

Mill - Thread Inserts and Kits



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

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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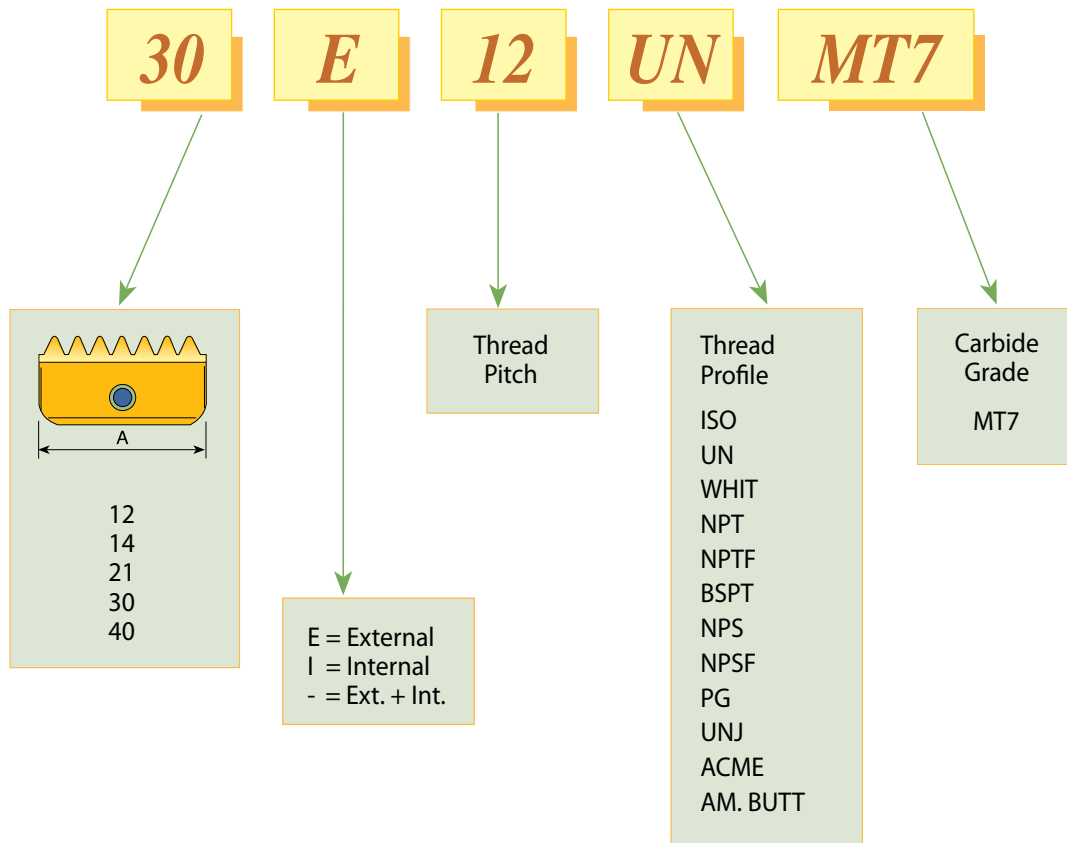
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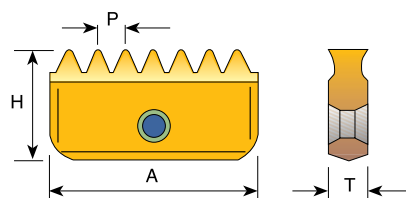
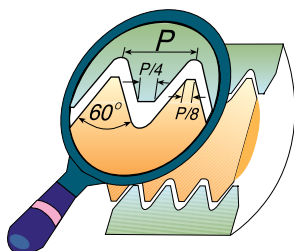
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Product Identification

Mill-Thread Inserts Ordering Codes



ISO

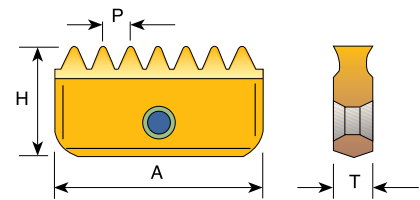
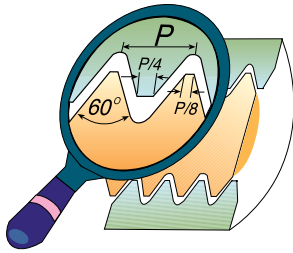


Pitch mm		Insert Size = A				
		12	14	21	30	40
0.5	Ext.					
0.5	Int.	* 12 I 0.5 ISO	14 I 0.5 ISO			
0.75	Ext.		14 E 0.75 ISO			
0.75	Int.	* 12 I 0.75 ISO	14 I 0.75 ISO			
1.0	Ext.		14 E 1.0 ISO	21 E 1.0 ISO		
1.0	Int.	* 12 I 1.0 ISO	14 I 1.0 ISO	21 I 1.0 ISO		
1.25	Ext.		14 E 1.25 ISO			
1.25	Int.	* 12 I 1.25 ISO	14 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			
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
H		6.3	7.5	12	16	20
T		2.9	3.1	4.7	5.5	6.3

Order example: 14 I 1.5 ISO MT7

* One cutting edge

UN UNC, UNF, UNEF, UNS



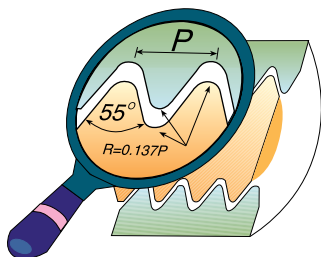
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32	Int.	* 12 I 32 UN	14 I 32 UN			
28	Ext.		14 E 28 UN			
28	Int.	* 12 I 28 UN	14 I 28 UN			
27	Ext.					
27	Int.		14 I 27 UN			
24	Ext.		14 E 24 UN	21 E 24 UN		
24	Int.	* 12 I 24 UN	14 I 24 UN	21 I 24 UN		
20	Ext.		14 E 20 UN	21 E 20 UN	30 E 20 UN	
20	Int.	* 12 I 20 UN	14 I 20 UN	21 I 20 UN	30 I 20 UN	
18	Ext.		14 E 18 UN	21 E 18 UN	30 E 18 UN	
18	Int.	* 12 I 18 UN	14 I 18 UN	21 I 18 UN	30 I 18 UN	
16	Ext.		14 E 16 UN	21 E 16 UN	30 E 16 UN	40 E 16 UN
16	Int.	* 12 I 16 UN	14 I 16 UN	21 I 16 UN	30 I 16 UN	40 I 16 UN
14	Ext.		14 E 14 UN	21 E 14 UN	30 E 14 UN	40 E 14 UN
14	Int.		14 I 14 UN	21 I 14 UN	30 I 14 UN	40 I 14 UN
12	Ext.		14 E 12 UN	21 E 12 UN	30 E 12 UN	40 E 12 UN
12	Int.		14 I 12 UN	21 I 12 UN	30 I 12 UN	40 I 12 UN
11	Ext.		14 E 11 UN	21 E 11 UN		
11	Int.		14 I 11 UN			
10	Ext.		14 E 10 UN	21 E 10 UN	30 E 10 UN	40 E 10 UN
10	Int.		14 I 10 UN	21 I 10 UN	30 I 10 UN	40 I 10 UN
9	Ext.					
9	Int.		** 14 I 9 UN			
8	Ext.				30 E 8 UN	40 E 8 UN
8	Int.			21 I 8 UN	30 I 8 UN	40 I 8 UN
7	Ext.					
7	Int.			21 I 7 UN		
6	Ext.				30 E 6 UN	40 E 6 UN
6	Int.				30 I 6 UN	40 I 6 UN
5	Ext.					
5	Int.				30 I 5 UN	
4.5	Ext.					
4.5	Int.					40 I 4.5UN
4	Ext.					
4	Int.					40 I 4 UN
H		6.3	7.5	12	16	20
T		2.9	3.1	4.7	5.5	6.3

Order example: 21 I 18 UN MT7

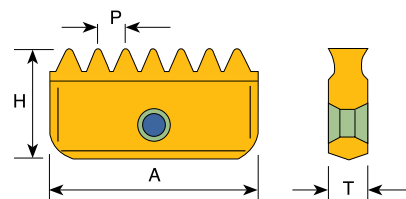
* One cutting edge

** Cannot be used with carbide shank Toolholders.

WHIT BSW, BSF, BSP



Same Insert for External and Internal thread.

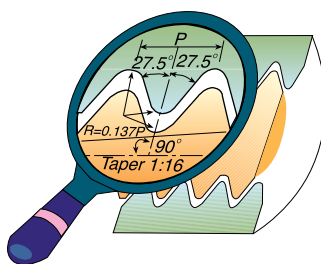


Pitch TPI	Insert Size = A				
	12	14	21	30	40
24		14-24 W			
20		14-20 W	21-20 W		
19	* 12 - 19 W	14-19 W	21-19 W		
16		14-16 W	21-16 W	30-16 W	
14		14-14 W	21-14 W	30-14 W	
11		14-11 W	21-11 W	30-11 W	40-11 W
8					40- 8 W
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

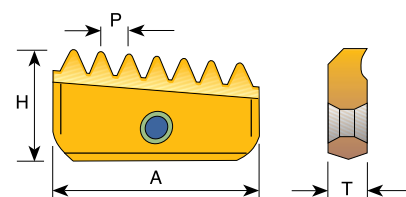
* One cutting edge

Order example: 21-11 W MT7

BSPT



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

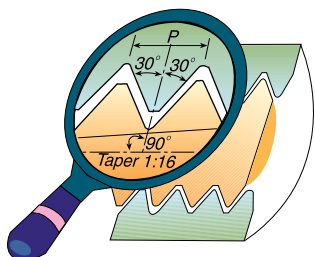


Pitch TPI	Insert Size = A				
	12	14	21	30	40
19	12-19 BSPT	14-19 BSPT			
14		14-14 BSPT	21-14 BSPT		
11			21-11 BSPT	30-11 BSPT	40-11 BSPT
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

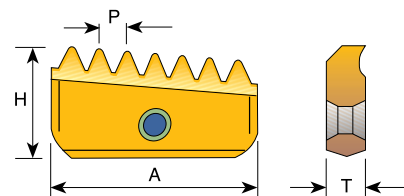
Order example: 14-19 BSPT MT7

For conical preparation end mills see page 221

NPT



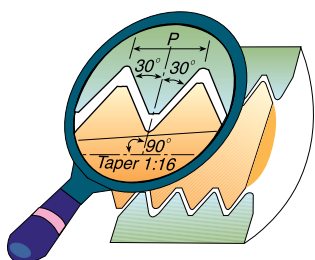
Conical pipe thread inserts are one-sided and may be used for both External and Internal threading.



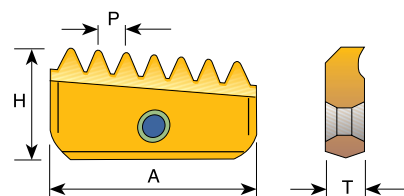
Pitch TPI	Insert Size = A				
	12	14	21	30	40
18	12-18 NPT	14-18 NPT			
14		14-14 NPT	21-14 NPT		
11.5			21-11.5 NPT	30-11.5 NPT	40-11.5 NPT
8				30- 8 NPT	40- 8 NPT
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

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.

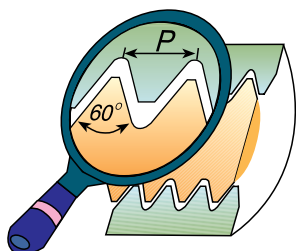


Pitch TPI	Insert Size = A				
	12	14	21	30	40
18	12-18 NPTF	14-18 NPTF			
14		14-14 NPTF	21-14 NPTF		
11.5			21-11.5 NPTF	30-11.5 NPTF	40-11.5 NPTF
8				30- 8 NPTF	40- 8 NPTF
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

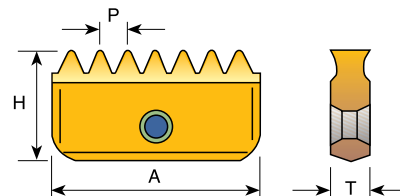
Order example: 21-14 NPTF MT7

For conical preparation end mills see page 221

NPS



Same Insert for External and Internal thread

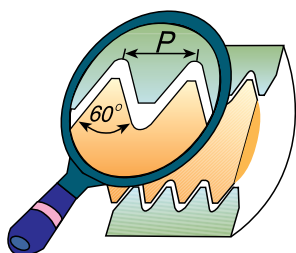


Pitch TPI	Insert Size = A				
	12	14	21	30	40
18	* 12-18 NPS	14-18 NPS			
14		14-14 NPS	21-14 NPS		
11.5			21-11.5 NPS	30-11.5 NPS	40-11.5 NPS
8				30- 8 NPS	40- 8 NPS
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

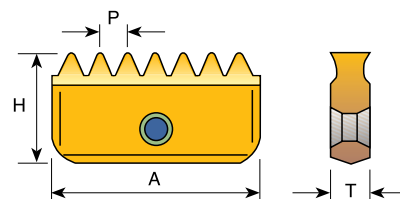
Order example: 30-11.5 NPS MT7

* One cutting edge

NPSF



Same Insert for External and Internal thread

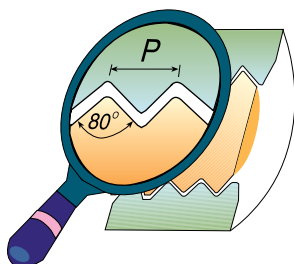


Pitch TPI	Insert Size = A				
	12	14	21	30	40
18	* 12-18 NPSF	14-18 NPSF			
14		14-14 NPSF	21-14 NPSF		
11.5			21-11.5 NPSF	30-11.5 NPSF	40-11.5 NPSF
8				30- 8 NPSF	40- 8 NPSF
H	6.3	7.5	12	16	20
T	2.9	3.1	4.7	5.5	6.3

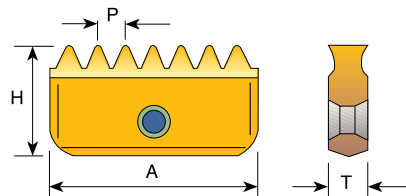
Order example: 21-14 NPSF MT7

* One cutting edge

PG - DIN 40430



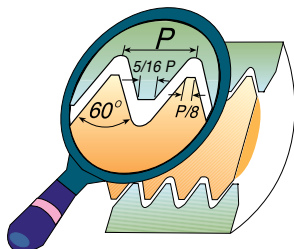
Same Insert for External and Internal thread



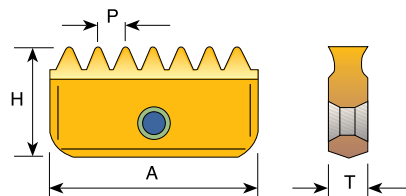
Pitch TPI	Insert Size = A		
	14	21	30
18	14-18 PG (PG 9, 11, 13.5, 16)	21-18 PG (PG 16)	
16		21-16 PG (PG 21, 29, 36, 42, 48)	30-16 PG (PG 36, 42, 48)
H	7.5	12	16
T	3.1	4.7	5.6

Order example: 21-18 PG MT7

UNJ



Inserts for External thread

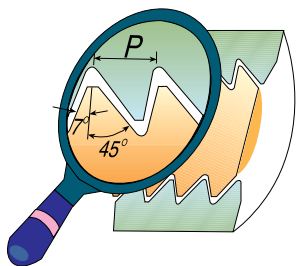


Pitch TPI	Insert Size = A		
		14	21
24	Ext.	14 E 24 UNJ	21 E 24 UNJ
20	Ext.	14 E 20 UNJ	21 E 20 UNJ
18	Ext.	14 E 18 UNJ	21 E 18 UNJ
16	Ext.	14 E 16 UNJ	21 E 16 UNJ
14	Ext.	14 E 14 UNJ	21 E 14 UNJ
12	Ext.	14 E 12 UNJ	21 E 12 UNJ
H		7.5	12
T		3.1	4.7

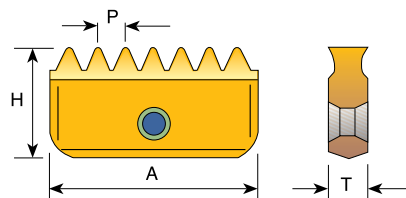
Order example: 21 E 16 UNJ MT7

For internal UNJ threads it is common to use UN inserts as partial profile.

American Buttress



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

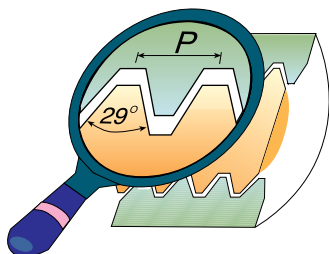


Pitch TPI	Insert Size = A		
	21	30	40
16	21 - 16 ABUT	30 - 16 ABUT	
12	21 - 12 ABUT	30 - 12 ABUT	
10	21 - 10 ABUT	30 - 10 ABUT	
8	21 - 8 ABUT	30 - 8 ABUT	
6		30 - 6 ABUT	
4		* 30 - 4 ABUT	40 - 4 ABUT
H	12	16	20
T	4.7	5.6	6.3

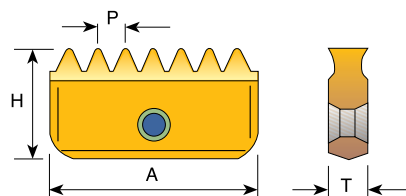
Order example: 30 - 6 ABUT MT7

* Inserts to be used only on Multi-Insert toolholders see page 155

ACME



Inserts for Internal threads



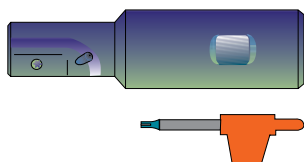
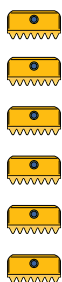
Pitch TPI		Insert Size = A		
		21	30	40
12	Int.	21 I 12 ACME	30 I 12 ACME	
10	Int.	21 I 10 ACME	30 I 10 ACME	
8	Int.	21 I 8 ACME	30 I 8 ACME	
6	Int.		30 I 6 ACME	
5	Int.		30 I 5 ACME	
4	Int.		* 30 I 4 ACME	40 I 4 ACME
3.5	Int.			40 I 3.5 ACME
3	Int.			** 40 I 3 ACME
H		12	16	20
T		4.7	5.6	6.3

Order example: 21 I 8 ACME MT7

* Inserts to be used only on Multi-Insert toolholders see page 155

** One cutting edge

Internal ISO Kits



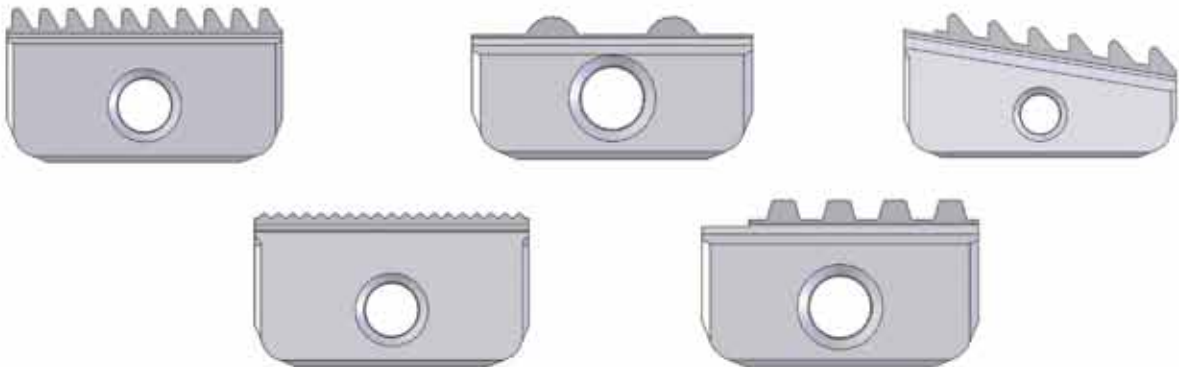
MTK 12 ISO	MTK 14 ISO
<u>INSERTS</u>	<u>INSERTS</u>
12 0.75 ISO	14 1.0 ISO 2 Pcs
12 1.0 ISO 2 Pcs	14 1.5 ISO 2 Pcs
12 1.25 ISO	14 2.0 ISO 2 Pcs
12 1.5 ISO 2 Pcs	
<u>TOOLHOLDER</u>	<u>TOOLHOLDER</u>
SR 0009 H12	SR 0017 H14
<u>KEY</u>	<u>KEY</u>
K12	K14
<u>SCREW</u>	<u>SCREW</u>
S12	S14

Order example : MTK 14 | ISO

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.





Mill-Thread Toolholders



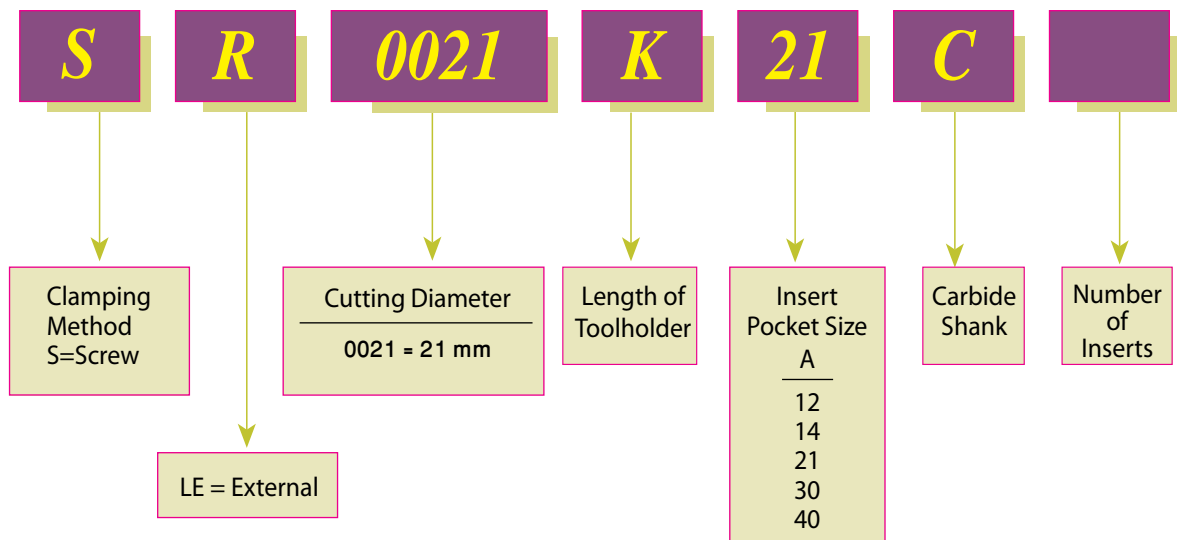
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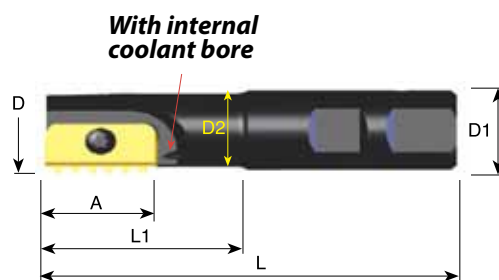
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Product Identification

Mill-Thread Toolholders Ordering Codes



Single Insert Toolholders



Ordering Code	A	D	D1	D2	L	L1	Insert Screw	Torx Key
* SR0009H12	12	9.5	20	7.5	85	14	S12	K12
SR0010H12	12	9.9	20	7.6	85	16	S12	K12
SR0012F14	14	12.0	20	8.9	75	20	S14	K14
SR0014H14	14	14.5	20	11.2	85	25	S14	K14
SR0017H14	14	17.0	20	13.4	85	30	S14	K14
** SR0018H21	21	18.0	20	14.4	85	30	S21	K21
SR0021H21	21	21.0	20	16.5	94	40	S21	K21
SR0029J30	30	29.0	25	22.4	110	50	S30	K30
SR0048M40	40	48.0	40	35.0	153	78	S40	K40

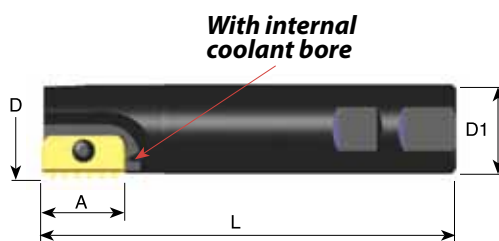
Order example: SR0029J30

* Not for conical inserts: 12-18 NPT, 12-18 NPTF, 12-19 BSPT

** Cannot be used with the following inserts:

21 I 3.5 ISO, 21 I 8 UN, 21 I 7 UN, 21-11 BSPT, 21-11.5 NPT, 21-11.5 NPTF

Long Shank Toolholders

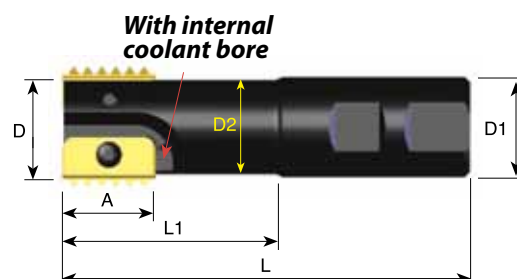


Ordering Code	A	D	D1	L	Insert Screw	Torx Key
SR0025K21	21	25	20	125	S21	K21
SR0031M30	30	31	25	150	S30	K30
SR0038M30	30	38	32	150	S30	K30
SR0048R40	40	48	40	210	S40	K40

Order example: SR0031M30

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

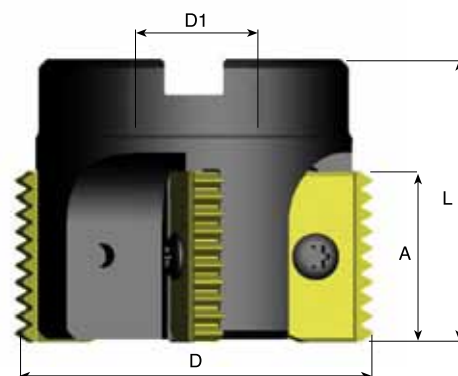
Twin Insert Toolholders



Ordering Code	A	D	D1	D2	L	L1	No. of Inserts	Insert Screw	Torx Key
SR0020H14-2	14	20	20	16	93	41	2	S14	K14
SR0030J21-2	21	30	25	24	108	52	2	S21	K21
SR0040L30-2	30	40	32	30	130	70	2	S30	K30
SR0050M40-2	40	50	40	38	153	78	2	S40	K40

Order example: SR0040L30-2

Multi Insert Toolholders

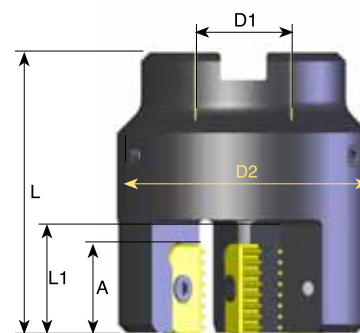
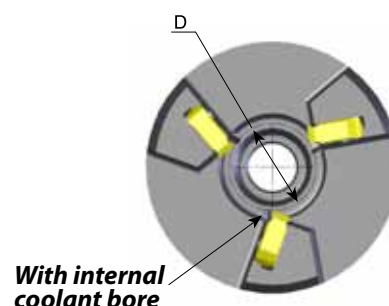
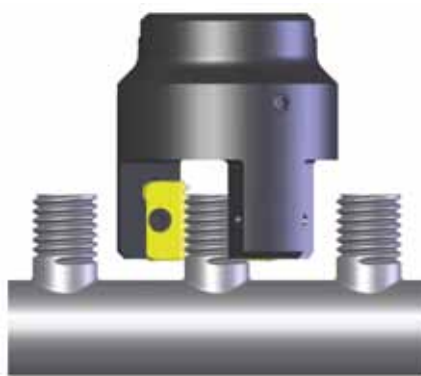


Ordering Code	A	D	D1	L	No. of Inserts	Insert Screw	Torx Key
SR0063C21-5	21	63	22	50	5	S21	K21
SR0063C30-4	30	63	22	50	4	S30	K30
SR0080D30-4	30	80	27	55	4	S30	K30
SR0100D30-4	30	100	32	60	4	S30	K30
SR0100D30-8	30	100	32	60	8	S30	K30
SR0080D40-4	40	80	27	65	4	S40	K40
SR0100E40-4	40	100	32	70	4	S40	K40
SR0100E40-6	40	100	32	70	6	S40	K40

Order example: SR0080D30-4

External Multi Insert Toolholder

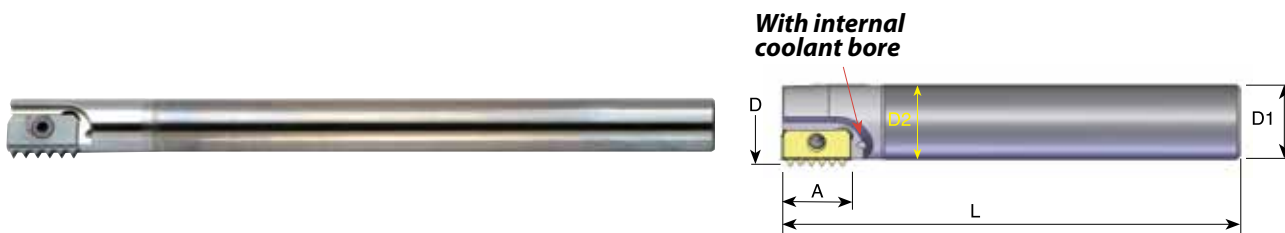
- Reduced machining time
- Optimal coolant supply



Ordering Code	A	D	D1	D2	L	L1	No. of Inserts	Insert Screw	Torx Key
SLE0020D21-3	21	20	22	58	65	25	3	S21	K21
SLE0030D21-3	21	30	22	68	65	25	3	S21	K21
SLE0045E21-4	21	45	27	83	70	25	4	S21	K21

Order example: SLE0030D21-3

Long Carbide Shank Toolholders

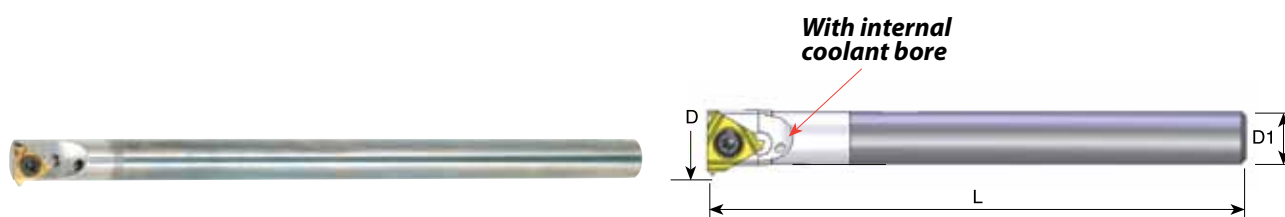


Ordering Code	A	D	D1	D2	L	Insert Screw	Torx Key
SR0010K12C	12	9.9	8	8	125	S12	K12
SR0013H14C	14	13.2	10	10	110	S14	K14
SR0013J14C	14	13.2	10	10	155	S14	K14
SR0015K14C	14	15.2	12	12	175	S14	K14
SR0021K21C	21	21.0	16	16	130	S21	K21
SR0021M21C	21	21.0	16	16	200	S21	K21
SR0027S30C	30	27.0	20	20	270	S30	K30

Order example: SR0015K14C

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		Pitch Range		D	D1	L	Insert Screw	Torx Key
		mm	TPI					
SR0005D06C	6	0.5-1.25	48-20	6.8	5.0	63	S06	K06
SR0006H08C	8	0.5-1.75	48-14	8.8	6.0	100	S08	K08
* SR0010M11C	11	0.5-2.00	48-11	13.2	10.0	150	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.

Spiral Mill-Thread



Advantages of Spiral Mill-Thread Tools

- The spiral designed tools enable a smooth cutting operation at a high feed rate and reduced machining time.
- The tools suit a wide range of applications, from machining small components in small machining centers to heavy-duty applications in high power milling machines.
- Spiral fluted toolholders hold 1 to 9 inserts in a comparatively small cutting diameter.
- The unique clamping method enables optimal indexability.
- Spiral tools reduce vibration and chatter.
- High grade finish is achieved in all applications: threading, end milling roughing and finishing.
- Inserts are available in MT7 Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade, which can be used with all materials.

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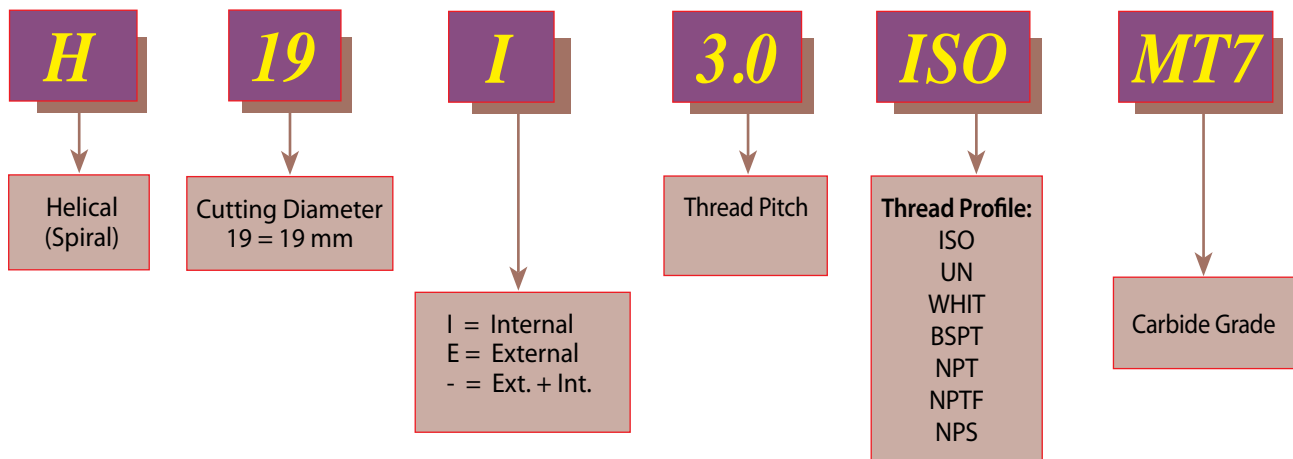
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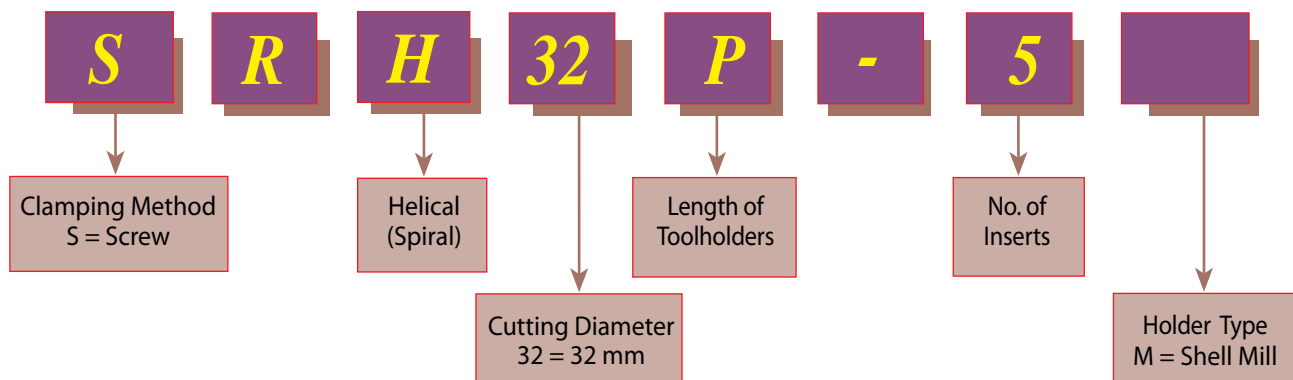
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Product Identification - Ordering Codes

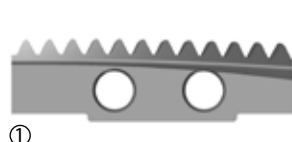
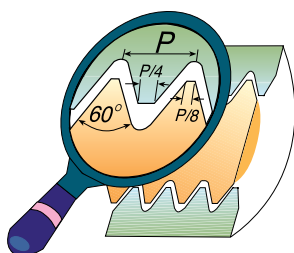
Spiral Mill - Thread Inserts



Spiral Mill - Thread Toolholders

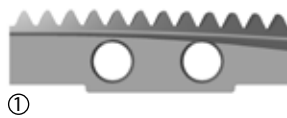
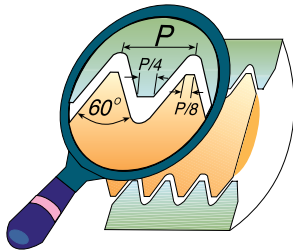


ISO



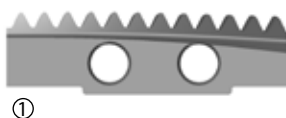
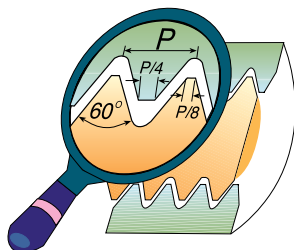
Insert Size	Fig.	Pitch mm	Ext./ Int.	M coarse	M fine	Ordering code	Toolholder
H13	1	1.0	Int.		≥ 15	H13 I 1.0 ISO	SRH13...
		1.5	Int.		≥ 16	H13 I 1.5 ISO	
		2.0	Int.	M16	≥ 17	H13 I 2.0 ISO	
H15	1	1.0	Int.		≥ 17	H15 I 1.0 ISO	SRH15...
		1.5	Int.		≥ 18	H15 I 1.5 ISO	
		2.0	Int.		≥ 19	H15 I 2.0 ISO	
		2.5	Int.	M18	≥ 20	H15 I 2.5 ISO	
H17	1	1.0	Int.		≥ 19	H17 I 1.0 ISO	SRH17...
		1.5	Int.		≥ 20	H17 I 1.5 ISO	
		2.0	Int.		≥ 21	H17 I 2.0 ISO	
		2.5	Int.	M20, M22	≥ 22	H17 I 2.5 ISO	
H19	1	2.0	Int.		≥ 23	H19 I 2.0 ISO	SRH19...
		3.0	Int.	M24	≥ 25	H19 I 3.0 ISO	
H23	2	1.0	Ext.			H23 E 1.0 ISO	SRH23...
		1.0	Int.		≥ 25	H23 I 1.0 ISO	
		1.5	Ext.			H23 E 1.5 ISO	
		1.5	Int.		≥ 26	H23 I 1.5 ISO	
		2.0	Ext.			H23 E 2.0 ISO	
		2.0	Int.		≥ 27	H23 I 2.0 ISO	
		3.0	Ext.			H23 E 3.0 ISO	
		3.0	Int.	M27	≥ 29	H23 I 3.0 ISO	
		3.5	Int.	M30, M33	≥ 30	H23 I 3.5 ISO	
H32	2	4.0	Int.	M36	≥ 31	H23 I 4.0 ISO	SRH32...
		1.0	Int.		≥ 34	H32 I 1.0 ISO	
		1.5	Ext.			H32 E 1.5 ISO	
		1.5	Int.		≥ 35	H32 I 1.5 ISO	
		2.0	Ext.			H32 E 2.0 ISO	
		2.0	Int.		≥ 36	H32 I 2.0 ISO	
		3.0	Ext.			H32 E 3.0 ISO	
		3.0	Int.		≥ 38	H32 I 3.0 ISO	
		3.5	Int.		≥ 39	H32 I 3.5 ISO	
		4.0	Ext.			H32 E 4.0 ISO	
		4.0	Int.	M39	≥ 40	H32 I 4.0 ISO	
		4.5	Int.	M42, M45	≥ 41	H32 I 4.5 ISO	
H45	2	5.0	Int.	M48	≥ 42	H32 I 5.0 ISO	SRH45...
		1.5	Ext.			H45 E 1.5 ISO	
		1.5	Int.		≥ 48	H45 I 1.5 ISO	
		2.0	Ext.			H45 E 2.0 ISO	
		2.0	Int.		≥ 49	H45 I 2.0 ISO	
		3.0	Int.		≥ 51	H45 I 3.0 ISO	
		3.5	Int.		≥ 52	H45 I 3.5 ISO	
		4.0	Int.		≥ 53	H45 I 4.0 ISO	
		4.5	Int.		≥ 54	H45 I 4.5 ISO	
		5.0	Int.	M52	≥ 55	H45 I 5.0 ISO	
H63	2	5.5	Int.	M56, M60	≥ 56	H45 I 5.5 ISO	SRH63...
		6.0	Int.	M64, M68	≥ 57	H45 I 6.0 ISO	
		1.5	Int.		≥ 66	H63 I 1.5 ISO	
		2.0	Int.		≥ 67	H63 I 2.0 ISO	
		3.0	Int.		≥ 69	H63 I 3.0 ISO	
		4.0	Int.		≥ 71	H63 I 4.0 ISO	
		6.0	Int.		≥ 75	H63 I 6.0 ISO	

UN



Insert Size	Fig.	Pitch TPI	Ext./ Int.	UN	UNC	UNF	UNS	Ordering code	Toolholder
H13	1	16	Int.	5/8, 11/16				H13 I 16 UN	SRH13...
		14	Int.				5/8	H13 I 14 UN	
		12	Int.	11/16				H13 I 12 UN	
H15	1	16	Int.			3/4		H15 I 16 UN	SRH15...
		14	Int.				3/4	H15 I 14 UN	
		12	Int.	3/4, 13/16				H15 I 12 UN	
		10	Int.		3/4		7/8, 1	H15 I 10 UN	
H17	1	16	Int.	13/16 - 1				H17 I 16 UN	SRH17...
		14	Int.			7/8, 1		H17 I 14 UN	
		12	Int.	7/8				H17 I 12 UN	
		9	Int.		7/8			H17 I 9 UN	
H19	1	12	Int.	15/16		1		H19 I 12 UN	SRH19...
		8	Int.	1 1/16, 1 1/8	1			H19 I 8 UN	
H23	2	32	Int.	1			1 - 1 1/4	H23 I 32 UN	SRH23...
		24	Int.					H23 I 24 UN	
		20	Ext.					H23 E 20 UN	
		20	Int.	1 1/16 - 1 5/16				H23 I 20 UN	
		18	Ext.					H23 E 18 UN	
		18	Int.				1	H23 I 18 UN	
		16	Ext.					H23 E 16 UN	
		16	Int.	1 1/16 - 1 5/16				H23 I 16 UN	
		14	Ext.					H23 E 14 UN	
		14	Int.				≥1 1/8	H23 I 14 UN	
		12	Ext.					H23 E 12 UN	
		12	Int.	1 1/16 - 1 3/16		1 1/8		H23 I 12 UN	
		10	Ext.					H23 E 10 UN	
		10	Int.				≥1 1/8	H23 I 10 UN	
		8	Ext.					H23 E 8 UN	
H28	2	12	Int.	1 5/16		1 1/4, 1 3/8		H28 I 12 UN	SRH28...
		8	Int.	1 3/8 - 1 7/16				H28 I 8 UN	
		6	Int.	1 3/8 - 1 9/16	1 1/2			H28 I 6 UN	
		24	Ext.				≥1 3/8	H32 E 24 UN	
		20	Ext.					H32 E 20 UN	
H32	2	20	Int.	≥1 3/8				H32 I 20 UN	SRH32...
		18	Ext.					H32 E 18 UN	
		18	Int.				≥1 3/4	H32 I 18 UN	
		16	Ext.					H32 E 16 UN	
		16	Int.	1 3/8 - 1 7/8				H32 I 16 UN	
		12	Ext.					H32 E 12 UN	
		12	Int.	1 7/16 - 1 7/8		1 1/2		H32 I 12 UN	
		8	Ext.					H32 E 8 UN	
		8	Int.	1 1/2 - 2				H32 I 8 UN	
		6	Ext.					H32 E 6 UN	
		6	Int.	1 5/8 - 1 7/8				H32 I 6 UN	
H40	2	5	Int.		1 3/4			H32 I 5 UN	SRH40...
		6	Int.	1 15/16, 2	2			H40 I 6 UN	
		4.5	Int.					H40 I 4.5 UN	

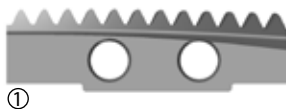
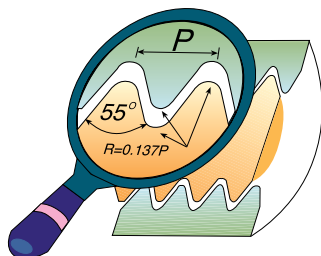
UN



Insert Size	Fig.	Pitch TPI	Ext./ Int.	UN	UNC	UNF	UNS	Ordering code	Toolholder
H45	2	16	Int.	1 15/16 - 2 1/2			2 1/16 - 2	H45 I 16 UN	SRH45...
		12	Int.	1 15/16 - 2 5/8				H45 I 12 UN	
		8	Int.	2 1/8 - 2 5/8				H45 I 8 UN	
		6	Int.	2 1/8 - 2 3/4				H45 I 6 UN	
		4.5	Int.		2 1/4			H45 I 4.5 UN	
		4	Int.		2 1/2 - 2 3/4			H45 I 4 UN	
H63	2	16	Int.	≥ 2 5/8				H63 I 16 UN	SRH63...
		12	Int.	≥ 2 3/4				H63 I 12 UN	
		8	Int.	≥ 2 3/4				H63 I 8 UN	
		6	Int.	≥ 2 7/8				H63 I 6 UN	
		4	Int.		≥ 3			H63 I 4 UN	

Whitworth

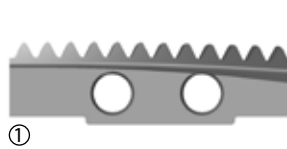
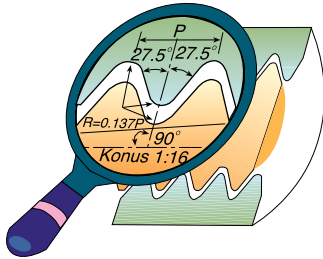
Same insert for internal and external thread



Insert Size	Fig.	Pitch TPI	Ordering code	Thread Size	Toolholder
H13	1	19	H13- 19 W	G 3/8	SRH13...
H15	1	14	H15- 14 W	G 1/2	SRH15...
H17	1	14	H17- 14 W	G 1/2 - 5/8	SRH17...
		11	H17- 11 W	G ≥ 1"	
H19	1	14	H19- 14 W	G 3/4 - 7/8	SRH19...
		11	H19- 11 W	G ≥ 1"	
H23	2	14	H23-14 W	Int. G 7/8" Ext. ≥ G 1/2"	SRH23...
		11	H23-11 W	≥ G 1"	
H32	2	14	H32-14 W	Ext. ≥ G 1/2"	SRH32...
		11	H32-11 W	Int. ≥ G 1 1/8" Ext. ≥ G 1"	
H45	2	11	H45-11 W	Int. ≥ G 1 5/8" Ext. ≥ G 1"	SRH45...
H63	2	11	H63-11 W	Int. ≥ G 2 3/8" Ext. ≥ G 1"	SRH63...

BSPT

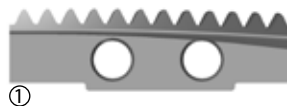
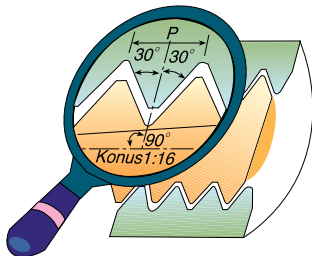
Same insert for internal and external thread



Insert Size	Fig.	Pitch TPI	Ordering code	Thread Size	Toolholder
H13	1	19	H13-19 BSPT	3/8	SRH13...
H15	1	14	H15-14 BSPT	1/2 - 3/4	SRH15...
H17	1	14	H17-14 BSPT	1/2 - 3/4	SRH17...
H23	2	11	H23-11 BSPT	≥ 1"	SRH23...
H32	2	11	H32-11 BSPT	Int. ≥ 1 1/8" Ext. ≥ 1"	SRH32...
H45	2	11	H45-11 BSPT	Int. ≥ 1 3/4" Ext. ≥ 1"	SRH45...
H63	2	11	H63-11 BSPT	Int. ≥ 2 1/2" Ext. ≥ 1"	SRH63...

NPT

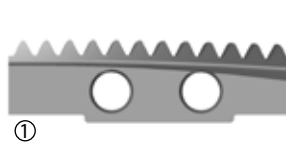
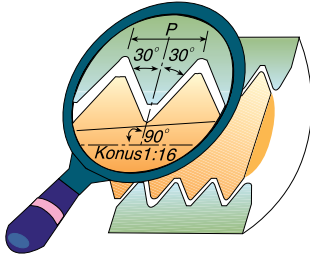
Same insert for internal and external thread



Insert Size	Fig.	Pitch TPI	Ordering code	Thread Size	Toolholder
H13	1	18	H13-18 NPT	3/8	SRH13...
H15	1	14	H15-14 NPT	1/2 - 3/4	SRH15...
H17	1	14	H17-14 NPT	1/2 - 3/4	SRH17...
H23	2	11.5	H23-11.5 NPT	1"-2"	SRH23...
H32	2	11.5	H32-11.5 NPT	Int. 1 1/4"-2" Ext. 1"- 2"	SRH32...
H45	2	11.5	H45-11.5 NPT	Int. ≥ 1 5/8" Ext. ≥ 1"	SRH45...
		8	H45- 8 NPT	≥ 2 1/2"	
H63	2	11.5	H63-11.5 NPT	Ext. 1-2"	SRH63...
		8	H63- 8 NPT	≥ 3"	

NPTF

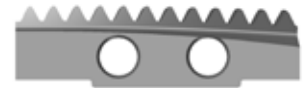
Same insert for internal and external thread



Insert Size	Fig.	Pitch TPI	Ordering code	Thread Size	Toolholder
H13	1	18	H13-18 NPTF	3/8	SRH13...
H15	1	14	H15-14 NPTF	1/2 - 3/4	SRH15...
H17	1	14	H17-14 NPTF	1/2 - 3/4	SRH17...
H23	2	11.5	H23-11.5 NPTF	1"-2"	SRH23...
H32	2	11.5	H32-11.5 NPTF	Int. 1 1/4"-2" Ext. 1" -2"	SRH32...

NPS

Same insert for internal and external thread



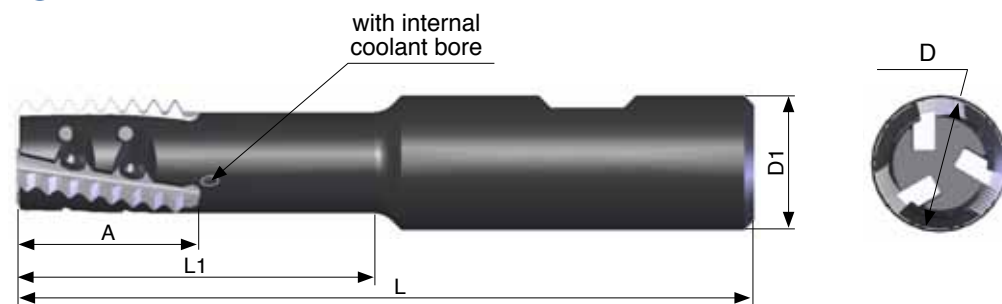
Insert Size	Pitch TPI	Ordering code	Thread Size	Toolholder
H13	18	H13- 18 NPS	3/8	SRH13...
H15	14	H15- 14 NPS	1/2 - 3/4	SRH15...
H17	14	H17- 14 NPS	1/2 - 3/4	SRH17...

Spiral Finishing Inserts



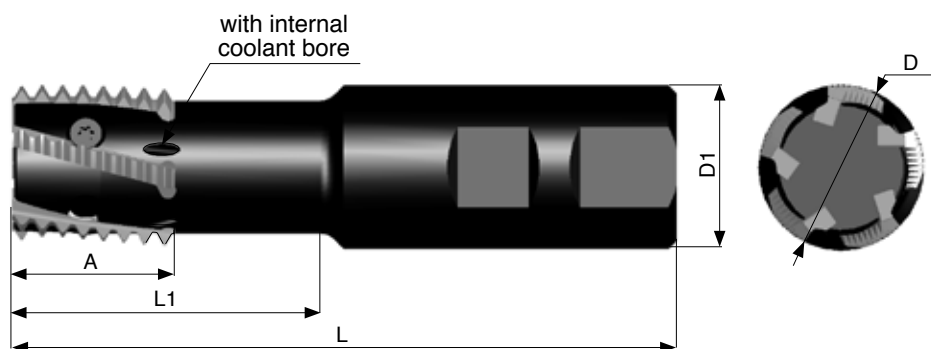
Insert Size	R	Ordering code	Toolholder
H23	0.2	H23 F R 0.2	SRH23...
	0.5	H23 F R 0.5	
	1.0	H23 F R 1.0	
H32	0.2	H32 F R 0.2	SRH32...
	0.5	H32 F R 0.5	
	1.0	H32 F R 1.0	
H45	0.2	H45 F R 0.2	SRH45...
	0.5	H45 F R 0.5	
	1.0	H45 F R 1.0	
	1.5	H45 F R 1.5	
	2.0	H45 F R 2.0	
H63	0.2	H63 F R 0.2	SRH63...
	0.5	H63 F R 0.5	
	1.0	H63 F R 1.0	
	1.5	H63 F R 1.5	
	2.0	H63 F R 2.0	

Toolholders

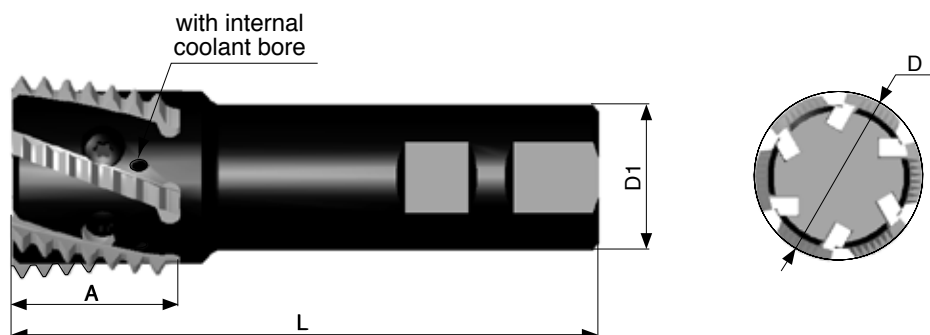


Ordering Code	Insert Type	Insert size A	D	D1	L	L1	No. of Inserts	Screw	Key
SRH13-1	H13	27	13	20	90	35	1	S13	K11
SRH15-1	H15	27	15	20	95	40	1	S15	K11
* SRH17-2	H17	27	17	20	85	30	2	S17	K11
* SRH17J-2	H17	27	17	20	100	45	2	S17	K11
SRH19-3	H19	27	19	20	85	30	3	S19	K11
SRH19J-3	H19	27	19	20	110	55	3	S19	K11

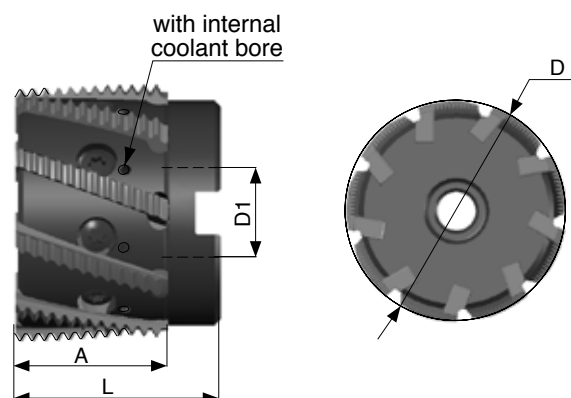
* When using NPT, NPTF, BSPT inserts the cutting diameter D = 18 mm



Ordering Code	Insert Type	Insert size A	D	D1	L	L1	No. of Inserts	Screw	Key
SRH23-2	H23	27	23	25	110	50	2	S23	K21
SRH23M-2	H23	27	23	25	150	75	2	S23	K21
SRH28-3	H28	32	28	32	150	75	3	S32S	K22
SRH32-5	H32	32	32	32	130	60	5	S32	K22
SRH32P-5	H32	32	32	32	180	90	5	S32	K22



Ordering Code	Insert Type	Insert size A	D	D1	L	No. of Inserts	Screw	Key
SRH40-4	H40	37	40	32	180	4	S45S	K40
SRH45-6	H45	37	45	32	130	6	S45	K40



Ordering Code	Insert Type	Insert size A	D	D1	L	No. of Inserts	Screw	Key
SRH32-5M	H32	32	32	16	52	5	S32S	K22
SRH45-6M	H45	37	45	22	60	6	S45S	K40
SRH63-9	H63	38	63	22	50	9	S63	K40

Special Tools

In addition to standard products, Carmex manufactures special tools and inserts according to customers' requests. The toolholders are multi-purpose, making them suitable for both roughing and finishing inserts. Special tools are supplied in short delivery times.



Case Studies

Case Study no. 1

Thread	M56x1.5
Internal/External	Internal
Thread Length	33.0
Raw Material	Ductile Iron
Cutting Speed – Vc	130 m/min
Tooth Load – Fz	0.15 mm/tooth
Toolholder	SRH45 – 6
Insert	H45 I 1.5 ISO MT7
Result	600 pcs with 0.02 offset (Competitor – 40 pcs with 0.15 offset)



Case Study no. 2

Application	Grooves Milling
Internal/External	External
Raw Material	Cast Steel
Cutting Speed – Vc	195 m/min
Tooth Load – Fz	0.10 mm/tooth
Toolholder	SRH63 – 9
Insert	Taylor Made H63
Result	1350 pcs (Competitor – 540 pcs)



CMT Vertical Mill-Thread



Vertical milling indexable inserts and toolholders to perform a wide variety of threads, grooves, chamfers and more.

Advantages of CMT - Vertical Mill-Thread

- Ground profile inserts for high precision and excellent performance.
- Working at high machining parameters, with high surface quality.
- Solid and accurate clamping method enables full repeatability.
- Same insert for right-hand or left-hand threads.
- Toolholders include weldon shank and coolant bore.
- Chamfer inserts are also available.

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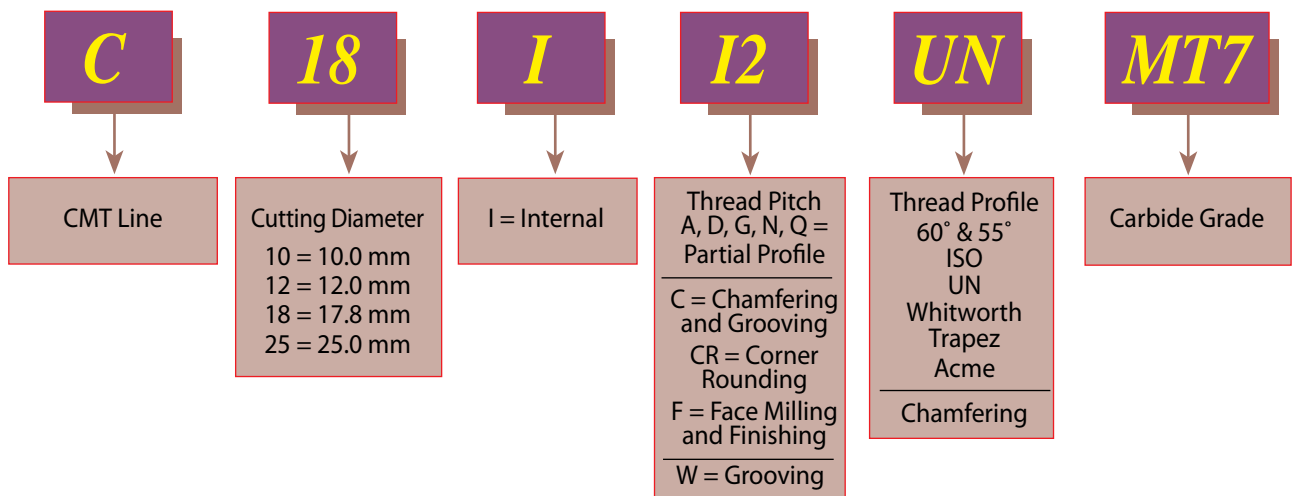
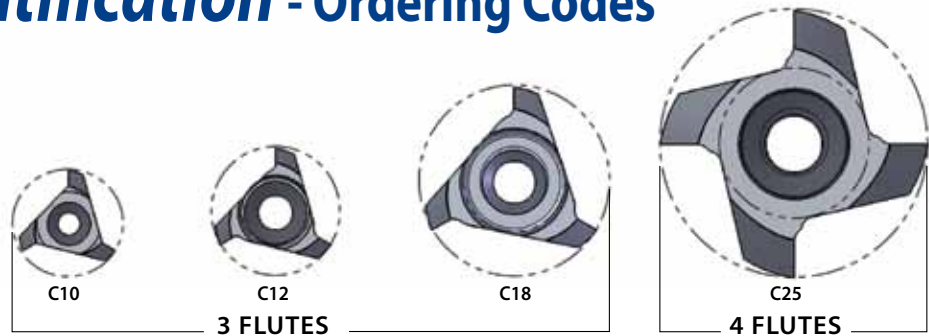
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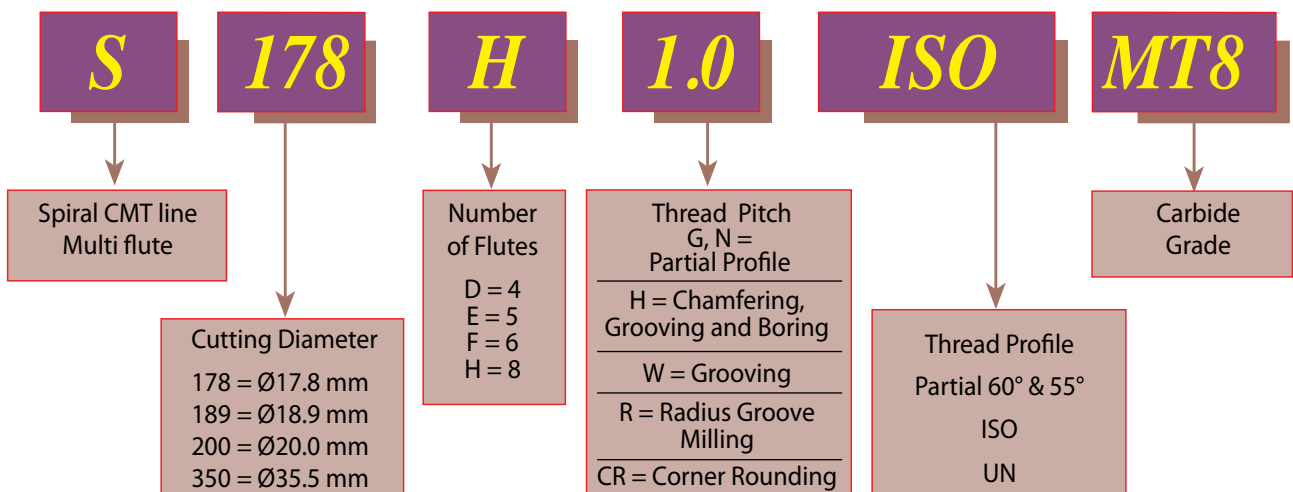
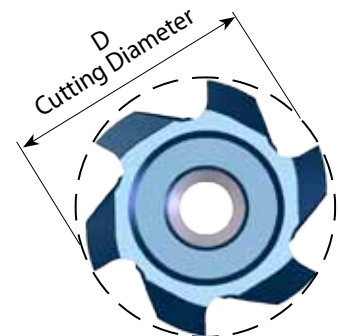
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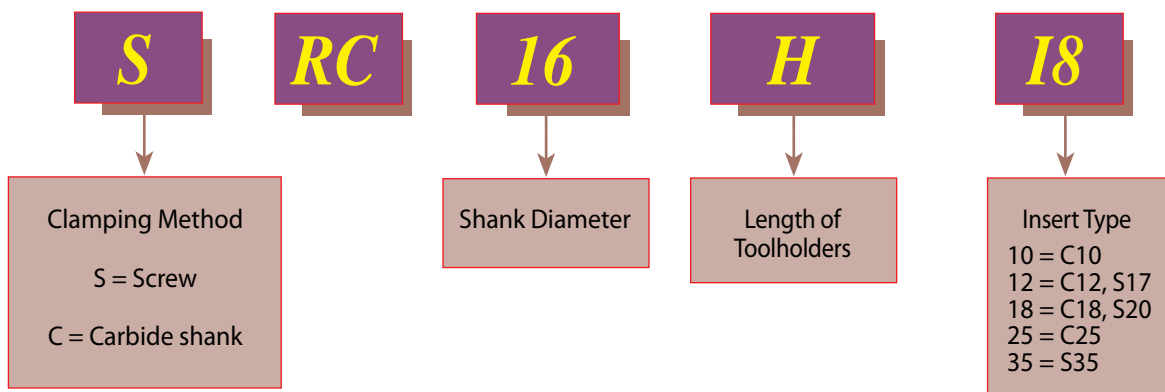
Product Identification - Ordering Codes



CMT Spiral Multi Flute Inserts

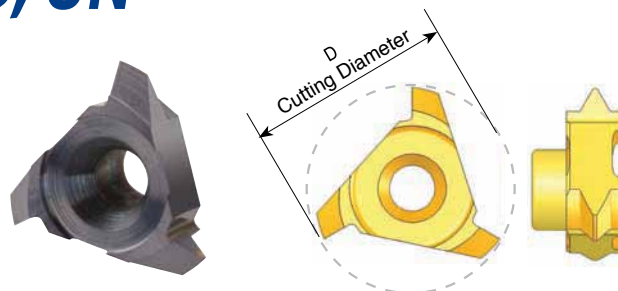


Product Identification - Ordering Codes CMT Toolholders



Partial Profile 60° - ISO, UN

Same insert for internal and external thread



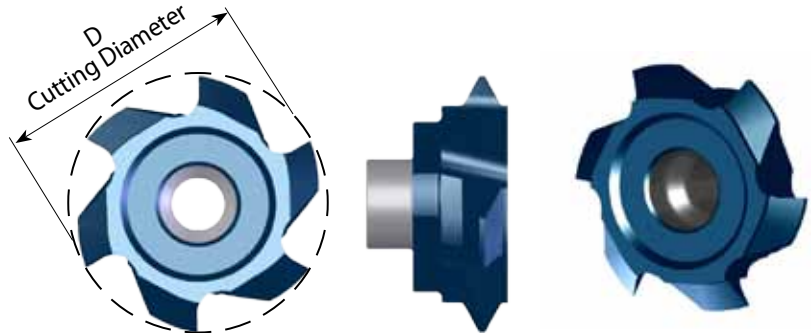
Insert Type	Pitch Range mm	Pitch Range TPI	Ordering Code	D	Thread Diameter (min)		Holder Code
					Pitch Low Range	Pitch High Range	
C10	Int. 0.5 - 0.8	56 - 28	C10 A60	10.0	Ø ≥ 11	Ø ≥ 12	H1, 2, 12, 13
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 2.0	28 - 13	C10 G60		Ø ≥ 12	Ø ≥ 14	H1, 2, 12
	Ex. 0.8 - 1.75	32 - 15					
C12	Int. 0.5 - 0.8	56 - 28	C12 A60	12.0	Ø ≥ 13	Ø ≥ 14	H3, 4, 5, 14, 15
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 2.0	28 - 13	C12 G60	12.4	Ø ≥ 14	Ø ≥ 16	
	Ex. 0.8 - 1.75	32 - 15					
C18	Int. 0.5 - 0.8	56 - 28	C18 A60	17.8	Ø ≥ 19		H6, 7, 8, 9, 16
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 1.75	28 - 14	C18 G60		Ø ≥ 20	Ø ≥ 21	
	Ex. 0.8 - 1.5	32 - 16					
	Int. 2.0 - 3.0	13 - 8	C18 D60		Ø ≥ 21	Ø ≥ 23	
	Ex. 1.75 - 2.5	15 - 10					
C25	Int. 1.5 - 2.5	16 - 10	C25 G60	25.0	Ø ≥ 28	Ø ≥ 30	H10, 11, 17, 18
	Ex. 1.0 - 2.0	28 - 13					
	Int. 3.0 - 5.0	8 - 5	C25 N60		Ø ≥ 30	Ø ≥ 34	
	Ex. 2.5 - 4.5	10 - 6					
	Int. 5.0 - 6.0	5 - 4	C25 Q60		Ø ≥ 34	Ø ≥ 35	
	Ex. 4.5 - 5.0	6 - 5					

* For complete toolholder description see pages 193 and 194

Partial Profile 60° - ISO, UN

Same insert for internal and external thread

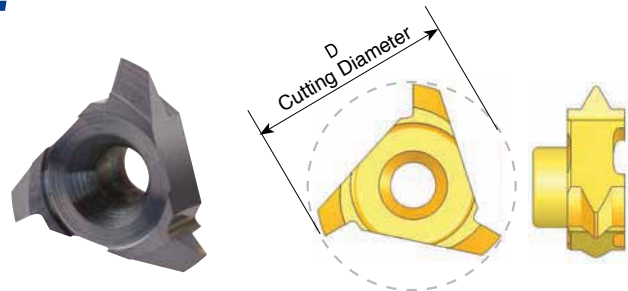
Multi Flute



Insert Type	Ordering Code	Pitch Range mm	Pitch Range TPI	D	No. of Flutes	Thread Dia (min)		Holder Code
						Pitch Low range	Pitch High range	
S20	S200 F G60	Int. 1.5-2.5	16-10	20.0	6	$\varnothing \geq 23$	$\varnothing \geq 25$	H6, 7, 8, 9, 16
		Ex. 1.0-2.0	28-13	20.0	6	$\varnothing \geq 23$	$\varnothing \geq 25$	
	S200 D N60	Int. 3.0-5.0	8- 5	20.0	4	$\varnothing \geq 25$	$\varnothing \geq 29$	H16
		Ex. 2.5-4.5	10-6	20.0	4	$\varnothing \geq 25$	$\varnothing \geq 29$	

Partial Profile 60° - NPT

Same insert for internal and external thread

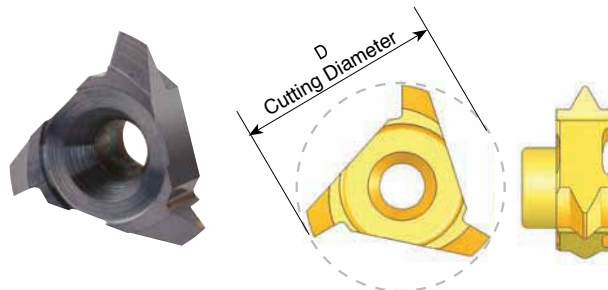


Insert Type	Pitch TPI	Standard	Ordering Code	D	Holder Code
C10	18	1/4 - 3/8	C10 18 NPT	10.0	H1, 2, 12
C18	14	1/2 - 3/4	C18 14 NPT	15.8	H16
C25	11.5	1-2	C25 11.5NPT	25.0	H10, 11, 17, 18
	8	$\geq 2 \frac{1}{2}$	C25 8 NPT	25.0	

* For complete toolholder description see pages 193 and 194

Partial Profile 55° - BSP(G), BSF, BSW

Same insert for internal and external thread

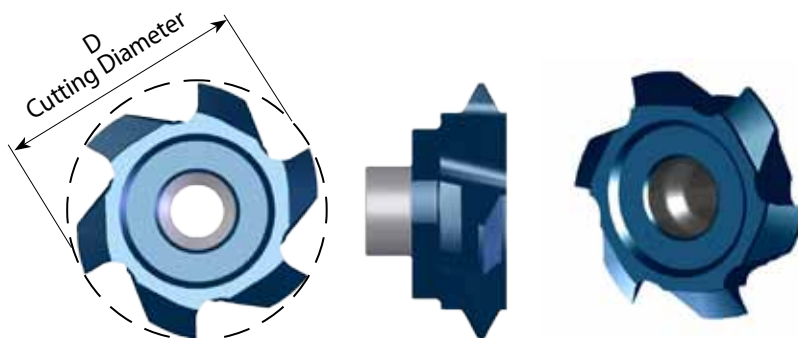


Insert Type	Pitch Range TPI	Ordering Code	D	Thread Dia. (min)	Holder Code
C10	19-14	C10 G55	10.0	$\varnothing \geq 13$	H1, 2, 12
C12	28-19	C12 G55	12.0	$\varnothing \geq 14$	H3, 4, 5, 14, 15
	14- 11	C12 N55	12.2	$\varnothing \geq 16$	H3, 4, 5, 14
C18	14- 8	C18 G55	18.0	$\varnothing \geq 23$	H6, 7, 8, 9, 16
C25	7- 5	C25 N55	25.0	$\varnothing \geq 31$	H10, 11, 17, 18

Partial Profile 55° - BSP(G), BSF, BSW

Same insert for internal and external thread

Multi Flute

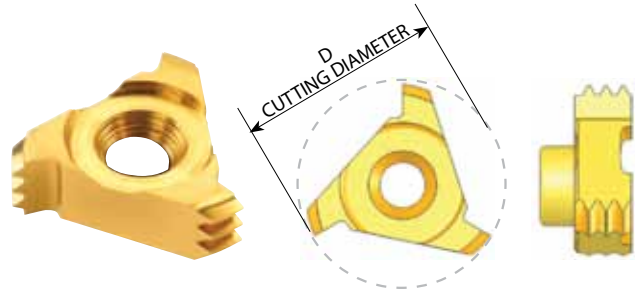


Insert Type	Ordering Code	Pitch Range TPI	D	No. of Flutes	Thread Dia (min)	Holder Code
S20	S195 F G55	14	19.5	6	$\varnothing \geq 23$	H6, 7, 8, 9, 16
	S200 D N55	8-6	20.0	4	$\varnothing \geq 25$	H16

* For complete toolholder description see pages 193 and 194

Full Profile - ISO

Inserts for internal thread



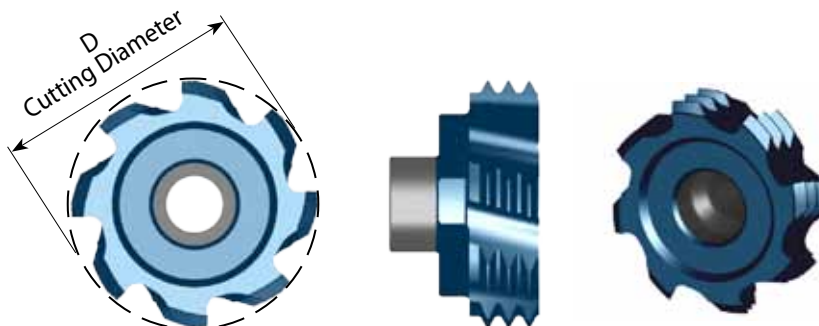
Insert Type	Pitch mm	M coarse	M fine	Ordering Code	Number of Teeth	D	Holder Code
C10	0.5		$\varnothing \geq 10$	C10 I 0.5 ISO	6	9.0	H1, 2, 12, 13
	1.0		$\varnothing \geq 12$	C10 I 1.0 ISO	3	10.0	
	1.5		$\varnothing \geq 13$	C10 I 1.5 ISO	2	10.0	
	1.75	M12	$\varnothing \geq 13$	C10 I 1.75ISO	1	9.6	H1, 2, 12
	2.0	M14	$\varnothing \geq 14$	C10 I 2.0 ISO	1	10.0	
C12	0.5		$\varnothing \geq 13$	C12 I 0.5 ISO	6	12.0	H3, 4, 5, 14, 15
	0.75		$\varnothing \geq 13$	C12 I 0.75ISO	4	12.0	
	1.0		$\varnothing \geq 14$	C12 I 1.0 ISO	3	12.0	
	1.5		$\varnothing \geq 15$	C12 I 1.5 ISO	2	12.0	
	2.0	M16	$\varnothing \geq 16$	C12 I 2.0 ISO	1	12.4	
	2.5	M18, M20	$\varnothing \geq 17$	C12 I 2.5 ISO	1	12.0	H3, 4, 5, 14
	3.0		$\varnothing \geq 17$	C12 I 3.0 ISO	1	12.4	
C18	0.5		$\varnothing \geq 19$	C18 I 0.5 ISO	9	17.8	H6, 7, 8, 9, 16
	0.75		$\varnothing \geq 19$	C18 I 0.75ISO	6	17.8	
	1.0		$\varnothing \geq 20$	C18 I 1.0 ISO	5	17.8	
	1.5		$\varnothing \geq 20$	C18 I 1.5 ISO	3	17.8	
	2.0		$\varnothing \geq 21$	C18 I 2.0 ISO	2	17.8	
	2.5	M22	$\varnothing \geq 22$	C18 I 2.5 ISO	2	17.8	
	3.0	M24, M27	$\varnothing \geq 23$	C18 I 3.0 ISO	1	17.8	
	3.5	M30, M33	$\varnothing \geq 24$	C18 I 3.5 ISO	1	17.8	
C25	3.0	M32, M33	$\varnothing \geq 30$	C25 I 3.0 ISO	2	25.0	H10, 11, 17, 18
	4.0	M36, M39	$\varnothing \geq 32$	C25 I 4.0 ISO	1	25.0	
	4.5	M45	$\varnothing \geq 33$	C25 I 4.5 ISO	1	25.0	
	5.0	M48, M52	$\varnothing \geq 34$	C25 I 5.0 ISO	1	25.0	
	5.5	M60	$\varnothing \geq 35$	C25 I 5.5 ISO	1	25.0	
	6.0	M64, M68	$\varnothing \geq 36$	C25 I 6.0 ISO	1	25.0	

* For complete toolholder description see pages 193 and 194

Full Profile - ISO

Inserts for internal thread

Multi Flute

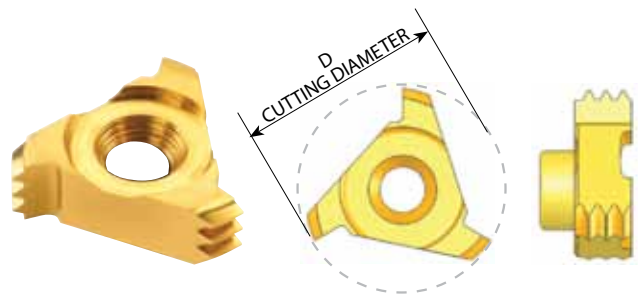


Insert Type	Ordering Code	Pitch mm	M coarse	M fine	Number of Teeth	D	No. of Flutes	Holder Code
S20	S163 H 1.0 ISO	1.0		$\emptyset \geq 18$	5	16.3	8	H6, 7, 8, 9, 16
	S175 H 1.5 ISO	1.5		$\emptyset \geq 20$	3	17.5	8	
	S186 F 2.0 ISO	2.0		$\emptyset \geq 22$	2	18.6	6	
S17	S160 F 2.5 ISO	2.5	M20	$\emptyset \geq 20$	1	16.0	6	H3, 4, 5, 14, 15
S20	S178 F 2.5 ISO	2.5	M22	$\emptyset \geq 22$	2	17.8	6	H6, 7, 8, 9, 16
	S189 F 3.0 ISO	3.0	M24, M27	$\emptyset \geq 24$	1	18.9	6	
	S200 F 3.5 ISO	3.5	M30, M33	$\emptyset \geq 26$	1	20.0	6	
	S200 F 4.0 ISO	4.0	M36, M39	$\emptyset \geq 27$	1	20.0	6	
	S200 E 4.5 ISO	4.5	M42, M45	$\emptyset \geq 28$	1	20.0	5	
	S200 D 5.0 ISO	5.0	M48, M52	$\emptyset \geq 29$	1	20.0	4	H16
S35	S350 F 6.0 ISO	6.0	M64, M68	$\emptyset \geq 46$	1	35.0	6	H19, 20, 21
	S350 F 8.0 ISO	8.0		$\emptyset \geq 50$	1	35.0	6	

* For complete toolholder description see pages 193 and 194

Full Profile - UN

Inserts for internal thread



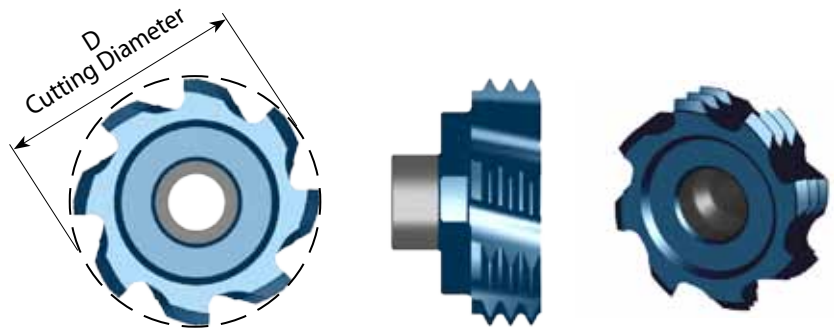
Insert Type	Pitch TPI	Nominal Size	UNC	UNF	UNEF	Ordering Code	Number of Teeth	D	Holder Code
C10	20			1/2		C10 I 20 UN	2	10.0	H1, 2, 12, 13
	18			9/16		C10 I 18 UN	2	10.0	
	13		1/2			C10 I 13 UN	1	10.0	H1, 2, 12
	12	5/8, 11/16, 3/4	9/16			C10 I 12 UN	1	10.0	
C12	32	9/16, 5/8				C12 I 32 UN	3	12.0	H3, 4, 5, 14, 15
	28	9/16, 5/8, 11/16				C12 I 28 UN	3	12.0	
	24				9/16, 5/8, 11/16	C12 I 24 UN	2	12.0	
	20	9/16, 5/8, 11/16			3/4	C12 I 20 UN	2	12.0	
	18			5/8		C12 I 18 UN	2	12.0	
	16	5/8, 11/16		3/4		C12 I 16 UN	1	12.0	
	11		5/8			C12 I 11 UN	1	12.0	H3, 4, 5, 14
	10		3/4			C12 I 10 UN	1	12.0	
C18	32	3/4, 13/16, 7/8				C18 I 32 UN	6	17.8	H6, 7, 8, 9, 16
	28	3/4, 13/16, 7/8				C18 I 28 UN	5	17.8	
	24					C18 I 24 UN	4	17.8	
	20	1 1/16, 1 1/8			13/16, 7/8, 15/16	C18 I 20 UN	3	17.8	
	18					C18 I 18 UN	3	17.8	
	16	7/8, 1				C18 I 16 UN	3	17.8	
	14			7/8		C18 I 14 UN	2	17.8	
	12	7/8		1, 1 1/8		C18 I 12 UN	2	17.8	
	11					C18 I 11 UN	2	17.8	
	9		7/8			C18 I 9 UN	1	17.8	
	8		1			C18 I 8 UN	1	17.8	
C25	8	1 3/16, 1 1/4, 1 5/16				C25 I 8 UN	2	25.0	H10, 11, 17, 18
	7		1 1/4			C25 I 7 UN	1	25.0	
	6	1 7/16, 1 9/16	1 3/8, 1 1/2			C25 I 6 UN	1	25.0	
	5		1 3/4			C25 I 5 UN	1	25.0	
	4		2 1/2, 2 3/4			C25 I 4 UN	1	25.0	

* For complete toolholder description see pages 193 and 194

Full Profile - UN

Inserts for internal thread

Multi Flute

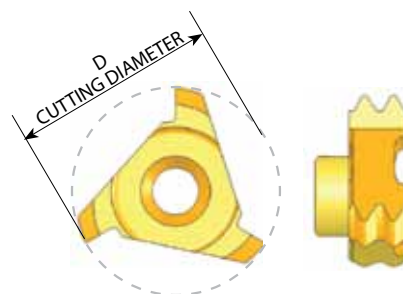


Insert Type	Ordering Code	Pitch TPI	Nominal size	UNC	UNF	UNEF	Number of Teeth	D	No. of Flutes	Holder Code
S20	S160 H 24 UN	24				11/16	4	16.0	8	H6, 7, 8, 9, 16
	S169 H 20 UN	20				3/4, 13/16, 7/8, 15/16, 1	4	16.9	8	
	S164 F 16 UN	16	7/8, 15/16, 1		3/4		3	16.4	6	
	S191 F 14 UN	14			7/8		2	19.1	6	
	S186 F 12 UN	12	7/8, 15/16		1		2	18.6	6	
	S178 F 9 UN	9		7/8			1	17.8	6	
	S200 F 8 UN	8	1 1/8	1			1	20.0	6	
	S200 F 7 UN	7		1 1/8, 1 1/4			1	20.0	6	
	S200 E 6 UN	6	1 7/16	1 3/8, 1 1/2			1	20.0	5	
	S200 D 5 UN	5		1 3/4			1	20.0	4	H16
S35	S350 F 4 UN	4		2 1/2, 2 3/4, 3			1	35.0	6	H19, 20, 21

* For complete toolholder description see pages 193 and 194

G 55° BSW, BSF, BSP

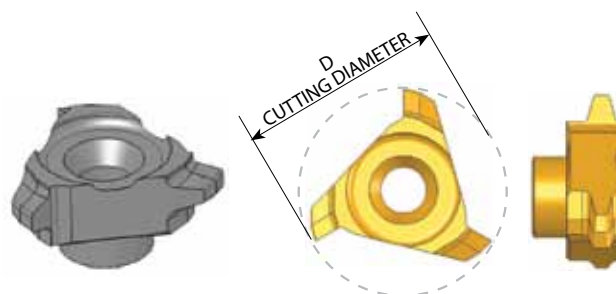
Same Insert for internal and external thread



Insert Type	Pitch TPI	Standard	Ordering Code	Number of Teeth	D	Holder Code
C10	19	G 1/4	C10 19 W	2	10.0	H1, 2, 12, 13
C12	19	G 3/8	C12 19 W	2	12.0	H3, 4, 5, 14, 15
C18	14	G 7/8	C18 14 W	2	17.8	H6, 7, 8, 9, 16
	11	G ≥ 1	C18 11 W	2	17.8	

Trapez - DIN 103

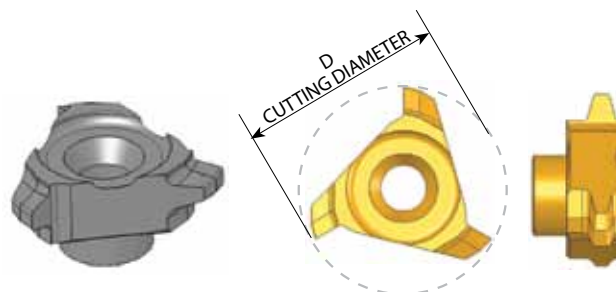
Inserts for internal thread



Insert Type	Pitch mm	Standard	Ordering Code	D	Holder Code
C10	2.0	Ø ≥ 16	C10 I 2 TR	10.0	H1, 2, 12,
C18	3.0	Ø ≥ 24	C18 I 3 TR	17.8	H6, 7, 8, 9, 16
	4.0	Ø ≥ 26	C18 I 4 TR	17.8	H16
	5.0	Ø ≥ 28	C18 I 5 TR	17.8	
C25	6.0	Ø ≥ 36	C25 I 6 TR	25.0	H10, 11, 17, 18

Acme

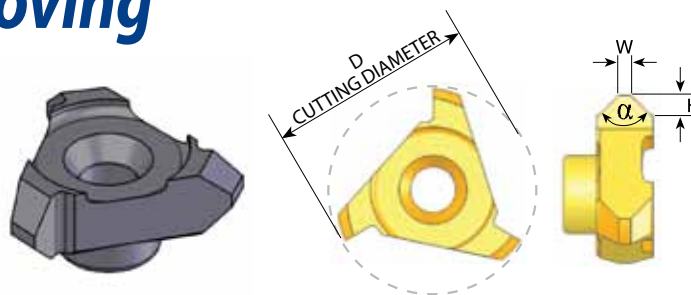
Inserts for internal thread



Insert Type	Pitch TPI	Standard	Ordering Code	D	Holder Code
C18	5	1 1/8, 1 1/4	C18 I 5 ACME	18.0	H16
C25	4	1 1/2, 1 3/4, 2	C25 I 4 ACME	25.0	H10, 11, 17, 18

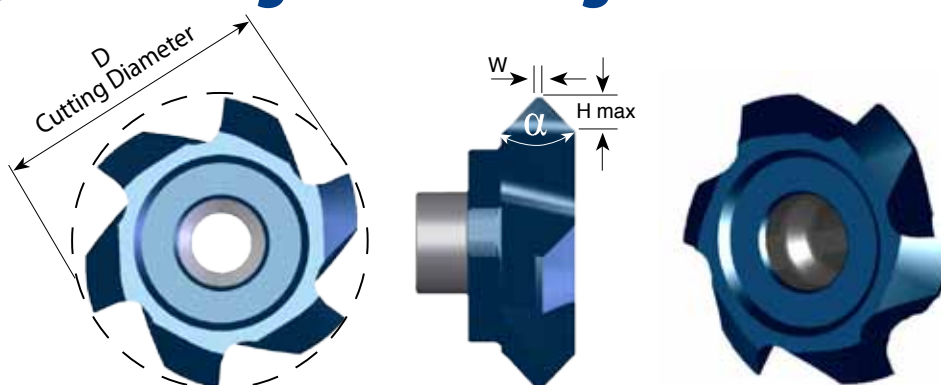
* For complete toolholder description see pages 193 and 194

Chamfering and Grooving



Insert Type	Ordering Code	D	H	W	α	Holder Code*
C10	C10 C90	10.0	1.30	0.4	90°	H1, 2, 12
C12	C12 C90	12.0	1.35	0.3	90°	H3, 4, 5, 14
C18	C18 C90	17.8	1.95	1.1	90°	H6, 7, 8, 9, 16
C25	C25 C90	25.0	2.50	1.0	90°	H10, 11, 17, 18

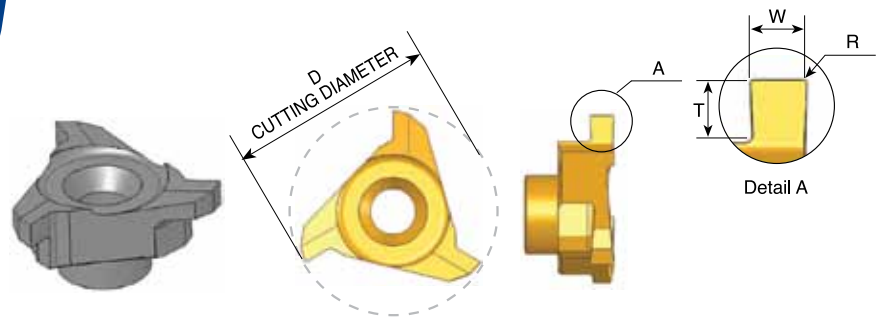
Chamfering, Grooving and Boring Multi Flute



Insert Type	Ordering Code	D	H max	W	α	No. of Flutes	Holder Code
S17	SC160 E H14	16.0	1.35	0.2	90°	5	H3, 4, 5, 14, 15
S20	SC170 E H14	17.0	1.35	0.2	90°	5	H6, 7, 8, 9, 16
	SC200 F H14	20.0	1.35	0.2	90°	6	H6, 7, 8, 9, 16
	SC200 F H24	20.0	2.35	0.2	90°	6	
S35	SC350 F H42	35.0	4.20	0.2	90°	6	H19, 20, 21
S20	SC200 F H20	20.0	1.95	1.0	90°	6	H6, 7, 8, 9, 16
	SC200 F H17	20.0	1.70	1.5	90°	6	
	SC200 F H15	20.0	1.50	2.0	90°	6	
	SC200 F H12	20.0	1.20	2.5	90°	6	

* For complete toolholder description see pages 193 and 194

Groove Milling

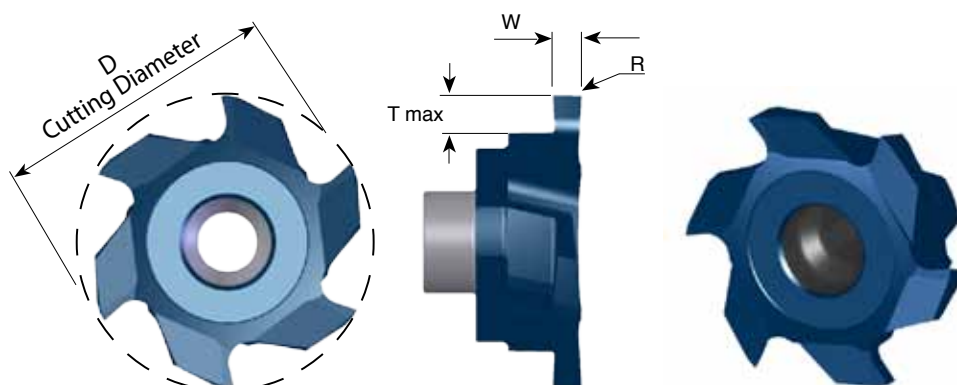


Insert Type	Ordering Code	D	W ±0.02	T max.	R	Groove Dia. (min.)	Holder Code
C10	C10 W08	10.0	0.80	0.80	0.1	Ø > 10.0	H1, 2, 12, 13
	C10 W09		0.90	0.90			
	C10 W10		1.00	0.90			
C12	C12 W08	12.0	0.80	0.80	0.1	Ø > 12.0	H3, 4, 5, 14, 15
	C12 W10		1.00	0.90			
C18	C18 W10	17.8	1.00	1.50	0.1	Ø > 17.8	H6, 7, 8, 9, 16
	C18 W12		1.20	1.50			
	C18 W15		1.50	1.95			
	C18 W20		2.00	2.80			H16
C25	C25 W20	25.0	2.00	3.00	0.2	Ø > 25	H10, 11, 17, 18
	C25 W25		2.50	3.00			
	C25 W30		3.00	3.00			
	C25 W35		3.50	3.50			
	C25 W40		4.00	3.50			
	C25 W50		5.00	3.50			

* For complete toolholder description see pages 193 and 194

Groove Milling

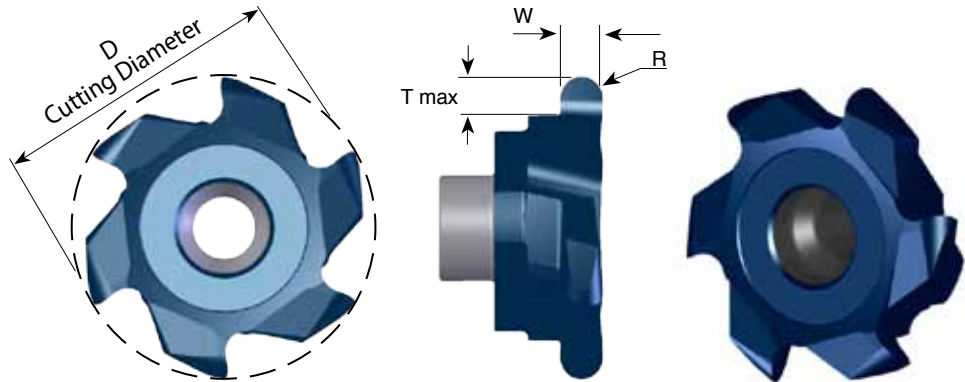
Multi Flute



Insert Type	Ordering Code	D	W ±0.02	T Max.	R	Groove Dia. (min)	No. of Flutes	Holder Code
S17	SG170 F W15	17.0	1.5	2.8	0.2	Ø > 17	6	H3, 4, 5, 14, 15
	SG170 F W20	17.0	2.0					
	SG170 F W25	17.0	2.5					
S20	SG200 F W15	20.0	1.5	2.9	0.2	Ø > 20	6	H6, 7, 8, 9, 16
	SG200 F W20	20.0	2.0					
	SG200 F W25	20.0	2.5					
	SG200 F W30	20.0	3.0					
	SG200 F W40	20.0	4.0					
	SG200 F W49	20.0	4.9					
S20	SG200 E W20T	20.0	2.0	3.7	0.2	Ø > 20	5	H16
	SG200 E W25T	20.0	2.5					
	SG200 E W30T	20.0	3.0					
S35	SG350 F W30T	35.0	3.0	6.3	0.2	Ø > 35	6	H19, 20, 21
	SG350 F W40T	35.0	4.0					
	SG350 F W50T	35.0	5.0					
	SG350 F W60T	35.0	6.0					
	SG350 F W80T	35.0	8.0					

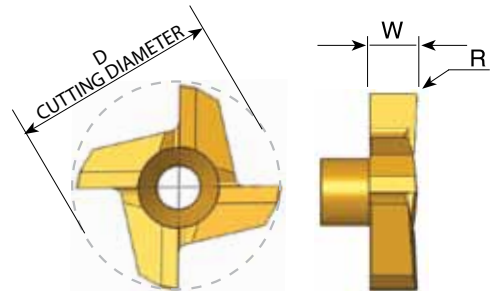
* For complete toolholder description see pages 193 and 194

Full Radius Groove Milling Multi Flute



Insert Type	Ordering Code	D	R	W ±0.02	T Max.	Groove Dia. (min)	No. of Flutes	Holder Code
S20	SG200 F R10	20.0	1.0	2.0	2.9	Ø > 20	6	H6, 7, 8, 9, 16
	SG200 F R12	20.0	1.2	2.4				
	SG200 F R15	20.0	1.5	3.0				
	SG200 F R20	20.0	2.0	4.0				

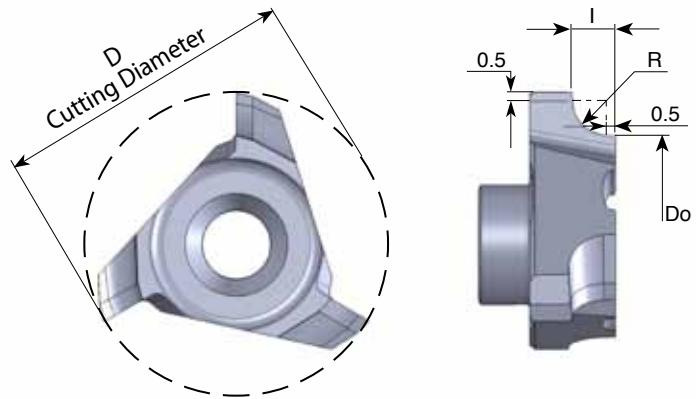
Face Milling and Finishing



Insert Type	Ordering Code	D	W	R	Holder Code
C18	C18 F R0.1	17.8	5.0	0.1	H6, 7, 8, 9, 16
C25	C25 F R0.2	25.0	6.0	0.2	H10, 11, 17, 18

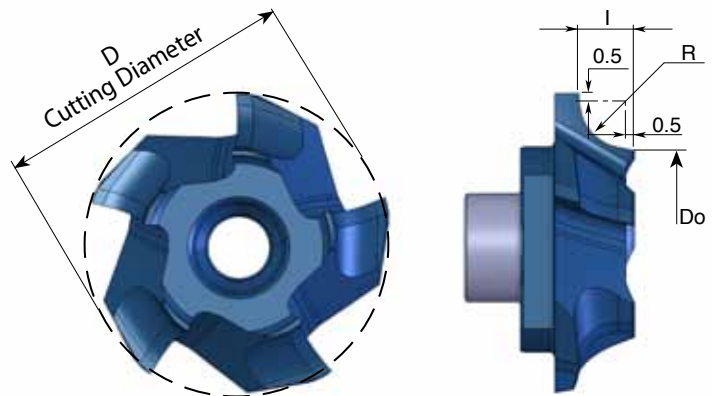
* For complete toolholder description see pages 193 and 194

Corner Rounding



Insert Type	Ordering Code	D	Do	R	I	Holder Code
C10	C10 CR05	10.0	7.9	0.5	1.05	H1, 2, 12, 13
	C10 CR10	10.0	6.9	1.0	1.55	
C18	C18 CR13	17.8	14.2	1.25	1.80	H6, 7, 8, 9, 16
	C18 CR15	17.8	13.7	1.5	2.05	
	C18 CR20	17.8	12.7	2.0	2.55	

Corner Rounding Multi Flute

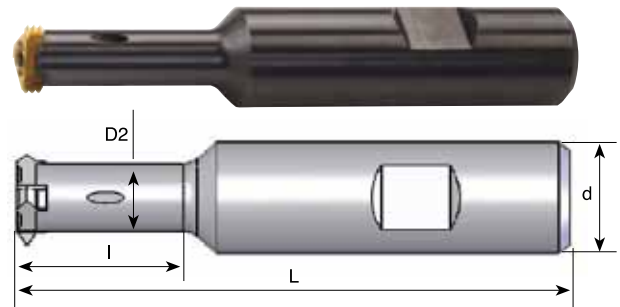


Insert Type	Ordering Code	D	Do	R	I	No. of Flutes	Holder Code
S17	S170 E CR10	17.0	13.9	1.0	1.55	5	H3, 4, 5, 14, 15
	S170 E CR13	17.0	13.4	1.25	1.80	5	
	S170 E CR15	17.0	12.9	1.5	2.05	5	

* For complete toolholder description see pages 193 and 194

Steel Toolholders

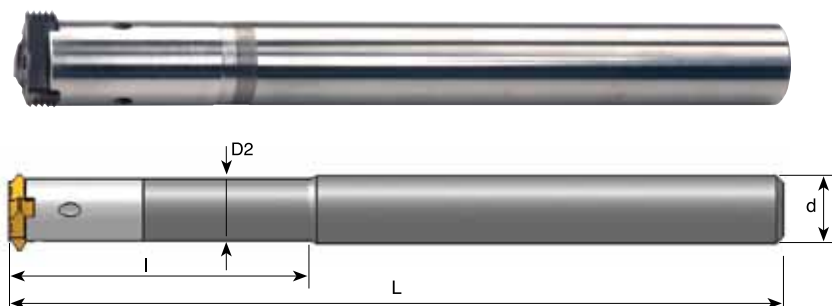
With internal coolant



Tool No.	Ordering Code	Insert Type	d	D2	I	L	Insert Screw	Torx Key
H1	SRC 1210 E	C10	12	7.3	19	70	S5	K5
H2	SRC 1610 G		16		19	90		
H3	SRC 1212 E	C12, S17	12	9.0	25	70	S10	K10
H4	SRC 1612 G		16		25	90		
H5	SRC 1612 H		16		35	100		
H6	SRC 1618 H	C18, S20	16	13.8	48	100	S16	K16
H7	SRC 2018 H		20		32	100		
H8	SRC 2018 J		20		48	110		
H9	SRC 2018 L		20		74	140		
H10	SRC 2525 J	C25	25	17.5	45	115	S27	K27
H11	SRC 2525 M		25		80	150		
H19	SRC 2535 H	S35	25	22	40	100	S33	K33
H20	SRC 2535 K		25		60	130		

Carbide Shank Toolholders

With internal coolant



Tool No.	Ordering Code	Insert Type	d	D2	I	L	Insert Screw	Torx Key
H12	CRC 0810 L35 K	C10	8	7.3	35	125	S5	K5
H13	CRC 0810 K		8	8.0	—	125	S5	K5
H14	CRC 1012 L40 M	C12, S17	10	9.0	40	150	S10	K10
H15	CRC 1012 M		10	10.0	—	150	S10	K10
H16	CRC 1218 P	C18, S20	12	12.0	—	170	S16	K16
H17	CRC 1625 R	C25	16	16.0	—	205	S27	K27
H18	CRC 2025 L85 S		20	17.5	85	250	S27	K27
H21	CRC 2035 S	S35	20	22.0	—	260	S33	K33

Toolholders without Weldon

CMT Multi Insert Milling Cutters

Carmex presents a new generation of CMT indexable milling inserts and cutters for Grooving, Chamfering and Threading



Inserts

- Insert profiles are fully ground
- Spiral inserts for smooth cutting operation
- Three cutting edges on each insert
- For a wide range of materials and applications

Carbide grade: MT7

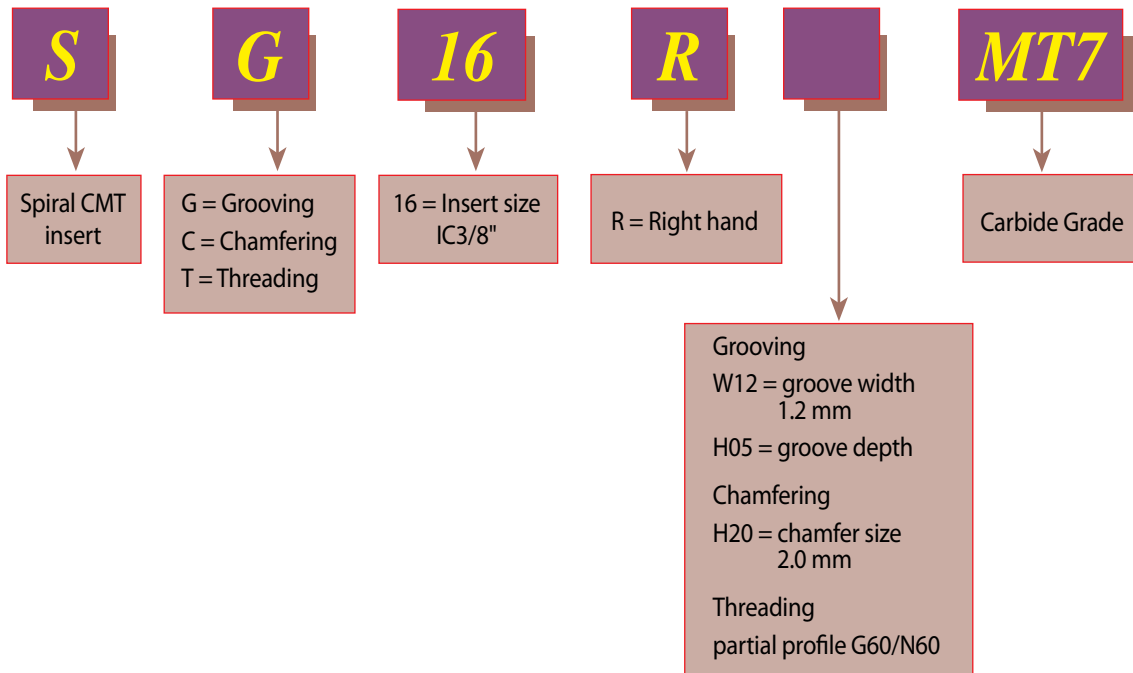


Milling cutters / Disc milling cutter

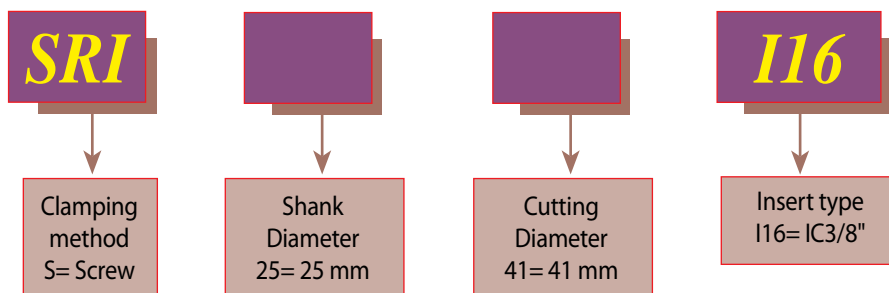
- 4 - 8 inserts per holder, for high productivity
- To use with Carmex standard CMT - S35 toolholders
- The milling cutters are coated with a special layer (silver color) for high Anti-corrosive resistance and extra protection against cutting burrs

Product Identification - Ordering Codes

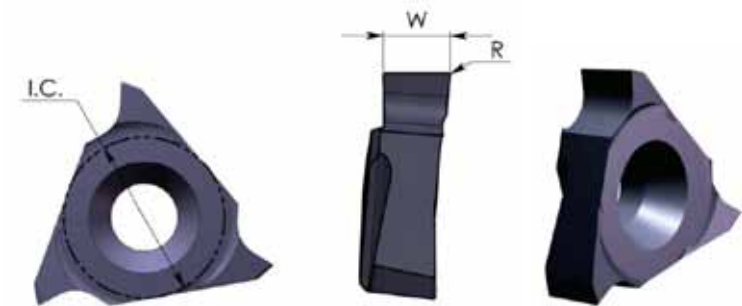
Inserts



Toolholders



Groove Milling



DIN 471 / 472

Insert Type	I.C.	Ordering Code	W	R	Holder Code
SI16	3/8"	SG 16 R W14	1.40	0.10	H22, H23
		SG 16 R W17	1.70	0.10	
		SG 16 R W19	1.95	0.15	
		SG 16 R W22	2.25	0.15	
		SG 16 R W27	2.75	0.20	
		SG 16 R W32	3.25	0.20	
		SG 16 R W42	4.25	0.20	H22, H23, H24
		SG 16 R W43	4.35	0.20	

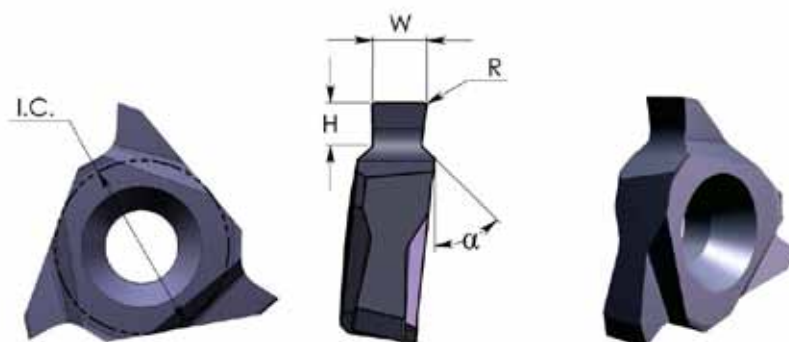
Right hand cutting

Insert Type	I.C.	Ordering Code	W	R	Holder Code
SI16	3/8"	SG 16 L W43	4.35	0.20	H24

Left hand cutting

* Maximum groove depth (T max) according to the toolholder.

Groove Milling with Chamfer

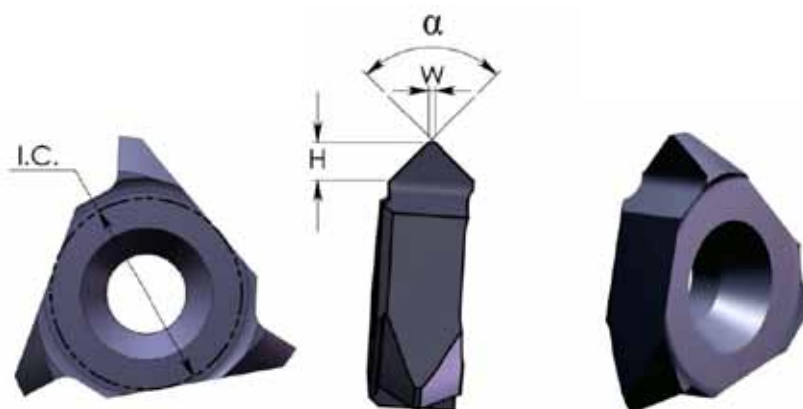


DIN 471 / 472

Insert Type	I.C.	Ordering Code	W	H max	R	α	Holder Code
SI16	3/8"	SG 16 R W12 H05	1.20	0.50	0.10	45°	H22, H23
		SG 16 R W14 H07	1.40	0.70			
		SG 16 R W14 H08	1.40	0.85			
		SG 16 R W17 H08	1.70	0.85			
		SG 16 R W17 H10	1.70	1.00			
		SG 16 R W19 H12	1.95	1.25	0.15		
		SG 16 R W22 H15	2.25	1.50			
		SG 16 R W27 H15	2.75	1.50			
		SG 16 R W27 H17	2.75	1.75			
		SG 16 R W32 H17	3.25	1.75			
		SG 16 R W42 H20	4.25	2.00			
		SG 16 R W42 H25	4.25	2.50			

Right hand cutting

Chamfering

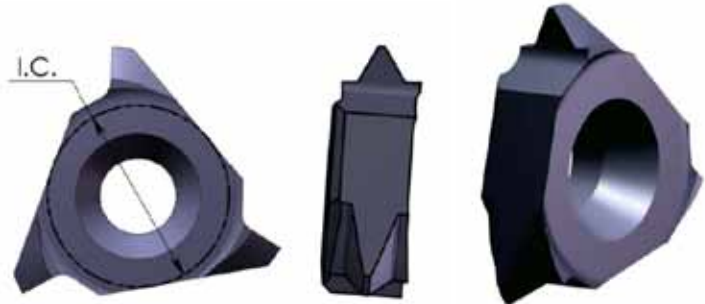


Insert Type	I.C.	Ordering Code	H max	W	α	Holder Code
SI16	3/8"	SC 16 R H20	2.00	0.2	90°	H22, H23
		SC 16 R H19	1.90	0.5		

Maximum groove depth (T max) according to the toolholder.

Partial Profile 60° - ISO, UN

Same Insert for internal and external thread

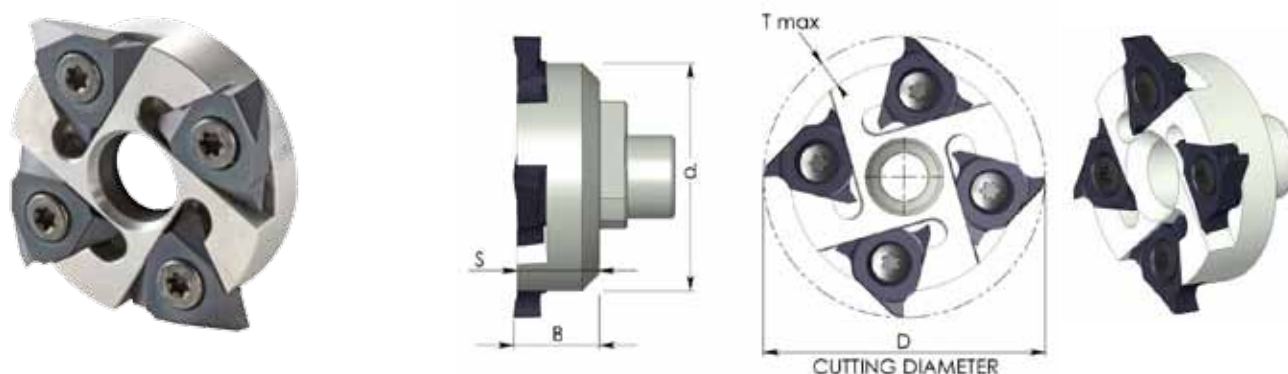


Insert Type	I.C.	Ordering Code	Pitch Range mm	Pitch Range TPI	Holder Code
SI16	3/8"	ST 16 R G60	1.5-3.0	16-8	H22, H23
		ST 16 R N60	3.5-5.0	7-5	

Right hand cutting

Toolholders

Milling Cutter- Arbor

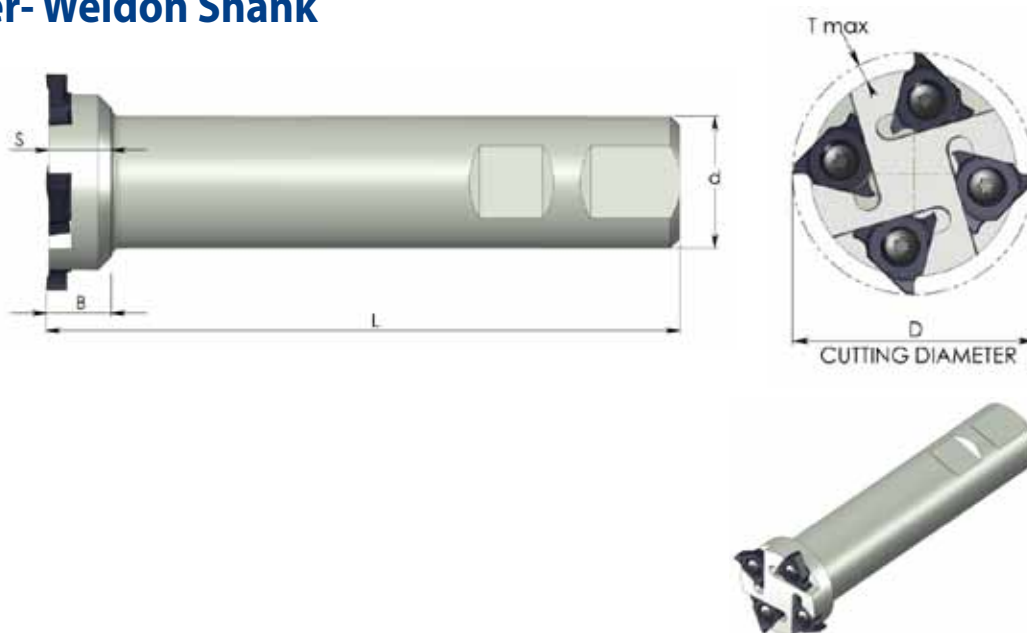


Tool No.	Ordering Code	Insert type	D	d	T max	B	S	Insert Screw	Torx Key
H22	SRI 41- I16	SI16	41	33.2	3.6	12.5	12.0	S16S	K16

Right hand cutting

To connect to the standard CMT toolholders S35: SRC 2535 H, SRC 2535 K, CRC 2035 S

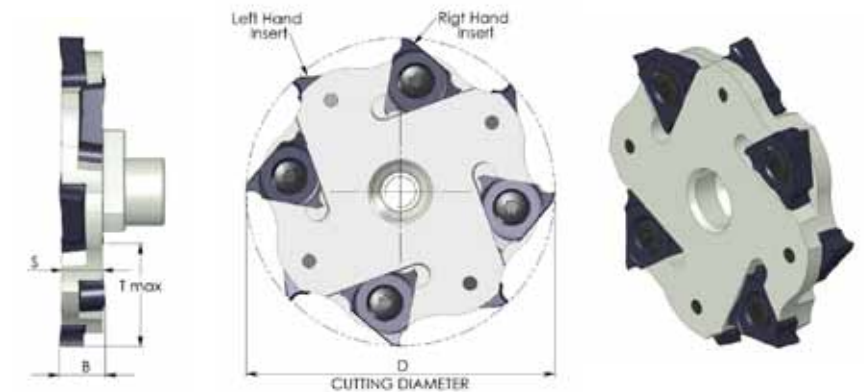
Milling Cutter- Weldon Shank



Tool No.	Ordering Code	Insert type	D	d	T max	B	S	L	Insert Screw	Torx Key
H23	SRI 2541-I16	SI16	41	25	3.6	12.5	12.0	125	S16S	K16

Right hand cutting

Mill Cutter - Disc Milling



Tool No.	Ordering Code	Insert type	D	T max	B	S	Insert Screw	Torx Key
H24	SRI 55-I16	SI16	55	15.5	8.2	7.2	S16M	K16

Right hand cutting

To use only with inserts SG 16 R W43, and SG 16 L W43

To connect to the standard CMT toolholders S35: SRC 2535 H, SRC 2535 K, CRC 2035 S