UN-6	.06	.27	.18
12	16U	3/8U	16U ER/L 12 UN-6	16U IR/L 12 UN-6	.06	.27	.18
11.5	16U	3/8U	16U ER/L 11.5 UN-6	16U IR/L 11.5 UN-6	.06	.27	.18
11	16U	3/8U	16U ER/L 11 UN-6	16U IR/L 11 UN-6	.06	.27	.18
10	16U	3/8U	16U ER/L 10 UN-6	16U IR/L 10 UN-6	.06	.27	.18
9	16U	3/8U	16U ER/L 9 UN-6	16U IR/L 9 UN-6	.06	.27	.18
8	16U	3/8U	16U ER/L 8 UN-6	16U IR/L 8 UN-6	.06	.27	.18
7	16U	3/8U	16U ER/L 7 UN-6	16U IR/L 7 UN-6	.06	.27	.18
6	16U	3/8U	16U ER/L 6 UN-6	16U IR/L 6 UN-6	.06	.27	.18
5	16U	3/8U	16U ER/L 5 UN-6	16U IR/L 5 UN-6	.06	.27	.18

Available coating grades: BMA or MXC
 For carbide grade and cutting speed see page A04-2 and 3

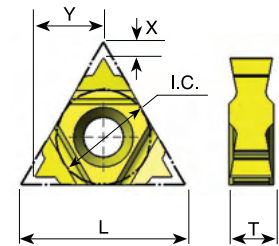
Whitworth 55° BSW, BSF, BSP, BSB



Pitch TPI	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
16	16U	3/8U	16U ER/L 16 W-6	16U IR/L 16 W-6	.06	.27	.18
14	16U	3/8U	16U ER/L 14 W-6	16U IR/L 14 W-6	.06	.27	.18
12	16U	3/8U	16U ER/L 12 W-6	16U IR/L 12 W-6	.06	.27	.18
11	16U	3/8U	16U ER/L 11 W-6	16U IR/L 11 W-6	.06	.27	.18
10	16U	3/8U	16U ER/L 10 W-6	16U IR/L 10 W-6	.06	.27	.18
9	16U	3/8U	16U ER/L 9 W-6	16U IR/L 9 W-6	.06	.27	.18
8	16U	3/8U	16U ER/L 8 W-6	16U IR/L 8 W-6	.06	.27	.18
7	16U	3/8U	16U ER/L 7 W-6	16U IR/L 7 W-6	.06	.27	.18
6	16U	3/8U	16U ER/L 6 W-6	16U IR/L 6 W-6	.06	.27	.18
5	16U	3/8U	16U ER/L 5 W-6	16U IR/L 5 W-6	.06	.27	.18

Available coating grades: BMA or MXC
Order example: 16U ER/L 9 W-6 BMA

NPT



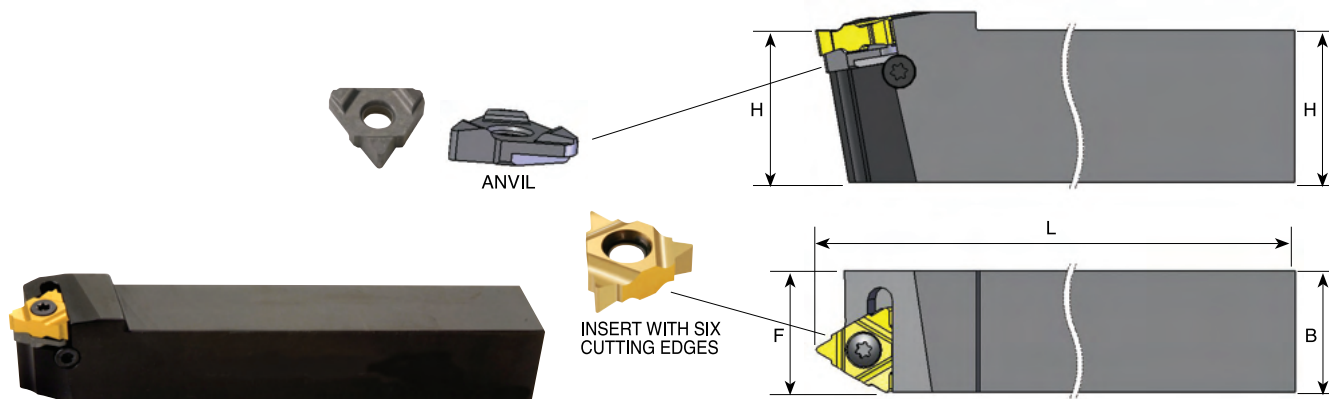
Pitch TPI	L mm	I.C.	EXTERNAL Ordering Code	INTERNAL Ordering Code	X	Y	T
14	16U	3/8U	16U ER/L 14 NPT-6	16U IR/L 14 NPT-6	.06	.27	.18
11.5	16U	3/8U	16U ER/L 11.5 NPT-6	16U IR/L 11.5 NPT-6	.06	.27	.18
8	16U	3/8U	16U ER/L 8 NPT-6	16U IR/L 8 NPT-6	.06	.27	.18

Available coating grades: BMA or MXC

For carbide grade and cutting speed see page A04-2 and 3

Heavy Duty Thread Turning Toolholders

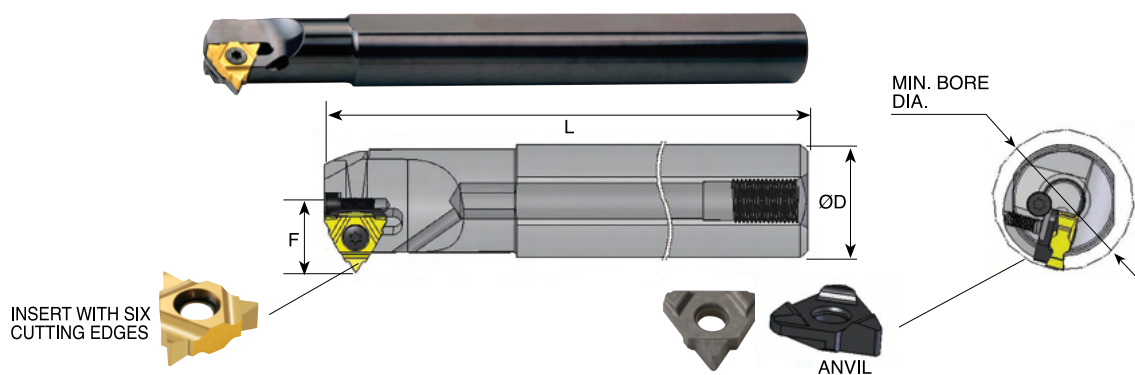
External



Ordering Code Right Hand	H	B	L	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
SER 0750 K16U-6	.75	.75	5	.75	S16	A16	K16	AER 16U-6	AEL 16U-6
SER 1079 M16U-6	1.0	.79	6	.79	S16	A16	K16	AER 16U-6	AEL 16U-6

For **LEFT HAND** toolholders specify **SEL** instead of **SER**

Internal with Coolant Bore



Ordering Code Right Hand	ØD	Min. bore dia.	L	F	Insert Screw	Anvil Screw	Torx Key	RH Anvil	LH Anvil
SIR 0750 P16UB-6	.75	.94	7	.57	S16	A16	K16	AIR 16U-6	AIL 16U-6
SIR 1000 R16UB-6	1.0	1.14	8	.69	S16	A16	K16	AIR 16U-6	AIL 16U-6

For **LEFT HAND** toolholders specify **SIL** instead of **SIR**



Thread Turning
Catalog and CNC
Programming
Software

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Recommended cutting speed	3	Flank Clearance Angle	6
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		Threading Inserts Standards	10

Carbide Grade Selection

Choose the Carmex grade specifically formulated for your application from the following list:
Coated Grades

HBA (H10-H25) (S10-S25) Extra-fine sub-micron grade with high toughness, for optimized performance on hardened steels and cast iron up to 62HRC, titanium alloys and super alloys (Hästelloy, Inconel and Nickel based alloys).

BLU (M10-M20) (K05-K20) (N10-N20) (S10-S20) PVD triple layer coated sub-micron grade for stainless steels, cast iron, titanium, non ferrous metals and most of the high temperature alloys.

BMA (P20-P40) (K20-K30) PVD TiAlN coated sub-micrograin grade for stainless steels and exotic materials at medium to high cutting speeds.

P25C (P15-P35) PVD TiN coated grade for treated and hard alloy steels (25 HRC & up) at medium to low cutting speeds.

MXC (K10-K20) (P10-P25) PVD TiN coated micrograin for free cutting untreated alloy steels (below 30 HRC), for stainless steels and cast iron.

BXC (P30-P50) (K25-K40) PVD TiN coated grade for low cutting speed. Works well with wide range of stainless steels.

Uncoated Grades

P30* (P20-P30) Carbide grade for carbon and cast steels, works well at medium to low cutting speeds.

K20* (K10-K30) Carbide grade for non ferrous metals, aluminum and cast iron.

* Upon request

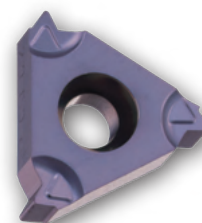
Note: Due to our unique and specialized production techniques, Carmex coated inserts provide superior cutting performance and exceptionally long tool life.

Grade availability per inserts size

Grade	HBA	BLU	BMA	P25C	MXC	BXC	P30	K20
Insert sizes	11, 16, 22, 27	11, 16, 22	06, 08, 11, 16, 22, 27, 33U,	11, 16, 22, 27, 33U	11, 16, 22, 27, 33U	06, 08	11, 16, 22, 27, 33U	06, 08, 11, 16, 22, 27, 33U
		Type-B 11, 16	Type-B 11, 16					

Type B - Threading Inserts

A combination of ground profile, and sintered chip-breaker threading inserts. Unlike most other manufacturers inserts, this combination ensures a consistent high quality thread, with precise shape and dimensions. Two different unique styles of chip-breaker were designed to suit the different specific requirements of Internal threads and External threads. All of Carmex Type B inserts are made of Sub-Micrograin grade.

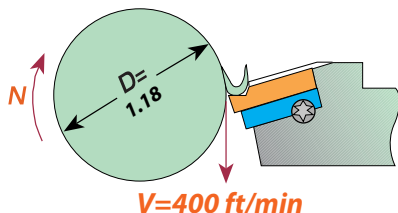


Recommended cutting speed (ft/min) for thread turning inserts

ISO Standard	Material		Condition	Carbide Grades							
				HBA	BLU	BMA	P25C	MXC	BXC	K20	P30
P	Non-Alloy Steel and Cast Steel, Free Cutting Steel	<0.25%C	Annealed	360-690	390-590	330-590	390-590	230-490	165-425		
		≥0.25%C	Annealed								
		<0.55%C	Quenched & Tempered								
≥0.55%C		Annealed									
			Quenched & Tempered								
	Low Alloy Steel and Cast Steel (less than 5% alloying elements)		Annealed Quenched & Tempered	295-460	260-425	230-394	230-390	195-295	165-260		
	High Alloy Steel, Cast Steel, and Tool Steel		Annealed Quenched & Tempered	230-295	195-260	165-195	180-230	165-195	130-165		
M	Stainless Steel and Cast Steel		Ferritic / Martensitic	360-525	295-425	195-295	195-295	165-260	165-260		
			Martensitic								
			Austenitic								
K	Cast Iron Nodular (GGG)		Ferritic / Pearlitic	390-490	330-425		260-360	195-295			
			Pearlitic								
	Grey Cast Iron (GG)		Ferritic	460-490	395-425		395-330	215-280			
			Pearlitic								
	Malleable Cast Iron		Ferritic Pearlitic	360-460	330-425		260-330	195-280			
N	Aluminum-Wrought Alloy		Not Cureable	2300-3280			1970-2620	1480-1970	1970-2620	1150-1640	
			Cured								
	Aluminum-Cast, Alloyed	≤12% Si	Not Cureable	920-2460			650-1800	490-1150	660-1800	360-985	
		>12% Si	Cured								
	Copper Alloys	>1% Pb		High Temperature	625-1150			490-820	360-590	490-820	295-490
				Free Cutting							
		Brass									
			Electrolytic Copper								
	Non Metallic		Duroplastics, Fiber Plastics				655-985	490-690	330-655	360-490	
		Hard Rubber									
S	High Temp. Alloys, Super Alloys	Fe based	Annealed	65-260	100-215	80-195					
			Cured								
		Ni or Co based	Annealed								
			Cured Cast								
	Titanium Alloys		Alpha +Beta Alloys Cured	100-195	130-165	115-145			115-145		
H	Hardened Steel		Hardened 45-50 HRc	100-195	130-165	115-145					
			Hardened 51-55 HRc								
			Hardened 56-62 HRc								
		Chilled Cast Iron		Cast	65-165	100-130	80-115				
	Cast Iron		Hardened	65-130	65-100	50-80					

Conversion of Cutting Speed to Rotational Speed

Conversion of a selected cutting speed to rotational speed is calculated by the following formula:



Example

$$N = \frac{V \times 12}{\pi \times D} = \frac{400 \times 12}{3.14 \times 1.18} = 1294 \text{ RPM}$$

Number of passes and depth of cut per pass for multitooth insert

	Pitch mm / TPI	Insert Size		No. of Teeth	Ordering Code	No. of Passes	Depth of Cut per pass			
		L mm	I.C.				1	2	3	4
ISO External	1.00	16	3/8	3	16 ER 1.0 ISO 3M	2	.015	.010		
	1.50	16	3/8	2	16 ER 1.5 ISO 2M	3	.017	.012	.008	
	1.50	22	1/2	3	22 ER 1.5 ISO 3M	2	.022	.015		
	2.00	22	1/2	2	22 ER 2.0 ISO 2M	3	.022	.016	.011	
	2.00	22	1/2	3	22 ER 2.0 ISO 3M	2	.030	.019		
ISO Internal	3.00	27	5/8	2	27 ER 3.0 ISO 2M	4	.023	.020	.017	.013
	1.00	16	3/8	3	16 IR 1.0 ISO 3M	2	.013	.010		
	1.50	16	3/8	2	16 IR 1.5 ISO 2M	3	.015	.011	.008	
	1.50	22	1/2	3	22 IR 1.5 ISO 3M	2	.020	.015		
	2.00	22	1/2	2	22 IR 2.0 ISO 2M	3	.020	.014	.010	
UN External	2.00	22	1/2	3	22 IR 2.0 ISO 3M	2	.028	.018		
	3.00	27	5/8	2	27 IR 3.0 ISO 2M	4	.023	.018	.015	.012
	16	16	3/8	2	16 ER 16 UN 2M	3	.017	.012	.009	
	16	22	1/2	3	22 ER 16 UN 3M	2	.023	.015		
	12	22	1/2	2	22 ER 12 UN 2M	3	.023	.017	.012	
UN Internal	12	22	1/2	3	22 ER 12 UN 3M	2	.031	.020		
	8	27	5/8	2	27 ER 8 UN 2M	4	.024	.021	.018	.014
	16	16	3/8	2	16 IR 16 UN 2M	3	.017	.011	.009	
	16	22	1/2	3	22 IR 16 UN 3M	2	.022	.015		
	12	22	1/2	2	22 IR 12 UN 2M	3	.021	.015	.012	
Whitworth 55° External	12	22	1/2	3	22 IR 12 UN 3M	2	.029	.019		
	8	27	5/8	2	27 IR 8 UN 2M	4	.025	.020	.016	.012
	14	16	3/8	2	16 ER 14 W 2M	3	.020	.015	.011	
	14	22	1/2	3	22 ER 14 W 3M	2	.028	.030		
	11	22	1/2	2	22 ER 11 W 2M	3	.026	.019	.013	
Whitworth 55° Internal	14	16	3/8	2	16 IR 14 W 2M	3	.020	.015	.011	
	14	22	1/2	3	22 IR 14 W 3M	2	.028	.018		
	11	22	1/2	2	22 IR 11 W 2M	2	.026	.019	.013	
	14	16	3/8	2	16 ER 14 NPT 2M	3	.021	.018	.017	
	11.5	22	1/2	2	22 ER 11.5 NPT 2M	4	.019	.019	.017	.013
NPT External	11.5	27	5/8	3	27 ER 11.5 NPT 3M	4	.020	.019	.017	.012
	8	27	5/8	2	27 ER 8 NPT 2M	4	.029	.026	.024	.021
	14	16	3/8	2	16 IR 14 NPT 2M	3	.021	.018	.017	
	11.5	22	1/2	2	22 IR 11.5 NPT 2M	4	.019	.019	.017	.013
	11.5	27	5/8	3	27 IR 11.5 NPT 3M	4	.020	.019	.017	.012
API Round External	8	27	5/8	2	27 IR 8 NPT 2M	4	.029	.026	.024	.021
	10	22	1/2	2	22 ER 10 APIRD 2M	3	.024	.020	.012	
	10	27	5/8	3	27 ER 10 APIRD 3M	2	.039	.016		
	8	27	5/8	2	27 ER 8 APIRD 2M	3	.031	.024	.016	
	10	22	1/2	2	22 IR 10 APIRD 2M	3	.024	.020	.012	
API Round Internal	10	27	5/8	3	27 IR 10 APIRD 3M	2	.039	.016		
	8	27	5/8	2	27 IR 8 APIRD 2M	3	.031	.024	.016	

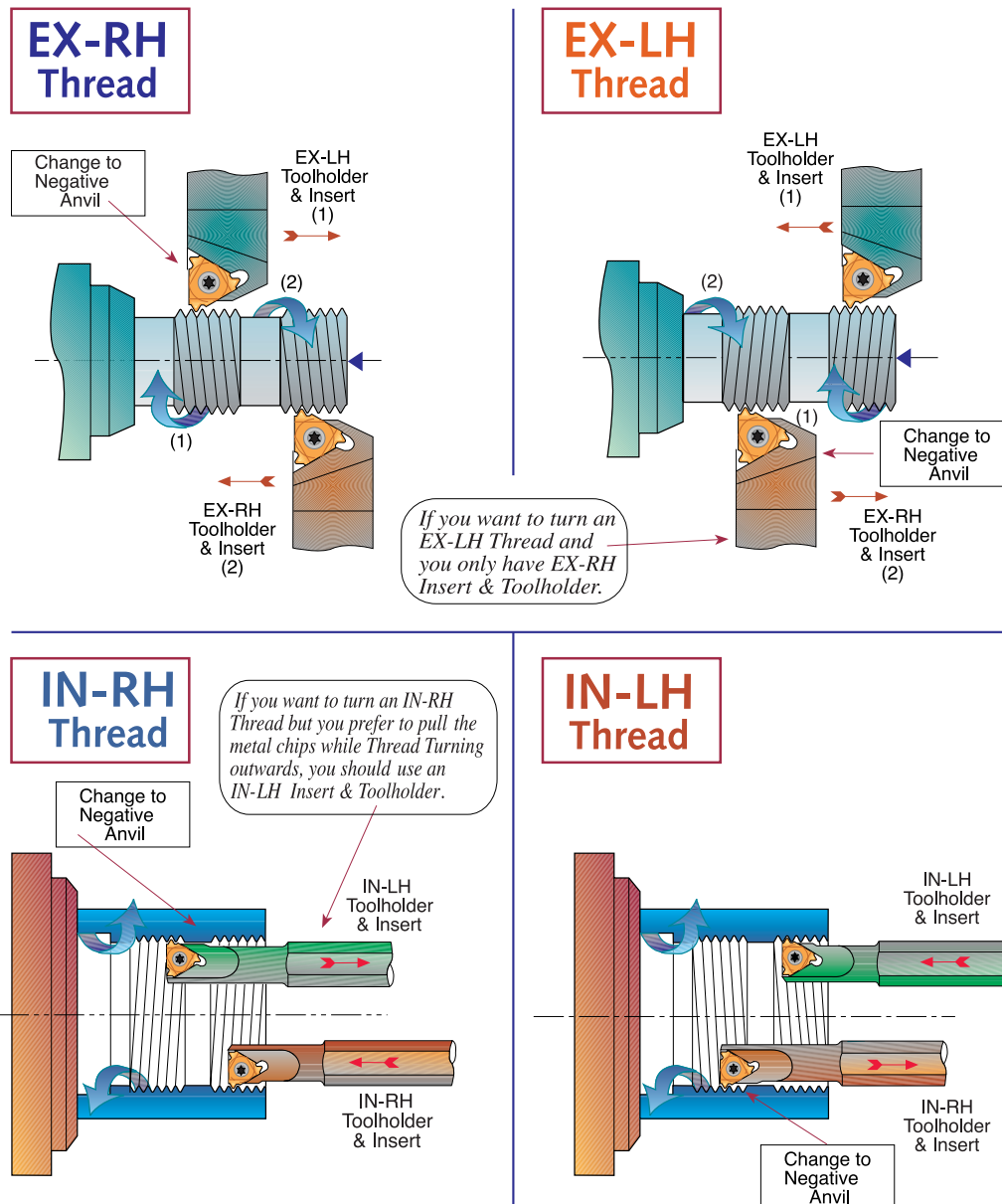
Number of threading passes selection for single point inserts

Pitch:	mm	0.5	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	6.0
TPI		48	32	24	20	16	14	12	10	8	6	4
Number of Passes		3-6	4-7	4-9	6-10	5-11	9-12	6-13	7-15	8-17	10-20	11-22

NOTES:

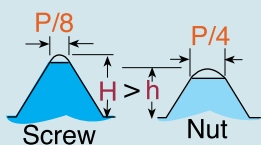
1. For most standard applications the middle of the range is a good starting point.
2. For most materials, the tougher the material, the higher the number of cutting passes you should select.
3. As a general rule of thumb, Fewer passes are better than more speed.

Thread Turning Methods

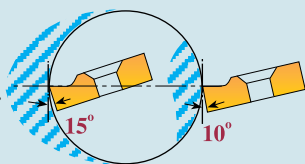


Important Points about Carmex Threading Inserts

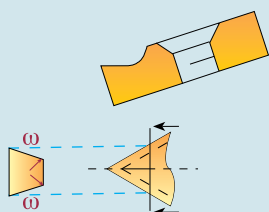
1. In most thread forms internal and external threads have different depth and radii, thus tools are not interchangeable



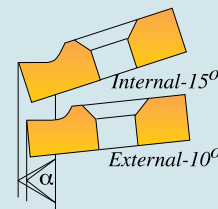
2. The Insert relief angle of a standard Carmex external toolholder is 10°; for an internal toolholder it is 15°. This 5° difference is to provide additional necessary radial clearance.



3. Our built-in relief angles ensure automatic insert flank angle clearance.



4. Profiles of Carmex internal & external threading inserts are precision ground to ensure accurate thread geometry when used in their corresponding toolholders. Using internal inserts with an external holder will result in distortion of angle and insert geometry.



5. Insert and toolholder should always match. An IN-RH insert must be used with an IN-RH toolholder. No mismatch is allowed.



Flank Clearance Angle ω

$$\omega = \text{ArcTan}(\tan \alpha \times \tan \phi)$$

$\omega = 5.8^\circ$ 	$\omega = 2.6^\circ$ 	$\omega = 10^\circ$ 	$\omega = 5.8^\circ$ 	$\phi = 10^\circ$ for External toolholders
$\omega = 8.8^\circ$ 				$\phi = 15^\circ$ for Internal toolholders
$\omega = 4^\circ$ 				
$\omega = 15^\circ$ 				
$\omega = 8.8^\circ$ 				

ISO, UN
PARTIAL 60
NPT

$2\alpha = 60^\circ$

TRAPEZ
ACME
STACME

$2\alpha = 30^\circ$
 $2\alpha = 29^\circ$

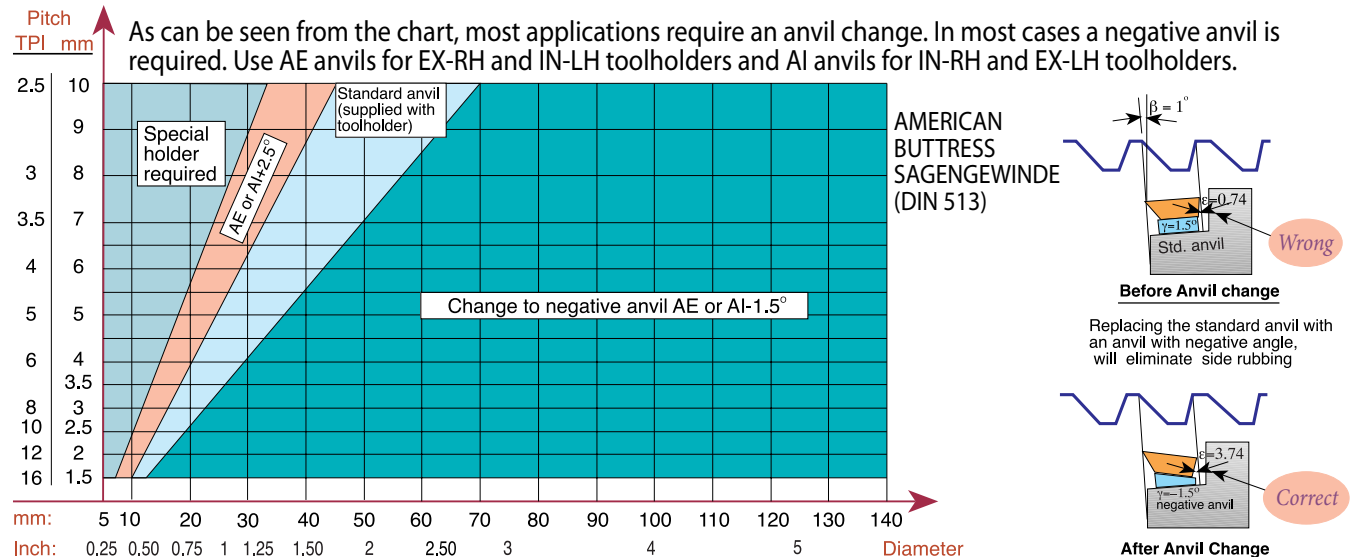
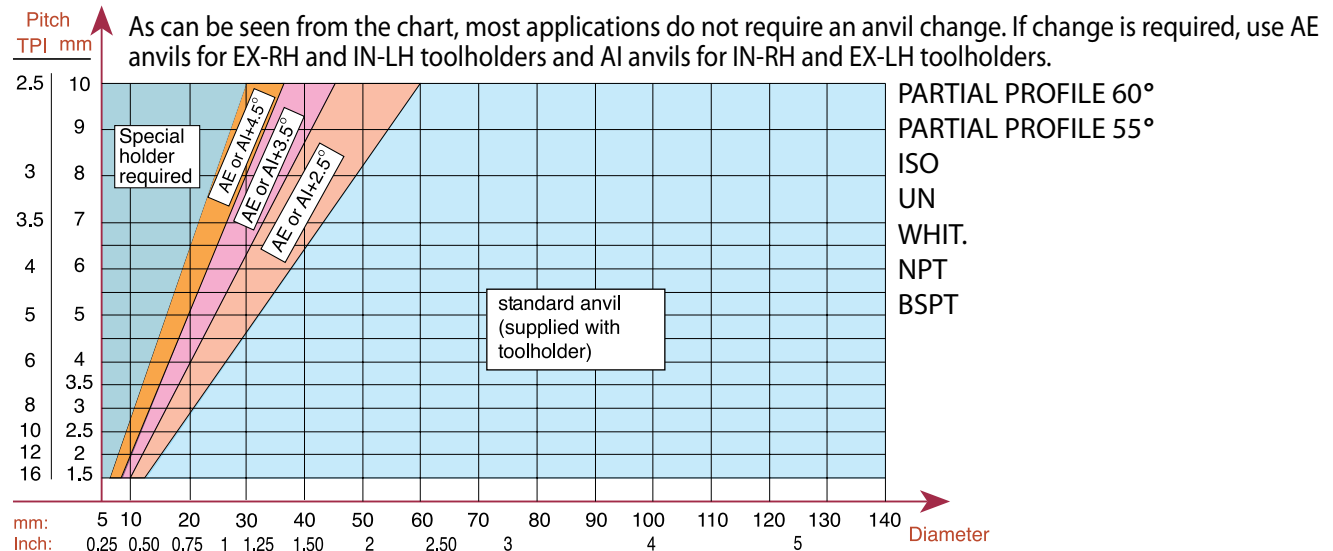
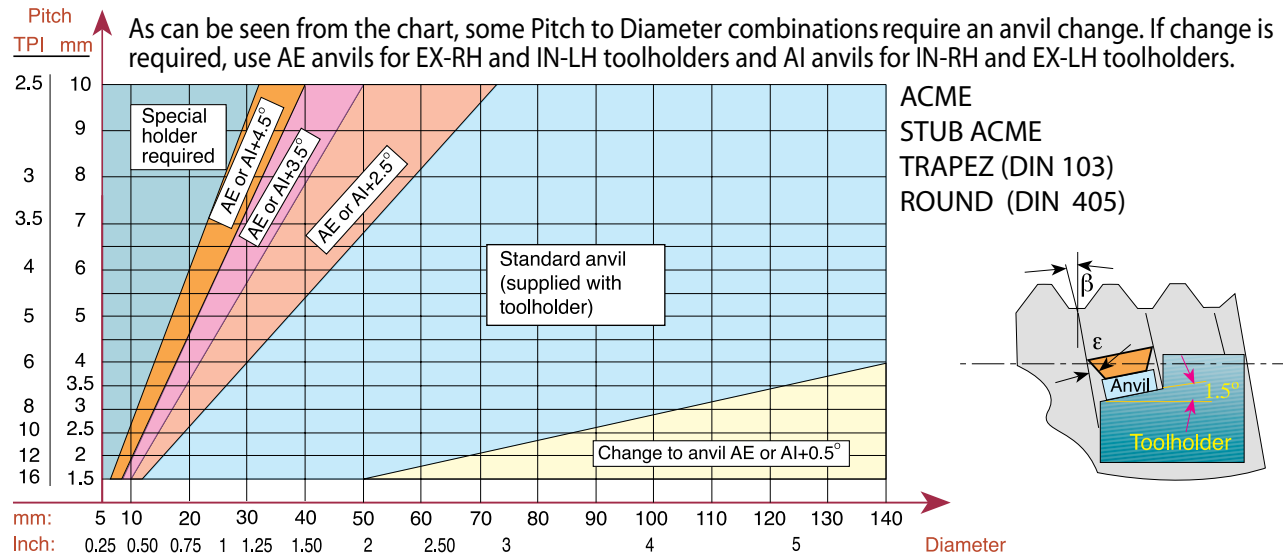
AMERICAN
BUTTRESS

$\alpha = 45^\circ$ $\alpha = 7^\circ$

SAGE
(DIN 513)

$\alpha = 30^\circ$ $\alpha = 3^\circ$

Anvil Change Recommendation



Thread Turning - Step by Step

Step 1 : Choose Thread Turning Method

Step 2 : Choose Insert

Step 3 : Choose Toolholder

Step 4 : Choose Insert Grade

Step 5 : Choose Thread Turning Speed

Step 6 : Choose Number of Threading Passes

In most cases the above mentioned 6 steps would be the steps needed to ensure a good thread. When cutting more complicated threads such as TRAPEZ, ACME, BUTTRESS or SAGE, it is advisable to check the effect of the thread "HELIX ANGLE" β on the "RESULTANT FLANK CLEARANCE" ϵ . If ϵ is smaller than 2° , an anvil change is required.

Step 7 : Find Thread Helix Angle

Step 8 : Choose Correct Anvil

EXAMPLES:

Example No. 1:

Step 1: Choose Thread Turning Method
from page A04-5, we chose **EX - RH Insert & Toolholder**

Step 2: Choose Insert from page A01-11: **16 ER 16 UN**

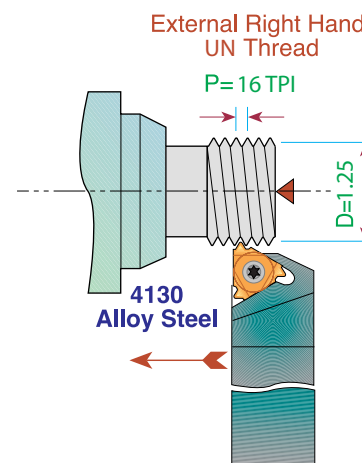
Step 3: Choose Toolholder from page A02-3: **SER 0750 K16**

Step 4: Choose Insert Grade from selection on page A04-2
Our choice for Alloy Steel is Grade **P25C**

Step 5: Choose Thread Turning Speed from chart on page A04-3,
we chose **330 ft/min**

Rotational Speed calculation:
$$N = \frac{330 \times 12}{\pi \times 1.25} = 1008 \text{ rpm}$$

Step 6: Choose Number of Threading passes
from table on page A04-5, we chose **8 passes**



Example No. 2:

Step 1: Choose Thread Turning Method from page A04-5
Usually, an IN-RH Toolholder and Insert will be chosen, however, in this particular case we prefer to pull the metal chips while thread turning outward, thus we chose to work with **IN-LH Insert & Toolholder**

Step 2: Choose Insert from page A01-11: **16 IL 12 UN**

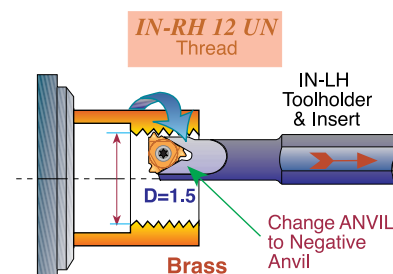
Step 3: Choose Toolholder from page A02-7: **SIL 1000 R16**
Note: since we thread cut IN-RH thread outward with an IN-LH tool, do not forget to replace the standard anvil (supplied with the holder) with a negative anvil **AE16-1.5**

Step 4: Choose Insert Grade from selection on page A04-2
Our choice for Brass is Grade **K20**

Step 5: Choose Thread Turning Speed from chart on page A04-3,
we chose **450 ft/min**

Rotational Speed calculation:
$$N = \frac{450 \times 12}{\pi \times 1.5} = 1146 \text{ RPM}$$

Step 6: Choose Number of Threading passes from table
on page A04-5, we chose **9 passes**

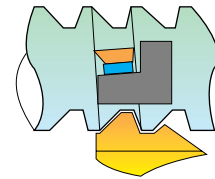


Example No. 3:

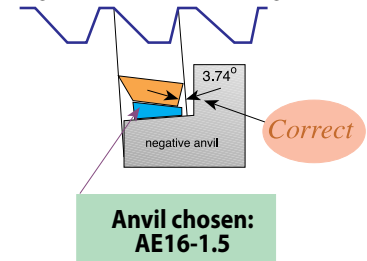
- Step 1: Choose Thread Turning Method from page A04-5
We chose EX-RH Insert & Toolholder.
- Step 2: Choose Insert from page A01-31: **16 ER 12 ABUT**
- Step 3: Choose Toolholder from page A02-3: **SER 1000 M16**
- Step 4: Choose Insert Grade from selection on page A04-2
Our choice for Stainless Steel is Grade **BMA**
- Step 5: Choose Thread Turning Speed from chart on page A04-4
We chose 360 ft/min.
Rotational Speed calculation:
$$N = \frac{360 \times 12}{\pi \times 1.5} = 917 \text{ RPM}$$
- Step 6: Choose Number of Threading passes from table on page A04-5. We chose **13 passes**
- Step 7: Find Thread Helix Angle: on page A02-16 for Pitch of 12 TPI and 1.5 Diameter
Helix Angle as shown in the chart is 1°
- Step 8: Choose correct Anvil: As can be seen from the chart on page A04-7, for AMERICAN BUTTRESS Thread, for 12 TPI and 1.5 Diameter a negative anvil **AE16-1.5** should replace the standard anvil supplied with the toolholder

EX-RH. AMERICAN BUTTRESS
12 TPI on 1.5 diameter.

Stainless Steel 304

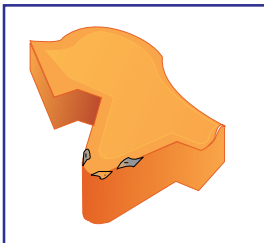


Replacing the standard anvil with an anvil with negative angle, will eliminate side rubbing



Troubleshooting

Chipping



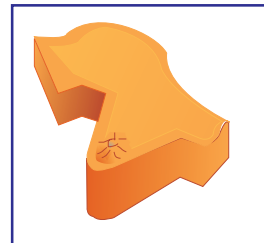
1. Use a tougher carbide grade
2. Eliminate tool overhang
3. Check if insert is correctly clamped
4. Eliminate vibration

Crater Wear



1. Reduce cutting speed
2. Apply coolant fluid
3. Use a harder carbide grade

Build-up Edge



1. Increase cutting speed
2. Use a tougher carbide grade

Thermal Cracking



1. Reduce cutting speed
2. Apply coolant fluid
3. Use a tougher carbide grade

Deformation



1. Use a harder carbide grade
2. Reduce cutting speed
3. Reduce depth of cut
4. Apply coolant fluid

Fracture

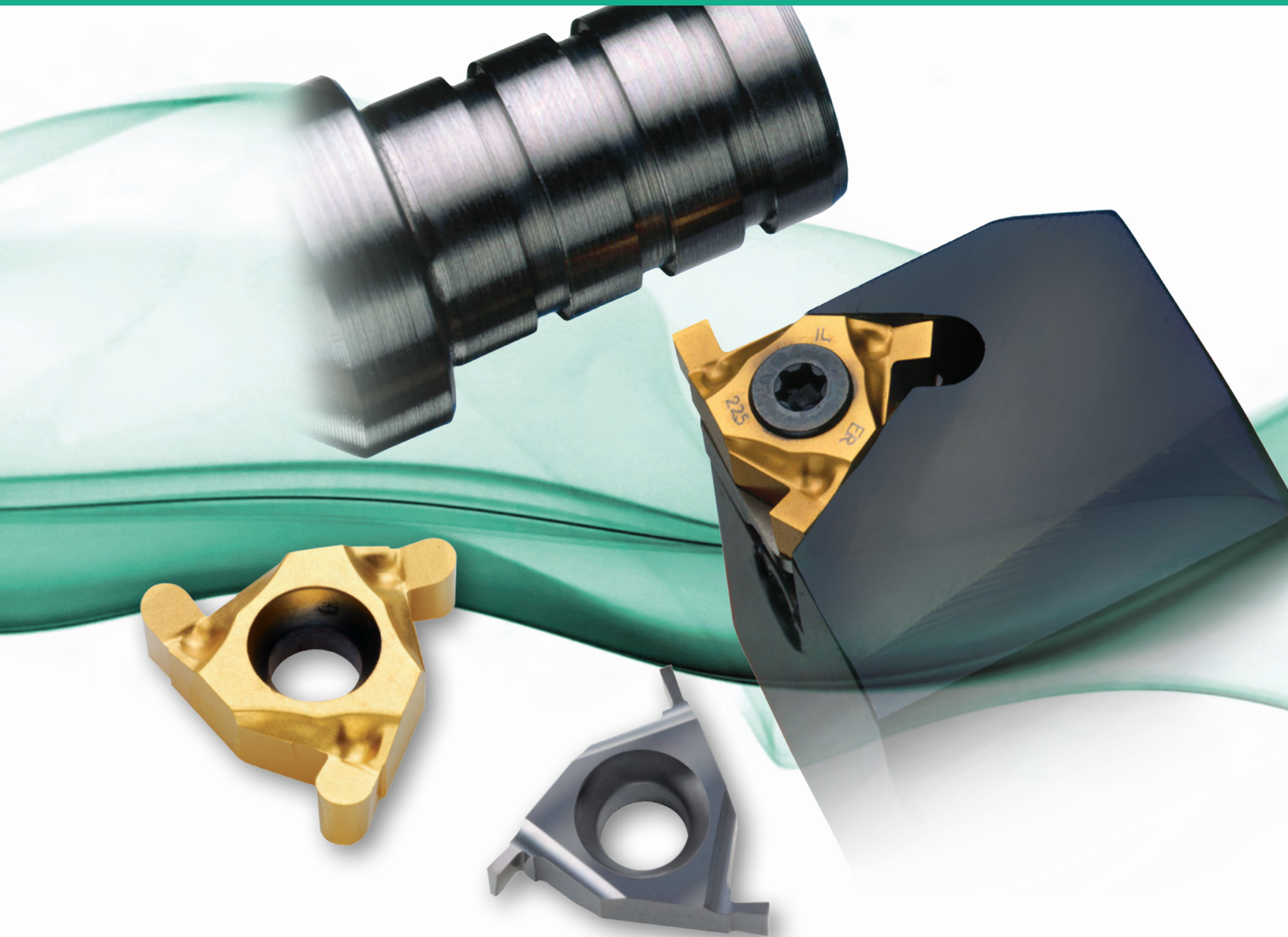


1. Use a tougher carbide grade
2. Reduce depth of cut
3. Index insert sooner
4. Check machine and tool stability

Threading Inserts Standards

Thread Profile	Standard	Thread Class
ISO	DIN 13	6g / 6H
UN	ANSI B1.1-1989	2A / 2B
WHITWORTH	B.S. 84: 1956	Medium Class
NPT	ANSI B1.20.1-1983	-
NPTF	ANSI B1.20.3-1976	-
NPS	ANSI B1.20.1-1983	-
NPSM	ANSI B1.20.1-1983	-
BSPT	B.S. 21: 1957	-
DIN 477	DIN 477	-
ACME	ANSI B1.5-1988	3G (EXT), 3G / 2G (INT)
STUB ACME	ANSI B1.8-1988	2G
TRAPEZ	DIN 103	7e / 7H
ROUND	DIN 405	Class 7
UNJ	MIL-S-8879C	3A / 3B
MJ	ISO 5855	4h/6h, 4H/5H
AMERICAN BUTTRESS	ANSI B1.9-1973	Class 2
SAGENGEWINDE	DIN 513	-
PG	DIN 40430	-
V-0.040	API Spec7	-
V-0.038R	API Spec7	-
V-0.050	API Spec7	-
V-0.055	API Spec7	-
API ROUND	API Spec Standard 5B	-
EXTREME – LINE CASING	API Spec Standard 5B	-
BUTTRESS CASING	API Spec Standard 5B	-
VAM	VAM	-
HUGHES	HUGHES	-
PAC	PAC	-

DIN: **Deutsches Institut für Normung**
 ANSI: **American National Standards Institute**
 API: **American Petroleum Institute**
 B.S.: **British Standards**
 ISO: **International Organisation for Standardization**
 MIL-S: **Military Specification**
 NPT: **American National Standard Taper Pipe Thread**
 NPTF: **National Standard Taper Fuel:Dryseal USA**
 PAC: **Pacific Asia Connection**
 NPS: **Straight thread,same as NPT without taper**
 NPSM: **Free-Fitting Mechanical Joints**



A combination of ground profile and sintered chip - breaker

Advantages:

- Same Toolholder for Grooving and Threading
- Minimum Investment in Tooling
- Three Cutting Edges
- Precision Ground

Contents:

Grooving Inserts
Grooving Inserts for Snap Ring
Product identification

Page:

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3

Contents:

Grooving Kits
Technical Section

Page:

3
4

Grooving Inserts



W ±.0008	T	I.C.	L mm	Ordering Code		Ordering Code	
				ER/IL Inserts	Anvil	IR/EL Inserts	Anvil
.020	.055	1/4	11	11 ER/IL .020	-	11 IR/EL .020	-
.024	.055	1/4	11	11 ER/IL .024	-	11 IR/EL .024	-
.028	.055	1/4	11	11 ER/IL .028	-	11 IR/EL .028	-
.031	.055	1/4	11	11 ER/IL .031	-	11 IR/EL .031	-
.039	.051	1/4	11	11 ER/IL .039	-	11 IR/EL .039	-
.031	.055	3/8	16	16 ER/IL .031	AE 16-0	16 IR/EL .031	AI 16-0
.039	.055	3/8	16	16 ER/IL .039	AE 16-0	16 IR/EL .039	AI 16-0
.047	.063	3/8	16	16 ER/IL .047	AE 16-0	16 IR/EL .047	AI 16-0
.055	.071	3/8	16	16 ER/IL .055	AE 16-0	16 IR/EL .055	AI 16-0
.062	.075	3/8	16	16 ER/IL .062	AE 16-0	16 IR/EL .062	AI 16-0
.067	.079	3/8	16	16 ER/IL .067	AE 16-0	16 IR/EL .067	AI 16-0
.077	.079	3/8	16	16 ER/IL .077	AE 16-0	16 IR/EL .077	AI 16-0
.089	.089	3/8	16	16 ER/IL .089	AE 16-0	16 IR/EL .089	AI 16-0
.094	.089	3/8	16	16 ER/IL .094	AE 16-0	16 IR/EL .094	AI 16-0

Order example: 16 ER/IL 1.20 BXC

- * The inserts should be used with our standard threading toolholders
- * The anvil must be changed to AE 16-0 or AI 16-0 before using size 16 mm (3/8) inserts
- * Size 16 internal holders without anvil can't be used

Grooving Inserts for Snap Ring

Carbide Grade: BXC



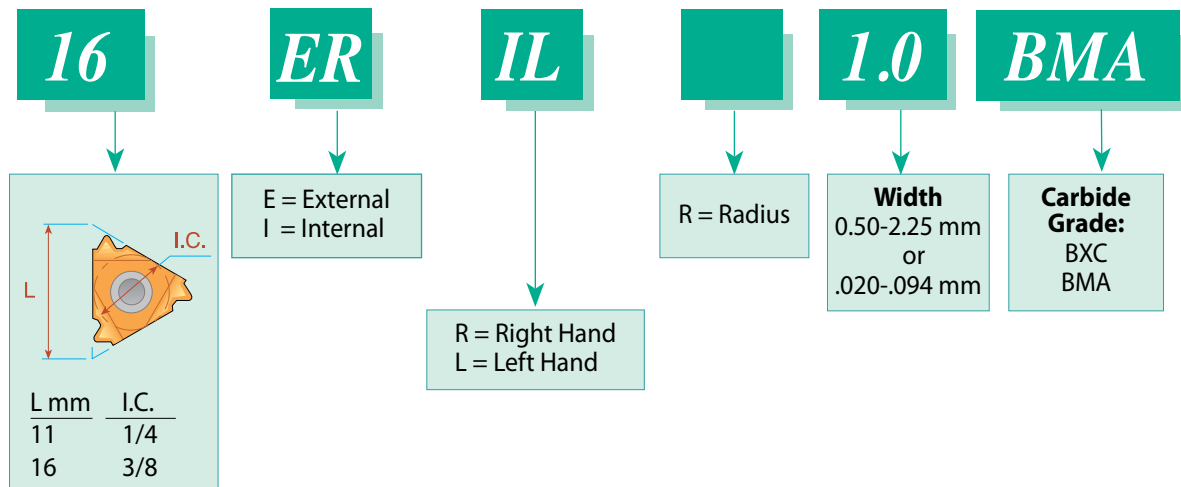
R ±.0016	T	I.C.	L mm	Ordering Code		Ordering Code	
				ER/IL Inserts	Anvil	IR/EL Inserts	Anvil
.020	.055	3/8	16	16 ER/IL R.020	AE 16 - 0	16 IR/EL R.020	AI 16 - 0
.024	.063	3/8	16	16 ER/IL R.024	AE 16 - 0	16 IR/EL R.024	AI 16 - 0
.035	.079	3/8	16	16 ER/IL R.035	AE 16 - 0	16 IR/EL R.035	AI 16 - 0
.039	.079	3/8	16	16 ER/IL R.039	AE 16 - 0	16 IR/EL R.039	AI 16 - 0
.043	.087	3/8	16	16 ER/IL R.043	AE 16 - 0	16 IR/EL R.043	AI 16 - 0
.047	.089	3/8	16	16 ER/IL R.047	AE 16 - 0	16 IR/EL R.047	AI 16 - 0

Order example: 16ER/IL R1.20 BXC

- * The inserts should be used with our standard threading toolholders
- * The anvil must be changed to AE 16-0 or AI 16-0 before using size 16 mm (3/8) inserts
- * Size 16 internal holders without anvil can't be used

Product Identification

Grooving Inserts Ordering Codes



Grooving Kits



**ER / IL INSERT
KGROI - EXTERNAL**

**IR / EL INSERT
KGROI - INTERNAL**

16 ER / IL .031 BXC	1 unit
16 ER / IL .039 BXC	1 unit
16 ER / IL .047 BXC	1 unit
16 ER / IL .062 BXC	1 unit
16 ER / IL .077 BXC	1 unit
16 ER / IL .094 BXC	1 unit

ANVIL AE 16 - 0 1 unit

16 IR / EL .031 BXC	1 unit
16 IR / EL .039 BXC	1 unit
16 IR / EL .047 BXC	1 unit
16 IR / EL .062 BXC	1 unit
16 IR / EL .077 BXC	1 unit
16 IR / EL .094 BXC	1 unit

ANVIL AI 16 - 0 1 unit

Technical Section

Cutting Speeds for Grooving Tools

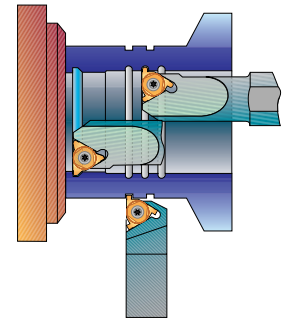
Carbide Grades:

BXC (P30 - P50, K25 - K40)

PVD TiN coated grade for low cutting speed. Works well with a wide range of stainless steels.

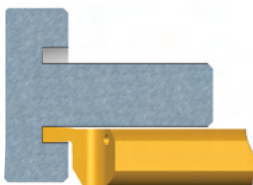
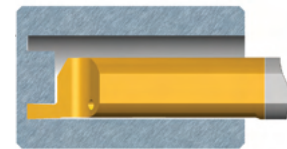
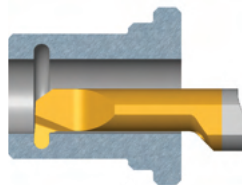
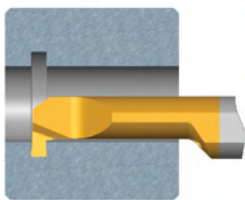
BMA (P20 - P40, K20 - K30)

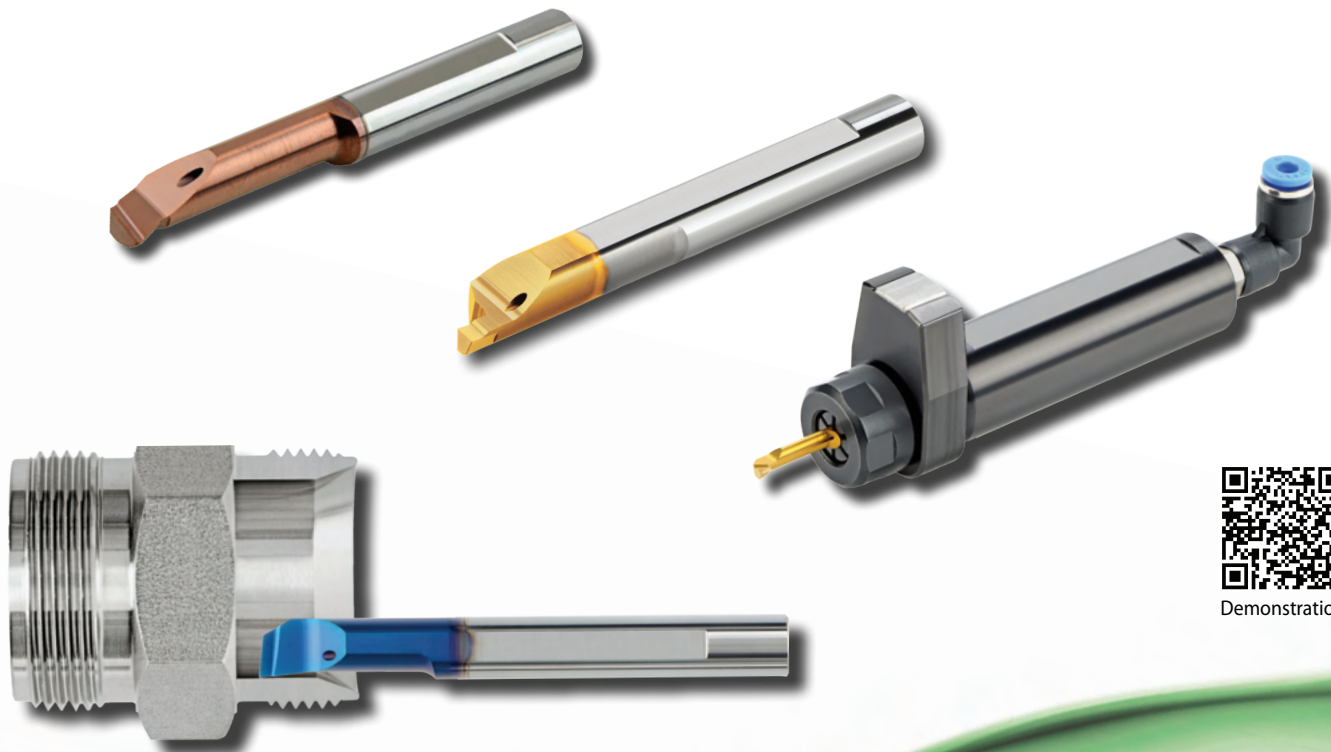
PVD TiAlN coated sub-micrograin grade for stainless steels and exotic materials at medium to high cutting speeds.



ISO Standard	Materials	Cutting Speed ft/min
P	Low & Medium Carbon Steel	65-330
	High Carbon Steel	100-260
	Alloy Steels and Treated Steels	130-300
M	Stainless Steels	100-260
	Cast Steels	100-300
K	Cast Iron	100-300
N	Non-Ferrous & Aluminum	65-660

For grooving small bores see pages A06-22- to 30





Demonstration

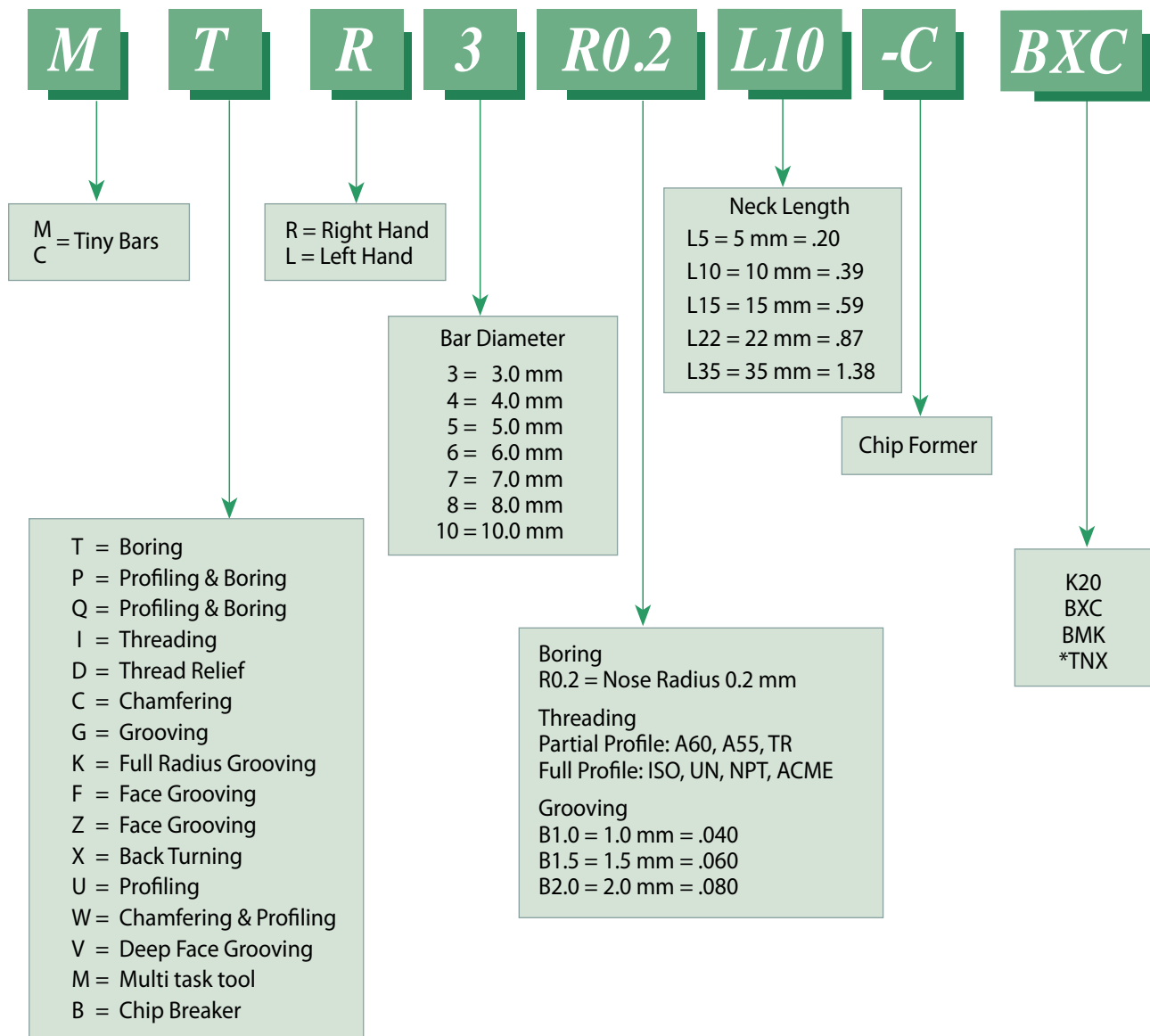
Solid Carbide tools for working in small bores

These tools are made for the high-tech, medical and small component industry. All tools include through coolant enabling the cooling fluid to reach the cutting edge efficiently, for easy chip removal and smooth cutting operations.

Contents:	Page:	Contents:	Page:
Tiny Bars	2-31	MFR Face Grooving Bars with Chip Former	26
Product Identification	2	MFL Face Grooving Bars	27
MTR Boring Bars	3-4	MVR Deep Face Grooving Bars	28
CBR Profiling and Boring Bars	5	MZR Face Grooving Bars	29
CMR Multi-Task Tiny Bars	6	MZL Face Grooving Bars	30
MXR Back Turning Bars	7	HK Broaching Tools	31
MPR Profiling and Boring Bars	8-9	Tiny Toolholders	32-41
MUR Profiling, 90° Face Cutting Bars	10	Product Identification	32
MQR Profiling and Boring Bars	11	Tiny Toolholders	32-33
MIR Threading Bars	12-18	Metric Shank Version	34
MDR Thread Relief, Chamfering and Grooving Bars	19	Tiny Toolholders for Star Swiss machines	35
MCR Chamfering and Boring Bars	20	CIM Clamping System	35-38
MWR Chamfering and Profiling Bars	21	Tiny Toolholders Square Shank	39-42
MGR Grooving Bars	22-23	Tiny Tools Kits	43
MKR Full Radius Grooving Bars	24	Technical Section	44-48
MFR Face Grooving Bars	25		

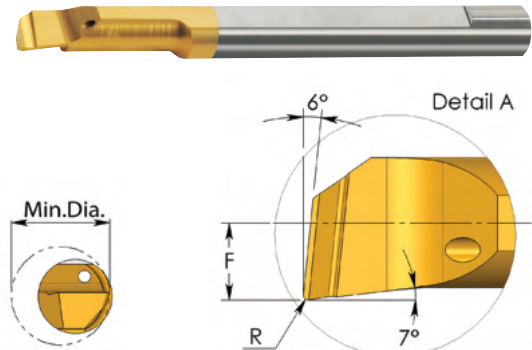
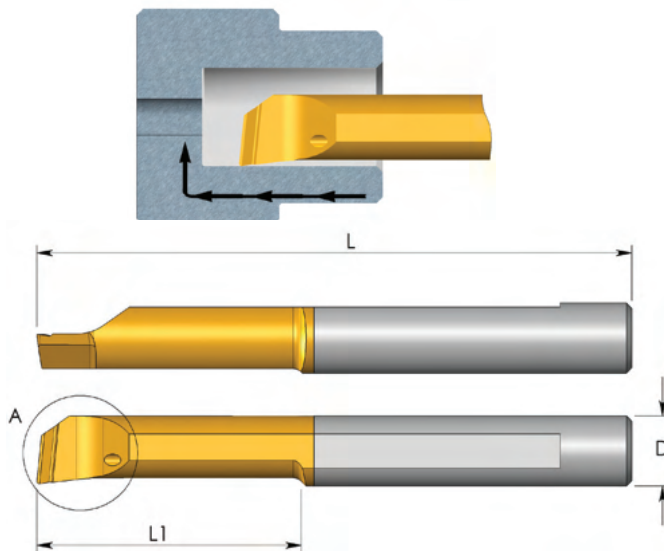
Product Identification

Tiny Bars Ordering Codes



* Available only for CBR bars

MTR Bars Boring



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

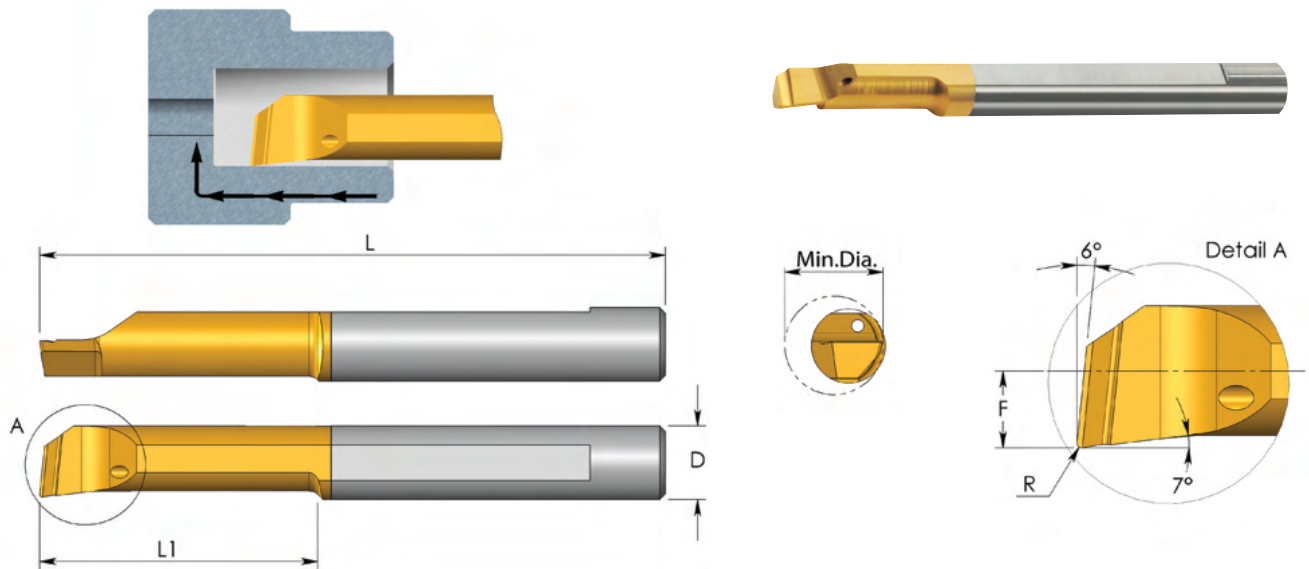
D mm	Ordering Code	L	L1	R	F	Min. Dia.	Holder
3.0	MTR 1 R0 L6	1.5	.24	0	.02	.04	SIM ... H3
	MTR 1 R0.05 L4	1.5	.16	.002	.02	.04	
	MTR 1 R0.05 L6	1.5	.24	.002	.02	.04	
3.0	MTR 1.2 R0 L7	1.5	.28	0	.02	.05	SIM ... H3
	MTR 1.2 R0 L9	1.5	.35	0	.02	.05	
3.0	MTR 1.5 R0 L6	1.5	.24	0	.03	.06	SIM ... H3
	MTR 1.5 R0.1 L6	1.5	.24	.004	.03	.06	
3.0	MTR 2 R0 L10	1.5	.39	0	.03	.08	SIM ... H3
	MTR 2 R0.05 L5	1.5	.20	.002	.03	.08	
	MTR 2 R0.05 L10	1.5	.39	.002	.03	.08	
	MTR 2 R0.1 L10	1.5	.39	.004	.03	.08	
	MTR 2 R0.1 L15	1.5	.59	.004	.03	.08	
	MTR 2 R0.15 L5	1.5	.20	.006	.03	.08	
4.0	MTR 2.5 R0 L10	2.0	.39	0	.04	.10	SIM ... H4
	MTR 2.5 R0.1 L10	2.0	.39	.004	.04	.10	
	MTR 2.5 R0.1 L15	2.0	.59	.004	.04	.10	
3.0	MTR 3 R0.05 L10	1.5	.39	.002	.05	.12	SIM ... H3
	MTR 3 R0.05 L15	1.5	.59	.002	.05	.12	
	MTR 3 R0.1 L10	1.5	.39	.004	.05	.12	
	MTR 3 R0.1 L15	1.5	.59	.004	.05	.12	
	MTR 3 R0.2 L10	1.5	.39	.008	.05	.12	
4.0	MTR 3 R0.2 L15	1.5	.59	.008	.05	.12	SIM ... H4
	MTR 4 R0.05 L15	2.0	.59	.002	.07	.16	
	MTR 4 R0.05 L22	2.0	.87	.002	.07	.16	
	MTR 4 R0.1 L10	2.0	.39	.004	.07	.16	
	MTR 4 R0.1 L15	2.0	.59	.004	.07	.16	
	MTR 4 R0.1 L22	2.0	.87	.004	.07	.16	
	MTR 4 R0.2 L10	2.0	.39	.008	.07	.16	
MTR 4 R0.2 L15	2.0	.59	.008	.07	.16		
	MTR 4 R0.2 L22	2.0	.87	.008	.07	.16	
	MTR 4 R0.2 L30	2.4	1.18	.008	.07	.16	

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MTR Bars Boring



D mm	Ordering Code	L	L1	R	F	Min Dia.	Holder
5.0	MTR 5 R0.05 L15	2.0	.59	.002	.08	.20	SIM ... H5
	MTR 5 R0.1 L15	2.0	.59	.004	.08	.20	
	MTR 5 R0.1 L22	2.0	.87	.004	.08	.20	
	MTR 5 R0.1 L30	3.0	1.18	.004	.08	.20	
	MTR 5 R0.2 L10	2.0	.39	.008	.08	.20	
	MTR 5 R0.2 L15	2.0	.59	.008	.08	.20	
	MTR 5 R0.2 L22	2.0	.87	.008	.08	.20	
	MTR 5 R0.2 L30	3.0	1.18	.008	.08	.20	
6.0	MTR 6 R0.05 L15	2.0	.59	.002	.11	.24	SIM ... H6
	MTR 6 R0.05 L22	2.0	.87	.002	.11	.24	
	MTR 6 R0.1 L15	2.0	.59	.004	.11	.24	
	MTR 6 R0.1 L22	2.0	.87	.004	.11	.24	
	MTR 6 R0.2 L15	2.0	.59	.008	.11	.24	
	MTR 6 R0.2 L22	2.0	.87	.008	.11	.24	
	MTR 6 R0.2 L30	2.3	1.18	.008	.11	.24	
	MTR 6 R0.2 L35	3.0	1.38	.008	.11	.24	
7.0	MTR 7 R0.2 L22	2.4	.87	.008	.13	.28	SIM ... H7
	MTR 7 R0.2 L30	2.4	1.18	.008	.13	.28	
8.0	MTR 8 R0.2 L15	2.5	.59	.008	.15	.32	SIM ... H8
	MTR 8 R0.2 L22	2.5	.87	.008	.15	.32	
	MTR 8 R0.2 L35	3.0	1.38	.008	.15	.32	
10.0	MTR 10 R0.2 L35	2.9	1.38	.008	.19	.40	SIM ... H10

Order example: MTR 6 R0.2 L22 BXC

For L.H. bars specify **MTL** instead of **MTR**

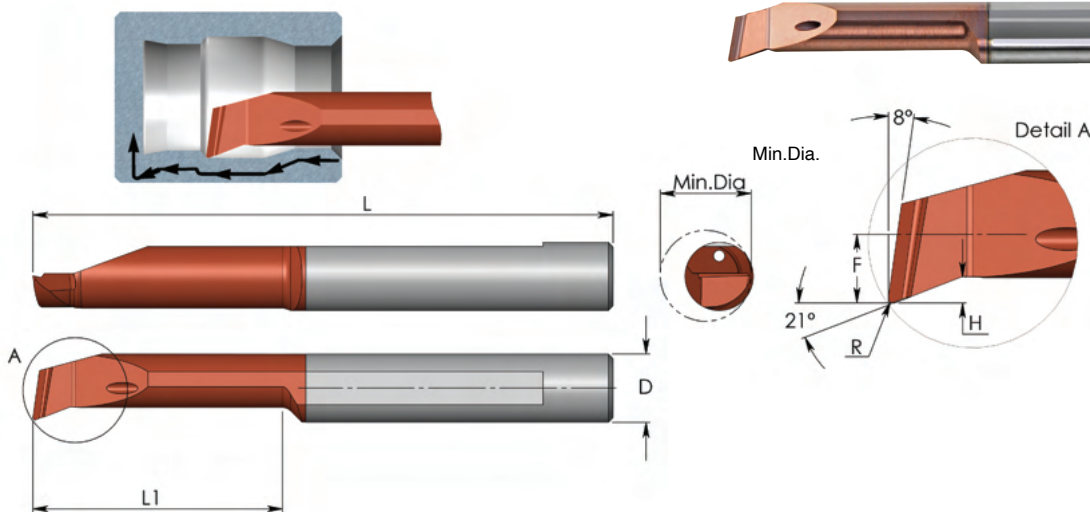
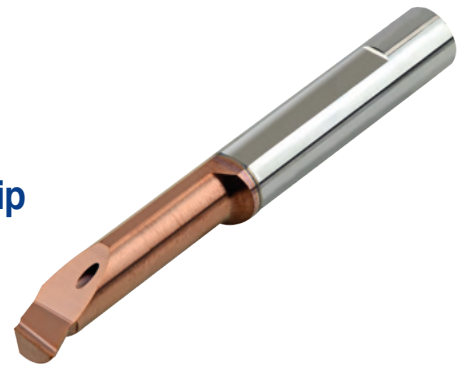
For additional holders see page A06-32 to 41

CBR Bars Profiling and Boring

With advanced Chip Breaker

Chip evacuation is obtained thanks to advanced Chip Breaker and the internal coolant through the tool, pushing the chips out of the hole.

Excellent solution for machining stainless steels, super alloys and other “difficult” materials that create curly chips around the tool and the application. Can be used also as general purpose for a wide range of materials.



Grade	P	M	K	N	S	H
TNX	●	●	●	●	●	●

D mm	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
4.0	CBR 4 R0.2 L10	2.0	.39	.008	.02	.07	.16	SIM ... H4
	CBR 4 R0.2 L15	2.0	.59	.008	.02	.07	.16	
5.0	CBR 5 R0.2 L15	2.0	.59	.008	.03	.09	.20	SIM ... H5
	CBR 5 R0.2 L22	2.0	.87	.008	.03	.09	.20	
6.0	CBR 6 R0.2 L15	2.0	.59	.008	.04	.11	.24	SIM ... H6
	CBR 6 R0.2 L22	2.0	.87	.008	.04	.11	.24	

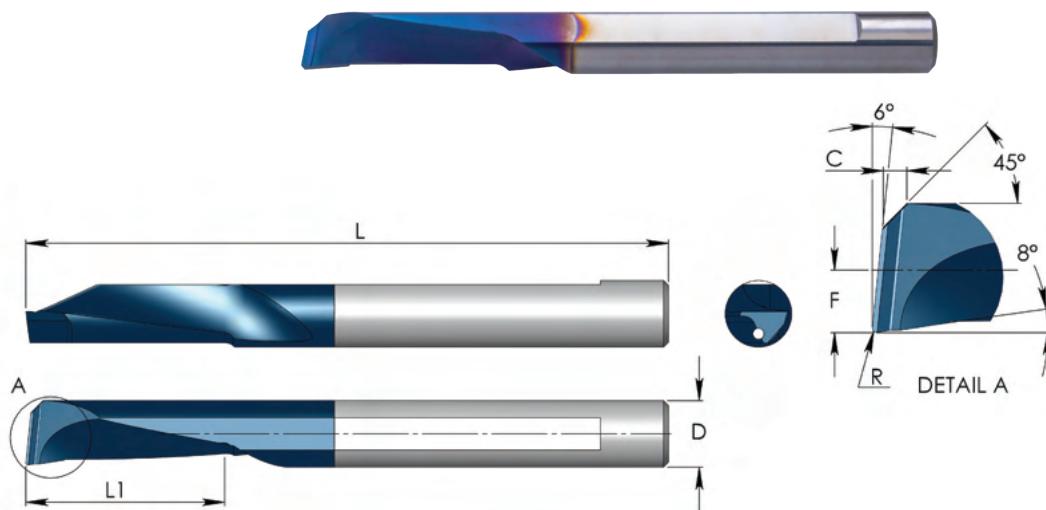
Order example: CBR 5 R0.2 L15 TNX

For L.H. bars specify CBL instead of CBR

For additional holders see page A06-32 to 41

CMR Multi-Task Tiny Bars

Multi-Task Tiny Tool CMR for Boring, Turning, Facing and Chamfering with a single tool



Grade	P	M	K	N	S	H
BMK	●	●	●	○	●	●

D mm	Ordering Code	L	L1	R	F	C	Hole Dia.*	Holder
4.0	CMR 4 R0.1 L10	2.0	.39	.004	.07	.04	.16	SIM...H4
	CMR 4 R0.1 L15	2.0	.59	.004	.07	.04	.16	
5.0	CMR 5 R0.2 L10	2.0	.39	.008	.09	.05	.20	SIM...H5
	CMR 5 R0.2 L15	2.0	.59	.008	.09	.05	.20	
6.0	CMR 6 R0.2 L12	2.3	.47	.008	.11	.06	.24	SIM...H6
	CMR 6 R0.2 L18	2.3	.71	.008	.11	.06	.24	

Order example: CMR 6 R0.2 L12 BMK

● First choice ○ Alternative

For L.H. bars specify CML instead of CMR

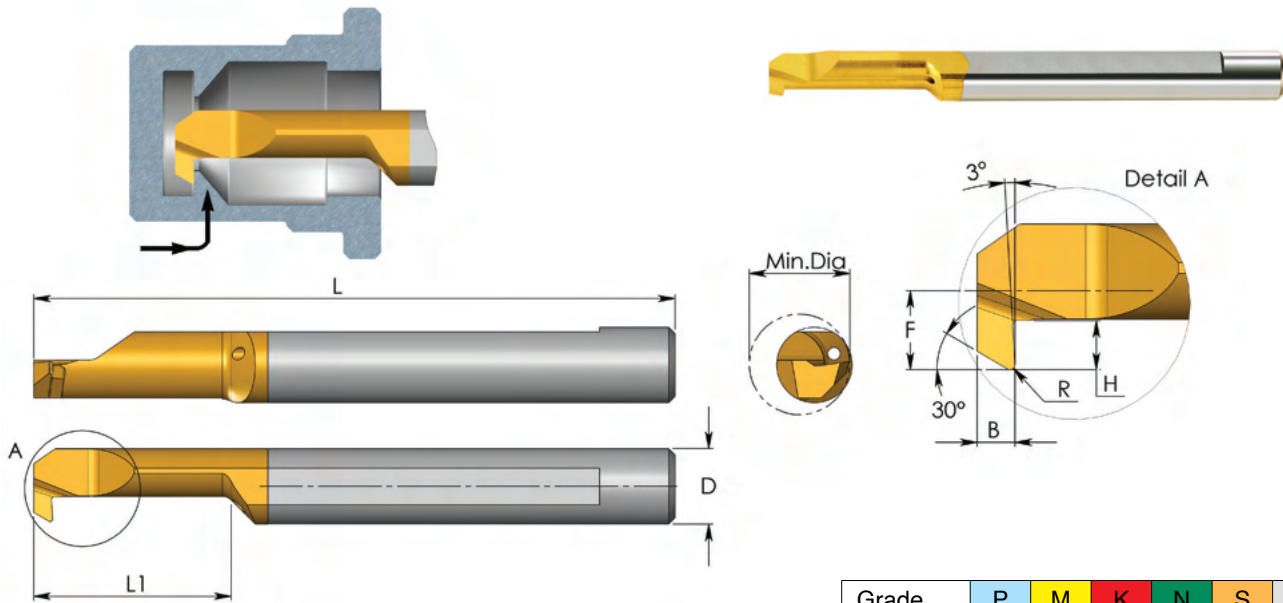
* The minimum diameter the tool can produce from a full material

For additional holders see page A06-32 to 41



Demonstration

MXR Bars Back Turning



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

D mm	Ordering Code	L	L1	B	R	H	F	Min. Dia.	Holder
4.0	MXR 4 R0.1 L10	2.0	.39	.05	.004	.02	.05	.12	SIM ... H4
4.0	MXR 4 R0.15 L10	2.0	.39	.05	.006	.03	.07	.16	SIM ... H4
	MXR 4 R0.15 L15	2.0	.59	.05	.006	.03	.07	.16	
5.0	MXR 5 R0.2 L15	2.0	.59	.06	.008	.04	.09	.20	SIM ... H5
	MXR 5 R0.2 L22	2.0	.87	.06	.008	.04	.09	.20	
6.0	MXR 6 R0.2 L15	2.0	.59	.06	.008	.07	.11	.24	SIM ... H6
	MXR 6 R0.2 L22	2.0	.87	.06	.008	.07	.11	.24	

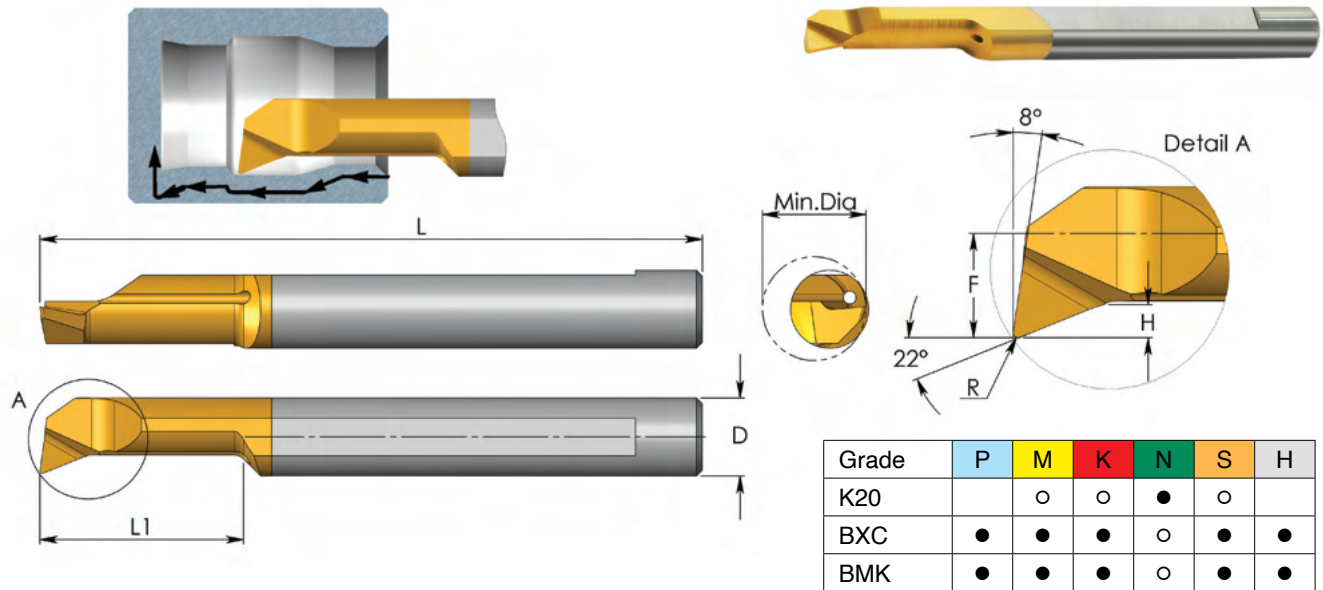
Order example: MXR 4 R0.15 L15 BXC

● First choice ○ Alternative

For L.H. bars specify **MXL** instead of **MXR**

For additional holders see page A06-32 to 41

MPR Bars Profiling and Boring

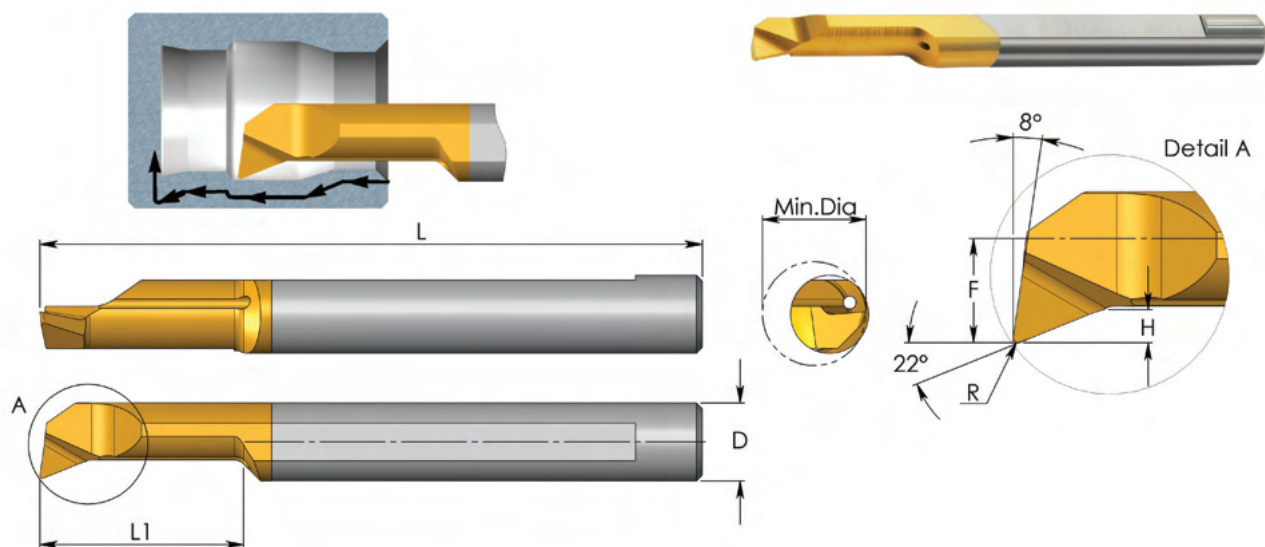


D mm	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
3.0	MPR 1 R0.05 L4	1.5	.16	.002	.01	.02	.04	SIM ... H3
	MPR 1 R0.05 L8	1.5	.31	.002	.01	.02	.04	
3.0	MPR 1.2 R0.1 L5	1.5	.20	.004	.01	.02	.05	SIM ... H3
	MPR 1.2 R0.1 L9	1.5	.35	.004	.01	.02	.05	
3.0	MPR 1.5 R0.05 L10	1.5	.39	.002	.01	.03	.06	SIM ... H3
	MPR 1.5 R0.1 L6	1.5	.24	.004	.01	.03	.06	
	MPR 1.5 R0.1 L10	1.5	.39	.004	.01	.03	.06	
3.0	MPR 2 R0.05 L10	1.5	.39	.002	.02	.03	.08	SIM ... H3
	MPR 2 R0.1 L10	1.5	.39	.004	.02	.03	.08	
	MPR 2 R0.15 L5	1.5	.20	.006	.02	.03	.08	
	MPR 2 R0.15 L10	1.5	.39	.006	.02	.03	.08	
	MPR 2 R0.15 L15	1.5	.59	.006	.02	.03	.08	
4.0	MPR 2.5 R0.1 L10	2.0	.39	.004	.02	.04	.10	SIM ... H4
	MPR 2.5 R0.1 L15	2.0	.59	.004	.02	.04	.10	
3.0	MPR 3 R0.05 L10	1.5	.39	.002	.03	.05	.12	SIM ... H3
	MPR 3 R0.05 L15	1.5	.59	.002	.03	.05	.12	
	MPR 3 R0.1 L10	1.5	.39	.004	.03	.05	.12	
	MPR 3 R0.1 L15	1.5	.59	.004	.03	.05	.12	
	MPR 3 R0.1 L22	1.9	.87	.004	.03	.05	.12	
	MPR 3 R0.2 L10	1.5	.39	.008	.03	.05	.12	
	MPR 3 R0.2 L15	1.5	.59	.008	.03	.05	.12	
	MPR 3 R0.2 L22	1.9	.87	.008	.03	.05	.12	
4.0	MPR 4 R0.1 L10	2.0	.39	.004	.03	.07	.16	SIM ... H4
	MPR 4 R0.1 L15	2.0	.59	.004	.03	.07	.16	
	MPR 4 R0.1 L22	2.0	.87	.004	.03	.07	.16	
	MPR 4 R0.2 L10	2.0	.39	.008	.03	.07	.16	
	MPR 4 R0.2 L15	2.0	.59	.008	.03	.07	.16	
	MPR 4 R0.2 L22	2.0	.87	.008	.03	.07	.16	
	MPR 4 R0.2 L30	2.4	1.18	.008	.03	.07	.16	

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MPR Bars Profiling and Boring



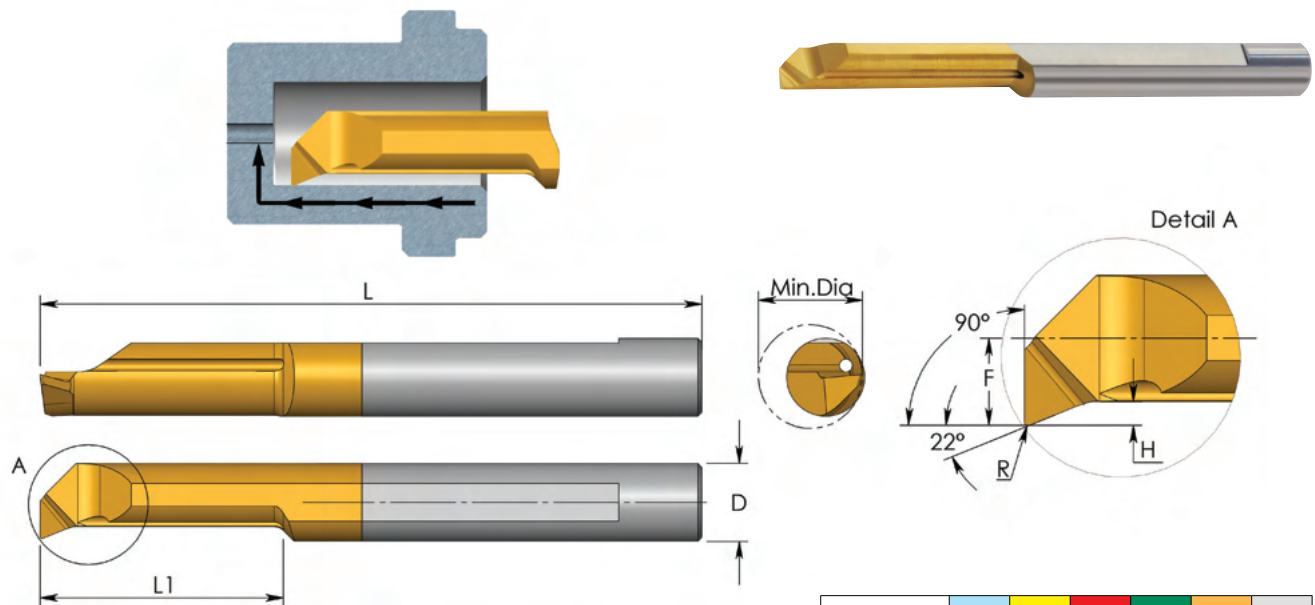
D mm	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
5.0	MPR 5 R0.1 L22	2.0	.87	.004	.05	.08	.20	SIM ... H5
	MPR 5 R0.1 L30	3.0	1.18	.004	.05	.08	.20	
	MPR 5 R0.2 L10	2.0	.39	.008	.05	.08	.20	
	MPR 5 R0.2 L15	2.0	.59	.008	.05	.08	.20	
	MPR 5 R0.2 L22	2.0	.87	.008	.05	.08	.20	
	MPR 5 R0.2 L30	3.0	1.18	.008	.05	.08	.20	
6.0	MPR 5 R0.2 L40	3.0	1.57	.008	.04	.08	.20	SIM ... H6
	MPR 6 R0.2 L10	2.0	.39	.008	.06	.11	.24	
	MPR 6 R0.2 L15	2.0	.59	.008	.06	.11	.24	
	MPR 6 R0.2 L22	2.0	.87	.008	.06	.11	.24	
	MPR 6 R0.2 L30	3.0	1.18	.008	.06	.11	.24	
7.0	MPR 6 R0.2 L40	3.0	1.57	.008	.04	.11	.24	SIM ... H7
	MPR 7 R0.2 L22	2.4	.87	.008	.06	.13	.28	
	MPR 7 R0.2 L30	2.4	1.18	.008	.06	.13	.28	
8.0	MPR 7 R0.2 L35	2.4	1.38	.008	.06	.13	.28	SIM ... H8
	MPR 8 R0.2 L15	2.5	.59	.008	.06	.15	.32	
	MPR 8 R0.2 L22	2.5	.87	.008	.06	.15	.32	
10.0	MPR 8 R0.2 L35	3.0	1.38	.008	.06	.15	.32	SIM ... H8
10.0	MPR 10 R0.2 L35	2.9	1.38	.008	.08	.19	.40	SIM ... H10

Order example: MPR 4 R0.2 L15 BXC

For L.H. Bars specify MPL instead of MPR

For additional holders see page A06-32 to 41

MUR Bars Profiling, 90° Face Cutting



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

D mm	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
3.0	MUR 3 R0.05 L10	1.5	.39	.002	.016	.05	.12	SIM ... H3
	MUR 3 R0.05 L15	1.5	.59	.002	.016	.05	.12	
4.0	MUR 4 R0.1 L10	2.0	.39	.004	.020	.07	.16	SIM ... H4
	MUR 4 R0.1 L15	2.0	.59	.004	.020	.07	.16	
5.0	MUR 5 R0.15 L15	2.0	.59	.006	.030	.08	.20	SIM ... H5
	MUR 5 R0.15 L22	2.0	.87	.006	.030	.08	.20	
6.0	MUR 6 R0.15 L15	2.0	.59	.006	.035	.11	.24	SIM ... H6
	MUR 6 R0.15 L22	2.0	.87	.006	.035	.11	.24	
8.0	MUR 8 R0.2 L22	2.5	.87	.008	.043	.15	.32	SIM ... H8

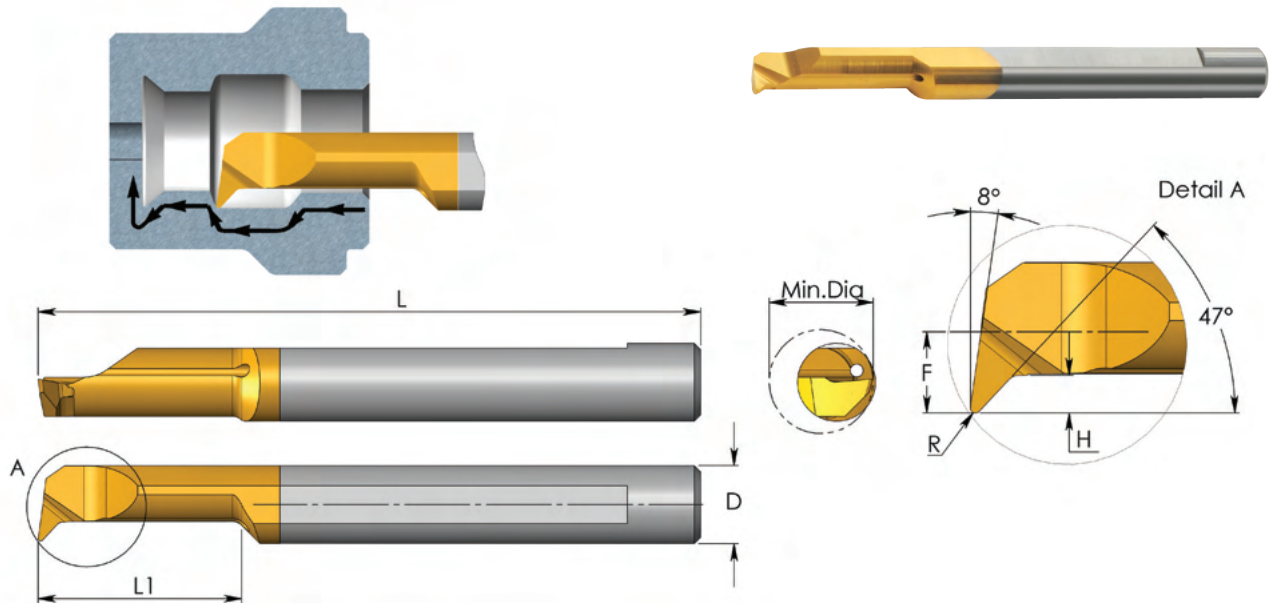
Order example: MUR 5 R0.15 L15 BXC

For L.H. bars specify MUL instead of MUR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MQR Bars Profiling and Boring



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

D mm	Ordering Code	L	L1	R	H	F	Min. Dia.	Holder
3.0	MQR 3 R0.1 L10	1.5	.39	.004	.02	.05	.12	SIM ... H3
	MQR 3 R0.1 L15	1.5	.59	.004	.02	.05	.12	
4.0	MQR 4 R0.1 L22	2.0	.87	.004	.03	.07	.16	SIM ... H4
	MQR 4 R0.2 L10	2.0	.39	.008	.03	.07	.16	
	MQR 4 R0.2 L22	2.0	.87	.008	.03	.07	.16	
5.0	MQR 5 R0.2 L15	2.0	.59	.008	.04	.09	.20	SIM ... H5
	MQR 5 R0.2 L22	2.0	.87	.008	.04	.09	.20	
6.0	MQR 6 R0.2 L15	2.0	.59	.008	.06	.11	.24	SIM ... H6
	MQR 6 R0.2 L22	2.0	.87	.008	.06	.11	.24	
	MQR 6 R0.2 L30	2.3	1.18	.008	.06	.11	.24	
8.0	MQR 8 R0.2 L22	2.5	.87	.008	.06	.15	.32	SIM ... H8
	MQR 8 R0.2 L27	2.5	1.06	.008	.08	.15	.32	

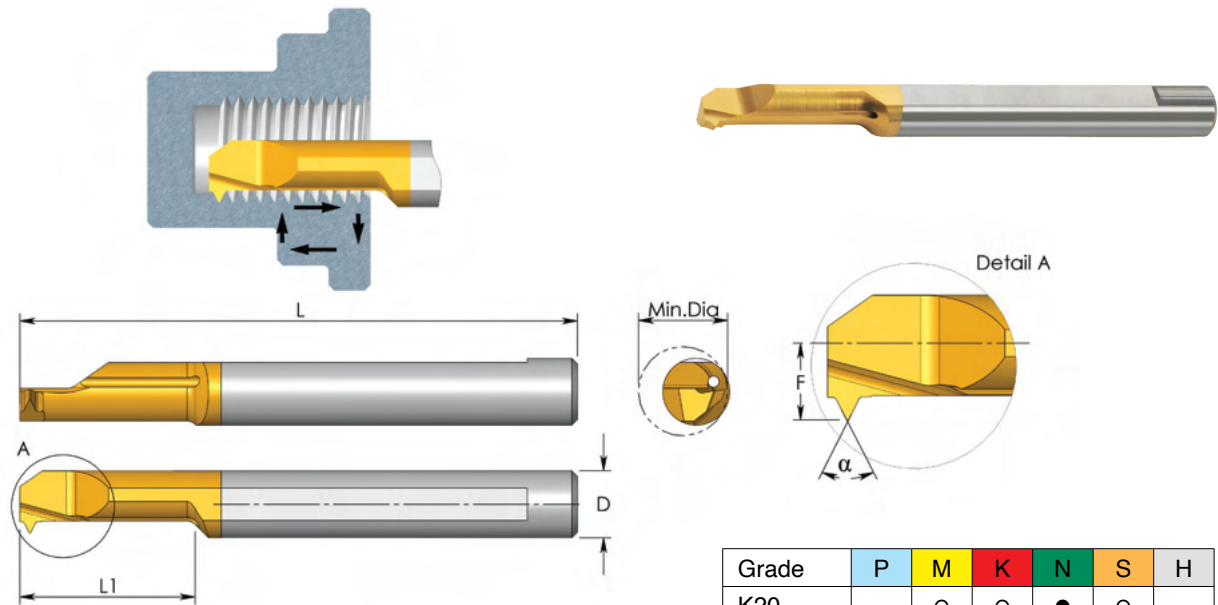
Order example: MQR 5 R0.2 L15 BXC

● First choice ○ Alternative

For L.H. bars specify MQL instead of MQR

For additional holders see page A06-32 to 41

MIR Bars Threading



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Partial Profile 55°

D mm	Ordering Code	Pitch Range		L	L1	α	F	Min. Dia.	Holder
		mm	TPI						
3.0	MIR 3 L15 A55	0.5 - 1.0	48 - 24	1.5	.59	55	.06	.13	SIM ... H3
4.0	MIR 4 L15 A55	0.5 - 1.0	48 - 24	2.0	.59	55	.07	.16	SIM ... H4
5.0	MIR 5 L15 A55	0.5 - 1.25	48 - 20	2.0	.59	55	.09	.20	SIM ... H5
	MIR 5 L22 A55	0.5 - 1.25	48 - 20	2.0	.87	55	.09	.20	
6.0	MIR 6 L15 A55	0.5 - 1.5	48 - 16	2.0	.59	55	.10	.24	SIM ... H6
	MIR 6 L22 A55	0.5 - 1.5	48 - 16	2.0	.87	55	.10	.24	

Order example: MIR 5 L15 A55 BXC

Partial Profile 60°

D mm	Ordering Code	Pitch Range		L	L1	α	F	Min. Dia.	Holder
		mm	TPI						
3.0	MIR 1 L5 A60	0.25 - 0.35	100 - 72	1.5	.19	60	.02	.05	SIM ... H3
	MIR 1.5 L6 A60	0.35 - 0.45	72 - 56	1.5	.25	60	.03	.06	
3.0	MIR 2 L8 A60	0.45 - 0.7	56 - 32	1.5	.31	60	.04	.08	SIM ... H3
3.0	MIR 3 L15 A60	0.7 - 1.0	32 - 24	1.5	.59	60	.06	.13	SIM ... H3
4.0	MIR 4 L17 A60	0.35 - 0.45	72 - 56	2.0	.67	60	.07	.16	SIM ... H4
	MIR 4 L15 A60	0.8 - 1.0	32 - 24	2.0	.59	60	.07	.16	
5.0	MIR 5 L15 A60	1.0 - 1.25	24 - 20	2.0	.59	60	.09	.20	SIM ... H5
	MIR 5 L22 A60	1.0 - 1.25	24 - 20	2.0	.87	60	.09	.20	
6.0	MIR 6 L15 A60	1.0 - 1.5	24 - 16	2.0	.59	60	.10	.24	SIM ... H6
	MIR 6 L22 A60	1.0 - 1.5	24 - 16	2.0	.87	60	.10	.24	
8.0	MIR 8 L22 A60	1.0 - 2.0	24 - 13	2.5	.87	60	.15	.31	SIM ... H8

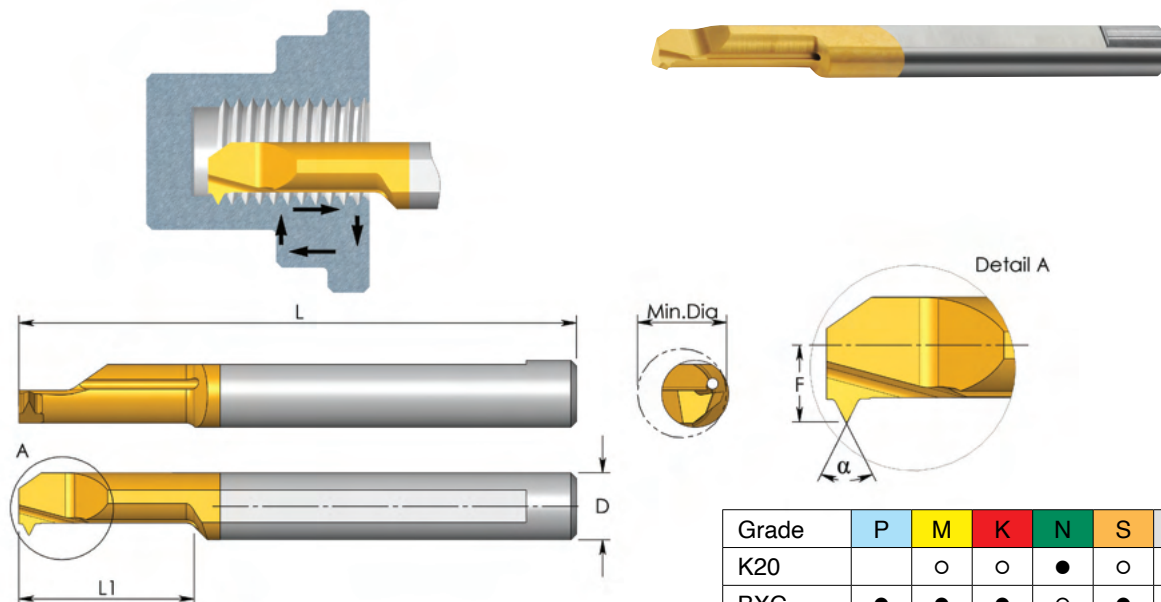
Order example: MIR 5 L15 A60 BXC

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MIR Bars Threading



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - ISO 60°

D mm	Ordering Code	Pitch mm	M Coarse	M Fine	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L10 0.5 ISO	0.5	M3	M3.5	1.5	.39	60	.04	.09	SIM ... H3
	MIR 3 L15 0.5 ISO	0.5		M4	1.5	.59	60	.06	.13	
3.0	MIR 3 L15 0.7 ISO	0.7	M4		1.5	.59	60	.06	.13	SIM ... H3
	MIR 3 L15 0.75 ISO	0.75	M4.5		1.5	.59	60	.06	.13	
4.0	MIR 4 L15 0.5 ISO	0.5		M5	2.0	.59	60	.07	.16	SIM ... H4
	MIR 4 L15 0.75 ISO	0.75		M5	2.0	.59	60	.07	.16	
	MIR 4 L15 0.8 ISO	0.8	M5		2.0	.59	60	.07	.16	
5.0	MIR 5 L15 1.0 ISO	1.0	M6, M7	M8	2.0	.59	60	.09	.19	SIM ... H5
6.0	MIR 6 L22 1.25 ISO	1.25	M8, M9	M10	2.0	.87	60	.11	.24	SIM ... H6
	MIR 6 L22 1.5 ISO	1.5	M10, M11		2.0	.87	60	.11	.24	

Order example: MIR 5 L15 1.0 ISO BXC

Full Profile - UN 60°

D mm	Ordering Code	Pitch TPI	UNC	UNF	UNEF	UNS	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L10 32 UN	32	6				1.5	.39	60	.04	.11	SIM...H3
3.0	MIR 3 L15 32 UN	32	8	10			1.5	.59	60	.06	.13	SIM...H3
	MIR 3 L15 36 UN	36		8		10	1.5	.59	60	.06	.13	
4.0	MIR 4 L15 36 UN	36				12	2.0	.59	60	.07	.16	SIM...H4
	MIR 4 L15 32 UN	32			12		2.0	.59	60	.07	.16	
5.0	MIR 5 L15 28 UN	28		1/4			2.0	.59	60	.09	.19	SIM...H5
	MIR 5 L18 20 UN	20	1/4				2.0	.71	60	.09	.20	
6.0	MIR 6 L18 24 UN	24		5/16			2.0	.71	60	.11	.26	SIM...H6
	MIR 6 L18 18 UN	18	5/6			3/8	2.0	.71	60	.11	.24	

Order example: MIR 4 L15 36 UN BXC

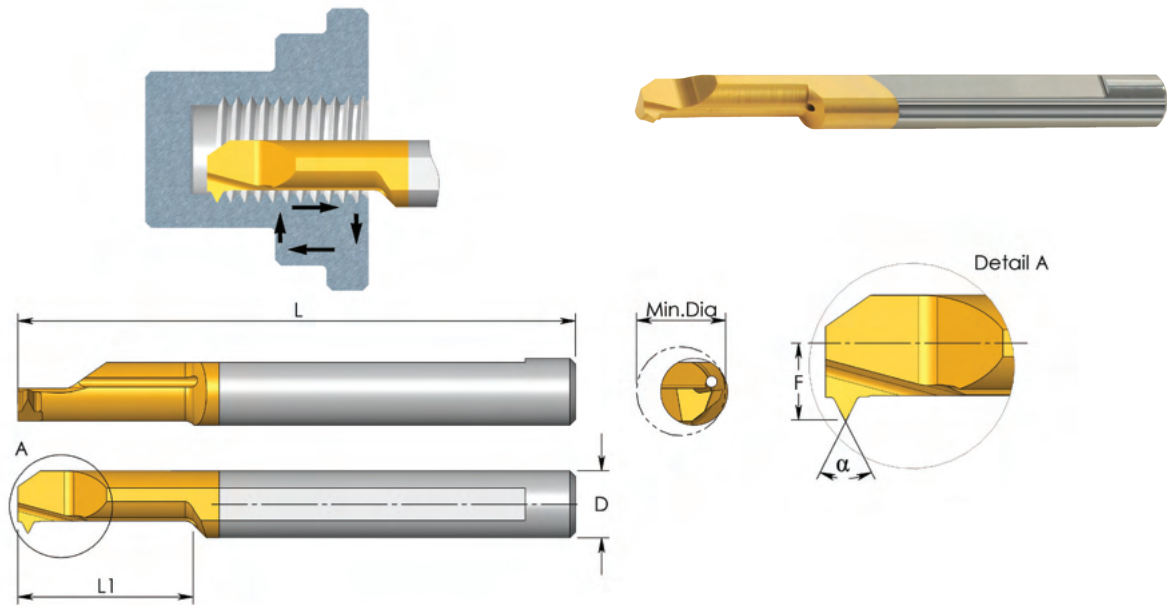
For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice

○ Alternative

MIR Bars Threading



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - MJ 60°

D mm	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L15 0.7 MJ	MJ4x0.7	1.5	.59	60	.06	.13	SIM ... H3
4.0	MIR 4 L15 0.8 MJ	MJ5x0.8	2.0	.59	60	.07	.16	SIM ... H4
5.0	MIR 5 L15 1.0 MJ	MJ6x1.0	2.0	.59	60	.09	.19	SIM ... H5

Order example: MIR 4 L15 0.8 MJ BXC

Full Profile - UNJ 60°

D mm	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
3.0	MIR 3 L15 32 UNJ	8-32 UNJC	1.5	.59	60	.06	.13	SIM...H3
5.0	MIR 5 L15 28 UNJ	1/4-28 UNJF	2.0	.59	60	.09	.19	SIM...H5
	MIR 5 L18 20 UNJ	1/4-20 UNJC	2.0	.71	60	.09	.20	SIM...H5

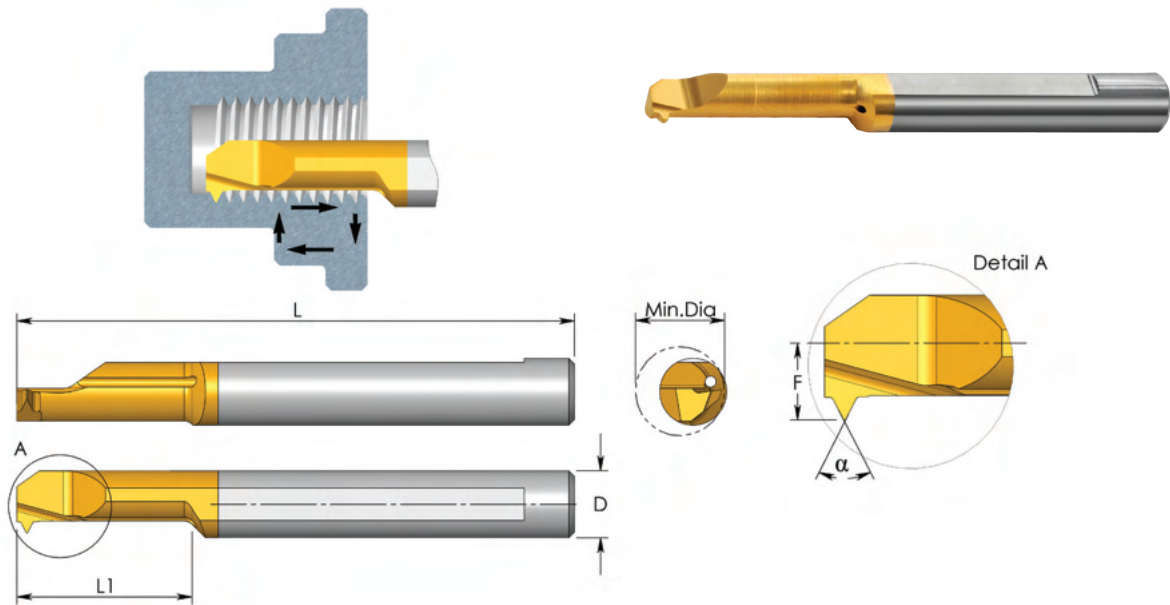
Order example: MIR 3 L15 32 UNJ BXC

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MIR Bars Threading



Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - G 55° BSP

D mm	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
6.0	MIR 6 L17 28 W	1/16-28 BSP	2.0	.67	55	.11	.26	SIM ... H6
	MIR 6 L17 19 W	1/4 -19 BSP	2.0	.67	55	.11	.28	

Full Profile - Whitworth 55° BSW

D mm	Ordering Code	Thread Size	L	L1	α	F	Min. Dia.	Holder
5.0	MIR 5 L17 20 W	1/4-20 BSW	2.0	.67	55	.08	.19	SIM ... H5

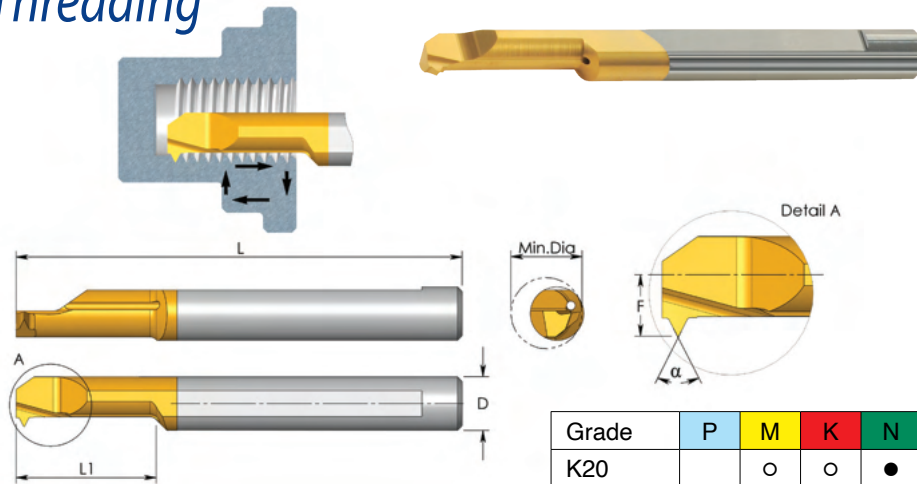
Order example: MIR 6 L17 28 W BMK

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MIR Bars Threading

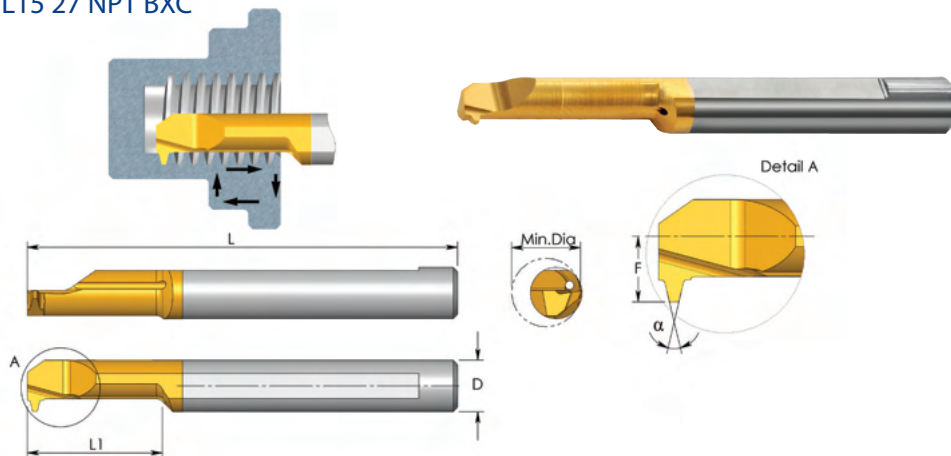


Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Full Profile - NPT 60°

D mm	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	Holder
6.0	MIR 6 L15 27 NPT	27	1/16 x 27 NPT 1/8 x 27 NPT	2.0	.59	60	.11	.23	SIM ... H6

Order example: MIR 6 L15 27 NPT BXC



Acme

D mm	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	Holder
4.0	MIR 4 L15 16 ACME	16	1/4 x 16	2.0	.59	29	.07	.18	SIM ... H4
6.0	MIR 6 L20 14 ACME	14	5/16 x 14	2.0	.79	29	.11	.24	SIM ... H6
7.0	MIR 7 L22 12 ACME	12	3/8 x 12 7/16 x 12	2.4	.87	29	.13	.28	SIM ... H7
8.0	MIR 8 L30 10 ACME	10	1/2 x 10	3.0	1.18	29	.15	.39	SIM ... H8
10.0	MIR 10 L35 8 ACME	8	5/8 x 8	2.9	1.38	29	.19	.49	SIM ... H10
10.0	MIR 10 L45 6 ACME	6	3/4 x 6 7/8 x 6	4.1	1.77	29	.19	.57	SIM ... H10
10.0	MIR 10 L52 5 ACME	5	1 x 5	4.1	2.05	29	.19	.79	SIM ... H10

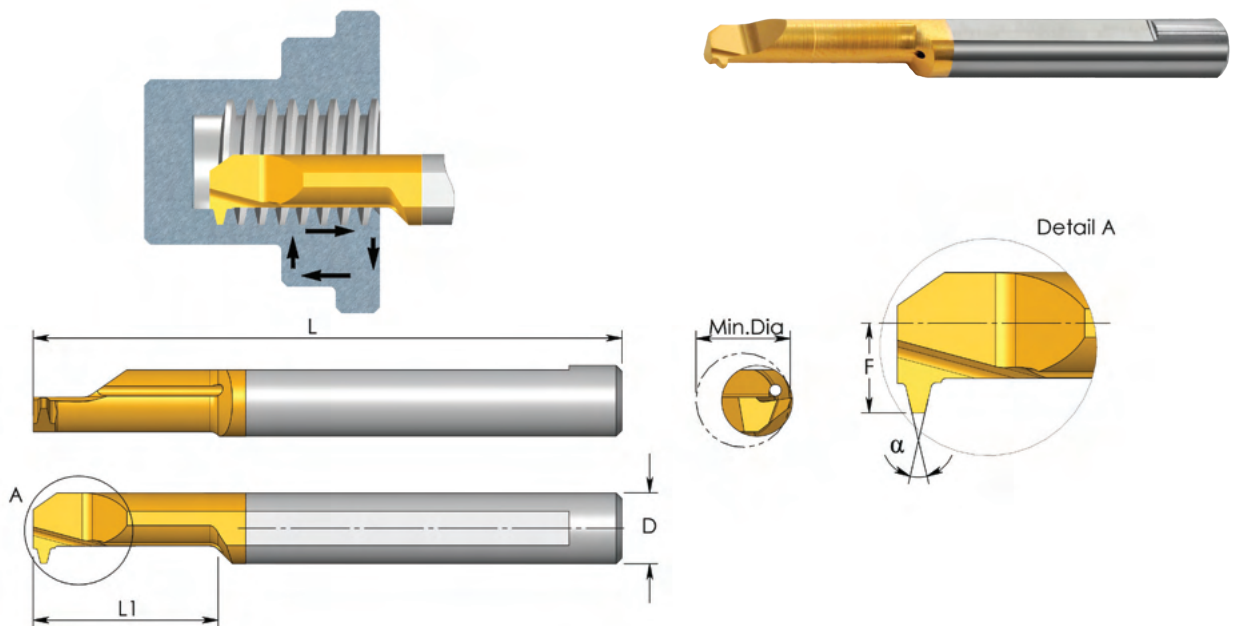
Order example: MIR 6 L 20 14 ACME BXC

For L.H. bars specify MIL instead of MIR

For additional holders see page A06-32 to 41

● First choice ○ Alternative

MIR Bars Threading



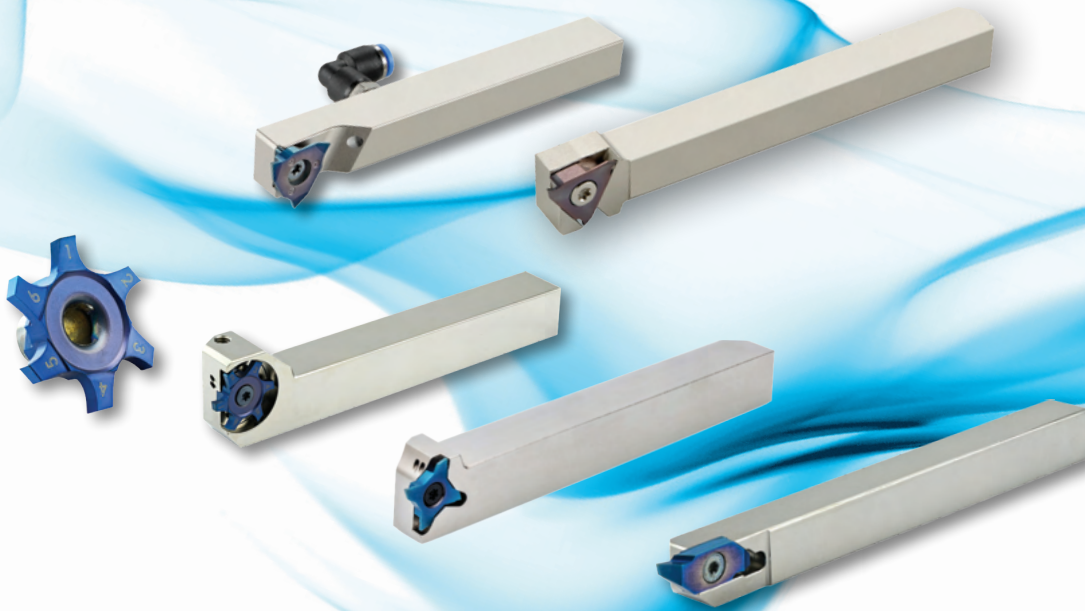
Grade	P	M	K	N	S	H
K20		○	○	●	○	
BXC	●	●	●	○	●	●
BMK	●	●	●	○	●	●

Stub Acme

D mm	Ordering Code	Pitch TPI	Thread Size	L	L1	α	F	Min. Dia.	Holder
4.0	MIR 4 L15 16 STACME	16	1/4 x 16	2.0	.59	29	.07	.20	SIM ... H4
6.0	MIR 6 L20 14 STACME	14	5/16 x 14	2.0	.79	29	.11	.26	SIM ... H6
7.0	MIR 7 L22 12 STACME	12	3/8 x 12 7/16 x 12	2.4	.87	29	.13	.32	SIM ... H7
8.0	MIR 8 L30 10 STACME	10	1/2 x 10	3.0	1.18	29	.15	.43	SIM ... H8
10.0	MIR 10 L35 8 STACME	8	5/8 x 8	2.9	1.38	29	.19	.54	SIM ... H10
10.0	MIR 10 L45 6 STACME	6	3/4 x 6 7/8 x 6	4.1	1.77	29	.19	.64	SIM ... H10

Order example: MIR 7 L22 12 STACME K20
 For additional holders see page A06-32 to 41

● First choice ○ Alternative



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Swiss-Line

- Swiss style lathes are becoming a popular alternative to large lathes and machining centers in many companies.
- Carmex is introducing a new line of inserts and toolholders, developed for automatic and Swiss style lathes.
- Designed for economic production of parting, grooving, profiling threading and chamfering.

Polygon Swiss Line

Carmex extends the Swiss Line range by offering a new type of polygon inserts and tool holders for external turning, grooving, parting and threading on Swiss-Type machines. Specially designed for small parts machining.



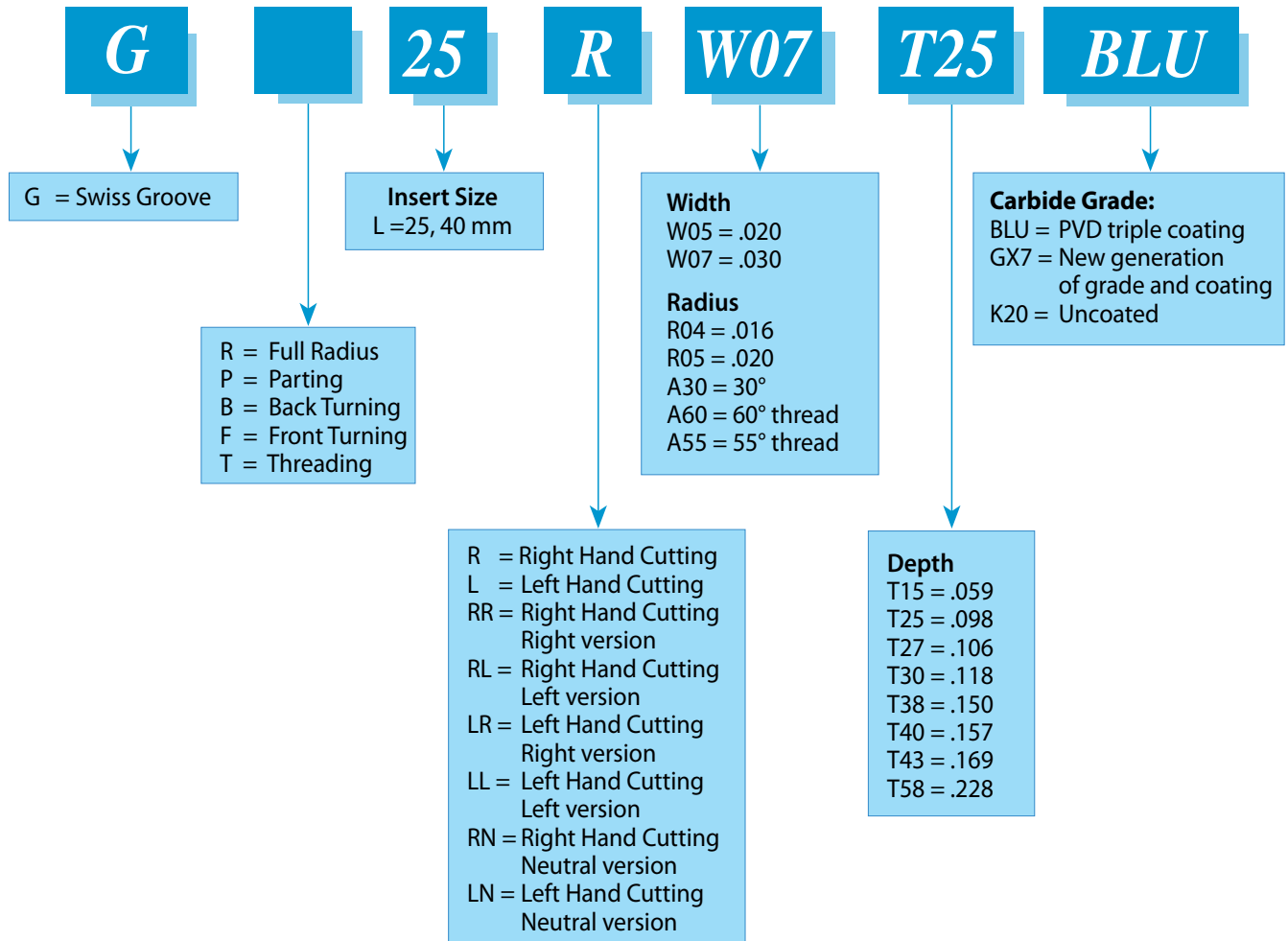
Features

- High precision ground inserts.
- All inserts can be used with same tool holders.
- A combination of the latest carbide and coating technologies guarantees maximum tool life and improved productivity.
- Compatible with a wide range of materials.
- Coated holders provide abrasive resistance.

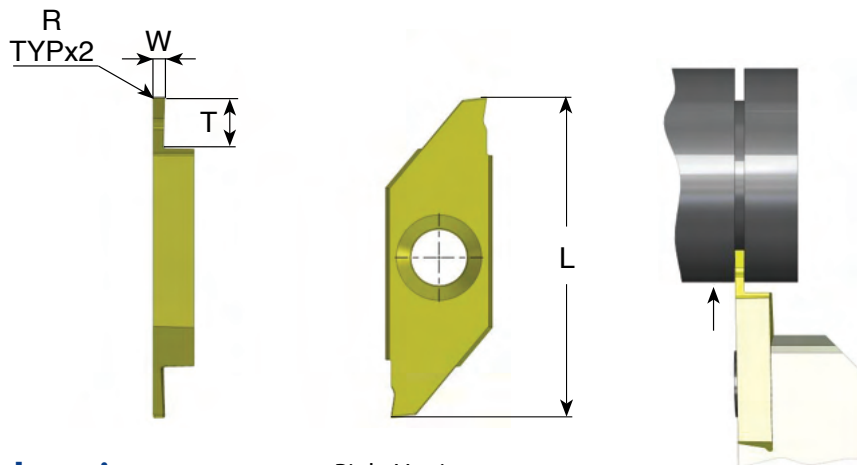
Carbide grades: BLU, GX7, K20

Product Identification

Polygon Inserts



Grooving and Turning



Right hand cutting

Right Version

Insert Size L mm	Ordering Code	W ± .001	T max	R	Feed inch/rev
25	G25 R W05 T15	.020	.059	0	.0004-.002
	G25 R W07 T25	.030	.098	0	.0008-.003
	G25 R W10 T27	.039	.106	.002	.0008-.004
	G25 R W12 T30	.047	.118	.002	.0008-.004
	G25 R W15 T38	.059	.150	.002	.0008-.005
	G25 R W20 T38	.079	.150	.002	.0008-.005
	G25 R W25 T38	.098	.150	.002	.0008-.006
40	G40 R W30 T80	.118	.315	.002	.0008-.006
	G40 R W40 T80	.157	.315	.002	.0008-.006

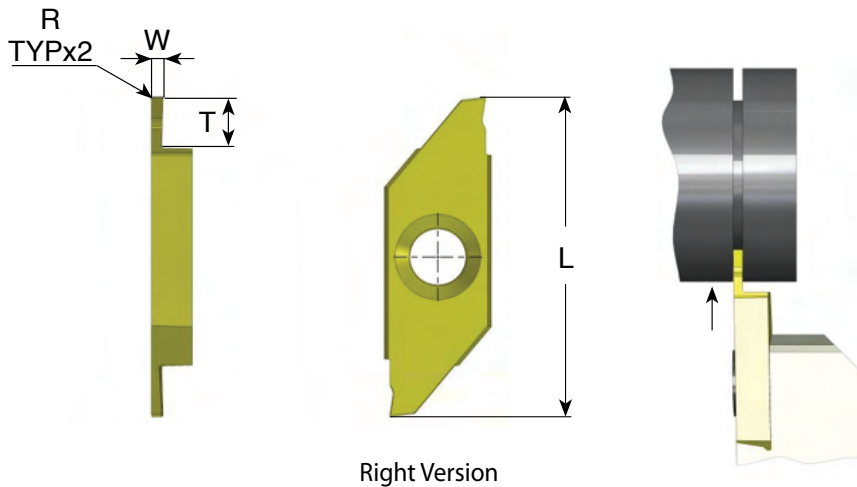
	K20	BLU	GX7*
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

For L.H, specify G25 **L** instead of G25 **R**

* Available for insert size G25... only

● First choice ○ Alternative

Grooving, Circlip Ring Grooves DIN 471/472



Right hand cutting

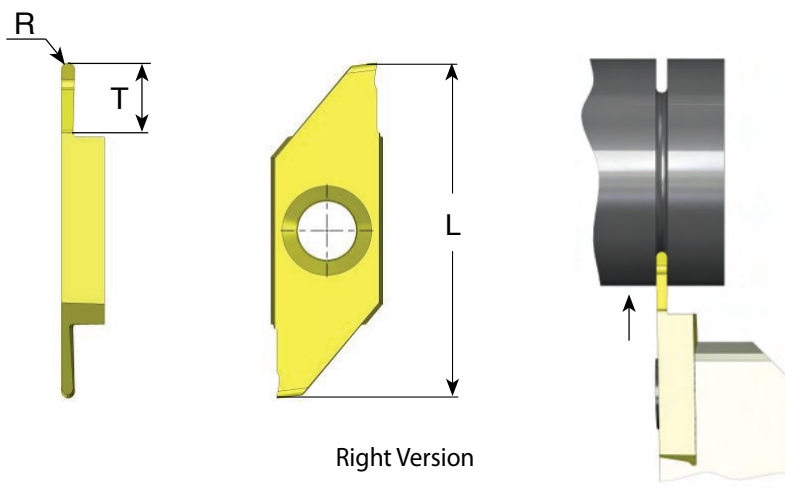
Insert Size L mm	Ordering Code	Nom` groove width	W - .002	T max	R	Feed Inch/rev
25	GD25 R W05 T16	.020	.022	.063	0	.0004-.002
	GD25 R W06 T17	.024	.026	.067	0	.0004-.002
	GD25 R W07 T19	.028	.030	.075	0	.0008-.003
	GD25 R W08 T22	.031	.034	.087	0	.0008-.004
	GD25 R W09 T24	.035	.038	.094	0	.0008-.004
	GD25 R W12 T31	.043	.049	.122	.002	.0008-.004
	GD25 R W14 T33	.051	.057	.130	.002	.0008-.005
	GD25 R W17 T33	.063	.069	.130	.002	.0008-.005
	GD25 R W19 T39	.073	.078	.154	.002	.0008-.005
	GD25 R W22 T45	.085	.090	.177	.002	.0008-.006
	GD25 R W27 T55	.104	.110	.217	.002	.0008-.006

	K20	BLU	GX7
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

For L.H, specify GD25 **L** instead of GD25 **R**
Nom` = nominal

● First choice ○ Alternative

Grooving and Profiling (full radius)



Right Version

Right hand cutting

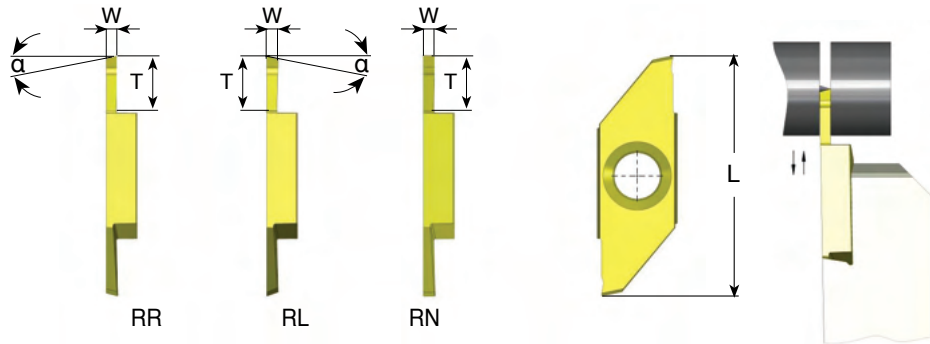
Insert Size L mm	Ordering Code	R±.001	T max	Feed inch/rev
25	GR25 R R02 T15	.010	.059	.0004-.002
	GR25 R R04 T25	.016	.098	.0008-.003
	GR25 R R05 T27	.020	.106	.0008-.004
	GR25 R R07 T27	.028	.106	.0008-.004

For L.H, specify GR25 **L** instead of GR25 **R**

	K20	BLU	GX7
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

● First choice ○ Alternative

Parting Off and Grooving



Right Version

Right hand cutting

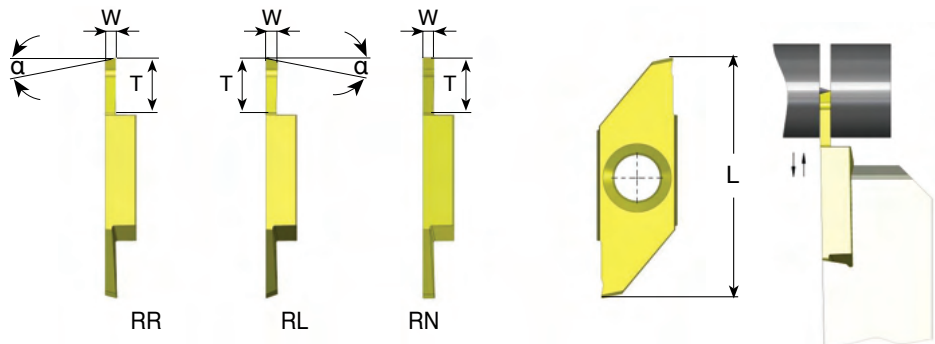
Insert Size L mm	Ordering Code	W	α°	T max	Feed inch/rev
25	GP25 RR W05 T30	.020	15	.118	.0008-.002
	GP25 RL W05 T30	.020	15	.118	.0008-.002
	GP25 RN W05 T30	.020	0	.118	.0008-.002
	GP25 RR W07 T43	.028	15	.169	.0008-.005
	GP25 RL W07 T43	.028	15	.169	.0008-.005
	GP25 RN W07 T43	.028	0	.169	.0008-.005
	GP25 RR W08 T50	.031	15	.197	.0008-.005
	GP25 RL W08 T50	.031	15	.197	.0008-.005
	GP25 RN W08 T50	.031	0	.197	.0008-.005
	GP25 RR W10 T58	.039	15	.228	.0008-.005
	GP25 RL W10 T58	.039	15	.228	.0008-.005
	GP25 RN W10 T58	.039	0	.228	.0008-.005
	GP25 RR W12 T58	.047	15	.228	.0008-.005
	GP25 RL W12 T58	.047	15	.228	.0008-.005
	GP25 RN W12 T58	.047	0	.228	.0008-.005
	GP25 RR W15 T58	.059	15	.228	.0008-.005
	GP25 RL W15 T58	.059	15	.228	.0008-.005
	GP25 RN W15 T58	.059	0	.228	.0008-.005
	GP25 RR W18 T58	.071	15	.228	.0008-.005
	GP25 RL W18 T58	.071	15	.228	.0008-.005
	GP25 RN W18 T58	.071	0	.228	.0008-.005
	GP25 RR W20 T58	.079	15	.228	.0008-.005
	GP25 RL W20 T58	.079	15	.228	.0008-.005
	GP25 RN W20 T58	.079	0	.228	.0008-.005
GP25 RR W20 T75	.079	15	.295	.0008-.005	
GP25 RL W20 T75	.079	15	.295	.0008-.005	
GP25 RN W20 T75	.079	0	.295	.0008-.005	
GP25 RR W25 T58	.098	15	.228	.002 -.005	
GP25 RL W25 T58	.098	15	.228	.002 -.005	
GP25 RN W25 T58	.098	0	.228	.002 -.005	

	K20	BLU	GX7
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

For L.H, specify GP25 LR instead of GP25 RR
 GP25 LL instead of GP25 RL
 GP25 LN instead of GP25 RN

● First choice ○ Alternative

Parting Off and Grooving



Right Version

Right hand cutting

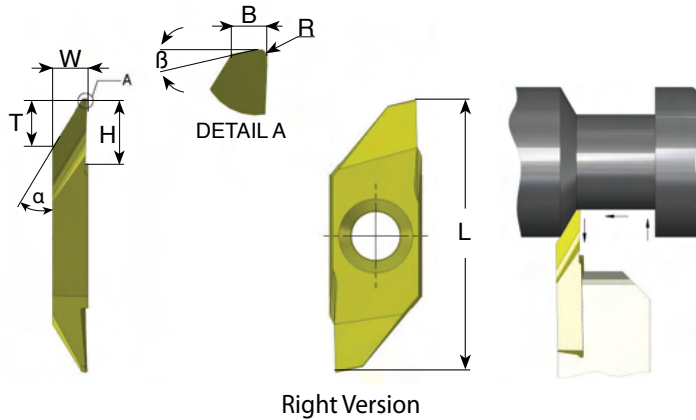
Insert Size L mm	Ordering Code	W	α°	T max	Feed inch/rev
40	GP40 RR W15 T80	.059	15	.315	.001-.003
	GP40 RL W15 T80	.059	15	.315	.001-.003
	GP40 RN W15 T80	.059	0	.315	.001-.003
	GP40 RR W18 T95	.071	15	.374	.001-.003
	GP40 RL W18 T95	.071	15	.374	.001-.003
	GP40 RN W18 T95	.071	0	.374	.001-.003
	GP40 RR W20 T110	.079	15	.433	.001-.003
	GP40 RL W20 T110	.079	15	.433	.001-.003
	GP40 RN W20 T110	.079	0	.433	.001-.003
	GP40 RR W25 T130	.098	15	.512	.001-.003
	GP40 RL W25 T130	.098	15	.512	.001-.003
	GP40 RN W25 T130	.098	0	.512	.001-.003
	GP40 RR W30 T130	.118	15	.512	.001-.003
	GP40 RL W30 T130	.118	15	.512	.001-.003
	GP40 RN W30 T130	.118	0	.512	.001-.003

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GP40 LR instead of GP40 RR
 GP40 LL instead of GP40 RL
 GP40 LN instead of GP40 RN

● First choice ○ Alternative

Back Turning



Right Version

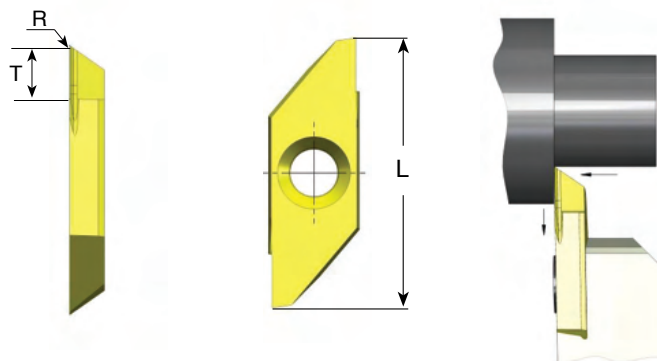
Right hand cutting

Insert Size L mm	Ordering Code	α°	β°	R	W	T _{max}	B	H	Feed inch/rev
25	GB25 R A30 R03	30	15	.001	.118	.157	.020	.315	.002-.005
	GB25 R A30 R10	30	15	.004	.118	.157	.020	.315	.002-.005
	GB25 R A30 R20	30	15	.008	.118	.157	.020	.315	.002-.005

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GB25 L instead of GB25 R

Front Turning



Right Version

Right hand cutting

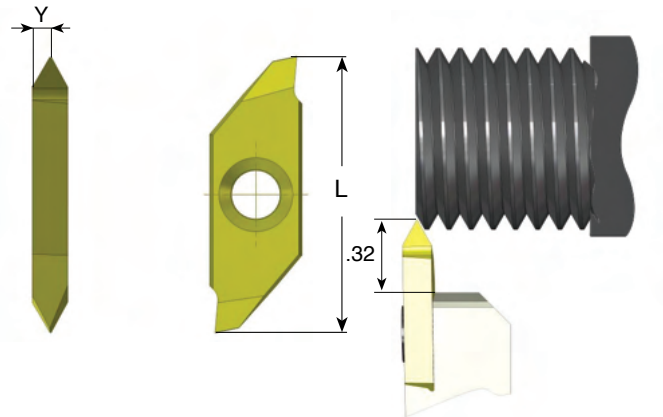
Insert Size L mm	Ordering Code	T _{max}	R	Feed inch/rev
25	GF25 R T40	.157	.002	.002-.005
	GF25 R T40 R10	.157	.004	.002-.005
	GF25 R T70	.276	.002	.002-.003

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GF25 L instead of GF25 R

● First choice ○ Alternative

Threading - Partial Profile 60°



Right Version

Right hand cutting

Insert Size L mm	Ordering Code	Pitch Range		Y
		mm	TPI	
25	GT25 R A60	0.25-0.8	100-32	.028
	GT25 R G60	1.0 -3.0	24- 8	.063

For L.H, specify GT25 **L** instead of GT25 **R**

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

Threading - Partial Profile 55°

Right hand cutting

Insert Size L mm	Ordering Code	Pitch Range		Y
		mm	TPI	
25	GT25 R A55	0.5 -1.5	48-16	.039
	GT25 R G55	1.75-3.0	14- 8	.063

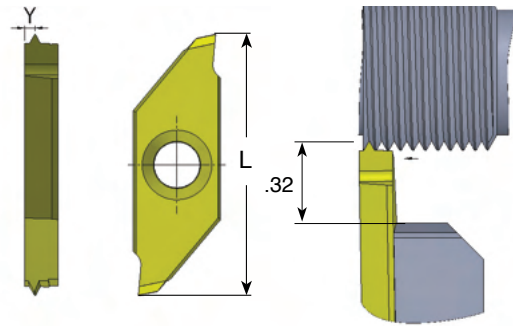
For L.H, specify GT25 **L** instead of GT25 **R**

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

● First choice ○ Alternative

Threading - ISO metric 60° Full Profile

External thread



Right Version

Right hand cutting

Insert Size L mm	Ordering Code	Pitch mm	Y
25	GT25 R 0.5ISO	0.5	.024
	GT25 R 0.6ISO	0.6	.024
	GT25 R 0.7ISO	0.7	.028
	GT25 R 0.75ISO	0.75	.028
	GT25 R 0.8ISO	0.8	.028
	GT25 R 1.0ISO	1.0	.031
	GT25 R 1.25ISO	1.25	.039
	GT25 R 1.5ISO	1.5	.043

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

Threading - UN unified 60° Full Profile

External thread

Right hand cutting

Insert Size L mm	Ordering Code	Pitch TPI	Y
25	GT25 R 56UN	56	.024
	GT25 R 40UN	40	.028
	GT25 R 32UN	32	.028
	GT25 R 24UN	24	.031

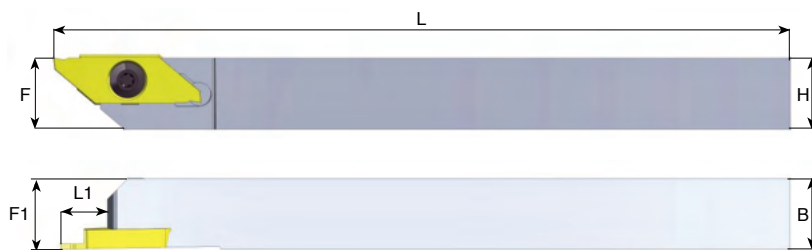
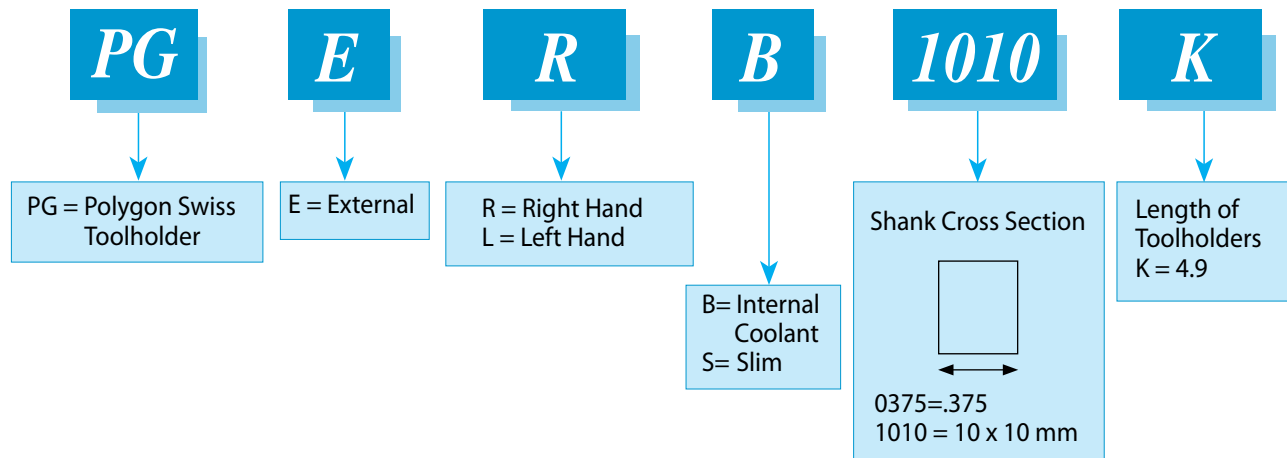
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

● First choice ○ Alternative

External Toolholders

Product Identification - Polygon Toolholders



Right Version



Right hand cutting Inch holders

Insert Size L mm	Ordering Code	B	H	L1	L	F	F1	Insert Screw Torx+	Key Torx+
25	PGER 0315 K	.315	.315	.31	4.9	.375	.375	S26PD	K11P
	PGER 0375 K	.375	.375	.31	4.9	.375	.375	S26PD	K11P
	PGER 0500 K	.500	.500	.31	4.9	.500	.500	S26PD	K11P
	PGER 0625 K	.625	.625	.31	4.9	.625	.625	S26PD	K11P
	PGER 0750 K	.750	.750	.31	4.9	.750	.750	S26PD	K11P
40	PGER 0375 K40	.375	.375	.51	4.9	.375	.375	S26PD	K11P
	PGER 0500 K40	.500	.500	.51	4.9	.500	.500	S26PD	K11P
	PGER 0625 K40	.625	.625	.51	4.9	.625	.625	S26PD	K11P
	PGER 0750 K40	.750	.750	.51	4.9	.750	.750	S26PD	K11P
	PGER 1000 K40	1	1	.51	5.9	1	1	S26PD	K11P

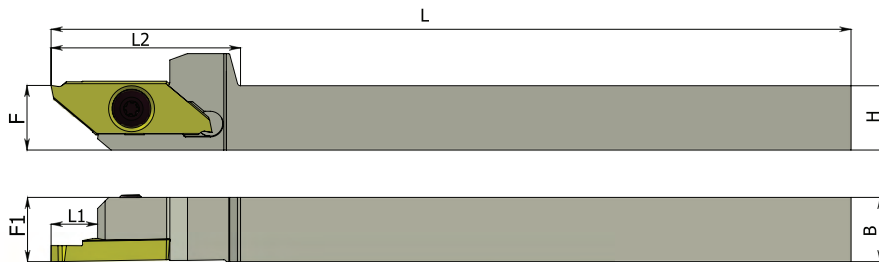
For L.H, specify PGE L instead of PGE R

Right hand cutting Metric holders

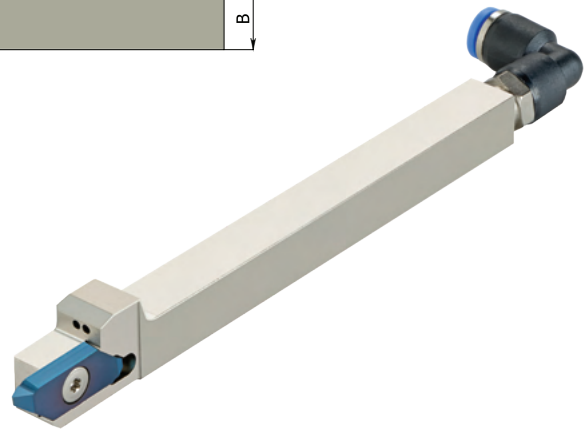
Insert Size L mm	Ordering Code	B mm	H mm	L1	L	F	F1	Insert Screw Torx+	Key Torx+
25	PGER 0808 K	8	8	.31	4.9	.394	.394	S26PD	K11P
	PGER 1010 K	10	10	.31	4.9	.394	.394	S26PD	K11P
	PGER 1212 K	12	12	.31	4.9	.472	.472	S26PD	K11P
	PGER 1616 K	16	16	.31	4.9	.630	.630	S26PD	K11P
	PGER 2020 K	20	20	.31	4.9	.787	.787	S26PD	K11P
40	PGER 1010 K40	10	10	.51	4.9	.394	.394	S26PD	K11P
	PGER 1212 K40	12	12	.51	4.9	.472	.472	S26PD	K11P
	PGER 1616 K40	16	16	.51	4.9	.630	.630	S26PD	K11P
	PGER 2020 K40	20	20	.51	4.9	.787	.787	S26PD	K11P
	PGER 2525 K40	25	25	.51	5.9	.984	.984	S26PD	K11P

For L.H, specify PGE **L** instead of PGE **R**

External Toolholders with internal coolant



Right Version



Right hand cutting Inch holders

Insert Size L mm	Ordering Code	B	H	L1	L2	L	F	F1	Insert Screw Torx+	Key Torx+	*Coolant connector mm
25	PGERB 0375 K	.375	.375	.31	1.18	4.9	.375	.375	S26PD	K11P	Ø4/Ø6
	PGERB 0500 K	.500	.500	.31	1.18	4.9	.500	.500	S26PD	K11P	Ø4/Ø6
	PGERB 0625 K	.625	.625	.31	1.18	4.9	.625	.625	S26PD	K11P	Ø4/Ø6

Right hand cutting Metric holders

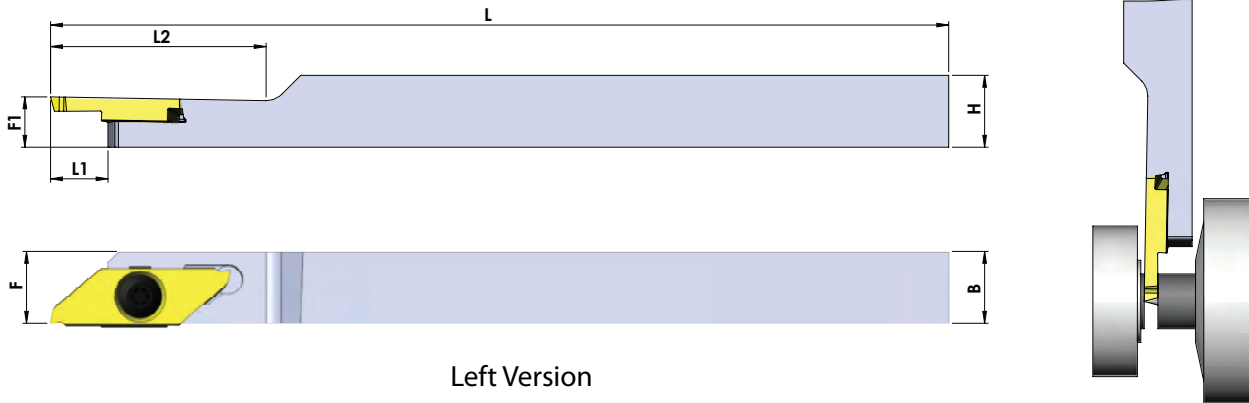
Insert Size L mm	Ordering Code	B mm	H mm	L1	L2	L	F	F1	Insert Screw Torx+	Key Torx+	*Coolant connector mm
25	PGERB 1010 K	10	10	.31	1.18	4.9	.394	.394	S26PD	K11P	Ø4/Ø6
	PGERB 1212 K	12	12	.31	1.18	4.9	.472	.472	S26PD	K11P	Ø4/Ø6
	PGERB 1616 K	16	16	.31	1.18	4.9	.630	.630	S26PD	K11P	Ø4/Ø6

For L.H, specify PGE **L** B instead of PGE **R** B

* Coolant pipe diameter

● First choice ○ Alternative

External Toolholders Slim



Left hand cutting Inch holders

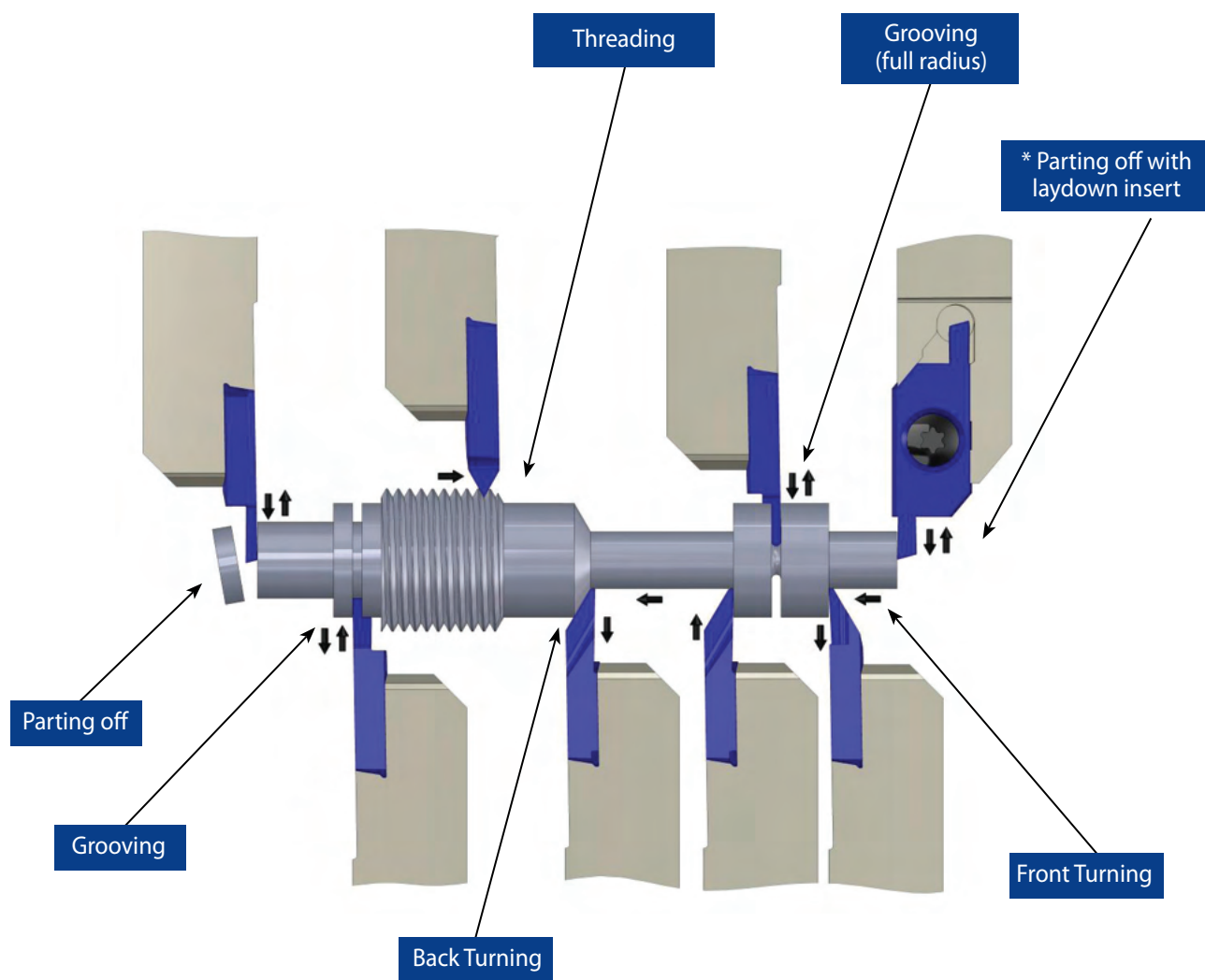
Insert Size L mm	Ordering Code	B	H	L1	L	F	F1	L2	Insert Screw Torx+	Key Torx+
25	PGELS 0375 K	.375	.375	.31	4.9	.375	.276	.94	S26PS	K11P
	PGELS 0500 K	.500	.500	.31	4.9	.500	.276	1.18	S26PS	K11P

Left hand cutting Metric holders

Insert Size L mm	Ordering Code	B mm	H mm	L1	L	F	F1	L2	Insert Screw Torx+	Key Torx+
25	PGELS 1010 K	10	10	.31	4.9	.394	.276	.94	S26PS	K11P
	PGELS 1212 K	12	12	.31	4.9	.472	.276	1.18	S26PS	K11P

Available only in L.H.
Coated holders provides a high abrasive resistance

Working Method



* Available upon request (grooving, parting, threading)

Polygon Swiss Line

Carbide Grades

BLU

PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Titanium and hard materials.

GX7

New generation of PVD triple layer coated Sub-Micron grade for wide range of materials as: Steel, Stainless Steels, Titanium and hard materials up to 58 HRc.

With high toughness for optimized performance.

K20

Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

Cutting Data

ISO Standard	Materials	Cutting Speed ft/min		
		K20	BLU	GX7*
P	Low & Medium Carbon Steels <0.55%C	---	260-490	230-530
	High Carbon Steels ≥0.55%C	---	230-395	200-430
	Alloy Steels, Treated Steels	---	130-260	130-330
M	Stainless Steel-Free Cutting	100-260	200-395	200-460
	Stainless Steel-Austenitic	65-230	100-295	100-390
	Cast Steels	100-260	165-395	165-460
K	Cast Iron	165-395	200-490	200-460
N	Aluminum ≤12%Si, Copper	395-820	---	---
	Aluminum >12%Si	295-656	---	---
	Synthetics, Duroplastics, Thermoplastics	230-490	---	---
S	Nickel Alloys, Titanium Alloys	65-165	100-230	100-460
H	Hardened Steel, 45-50HRc	---	65-165	65-230
	Hardened Steel, 50-58HRc	---	---	65-200

* Available for grooving and parting off, with G25 insert size

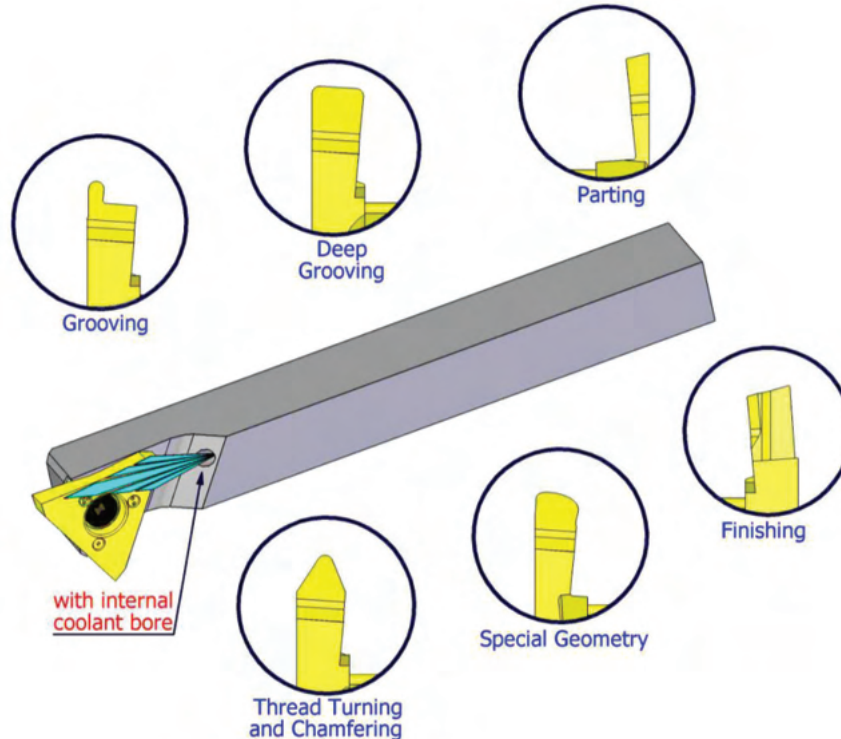
3 Cutting Edges Swiss Line Inserts and Toolholders

- Swiss style lathes are becoming a popular alternative to large lathes and machining centers in many companies
- Carmex offers a large and versatile product line of inserts and toolholders, developed for automatic and Swiss style lathes
- Designed for economic production of parting, grooving, profiling and chamfering

Advantages

Advanced sub-micron grade (K10-K30) - a combination of strength, toughness, wear resistance and edge sharpness

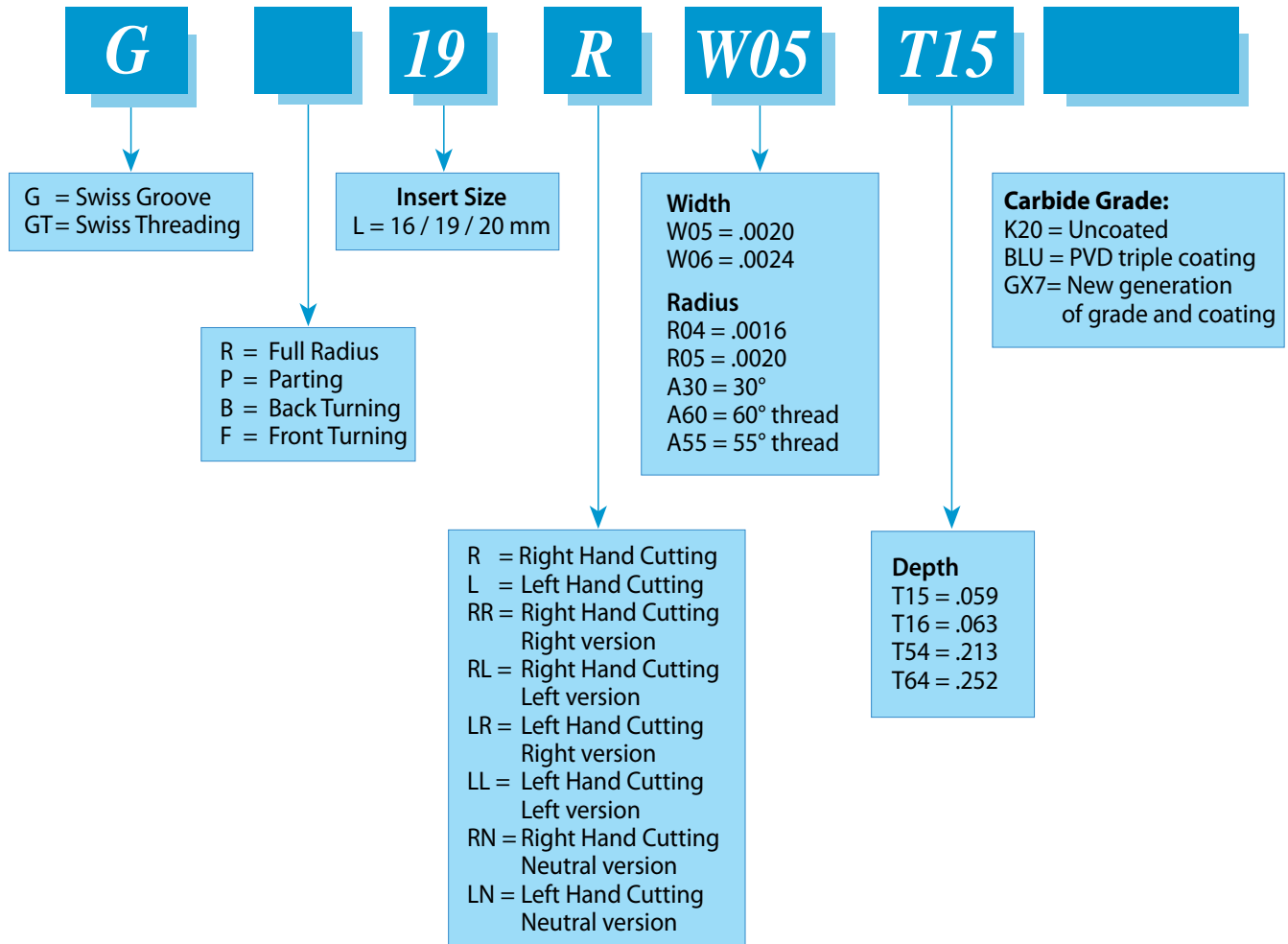
- Grounded cutting edges
- Advanced and unique PVD triple coating, for high wear and heat resistance
- For most types of material, including Stainless Steels, Titanium and Super Alloys



- Three cutting edges
- The insert can be indexed directly on the machine
- Internal coolant to the cutting edge

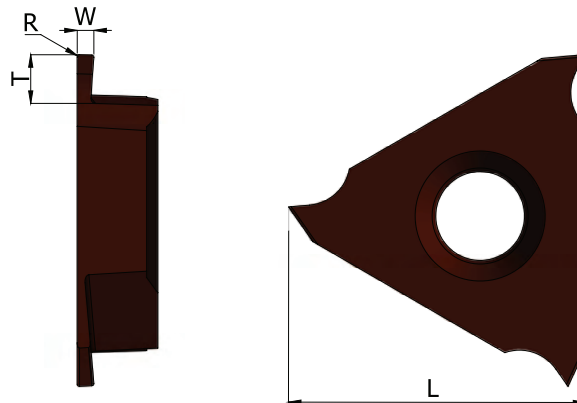
Product Identification

Inserts



16 mm Inserts and Toolholders

Grooving



Right Version

Right hand cutting

Insert Size L mm	Ordering Code	W ± .001	T max	R	Feed inch/rev	
					Radial	Axial
16	G16 R W05 T12	.020	.05	.002	.0004-.0024	.0008-.0031
	G16 R W10 T20	.039	.08	.002	.0008-.0028	.0008-.0039
	G16 R W15 T25	.059	.10	.004	.0012-.0031	.0008-.0039
	G16 R W20 T25	.079	.10	.006	.0020-.0039	.0008-.0039
	G16 R W25 T25	.098	.10	.008	.0020-.0039	.0008-.0059

	K20	GX7
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤58 HRc

For L.H, specify G16 L instead of G16 R

Grooving, Circlip Ring Grooves DIN 471/472

Right hand cutting

Insert Size L mm	Ordering Code	Nom` groove width	W-.002	T max	R	Feed inch/rev	
						Radial	Axial
16	G16 R W07 T20	.028	.030	.08	0	.0004-.0024	.0008-.0031
	G16 R W08 T20	.031	.034	.08	0	.0004-.0024	.0008-.0031
	G16 R W09 T25	.035	.038	.10	0	.0008-.0028	.0008-.0039
	G16 R W12 T25	.043	.049	.10	.002	.0008-.0028	.0008-.0039
	G16 R W14 T25	.051	.057	.10	.002	.0012-.0031	.0008-.0039
	G16 R W17 T25	.063	.069	.10	.002	.0012-.0031	.0008-.0039

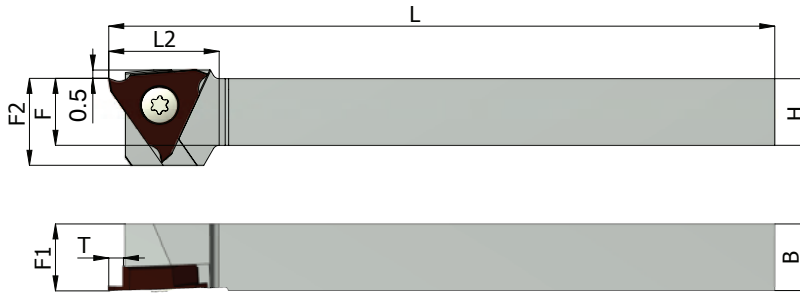
	K20	GX7
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤58 HRc

For L.H, specify G16 L instead of G16 R

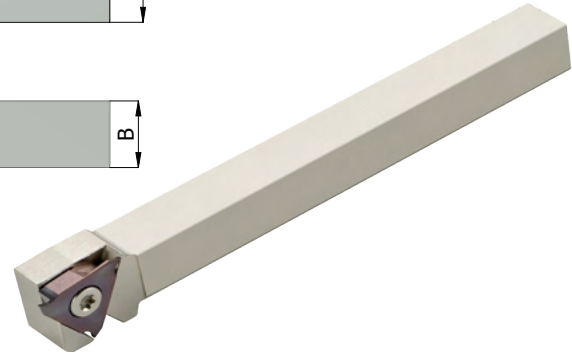
Nom` = nominal

● First choice ○ Alternative

External Toolholders



Right Version



Right hand cutting Inch holders

Ordering Code	B	H	T	L2	L	F	F1	F2	Insert Screw Torx+	Key Torx+
VGER 0315 K	.375	.315	.102	.67	4.9	.315	.375	.51	S16PS	K16P
VGER 0375 K	.375	.375	.102	.67	4.9	.375	.375	.51	S16PS	K16P
VGER 0500 K	.500	.500	.102	.67	4.9	.500	.500	.51	S16P	K16P
VGER 0625 K	.625	.625	.102	.67	4.9	.625	.625	.63	S16P	K16P

For L.H, specify VGE L instead of VGE R

Right hand cutting mm holders

Ordering Code	B mm	H mm	T	L2	L	F	F1	F2	Insert Screw Torx+	Key Torx+
VGER 0810 K	10	8	.102	.67	4.9	.315	.394	.51	S16PS	K16P
VGER 1010 K	10	10	.102	.67	4.9	.394	.394	.51	S16PS	K16P
VGER 1212 K	12	12	.102	.67	4.9	.472	.472	.51	S16P	K16P
VGER 1616 K	16	16	.102	.67	4.9	.630	.630	.63	S16P	K16P

For L.H, specify VGE L instead of VGE R

3 Cutting Edges Swiss Line Inserts (16 mm)

Carbide Grades

GX7

New generation of PVD triple layer coated Sub-Micron grade for wide range of materials as: Steel, Stainless Steels, Titanium and hard materials up to 58 HRC. With high toughness for optimized performance.

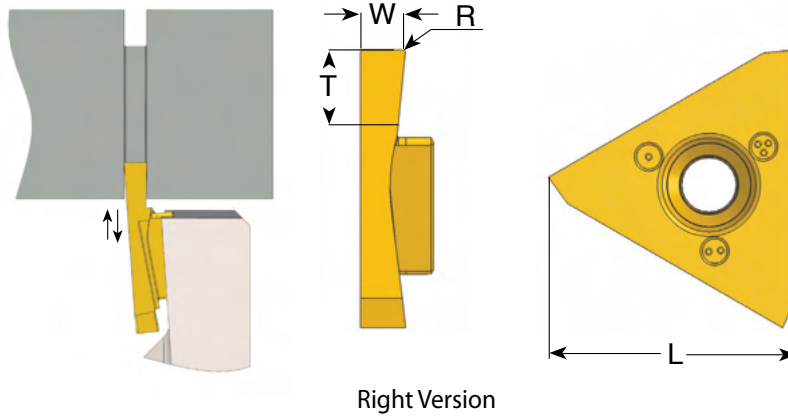
K20

Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

Cutting Data

ISO Standard	Materials	Cutting Speed ft/min	
		K20	GX7
P	Low & Medium Carbon Steels <0.55%C	---	265-495
	High Carbon Steels ≥0.55%C	---	230-395
	Alloy Steels, Treated Steels	---	130-265
M	Stainless Steel-Free Cutting	100-260	200-400
	Stainless Steel-Austenitic	65-230	100-300
	Cast Steels	100-260	165-400
K	Cast Iron	165-395	165-395
N	Aluminum ≤12%Si, Copper	395-820	---
	Aluminum >12%Si	295-650	---
	Synthetics, Duroplastics, Thermoplastics	230-490	---
S	Nickel Alloys, Titanium Alloys	65-165	100-230
H	Hardened Steel, 45-58HRC	---	65-165

Grooving and Turning



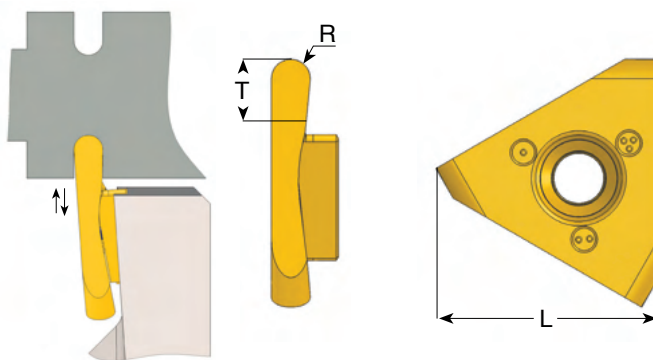
Right hand cutting

Insert Size L mm	Ordering Code	W ± .001	T max	R	Feed inch/rev	
					Radial	Axial
19	G19 R W05 T15	.020	.059	0	.0004-.0024	.001-.004
	G19 R W06 T16	.024	.063	0	.0004-.0024	.001-.004
	G19 R W07 T17	.030	.067	0	.0004-.0024	.001-.004
	G19 R W08 T18	.031	.079	.002	.0004-.0024	.001-.004
	G19 R W10 T22	.040	.098	.002	.001 -.003	.001-.004
	G19 R W12 T24	.047	.118	.002	.001 -.003	.001-.004
	G19 R W14 T28	.055	.118	.002	.001 -.003	.001-.004
	G19 R W15 T30	.059	.118	.002	.001 -.003	.001-.004
	G19 R W17 T34	.067	.157	.002	.0016-.0035	.001-.008
20	G20 R W20 T40	.079	.157	.004	.002 -.004	.001-.008
	G20 R W22 T45	.089	.197	.004	.002 -.004	.001-.008
	G20 R W25 T50	.098	.236	.004	.002 -.004	.001-.008
	G20 R W30 T60	.118	.236	.004	.002 -.004	.001-.008

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify G19 L... or G20 L...

Grooving and Profiling (full radius)



Right Version

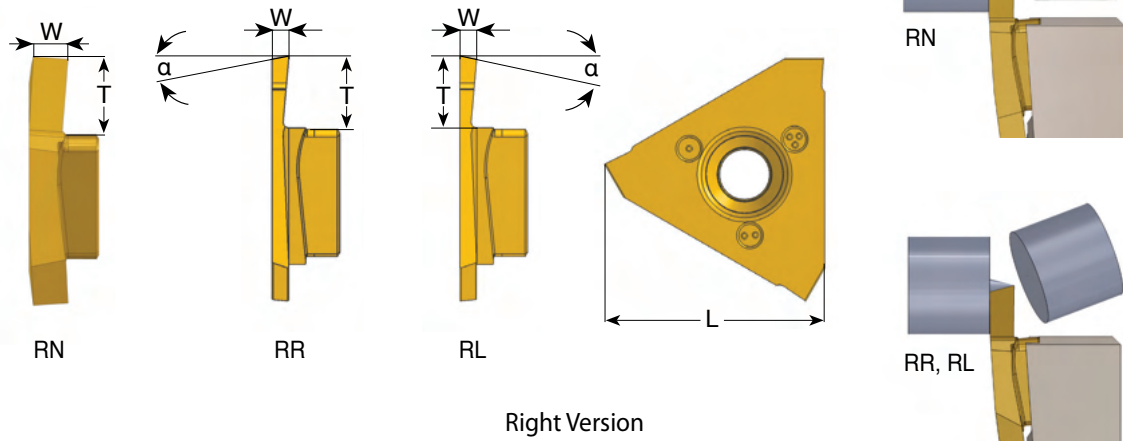
Right hand cutting

Insert Size L mm	Ordering Code	R ± .0012	T max	Feed mm/rev	
				Radial	Axial
19	GR19 R R02 T15	.010	.059	.0004-.0030	.001-.004
	GR19 R R04 T18	.016	.079	.0004-.0030	.001-.004
	GR19 R R05 T22	.020	.098	.0010-.0030	.001-.004
	GR19 R R06 T26	.024	.118	.0010-.0030	.001-.004
	GR19 R R08 T33	.031	.138	.0016-.0035	.001-.008
	GR19 R R10 T40	.040	.158	.0020-.0040	.001-.008
20	GR20 R R12 T50	.050	.236	.0020-.0040	.001-.008
	GR20 R R15 T60	.059	.236	.0020-.0040	.001-.008

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify G19 L... or G20 L...

Parting Off



Right hand cutting

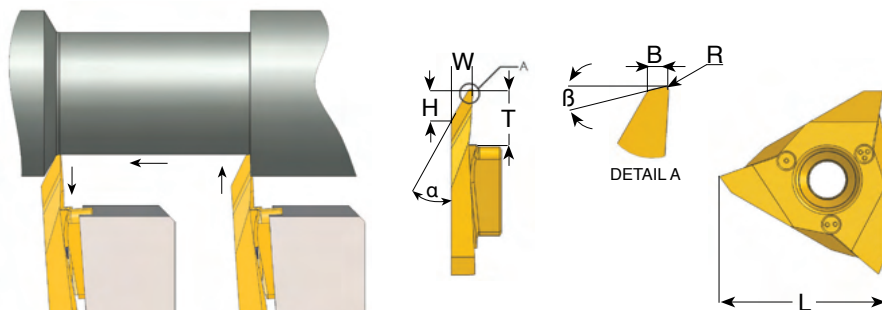
Insert Size L mm	Ordering Code	W	α°	T max	Feed inch/rev Radial
19	GP19 RR W10 T54	.039	15	.213	.0010-.0035
	GP19 RL W10 T54	.039	15	.213	
	GP19 RN W10 T54	.039	0	.213	
	GP19 RR W12 T54	.047	15	.213	
	GP19 RL W12 T54	.047	15	.213	
	GP19 RN W12 T54	.047	0	.213	
20	GP20 RR W15 T64	.059	15	.252	.0016-.0040
	GP20 RL W15 T64	.059	15	.252	
	GP20 RN W15 T64	.059	0	.252	
	GP20 RR W18 T64	.071	15	.252	.0016-.0040
	GP20 RL W18 T64	.071	15	.252	
	GP20 RN W18 T64	.071	0	.252	
	GP20 RR W20 T64	.079	15	.252	.0020-.0047
	GP20 RL W20 T64	.079	15	.252	
	GP20 RN W20 T64	.079	0	.252	
	GP20 RR W25 T64	.098	15	.252	.0020-.0047
	GP20 RL W25 T64	.098	15	.252	
	GP20 RN W25 T64	.098	0	.252	
	GP20 RR W30 T64	.118	15	.252	.0020-.0047
	GP20 RL W30 T64	.118	15	.252	
GP20 RN W30 T64	.118	0	.252		

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify GP19 LR... or G20 LR...

● First choice ○ Alternative

Back Turning



Right Version

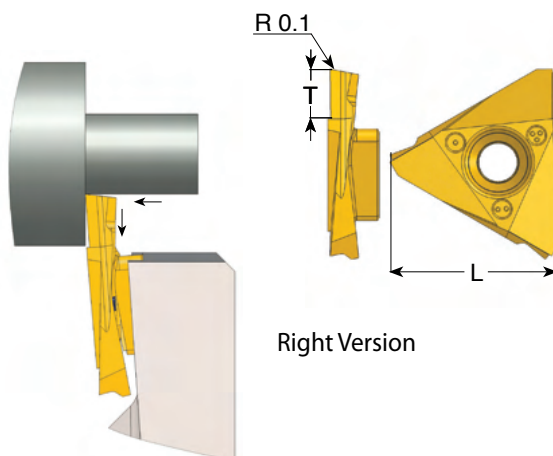
Right hand cutting

Insert Size L mm	Ordering Code	α°	β°	R	W	H	B	T max	Feed inch/rev
19	GB19 R A30	30	12	.004	.134	.169	.002	.213	.002-.006
20	GB20 R A30	30	12	.004	.134	.169	.002	.252	.002-.006

For left hand insert specify GB19 L ... or GB20 L ...

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

Front Turning



Right Version

Right hand cutting

Insert Size L mm	Ordering Code	T max	Feed inch/rev
19	GF19 R T54	.213	.002-.006
20	GF20 R T64	.252	.002-.006

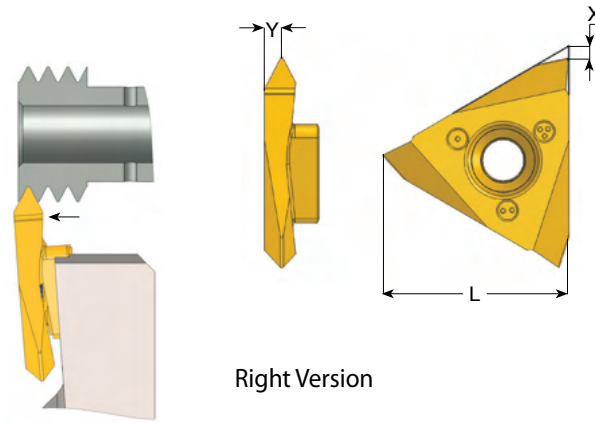
For left hand insert specify GF19 L... or GF20 L...

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

● First choice ○ Alternative

Threading - Partial Profile 60°

External Thread



Right hand cutting

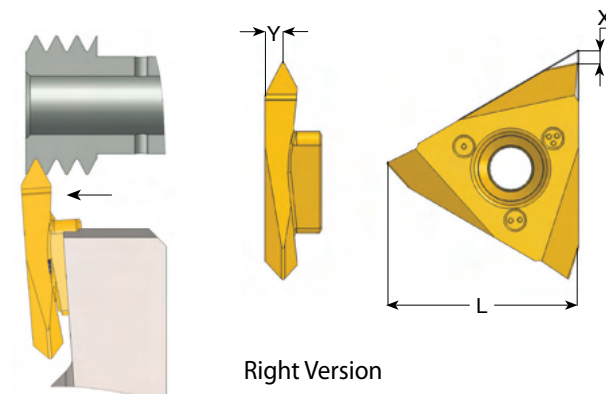
Insert Size L mm	Pitch Range		Ordering Code	X	Y
	mm	TPI			
19	0.5 -1.5	48-16	GT19 R A60	.11	.043
	1.75-3.0	14- 8	GT19 R G60	.11	.067
	0.5 -3.0	48- 8	GT19 R AG60	.11	.067

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify GT19 L

Threading - Partial Profile 55°

External Thread



Right hand cutting

Insert Size L mm	Pitch Range		Ordering Code	X	Y
	mm	TPI			
19	0.5- 1.5	48-16	GT19 R A55	.11	.039
	1.75-3.0	14- 8	GT19 R G55	.11	.067
	0.5- 3.0	48- 8	GT19 R AG55	.11	.067

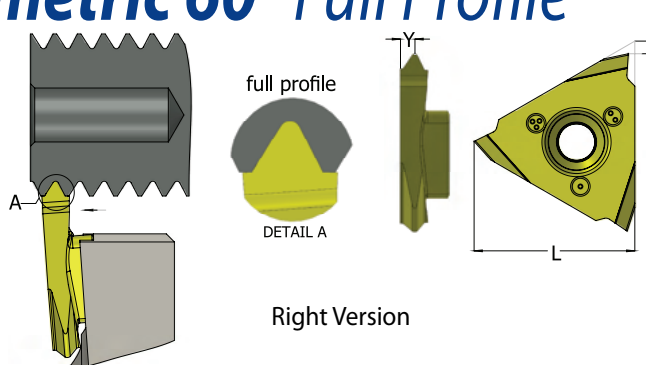
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify GT19 L

● First choice ○ Alternative

Threading - ISO metric 60° Full Profile

External Thread



Right hand cutting

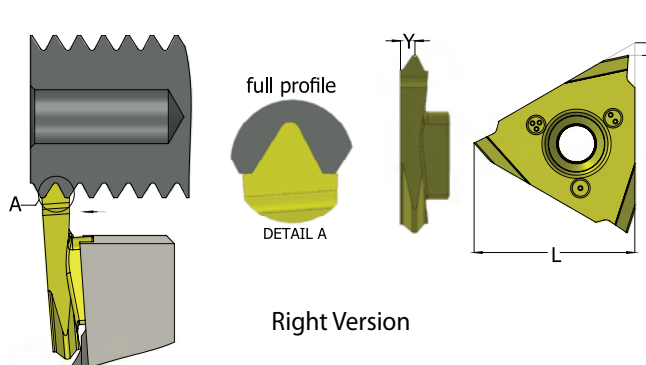
Insert Size L mm	Pitch mm	Ordering Code	X	Y
19	0.5	GT19 R 0.5 ISO	.11	.024
	0.7	GT19 R 0.7 ISO	.11	.028
	0.75	GT19 R 0.75 ISO	.11	.028
	0.8	GT19 R 0.8 ISO	.11	.028
	1.0	GT19 R 1.0 ISO	.11	.032
	1.25	GT19 R 1.25 ISO	.11	.039
	1.5	GT19 R 1.5 ISO	.11	.043
	1.75	GT19 R 1.75 ISO	.11	.051

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify GT19 L

Threading - UN unified 60° Full Profile

External Thread



Right hand cutting

Insert Size L mm	Pitch TPI	Ordering Code	X	Y
19	72	GT19 R 72UN	.11	.016
	56	GT19 R 56UN	.11	.024
	40	GT19 R 40UN	.11	.028
	32	GT19 R 32UN	.11	.028
	24	GT19 R 24UN	.11	.032
	14	GT19 R 20UN	.11	.032
	14	GT19 R 14UN	.11	.047

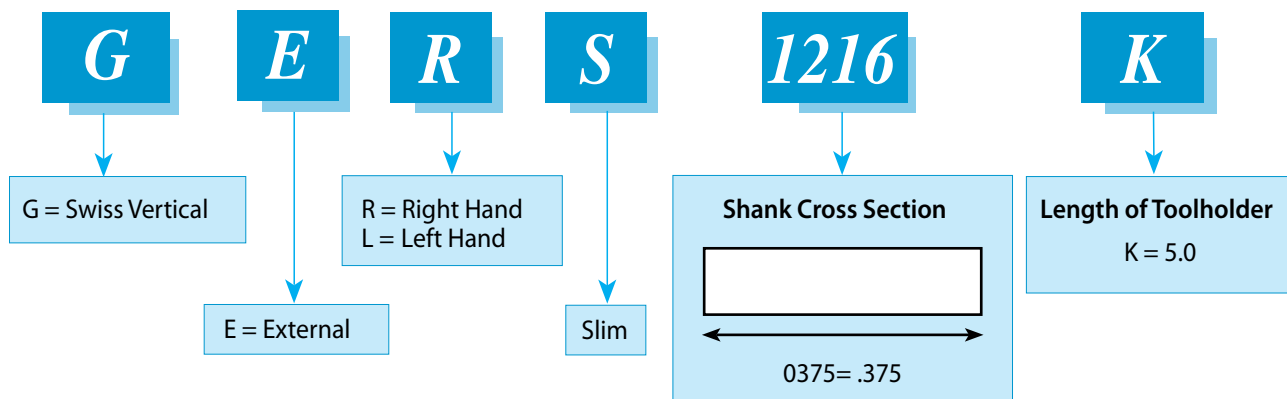
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For left hand insert specify GT19 L

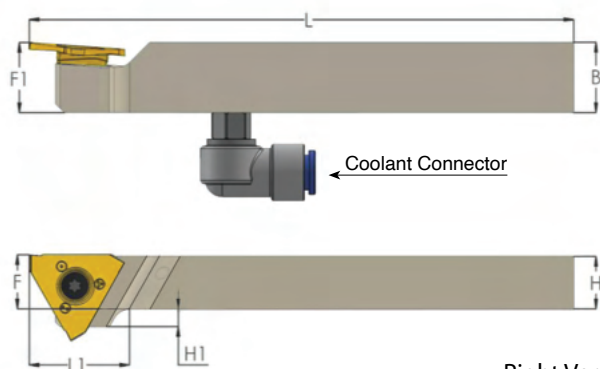
● First choice ○ Alternative

External Toolholders

Product Identification - Ordering Codes



- Coolant through toolholders, for external turning in Swiss type lathes machines.
- The high pressure coolant is directed towards the insert cutting edge, in order to evacuate the chips created and avoid build up edge.
- Includes a coolant connector for fast attachment on the machine.



Right Version



Right hand cutting Metric holders

Ordering Code	B mm	H mm	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector mm
**GER 0816 K	16	8	.67	4.9	.315	.630	.31	S21	K21	---
GER 1016 K	16	10	.67	4.9	.394	.630	.24	S21	K21	Ø4 / Ø6
GER 1216 K	16	12	.67	4.9	.472	.630	.16	S21	K21	Ø4 / Ø6
GER 1616 K	16	16	----	4.9	.630	.630	0	S21	K21	Ø4 / Ø6
GER 2020 K	20	20	----	4.9	.787	.787	0	S21	K21	Ø4 / Ø6
GER 2525 M	25	25	----	5.9	.984	.984	0	S21	K21	Ø4 / Ø6

For left hand Toolholder specify **GE L**

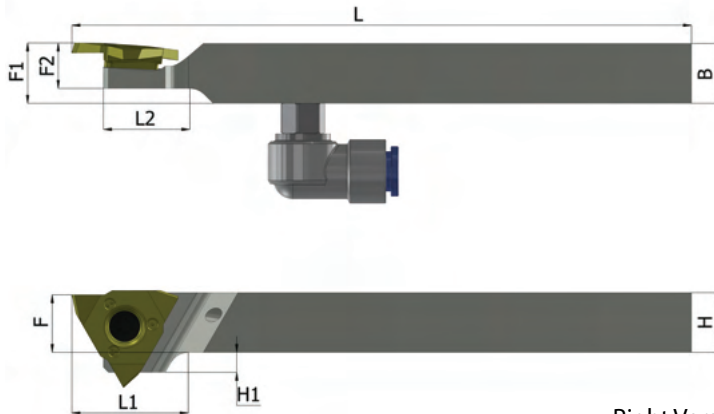
* Coolant pipe diameter

** Without coolant

Right hand cutting Inch holders

Ordering Code	B	H	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector mm
GER 0315 K	.625	.315	.67	4.9	.315	.625	.32	S21	K21	Ø4 / Ø6
GER 0375 K	.625	.375	.67	4.9	.394	.625	.24	S21	K21	Ø4 / Ø6
GER 0500 K	.625	.500	.67	4.9	.472	.625	.16	S21	K21	Ø4 / Ø6
GER 0625 K	.625	.625	----	4.9	.625	.625	0	S21	K21	Ø4 / Ø6
GER 0750 K	.750	.750	----	4.9	.750	.750	0	S21	K21	Ø4 / Ø6
GER 1000 M	1	1	----	5.9	1	1	0	S21	K21	Ø4 / Ø6

Slim Holders



Right Version

Right hand cutting Metric holders

Ordering Code	B=H mm	L1	L2	L	F	F1	F2	H1	Insert Screw	Torx Key	*Coolant connector mm
GERS 1010 K	10	.67	.43	4.9	.394	.394	.394	.24	S21S	K21	Ø4 / Ø6
GERS 1212 K	12	.67	.43	4.9	.470	.470	.375	.16	S21S	K21	Ø4 / Ø6
GERS 1616 K	16	----	.43	4.9	.630	.630	.375	0	S21S	K21	Ø4 / Ø6
GERS 2020 K	20	----	.43	4.9	.787	.787	.375	0	S21S	K21	Ø4 / Ø6

For L.H, specify GELS instead of GERS

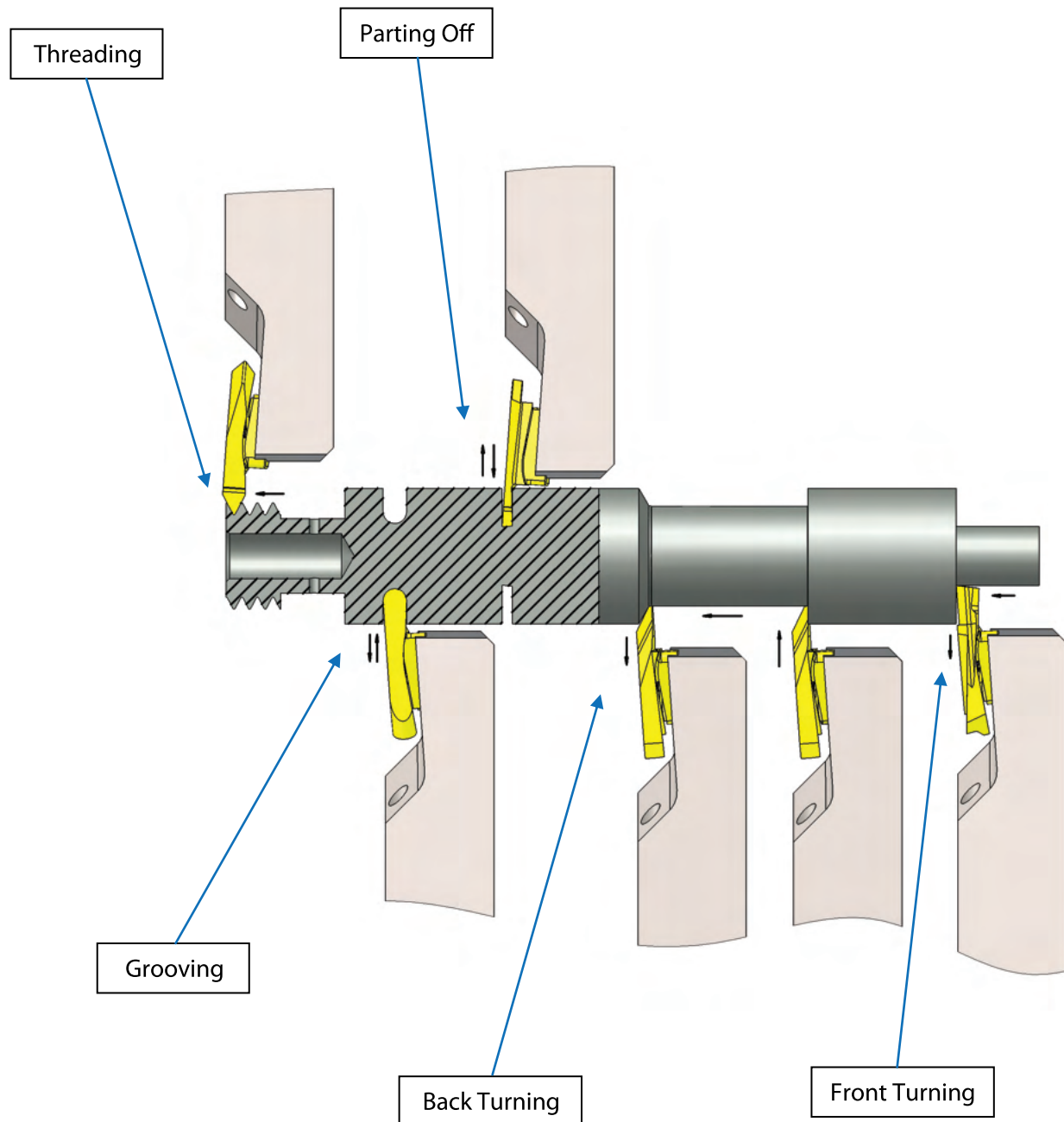
Right hand cutting Inch holders

Ordering Code	B=H	L1	L2	L	F	F1	F2	H1	Insert Screw	Torx Key	*Coolant connector mm
GERS 0375 K	.375	.67	.43	4.9	.375	.375	.375	.24	S21S	K21	Ø4 / Ø6
GERS 0500 K	.500	.67	.43	4.9	.500	.500	.374	.16	S21S	K21	Ø4 / Ø6
GERS 0625 K	.625	----	.43	4.9	.625	.625	.374	0	S21S	K21	Ø4 / Ø6
GERS 0750 K	.750	----	.43	4.9	.750	.750	.374	0	S21S	K21	Ø4 / Ø6

For L.H, specify GELS instead of GERS

Working Method

Grooving - Parting Off - Turning - Profiling - Threading



3 Cutting Edges Swiss Line Inserts (19,20 mm)

Carbide Grades

BLU

PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Titanium and hard materials.

K20

Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

Cutting Data

ISO Standard	Materials	Cutting Speed ft/min	
		K20	BLU
P	Low & Medium Carbon Steels <0.55%C	---	262-492
	High Carbon Steels ≥0.55%C	---	230-394
	Alloy Steels, Treated Steels	---	131-262
M	Stainless Steel-Free Cutting	98-262	197-394
	Stainless Steel-Austenitic	66-230	98-295
	Cast Steels	98-262	164-394
K	Cast Iron	164-394	---
N	Aluminum ≤12%Si, Copper	394-820	---
	Aluminum >12%Si	295-656	---
	Synthetics, Duroplastics, Thermoplastics	230-492	---
S	Nickel Alloys, Titanium Alloys	66-164	98-230
H	Hardened Steel, 45-50HRc	---	66-164

4 Cutting Edges G4 Turning Inserts and Toolholders

For grooving, parting-off and threading applications

Benefits

- High productivity and cost efficient due to four cutting edges
- High precision thanks to the fully ground profile

Features

- Strong and stable clamping due to the unique insert shape and the holder pocket.
- High repeatability.
- Maximum versatility- a single holder for large range of inserts.
- Can be used with high machining parameters, and provides high surface finish.
- Internal coolant provides the coolant liquid towards the cutting edge.

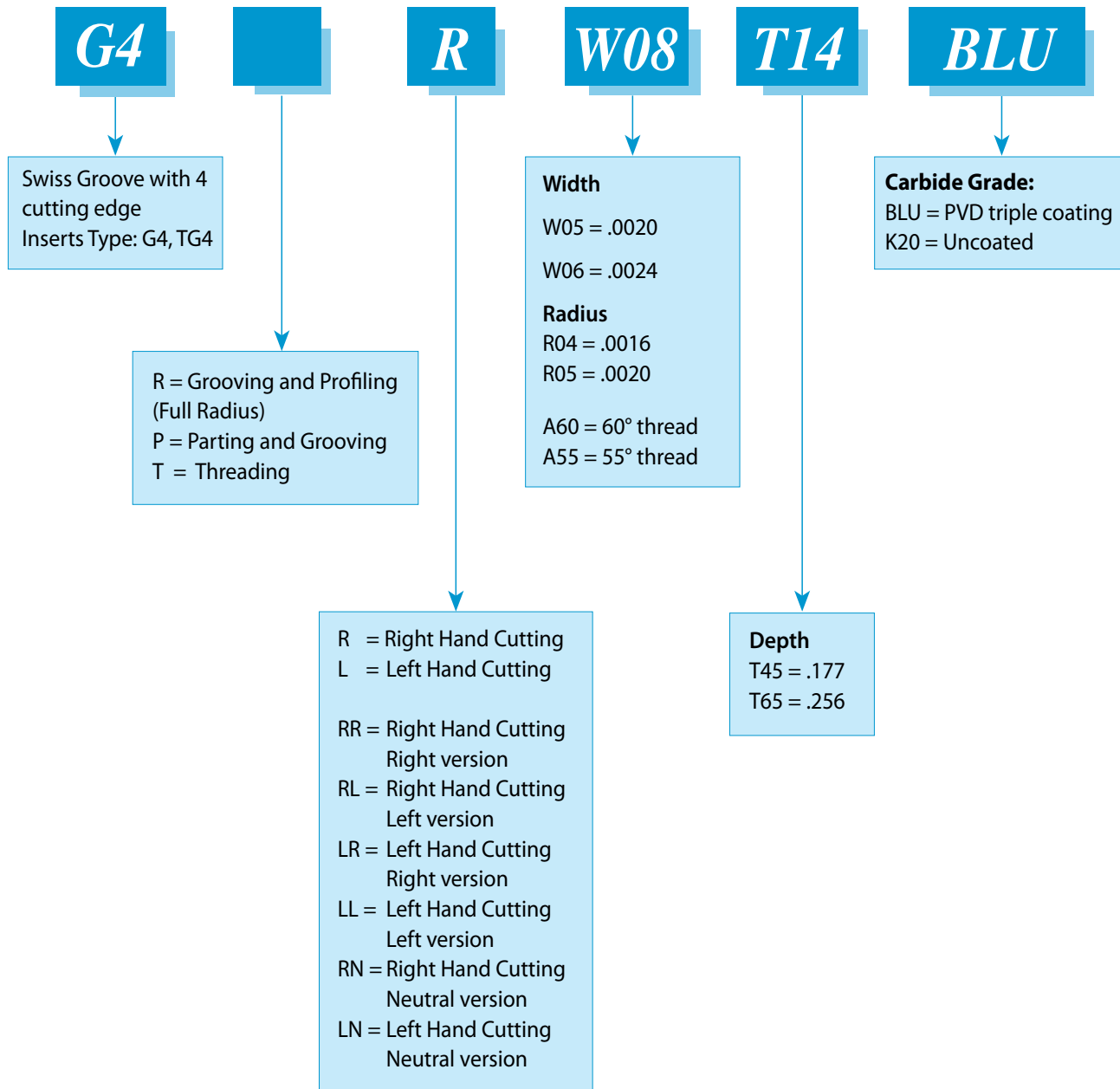
Application

- Multi-function inserts for grooving, parting, turning and threading.
- Fits to a large range of diameters, from very small applications with a thin wall up to 100 mm diameter.

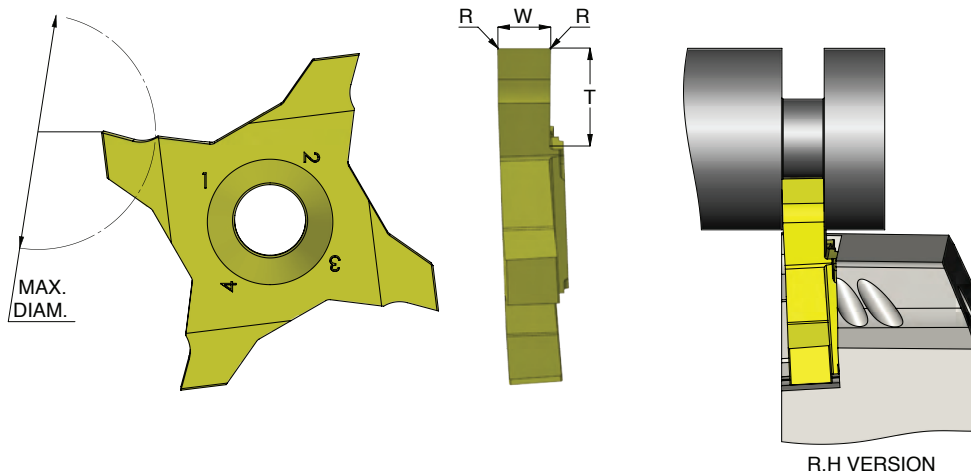
Carbide grades: BLU, K20

Product Identification - Ordering Codes

G4 Inserts



Grooving



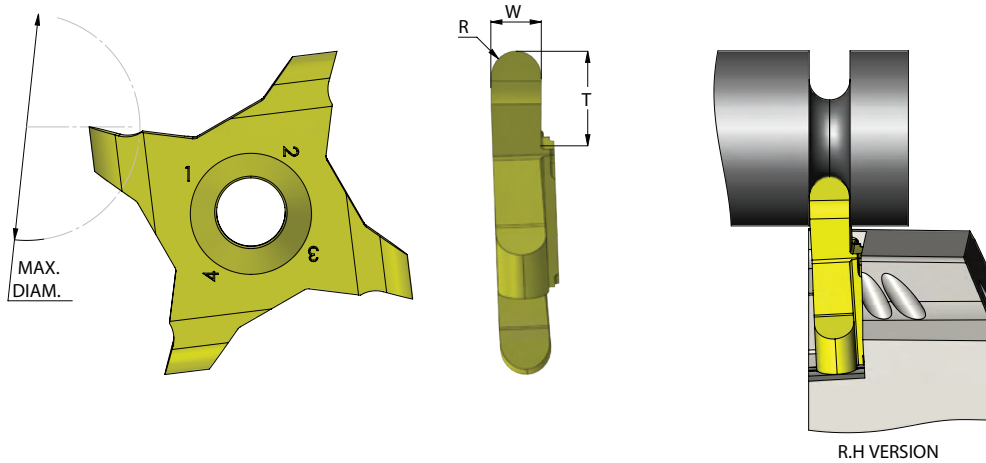
Insert Type	Ordering Code	W±.001	T max	R	MAX DIAM.	Feed inch/rev
G4	G4 R W05 T16	.020	.063	0	3.94	.0004-.0024
	G4 R W06 T16	.024	.063	0	3.94	.0004-.0024
	G4 R W07 T18	.028	.071	0	3.94	.0004-.0024
	G4 R W08 T20	.031	.079	0	3.94	.0008-.0028
	G4 R W10 T25	.039	.098	.002	3.94	.0008-.0035
	G4 R W12 T30	.047	.118	.002	3.94	.0008-.0035
	G4 R W14 T30	.055	.118	.002	3.94	.0008-.0047
	G4 R W15 T30	.059	.118	.002	3.94	.0008-.0047
	G4 R W16 T35	.063	.138	.002	3.94	.0008-.0047
	G4 R W17 T40	.067	.157	.002	3.94	.0008-.0047
G4 R W20 T40	.079	.157	.002	3.94	.0008-.0051	
TG4	TG4 R W22 T50	.089	.197	.002	3.94	.0008-.0055
	TG4 R W25 T50	.098	.197	.002	3.94	.0008-.0055
	TG4 R W27 T55	.108	.217	.002	3.94	.0008-.0047
	TG4 R W30 T65	.118	.256	.004	3.94	.0008-.0047
	TG4 R W32 T65	.125	.256	.004	3.94	.0008-.0047
TG4 R W35 T65	.138	.256	.004	3.94	.0008-.0047	

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G4 L instead of G4 R

● First choice ○ Alternative

Grooving and Profiling (full radius)

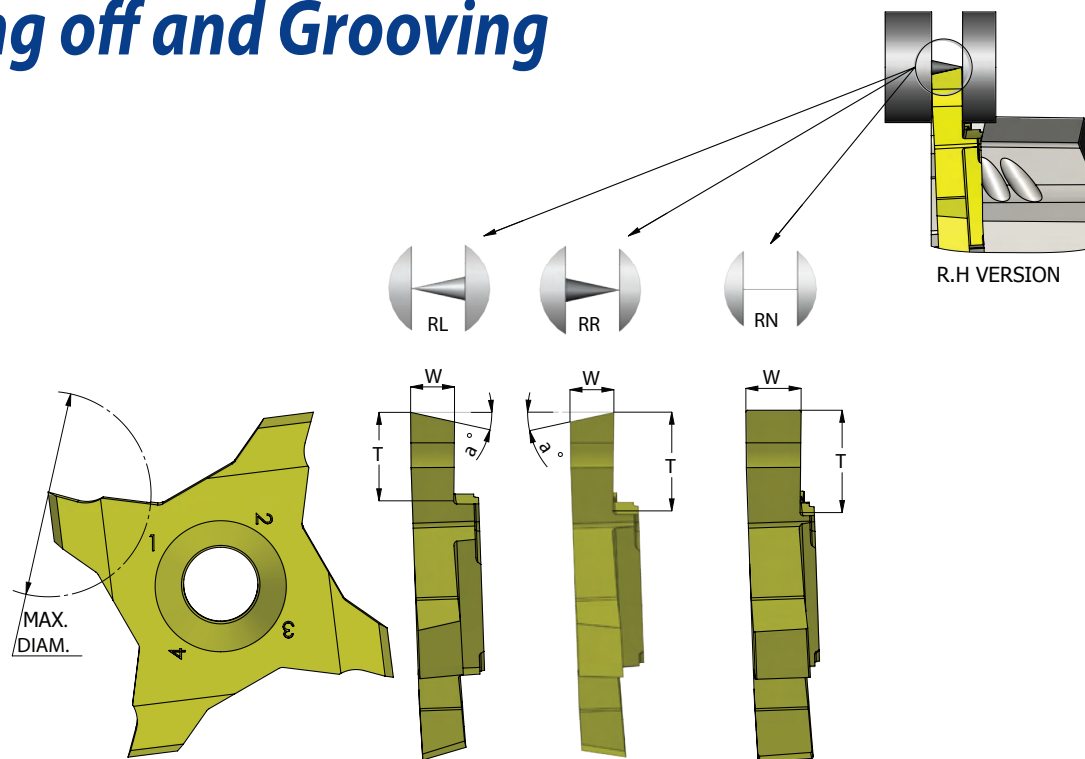


Insert Type	Ordering Code	R±.0012	W	T max	MAX DIAM.	Feed inch/rev
G4	G4R R R02 T15	.010	.020	.059	3.94	.0004-.0024
	G4R R R04 T20	.016	.031	.079	3.94	.0004-.0024
	G4R R R05 T25	.020	.039	.098	3.94	.0008-.0035
	G4R R R07 T38	.030	.059	.150	3.94	.0008-.0035
	G4R R R10 T45	.039	.079	.177	3.94	.0008-.0051
TG4	TG4R R R12 T50	.049	.098	.197	3.94	.0008-.0051
	TG4R R R15 T65	.059	.118	.256	3.94	.0008-.0047

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify TG4R L instead of TG4R R

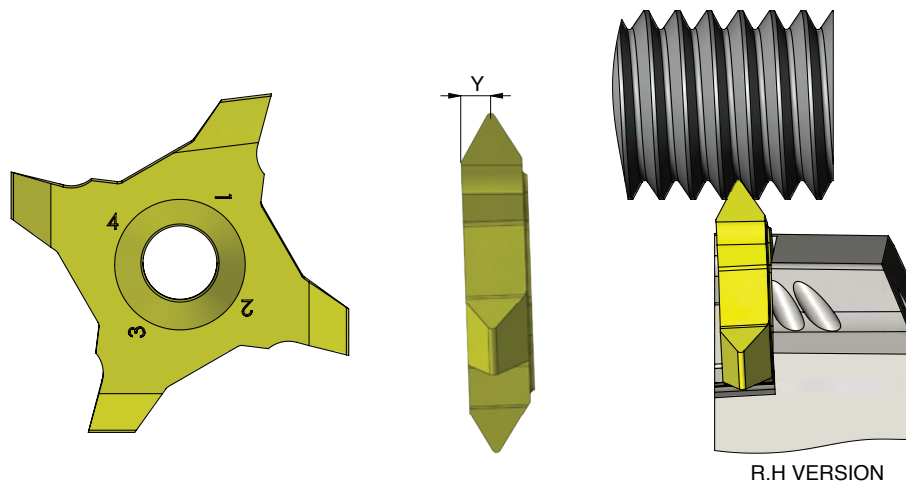
Parting off and Grooving



Insert Type	Ordering Code	W	α°	T max	MAX DIAM. Parting off	MAX DIAM. Grooving	Feed inch/rev
G4	G4P RR W05 T30	.020	15	.118	.24	3.94	.0008-.0024
	G4P RL W05 T30	.020	15	.118	.24	3.94	.0008-.0024
	G4P RN W05 T30	.020	0	.118	.24	3.94	.0008-.0024
	G4P RR W07 T43	.028	15	.169	.32	3.94	.0008-.0035
	G4P RL W07 T43	.028	15	.169	.32	3.94	.0008-.0035
	G4P RN W07 T43	.028	0	.169	.32	3.94	.0008-.0035
	G4P RR W08 T45	.031	15	.177	.35	3.94	.0008-.0035
	G4P RL W08 T45	.031	15	.177	.35	3.94	.0008-.0035
	G4P RN W08 T45	.031	0	.177	.35	3.94	.0008-.0035
TG4	TG4P RR W10 T58	.039	15	.228	.46	3.94	.0008-.0035
	TG4P RL W10 T58	.039	15	.228	.46	3.94	.0008-.0035
	TG4P RN W10 T58	.039	0	.228	.46	3.94	.0008-.0035
	TG4P RR W15 T65	.059	15	.256	.51	3.94	.0008-.0051
	TG4P RL W15 T65	.059	15	.256	.51	3.94	.0008-.0051
	TG4P RN W15 T65	.059	0	.256	.51	3.94	.0008-.0051
	TG4P RR W20 T65	.079	15	.256	.51	3.94	.0008-.0051
	TG4P RL W20 T65	.079	15	.256	.51	3.94	.0008-.0051
	TG4P RN W20 T65	.079	0	.256	.51	3.94	.0008-.0051
	TG4P RR W25 T65	.098	15	.256	.51	3.94	.0008-.0051
	TG4P RL W25 T65	.098	15	.256	.51	3.94	.0008-.0051
	TG4P RN W25 T65	.098	0	.256	.51	3.94	.0008-.0051

For L.H, specify G4P LR instead of G4P RR
 For L.H, specify G4P LL instead of G4P RL
 For L.H, specify G4P LN instead of G4P RN

Threading-Partial profile 60°



Insert Type	Ordering Code	Pitch		Y
		mm	TPI	
G4	G4T R AF60	0.25-0.8	100-32	.028
	G4T R A60	0.5 -1.5	46-16	.043
	G4T R G60	1.75-3.0	14- 8	.055
	G4T R AG60	0.5 -3.0	48- 8	.055

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G4T **L** instead of G4T **R**

Threading-Partial profile 55°

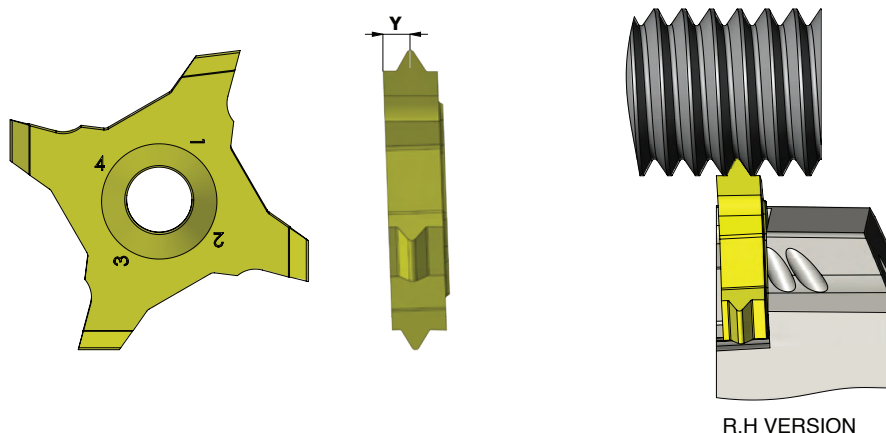
Insert Type	Ordering Code	Pitch		Y
		mm	TPI	
G4	G4T R A55	0.5 -1.5	46-16	.043
	G4T R G55	1.75-3.0	14- 8	.055
	G4T R AG55	0.5 -3.0	48- 8	.055

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G4T **L** instead of G4T **R**

● First choice ○ Alternative

Threading-ISO metric 60° Full Profile



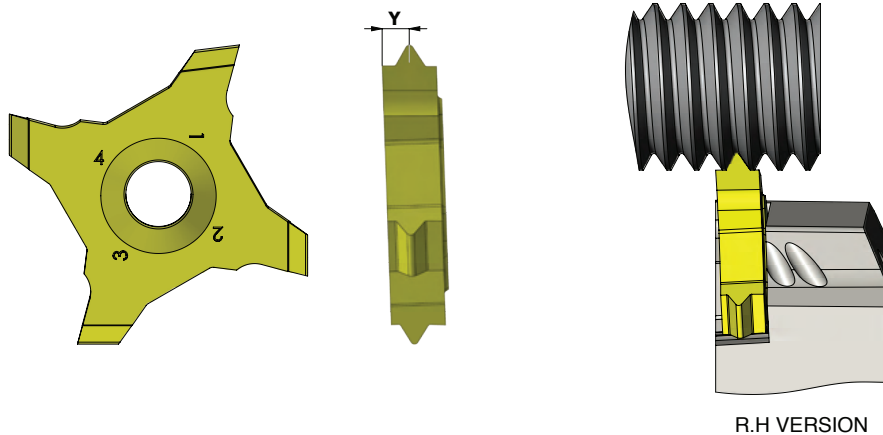
Insert Type	Ordering Code	Pitch mm	Y
G4	G4T R 0.5ISO	0.5	.024
	G4T R 0.6ISO	0.6	.024
	G4T R 0.7ISO	0.7	.028
	G4T R 0.75ISO	0.75	.028
	G4T R 0.8ISO	0.8	.028
	G4T R 1.0ISO	1.0	.031
	G4T R 1.25ISO	1.25	.039
	G4T R 1.5ISO	1.5	.043
TG4	TG4T R 1.75ISO	1.75	.047
	TG4T R 2.0ISO	2.0	.051
	TG4T R 3.0ISO	3.0	.067

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G4T **L** instead of G4T **R**

● First choice ○ Alternative

Threading-UN unified 60° Full Profile



Insert Type	Ordering Code	Pitch TPI	Y
G4	G4T R 72UN	72	.012
	G4T R 64UN	64	.016
	G4T R 56UN	56	.024
	G4T R 40UN	40	.028
	G4T R 32UN	32	.028
	G4T R 28UN	28	.031
	G4T R 24UN	24	.031
	G4T R 20UN	20	.035
	G4T R 18UN	18	.039
TG4	TG4T R 16UN	16	.043
	TG4T R 14UN	14	.047
	TG4T R 13UN	13	.051
	TG4T R 12UN	12	.055

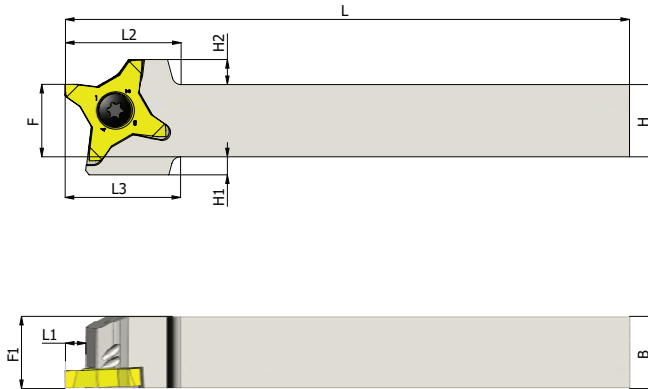
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G4T L instead of G4T R

● First choice ○ Alternative

External Toolholders

Coated holders provide high abrasive resistance



Inch holders

Insert Type	Ordering Code	B	H	L1	L2	L3	L	F	F1	H1	H2	Insert Screw Torx +	Key Torx +	** Coolant connector mm
G4	*G4ER 0500 K	.500	.500	.177	.71	.71	4.9	.500	.500	.16	.16	S16P	IP10	---
	G4ER 0625 K	.625	.625	.177	.71	---	4.9	.625	.625	---	.16	S16P	IP10	Ø4/Ø6
	G4ER 0750 K	.750	.750	.177	.71	---	4.9	.750	.750	---	.16	S16P	IP10	Ø4/Ø6
	G4ER 1000 M	1	1	.177	.71	---	5.9	1	1	---	.16	S16P	IP10	Ø4/Ø6
TG4	TG4ER 0625 K	.625	.625	.256	1.02	1.02	4.9	.625	.625	.16	.24	S22P	IP20	Ø4/Ø6
	TG4ER 0750 K	.750	.750	.256	1.02	---	4.9	.750	.750	---	.24	S22P	IP20	Ø4/Ø6
	TG4ER 1000 M	1	1	.256	1.02	---	5.9	1	1	---	.24	S22P	IP20	Ø4/Ø6

Metric holders

Insert Type	Ordering Code	B mm	H mm	L1	L2	L3	L	F	F1	H1	H2	Insert Screw Torx +	Key Torx +	** Coolant connector mm
G4	*G4ER 1212 K	12	12	.177	.71	.71	4.9	.472	.63	.16	.16	S16P	IP10	---
	G4ER 1616 K	16	16	.177	.71	---	4.9	.630	.63	---	.16	S16P	IP10	Ø4/Ø6
	G4ER 2020 K	20	20	.177	.71	---	4.9	.787	.79	---	.16	S16P	IP10	Ø4/Ø6
	G4ER 2525 M	25	25	.177	.71	---	5.9	.984	.98	---	.16	S16P	IP10	Ø4/Ø6
TG4	TG4ER 1616 K	16	16	.256	1.02	1.02	4.9	.630	.63	.16	.24	S22P	IP20	Ø4/Ø6
	TG4ER 2020 K	20	20	.256	1.02	---	4.9	.787	.79	---	.24	S22P	IP20	Ø4/Ø6
	TG4ER 2525 M	25	25	.256	1.02	---	5.9	.984	.98	---	.24	S22P	IP20	Ø4/Ø6

* Without internal coolant

** Diameter of coolant pipe

For Left Hand:

specify G4EL... instead of G4ER...

specify TG4EL... instead of TG4ER...

Carbide Grades

BLU

PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Super alloys and hard materials up to 45 HRc.

K20

Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

Cutting Data

ISO Standard	Materials	Cutting Speed ft/min	
		K20	BLU
P	Low & Medium Carbon Steels <0.55%C	---	260-490
	High Carbon Steels ≥0.55%C	---	230-390
	Alloy Steels, Treated Steels	---	130-260
M	Stainless Steel-Free Cutting	100-260	200-390
	Stainless Steel-Austenitic	65-230	100-300
	Cast Steels	100-260	165-390
K	Cast Iron	160-390	200-430
N	Aluminium ≤12%Si, Copper	390-820	---
	Aluminium >12%Si	300-660	---
	Synthetics, Duroplastics, Thermoplastics	230-490	---
S	Nickel alloys, Titanium alloys	65-165	100-230
H	Hardened Steel, ≤45 HRc	---	65-165

6 Cutting Edges G6 Turning Inserts and Toolholders

For grooving, parting-off and threading

Benefits

- High productivity and cost efficient due to G6 six cutting edges
- One holder for all inserts type- Maximum versatility
- High precision thanks to the fully ground profile

Features

- Strong and stable clamping due to the unique insert shape
- Can be used with high machining parameters, and provides high surface finish
- Internal coolant provides the cool liquid towards the cutting edge

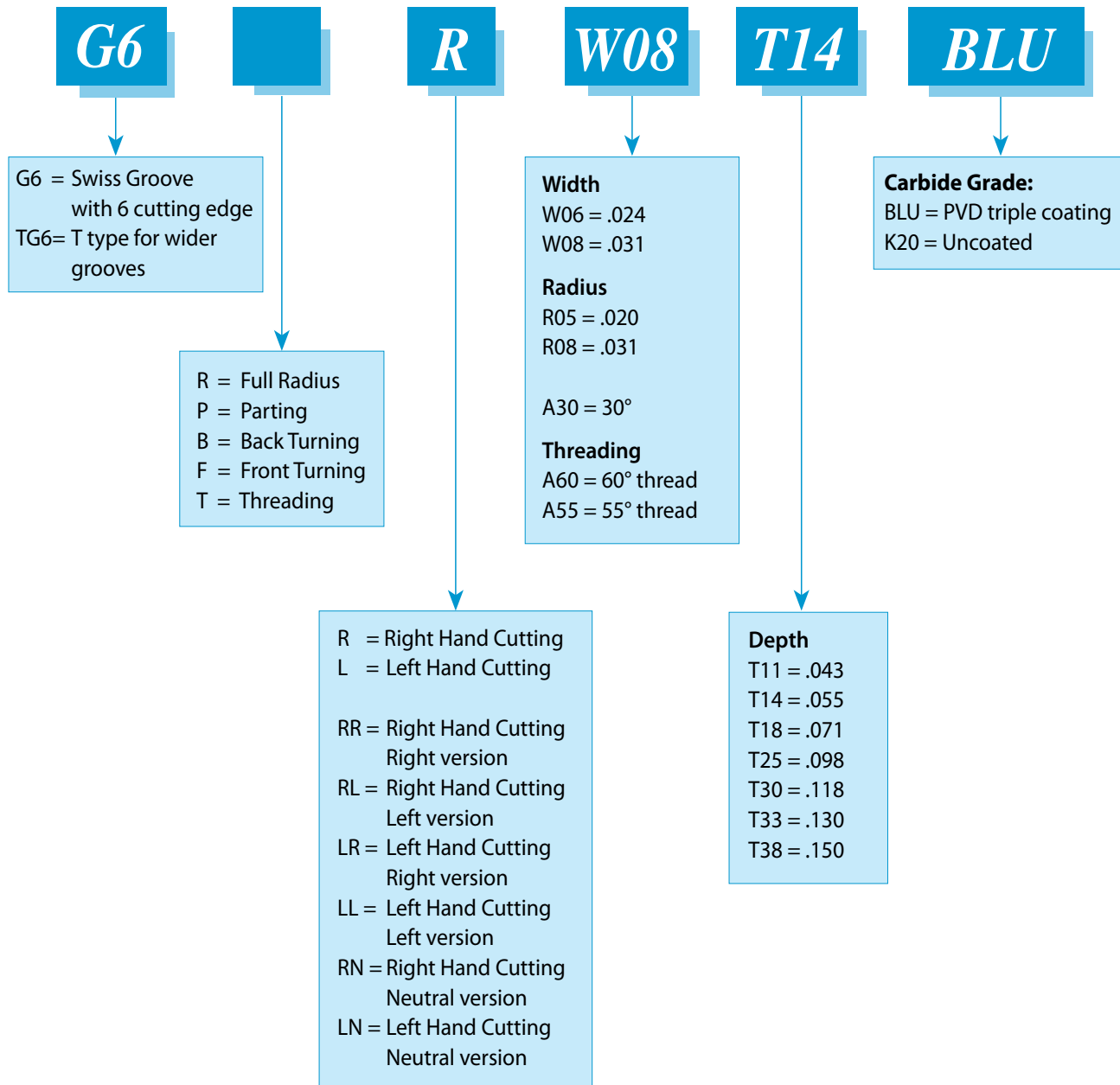
Application

- Multi-function inserts for threading, grooving, parting and turning
- Fit to a large range of diameters, from very small applications with a thin wall up to diameter of 60 mm.

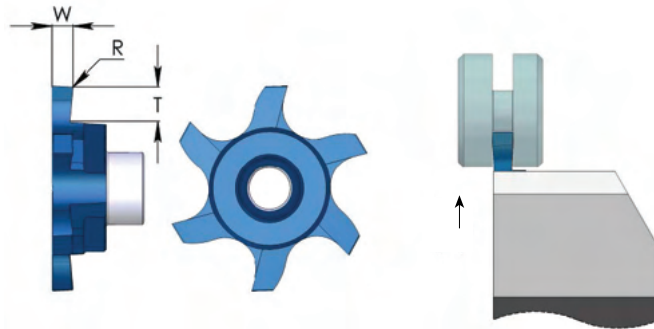
Carbide grades: BLU, K20

Product Identification - Ordering Codes

G6 Inserts



Grooving



Right Version

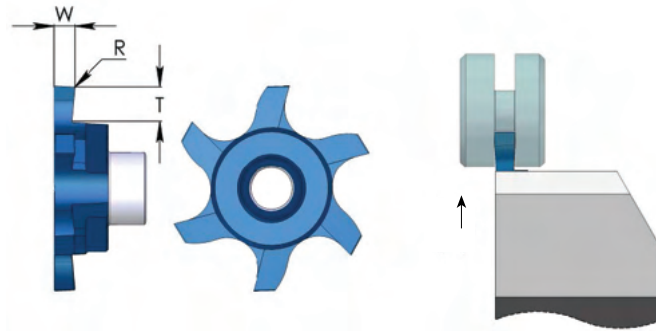
Right hand cutting

Insert Type	Ordering Code	W±.001	T max	R	Feed inch/rev
G6	G6 R W06 T11	.024	.043	0	.0004-.002
	G6 R W08 T14	.031	.055	0	.0008-.003
	G6 R W10 T18	.039	.071	.002	.0008-.004
	G6 R W15 T33	.059	.130	.002	.0008-.005
	G6 R W20 T38	.079	.150	.004	.0008-.005
	G6 R W25 T38	.098	.150	.004	.0008-.006
TG6	G6 R W30 T38	.118	.150	.004	.0008-.005
	G6 R W40 T38	.157	.150	.004	.0008-.005

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G6 L instead of G6 R

Grooving, Circlip Ring Grooves DIN 471/472



Right Version

Right hand cutting

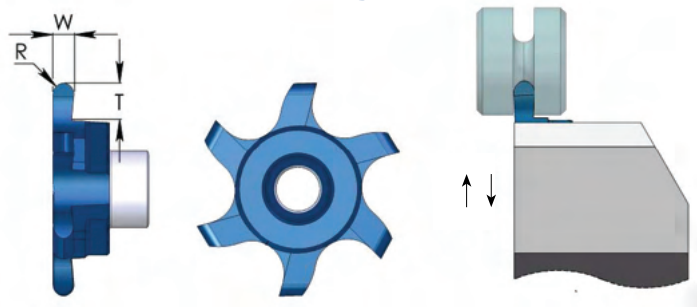
Insert Type	Ordering Code	Nom` groove width	W- .002	T max	R	Feed inch/rev
G6	G6D R W12 T31	.043	.049	.122	.0020	.001-.004
	G6D R W14 T33	.051	.057	.130	.0020	.001-.005
	G6D R W17 T33	.063	.069	.130	.0020	.001-.005

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G6D L instead of G6D R

Nom` = nominal

Grooving and Profiling (full radius)



Right Version

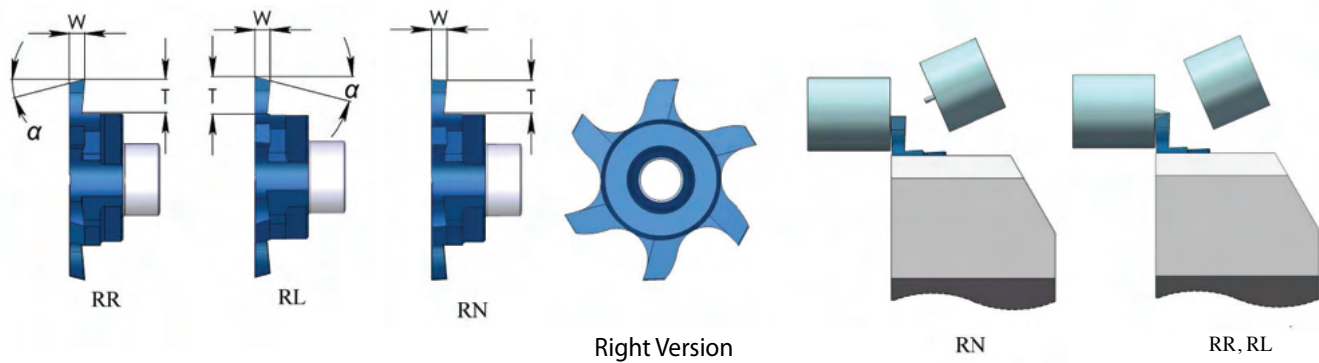
Right hand cutting

Insert Type	Ordering Code	R±.001	W	T max	Feed inch/rev
G6	G6R R R05 T25	.020	.039	.098	.0008-.004
	G6R R R08 T30	.031	.063	.118	.0008-.004
	G6R R R10 T38	.039	.079	.150	.0008-.005
	G6R R R12 T38	.049	.098	.150	.0008-.006
TG6	TG6R R R15 T38	.059	.118	.150	.0008-.005
	TG6R R R20 T38	.079	.157	.150	.0008-.005

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

● First choice ○ Alternative

Parting Off and Grooving



Right hand cutting

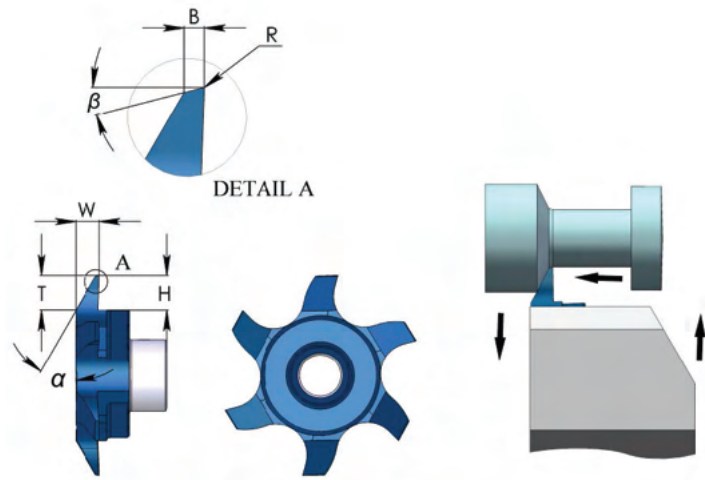
Insert Type	Ordering Code	W	α°	T max	Feed inch/rev
G6	G6P RR W08 T38	.039	15	.150	.0008-.004
	G6P RL W08 T38	.039	15	.150	.0008-.004
	G6P RN W08 T38	.039	0	.150	.0008-.004
	G6P RR W10 T38	.059	15	.150	.0008-.005
	G6P RL W10 T38	.059	15	.150	.0008-.005
	G6P RN W10 T38	.059	0	.150	.0008-.005
	G6P RR W15 T38	.079	15	.150	.0008-.005
	G6P RL W15 T38	.079	15	.150	.0008-.005
	G6P RN W15 T38	.079	0	.150	.0008-.005
	G6P RR W20 T38	.039	15	.150	.0008-.005
	G6P RL W20 T38	.039	15	.150	.0008-.005
	G6P RN W20 T38	.039	0	.150	.0008-.005

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify **G6P LR** instead of **G6P RR**
G6P LL instead of **G6P RL**
G6P LN instead of **G6P RN**

● First choice ○ Alternative

Back Turning



Right Version

Right hand cutting

Insert Type	Ordering Code	α°	β°	R	W	H	B	T _{max}	Feed inch/rev
G6	G6B R A30	30	12	.004	.102	.150	.02	.150	.002-.005

For L.H, specify G6B L instead of G6B R

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

Front Turning



Right Version

Right hand cutting

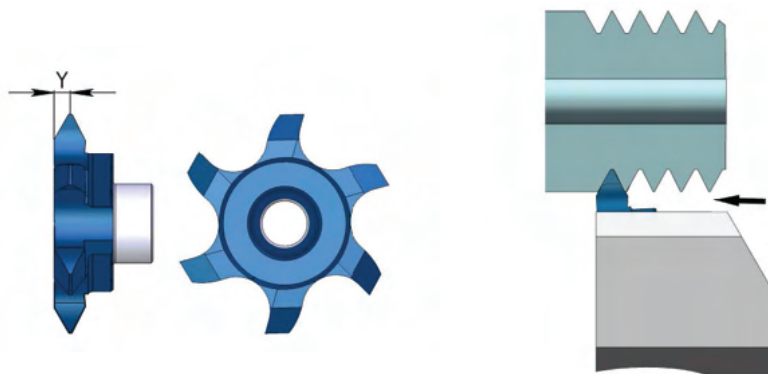
Insert Type	Ordering Code	T _{max}	R	Feed inch/rev
G6	G6F R T38	.15	.004	.002-.005

For L.H, specify G6F L instead of G6F R

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

● First choice ○ Alternative

Threading - Partial Profile 60°



Right Version

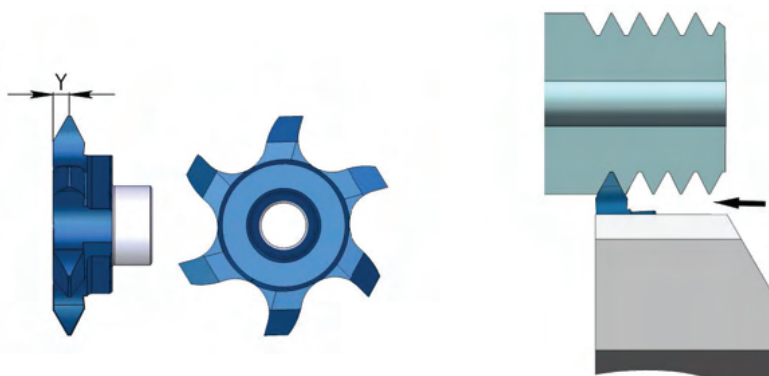
Right hand cutting

Insert Type	Ordering Code	Pitch Range		Y
		mm	TPI	
G6	G6T R A60	0.5 -1.5	48-16	.031
	G6T R G60	1.75-3.0	14- 8	.059
	G6T R AG60	0.5 -3.0	48- 8	.059

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G6T L instead of G6T R

Threading - Partial Profile 55°



Right Version

Right hand cutting

Insert Type	Ordering Code	Pitch Range		Y
		mm	TPI	
G6	G6T R A55	0.5 -1.5	48-16	.031
	G6T R G55	1.75-3.0	14- 8	.059
	G6T R AG55	0.5 -3.0	48- 8	.059

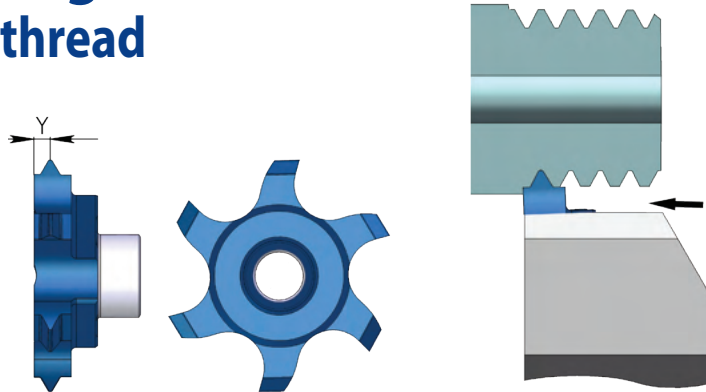
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G6T L instead of G6T R

● First choice ○ Alternative

Threading - ISO metric 60° Full Profile

External thread



Right Version

Right hand cutting

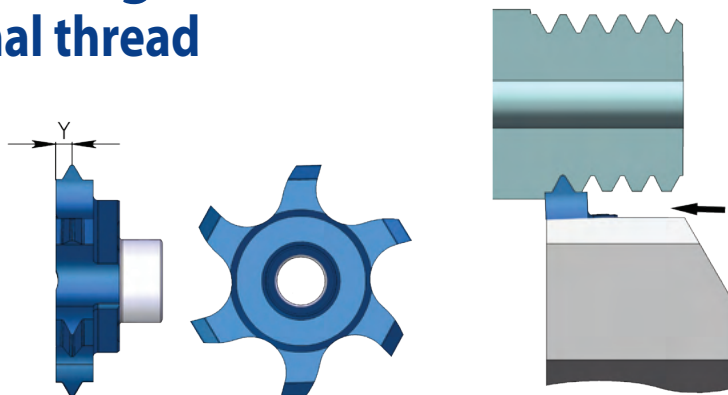
Insert Type	Ordering Code	Pitch mm	Y
G6	G6T R 1.0ISO	1.0	.028
	G6T R 1.5ISO	1.5	.039
	G6T R 2.0ISO	2.0	.051

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify G6T L instead of G6T R

Threading - UN unified 60° Full Profile

External thread



Right Version

Right hand cutting

Insert Type	Ordering Code	Pitch TPI	Y
G6	G6T R 56UN	56	.024
	G6T R 40UN	40	.016
	G6T R 32UN	32	.028
	G6T R 24UN	24	.028

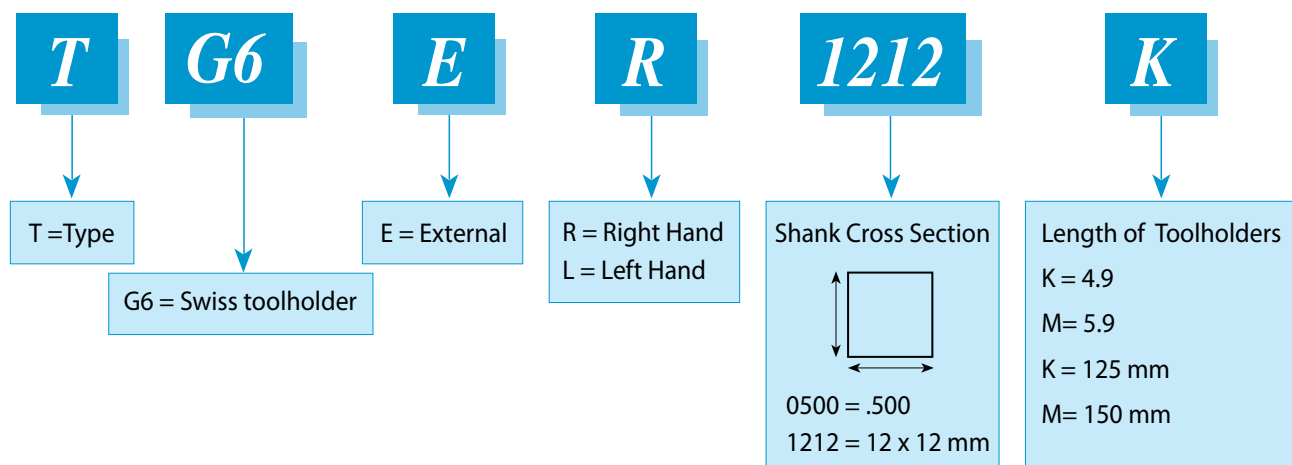
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

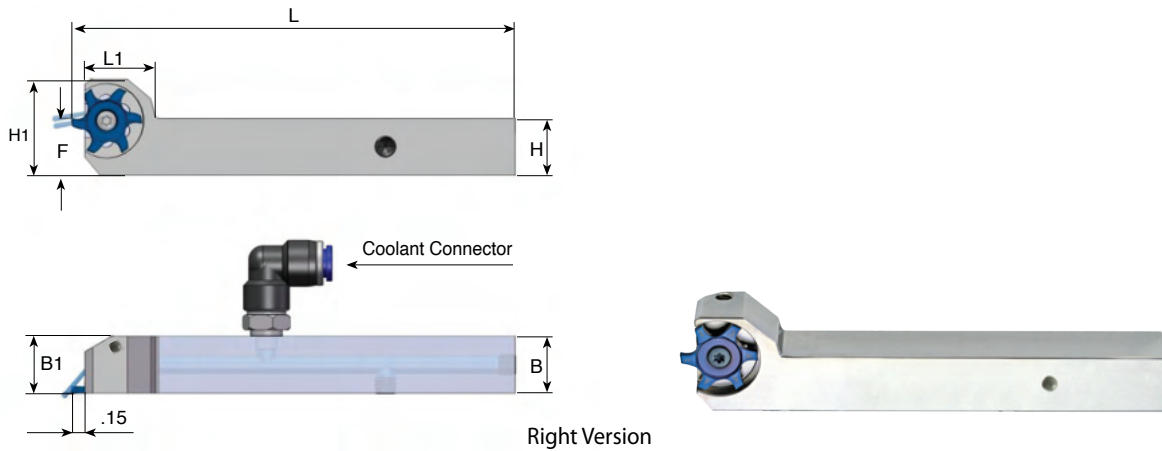
● First choice ○ Alternative

External Toolholders - For G6 Inserts

Coolant through toolholders, for external turning in Swiss type lathes machines. The high pressure coolant is directed towards the insert cutting edge in order to evacuate the chips created and avoid build up edge. Includes a coolant connector for fast attachment on the machine.

Product Identification - Ordering Codes





Right hand cutting Inch Holders

Insert Type	Ordering Code	B	H	L1	L	H1	F	B1	Insert Screw Torx +	Torx + Key	**Coolant connector (mm)
G6	*G6ER 0500 K	.500	.500	.8	4.9	.9	.500	.63	S16LP	K16P	Ø4 / Ø6
	G6ER 0625 K	.625	.625	.8	4.9	1.1	.625	.63	S16LP	K16P	Ø4 / Ø6
	G6ER 0750 K	.750	.750	.8	4.9	1.2	.750	.75	S16LP	K16P	Ø4 / Ø6
	G6ER 1000 M	1	1	.8	5.9	1.4	1	1	S16LP	K16P	Ø4 / Ø6
TG6	*TG6ER 0500 K	.500	.500	.8	4.9	.9	.500	.71	S16LP	K16P	Ø4 / Ø6
	TG6ER 0625 K	.625	.625	.8	4.9	1.1	.625	.71	S16LP	K16P	Ø4 / Ø6
	TG6ER 0750 K	.750	.750	.8	4.9	1.2	.750	.75	S16LP	K16P	Ø4 / Ø6
	TG6ER 1000 M	1	1	.8	5.9	1.4	1	1	S16LP	K16P	Ø4 / Ø6

* Without internal coolant ** Coolant pipe diameter, standard packing with Ø4 mm

For L.H, specify G6EL instead of G6ER

Coated holders provide high abrasive resistance

Right hand cutting Metric Holders

Insert Type	Ordering Code	B mm	H mm	L1	L	H1	F	B1	Insert Screw Torx +	Torx + Key	**Coolant connector (mm)
G6	*G6ER 1212 K	12	12	.8	4.9	.9	.472	.63	S16LP	K16P	---
	G6ER 1616 K	16	16	.8	4.9	1.1	.630	.63	S16LP	K16P	Ø4 / Ø6
	G6ER 2020 K	20	20	.8	4.9	1.2	.787	.79	S16LP	K16P	Ø4 / Ø6
	G6ER 2525 M	25	25	.8	5.9	1.4	.984	.98	S16LP	K16P	Ø4 / Ø6
TG6	*TG6ER 1212 K	12	12	.8	4.9	.9	.472	.71	S16LP	K16P	---
	TG6ER 1616 K	16	16	.8	4.9	1.1	.630	.71	S16LP	K16P	Ø4 / Ø6
	TG6ER 2020 K	20	20	.8	4.9	1.2	.787	.79	S16LP	K16P	Ø4 / Ø6
	TG6ER 2525 M	25	25	.8	5.9	1.4	.984	.98	S16LP	K16P	Ø4 / Ø6

* Without internal coolant ** Coolant pipe diameter, standard packing with Ø4 mm

For L.H, specify G6EL instead of G6ER

Coated holders provide high abrasive resistance

G6 Inserts

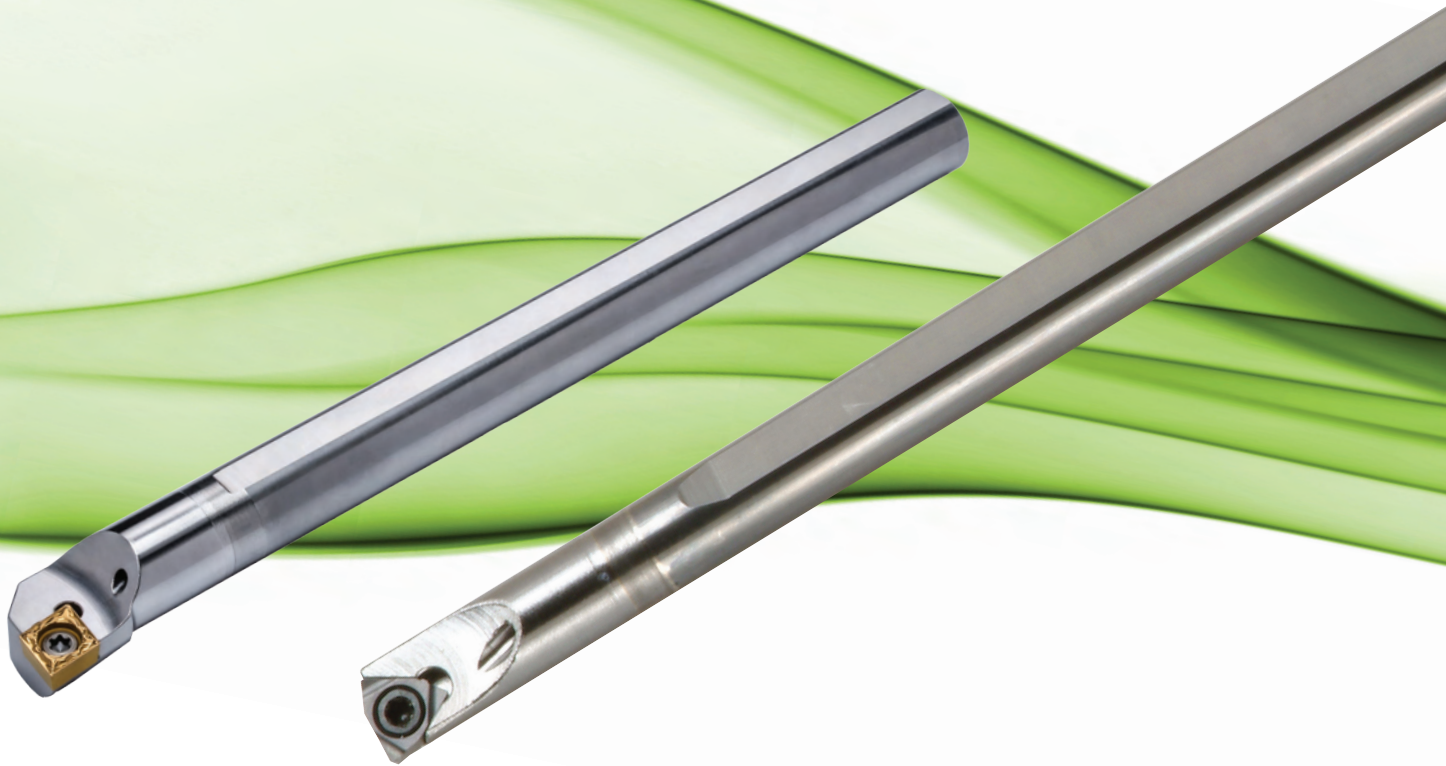
Carbide Grades

BLU PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Titanium and hard materials.

K20 Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

Cutting Data

ISO Standard	Material	Cutting Speed ft/min	
		K20	BLU
P	Low and Medium Carbon Steels <0.55%C	-	260-490
	High Carbon Steels ≥0.55%C	-	230-395
	Alloy Steels, Treated Steels	-	130-260
M	Stainless Steel-Free Cutting	100-260	200-395
	Stainless Steel-Austenitic	65-230	100-295
	Cast Steels	100-260	165-395
K	Cast Iron	165-395	200-490
N	Aluminum ≤12%Si, Copper	395-820	-
	Aluminum >12%Si	295-656	-
	Synthetics, Duroplastics, Thermoplastics	230-490	-
S	Nickel Alloys, Titanium Alloys.	65-165	100-230
H	Hardened Steel, ≤45 HRc	-	65-165



Toolholders Specifications

High performance Carbide Shank turning toolholders for internal machining from 6 mm (.236") minimum diameter and larger.

- Unique Carbide type for high rigidity
- Cylindrical shank
- Internal coolant supply to the cutting edge
- Screw clamping design
- Can be used also for standard ISO turn inserts

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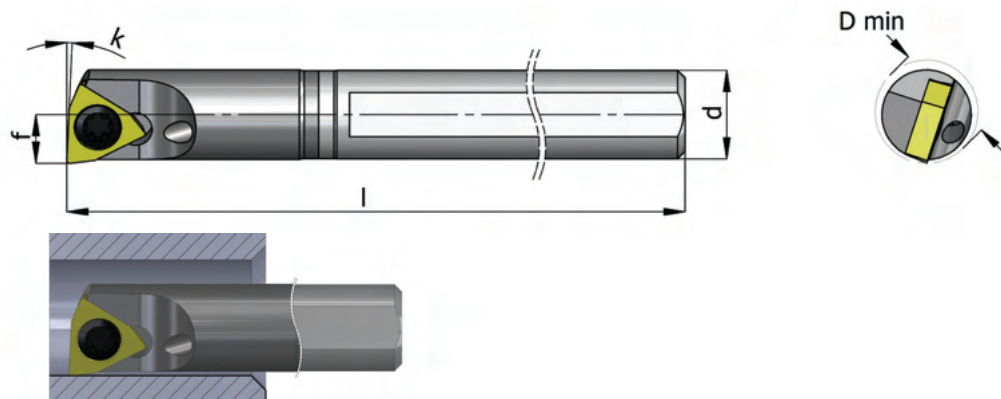
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Boring bar, SCLCR/L type Lead angle $k=5^\circ$ 3

Boring bar, SDUCR/L type Lead angle $k=3^\circ$ 4
Boring bar, STFPR/L type Lead angle $k=1^\circ$ 5

Boring bar, SWUBR/L type Lead angle $k=3^\circ$



Metric Holders

Ordering Code	R. Hand L. Hand	d mm	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert
E06H SWUBR-06 *(SIR 0006 H06CT)	R	6	.256	3.9	.126	3°	S06	K06	WBMT 06 01 02L
E06H SWUBL-06	L	6	.256	3.9	.126	3°	S06	K06	WBMT 06 01 02R
E08K SWUBR-06 *(SIR 0008 K06CT)	R	8	.339	4.9	.165	3°	S06	K06	WBMT 06 01 02L
E08K SWUBL-06	L	8	.339	4.9	.165	3°	S06	K06	WBMT 06 01 02R
E10M SWUBR-06 *(SIR 0010 M06CT)	R	10	.433	5.9	.217	3°	S06	K06	WBMT 06 01 02L
E10M SWUBL-06	L	10	.433	5.9	.217	3°	S06	K06	WBMT 06 01 02R

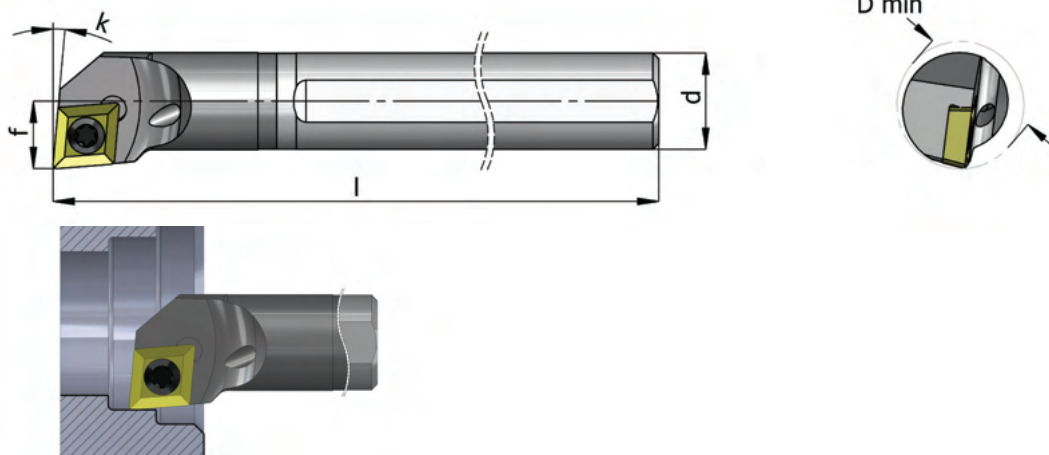
*Old item description

** Insert nose radius R=0.2 mm/.008

Inch Holders

Ordering Code	R. Hand L. Hand	d	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert
E-SWUBR 4-5	R	1/4	.276	4	.134	3°	S06	K06	WBMT 06 01 02L
E-SWUBR 5-5	R	5/16	.331	5	.165	3°	S06	K06	WBMT 06 01 02L
E-SWUBR 6-5	R	3/8	.413	6	.210	3°	S06	K06	WBMT 06 01 02L

Boring bar, SCLCR/L type Lead angle $k=5^\circ$



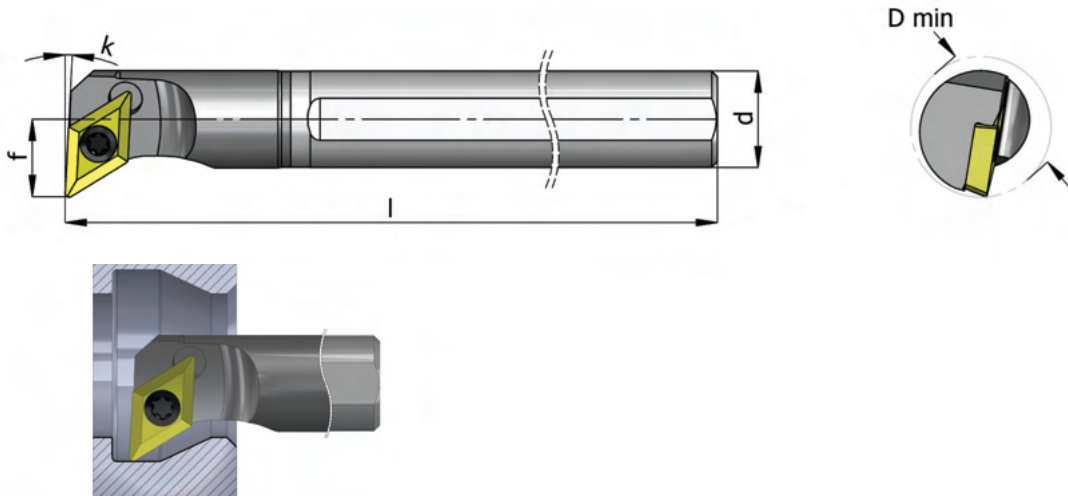
Metric Holders

Ordering Code	R. Hand L. Hand	d mm	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert*
E08K SCLCR-06	R	8	.394	4.9	.193	5°	S09	K07	CC.. 06 02 ..
E08K SCLCL-06	L	8	.394	4.9	.193	5°	S09	K07	CC.. 06 02 ..
E10M SCLCR-06	R	10	.551	5.9	.272	5°	S09	K07	CC.. 06 02 ..
E10M SCLCL-06	L	10	.551	5.9	.272	5°	S09	K07	CC.. 06 02 ..
E12P SCLCR-06	R	12	.630	6.7	.350	5°	S09	K07	CC.. 06 02 ..
E12P SCLCL-06	L	12	.630	6.7	.350	5°	S09	K07	CC.. 06 02 ..
E16R SCLCR-06	R	16	.787	7.9	.429	5°	S09	K07	CC.. 06 02 ..
E16R SCLCL-06	L	16	.787	7.9	.429	5°	S09	K07	CC.. 06 02 ..
E16R SCLCR-09	R	16	.787	7.9	.429	5°	S20	K22	CC.. 09 T3 ..
E16R SCLCL-09	L	16	.787	7.9	.429	5°	S20	K22	CC.. 09 T3 ..

Inch Holders

Ordering Code	R. Hand L. Hand	d	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert
E-SCLCR 5-2	R	5/16	.394	5	.193	5°	S09	K07	CC...06 02...
E-SCLCR 6-2	R	3/8	.461	6	.250	5°	S09	K07	CC...06 02...
E-SCLCR 8-2	R	1/2	.622	7	.353	5°	S09	K07	CC...06 02...
E-SCLCR 10-3	R	5/8	.787	8	.429	5°	S20	K22	CC...09 T3...
E-SCLCR 12-3	R	3/4	.985	10	.500	5°	S20	K22	CC...09 T3...

Boring bar, SDUCR/L type Lead angle $k=3^\circ$



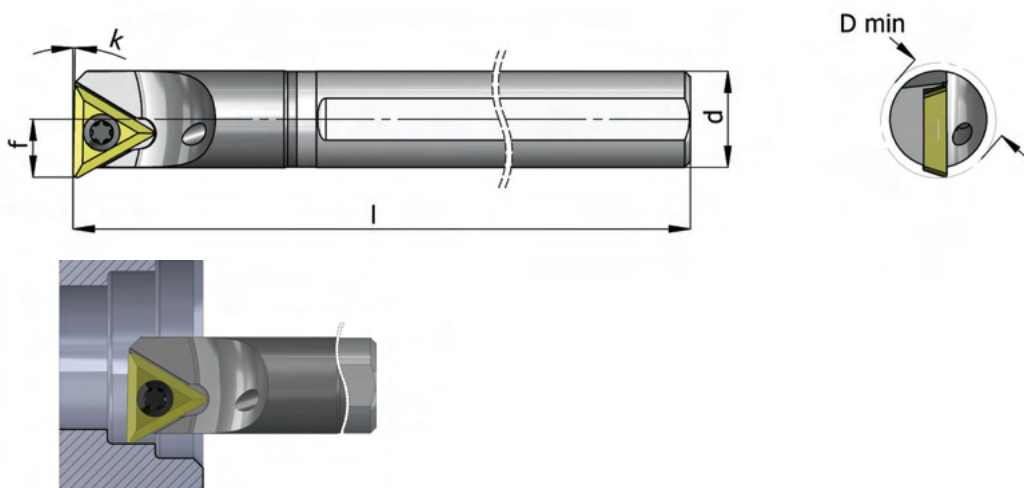
Metric Holders

Ordering Code	R. Hand L. Hand	d mm	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert*
E10M SDUCR-07	R	10	.551	5.9	.311	3°	S09	K07	DC.. 07 02 ..
E10M SDUCL-07	L	10	.551	5.9	.311	3°	S09	K07	DC.. 07 02 ..
E12P SDUCR-07	R	12	.630	6.7	.350	3°	S09	K07	DC.. 07 02 ..
E12P SDUCL-07	L	12	.630	6.7	.350	3°	S09	K07	DC.. 07 02 ..
E16R SDUCR-07	R	16	.787	7.9	.429	3°	S09	K07	DC.. 07 02 ..
E16R SDUCL-07	L	16	.787	7.9	.429	3°	S09	K07	DC.. 07 02 ..

Inch Holders

Ordering Code	R. Hand L. Hand	d	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert*
E-SDUCR 6-2	R	3/8	.563	6	.353	3°	S09	K07	DC...07 02....
E-SDUCR 8-2	R	1/2	.630	7	.353	3°	S09	K07	DC...07 02....
E-SDUCR 10-2	R	5/8	.787	8	.431	3°	S09	K07	DC...07 02....
E-SDUCR 12-3	R	3/4	.985	10	.500	3°	S20	K22	DC...11 T3....

Boring bar, STFPR/L type Lead angle $k=1^\circ$



Metric Holders

Ordering Code	R. Hand L. Hand	d	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert*
E10M STFPR-11	R	10	.433	5.9	.232	1°	S18	K07	TPGB 11 03 04
E10M STFPL-11	L	10	.433	5.9	.232	1°	S18	K07	TPGB 11 03 04
E12P STFPR-11	R	12	.551	6.7	.272	1°	S18	K07	TPGB 11 03 04
E12P STFPL-11	L	12	.551	6.7	.272	1°	S18	K07	TPGB 11 03 04

Inch Holders

Ordering Code	R. Hand L. Hand	d	Min Bore Dia	l	f	k	Insert Screw	Torx Key	Insert*
E-STFPR 6-2	R	3/8	.449	6	.217	1°	S18	K07	TPGB 11 03 04
E-STFPR 8-2	R	1/2	.555	7	.285	1°	S18	K07	TPGB 11 03 04
E-STFPR 10-2	R	5/8	.689	8	.343	1°	S18	K07	TPGB 11 03 04



Demonstration

For Perfect Long Threads on Swiss Type Machines

- Single pass working ability reduces machining time and increases productivity
- A high accuracy Holder-Insert system along with special cutting edge geometry leads to a high quality surface finish
- Multi-Insert holders reduce cycle time and increase tool life
- Whirling toolholders consist of 6 to 8 inserts
- Whirling inserts consist of three cutting edges with high indexability
- Whirling inserts can produce single or double start threads in one pass

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Thread Whirling Advantages
Applications
Product Identification

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Case Study
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Thread Whirling is a fast and an accurate way to thread long, small diameter parts in exotic materials such as titanium, stainless steel and inconel.

Cutting is the result of the whirling ring rotating eccentrically at high speed about the slowly rotating workpiece. The advancement of the workpiece rotationally and the advancement of the tool head longitudinally correspond to the thread pitch required.

Advantages

Thread Whirling offers several advantages over single point threading:

Enables production of small diameter long threads when used on Swiss type machines. The thread whirling spindle works close to the guide bushing for increased support and rigidity.

Increased Productivity

Thread Whirling is performed in a single pass, resulting in a shorter machining time.

This eliminates multiple passes required for a single point threading.

Thread whirling allows working at high feed rates and consequently results in short cycle times.

Very high surface quality and accurate geometry

The use of 6 to 8 cutting edges, higher concentricity, special cutting edge geometry and ideal chip removal, enable top quality surfaces to be produced without burrs.

Long tool life

Whirling inserts have a stronger cutting edge than single point tools, since cutter side clearance is achieved by rotating the whirling spindle, not by relieving material under the cutting edge.

Faster Setup

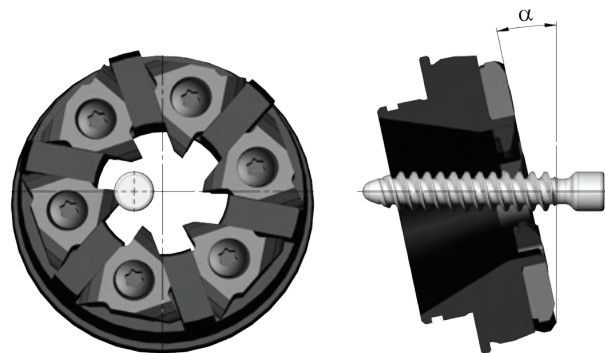
Thread whirling eliminates special support devices and expensive startup development costs.

Compensation of large helix angles

Large helix angles can be compensated by adjusting the whirling unit.

Short Delivery Time

Up to 3 weeks.



Applications

Carmex supports and offers high quality Thread Whirling tools for a wide range of applications, such as: Bone screws, Dental implants, Orthopedic screws, automotive parts, semiconductor small parts, etc.

Carmex holds in stock thread whirling holders that are compatible with all

Swiss Type machines such as STAR, Citizen, Tornos, Hanwha, Tsugami, Nexturn, and **Whirling units** as PCM, WTO, H&F, MADLAULA, etc.

Thread Whirling Tools

Machine details and **Whirling unit** details are needed in order to offer a suitable toolholder.

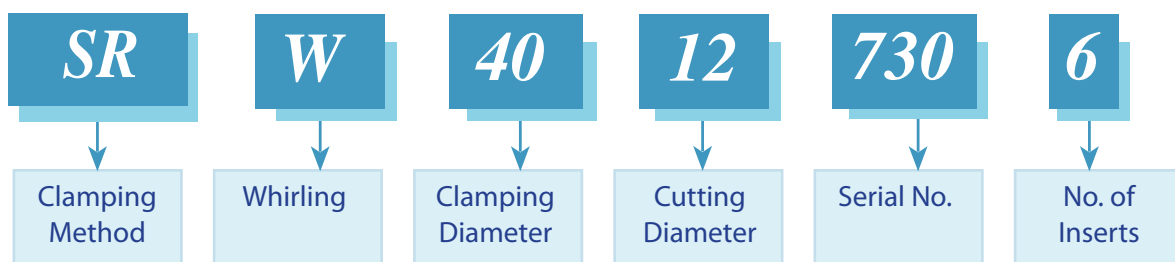
Machine		Whirling Unit	Whirling Holder Ordering Code	Z	D	d1	Insert Size
Type	Model						
Star	SR20 / ECAS20	Star	SRW4012 730 - 6	6	12	40	18W
			SRW4012 425 - 8	8			11W
	SR20 / ECAS20	WTO	SRW4295 557 - 6	6	9.5	42	18W
			SRW4212 717 - 8	8	12	42	11W
Citizen	M20 / M32	PCM	SRW4512 719 - 6	6	12	45	18W
			SRW4512 427 - 8	8			11W

* The above table serves as an example.

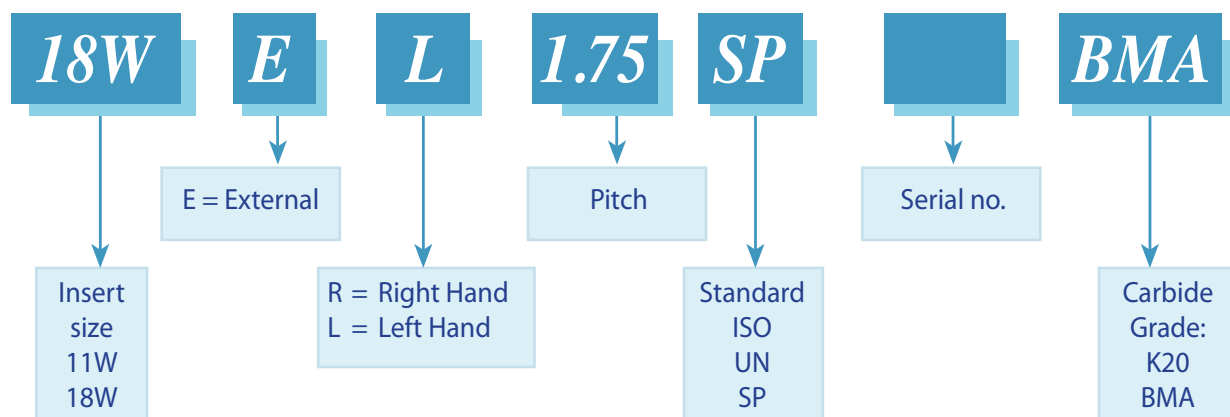


Product Identification - Ordering Codes

Toolholders



Inserts





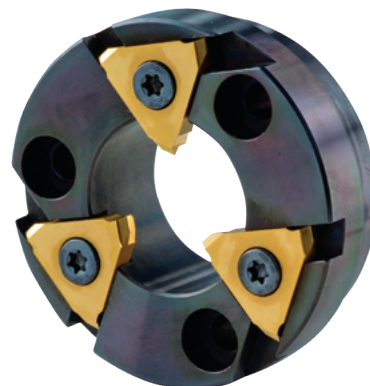
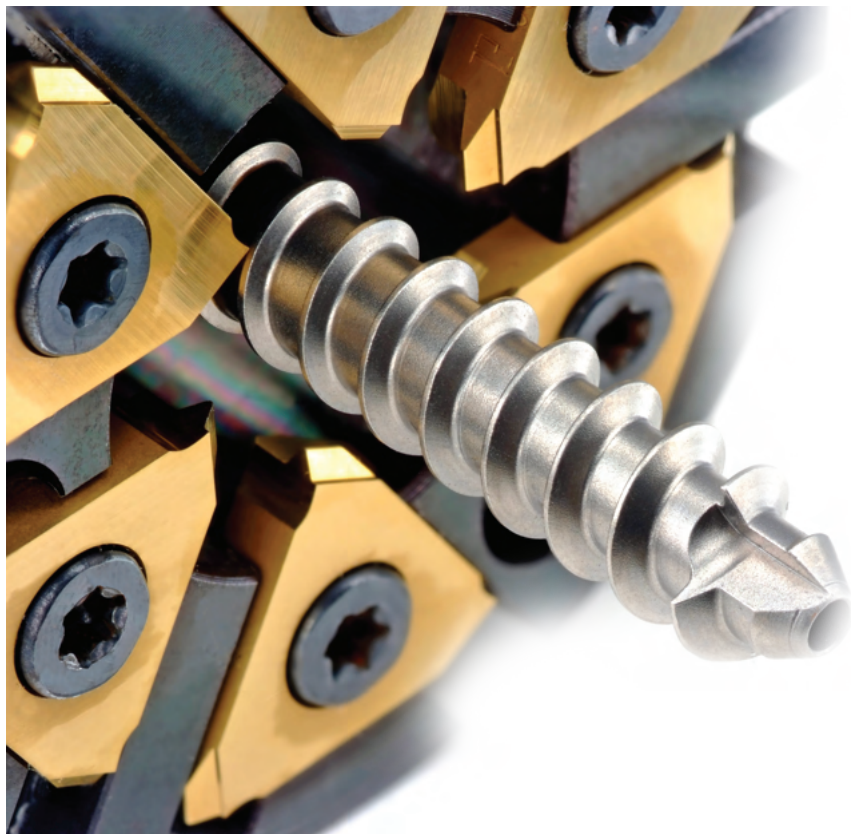
Case Study

Machine:	STAR SR20
Whirling unit:	STAR
Application:	Dental Implant
Material:	Ti-6Al-4V ELI
Carmex holder:	SRW4012 730-6
Vc [m/min]:	65
Tooth load [mm/tooth]:	0.03
No. of parts:	25,000 +

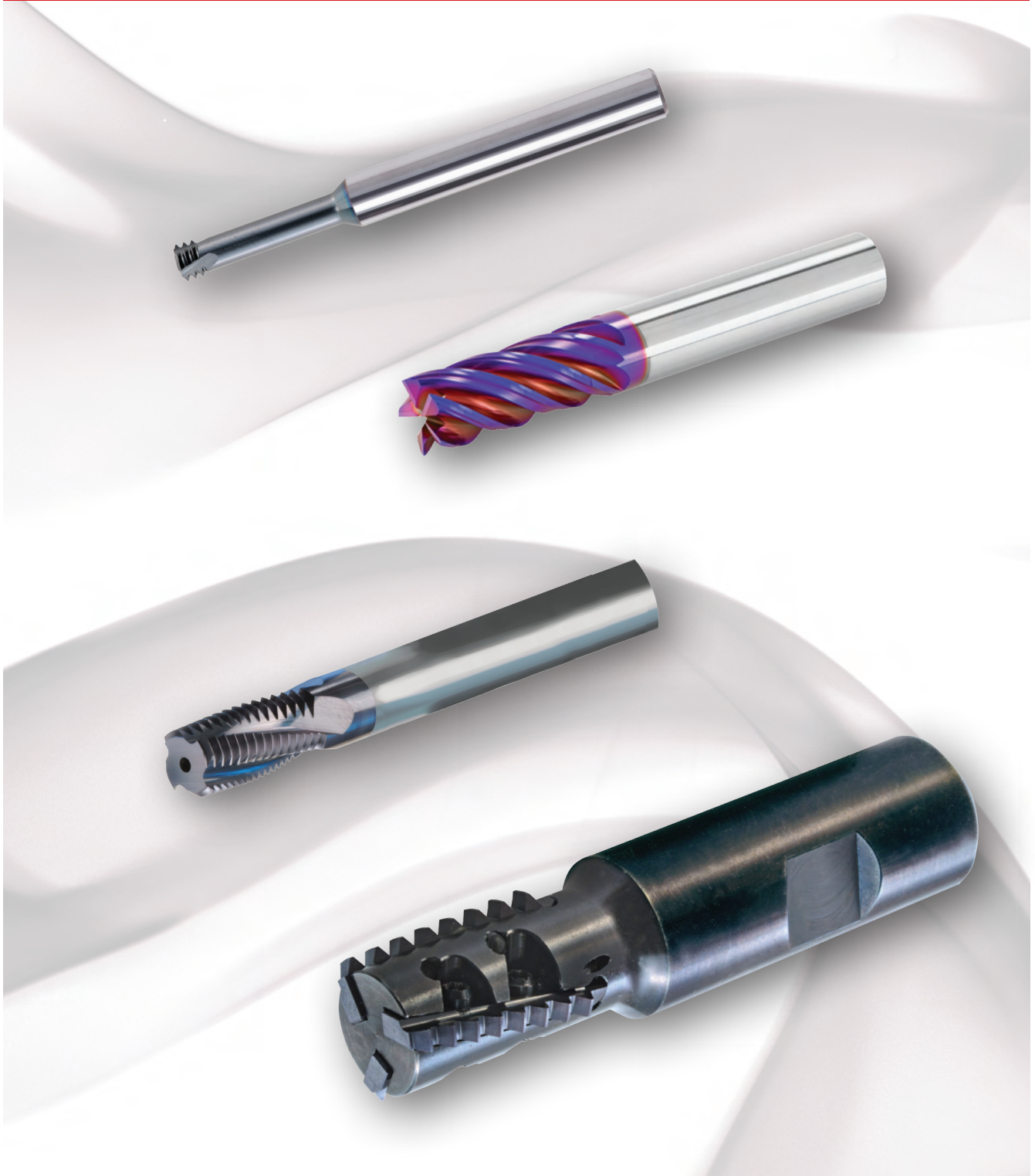


SPECIALS ARE OUR SPECIALTY

Carmex produce special tools in accordance with the customer's requirements



Milling Tools

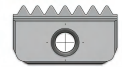


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B12 | Mill-Thread Technical Section

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B15 | Mini Chamfer and Countersink

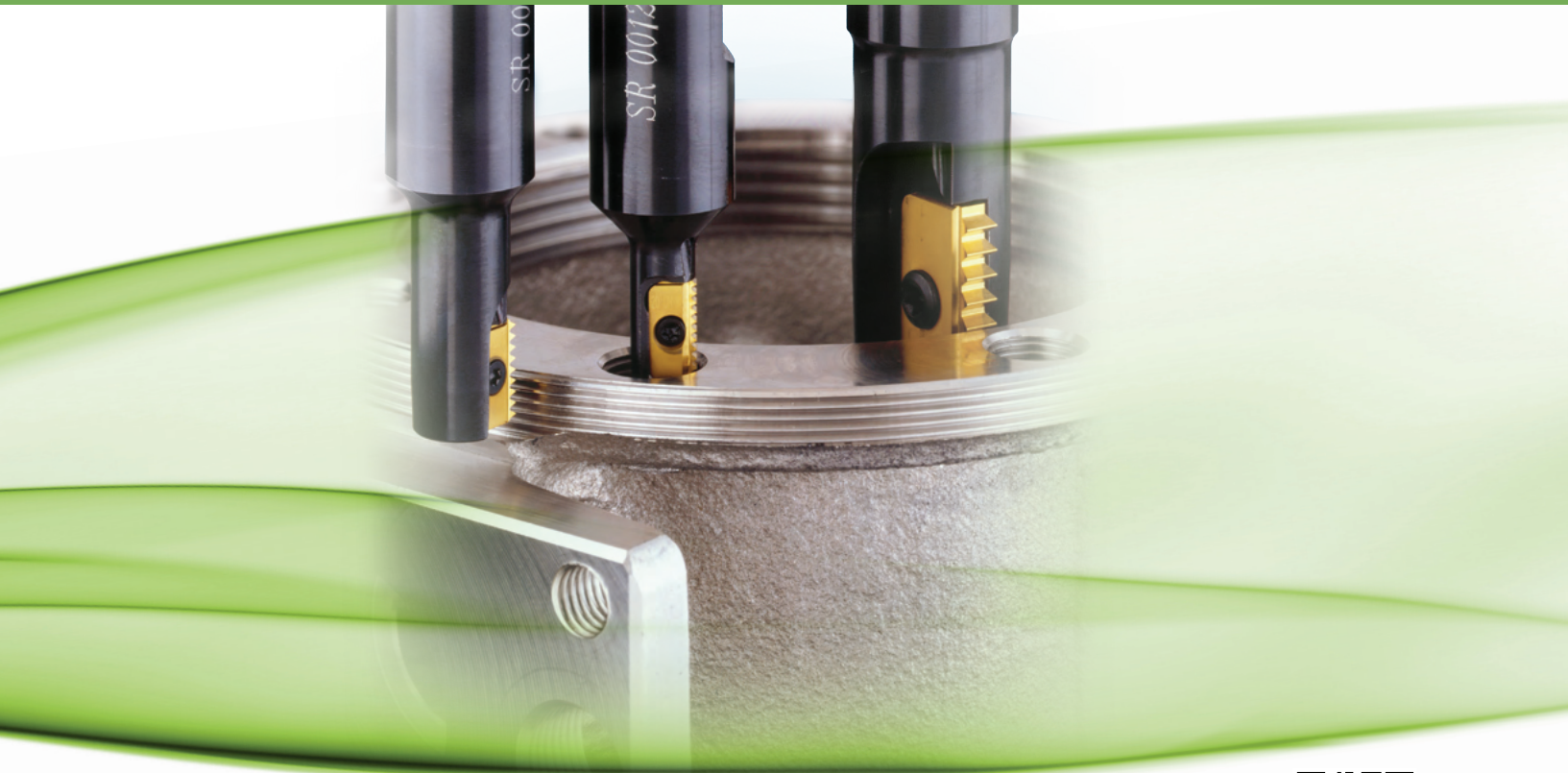
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B16 | Gear Milling

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Mill-Thread tools for threading on CNC milling machines by using helical interpolation programs



Demonstration

Advantages of Mill-Thread Tools

- Same toolholder and insert can produce both right-hand and left-hand threads.
- A single insert & toolholder can produce a given thread on many diameters (External & Internal).
- Prismatic shape of insert's tail ensures exact and reliable clamping in the toolholder.
- Most inserts are double sided, having two cutting edges.
- Thread is produced in one tool pass.
- MT tools can produce tapered threads.
- Improved productivity thanks to increased cutting speeds and multitooth type carbide inserts.
- Threading to one pitch of a shoulder in a blind hole.
- Longer tool life thanks to a special multilayer coating process.
- Lower tooling costs, considerably less expensive than using taps and dies.
- Since lower machine power is required, a smaller machine can produce larger threads in a single operation with less idle time and tool changes.

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NPTF	6
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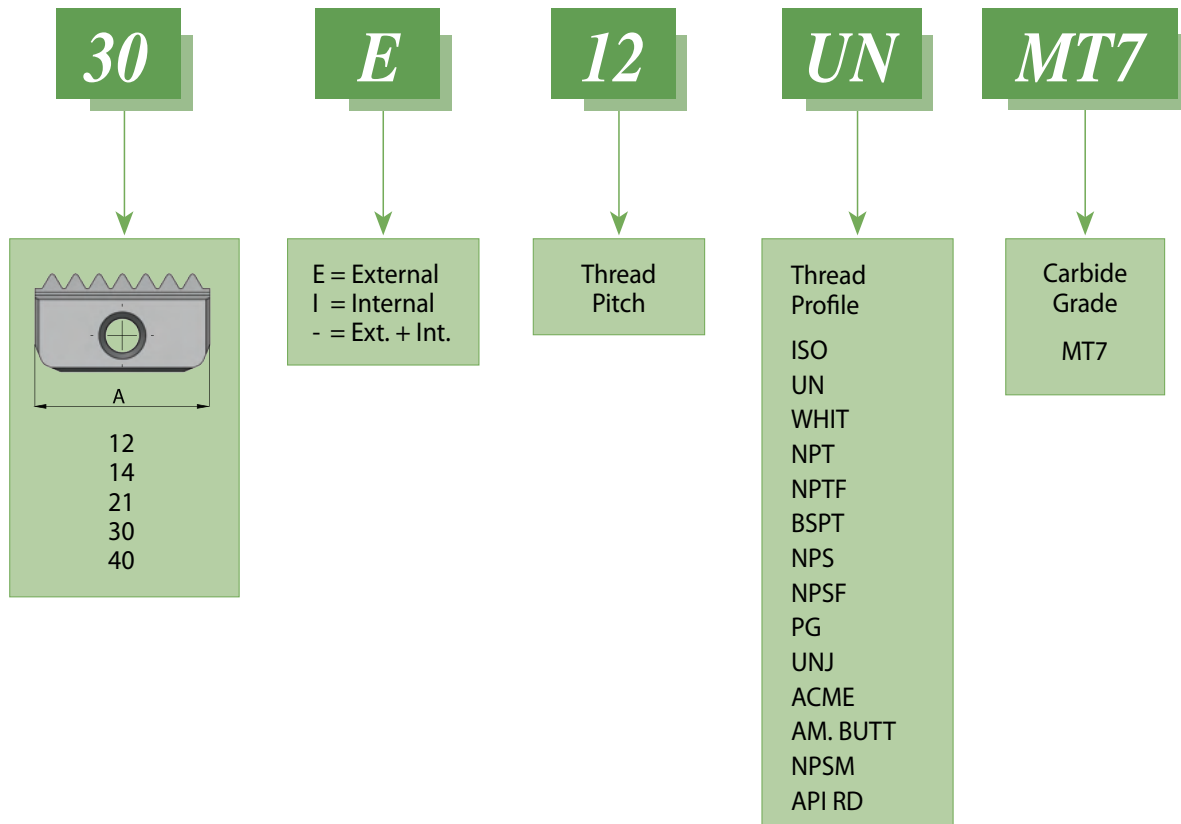
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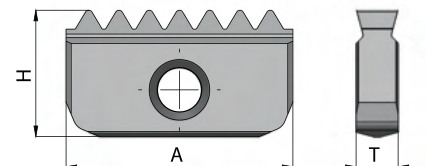
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Product Identification

Mill-Thread Inserts Ordering Codes

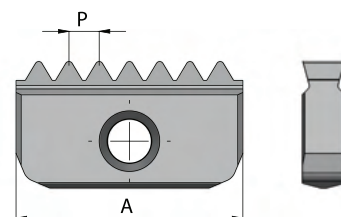
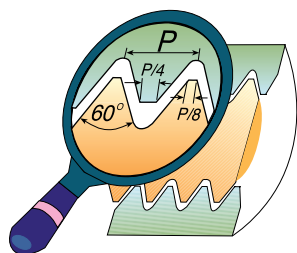


	Insert Size = A				
	12 mm	14 mm	21 mm	30 mm	40 mm
H	.248	.295	.472	.630	.787
T	.114	.122	.185	.217	.248



Mill - Thread Inserts

ISO

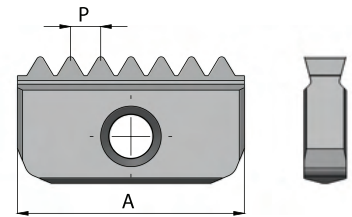
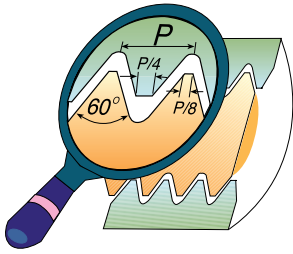


Pitch mm		Insert Size = A				
		12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
0.5	Ext.					
0.5	Int.	* 12 I 0.5 ISO	14 I 0.5 ISO			
0.75	Ext.		14 E 0.75 ISO			
0.75	Int.	* 12 I 0.75 ISO	14 I 0.75 ISO			
1.0	Ext.		14 E 1.0 ISO	21 E 1.0 ISO		
1.0	Int.	* 12 I 1.0 ISO	14 I 1.0 ISO	21 I 1.0 ISO		
1.25	Ext.		14 E 1.25 ISO	21 E 1.25 ISO		
1.25	Int.	* 12 I 1.25 ISO	14 I 1.25 ISO	21 I 1.25 ISO		
1.5	Ext.		14 E 1.5 ISO	21 E 1.5 ISO	30 E 1.5 ISO	40 E 1.5 ISO
1.5	Int.	* 12 I 1.5 ISO	14 I 1.5 ISO	21 I 1.5 ISO	30 I 1.5 ISO	40 I 1.5 ISO
1.75	Ext.		14 E 1.75 ISO	21 E 1.75 ISO		
1.75	Int.		14 I 1.75 ISO	21 I 1.75 ISO		
2.0	Ext.		14 E 2.0 ISO	21 E 2.0 ISO	30 E 2.0 ISO	40 E 2.0 ISO
2.0	Int.		14 I 2.0 ISO	21 I 2.0 ISO	30 I 2.0 ISO	40 I 2.0 ISO
2.5	Ext.		14 E 2.5 ISO	21 E 2.5 ISO		
2.5	Int.		14 I 2.5 ISO	21 I 2.5 ISO		
3.0	Ext.			21 E 3.0 ISO	30 E 3.0 ISO	40 E 3.0 ISO
3.0	Int.			21 I 3.0 ISO	30 I 3.0 ISO	40 I 3.0 ISO
3.5	Ext.				30 E 3.5 ISO	
3.5	Int.			21 I 3.5 ISO	30 I 3.5 ISO	40 I 3.5 ISO
4.0	Ext.				30 E 4.0 ISO	40 E 4.0 ISO
4.0	Int.				30 I 4.0 ISO	40 I 4.0 ISO
4.5	Ext.					
4.5	Int.				30 I 4.5 ISO	40 I 4.5 ISO
5.0	Ext.					40 E 5.0 ISO
5.0	Int.				30 I 5.0 ISO	40 I 5.0 ISO
5.5	Ext.					
5.5	Int.				30 I 5.5 ISO	40 I 5.5 ISO
6.0	Ext.					40 E 6.0 ISO
6.0	Int.					40 I 6.0 ISO

* One cutting edge

Order example: 14 I 1.5 ISO MT7

UN UNC, UNF, UNEF, UNS



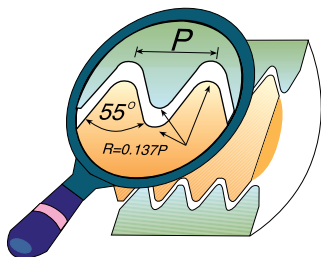
Pitch TPI		Insert Size = A				
		12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
32	Ext.		14 E 32 UN			
32	Int.	* 12 32 UN	14 32 UN			
28	Ext.		14 E 28 UN			
28	Int.	* 12 28 UN	14 28 UN			
27	Ext.					
27	Int.		14 27 UN			
24	Ext.		14 E 24 UN	21 E 24 UN		
24	Int.	* 12 24 UN	14 24 UN	21 24 UN		
20	Ext.		14 E 20 UN	21 E 20 UN	30 E 20 UN	
20	Int.	* 12 20 UN	14 20 UN	21 20 UN	30 20 UN	
18	Ext.		14 E 18 UN	21 E 18 UN	30 E 18 UN	
18	Int.	* 12 18 UN	14 18 UN	21 18 UN	30 18 UN	
16	Ext.		14 E 16 UN	21 E 16 UN	30 E 16 UN	40 E 16 UN
16	Int.	* 12 16 UN	14 16 UN	21 16 UN	30 16 UN	40 16 UN
14	Ext.		14 E 14 UN	21 E 14 UN	30 E 14 UN	40 E 14 UN
14	Int.		14 14 UN	21 14 UN	30 14 UN	40 14 UN
13	Ext.		14 E 13 UN			
12	Ext.		14 E 12 UN	21 E 12 UN	30 E 12 UN	40 E 12 UN
12	Int.		14 12 UN	21 12 UN	30 12 UN	40 12 UN
11	Ext.		14 E 11 UN	21 E 11 UN		
11	Int.		14 11 UN			
10	Ext.		* 14 E 10 UN	21 E 10 UN	30 E 10 UN	40 E 10 UN
10	Int.		14 10 UN	21 10 UN	30 10 UN	40 10 UN
9	Ext.					
9	Int.		** 14 9 UN			
8	Ext.				30 E 8 UN	40 E 8 UN
8	Int.			21 8 UN	30 8 UN	40 8 UN
7	Ext.					
7	Int.			21 7 UN		
6	Ext.				30 E 6 UN	40 E 6 UN
6	Int.				30 6 UN	40 6 UN
5	Ext.					
5	Int.				30 5 UN	
4.5	Ext.					
4.5	Int.					40 4.5 UN
4	Ext.					40 E 4 UN
4	Int.					40 4 UN

* One cutting edge

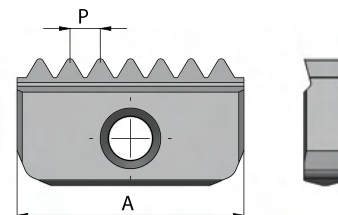
** Cannot be used with carbide shank Toolholders.

Order example: 21 | 18 UN MT7

WHIT BSW, BSF, BSP



Same Insert for External and Internal thread.

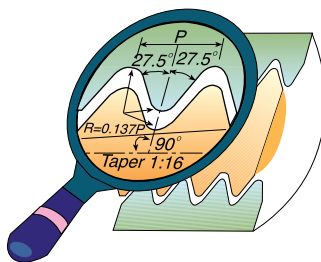


Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
24		14-24 W			
20		14-20 W	21-20 W		
19	* 12 - 19 W	14-19 W	21-19 W		
18		14-18 W			
16		14-16 W	21-16 W	30-16 W	
14		14-14 W	21-14 W	30-14 W	
12		14-12 W	21-12 W		
11		* 14-11 W	21-11 W	30-11 W	40-11 W
10			21-10 W		
8					40- 8 W

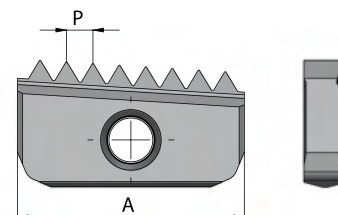
* One cutting edge

Order example: 21-11 W MT7

BSPT



Conical pipe thread inserts are one-sided and may be used for both External and Internal threading.

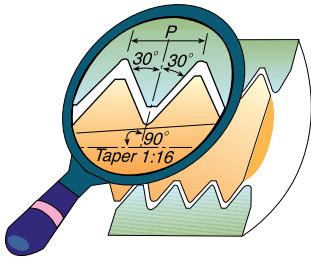


Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
19	12-19 BSPT	14-19 BSPT			
14		14-14 BSPT	21-14 BSPT		
11			21-11 BSPT	30-11 BSPT	40-11 BSPT

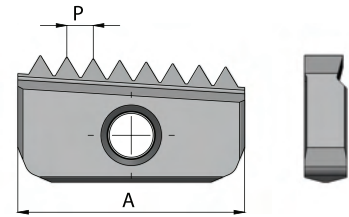
Order example: 14-19 BSPT MT7

For conical preparation end mills see page B08-23

NPT



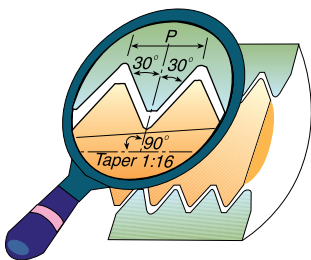
Conical pipe thread inserts are one-sided and may be used for both External and Internal threading.



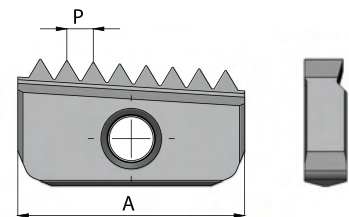
Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
18	12-18 NPT	14-18 NPT			
14		14-14 NPT	21-14 NPT		
11.5			21-11.5 NPT	30-11.5 NPT	40-11.5 NPT
8				30- 8 NPT	40- 8 NPT

Order example: 30-11.5 NPT MT7

NPTF



Conical pipe thread inserts are one-sided and may be used for both External and Internal threading.

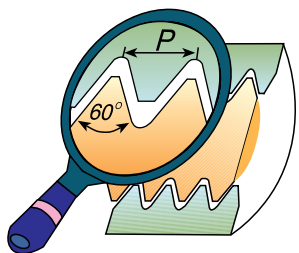


Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
18	12-18 NPTF	14-18 NPTF			
14		14-14 NPTF	21-14 NPTF		
11.5			21-11.5 NPTF	30-11.5 NPTF	40-11.5 NPTF
8				30- 8 NPTF	40- 8 NPTF

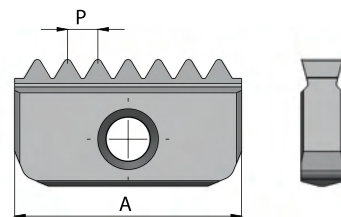
Order example: 21-14 NPTF MT7

For conical preparation end mills see page B08-23

NPS



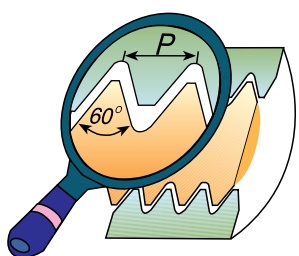
Same Insert for External and Internal thread



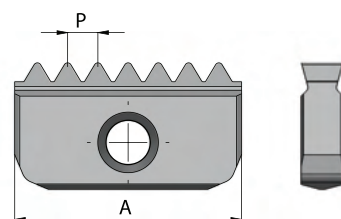
Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
18	* 12-18 NPS	14-18 NPS			
14		14-14 NPS	21-14 NPS		
11.5			21-11.5 NPS	30-11.5 NPS	40-11.5 NPS
8				30- 8 NPS	40- 8 NPS

Order example: 16 ER 14 NPS MXC

NPSF



Same Insert for External and Internal thread

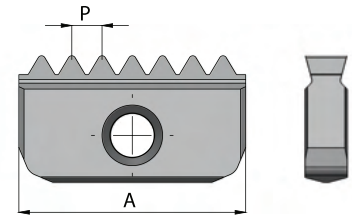
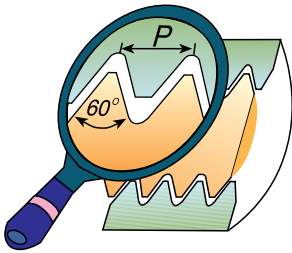


Pitch TPI	Insert Size = A				
	12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
18	* 12-18 NPSF	14-18 NPSF			
14		14-14 NPSF	21-14 NPSF		
11.5			21-11.5 NPSF	30-11.5 NPSF	40-11.5 NPSF
8				30- 8 NPSF	40- 8 NPSF

Order example: 21-14 NPSF MT7

* One cutting edge

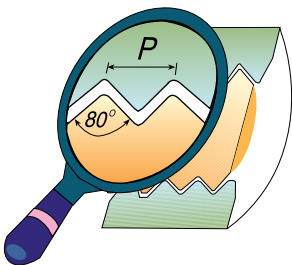
NPSM



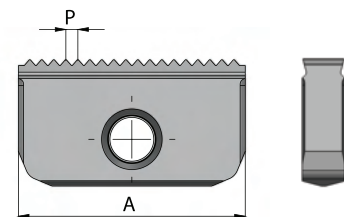
Pitch TPI		Insert Size = A				
		12 mm .472	14 mm .551	21 mm .827	30 mm 1.181	40 mm 1.575
18	Ext.		14 E 18 NPSM			
18	Int.	12 I 18 NPSM	14 I 18 NPSM			
14	Ext.			21 E 14 NPSM		
14	Int.		14 I 14 NPSM	21 I 14 NPSM		
11.5	Ext.			21 E 11.5 NPSM	30 E 11.5 NPSM	40 E 11.5 NPSM
11.5	Int.			21 I 11.5 NPSM	30 I 11.5 NPSM	40 I 11.5 NPSM
8	Ext.				30 E 8 NPSM	40 E 8 NPSM
8	Int.				30 I 8 NPSM	40 I 8 NPSM

Order example: 21 I 11.5 NPSM MT7

PG - DIN 40430



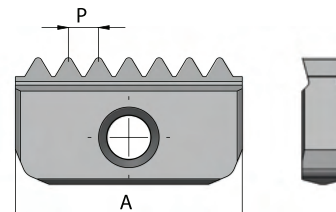
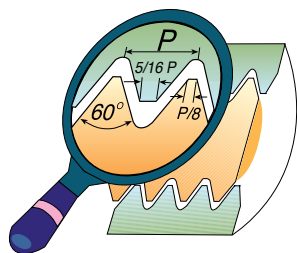
Same Insert for External and Internal thread



Pitch TPI	Insert Size = A		
	14 mm .551	21 mm .827	30 mm 1.181
18	14-18 PG (PG 9, 11, 13.5, 16)	21-18 PG (PG 16)	
16		21-16 PG (PG 21, 29, 36, 42, 48)	30-16 PG (PG 36, 42, 48)

Order example: 21-18 PG MT7

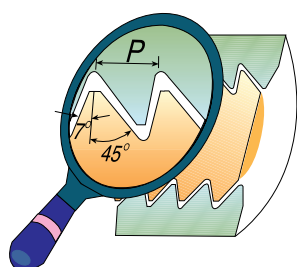
UNJ



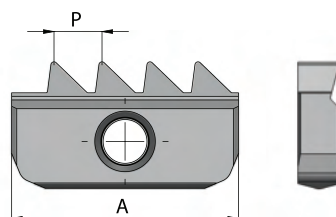
Pitch TPI		Insert Size = A	
		14 mm .551	21 mm .827
24	Ext.	14 E 24 UNJ	21 E 24 UNJ
24	Int.	14 I 24 UNJ	21 I 24 UNJ
20	Ext.	14 E 20 UNJ	21 E 20 UNJ
20	Int.	14 I 20 UNJ	21 I 20 UNJ
18	Ext.	14 E 18 UNJ	21 E 18 UNJ
18	Int.	14 I 18 UNJ	21 I 18 UNJ
16	Ext.	14 E 16 UNJ	21 E 16 UNJ
16	Int.	14 I 16 UNJ	21 I 16 UNJ
14	Ext.	14 E 14 UNJ	21 E 14 UNJ
14	Int.	14 I 14 UNJ	21 I 14 UNJ
12	Ext.	14 E 12 UNJ	21 E 12 UNJ
12	Int.	14 I 12 UNJ	21 I 12 UNJ

Order example: 21E 16 UNJ MT7

American Buttress



ABUT thread inserts are one-sided and may be used for both External and Internal threading

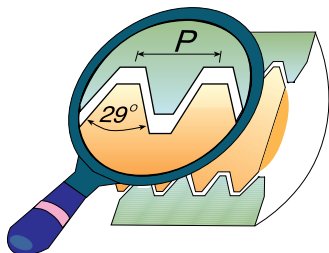


Pitch TPI	Insert Size = A		
	21 mm .827	30 mm 1.181	40 mm 1.575
16	21 - 16 ABUT	30 - 16 ABUT	
12	21 - 12 ABUT	30 - 12 ABUT	
10	21 - 10 ABUT	30 - 10 ABUT	
8	21 - 8 ABUT	30 - 8 ABUT	
6		30 - 6 ABUT	
4		* 30 - 4 ABUT	40 - 4 ABUT

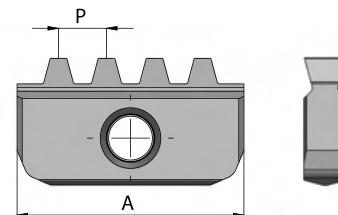
Order example: 30 - 6 ABUT MT7

* Inserts to be used only on Multi-Insert toolholders see page B02-5

ACME



Inserts for Internal threads



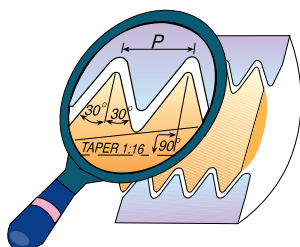
Pitch TPI		Insert Size = A		
		21 mm .827	30 mm 1.181	40 mm 1.575
12	Int.	21 12 ACME	30 12 ACME	
10	Int.	21 10 ACME	30 10 ACME	
8	Int.	21 8 ACME	30 8 ACME	
6	Int.		30 6 ACME	
5	Int.		30 5 ACME	
4	Int.		* 30 4 ACME	40 4 ACME
3.5	Int.			40 3.5 ACME
3	Int.			** 40 3 ACME

Order example: 21 | 8 ACME MT7

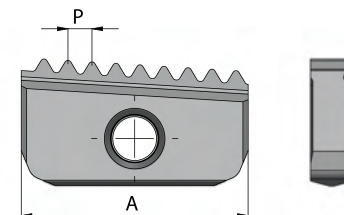
* Inserts to be used only on Multi-Insert toolholders see page B02-5

** One cutting edge

API RD



API RD thread inserts are one - sided and may be used for both External and Internal threading



Pitch TPI		Insert Size = A		
		21 mm .827	30 mm 1.181	40 mm 1.575
10		21 - 10 API RD	30 - 10 API RD	
8			30 - 8 API RD	40 - 8 API RD

Order example: 30 - 8 API RD MT7

Internal UN Kits



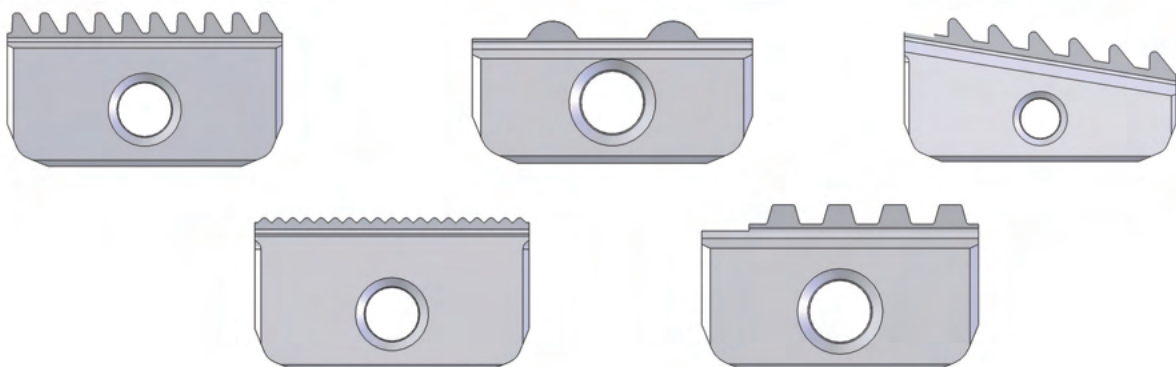
MTK 12 I UN	MTK 14 I UN
<u>INSERTS</u>	<u>INSERTS</u>
12 32 UN	14 24 UN
12 24 UN	14 24 UN
12 20 UN	14 20 UN
12 20 UN	14 20 UN
12 16 UN	14 16 UN
12 16 UN	14 16 UN
<u>TOOLHOLDER</u>	<u>TOOLHOLDER</u>
SR 0375 H12	SR 0670 H14
<u>KEY</u>	<u>KEY</u>
K12	K14
<u>SCREW</u>	<u>SCREW</u>
S12	S14

Order example : MTK 14 I UN

Special Tools



In addition to standard products, Carmex manufactures special tools and inserts according to customers' requests. Special tools are supplied in short delivery times.



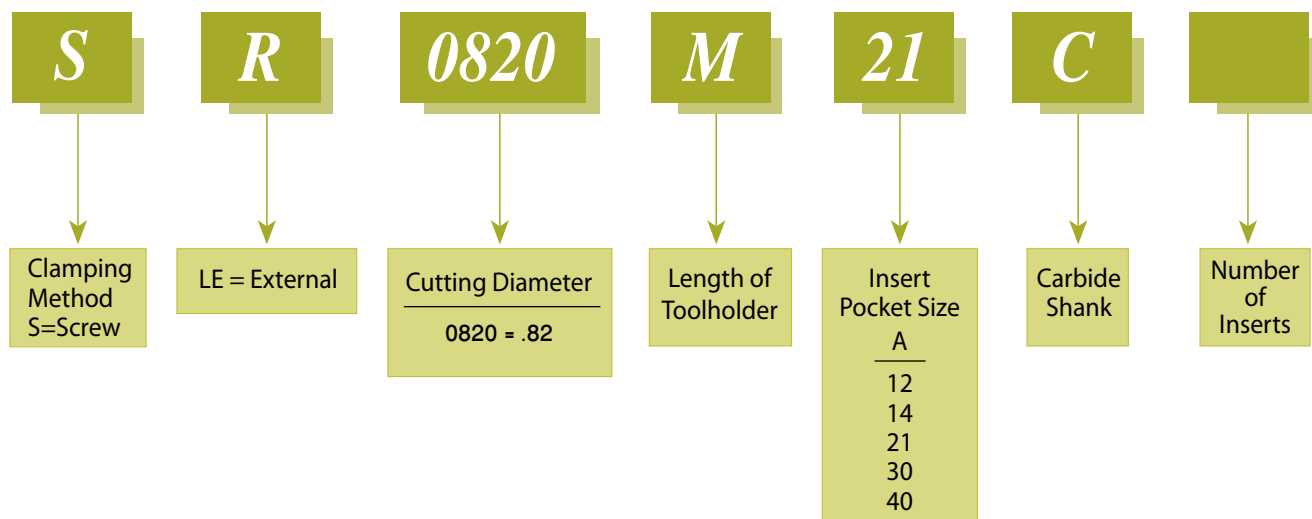


Demonstration

Contents:		Page:	Contents:		Page:
Product Identification		2	External Multi Insert Toolholder		5
Single Insert Toolholders		3	Long Carbide Shank Toolholders		6
Long Shank Toolholders		4	Carbide Shank Toolholders		6
Twin Insert Toolholders		4	for Single Point Threading		
Multi Insert Toolholders		5			

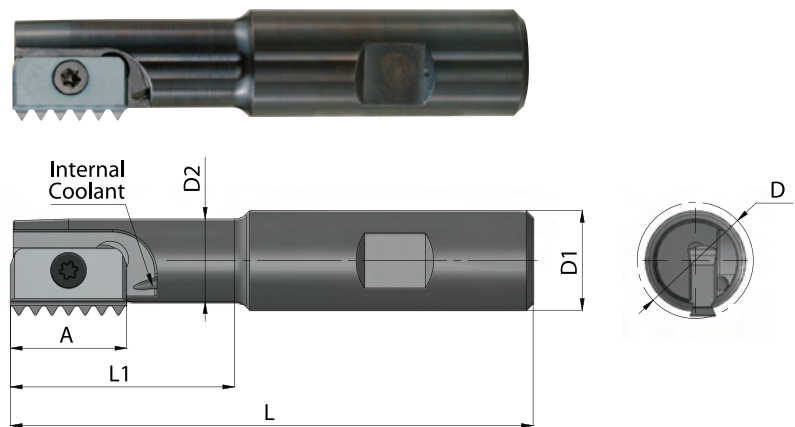
Product Identification

Mill-Thread Toolholders Ordering Codes



Mill - Thread Toolholders

Single Insert Toolholders

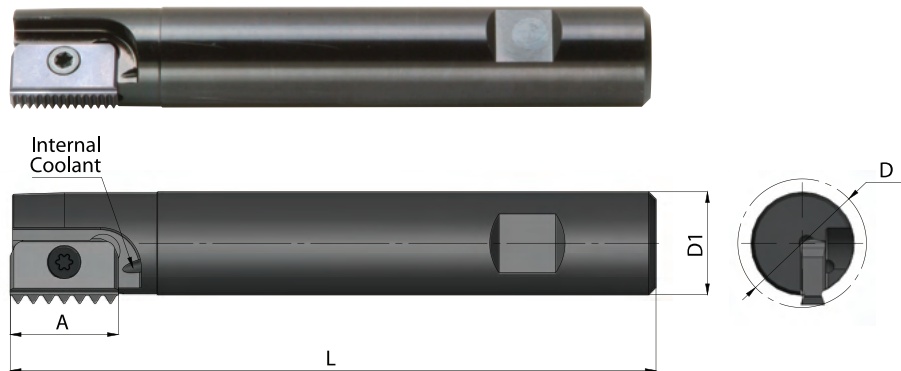


Ordering Code	A mm	D	D1	D2	L	L1	Insert Screw	Torx Key
SR0375H12	12	.37	.75	.30	3.35	.51	S12	K12
* SR0390H12	12	.39	.75	.30	3.35	.51	S12	K12
SR0500F14	14	.50	.75	.37	2.95	.70	S14	K14
SR0540F14	14	.54	.75	.38	2.98	.77	S14	K14
SR0570H14	14	.57	.75	.41	3.20	1.00	S14	K14
SR0670H14	14	.67	.75	.53	3.35	1.18	S14	K14
SR0790H21	21	.79	.75	.61	3.70	1.57	S21	K21
SR0790K21	21	.79	.75	.61	5.00	2.25	S21	K21
SR1140J30	30	1.14	1.00	.88	4.27	1.85	S30	K30
SR1500P40	40	1.50	1.25	1.13	7.00	4.25	S40	K40
SR1500R40	40	1.50	1.25	1.13	8.00	5.25	S40	K40
SR1730M40	40	1.73	1.50	1.38	6.02	3.19	S40	K40

Order example: SR0790H21

* For conical inserts: 12-18 NPT, 12-18 NPTF, 12-19 BSPT

Long Shank Toolholders

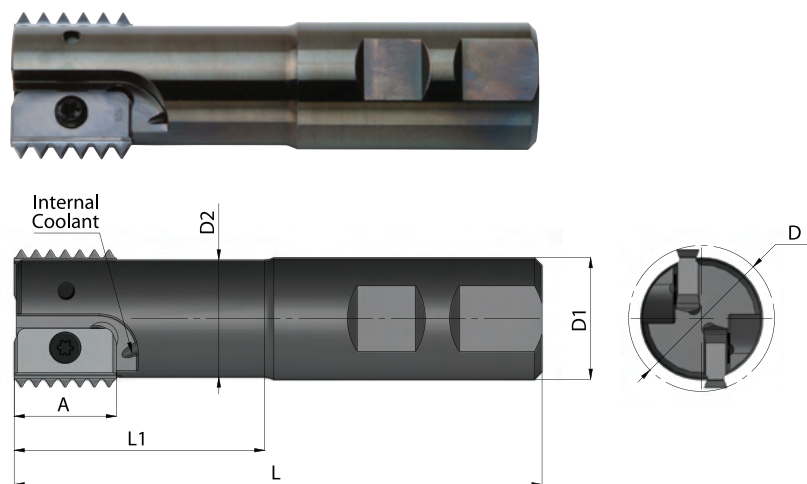


Ordering Code	A mm	D	D1	L	Insert Screw	Torx Key
SR0940K21	21	.94	.75	5.00	S21	K21
SR1240M30	30	1.24	1.00	6.00	S30	K30
SR1500M30	30	1.50	1.25	6.00	S30	K30

Order example: SR1240M30

For holders with long overhang reduce the cutting speed and feed rate between 20% to 40% (depends on workpiece material, pitch and overhang)

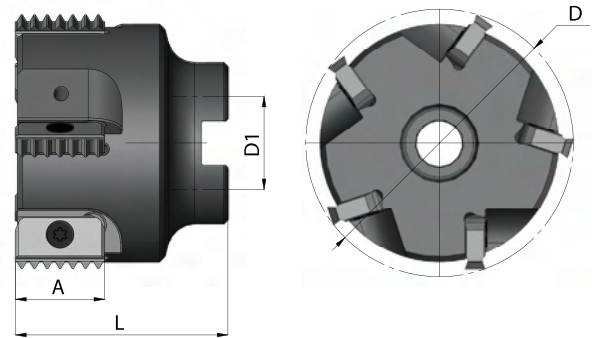
Twin Insert Toolholders



Ordering Code	A mm	D	D1	D2	L	L1	No. of Inserts	Insert Screw	Torx Key
SR0790H14-2	14	.79	.75	.63	3.66	1.54	2	S14	K14
SR1180J21-2	21	1.18	1.00	.95	4.25	1.97	2	S21	K21
SR1580L30-2	30	1.57	1.25	1.18	5.12	2.80	2	S30	K30
SR1970M40-2	40	1.97	1.50	1.49	6.02	3.35	2	S40	K40

Order example: SR1580L30-2

Multi Insert Toolholders

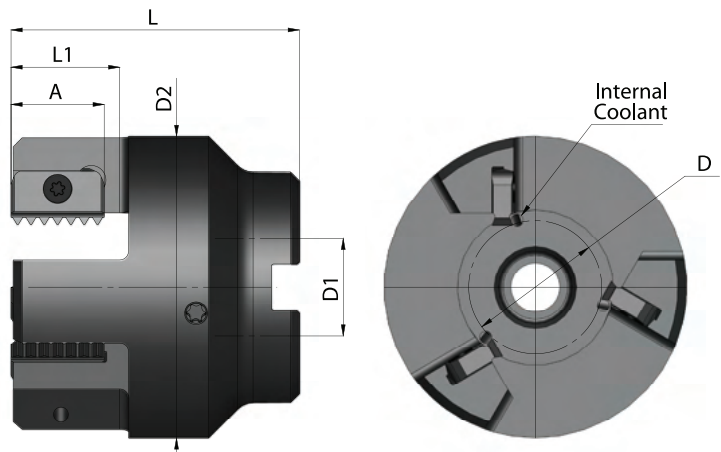


Ordering Code	A mm	D	D1	L	No. of Inserts	Insert Screw	Torx Key
SR2480C21-5	21	2.48	.75	1.97	5	S21	K21
SR2480C30-4	30	2.48	.75	1.97	4	S30	K30
SR3150D30-4	30	3.15	1.00	2.16	4	S30	K30
SR3940D30-4	30	3.94	1.25	2.36	4	S30	K30
SR3940D30-8	30	3.94	1.25	2.36	8	S30	K30
SR3150D40-4	40	3.15	1.00	2.56	4	S40	K40
SR3940E40-4	40	3.94	1.25	2.76	4	S40	K40
SR3940E40-6	40	3.94	1.25	2.76	6	S40	K40

Order example: SR3940D30-4

External Multi Insert Toolholder

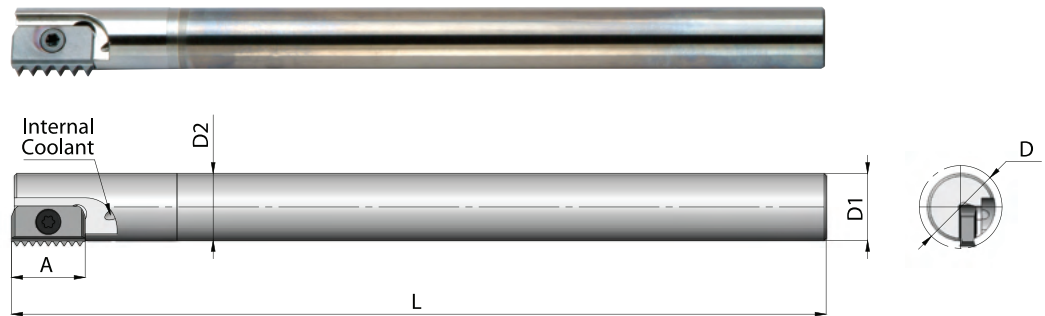
- Reduced machining time
- Optimal coolant supply



Ordering Code	A mm	D	D1	D2	L	L1	No. of Inserts	Insert Screw	Torx Key
SLE0790D21-3	21	.79	.75	2.28	2.56	.95	3	S21	K21
SLE1180D21-3	21	1.18	.75	2.68	2.56	.95	3	S21	K21
SLE1770E21-4	21	1.77	1.00	3.27	2.76	.95	4	S21	K21

Order example: SLE1180D21-3

Long Carbide Shank Toolholders

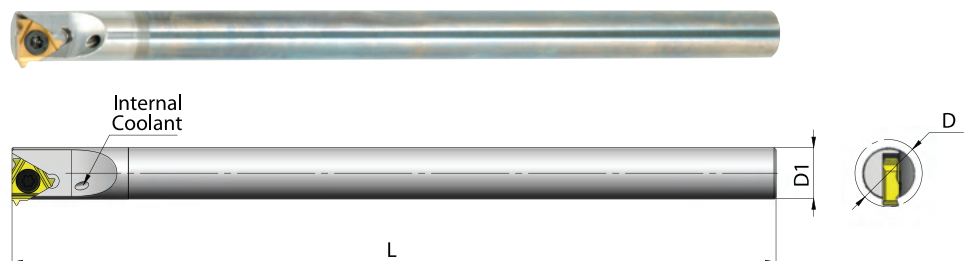


Ordering Code	A mm	D	D1	D2	L	Insert Screw	Torx Key
SR0390K12C	12	.39	.312	.312	5.0	S12	K12
SR0500J14C	14	.50	.375	.375	6.0	S14	K14
SR0620K14C	14	.62	.500	.500	7.0	S14	K14
SR0820M21C	21	.82	.625	.625	8.0	S21	K21
SR1020S30C	30	1.02	.750	.750	10.5	S30	K30

Order example: SR0620 K14C

For holders with long overhang reduce the cutting speed and feed rate between 20% to 40% (depends on workpiece material, pitch and overhang)

Carbide Shank Toolholders for Single Point Threading



Ordering Code	L mm	Pitch Range		D	D1	L	Insert Screw	Torx Key
		mm	TPI					
* SR0250H08C	08	0.5-1.75	48-14	.35	.25	4.0	S08	K08
* SR0375M11C	11	0.5-2.00	48-11	.50	.38	6.0	S11	K11

For Inserts see the Thread Turning Tools section of this catalog.

For an internal application use an internal R.H. insert.

* For an external application use an external L.H. insert.



Contents:	Page:	Contents:	Page:
Introduction	2	BSPT	7
Product Identification	3	Toolholders	8-9
ISO	4	Standard Toolholders	8
UN	5	Toolholders for Conical Threads	9
WHIT BSW, BSF, BSP	6	Carbide Shank Toolholders	9
NPT	6	Multi-Insert Toolholders	10
NPTF	7		

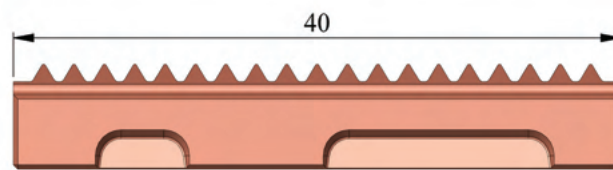
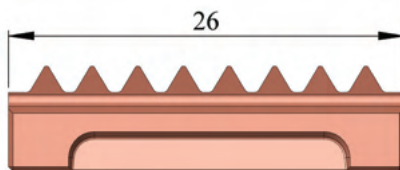
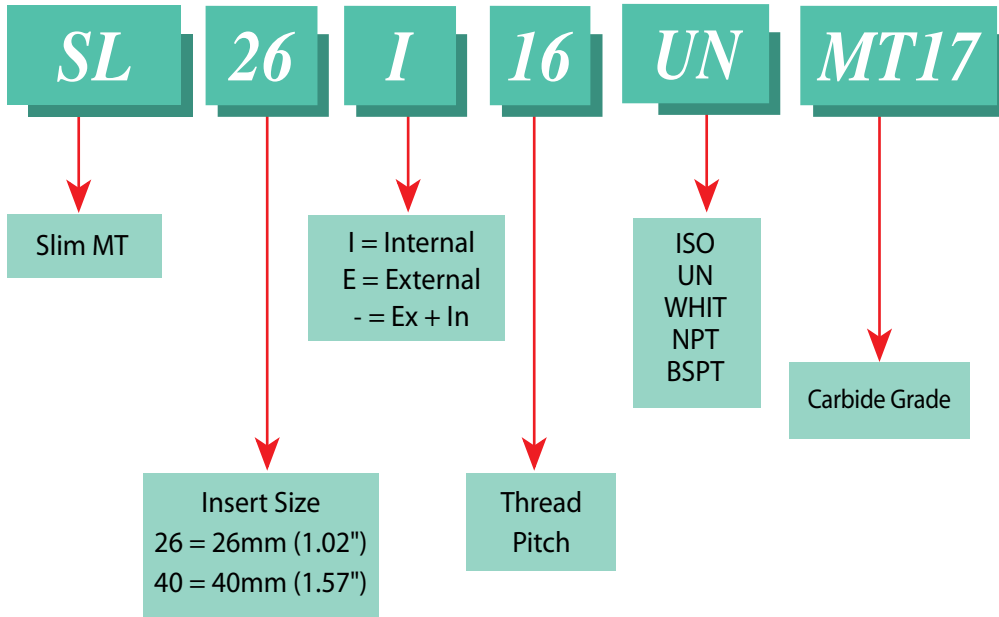
Slim MT ***High productivity, Slim cost.***

A new product line of indexable Mill-Thread inserts and tool holders including multiple straight flutes for machining long threads from small to large diameters.

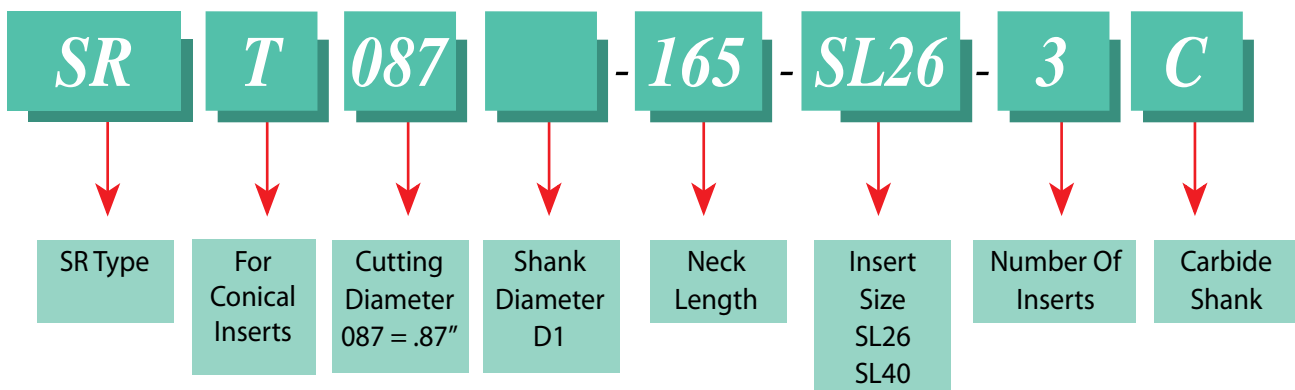
- **Advanced carbide and coating combination for extended tool life and improved productivity.**
- **Most inserts are double sided.**
- **Nickel coated holders for high wear resistance.**
- **Unique clamping mechanism.**
- **Large variety of holders & inserts in accordance to international standards.**

Product Identification

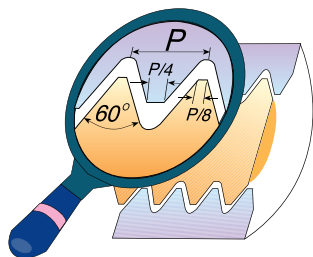
Inserts



Toolholders



ISO



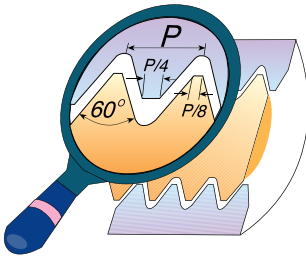
Insert size	Pitch mm	Ex/In	Ordering code	Toolholder
SL 26	0.5	In	SL26 I 0.5 ISO	SR - SL26 - ...
	0.75	In	SL26 I 0.75 ISO	
	1.0	In	SL26 I 1.0 ISO	
	1.0	Ex	SL26 E 1.0 ISO	
	1.5	In	SL26 I 1.5 ISO	
	1.5	Ex	SL26 E 1.5 ISO	
	2.0	In	SL26 I 2.0 ISO	
	2.0	Ex	SL26 E 2.0 ISO	
	2.5	In	SL26 I 2.5 ISO	
	2.5	Ex	SL26 E 2.5 ISO	
	3.0	In	* SL26 I 3.0 ISO	
	3.0	Ex	* SL26 E 3.0 ISO	
SL 40	1.5	In	SL40 I 1.5 ISO	SR - SL40 - ...
	2.0	In	SL40 I 2.0 ISO	
	2.5	In	SL40 I 2.5 ISO	
	3.0	In	SL40 I 3.0 ISO	

* Cannot be used with toolholder SR067- ... -SL26-2

For tool holders see pages A01-6-8.

For carbide grade and cutting speed see page A01-9.

UN



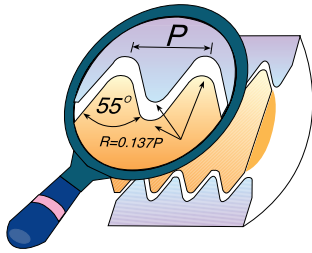
Insert size	Pitch TPI	Ex/In	Ordering code	Toolholder
SL 26	20	In	SL26 I 20 UN	SR - SL26 - ...
	20	Ex	SL26 E 20 UN	
	18	In	SL26 I 18 UN	
	18	Ex	SL26 E 18 UN	
	16	In	SL26 I 16 UN	
	16	Ex	SL26 E 16 UN	
	14	In	SL26 I 14 UN	
	14	Ex	SL26 E 14 UN	
	12	In	SL26 I 12 UN	
	12	Ex	SL26 E 12 UN	
	10	In	SL26 I 10 UN	
	10	Ex	SL26 E 10 UN	
	9	In	* SL26 I 9 UN	
	8	In	* SL26 I 8 UN	
SL 40	16	In	SL40 I 16 UN	SR - SL40 - ...
	14	In	SL40 I 14 UN	
	12	In	SL40 I 12 UN	
	10	In	SL40 I 10 UN	
	8	In	SL40 I 8 UN	

* Cannot be used with toolholder SR067- ... -SL26-2

For tool holders see pages A01-6 - A01-8.

For carbide grade and cutting speed see page A01-9.

WHIT BSW, BSF, BSP



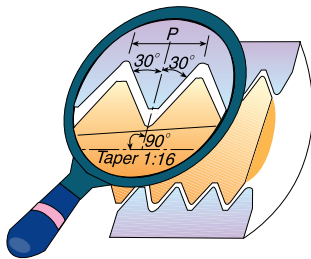
Same insert for External and Internal thread

Insert size	Pitch TPI	Ordering code	Toolholder
SL 26	14	SL 26 - 14 W	SR - SL26 - ...
	11	SL 26 - 11 W	
SL 40	14	SL 40 - 14 W	SR - SL40 - ...
	11	SL 40 - 11 W	

For tool holders see pages A01-6 - A01-8.

For carbide grade and cutting speed see page A01-9.

NPT



Conical pipe thread inserts are one-sided and may be used for both External and Internal threading

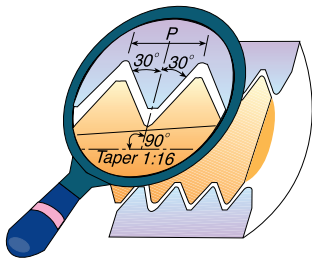
Insert size	Pitch TPI	Ordering code	Toolholder
SL 26	14	SL 26 - 14 NPT	SRT - SL26 - ...
	11.5	* SL 26 - 11.5 NPT	

* Cannot be used with toolholder SRT067-...-SL26-2

For tool holders see pages A01-7.

For carbide grade and cutting speed see page A01-9.

NPTF



Conical pipe thread inserts are one-sided and may be used for both External and Internal threading

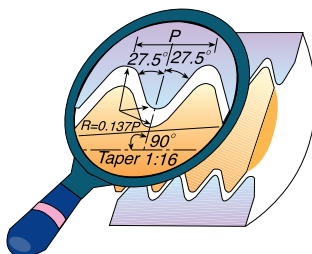
Insert size	Pitch TPI	Ordering code	Toolholder
SL 26	14	SL 26 - 14 NPTF	SRT - SL26 - ...
	11.5	* SL 26 - 11.5 NPTF	

* Cannot be used with toolholder SRT067-...-SL26-2

For tool holders see pages A01-7.

For carbide grade and cutting speed see page A01-9.

BSPT



Conical pipe thread inserts are one-sided and may be used for both External and Internal threading

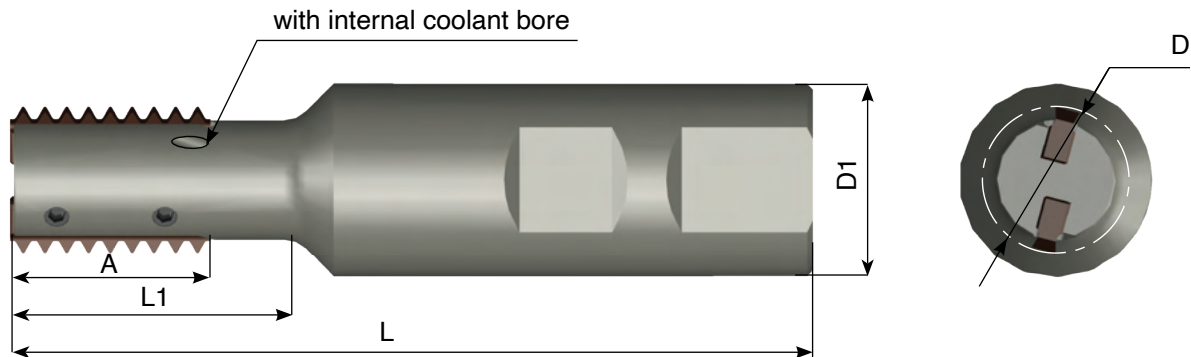
Insert size	Pitch TPI	Ordering code	Toolholder
SL 26	14	SL 26 - 14 BSPT	SRT - SL26 - ...
	11	* SL 26 - 11 BSPT	

* Cannot be used with toolholder SRT067-...-SL26-2

For tool holders see pages A01-7.

For carbide grade and cutting speed see page A01-9.

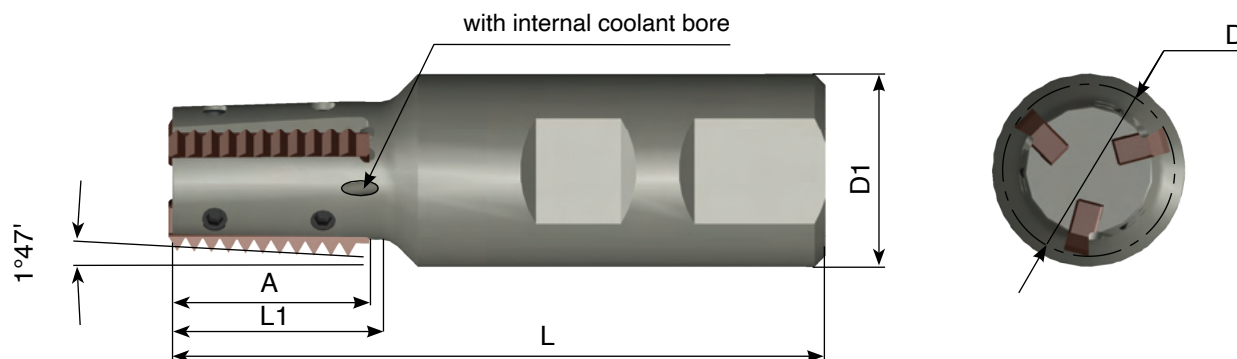
Toolholders



Ordering Code	Insert size=A	D	D1	L	L1	No. of Inserts	Screw	Key
*SR 067-075-106-SL26-2	SL 26	.67	.75	3.75	1.06	2	S4P	K08P
*SR 067-075-142-SL26-2		.67	.75	4.15	1.42	2	S4P	K08P
SR 067-106-SL26-2		.67	1	3.75	1.06	2	S4P	K08P
SR 067-142-SL26-2		.67	1	4.15	1.42	2	S4P	K08P
SR 075-106-SL26-2		.75	1	3.75	1.06	2	S4P	K08P
SR 075-157-SL26-2		.75	1	4.35	1.57	2	S4P	K08P
SR 081-106-SL26-3		.81	1	3.75	1.06	3	S4P	K08P
SR 081-157-SL26-3		.81	1	4.35	1.57	3	S4P	K08P
SR 081-225-SL26-2		.81	1	5.00	2.25	2	S4P	K08P
SR 087-110-SL26-3		.87	1	3.75	1.10	3	S4P	K08P
SR 087-165-SL26-3		.87	1	4.35	1.65	3	S4P	K08P
SR 087-225-SL26-2		.87	1	5.00	2.25	2	S4P	K08P
SR 118-315-SL26-3		1.18	1	5.90	3.15	3	S4P	K08P
SR 087-165-SL40-3		SL 40	.87	1	4.35	1.65	3	S4P
SR 087-250-SL40-2	.87		1	5.25	2.50	2	S4P	K08P
SR 118-165-SL40-4	1.18		1.25	4.95	1.65	4	S4P	K08P
SR 118-315-SL40-3	1.18		1.25	5.90	3.15	3	S4P	K08P

* Straight shank Toolholder

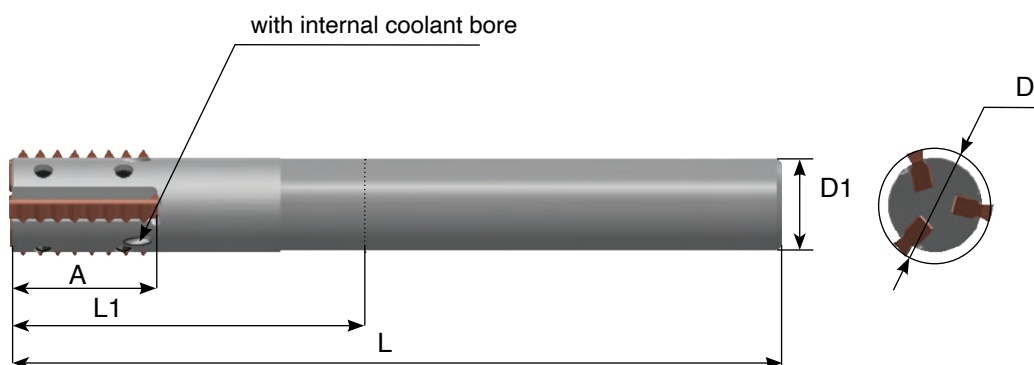
Toolholders for Conical Threads



Ordering Code	Insert size=A	D	D1	L	L1	No. of Inserts	Screw	Key
*SR T 067-075-106-SL26-2	SL 26	.67	.75	3.75	1.06	2	S4P	K08P
SR T 067-106-SL26-2		.67	1	3.75	1.06	2	S4P	K08P
SR T 087-106-SL26-3		.87	1	3.75	1.06	3	S4P	K08P
SR T 106-106-SL26-4		1.06	1	3.75	1.06	4	S4P	K08P

* Straight shank Toolholder

Carbide Shank Toolholders



Ordering Code	Insert size=A	D	D1	L	L1	No. of Inserts	Screw	Key
SR 075-440-SL26-2 C	SL 26	.75	.625	7.00	4.40	2	S4P	K08P
SR 081-540-SL26-3 C		.81	.625	8.00	5.40	3	S4P	K08P
SR 100-740-SL26-3 C		1.00	.750	10.00	7.40	3	S4P	K08P
SR 075-275-SL26-2 C		.75	.625	5.3	2.75	2	S4P	K08P
SR 081-275-SL26-2 C		.81	.625	5.3	2.75	3	S4P	K08P