

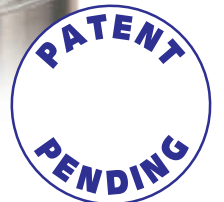


***Carmex***  
*Precision Tools Ltd.*  
***x-treme thread cutting™***



# **CMT**

## **New Products**



**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**

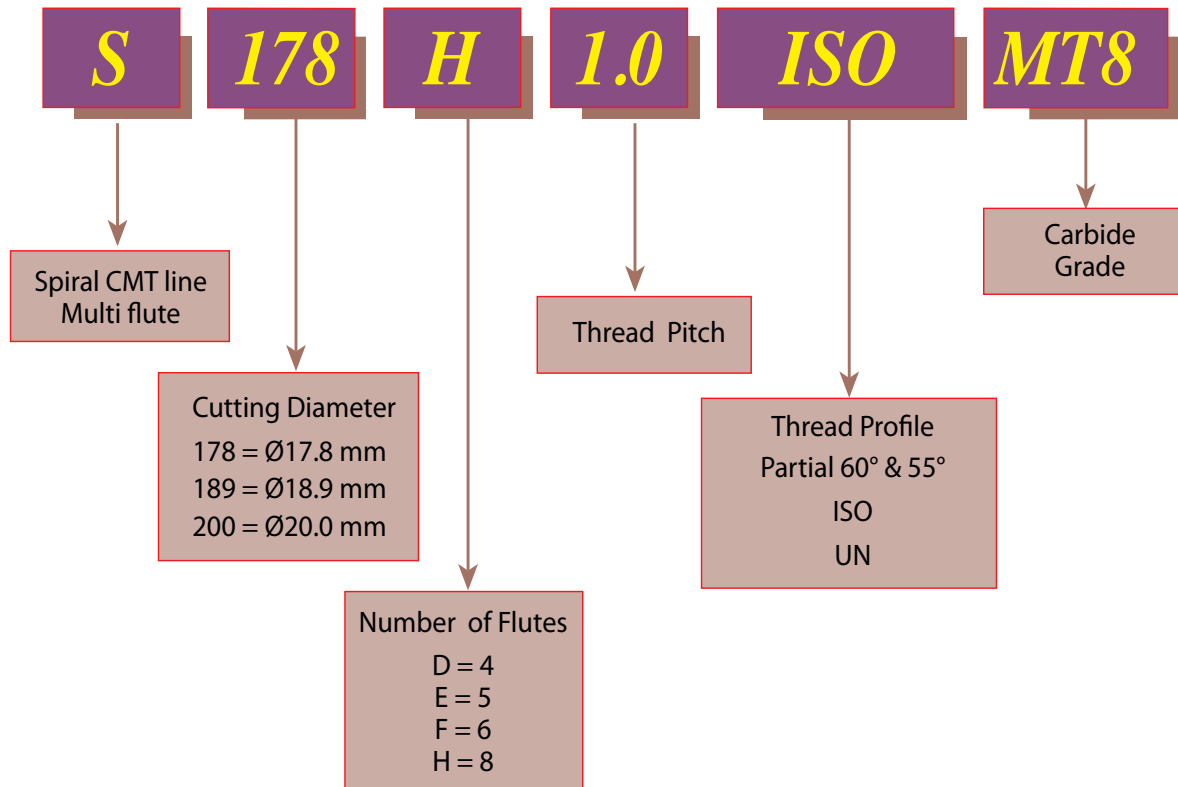
**Carbide Grade: MT8**

**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.**

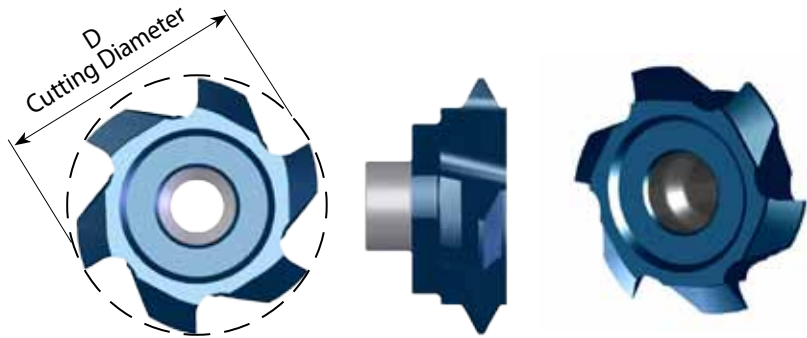
# Product Identification

## 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	
<b>S200 F G60</b>	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
<b>S200 D N60</b>	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°

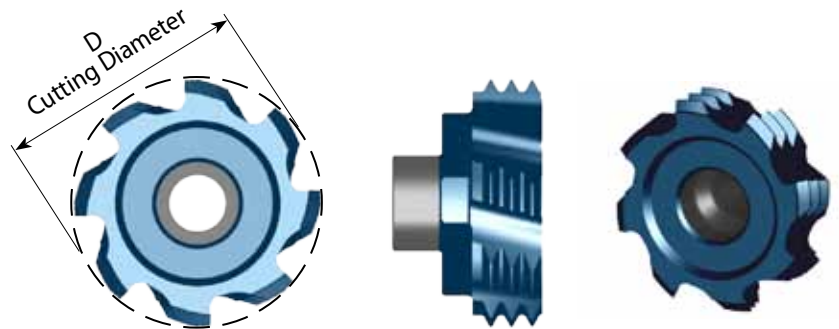
Same insert for internal and external thread

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

# Full Profile

## ISO

Inserts for internal thread



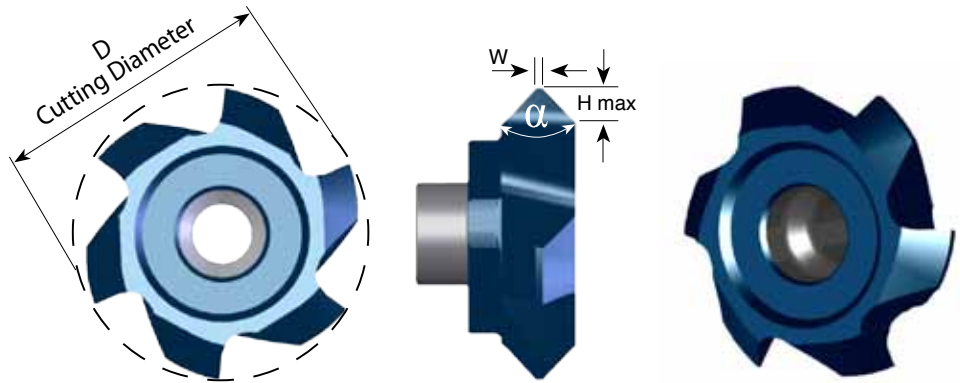
Ordering Code	Pitch mm	M coarse	M fine	Number of Teeth	D	No. of Flutes	Holder Code
<b>S163 H 1.0 ISO</b>	1.0		$\text{Ø} \geq 18$	5	16.3	8	H6, 7, 8, 9, 15
<b>S175 H 1.5 ISO</b>	1.5		$\text{Ø} \geq 20$	3	17.5	8	
<b>S186 F 2.0 ISO</b>	2.0		$\text{Ø} \geq 22$	2	18.6	6	
<b>S178 F 2.5 ISO</b>	2.5	M22	$\text{Ø} \geq 22$	2	17.8	6	
<b>S189 F 3.0 ISO</b>	3.0	M24, M27	$\text{Ø} \geq 24$	1	18.9	6	
<b>S200 F 3.5 ISO</b>	3.5	M30, M33	$\text{Ø} \geq 26$	1	20.0	6	
<b>S200 F 4.0 ISO</b>	4.0	M36, M39	$\text{Ø} \geq 27$	1	20.0	6	
<b>S200 E 4.5 ISO</b>	4.5	M42, M45	$\text{Ø} \geq 28$	1	20.0	5	
<b>S200 D 5.0 ISO</b>	5.0	M48, M52	$\text{Ø} \geq 29$	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
<b>S160 H 24 UN</b>	24				11/16	4	16.0	8	H6, 7, 8, 9, 15
<b>S169 H 20 UN</b>	20				3/4, 13/16, 7/8, 15/16, 1	4	16.9	8	
<b>S164 F 16 UN</b>	16	7/8, 15/16, 1		3/4		3	16.4	6	
<b>S191 F 14 UN</b>	14			7/8		2	19.1	6	
<b>S186 F 12 UN</b>	12	7/8, 15/16		1		2	18.6	6	
<b>S178 F 9 UN</b>	9		7/8			1	17.8	6	
<b>S200 F 8 UN</b>	8	1 1/8	1			1	20.0	6	
<b>S200 F 7 UN</b>	7		1 1/8, 1 1/4			1	20.0	6	
<b>S200 E 6 UN</b>	6	1 7/16	1 3/8, 1 1/2			1	20.0	5	
<b>S200 D 5 UN</b>	5		1 3/4			1	20.0	4	

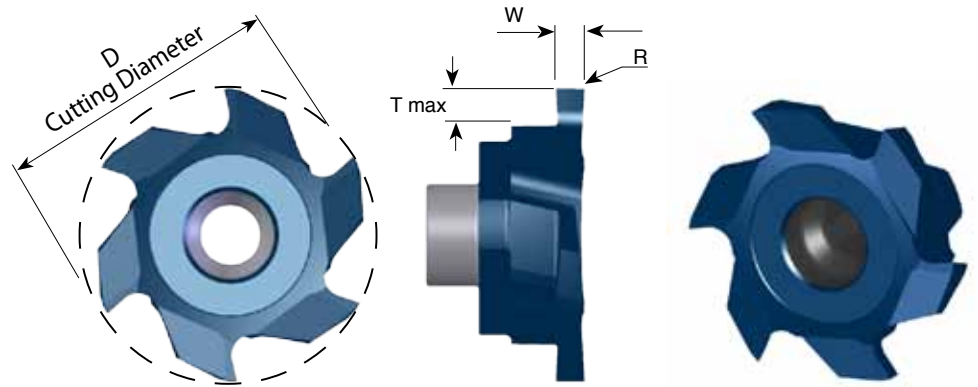
# Chamfering, Grooving and Boring



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

Order example: **SC200 F H24 MT8**

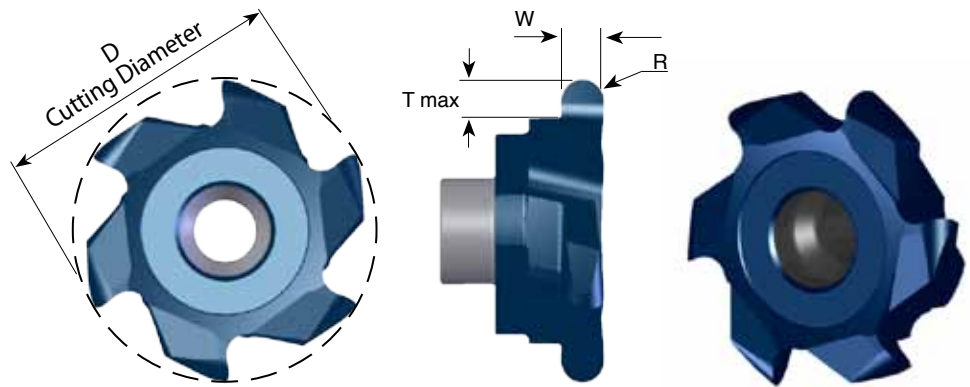
# Groove Milling



Ordering Code	D	W ±0.02	T Max.	R	Groove Dia. (min)	No. of Flutes	Holder Code
<b>SG200 F W15</b>	20.0	1.5	2.9	0.2	Ø>20	6	H6, 7, 8, 9, 15
<b>SG200 F W20</b>	20.0	2.0					
<b>SG200 F W25</b>	20.0	2.5					
<b>SG200 F W30</b>	20.0	3.0					
<b>SG200 F W40</b>	20.0	4.0					
<b>SG200 F W49</b>	20.0	4.9					
<b>SG200 E W20T</b>	20.0	2.0	3.7	0.2	Ø>20	5	H15
<b>SG200 E W25T</b>	20.0	2.5					
<b>SG200 E W30T</b>	20.0	3.0					

Order example: **SG200 F W30 MT8**

# Full Radius Groove Milling



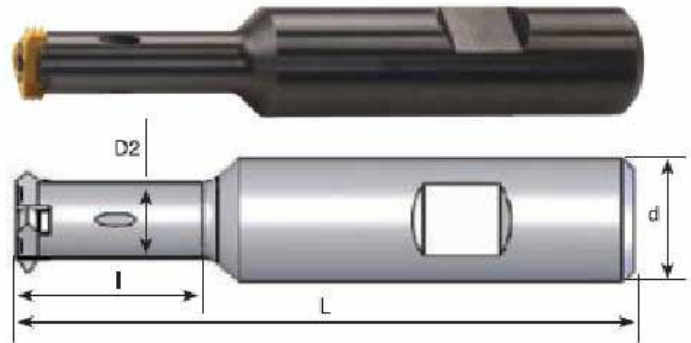
Ordering Code	D	R	W ±0.02	T Max.	Groove Dia. (min)	No. of Flutes	Holder Code
<b>SG200 F R10</b>	20.0	1.0	2.0	2.9	Ø>20	6	H6, 7, 8, 9, 15
<b>SG200 F R12</b>	20.0	1.2	2.4				
<b>SG200 F R15</b>	20.0	1.5	3.0				
<b>SG200 F R20</b>	20.0	2.0	4.0				

Order example: **SG200 F R15 MT8**



# Steel Toolholders

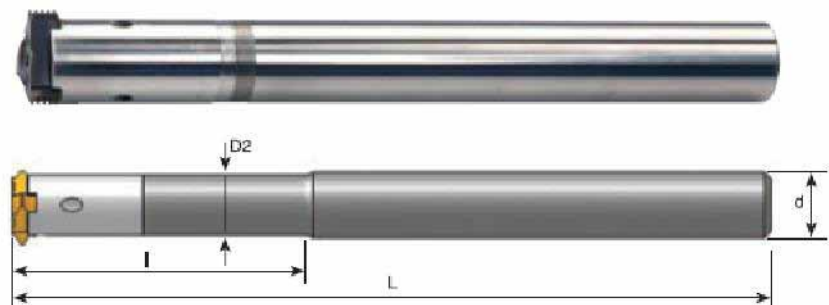
With internal coolant



Tool No.	Ordering Code	d	D2	l	L	Insert Screw	Torx Key
H6	<b>SRC 1618 H</b>	16	13.8	48	100	S16	K16
H7	<b>SRC 2018 H</b>	20		32	100		
H8	<b>SRC 2018 J</b>	20		48	110		
H9	<b>SRC 2018 L</b>	20		74	140		

# Carbide Shank Toolholder

With internal coolant



Tool No.	Ordering Code	d	D2	l	L	Insert Screw	Torx Key
H15	<b>CRC 1218 P</b>	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
<b>P</b>	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
<b>M</b>	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
<b>K</b>	Cast Iron	40-80	0.14-0.24
<b>N</b>	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
<b>S</b>	Nickel alloys, Titanium alloys.	20-40	0.05-0.14
<b>H</b>	Hardened Steel, 45-50HRC	60-70	0.07-0.17
	Hardened Steel, 51-55HRC	50-60	0.06-0.16



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