



### MTSH Type

Carmex is pioneer in offering solid carbide thread mills tools 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

Carmex provide new 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

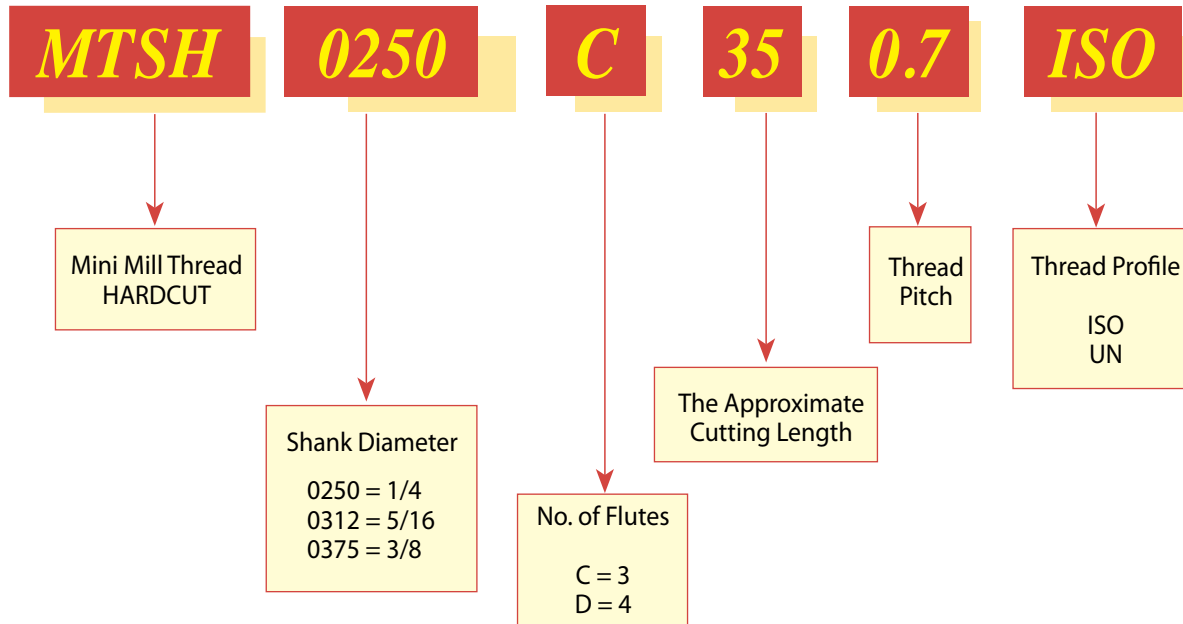
#### Advantages

- 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.

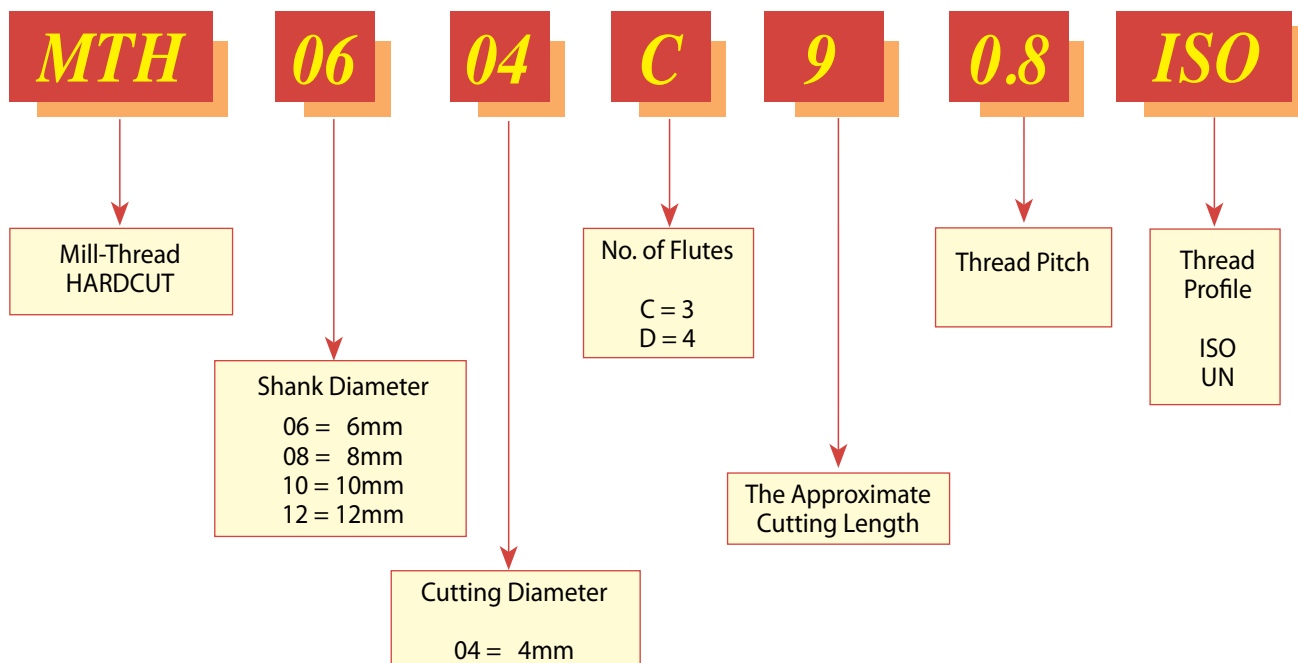
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# Product Identification

## Mini Mill-Thread MTSH Type Ordering Codes

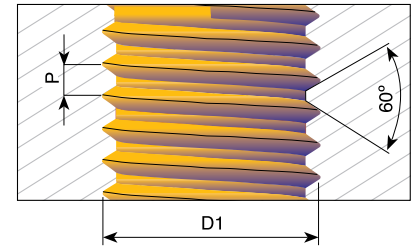
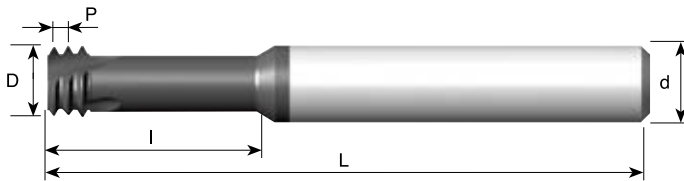


## MTH Type Ordering Codes



## ISO

### Tools for Internal Thread



Left hand cutting  
For CNC code use M04

### For thread depth up to 2 x D1

Pitch mm	D1	Ordering Code	d	D	No. of Flutes	I	L
0.4	M2	<a href="#">MTSH0250C18 0.4 ISO</a>	1/4	.061	3	.18	2.5
0.45	M2.2	<a href="#">MTSH0250C20 0.45 ISO</a>	1/4	.065	3	.20	2.5
0.45	M2.5	<a href="#">MTSH0250C22 0.45 ISO</a>	1/4	.077	3	.22	2.5
0.5	M3	<a href="#">MTSH0250C26 0.5 ISO</a>	1/4	.093	3	.26	2.5
0.6	M3.5	<a href="#">MTSH0250C30 0.6 ISO</a>	1/4	.108	3	.30	2.5
0.7	M4	<a href="#">MTSH0250C35 0.7 ISO</a>	1/4	.122	3	.35	2.5
0.8	M5	<a href="#">MTSH0250C49 0.8 ISO</a>	1/4	.150	3	.49	2.5
1.0	M6	<a href="#">MTSH0250C55 1.0 ISO</a>	1/4	.183	3	.55	2.5
1.25	M8	<a href="#">MTSH0250C71 1.25 ISO</a>	1/4	.234	3	.71	2.5
1.5	M10	<a href="#">MTSH0312C91 1.5 ISO</a>	5/16	.307	3	.91	2.5
1.75	M12	<a href="#">MTSH0375C10 1.75 ISO</a>	3/8	.354	3	1.02	3.0
2.0	M16	<a href="#">MTSH12118D35 2.0 ISO</a>	12mm	.465	4	1.38	3.3

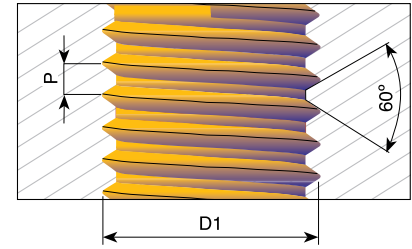
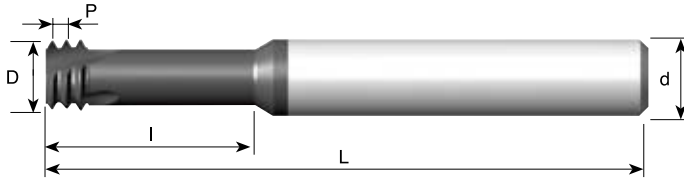
### For thread depth up to 3 x D1

Pitch mm	D1	Ordering Code	d	D	No. of Flutes	I	L
0.3	M1.4	<a href="#">MTSH03011C4 0.3 ISO</a>	3mm	.041	3	.16	1.5
0.35	M1.6	<a href="#">MTSH03012C5 0.35 ISO</a>	3mm	.047	3	.19	1.5
0.4	M2	<a href="#">MTSH03016C6 0.4 ISO</a>	3mm	.061	3	.24	1.5
0.45	M2.5	<a href="#">MTSH0250C30 0.45 ISO</a>	1/4	.077	3	.30	2.5
0.5	M3	<a href="#">MTSH0250C37 0.5 ISO</a>	1/4	.093	3	.37	2.5
0.7	M4	<a href="#">MTSH0250C49 0.7 ISO</a>	1/4	.122	3	.49	2.5
0.8	M5	<a href="#">MTSH0250C63 0.8 ISO</a>	1/4	.150	3	.63	2.5
1.0	M6	<a href="#">MTSH0250C79 1.0 ISO</a>	1/4	.183	3	.79	2.5
1.25	M8	<a href="#">MTSH0250C94 1.25 ISO</a>	1/4	.234	3	.94	2.5

Order example: [MTSH 0250C35 0.7 ISO](#) MT9

# UN

## Tools for Internal Thread



Left hand cutting  
For CNC code use M04

### For thread depth up to 2 x D1

Pitch TPI	UNC	UNF	Ordering Code	d	D	No. of Flutes	I	L
72		1	MTSH0250C15 72 UN	1/4	.057	3	.15	2.5
64	1	2	MTSH0250C15 64 UN	1/4	.055	3	.15	2.5
56	2	3	MTSH0250C17 56 UN	1/4	.065	3	.17	2.5
48	3	4	MTSH0250C20 48 UN	1/4	.075	3	.20	2.5
40	4		MTSH0250C25 40 UN	1/4	.083	3	.25	2.5
40	5	6	MTSH0250C28 40 UN	1/4	.096	3	.28	2.5
36		8	MTSH0250C35 36 UN	1/4	.130	3	.35	2.5
32	6		MTSH0250C28 32 UN	1/4	.100	3	.28	2.5
32	8		MTSH0250C37 32 UN	1/4	.126	3	.37	2.5
32		10	MTSH0250C41 32 UN	1/4	.146	3	.41	2.5
28		12	MTSH0250C43 28 UN	1/4	.165	3	.43	2.5
28		1/4	MTSH0250C57 28 UN	1/4	.197	3	.57	2.5
24	10, 12		MTSH0250C42 24 UN	1/4	.138	3	.42	2.5
24		5/16, 3/8	MTSH0312C67 24 UN	5/16	.260	3	.67	2.5
20	1/4		MTSH0250C55 20 UN	1/4	.187	3	.55	2.5
20		7/16	MTSH0312C98 20 UN	5/16	.312	3	.98	2.5
18	5/16		MTSH0250C67 18 UN	1/4	.236	3	.67	2.5
18		5/8	MTSH1212D35 18 UN	12mm	.472	4	1.38	3.3
16	3/8		MTSH0312C87 16 UN	5/16	.264	3	.87	2.5
14	7/16		MTSH0312C98 14 UN	5/16	.303	3	.98	2.5
13	1/2		MTSH0375C10 13 UN	3/8	.362	3	1.08	3.0
12	9/16		MTSH12105C31 12 UN	12mm	.413	3	1.24	3.3
11	5/8		MTSH12114C34 11 UN	12mm	.449	3	1.36	3.3

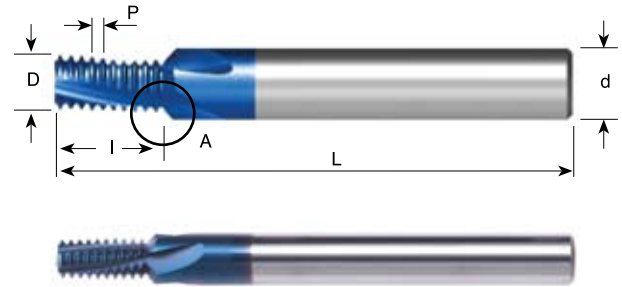
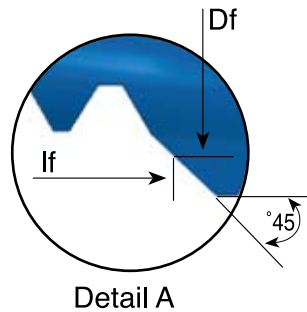
### For thread depth up to 3 x D1

Pitch TPI	UNC	UNF	Ordering Code	d	D	No. of Flutes	I	L
80		0	MTSH0250C16 80 UN	1/4	.045	3	.16	2.5
72		1	MTSH03015C6 72 UN	3mm	.057	3	.24	1.5
56	2	3	MTSH0250C26 56 UN	1/4	.065	3	.26	2.5
40	4		MTSH0250C31 40 UN	1/4	.083	3	.31	2.5
40	5	6	MTSH0250C38 40 UN	1/4	.096	3	.38	2.5
32	6		MTSH0250C40 32 UN	1/4	.100	3	.41	2.5
32	8		MTSH0250C49 32 UN	1/4	.126	3	.49	2.5
32		10	MTSH0250C59 32 UN	1/4	.146	3	.59	2.5
28		1/4	MTSH0250C75 28 UN	1/4	.197	3	.75	2.5
24		5/16, 3/8	MTSH0312C94 24 UN	5/16	.260	3	.94	2.5
20	1/4		MTSH0250C75 20 UN	1/4	.187	3	.75	2.5
18	5/16		MTSH0250C91 18 UN	1/4	.236	3	.91	2.5

Order example: MTSH 0250C28 40 UN MT9

## ISO

### Tools for Internal Thread - Metric Shanks

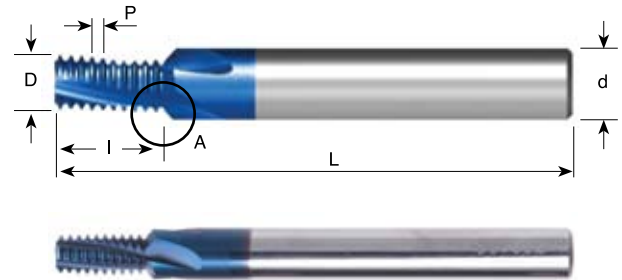
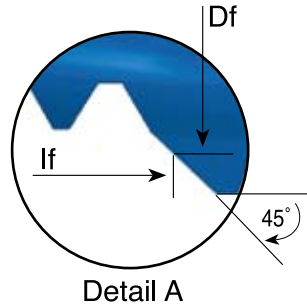


Pitch mm	M coarse	M fine	Ordering Code	d mm	D	Df	No. of Flutes	I	lf	L
0.5	M3	$\varnothing \geq 4$	<b>MTH06024C5 0.5 ISO</b>	6	.094	.142	3	.209	.232	2.3
0.7	M4	$\varnothing \geq 5$	<b>MTH06031C7 0.7 ISO</b>	6	.122	.169	3	.291	.315	2.3
0.8	M5	$\varnothing \geq 6$	<b>MTH0604C9 0.8 ISO</b>	6	.157	.205	3	.362	.386	2.3
1.0	M6	$\varnothing \geq 7$	<b>MTH08048D10 1.0 ISO</b>	8	.189	.252	4	.413	.445	2.5
1.0		$\varnothing \geq 9$	<b>MTH0806D13 1.0 ISO</b>	8	.236	.299	4	.531	.563	2.5
1.0		$\varnothing \geq 10$	<b>MTH1008D16 1.0 ISO</b>	10	.315	.378	4	.650	.681	2.9
1.25	M8	$\varnothing \geq 10$	<b>MTH0806D14 1.25 ISO</b>	8	.236	.299	4	.567	.598	2.5
1.5	M10	$\varnothing \geq 12$	<b>MTH1008D17 1.5 ISO</b>	10	.315	.386	4	.681	.717	2.9
1.5		$\varnothing \geq 14$	<b>MTH1210D21 1.5 ISO</b>	12	.394	.465	4	.858	.894	3.3
1.75	M12	$\varnothing \geq 12$	<b>MTH12095D20 1.75 ISO</b>	12	.374	.453	4	.791	.831	3.3

Order example: MTH08048D10 1.0 ISO MT11

# UN

## Tools for Internal Thread - Metric Shanks



Pitch TPI	UNC	UNF	UNEF	Ordering Code	d mm	D	Df	No. of Flutes	I	If	L
40	5	6		<b>MTH06025C6 40 UN</b>	6	.098	.146	3	.236	.260	2.3
32	6			<b>MTH06026C5 32 UN</b>	6	.102	.150	3	.232	.256	2.3
32	8			<b>MTH06032C7 32 UN</b>	6	.126	.173	3	.295	.319	2.3
32		10	12	<b>MTH06038C9 32 UN</b>	6	.150	.197	3	.358	.382	2.3
28		1/4		<b>MTH08052D11 28 UN</b>	8	.205	.268	4	.445	.476	2.5
28			7/16, 1/2	<b>MTH12096D20 28 UN</b>	12	.378	.441	4	.803	.835	3.3
24		5/16, 3/8	9/16, 5/8, 11/16	<b>MTH08066D14 24 UN</b>	8	.260	.315	4	.563	.591	2.5
20	1/4			<b>MTH06048C12 20 UN</b>	6	.189	.236	3	.476	.500	2.3
20		7/16, 1/2	3/4, 1	<b>MTH12092D21 20 UN</b>	12	.362	.425	4	.827	.858	3.3
18	5/16	9/16, 5/8	11/16	<b>MTH08057C14 18 UN</b>	8	.224	.295	3	.583	.618	2.5
16	3/8	3/4		<b>MTH10074C16 16 UN</b>	10	.291	.362	3	.657	.693	2.9
14	7/16	7/8		<b>MTH10085D20 14 UN</b>	10	.335	.390	4	.823	.850	2.9
13	1/2			<b>MTH12094D22 13 UN</b>	12	.370	.449	4	.886	.925	3.3

Order example: MTH06048C12 20 UN MT11