



MTSH
Demonstration

MTH Type

Carmex 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).

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.

MTSH Type

Carmex 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.

- 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

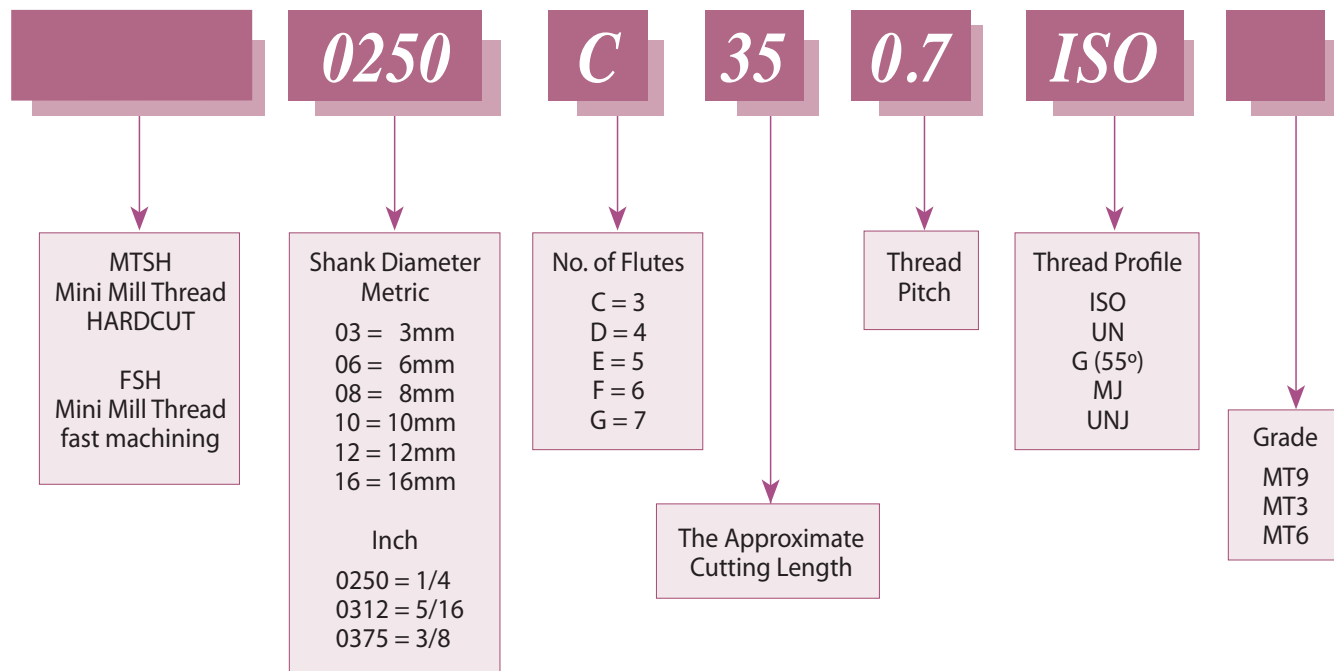
FSH Type

High productive Solid Carbide Thread-Mills with a large number of flutes for machining hard materials up to 65 HRC

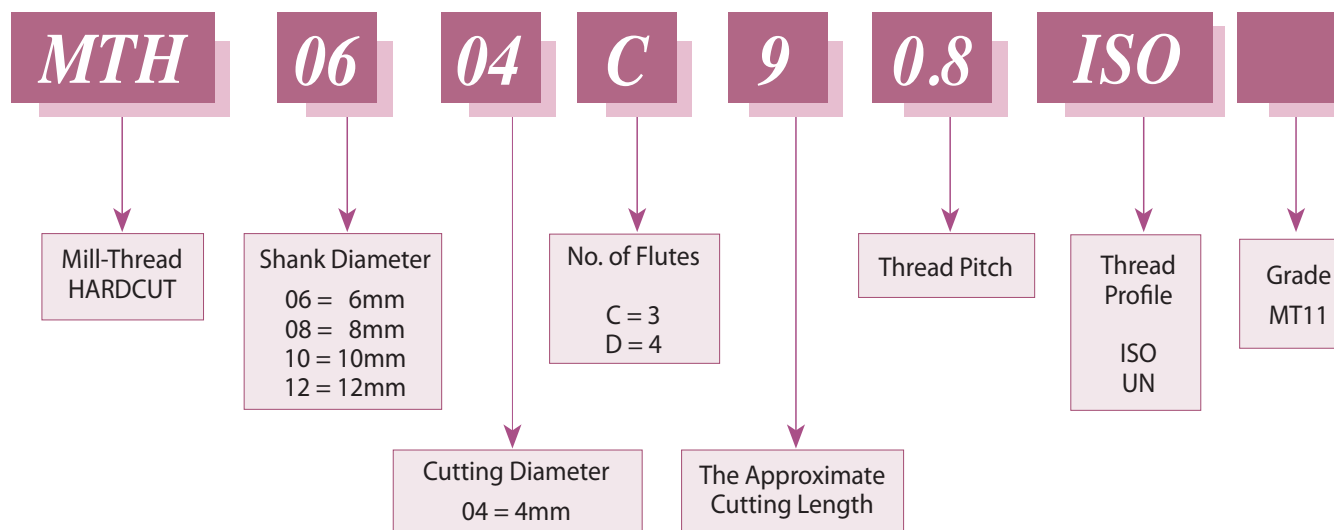
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Product Identification

Mini Mill-Thread MTSH Type Ordering Codes

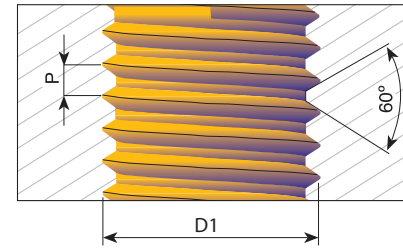
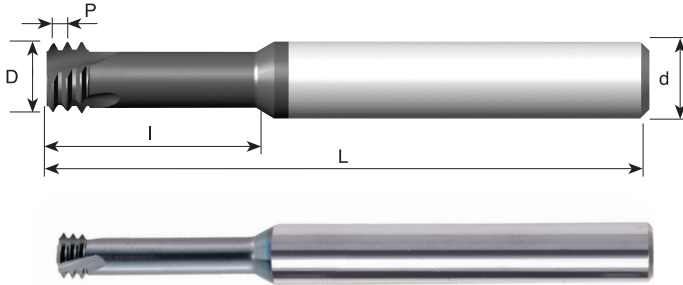


MTH Type Ordering Codes



ISO

Tools for Internal Thread



Left hand cutting
For CNC code use M04

Grade	P	M	K	N	S	H
MT9	●	●	○	○	●	≤62 HRc

Pitch mm	M coarse	M fine	Ordering Code	d	D	No. of Flutes	I	L	Thread depth
0.3	M1.4		MTSH 03011 C4 0.3 ISO	3 mm	.041	3	.16	1.5	3xD1
0.35	M1.6, M1.8	M2, M2.5	MTSH 03012 C5 0.35 ISO	3 mm	.047	3	.19	1.5	3xD1
0.4	M2		MTSH 0250 C18 0.4 ISO	1/4	.060	3	.18	2.5	2xD1
0.4	M2		MTSH 03016 C6 0.4 ISO	3 mm	.060	3	.24	1.5	3xD1
0.45	M2.2		MTSH 0250 C20 0.45 ISO	1/4	.065	3	.20	2.5	2xD1
0.45	M2.2		MTSH 06017 C7 0.45 ISO	6 mm	.065	3	.28	2.3	3xD1
0.45	M2.5		MTSH 0250 C22 0.45 ISO	1/4	.077	3	.22	2.5	2xD1
0.45	M2.5		MTSH 0250 C30 0.45 ISO	1/4	.077	3	.30	2.5	3xD1
0.5	M3	M4, M5	MTSH 0250 C26 0.5 ISO	1/4	.093	3	.26	2.5	2xD1
0.5	M3	M4, M5	MTSH 0250 C37 0.5 ISO	1/4	.093	3	.37	2.5	3xD1
0.6	M3.5		MTSH 0250 C30 0.6 ISO	1/4	.108	3	.30	2.5	2xD1
0.6	M3.5		MTSH 06028 C10 0.6 ISO	6 mm	.108	3	.41	2.3	3xD1
0.7	M4		MTSH 0250 C35 0.7 ISO	1/4	.122	3	.35	2.5	2xD1
0.7	M4		MTSH 0250 C49 0.7 ISO	1/4	.122	3	.49	2.5	3xD1
0.7	M4		MTSH 06032 C12 0.7 ISO-L	6 mm	.126	3	.49	4.1	3xD1
0.8	M5		MTSH 0250 C49 0.8 ISO	1/4	.150	3	.49	2.5	2xD1
0.8	M5		MTSH 0250 C63 0.8 ISO	1/4	.150	3	.63	2.5	3xD1
0.8	M5		MTSH 0604 C16 0.8 ISO-L	6 mm	.157	3	.63	4.1	3xD1
1.0	M6	M8	MTSH 0250 C55 1.0 ISO	1/4	.183	3	.55	2.5	2xD1
1.0	M6	M8	MTSH 0250 C79 1.0 ISO	1/4	.183	3	.79	2.5	3xD1
1.0	M6	M8	MTSH 06048 C20 1.0 ISO-L	6 mm	.189	3	.79	4.1	3xD1
1.0		M10, M12	MTSH 0808 D31 1.0 ISO	8 mm	.315	4	1.22	2.5	3xD1
1.25	M8	M10, M12	MTSH 0250 C71 1.25 ISO	1/4	.236	3	.71	2.5	2xD1
1.25	M8	M10, M12	MTSH 0250 C94 1.25 ISO	1/4	.236	3	.94	2.5	3xD1
1.5	M10	M14, M16	MTSH 0312 C91 1.5 ISO	5/16	.307	3	.91	2.5	2xD1
1.5	M10	M14, M16	MTSH 08078 D31 1.5 ISO	8 mm	.307	4	1.24	2.5	3xD1
1.75	M12		MTSH 0375 C10 1.75 ISO	3/8	.354	3	1.02	3.0	2xD1
2.0	M14	M17	MTSH 1010 D30 2.0 ISO	10 mm	.394	4	1.18	2.9	2xD1
2.0	M16	M18, M20	MTSH 12118 D35 2.0 ISO	12 mm	.465	4	1.38	3.3	2xD1

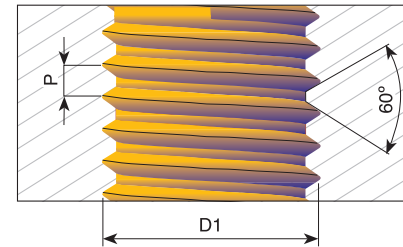
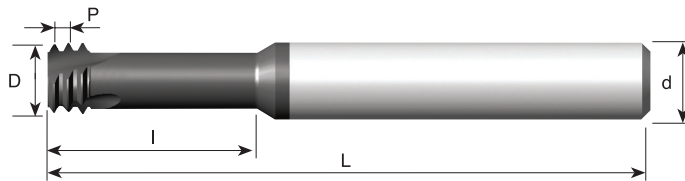
Order example: MTSH 0250C35 0.7 ISO MT9

● First choice ○ Alternative

B11-3

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	MTSH 0250 C16 80 UN	1/4	.045	3	.16	2.5	3xD1
72		1	MTSH 0250 C15 72 UN	1/4	.057	3	.15	2.5	2xD1
72		1	MTSH 03015 C6 72 UN	3 mm	.057	3	.24	1.5	3xD1
64	1	2	MTSH 0250 C15 64 UN	1/4	.055	3	.15	2.5	2xD1
56	2	3	MTSH 0250 C17 56 UN	1/4	.065	3	.17	2.5	2xD1
56	2	3	MTSH 06016 C6 56 UN	6 mm	.065	3	.26	2.3	3xD1
48	3	4	MTSH 0250 C20 48 UN	1/4	.075	3	.20	2.5	2xD1
40	4		MTSH 0250 C25 40 UN	1/4	.083	3	.25	2.5	2xD1
40	4		MTSH 06021 C8 40 UN	6 mm	.083	3	.31	2.3	3xD1
40	5	6	MTSH 0250 C28 40 UN	1/4	.096	3	.28	2.5	2xD1
40	5	6	MTSH 0250 C38 40 UN	1/4	.096	3	.38	2.5	3xD1
36		8	MTSH 0250 C35 36 UN	1/4	.130	3	.35	2.5	2xD1
32	6		MTSH 0250 C28 32 UN	1/4	.100	3	.28	2.5	2xD1
32	6		MTSH 06025 C10 32 UN	6 mm	.100	3	.41	2.5	3xD1
32	8		MTSH 0250 C37 32 UN	1/4	.126	3	.37	2.5	2xD1
32	8		MTSH 0250 C49 32 UN	1/4	.126	3	.49	2.5	3xD1
32		10	MTSH 0250 C41 32 UN	1/4	.146	3	.41	2.5	2xD1
32		10	MTSH 0250 C59 32 UN	1/4	.146	3	.59	2.5	3xD1
28		12	MTSH 0250 C43 28 UN	1/4	.165	3	.43	2.3	2xD1
28		1/4	MTSH 0250 C57 28 UN	1/4	.197	3	.57	2.5	2xD1
28		1/4	MTSH 0250 C75 28 UN	1/4	.197	3	.75	2.5	3xD1
24	10, 12		MTSH 0250 C42 24 UN	1/4	.138	3	.42	2.5	2xD1
24		5/16, 3/8	MTSH 0312 C67 24 UN	5/16	.260	3	.67	2.5	2xD1
24		5/16, 3/8	MTSH 0312 C94 24 UN	5/16	.260	3	.94	2.5	3xD1
20	1/4		MTSH 0250 C55 20 UN	1/4	.187	3	.55	2.5	2xD1
20	1/4		MTSH 0250 C75 20 UN	1/4	.187	3	.75	2.5	3xD1
20		7/16	MTSH 0808 C25 20 UN	8 mm	.315	3	.98	2.5	2xD1
18	5/16		MTSH 0250 C67 18 UN	1/4	.236	3	.67	2.5	2xD1
18	5/16		MTSH 0250 C91 18 UN	1/4	.236	3	.91	2.5	3xD1
18		5/8	MTSH 1212 D35 18 UN	12 mm	.472	4	1.38	3.3	2xD1
16	3/8		MTSH 0312 C87 16 UN	5/16	.264	3	.87	2.5	2xD1
16	3/8		MTSH 08074 D30 16UN	8 mm	.291	4	1.19	2.5	3xD1
14	7/16		MTSH 0312 C98 14 UN	5/16	.303	3	.98	2.5	2xD1
13	1/2		MTSH 0375 C10 13 UN	3/8	.362	3	1.08	3.0	2xD1
12	9/16		MTSH 12105 C31 12 UN	12 mm	.413	3	1.24	3.3	2xD1
11	5/8		MTSH 12114 C34 11 UN	12 mm	.449	3	1.36	3.3	2xD1
10	3/4		MTSH 16144 D41 10 UN	16 mm	.567	4	1.63	4.1	2xD1

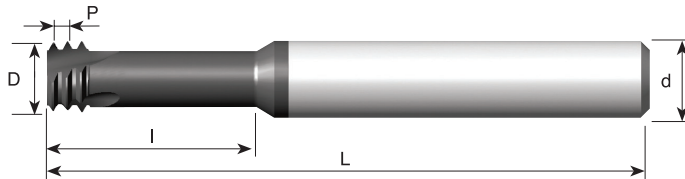
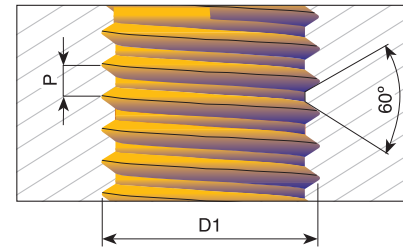
Order example: MTSH 0250C28 40 UN MT9

B11-4

HARDCUT

G (55°) BSW, BSP

Same Tool for Internal and External Thread

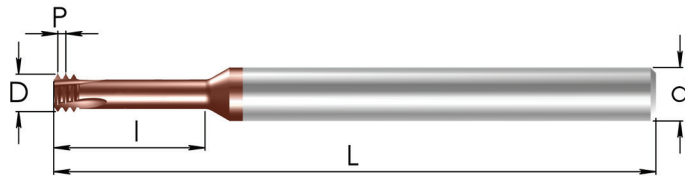


Left hand cutting
For CNC code use M04

Grade	P	M	K	N	S	H
MT9	●	●	○	○	●	≤62 HRc

Pitch TPI	Standard	Ordering Code	d mm	D	No. of Flutes	I	L	Thread depth
28	G1/8	MTSH 08078 C19 28 W	8	.307	3	.77	2.5	2xD1
19	G1/4-3/8	MTSH 1010 D30 19 W	10	.394	4	1.18	2.9	2xD1
14	G1/2-7/8	MTSH 1212 D37 14 W	12	.472	4	1.46	3.3	2xD1
11	G≥1	MTSH 1616 D44 11 W	16	.630	4	1.73	4.1	2xD1

MJ Tools for Internal Thread



Grade	P	M	K	N	S	H
MT6	●	●	○	○	●	≤58 HRc

Pitch mm	D1	Ordering Code	d mm	D	No. of Flutes	I	L	Thread depth
0.5	MJ3	MTSH 06024 C9 0.5 MJ	6	.094	3	.37	2.3	3xD1
0.7	MJ4	MTSH 06032 C12 0.7 MJ	6	.126	3	.50	2.3	3xD1
0.8	MJ5	MTSH 0604 D15 0.8 MJ	6	.157	4	.62	2.3	3xD1
1.0	MJ6-MJ8	MTSH 06048 D19 1.0 MJ	6	.189	4	.75	2.3	3xD1
1.25	MJ8-MJ10	MTSH 08064 D25 1.25 MJ	8	.252	4	1.00	2.5	3xD1
1.5	MJ10-MJ12	MTSH 0808 D31 1.5 MJ	8	.315	4	1.24	2.5	3xD1
1.75	MJ12	MTSH 10095 D25 1.75 MJ	10	.374	4	1.02	2.9	2xD1
2.0	MJ14-MJ20	MTSH 1211 D30 2.0 MJ	12	.433	4	1.18	3.3	2xD1

UNJ Tools for Internal Thread

Grade	P	M	K	N	S	H
MT6	●	●	○	○	●	≤58 HRc

Pitch TPI	UNJC	UNJF	Ordering Code	d mm	D	No. of Flutes	I	L	Thread depth
56	2		MTSH 06016 C7 56 UNJ	6	.065	3	.28	2.3	3xD1
32	6		MTSH 06025 C11 32 UNJ	6	.100	3	.44	2.3	3xD1
32	8	10	MTSH 06033 C13 32 UNJ	6	.130	3	.52	2.3	3xD1
28		1/4	MTSH 06052 D20 28 UNJ	6	.205	4	.79	2.3	3xD1
24		5/16, 3/8	MTSH 08067 D24 24 UNJ	8	.264	4	.98	2.5	3xD1
20	1/4		MTSH 06049 D20 20 UNJ	6	.193	4	.80	2.3	3xD1
20		7/16	MTSH 10092 D23 20 UNJ	10	.362	4	.93	2.9	2xD1
18	5/16		MTSH 0606 D17 18 UNJ	6	.236	4	.68	2.3	2xD1
16	3/8		MTSH 08074 D20 16 UNJ	8	.291	4	.81	2.5	2xD1
14	7/16		MTSH 10085 D24 14 UNJ	10	.335	4	.94	2.9	2xD1
13	1/2		MTSH 10098 D27 13 UNJ	10	.386	4	1.08	2.9	2xD1

Order example: MTSH 10095 D25 1.75 MJ MT6

● First choice ○ Alternative

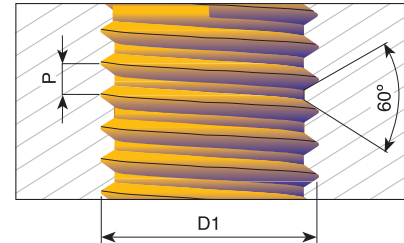
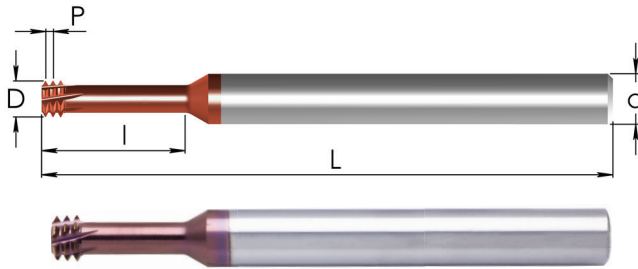
B11-5

FSH

Solid Carbide Thread Mills with large number of flutes for machining hard materials

ISO Tools for Internal Thread

d



Left hand cutting
For CNC code use M04

Grade	P	M	K	N	S	H
MT3	●	○	○	○	●	≤65 HRc

Pitch mm	M Coarse	M Fine	Ordering Code	d mm	D	No. of Flutes	I	L	Thread depth
0.45	M2.5		FSH 0602 E5 0.45 ISO	6	.077	5	.22	2.3	2xD1
0.45	M2.5		FSH 0602 E8 0.45 ISO	6	.077	5	.31	2.3	3xD1
0.5	M3	M4,M5	FSH 06024 E6 0.5 ISO	6	.094	5	.26	2.3	2xD1
0.5	M3	M4,M5	FSH 06024 E9 0.5 ISO	6	.094	5	.37	2.3	3xD1
0.7	M4		FSH 06032 E8 0.7 ISO	6	.126	5	.34	2.3	2xD1
0.7	M4		FSH 06032 E12 0.7 ISO	6	.126	5	.50	2.3	3xD1
0.8	M5		FSH 0604 E10 0.8 ISO	6	.157	5	.43	2.3	2xD1
0.8	M5		FSH 0604 E15 0.8 ISO	6	.157	5	.62	2.3	3xD1
1.0	M6	M8	FSH 06048 F13 1.0 ISO	6	.189	6	.51	2.3	2xD1
1.0	M6	M8	FSH 06048 F19 1.0 ISO	6	.189	6	.75	2.3	3xD1
1.25	M8	M10,M12	FSH 08064 G17 1.25 ISO	8	.252	7	.68	2.5	2xD1
1.25	M8	M10,M12	FSH 08064 G25 1.25 ISO	8	.252	7	1.00	2.5	3xD1

Order example: FSH 0604 E10 0.8 ISO MT3

UN Tools for Internal Thread

Grade	P	M	K	N	S	H
MT3	●	○	○	○	●	≤65 HRc

Pitch TPI	UNC	UNF	Ordering Code	d mm	D	No. of Flutes	I	L	Thread depth
40	4		FSH 06021 D6 40 UN	6	.083	4	.25	2.3	2xD1
40	4		FSH 06021 D9 40 UN	6	.083	4	.36	2.3	3xD1
40	5	6	FSH 06024 D7 40 UN	6	.096	4	.28	2.3	2xD1
40	5	6	FSH 06024 D10 40 UN	6	.096	4	.40	2.3	3xD1
32	6		FSH 06025 D7 32 UN	6	.100	4	.31	2.3	2xD1
32	6		FSH 06025 D11 32 UN	6	.100	4	.44	2.3	3xD1
32	8		FSH 06032 D9 32 UN	6	.126	4	.36	2.3	2xD1
32	8		FSH 06032 D13 32 UN	6	.126	4	.52	2.3	3xD1
32		10	FSH 06038 E10 32 UN	6	.150	5	.41	2.3	2xD1
32		10	FSH 06038 E15 32 UN	6	.150	5	.60	2.3	3xD1
28		1/4	FSH 06052 F13 28 UN	6	.205	6	.54	2.3	2xD1
28		1/4	FSH 06052 F20 28 UN	6	.205	6	.79	2.3	3xD1
24		5/16, 3/8	FSH 08066 F16 24 UN	8	.260	6	.67	2.5	2xD1
24		5/16, 3/8	FSH 08066 F24 24 UN	8	.260	6	.98	2.5	3xD1
20	1/4		FSH 06048 E14 20 UN	6	.189	5	.55	2.3	2xD1
20	1/4		FSH 06048 E20 20 UN	6	.189	5	.80	2.3	3xD1

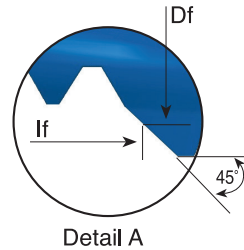
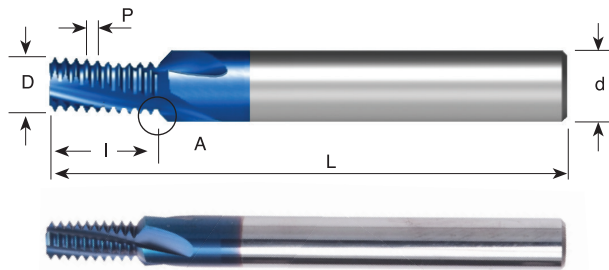
Order example: FSH 08066 F24 24 UN MT3

● First choice ○ Alternative

B11-6

HARDCUT

MTH ISO Tools for Internal Thread

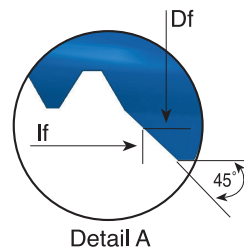
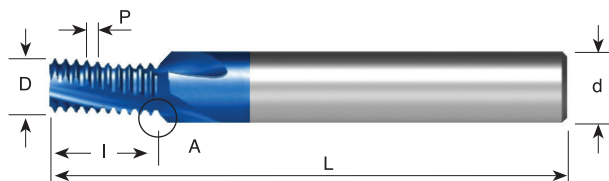


Grade	P	M	K	N	S	H
MT11	●	○	●	○	●	≤62 HRc

Pitch mm	M Coarse	M Fine	Ordering Code	d mm	D	Df	No. of Flutes	I	If	L
0.5	M3	$\varnothing \geq 4$	MTH 06024 C5 0.5 ISO	6	.094	.142	3	.209	.232	2.3
0.7	M4	$\varnothing \geq 5$	MTH 06031 C7 0.7 ISO	6	.122	.169	3	.291	.315	2.3
0.8	M5	$\varnothing \geq 6$	MTH 0604 C9 0.8 ISO	6	.157	.205	3	.362	.386	2.3
1.0	M6	$\varnothing \geq 7$	MTH 08048 D10 1.0 ISO	8	.189	.252	4	.413	.445	2.5
1.0		$\varnothing \geq 9$	MTH 0806 D13 1.0 ISO	8	.236	.299	4	.531	.563	2.5
1.0		$\varnothing \geq 10$	MTH 1008 D16 1.0 ISO	10	.315	.378	4	.650	.681	2.9
1.25	M8	$\varnothing \geq 10$	MTH 0806 D14 1.25 ISO	8	.236	.299	4	.567	.598	2.5
1.5	M10	$\varnothing \geq 12$	MTH 1008 D17 1.5 ISO	10	.315	.386	4	.681	.717	2.9
1.5		$\varnothing \geq 14$	MTH 1210 D21 1.5 ISO	12	.394	.465	4	.858	.894	3.3
1.75	M12	$\varnothing \geq 12$	MTH 12095 D20 1.75 ISO	12	.374	.453	4	.791	.831	3.3

Order example: MTH08048D10 1.0 ISO MT11

UN Tools for Internal Thread



Grade	P	M	K	N	S	H
MT11	●	○	●	○	●	≤62 HRc

Pitch TPI	UNC	UNF	UNEF	Ordering Code	d mm	D	Df	No. of Flutes	I	If	L
40	5	6		MTH 06025 C6 40 UN	6	.098	.146	3	.236	.260	2.3
32	6			MTH 06026 C5 32 UN	6	.102	.150	3	.232	.256	2.3
32	8			MTH 06032 C7 32 UN	6	.126	.173	3	.295	.319	2.3
		10	12	MTH 06038 C9 32 UN	6	.150	.197	3	.358	.382	2.3
28		1/4		MTH 08052 D11 28 UN	8	.205	.268	4	.445	.476	2.5
28			7/16, 1/2	MTH 12096 D20 28 UN	12	.378	.441	4	.803	.835	3.3
24		5/16, 3/8	9/16, 5/8, 11/16	MTH 08066 D14 24 UN	8	.260	.315	4	.563	.591	2.5
20	1/4			MTH 06048 C12 20 UN	6	.189	.236	3	.476	.500	2.3
20		7/16, 1/2	3/4, 1	MTH 12092 D21 20 UN	12	.362	.425	4	.827	.858	3.3
18	5/16	9/16, 5/8	11/16	MTH 08057 C14 18 UN	8	.224	.295	3	.583	.618	2.5
16	3/8	3/4		MTH 10074 C16 16 UN	10	.291	.362	3	.657	.693	2.9
14	7/16	7/8		MTH 10085 D20 14 UN	10	.335	.390	4	.823	.850	2.9
13	1/2			MTH 12094 D22 13 UN	12	.370	.449	4	.886	.925	3.3

Order example: MTH 06048 C12 20 UN MT11

● First choice ○ Alternative

B11-7