



### MTSH Type

C.P.T. are pioneers in offering solid carbide thread mills designed specifically for the machining of hardened materials up to 62HRc. These tools provide high performance, improved cut and an excellent surface finish.

#### HARDCUT MTSH & MTH Types

**Carbide grade: MT9 / MT11** - Ultra fine sub-micron grade with Advanced PVD Triple Coating

### MTH Type

C.P.T. provide innovative mill thread solid carbide tools for machining:

- Hardened steels and cast iron up to 62 HRc.
- High temperature alloys.
- Titanium alloys.
- Super Alloys (Hastelloy, Inconel, Nickel Base Alloys).

- Threading from ISO M1.4 x 0.3 and 0-80UN
- Perfect solution for the Die and Mold industry
- Working at high cutting speeds
- Short machining time
- Low cutting forces thanks to the short profile

#### Advantages

- Same tool performs thread milling and chamfering - saves machining time.
- Increased cutting diameter - better rigidity and stability.
- Coating provides high wear and heat resistance.
- Ultra fine grade - dedicated for hardened materials.
- Short chips are produced, insure high process security.
- Short cycle time - increases productivity.
- Thread length up to 2xD.

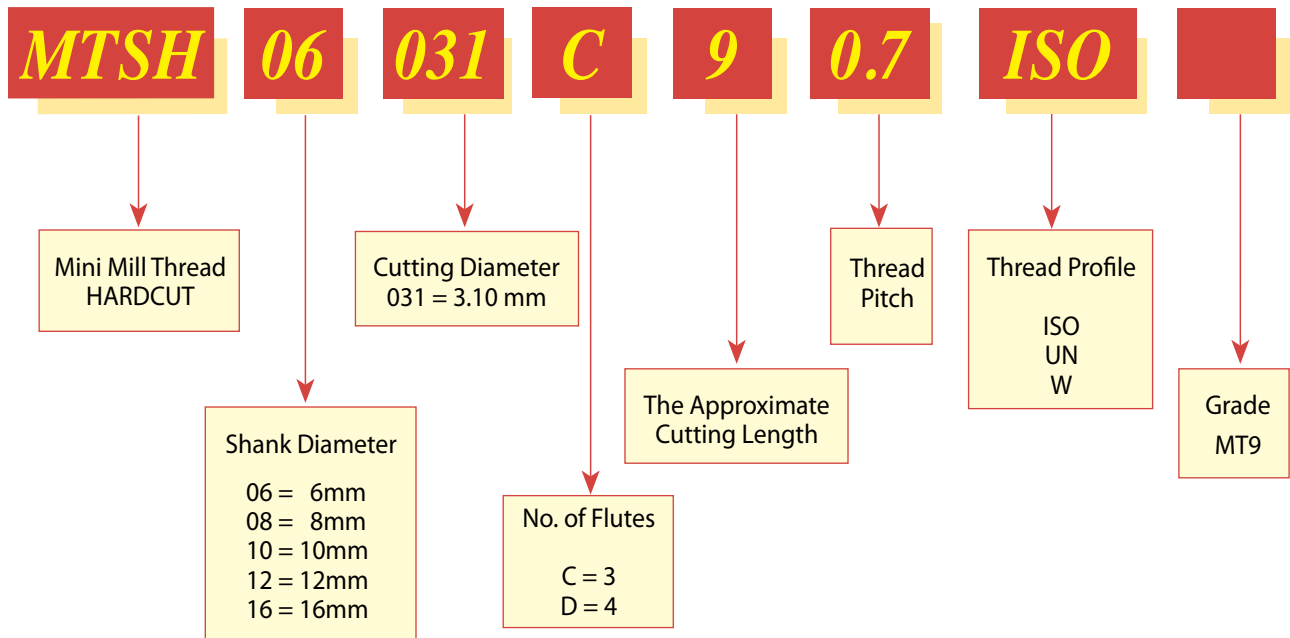
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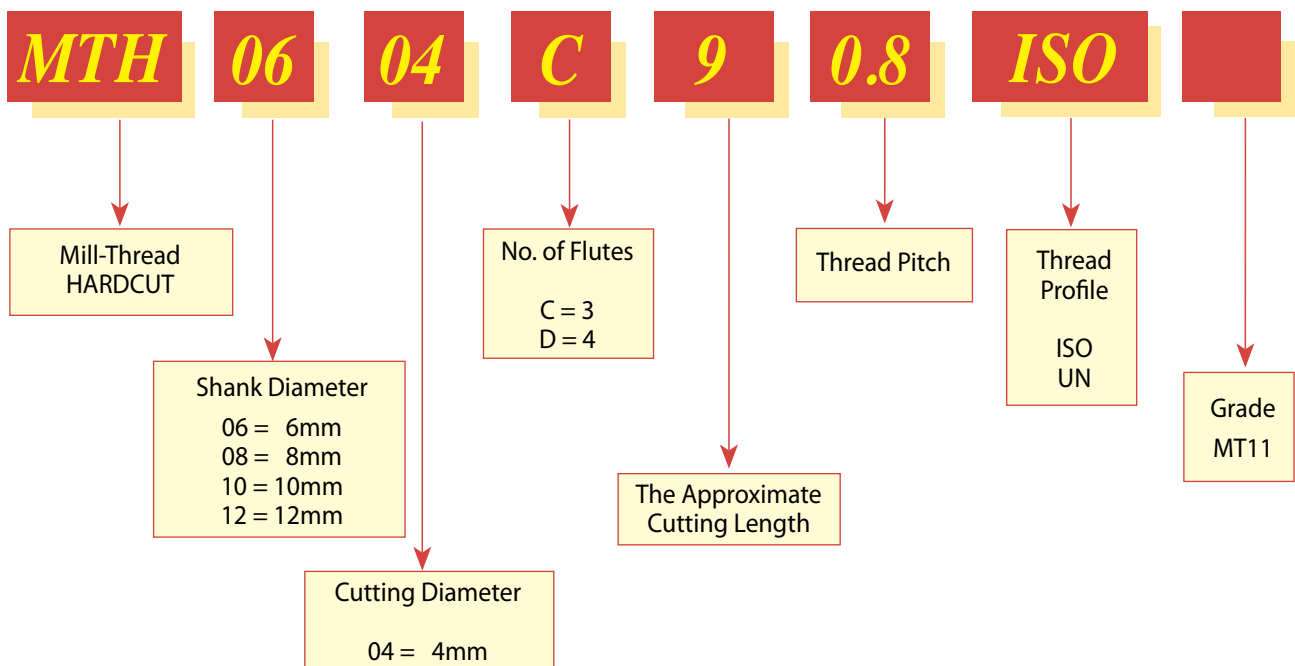
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# Product Identification

## Mini Mill-Thread MTSH Type Ordering Codes

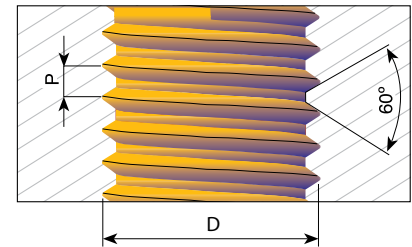
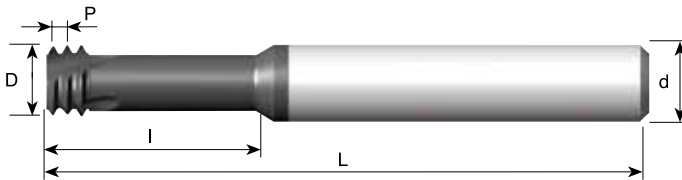


## MTH Type Ordering Codes



## ISO

### Same Tool for Internal and External Thread



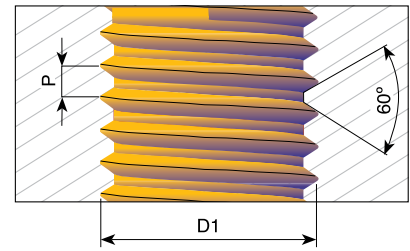
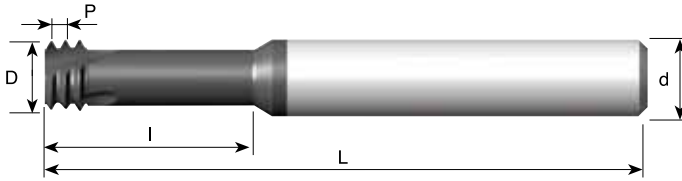
Left hand cutting  
For CNC code use M04

Pitch mm	D1	Ordering Code	d	D	No. of Flutes	I	L	Thread depth
0.3	M1.4	<b>MTSH03011C4 0.3 ISO</b>	3	1.05	3	4.0	39	3xD
0.35	M1.6	<b>MTSH03012C5 0.35 ISO</b>	3	1.20	3	4.8	39	3xD
0.4	M2	<b>MTSH06016C4 0.4 ISO</b>	6	1.53	3	4.5	58	2xD
		<b>MTSH03016C6 0.4 ISO</b>	3			6.0	39	3xD
0.45	M2.2	<b>MTSH06017C5 0.45 ISO</b>	6	1.65	3	5.0	58	2xD
		<b>MTSH06017C7 0.45 ISO</b>				7.0	58	3xD
0.45	M2.5	<b>MTSH0602C5 0.45 ISO</b>	6	1.95	3	5.5	58	2xD
		<b>MTSH0602C7 0.45 ISO</b>				7.5	58	3xD
0.5	M3	<b>MTSH06024C6 0.5 ISO</b>	6	2.37	3	6.5	58	2xD
		<b>MTSH06024C9 0.5 ISO</b>				9.5	58	3xD
0.6	M3.5	<b>MTSH06028C7 0.6 ISO</b>	6	2.75	3	7.5	58	2xD
		<b>MTSH06028C10 0.6 ISO</b>				10.5	58	3xD
0.7	M4	<b>MTSH06031C9 0.7 ISO</b>	6	3.10	3	9.0	58	2xD
		<b>MTSH06031C12 0.7 ISO</b>				12.5	58	3xD
0.8	M5	<b>MTSH06038C12 0.8 ISO</b>	6	3.80	3	12.5	58	2xD
		<b>MTSH06038C16 0.8 ISO</b>				16.0	58	3xD
1.0	M6	<b>MTSH06047C14 1.0 ISO</b>	6	4.65	3	14.0	58	2xD
		<b>MTSH06047C20 1.0 ISO</b>				20.0	58	3xD
1.25	M8	<b>MTSH0606C18 1.25 ISO</b>	6	6.00	3	18.0	58	2xD
		<b>MTSH0606C24 1.25 ISO</b>				24.0	58	3xD
1.5	M10	<b>MTSH08078C23 1.5 ISO</b>	8	7.80	3	23.0	64	2xD
1.75	M12	<b>MTSH1009C26 1.75 ISO</b>	10	9.00	3	26.0	73	2xD
2.0	M16	<b>MTSH12118D35 2.0 ISO</b>	12	11.80	4	35.0	84	2xD

Order example: MTSH 06031C9 0.7 ISO MT9

## UN

### Tools for Internal Thread



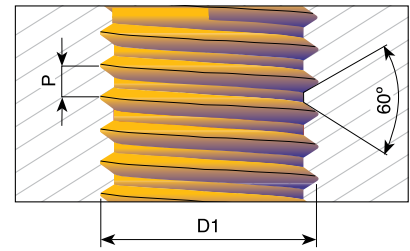
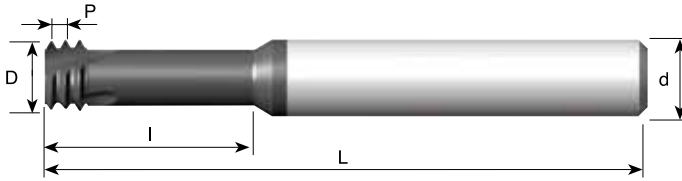
Left hand cutting  
For CNC code use M04

Pitch TPI	UNC	UNF	Ordering Code	d	D	No. of Flutes	I	L	Thread depth
80		0	<b>MTSH06012C4 80 UN</b>	6	1.15	3	4.0	58	3xD1
72		1	<b>MTSH06014C3 72 UN</b>	6	1.45	3	3.7	58	2xD1
72		1	<b>MTSH03015C6 72 UN</b>	3	1.45	3	6.0	39	3xD1
64	1	2	<b>MTSH06014C3 64 UN</b>	6	1.40	3	3.8	58	2xD1
56	2	3	<b>MTSH06016C4 56 UN</b>	6	1.65	3	4.4	58	2xD1
56	2	3	<b>MTSH06016C6 56 UN</b>	6	1.65	3	6.6	58	3xD1
48	3	4	<b>MTSH06019C5 48 UN</b>	6	1.90	3	5.2	58	2xD1
40	4		<b>MTSH06021C6 40 UN</b>	6	2.10	3	6.3	58	2xD1
40	4		<b>MTSH06021C8 40 UN</b>	6	2.10	3	8.0	58	3xD1
40	5	6	<b>MTSH06024C7 40 UN</b>	6	2.45	3	7.0	58	2xD1
40	5	6	<b>MTSH06024C9 40 UN</b>	6	2.45	3	9.6	58	3xD1
36		8	<b>MTSH06033C9 36 UN</b>	6	3.30	3	9.0	58	2xD1
32	6		<b>MTSH06025C7 32 UN</b>	6	2.55	3	7.1	58	2xD1
32	6		<b>MTSH06025C10 32 UN</b>	6	2.55	3	10.5	58	3xD1
32	8		<b>MTSH06032C9 32 UN</b>	6	3.20	3	9.5	58	2xD1
32	8		<b>MTSH06032C12 32 UN</b>	6	3.20	3	12.5	58	3xD1
32		10	<b>MTSH06037C10 32 UN</b>	6	3.70	3	10.5	58	2xD1
32		10	<b>MTSH06037C15 32 UN</b>	6	3.70	3	15.0	58	3xD1
28		12	<b>MTSH06042C11 28 UN</b>	6	4.20	3	11.0	58	2xD1
28		1/4	<b>MTSH0605C14 28 UN</b>	6	5.00	3	14.5	58	2xD1
28		1/4	<b>MTSH0605C19 28 UN</b>	6	5.00	3	19.0	58	3xD1
24	10, 12		<b>MTSH06035C10 24 UN</b>	6	3.50	3	10.6	58	2xD1
24		5/16, 3/8	<b>MTSH08066C17 24 UN</b>	8	6.60	3	17.0	64	2xD1
24		5/16, 3/8	<b>MTSH08066C24 24 UN</b>	8	6.60	3	24.0	64	3xD1
20	1/4		<b>MTSH06047C14 20 UN</b>	6	4.75	3	14.0	58	2xD1
20	1/4		<b>MTSH06047C19 20 UN</b>	6	4.75	3	19.0	58	3xD1
20		7/16	<b>MTSH0808C25 20 UN</b>	8	8.00	3	25.0	64	2xD1
18	5/16		<b>MTSH0606C17 18 UN</b>	6	6.00	3	17.0	58	2xD1
18	5/16		<b>MTSH0606C23 18 UN</b>	6	6.00	3	23.0	58	3xD1
18		5/8	<b>MTSH1212D35 18 UN</b>	12	12.00	4	35.0	84	2xD1
16	3/8		<b>MTSH08067C22 16 UN</b>	8	6.70	3	22.0	64	2xD1
14	7/16		<b>MTSH08077C25 14 UN</b>	8	7.70	3	25.0	64	2xD1
13	1/2		<b>MTSH10092C27 13 UN</b>	10	9.20	3	27.5	73	2xD1
12	9/16		<b>MTSH12105C31 12 UN</b>	12	10.50	3	31.5	84	2xD1
11	5/8		<b>MTSH12114C34 11 UN</b>	12	11.40	3	34.5	84	2xD1
10	3/4		<b>MTSH16144D41 10 UN</b>	16	14.40	4	41.5	105	2xD1

Order example: MTSH 06047C14 20 UN MT9

## G (55°) BSW, BSP

Same Tool for Internal and External Thread



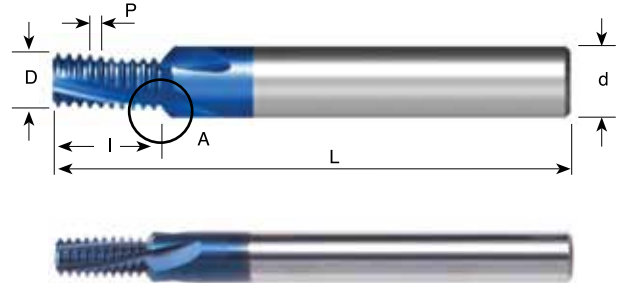
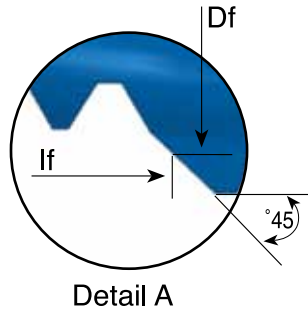
Left hand cutting  
For CNC code use M04

Pitch TPI	Standard	Ordering Code	d	D	No. of Flutes	I	L	Thread depth
28	G1/8	<b>MTSH08078 C19 28W</b>	8	7.8	3	19.5	64	2xD1
19	G1/4-3/8	<b>MTSH1010 D30 19W</b>	10	10.0	4	30.0	73	
14	G1/2-7/8	<b>MTSH1212 D37 14W</b>	12	12.0	4	37.0	84	
11	G≥1	<b>MTSH1616 D44 11W</b>	16	16.0	4	44.0	105	

Order example: MTSH 1010D30 19 W MT9

## ISO

### Tools for Internal Thread

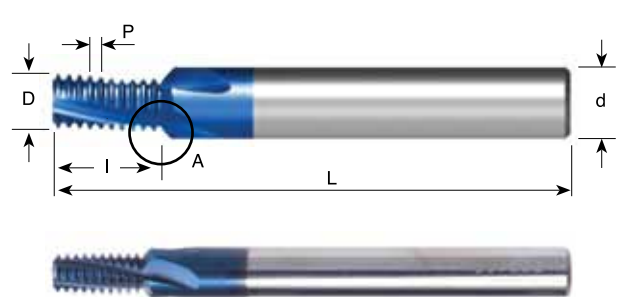
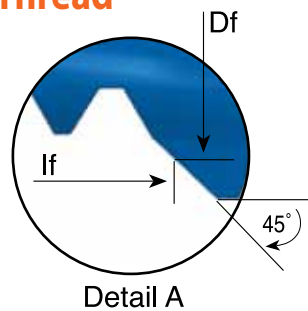


Pitch mm	M coarse	M fine	Ordering Code	d	D	Df	No. of Flutes	I	lf	L
0.5	M3	$\varnothing \geq 4$	MTH06024C5 0.5 ISO	6	2.4	3.6	3	5.3	5.9	58
0.7	M4	$\varnothing \geq 5$	MTH06031C7 0.7 ISO	6	3.1	4.3	3	7.4	8.0	58
0.8	M5	$\varnothing \geq 6$	MTH0604C9 0.8 ISO	6	4.0	5.2	3	9.2	9.8	58
1.0	M6	$\varnothing \geq 7$	MTH08048D10 1.0 ISO	8	4.8	6.4	4	10.5	11.3	64
1.0		$\varnothing \geq 9$	MTH0806D13 1.0 ISO	8	6.0	7.6	4	13.5	14.3	64
1.0		$\varnothing \geq 10$	MTH1008D16 1.0 ISO	10	8.0	9.6	4	16.5	17.3	73
1.25	M8	$\varnothing \geq 10$	MTH0806D14 1.25 ISO	8	6.0	7.6	4	14.4	15.2	64
1.5	M10	$\varnothing \geq 12$	MTH1008D17 1.5 ISO	10	8.0	9.8	4	17.3	18.2	73
1.5		$\varnothing \geq 14$	MTH1210D21 1.5 ISO	12	10.0	11.8	4	21.8	22.7	84
1.75	M12	$\varnothing \geq 12$	MTH12095D20 1.75 ISO	12	9.5	11.5	4	20.1	21.1	84

Order example: MTH08048D10 1.0 ISO MT11

## UN

### Tools for Internal Thread



Pitch TPI	UNC	UNF	UNEF	Ordering Code	d	D	Df	No. of Flutes	I	lf	L
40	5	6		MTH06025C6 40 UN	6	2.5	3.7	3	6.0	6.6	58
32	6			MTH06026C5 32 UN	6	2.6	3.8	3	5.9	6.5	58
32	8			MTH06032C7 32 UN	6	3.2	4.4	3	7.5	8.1	58
32		10	12	MTH06038C9 32 UN	6	3.8	5.0	3	9.1	9.7	58
28		1/4		MTH08052D11 28 UN	8	5.2	6.8	4	11.3	12.1	64
28			7/16, 1/2	MTH12096D20 28 UN	12	9.6	11.2	4	20.4	21.2	84
24		5/16, 3/8	9/16, 5/8, 11/16	MTH08066D14 24 UN	8	6.6	8.0	4	14.3	15.0	64
20	1/4			MTH06048C12 20 UN	6	4.8	6.0	3	12.1	12.7	58
20		7/16, 1/2	3/4, 1	MTH12092D21 20 UN	12	9.2	10.8	4	21.0	21.8	84
18	5/16	9/16, 5/8	11/16	MTH08057C14 18 UN	8	5.7	7.5	3	14.8	15.7	64
16	3/8	3/4		MTH10074C16 16 UN	10	7.4	9.2	3	16.7	17.6	73
14	7/16	7/8		MTH10085D20 14 UN	10	8.5	9.9	4	20.9	21.6	73
13	1/2			MTH12094D22 13 UN	12	9.4	11.4	4	22.5	23.5	84

Order example: MTH06048C12 20 UN MT11