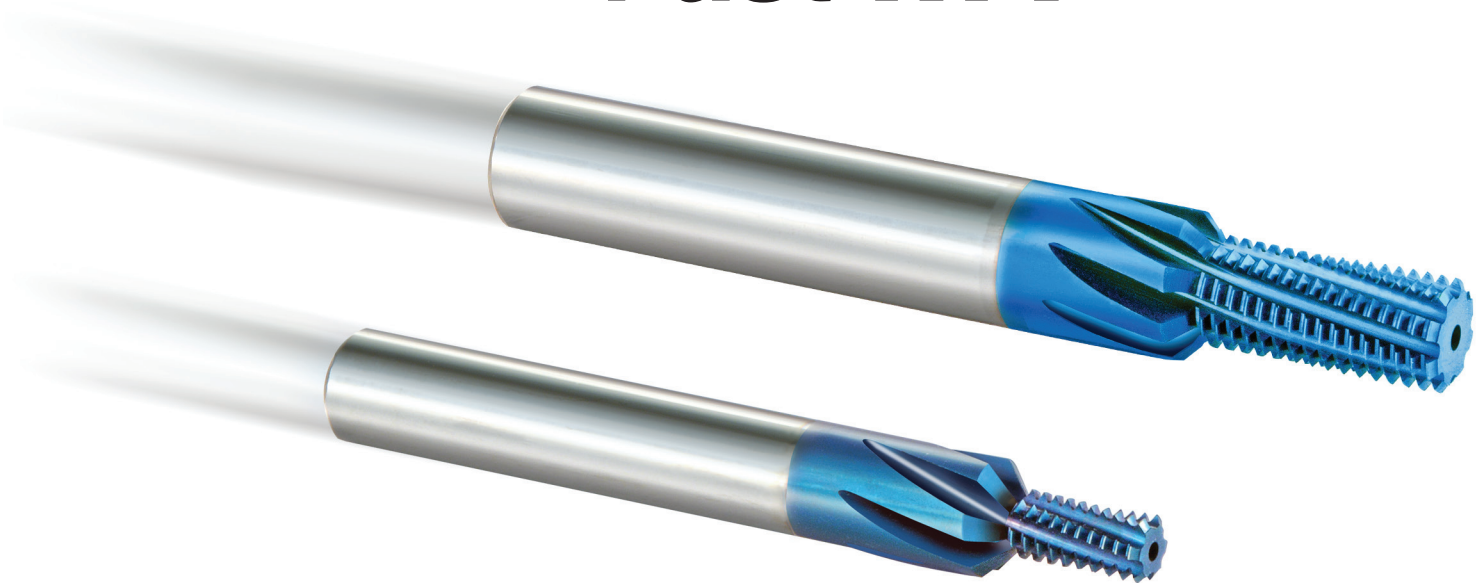




Carmex
Precision Tools Ltd.
x-treme thread cutting™

FMT ***Fast MT***



Inch 2017

Fast MT

- Carmex has designed a unique line of solid carbide thread milling tools (FMT) for increased productivity and extended tool life.
- Large number of flutes results in significantly shorter machining time.

FMT vs. Taps

Features	FMT	Taps
Thread up to bottom at blind hole	Possible	Not possible
Machining load	Very low	High
Thread surface quality	High	Medium
Process reliability	Very reliable, especially for expensive work pieces	Medium
Thread geometry	Very accurate	Medium
Cycle time	Same or faster than tap	Fast

Carbide grade MT8:

Sub Micron grade with advanced PVD triple coating (ISO K10-K20). Extremely high heat resistance and smooth cutting operation for high performance in normal and general machining conditions on all materials.

Test Report

Application

Internal right hand thread: M6x1.0
 Thread length: .39", Blind hole
 Bore size: Ø .197"
 Chamfer: .035"

Work piece material

Steel SAE 4340

Cutter description

FMT08048F10 1.0 ISO- with internal coolant
 Shank diameter: Ø 8 mm
 Cutting diameter: Ø .189"
 Number of flutes: 6
 Cutting length: .41"
 Total length: 2.5"

Cutting conditions

Cutting speed: 425ft/min Feed: .00063 inch/tooth

Machine

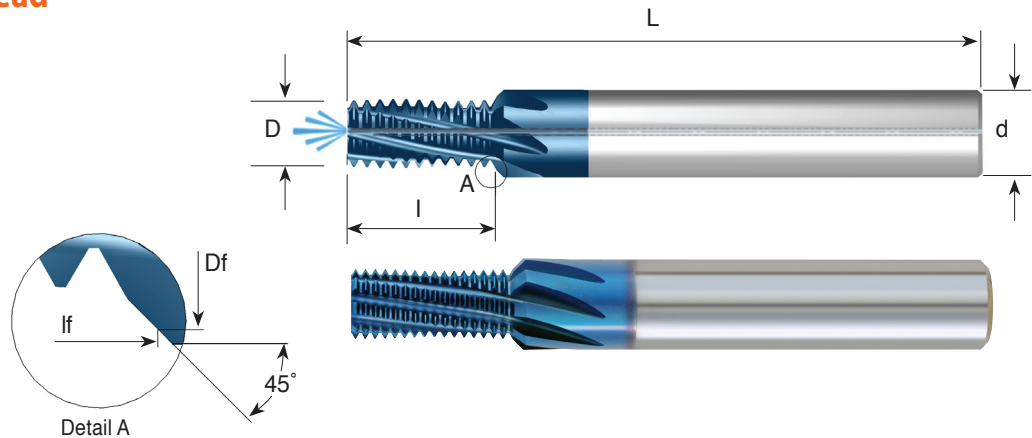
Mori Seiki NV5000 Coolant: emulsion 5%

Results

Tool life : 2,170 threads
 Cycle time: 1.5 sec

ISO Fast MT With internal coolant bore

Tools for Internal thread



Pitch mm	M coarse	M fine	Ordering Code	d mm	D	Df	Flutes	I	lf	L
0.7	M4		FMT 06032 E7 0.7 ISO	6	.126	.189	4	.29	.32	2.3
0.8	M5		FMT 0604 E9 0.8 ISO	7	.157	.224	5	.36	.40	2.3
1.0	M6	M8	FMT 08048 F10 1.0 ISO	8	.189	.268	6	.41	.45	2.5
1.25	M8	M10	FMT 10064 G14 1.25 ISO	10	.252	.378	7	.57	.63	2.9
1.5	M10	M14	FMT 1008 G17 1.5 ISO	10	.315	.386	7	.68	.72	2.9
1.75	M12		FMT 12095 G20 1.75 ISO	12	.374	.461	7	.79	.83	3.3

UN Fast MT with internal coolant bore

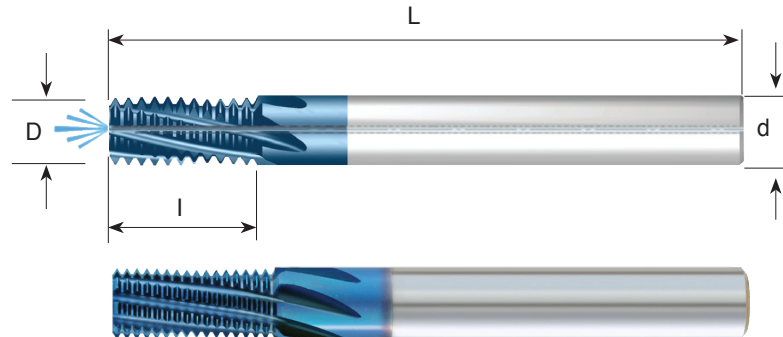
Tools for Internal Thread

Pitch TPI	UNC	UNF	UNEF	Ordering Code	d mm	D	Df	Flutes	I	lf	L
28		1/4		FMT 08052 F11 28 UN	8	.205	.283	6	.44	.48	2.5
28			7/16, 1/2	FMT 12098 H19 28 UN	12	.386	.465	8	.77	.81	3.3
24		5/16		FMT 10066 G14 24 UN	10	.260	.378	7	.56	.62	2.9
24		3/8	9/16, 5/8, 11/16	FMT 12082 G17 24 UN	12	.323	.417	7	.69	.74	3.3
20	1/4			* FMT 08048 E12 20 UN	8	.189	.268	5	.48	.52	2.5
20		7/16		FMT 12092 H21 20 UN	12	.362	.449	8	.83	.87	3.3
20		1/2	3/4, 7/8, 1	FMT 14111 H22 20 UN	14	.437	.531	8	.87	.92	3.3
18	3/8			FMT 1006 F14 18 UN	10	.236	.331	6	.58	.63	2.9
18		9/16, 5/8	1 1/16, 1 1/8	FMT 16125 H26 18 UN	16	.492	.591	8	1.03	1.08	4.1
16	3/8			FMT 10074 F16 16 UN	10	.291	.378	6	.66	.70	2.9
16		3/4		FMT 20167 H34 16 UN	20	.657	.760	8	1.34	1.39	4.1
14	7/16	7/8		FMT 12085 F20 14 UN	12	.335	.421	6	.82	.87	3.3
13	1/2			FMT 12098 F24 13 UN	12	.386	.465	6	.96	1.00	3.3
12	9/16	1		FMT 16116 F26 12 UN	16	.457	.598	6	1.04	1.11	4.1

* Without internal coolant

G 55° Fast MT With internal coolant bore

Same Tool for Internal and External Thread



Pitch TPI	Standard	Ordering Code	d mm	D	Flutes	I	L
28	G1/8	FMT 08078 H14 28W	8	.307	8	.56	2.5
19	G1/4-3/8	FMT 1010 G16 19W	10	.394	7	.66	2.9
14	G1/2-7/8	FMT 1414 H26 14W	14	.551	8	1.04	3.3
11	G≥1	FMT 1616 H38 11W	16	.630	8	1.50	4.1

Without cutting chamfer

Cutting Data

ISO Standard	Materials	Cutting Speed ft/min	Feed inch/tooth Cutting Diameter = D				
			Ø .17	Ø .24	Ø .31	Ø .39	Ø .47 - Ø .63
P	Low&Medium Carbon Steels <0.55%C	330-820	.0012	.0024	.0028	.0031	.0035
	High Carbon Steels ≥0.55%C	360-590	.0012	.0020	.0024	.0028	.0031
	Alloy Steels, Treated Steels	300-520	.0008	.0012	.0016	.0020	.0020
M	Stainless Steel-Free Cutting	200-520	.0012	.0016	.0020	.0024	.0024
	Stainless Steel-Austenitic	200-390	.0004	.0012	.0016	.0020	.0020
	Cast Steels	430-560	.0008	.0012	.0016	.0020	.0020
K	Cast Iron	230-490	.0016	.0024	.0028	.0031	.0035
N	Aluminum ≤12%Si, Copper	490-1150	.0016	.0024	.0028	.0031	.0035
	Aluminum >12%Si	330-820	.0012	.0012	.0016	.0020	.0020
	Synthetics, Duroplastics, Thermoplastics	330-1310	.0024	.0031	.0039	.0043	.0047
S	Nickel Alloys, Titanium Alloys	70-260	.0008	.0012	.0012	.0012	.0012
H	Hardened Steel, 45-50HRc	195-230	.0008	.0012	.0012	.0012	.0012




AHB Tooling & Machinery, Inc.
 Complete Metalworking Solutions
 Roseville Saginaw & Jackson, MI
 ISO Certified
 (800) 991-4225
 www.ahbinc.com
 customerservice@ahbinc.com