Carmex®
Precision Tools Ltd.
x-treme thread cutting™

25th Anniversary

CMT
New Products

PATENT PENDING

Carmex presents the new generation of CMT vertical thread milling inserts to perform a wide variety of threading, grooving and chamfering.

- Grounded profile
- Multi flute: 4-8 cutting edges
- Spiral flute for smooth cutting

The new cutters are designed for large range of materials including hardened steel up to 62 HRc.
To use with the same CMT tool holders, C18 type.

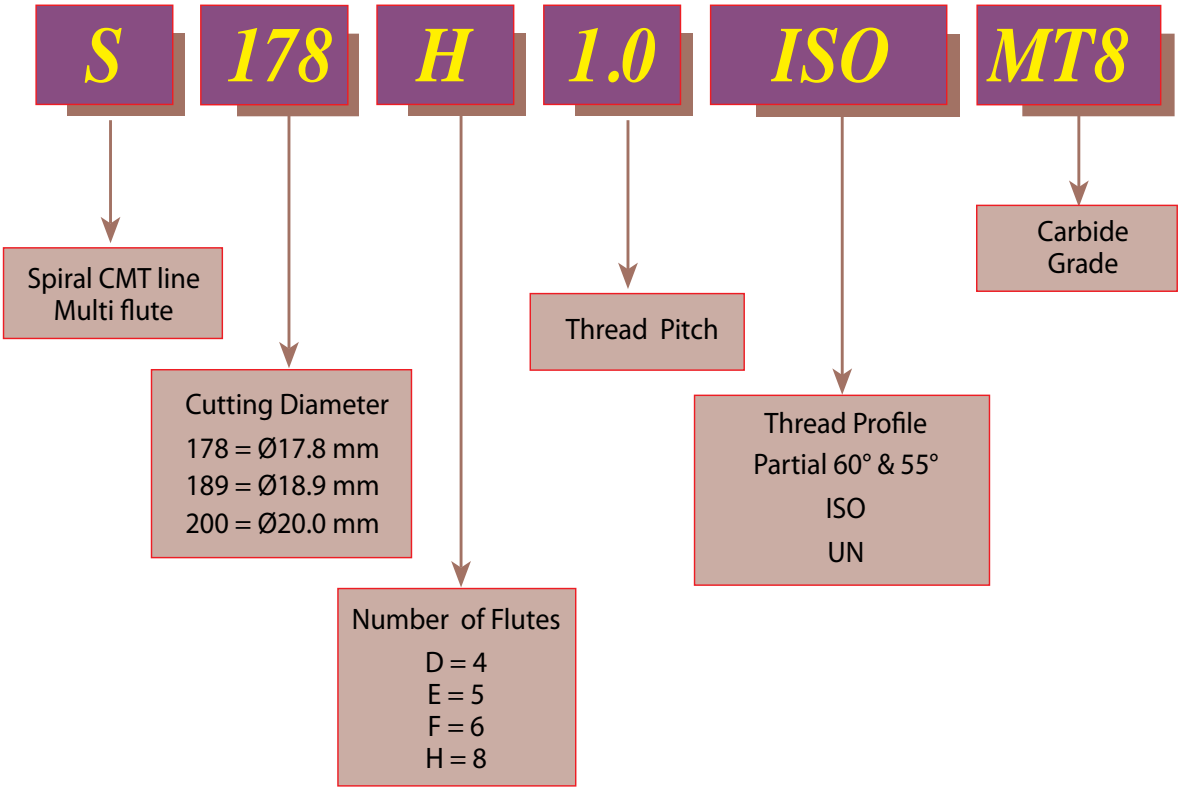
Advantages

- Longer tool life
- High material removal and higher feeds results increased productivity
- Excellent surface finish
- Reduced cycle time
- Low cutting forces due to the spiral multi flutes

Carbide Grade: MT8
Sub Micron grade with advanced PVD triple coating (ISO K10-K20).
Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining condition, general purpose for all materials.

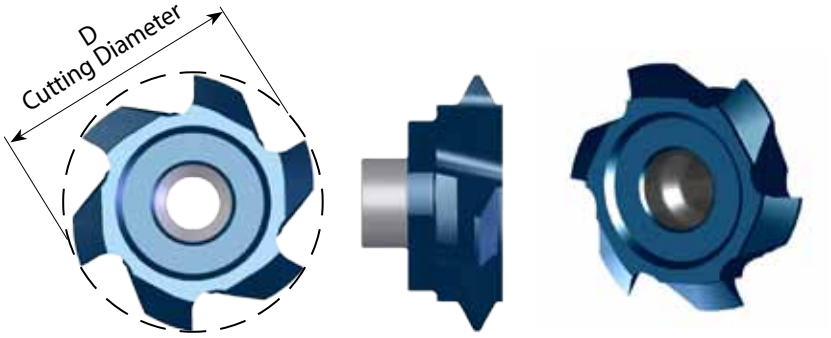
Product Identification

CMT



Partial Profile 60°

Same insert for internal and external thread



Ordering Code	Pitch Range mm	Pitch Range TPI	D	No. of Flutes	Thread Dia (min)		Holder Code
					Pitch Low range	Pitch High range	
S200 F G60	Int. 1.5-2.5 Ex. 1.0-2.0	16-10 28-13	20.0	6	Ø≥23	Ø≥25	H6, 7, 8, 9, 15
S200 D N60	Int. 3.0-5.0 Ex. 2.5-4.5	8-5 10-6	20.0	4	Ø≥25	Ø≥29	H15

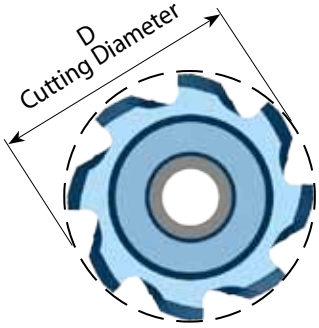
Order example: S200 F G60 MT8

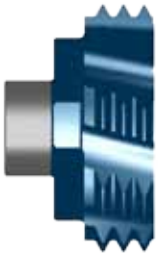
Partial Profile 55°

Same insert for internal and external thread

Ordering Code	Pitch Range TPI	D	No. of Flutes	Thread Dia (min)	Holder Code
S195 F G55	14	19.5	6	Ø≥23	H6, 7, 8, 9, 15
S200 D N55	8-6	20.0	4	Ø≥25	H15

Full Profile





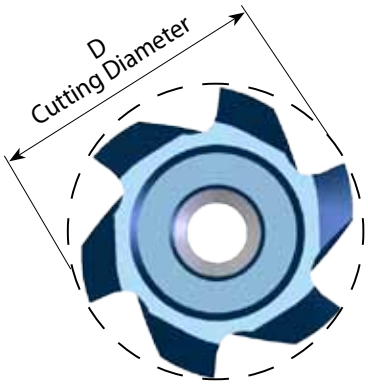
ISO
Inserts for internal thread

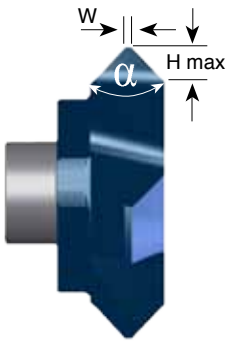
Ordering Code	Pitch mm	M coarse	M fine	Number of Teeth	D	No. of Flutes	Holder Code
S163 H 1.0 ISO	1.0		Ø≥18	5	16.3	8	H6, 7, 8, 9, 15
S175 H 1.5 ISO	1.5		Ø≥20	3	17.5	8	
S186 F 2.0 ISO	2.0		Ø≥22	2	18.6	6	
S178 F 2.5 ISO	2.5	M22	Ø≥22	2	17.8	6	
S189 F 3.0 ISO	3.0	M24, M27	Ø≥24	1	18.9	6	
S200 F 3.5 ISO	3.5	M30, M33	Ø≥26	1	20.0	6	
S200 F 4.0 ISO	4.0	M36, M39	Ø≥27	1	20.0	6	
S200 E 4.5 ISO	4.5	M42, M45	Ø≥28	1	20.0	5	
S200 D 5.0 ISO	5.0	M48, M52	Ø≥29	1	20.0	4	H15

UN
Inserts for internal thread

Ordering Code	Pitch TPI	Nominal size	UNC	UNF	UNEF	Number of Teeth	D	No. of Flutes	Holder Code
S160 H 24 UN	24				11/16	4	16.0	8	H6, 7, 8, 9, 15
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	H15

Chamfering, Grooving and Boring

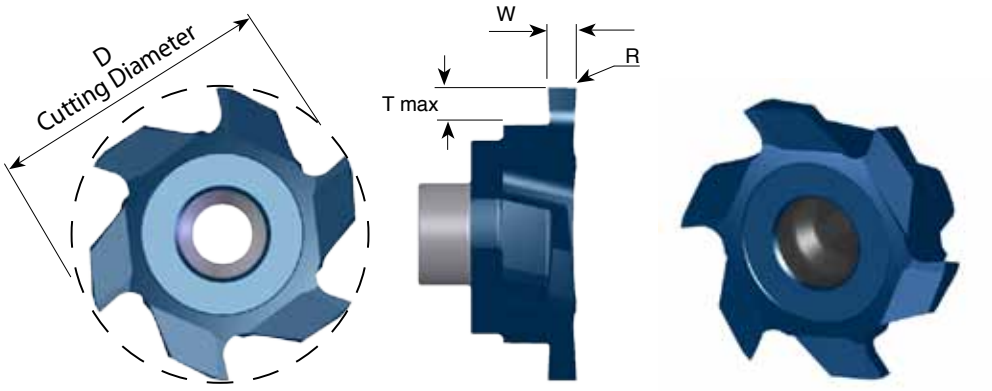




Ordering Code	D	W	H max	α	No. of Flutes	Holder Code
SC170 E H14	17.0	0.2	1.35	90°	5	H6, 7, 8, 9, 15
SC200 F H14	20.0	0.2	1.35	90°	6	H6, 7, 8, 9, 15
SC200 F H24	20.0	0.2	2.35			
SC200 F H20	20.0	1.0	1.95	90°	6	H6, 7, 8, 9, 15
SC200 F H17	20.0	1.5	1.70			
SC200 F H15	20.0	2.0	1.50			
SC200 F H12	20.0	2.5	1.20			

Order example: SC200 F H24 MT8

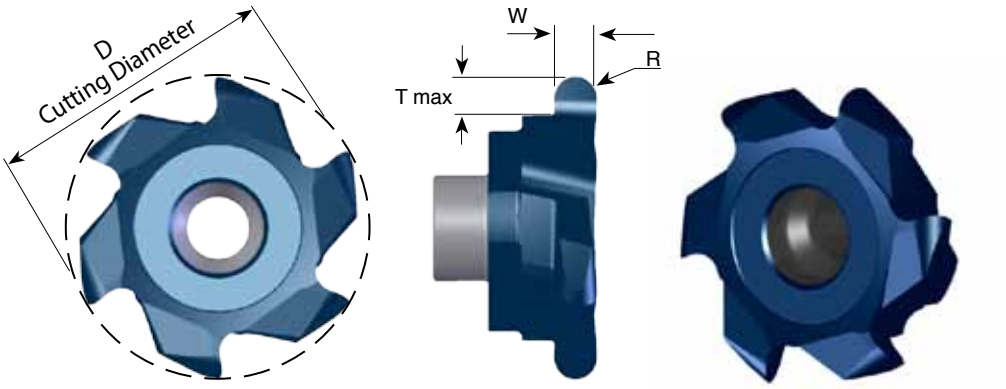
Groove Milling



Ordering Code	D	W ±0.02	T Max.	R	Groove Dia. (min)	No. of Flutes	Holder Code
SG200 F W15	20.0	1.5	2.9	0.2	Ø>20	6	H6, 7, 8, 9, 15
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					
SG200 E W20T	20.0	2.0	3.7	0.2	Ø>20	5	H15
SG200 E W25T	20.0	2.5					
SG200 E W30T	20.0	3.0					

Order example: SG200 F W30 MT8

Full Radius Groove Milling

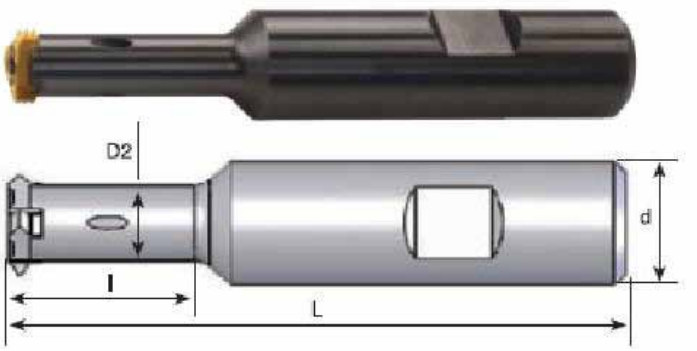


Ordering Code	D	R	W ±0.02	T Max.	Groove Dia. (min)	No. of Flutes	Holder Code
SG200 F R10	20.0	1.0	2.0	2.9	Ø>20	6	H6, 7, 8, 9, 15
SG200 F R12	20.0	1.2	2.4				
SG200 F R15	20.0	1.5	3.0				
SG200 F R20	20.0	2.0	4.0				

Order example: SG200 F R15 MT8

Steel Toolholders

With internal coolant



Tool No.	Ordering Code	d	D2	l	L	Insert Screw	Torx Key
H6	**SRC 1618 H**	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		

Carbide Shank Toolholder

With internal coolant

Tool No.	Ordering Code	d	D2	l	L	Insert Screw	Torx Key
H15	**CRC 1218 P**	12	12.0	---	170	S16	K16

Toolholder without Weldon

Cutting Data

Carbide grade - MT8:

Sub-Micron Grade with Aluminum Titanium Nitride (AlTiN) multi-layer coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

ISO Standard	Material	Cutting Speed m/min	Feed mm/tooth Cutting Diameter = D
			Ø16–Ø20
P	Low&Medium Carbon Steels <0.55%C	60–120	0.14–0.24
	High Carbon Steels ≥0.55%C	60–90	0.12–0.24
	Alloy Steels,Treated Steels	50–80	0.08–0.20
M	Stainless Steel–Free Cutting	70–100	0.08–0.19
	Stainless Steel–Austenitic	60–90	0.08–0.19
	Cast Steels	70–90	0.08–0.20
K	Cast Iron	40–80	0.14–0.24
N	Aluminum ≤12%Si, Copper	100–200	0.14–0.26
	Aluminum >12%Si	60–140	0.08–0.22
	Synthetics, duroplastics, thermoplastics	50–200	0.17–0.28
S	Nickel alloys, Titanium alloys.	20–40	0.05–0.14
H	Hardened Steel, 45–50HRc	60–70	0.07–0.17
	Hardened Steel, 51–55HRc	50–60	0.06–0.16

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CARMEX CMT NEWS 04/2013

1st Hacharoshet St., Maalot Industrial Zone 2101302, ISRAEL
Tel: (972) 4-9077400, Fax: (972) 4-9077440.
E-mail: info @carmex.com Website: www.carmex.com
Postal address: P.O. Box 404, Maalot 2101302, ISRAEL.