



**Carmex**  
Precision Tools Ltd.  
*x-treme thread cutting™*



**New**

# FMT Fast MT



# Fast MT

- Carmex has designed a unique line of solid carbide thread milling tools FMT for increased productivity, and high performance.
- Large number of flutes enables to achieve significant 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 resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

## Test Report

### Application

Internal right hand thread: M6x1.0  
 Thread length: 10 mm, Blind hole  
 Bore size: Ø 5 mm  
 Chamfer: 0.9 mm

### Work piece material

Steel SAE 4340

### Cutter description

FMT08048F10 1.0 ISO- with internal coolant  
 Shank diameter: Ø8 mm  
 Cutting diameter: Ø4.8 mm  
 Number of flutes: 6  
 Cutting length: 10.5 mm  
 Total length: 64 mm

### Cutting conditions

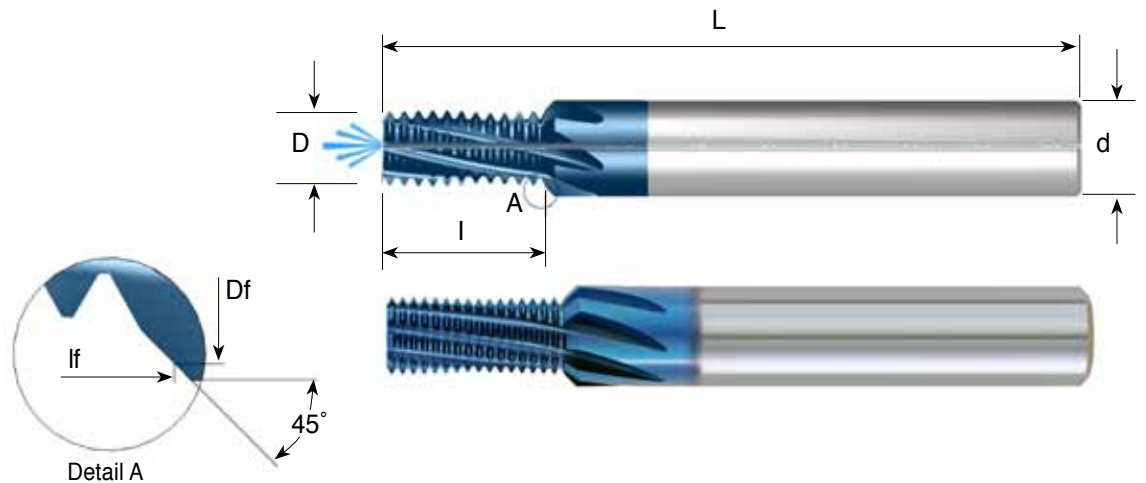
Cutting speed: 130 m/min Feed: 0.016 mm/tooth

### Machine

Mori Seiki NV5000 Coolant: emulsion 5%

### Results

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



## ISO

Pitch mm	M coarse	M fine	Ordering Code	d	D	Df	Flutes	I	If	L
1.0	M6	$\emptyset \geq 7$	<b>FMT 08048 F10 1.0 ISO</b>	8	4.8	6.8	6	10.5	11.5	64
1.25	M8	$\emptyset \geq 10$	<b>FMT 10064 G14 1.25 ISO</b>	10	6.4	9.6	7	14.4	16.0	73
1.5	M10	$\emptyset \geq 12$	<b>FMT 1008 G17 1.5 ISO</b>	10	8.0	9.8	7	17.3	18.2	73
1.75	M12	$\emptyset \geq 12$	<b>FMT 12095 G20 1.75 ISO</b>	12	9.5	11.7	7	20.1	21.2	84

## UN

Pitch TPI	UNC	UNF	UNEF	Ordering Code	d	D	Df	Flutes	I	If	L
24		5/16, 3/8	9/16, 5/8, 11/16	<b>FMT 10066 G14 24 UN</b>	10	6.6	9.6	7	14.3	15.8	73
20	1/4			<b>* FMT 08048 E12 20 UN</b>	8	4.8	6.8	5	12.1	13.1	64
20		7/16, 1/2	3/4, 1	<b>FMT 12092 H21 20 UN</b>	12	9.2	11.4	8	21.0	22.1	84
18	5/16	9/16, 5/8	11/16	<b>FMT 1006 F14 18 UN</b>	10	6.0	8.4	6	14.8	16.0	73
16	3/8	3/4		<b>FMT 10074 F16 16 UN</b>	10	7.4	9.6	6	16.7	17.8	73
14	7/16	7/8		<b>FMT 12085 F20 14 UN</b>	12	8.5	10.7	6	20.9	22.0	84

\* without internal coolant

# Cutting Data



ISO Standard	Materials	Cutting Speed m/min	Feed mm/tooth Cutting Diameter = D				
			Ø 5	Ø 6	Ø 8	Ø 10	Ø 12
<b>P</b>	Low&Medium Carbon Steels <0.55%C	100-250	0.03	0.06	0.07	0.08	0.09
	High Carbon Steels ≥0.55%C	110-180	0.03	0.05	0.06	0.07	0.08
	Alloy Steels, Treated Steels	90-60	0.02	0.03	0.04	0.05	0.05
<b>M</b>	Stainless Steel-Free Cutting	60-160	0.03	0.04	0.05	0.06	0.06
	Stainless Steel-Austenitic	60-120	0.01	0.03	0.04	0.05	0.05
	Cast Steels	130-170	0.02	0.03	0.04	0.05	0.05
<b>K</b>	Cast Iron	70-150	0.04	0.06	0.07	0.08	0.09
<b>N</b>	Aluminum ≤12%Si, Copper	150-350	0.04	0.06	0.07	0.08	0.09
	Aluminum >12%Si	100-250	0.03	0.03	0.04	0.05	0.05
	Synthetics, duroplastics, thermoplastics	100-400	0.06	0.08	0.10	0.11	0.12
<b>S</b>	Nickel alloys, Titanium alloys.	20-80	0.02	0.03	0.03	0.03	0.03
<b>H</b>	Hardened Steel, 45-50HRc	60-70	0.02	0.03	0.03	0.03	0.03



1st Hacharoshet St., Maalot Industrial Zone 2101302, ISRAEL  
 Tel: (972) 4-9077400, Fax: (972) 4-9077440.  
 E-mail: info@carmex.com Website: www.carmex.com  
 Postal address: P.O. Box 404, Maalot 2101302, ISRAEL.