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

Mill Thread Solid Carbide

New Products

Metric 2018

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MT Drill

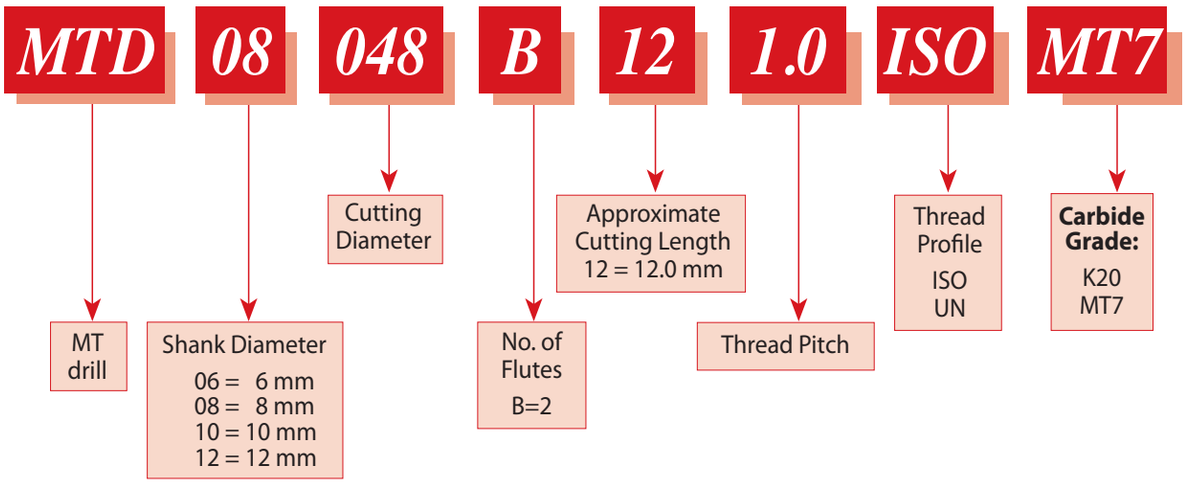
Carmex presents a new type of solid carbide thread mills.
The new Carmex **MT Drill** is designed to drill, chamfer and thread mill the hole in one opreation.

Advantages

- Two fluted drill/thread milling cutter, with 45^0 chamfering.
- Ideal for mass production applications.
- Reduces cycle times by combining operations and eliminating tool changes.
- For both right and left hand internal threads.
- Same tool for blind or through hole.
- High thread surface quality.
- Internal coolant.
- Optimized carbide grade for Aluminum and Cast Iron.

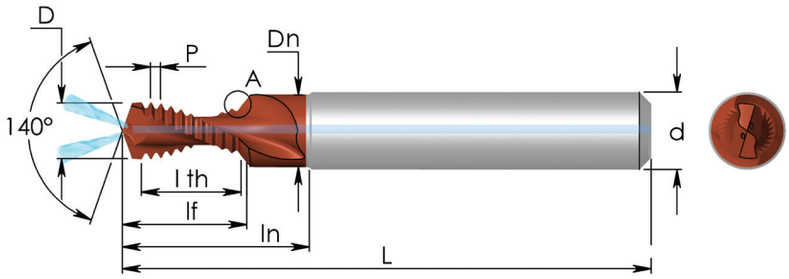
Product Identification

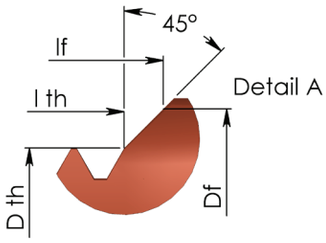
Mill-Thread Drill Ordering Codes



MT Drill

Tools for Internal thread





Thread length: 2xD

Grade	P	M	K	N	S	H
K20			●	●		
MT7			●	●		

ISO

Pitch mm	M coarse	Ordering Code	d	D	Dth	Df	Dn	ln	l th	lf	L
0.7	M4	**MTD 06032 B7 0.7 ISO**	6	3.30	3.20	4.7	4.9	15	7.7	9.8	54
0.8	M5	**MTD 0604 B9 0.8 ISO**	6	4.20	4.00	5.5	5.7	18	9.6	11.9	54
1.0	M6	**MTD 08048 B12 1.0 ISO**	8	5.00	4.80	6.5	6.8	26	12.0	14.8	62
1.25	M8	**MTD 10064 B15 1.25 ISO**	10	6.75	6.40	8.6	8.9	34	15.1	18.7	74
1.5	M10	**MTD 1208 B19 1.5 ISO**	12	8.50	8.00	10.5	10.8	35	19.5	23.8	80

UNC

Pitch mm	UNC	Ordering Code	d	D	Dth	Df	Dn	ln	lth	lf	L
20	1/4	**MTD 08048 B12 20 UN**	8	5.20	4.80	6.7	6.9	26	12.7	15.9	62
18	5/16	**MTD 10061 B15 18 UN**	10	6.60	6.10	8.3	8.6	34	15.5	19.2	74
16	3/8	**MTD 12075 B19 16 UN**	12	8.00	7.50	10.0	10.3	35	19.1	23.4	80
14	7/16	**MTD 12088 B21 14 UN**	12	9.40	8.80	11.4	11.6	35	21.8	26.7	80

UNF

Pitch mm	UNF	Ordering Code	d	D	Dth	Df	Dn	ln	lth	lf	L
32	10	**MTD 06038 B9 32 UN**	6	4.10	3.80	5.4	5.6	18	9.5	11.9	54
28	1/4	**MTD 08052 B13 28 UN**	8	5.50	5.20	6.7	6.9	26	13.0	15.7	62
24	5/16	**MTD 10066 B15 24 UN**	10	6.90	6.60	8.4	8.7	34	15.9	19.1	74
24	3/8	**MTD 12082 B19 24 UN**	12	8.50	8.20	10.0	10.3	35	19.0	22.5	80

* Tools without coolant, available upon request.
* Cylindrical shank DIN6535-HA (Weldon shank, available upon request).

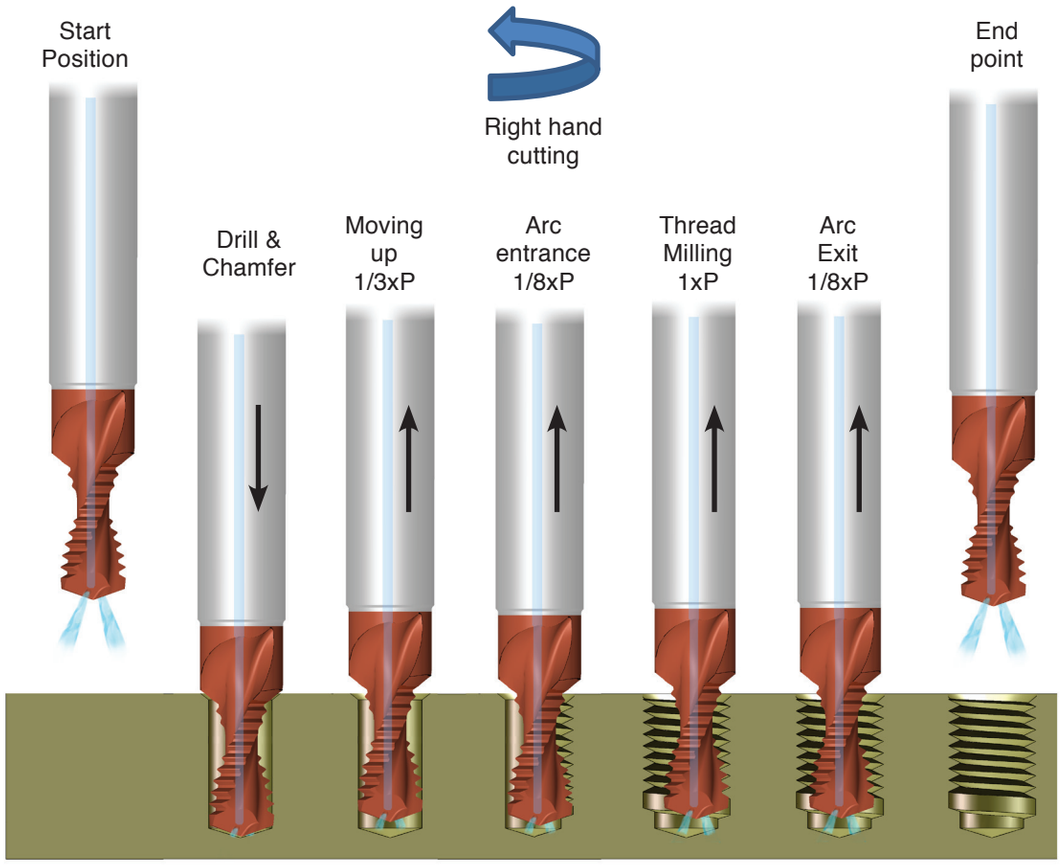
Cutting Data

Carbide grade **K20:** Uncoated Sub-Micron carbide grade dedicated for machining Aluminum and Cast Iron.

MT7: Sub-Micron carbide grade combines high hardness and toughness, with PVD triple coating for smooth cutting and high performance.

Material Group	Materials	Cutting Speed m/min		Feed mm/r Cutting Diameter = D			Feed mm/tooth Cutting Diameter = D		
				Drilling			Mill Thread		
		K20	MT7	D≤4	4<D<6	D≥6	D≤4	4<D<6	D≥6
K	Cast Iron	50- 80	80-120	0.10-0.15	0.15-0.20	0.15-0.30	0.005-0.03	0.01-0.05	0.02-0.10
N	Aluminum ≤12%Si, Copper	100-250	100-350	0.06-0.10	0.10-0.20	0.20-0.30	0.005-0.04	0.01-0.06	0.02-0.13
	Aluminum >12%Si	---	80-180	0.05-0.07	0.10-0.15	0.15-0.25	0.005-0.04	0.01-0.06	0.02-0.13
	Synthetics, Duroplastics, Thermoplastics	60-100	80-180	0.10-0.20	0.20-0.30	0.20-0.30	0.005-0.04	0.01-0.06	0.02-0.13

MT drill working cycle



MTSB type

Carmex has developed new innovative solid carbide thread milling cutters, the **MTSB type with internal coolant bore.**
The coolant bore provides high coolant pressure through the tool into the application pre-hole, and washes the chips away during the threading cycle.
The coolant liquid also cools the tool cutting edge very efficiently.

Excellent solution for:

- Small and deep threads.
- Thread milling operations on horizontal machining centers, where chips are concentrated at the bottom of the thread and external coolant can't wash the chips away.
- Complicated applications where external coolant is inefficient or can't reach the machined area.
- Case where the tool collet is close to the application pre-hole and blocks the external coolant.

Can also be used in any other thread milling operation (blind or through hole) that requires improved performance with high thread quality.

Features:

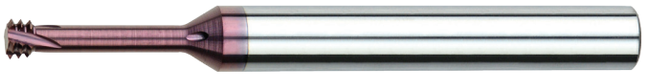
- Increased number of flutes for high performance, shorter cycle time and improved tool life.
- Working at high machining parameters (increasing productivity).
- Advanced PVD triple coating.
- Threads size: M1.2 up to M8
  0-80 up to 12-24UNC

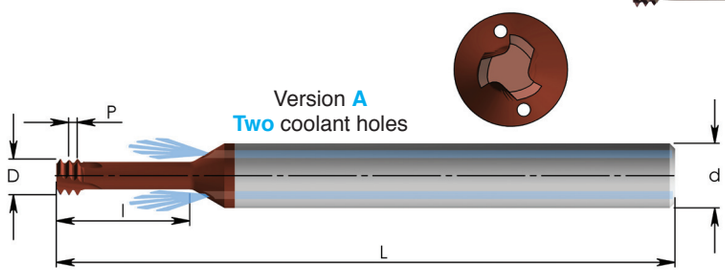
Carbide grade: MT7

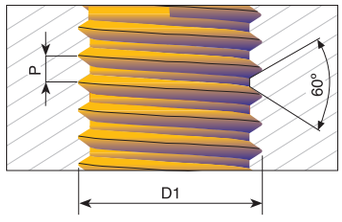
Our MT7 sub-micron grade with it's advanced PVD triple coating provides extremely high heat resistance along with smooth cutting action, delivering high performance under normal machining conditions.

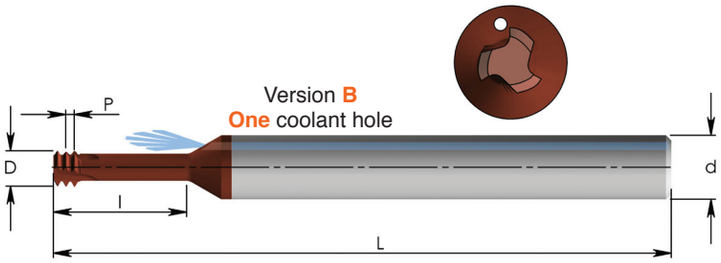
ISO

Tools for Internal Thread







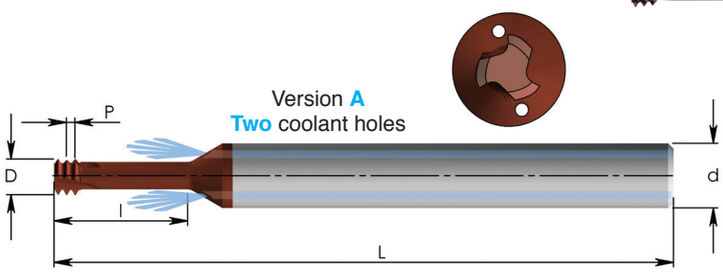


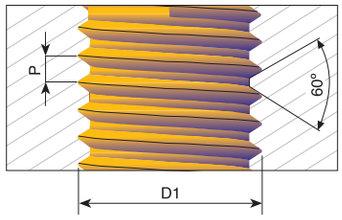
P	M	K	N	S	H
●	●	●	●	●	≤45 HRc

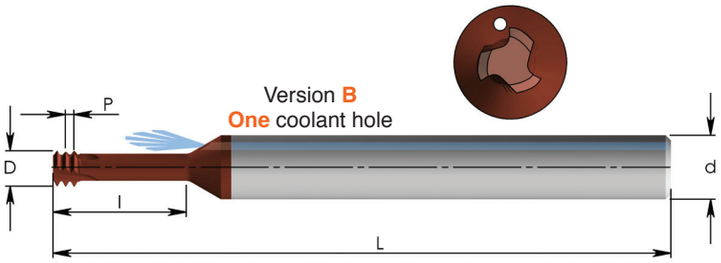
Pitch mm	M coarse	M Fine	Ordering Code	d	D	No. of Flutes	l	L	Thread depth	Version
0.25	M1.2	M1.4	**MTSB 06009 C2 0.25 ISO**	6	0.90	3	2.7	58	2xD1	A
0.3	M1.4		**MTSB 06011 C4 0.3 ISO**	6	1.05	3	4.5	58	3xD1	A
0.35	M1.6	M2	**MTSB 06012 C5 0.35 ISO**	6	1.20	3	5.2	58	3xD1	A
0.4	M2		**MTSB 06016 C4 0.4 ISO**	6	1.55	3	4.4	58	2xD1	A
0.4	M2		**MTSB 06016 C6 0.4 ISO**	6	1.55	3	6.4	58	3xD1	A
0.45	M2.5		**MTSB 0602 D5 0.45 ISO**	6	1.95	4	5.5	58	2xD1	A
0.45	M2.5		**MTSB 0602 D7 0.45 ISO**	6	1.95	4	7.9	58	3xD1	A
0.5	M3		**MTSB 06024 D6 0.5 ISO**	6	2.40	4	6.5	58	2xD1	A
0.5	M3		**MTSB 06024 D9 0.5 ISO**	6	2.40	4	9.5	58	3xD1	A
0.6	M3.5		**MTSB 06028 D7 0.6 ISO**	6	2.80	4	7.6	58	2xD1	A
0.7	M4		**MTSB 06032 D8 0.7 ISO**	6	3.20	4	8.7	58	2xD1	B
0.7	M4		**MTSB 06032 D12 0.7 ISO**	6	3.20	4	12.7	58	3xD1	B
0.8	M5		**MTSB 06038 D10 0.8 ISO**	6	3.80	4	10.8	58	2xD1	B
0.8	M5		**MTSB 06038 D15 0.8 ISO**	6	3.80	4	15.8	58	3xD1	B
1.0	M6	M8	**MTSB 08048 D13 1.0 ISO**	8	4.80	4	13.0	64	2xD1	B
1.0	M6	M8	**MTSB 08048 D19 1.0 ISO**	8	4.80	4	19.0	64	3xD1	B

UN

Tools for Internal Thread







P	M	K	N	S	H
●	●	●	●	●	≤45 HRc

Pitch TPI	UNC	UNF	Ordering Code	d	D	No. of Flutes	l	L	Thread depth	Version
80		0	MTSB 06012 C4 80 UN	6	1.15	3	4.9	58	3xD1	A
72		1	MTSB 06014 C5 72 UN	6	1.45	3	5.9	58	3xD1	A
56	2	3	MTSB 06016 C4 56 UN	6	1.65	3	4.8	58	2xD1	A
56	2	3	MTSB 06016 C7 56 UN	6	1.65	3	7.0	58	3xD1	A
48	3	4	MTSB 06019 D5 48 UN	6	1.90	4	5.6	58	2xD1	A
40	4		MTSB 06021 D6 40 UN	6	2.10	4	6.3	58	2xD1	A
40	4		MTSB 06021 D9 40 UN	6	2.10	4	9.2	58	3xD1	A
40	4		MTSB 06021 D12 40 UN	6	2.10	4	12.0	58	4xD1	A
40	5	6	MTSB 06024 D7 40 UN	6	2.45	4	7.0	58	2xD1	A
32	6		MTSB 06025 D7 32 UN	6	2.55	4	7.8	58	2xD1	A
32	6		MTSB 06025 D11 32 UN	6	2.55	4	11.3	58	3xD1	A
32	8		MTSB 06032 D9 32 UN	6	3.20	4	9.1	58	2xD1	B
32	8		MTSB 06032 D13 32 UN	6	3.20	4	13.3	58	3xD1	B
32		10	MTSB 06037 D10 32 UN	6	3.70	4	10.5	58	2xD1	B
32		10	MTSB 06037 D15 32 UN	6	3.70	4	15.3	58	3xD1	B
24	10, 12		MTSB 06035 D10 24 UN	6	3.50	4	10.7	58	2xD1	B
24	10, 12		MTSB 06035 D15 24 UN	6	3.50	4	15.5	58	3xD1	B

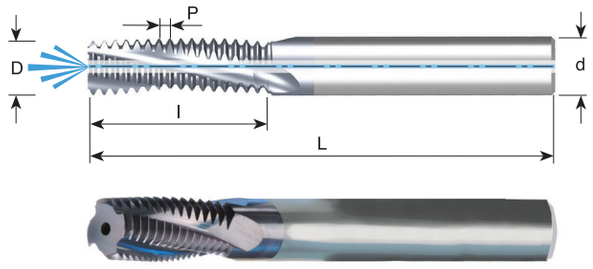
Cutting Data

ISO Standard	Materials	Cutting speed Vc [m/min]	Feed Fz [mm/tooth] Cutting Diameter=D					
			Ø1	Ø1.5	Ø2	Ø3	Ø4	Ø5
P	Low and Medium Carbon Steels < 0.55%C	60-120	0.04	0.05	0.05	0.07	0.09	0.11
	High Carbon Steels ≥ 0.55%C	60- 90	0.03	0.04	0.05	0.06	0.08	0.09
	Alloy Steels, Treated Steels	50- 80	0.03	0.04	0.04	0.05	0.05	0.06
M	Stainless Steel - Free Cutting	70-100	0.02	0.03	0.03	0.04	0.05	0.06
	Stainless Steel - Austenitic	60- 90	0.02	0.03	0.03	0.04	0.05	0.06
	Cast Steels	70- 90	0.03	0.04	0.04	0.05	0.05	0.06
K	Cast Iron	40- 80	0.04	0.05	0.05	0.07	0.09	0.11
N	Aluminum ≤ 12%Si, Copper	100-200	0.04	0.05	0.05	0.07	0.09	0.11
	Aluminum > 12%Si	60-140	0.03	0.03	0.03	0.04	0.05	0.06
	Synthetics, Duroplastics, Thermoplastics	50-200	0.09	0.10	0.11	0.12	0.14	0.16
S	Nickel Alloys, Titanium Alloys.	20- 40	0.03	0.03	0.03	0.04	0.04	0.05
H	Hardened Steel, 45-50HRc	60- 70	0.03	0.04	0.04	0.05	0.05	0.06

MTB Mill Thread Solid Carbide

G 55° BSF, BSP With internal coolant bore

new items



Pitch TPI	Standard	Ordering Code	d mm	D	No. of Flutes	l	L
28	G1/8	**MTB 0808 C20 28W**	8	8.0	3	20.4	73
19	G1/4	**MTB 1211 D27 19W**	12	11.0	4	27.4	84
19	G3/8	**MTB 1414 D26 19W**	14	14.0	4	26.1	84
19	G3/8	**MTB 1414 D34 19W**	14	14.0	4	34.1	84

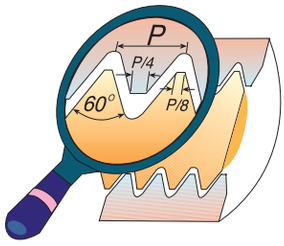
* For the complete range of G55° thread mills see main catalogue.

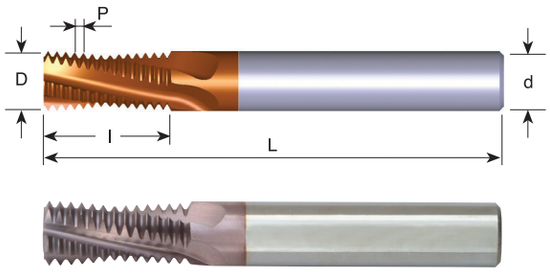
EMT Mill-Thread solid carbide for external threads

Carmex presents new Mill-Thread solid carbide tools for external MJ and UNJ threads. Dedicated tools for the Aerospace industry for machining large range of materials as Titanium alloys, stainless steel, nickel alloys, cast materials and steels up to 50 HRc.
Carbide Grade: MT7

Mill - Thread Solid Carbide for External Threads

MJ - ISO 5855

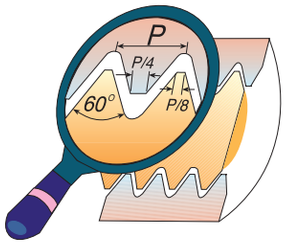


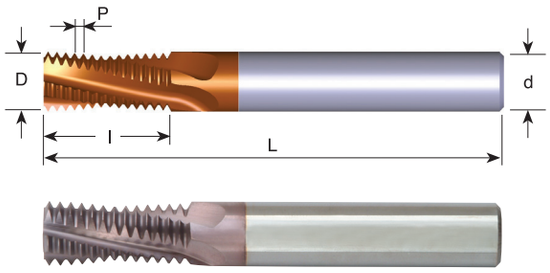


Grade	P	M	K	N	S	H
MT7	●	●	●	○	●	≤50 HRc

Pitch mm	Ordering Code	d	D	No. of Flutes	l	L
1.0	**EMT 1010 D20 1.0 MJ**	10	10.0	4	20.5	72
1.0	**EMT 1212 E24 1.0 MJ**	12	12.0	5	24.5	83
1.5	**EMT 1010 D21 1.5 MJ**	10	10.0	4	21.8	72
1.5	**EMT 1212 D26 1.5 MJ**	12	12.0	4	26.3	83
2.0	**EMT 1010 C21 2.0 MJ**	10	10.0	3	21.0	72
2.0	**EMT 1212 D27 2.0 MJ**	12	12.0	4	27.0	83

UNJ UNJC, UNJF, UNJEF, UNJS





Grade	P	M	K	N	S	H
MT7	●	●	●	○	●	≤50 HRc

Pitch mm	Ordering Code	d	D	No. of Flutes	l	L
32	**EMT 0606 C13 32 UNJ**	6	6.0	3	13.9	57
28	**EMT 0808 D17 28 UNJ**	8	8.0	4	17.7	63
24	**EMT 1010 D20 24 UNJ**	10	10.0	4	20.6	72
20	**EMT 1212 E27 20 UNJ**	12	12.0	5	27.3	83
18	**EMT 1212 D26 18 UNJ**	12	12.0	4	26.1	83
16	**EMT 1212 D26 16 UNJ**	12	12.0	4	26.2	83
14	**EMT 1212 D26 14 UNJ**	12	12.0	4	26.3	83
12	**EMT 1212 D26 12 UNJ**	12	12.0	4	26.5	83

● First choice ○ Alternative

* For cutting data information refer to MT cutting data table in main catalogue.

Carmex
Precision Tools Ltd.

CARMEX MT Solid Carbide N.P Metric 12/2017

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