



FMTZ & FT

Thread mills for High Cutting Stability



Metric

FMTZ & FT thread mills for high cutting stability

Carmex has developed new solid carbide thread mills: right hand cutting with left hand helix **FMTZ** and **FT**.

The tool enters the material at the upper point of the cutting edge close to the shank.

The **FMTZ** is equipped with radial coolant holes.

The **FT** thread mill offers more flutes for increased productivity

Features

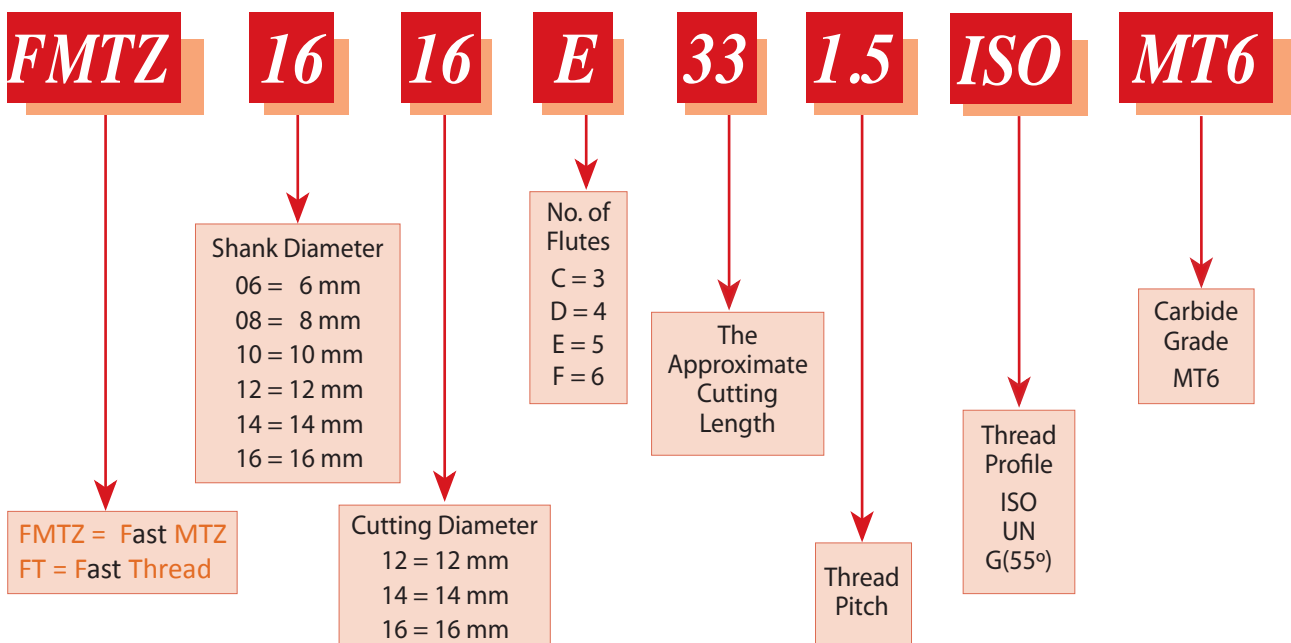
- Smooth cutting and reduced cutting forces during process
- Lower tool vibrations and High Surface Finish
- High Productivity through significant shorter cycle time
- Coolant holes directed to the cutting edge (FMTZ tools type only)
- For both right-hand and left-hand threads
- Optimized Carbide Grade for High Performance Cutting and Edge Stability
- Cylindrical shank

Carbide Grade: **MT6**

Ultra-Fine Carbide Grade with high hardness and toughness provides an excellent solution for machining steels, stainless steels, cast materials and super alloys.

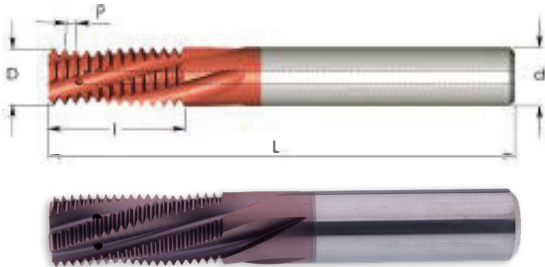
The universal PVD multi-layer coating provides high heat and wear resistance.

Product Identification



ISO With internal coolant through the flutes

Tools for Internal Thread



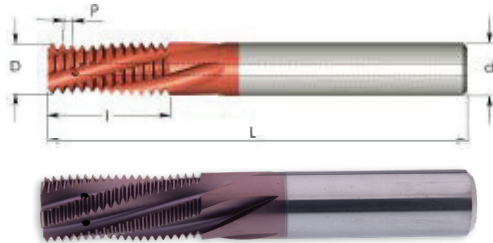
Grade	P	M	K	N	S	H
MT6	●	●	●	○	●	≤55 HRC

Pitch mm	M coarse	M fine	Ordering Code	d	D	No. of Flutes	I	L
1.0	M6	M8	FMTZ 06048 C10 1.0ISO	6	4.8	3	10.5	58
1.0		M8, M9	FMTZ 0606 C12 1.0ISO	6	6.0	3	12.5	58
1.0		M10	FMTZ 0808 D16 1.0ISO	8	8.0	4	16.5	64
1.0		M12, M14	FMTZ 12107 E24 1.0ISO	12	10.7	5	24.5	84
1.25	M8	M10	FMTZ 08064 D14 1.25ISO	8	6.4	4	14.4	64
1.5	M10	M12	FMTZ 08078 C17 1.5ISO	8	7.8	3	17.0	64
1.5		M14	FMTZ 1010 D21 1.5ISO	10	10.0	4	21.8	73
1.5		M14, M16	FMTZ 1212 D26 1.5ISO	12	12.0	4	26.3	84
1.5		M16, M18	FMTZ 1414 E32 1.5ISO	14	14.0	5	32.3	101
1.5		M20	FMTZ 1616 E33 1.5ISO	16	16.0	5	33.8	101
1.75	M12		FMTZ 10095 E20 1.75ISO	10	9.5	5	20.1	73

Order example: FMTZ 08078 C17 1.5ISO MT6

UN With internal coolant through the flutes

Tools for Internal Thread

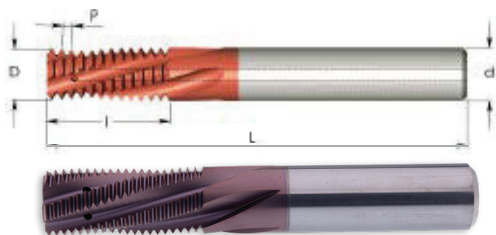


Grade	P	M	K	N	S	H
MT6	●	●	●	○	●	≤55 HRc

Pitch TPI	UNC	UNF	UNEF	Ordering Code	d	D	No. of Flutes	I	L
28		1/4		FMTZ 06052 D11 28UN	6	5.2	4	11.3	58
24		5/16		FMTZ 08066 D14 24UN	8	6.6	4	14.3	64
24		3/8	9/16-5/8	FMTZ 0808 D21 24UN	8	8.0	4	20.6	64
20		7/16-1/2		FMTZ 0808 C21 20UN	8	8.0	3	21.0	64
20			3/4-1	FMTZ 1212 E27 20UN	12	12.0	5	27.3	84
18	5/16			FMTZ 0606 D14 18UN	6	6.0	4	14.8	58
18		9/16-5/8	1 1/8-1 5/8	FMTZ 12113 D26 18UN	12	11.3	4	26.1	84
16	3/8			FMTZ 08074 D16 16UN	8	7.4	4	16.7	64
16		3/4		FMTZ 1212 D31 16UN	12	12.0	4	31.0	84
14	7/16			FMTZ 10085 D20 14UN	10	8.5	4	20.9	73
14		7/8		FMTZ 1616 E37 14UN	16	16.0	5	37.2	101
13	1/2			FMTZ 10098 E22 13UN	10	9.8	5	22.5	73
12	9/16			FMTZ 12116 E26 12UN	12	11.6	5	26.5	84
12		1-1 1/2		FMTZ 1616 E41 12UN	16	16.0	5	41.3	101
11	5/8			FMTZ 1212 E28 11UN	12	12.0	5	28.9	84
10	3/4			FMTZ 16147 E34 10UN	16	14.7	5	34.3	101
8	1			FMTZ 20195 E42 8UN	20	19.5	5	42.9	105

Order example: FMTZ 1212 D31 16UN MT6

G (55°) BSF, BSP With internal coolant through the flutes

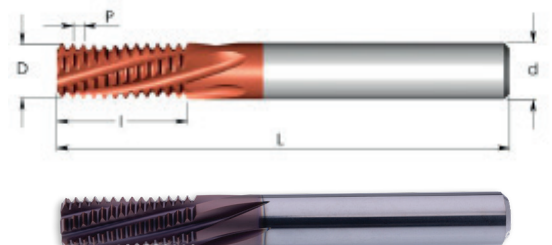


Grade	P	M	K	N	S	H
MT6	●	●	●	○	●	≤55 HRc

Pitch TPI	Standard	Ordering Code	d	D	No. of Flutes	I	L
28	G1/8	FMTZ 08078 C14 28W	8	7.8	3	14.1	64
19	G1/4-3/8	FMTZ 1010 D16 19W	10	10.0	4	16.7	73
19	G1/4-3/8	FMTZ 1010 D26 19W	10	10.0	4	26.1	73
14	G1/2-7/8	FMTZ 1616 E26 14W	16	16.0	5	26.3	101
11	G≥1	FMTZ 1616 D38 11W	16	16.0	4	38.1	101

Order example: FMTZ 1010 D26 19W MT6

ISO Tools for Internal Thread



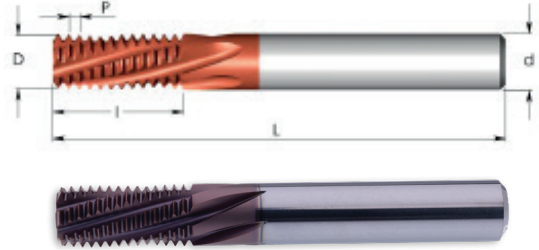
Grade	P	M	K	N	S	H
MT6	●	●	●	○	●	≤55 HRc

Pitch mm	M coarse	M fine	Ordering Code	d	D	No. of Flutes	I	L
1.0	M6	M8	FT 06048 E10 1.0ISO	6	4.8	5	10.5	57
1.0		M8, M9	FT 0606 E12 1.0ISO	6	6.0	5	12.5	57
1.0		M10	FT 0808 F16 1.0ISO	8	8.0	6	16.5	63
1.0		M12, M14	FT 12107 F24 1.0ISO	12	10.7	6	24.5	83
1.25	M8	M10	FT 08064 E14 1.25ISO	8	6.4	5	14.4	63
1.5	M10	M12	FT 08078 E17 1.5ISO	8	7.8	5	17.0	63
1.5		M14	FT 1010 F21 1.5ISO	10	10.0	6	21.8	72
1.5		M14, M16	FT 1212 F26 1.5ISO	12	12.0	6	26.3	83
1.5		M16, M18	FT 1414 F32 1.5ISO	14	14.0	6	32.3	100
1.5		M20	FT 1616 F33 1.5ISO	16	16.0	6	33.8	105
1.75	M12		FT 10095 F20 1.75ISO	10	9.5	6	20.1	72

Order example: FT 1212 F31 16UN MT6

UN

Tools for Internal Thread



Grade	P	M	K	N	S	H
MT6	●	●	●	○	●	≤55 HRc

Pitch TPI	UNC	UNF	UNEF	Ordering Code	d	D	No. of Flutes	I	L
28		1/4		FT 06052 E11 28UN	6	5.2	5	11.3	57
24		5/16		FT 08066 E14 24UN	8	6.6	5	14.3	63
24		3/8	9/16-5/8	FT 0808 F21 24UN	8	8.0	6	20.6	63
20	1/4			FT 06048 D12 20UN	6	4.8	4	12.1	57
20		7/16-1/2		FT 0808 F21 20UN	8	8.0	6	21.0	63
20			3/4-1	FT 1212 F27 20UN	12	12.0	6	27.3	83
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18		9/16-5/8	1 1/8-1 5/8	FT 12113 F26 18UN	12	11.3	6	26.1	83
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16		3/4		FT 1212 F31 16UN	12	12.0	6	31.0	83
14	7/16			FT 10085 E20 14UN	10	8.5	5	20.9	72
14		7/8		FT 1616 F37 14UN	16	16.0	6	37.2	105
13	1/2			FT 10098 E22 13UN	10	9.8	5	22.5	72
12	9/16			FT 12116 F26 12UN	12	11.6	6	26.5	83
12		1-1 1/2		FT 1616 F41 12UN	16	16.0	6	41.3	105
11	5/8			FT 1212 E28 11UN	12	12.0	5	28.9	83
10	3/4			FT 16147 E34 10UN	16	14.7	5	34.3	105
8	1			FT 20195 F42 8UN	20	19.5	6	42.9	104

Order example: FT 1212 F31 16UN MT6

Cutting Data

ISO Standard	Material	Cutting Speed m/min	Cutting Diameter = D Feed mm/tooth		
			D ≤ 4	4 < D < 9	D ≥ 9
P	Low & Medium Carbon Steels < 0.55%C	100-250	0.03-0.04	0.03-0.08	0.08-0.12
	High Carbon Steels ≥ 0.55%C	110-180	0.02-0.03	0.02-0.07	0.07-0.10
	Alloy Steels, Treated Steels	90-160	0.02-0.03	0.03-0.06	0.05-0.08
M	Stainless Steel-Free Cutting	60-160	0.02-0.03	0.03-0.06	0.05-0.08
	Stainless Steel-Austenitic	60-120	0.02-0.03	0.03-0.05	0.04-0.07
	Cast Steels	130-170	0.02-0.03	0.03-0.05	0.04-0.07
K	Cast Iron	70-150	0.03-0.04	0.05-0.08	0.08-0.12
N	Aluminum ≤ 12%Si, Copper	150-350	0.03-0.04	0.05-0.08	0.08-0.12
	Aluminum > 12%Si	100-250	0.02-0.03	0.03-0.05	0.04-0.07
	Synthetics, Duroplastics, Thermoplastics	100-400	0.05-0.07	0.07-0.11	0.10-0.15
S	Nickel alloys, Titanium alloys.	20-80	0.02-0.03	0.02-0.03	0.02-0.04
H	Hardened Steel 45-50 HRc	60-70	0.02-0.03	0.02-0.03	0.02-0.04
	Hardened Steel 50-55 HRc	50-60	0.01-0.02	0.01-0.02	0.01-0.03

