

THREAD MAKING



THREAD MAKING



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Guide to Icons



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➤ Cutting Condition Page

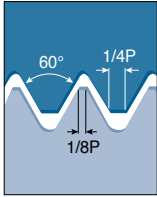
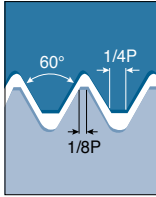
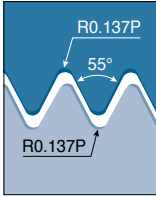










T-TAP (Tapping)

Straight Flute with Spiral Point	C62
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Tool Selection Guide

Solid carbide threading end mills

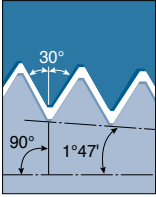
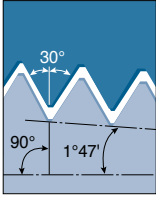
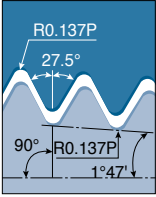
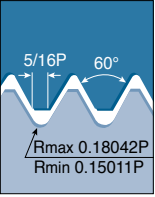
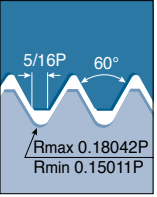
Thread	TS-THREAD		
	Metric ISO	American UN	Whitworth
			
Application	General usage for all industries	General usage for all industries	General industries. Pipe fittings and couplings
MTEC  General type	● C15	● C23	● C30
MTECB  Internal coolant hole	● C13	● C21	● C30
MTECZ  Internal coolant in the flutes	● C14	● C22	● C30
MTECS  Short head	● C18-C19	● C26-C27	
MTECSH  Short head for hard materials	● C20	● C28-C29	
MTECQ  Reduced neck diameter for deep threading	● C16	● C24	
MTECI  Partial profile	● C35	● C35	
MTEC E  External threading	● C17	● C25	

• For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

Tool Selection Guide

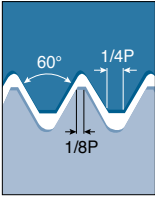
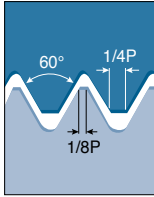
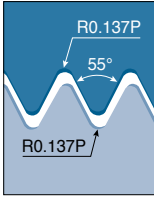
Solid carbide threading end mills

TS-THREAD

NPT	NPTF	BSPT	UNJ	MJ
				
Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Aviation and aerospace industry	Aviation and aerospace industry
● C31	● C32	● C33		
● C31	● C32	● C33		
● C31	● C32	● C33		
			● C34	● C34

Tool Selection Guide

Indexable insert type

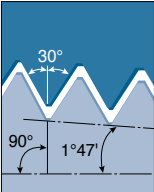
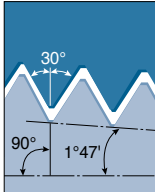
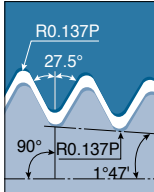
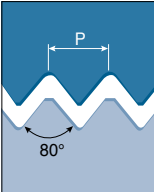
Thread	TS-THREAD		
	Metric ISO	American UN	Whitworth
			
Insert page	C45, C53	C46, C47, C54	C48, C55
Application	General usage for all industries	General usage for all industries	General industries. Pipe fittings and couplings
MTE D C37 Single insert	•	•	•
MTE D-C C38 Solid carbide shank	•	•	•
MTE D-W C39 Twin insert	•	•	•
TMTSRH C40 Helical end mill	•	•	•
MTF D C41 Large diameter thread	•	•	•
MTFLE D C42 Multi tooth-external threading	•	•	•
TMTSRH C43 Helical shell mill	•	•	•

• For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

Tool Selection Guide

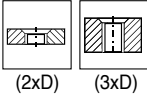
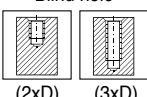
Indexable insert type

TS-THREAD

NPT	NPTF	BSPT	PG
			
C49, C55	C50	C51, C56	C52
Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Electrical connector
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•

Tool Selection Guide




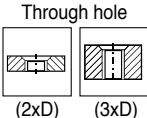
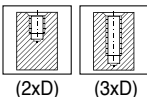
Straight flute with spiral point tap

Series		T-TAP		
		Straight flute with spiral point tap		
		TPH...52B	TPH...52B05	TPH...52B10
Pages		C62	C62	C62
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form B 4-5 threads chamfer	Form B 4-5 threads chamfer	Form B 4-5 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xD) (3xD)	●	●	●
	Blind hole  (2xD) (3xD)			

● Recommended, ○ Suitable

Tool Selection Guide

40° right hand spiral flute tap

		T-TAP		
		40° right hand spiral flute tap		
		TPH...54C	TPH...54C05	TPH...54C10
Series				
Pages		C64	C64	C64
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form C 2-3 threads chamfer	Form C 2-3 threads chamfer	Form C 2-3 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xD) (3xD)			
	Blind hole  (2xD) (3xD)	●	●	●

● Recommended, ○ Suitable

Grades

Thread making grades

Grades	ISO	Characteristics & applications									
TT9030 PVD coated	<table border="1"><tr><td>P20</td><td>—</td><td>P40</td></tr><tr><td>M20</td><td>—</td><td>M40</td></tr><tr><td>S20</td><td>—</td><td>S40</td></tr></table>	P20	—	P40	M20	—	M40	S20	—	S40	<ul style="list-style-type: none">• General machining of steel• General machining of stainless steel• General machining of heat-resistant alloy
P20	—	P40									
M20	—	M40									
S20	—	S40									

TS-THREAD

Thread Milling



Designation System

Solid carbide end mill



1 TaeguTec mill thread

MT - Mill thread
E - End mill
C - Carbide

2 End mill type

B - Axial coolant bore
Z - Coolant hole in the flutes
S - Short head
SH - Short head for threading hard materials
Q - Reduced diameter neck
I - Partial profile

3 Shank diameter

06 6.0 mm
10 10.0 mm

4 Cutting diameter

031 3.1 mm
04 4.0 mm

5 No. of flutes

C - 3 flutes
D - 4 flutes
E - 5 flutes
F - 6 flutes

6 Length of thread (ap)

10 10.0 mm

7 Thread pitch

0.25-4.0 pitch (mm)
72-7 TPI

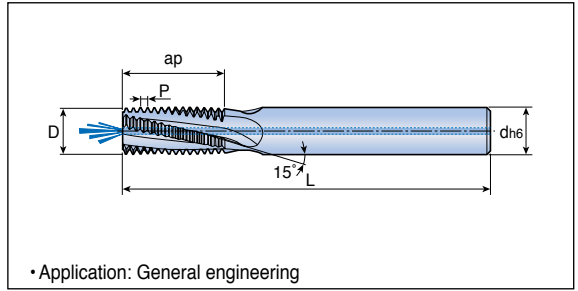
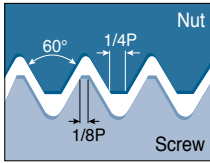
8 Thread standard

ISO
UN
W
NPT
NPTF
BSPT
UNJ
MJ

9 Grades

Coated
TT9030
TT1040

Solid carbide threading end mills with internal coolant hole

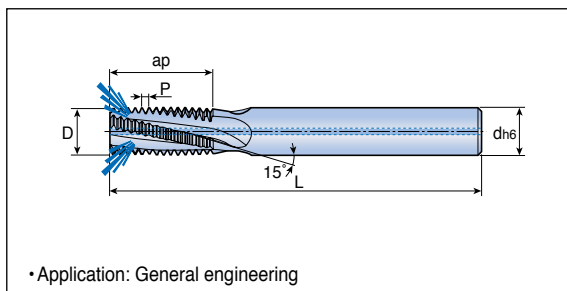
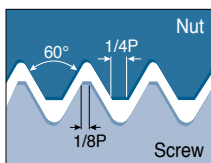


Designation	Pitch (mm)	M coarse	M fine	Dimension (mm)				No. of flutes	Grade TT9030
				d	D	ap	L		
MTECB 06038C10 0.5 ISO	0.5	-	$\varnothing \geq 5$	6	3.8	10.3	58	3	●
06031C7 0.7 ISO	0.7	M4	$\varnothing \geq 5$	6	3.1	7.4	58	3	●
06045C10 0.75 ISO	0.75	-	$\varnothing \geq 6$	6	4.5	10.1	58	3	●
1010D24 0.75 ISO	0.75	-	$\varnothing \geq 12$	10	10.0	24.4	73	4	●
06038C9 0.8 ISO	0.8	M5	$\varnothing \geq 6$	6	3.8	9.2	58	3	●
06046C10 1.0 ISO	1.0	M6	$\varnothing \geq 7$	6	4.6	10.5	58	3	●
06046C14 1.0 ISO	1.0	M6	$\varnothing \geq 7$	6	4.6	14.5	58	3	●
0606C12 1.0 ISO	1.0	-	$\varnothing \geq 9$	6	6.0	12.5	58	3	●
0808D16 1.0 ISO	1.0	-	$\varnothing \geq 10$	8	8.0	16.5	64	4	●
1010D24 1.0 ISO	1.0	-	$\varnothing \geq 12$	10	10.0	24.5	73	4	●
0606C14 1.25 ISO	1.25	M8	$\varnothing \geq 10$	6	6.0	14.4	58	3	●
0606C19 1.25 ISO	1.25	M8	$\varnothing \geq 10$	6	6.0	19.4	58	3	●
08078C17 1.5 ISO	1.5	M10	$\varnothing \geq 12$	8	7.8	17.0	64	3	●
08078C24 1.5 ISO	1.5	M10	$\varnothing \geq 12$	8	7.8	24.8	64	3	●
1010D21 1.5 ISO	1.5	-	$\varnothing \geq 14$	10	10.0	21.8	73	4	●
1212D26 1.5 ISO	1.5	-	$\varnothing \geq 16$	12	12.0	26.3	84	4	●
1616F33 1.5 ISO	1.5	-	$\varnothing \geq 20$	16	16.0	33.8	105	6	●
1009C20 1.75 ISO	1.75	M12	$\varnothing \geq 12$	10	9.0	20.1	73	3	●
1009C28 1.75 ISO	1.75	M12	$\varnothing \geq 12$	10	9.0	28.9	73	3	●
1010C27 2.0 ISO	2.0	M14	$\varnothing \geq 15$	10	10.0	27.0	73	3	●
12118D27 2.0 ISO	2.0	M16	$\varnothing \geq 17$	12	11.8	27.0	84	4	●
12118D39 2.0 ISO	2.0	M16	$\varnothing \geq 17$	12	11.8	39.0	105	4	●
2020F41 2.0 ISO	2.0	-	$\varnothing \geq 26$	20	20.0	41.0	105	6	●
1615E33 2.5 ISO	2.5	M20	$\varnothing \geq 22$	16	15.0	33.8	105	5	●
1615E48 2.5 ISO	2.5	M20	$\varnothing \geq 22$	16	15.0	48.8	105	5	●
2018D40 3.0 ISO	3.0	M24	$\varnothing \geq 25$	20	18.0	40.5	105	4	●
2018D58 3.0 ISO	3.0	M24	$\varnothing \geq 25$	20	18.0	58.5	120	4	●
2020D43 3.0 ISO	3.0	M27	$\varnothing \geq 27$	20	20.0	43.5	105	4	●



●: Standard items

Solid carbide with internal coolant in the flutes, for internal threading

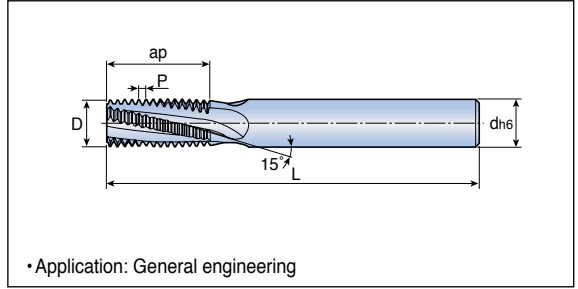
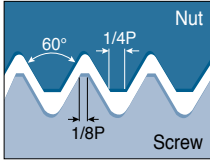


Designation	Pitch (mm)	M coarse	M fine	Dimension (mm)				No. of flutes	Grade		
				d	D	ap	L			TT9030	
MTECZ 06048C10	1.0	ISO	1.0	M6	$\text{Ø} \geq 7$	6	4.8	10.5	58	3	●
0606C12	1.0	ISO	1.0	-	$\text{Ø} \geq 9$	6	6.0	12.5	58	3	●
0808D16	1.0	ISO	1.0	-	$\text{Ø} \geq 10$	8	8.0	16.5	64	4	●
0606C14	1.25	ISO	1.25	M8	$\text{Ø} \geq 10$	6	6.0	14.4	58	3	●
0606C19	1.25	ISO	1.25	M8	$\text{Ø} \geq 10$	6	6.0	19.4	58	3	●
08078C17	1.5	ISO	1.5	M10	$\text{Ø} \geq 12$	8	7.8	17.0	64	3	●
1010D21	1.5	ISO	1.5	-	$\text{Ø} \geq 14$	10	10.0	21.8	73	4	●
1212D26	1.5	ISO	1.5	-	$\text{Ø} \geq 16$	12	12.0	26.3	84	4	●
1616E33	1.5	ISO	1.5	-	$\text{Ø} \geq 20$	16	16.0	33.8	101	5	●
1009C20	1.75	ISO	1.75	M12	$\text{Ø} \geq 12$	10	9.0	20.1	73	3	●
1009C28	1.75	ISO	1.75	M12	$\text{Ø} \geq 12$	10	9.0	28.9	73	3	●
1010C27	2.0	ISO	2.0	M14	$\text{Ø} \geq 15$	10	10.0	27.0	73	3	●
12118D27	2.0	ISO	2.0	M16	$\text{Ø} \geq 17$	12	11.8	27.0	84	4	●
1615E33	2.5	ISO	2.5	M20	$\text{Ø} \geq 22$	16	15.0	33.8	101	5	●

●: Standard items



Solid carbide threading end mills for internal threading

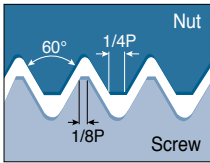
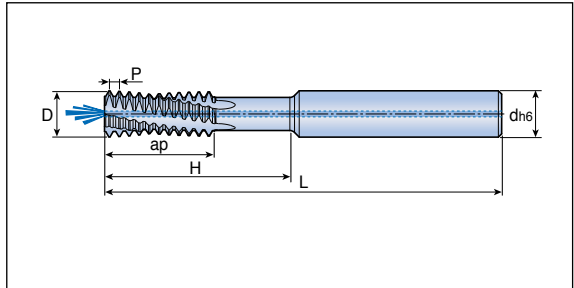


Designation	Pitch (mm)	M coarse	M fine	Dimension (mm)				No. of flutes	Grade TT9030		
				d	D	ap	L				
MTEC 06022C5	0.5	ISO	0.5	M3	$\varnothing \geq 4$	6	2.2	5.3	58	3	●
06038C10	0.5	ISO	0.5	-	$\varnothing \geq 5$	6	3.8	10.4	58	3	●
06031C7	0.7	ISO	0.7	M4	$\varnothing \geq 5$	6	3.1	7.4	58	3	●
06045C10	0.75	ISO	0.75	-	$\varnothing \geq 6$	6	4.5	10.1	58	3	●
06036C9	0.8	ISO	0.8	M5	$\varnothing \geq 6$	6	3.6	9.2	58	3	●
0604C10	1.0	ISO	1.0	M6	$\varnothing \geq 7$	6	4	10.5	58	3	●
0604C14	1.0	ISO	1.0	M6	$\varnothing \geq 7$	6	4	14.5	58	3	●
0606C12	1.0	ISO	1.0	-	$\varnothing \geq 9$	6	6	12.5	58	3	●
0808D16	1.0	ISO	1.0	-	$\varnothing \geq 10$	8	8	16.5	64	4	●
0605C14	1.25	ISO	1.25	M8	$\varnothing \geq 10$	6	5	14.4	58	3	●
0605C19	1.25	ISO	1.25	M8	$\varnothing \geq 10$	6	5	19.4	58	3	●
0807C17	1.5	ISO	1.5	M10	$\varnothing \geq 12$	8	7	17.3	64	3	●
0807C24	1.5	ISO	1.5	M10	$\varnothing \geq 12$	8	7	24.8	76	3	●
1010D21	1.5	ISO	1.5	-	$\varnothing \geq 14$	10	10	21.8	73	4	●
1616F33	1.5	ISO	1.5	-	$\varnothing \geq 20$	16	16	33.8	105	6	●
0808C20	1.75	ISO	1.75	M12	$\varnothing \geq 14$	8	8	20.1	64	3	●
0808C28	1.75	ISO	1.75	M12	$\varnothing \geq 14$	8	8	28.9	76	3	●
1010C27	2.0	ISO	2.0	M16	$\varnothing \geq 17$	10	10	27.0	73	3	●
1010C39	2.0	ISO	2.0	M16	$\varnothing \geq 17$	10	10	39.0	105	3	●
1212D27	2.0	ISO	2.0	-	$\varnothing \geq 18$	12	12	27.0	84	4	●
2020F41	2.0	ISO	2.0	-	$\varnothing \geq 26$	20	20	41.0	105	6	●
1414D33	2.5	ISO	2.5	M20	$\varnothing \geq 22$	14	14	33.8	84	4	●
1414D48	2.5	ISO	2.5	M20	$\varnothing \geq 22$	14	14	48.8	105	4	●
1616C40	3.0	ISO	3.0	M24	$\varnothing \geq 25$	16	16	40.5	105	3	●
1616C58	3.0	ISO	3.0	M24	$\varnothing \geq 25$	16	16	58.5	120	3	●
2020D43	3.0	ISO	3.0	M27	$\varnothing \geq 28$	20	20	43.5	105	4	●



●: Standard items

Solid carbide thread end mills with internal coolant holes and a reduced diameter neck for deep internal threading



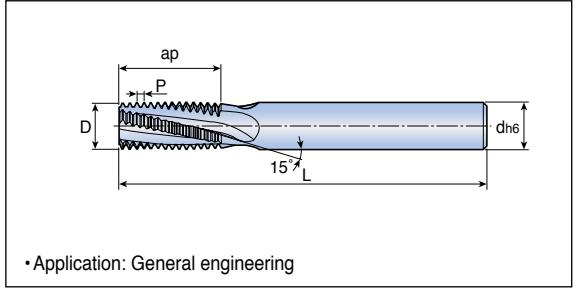
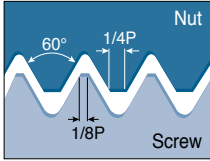
Designation	Pitch (mm)	Thread size	Dimension (mm)					No. of flutes	Grade	
			d	D	ap	H	L			
MTECQ 1010D32 1.0 ISO	1.0	$\varnothing \geq 12$	10	10.0	18.0	32.0	73	4	●	
1212D38 1.0 ISO	1.0	$\varnothing \geq 14$	12	12.0	21.0	38.0	84	4	●	
1616F45 1.0 ISO	1.0	$\varnothing \geq 18$	16	16.0	26.0	45.0	105	6	●	
1010D30 1.5 ISO	1.5	$\varnothing \geq 13$	10	10.0	18.0	30.0	73	4	●	
1212D34 1.5 ISO	1.5	$\varnothing \geq 15$	12	12.0	19.5	34.5	84	4	●	
1616F43 1.5 ISO	1.5	$\varnothing \geq 19$	16	16.0	25.5	43.5	105	6	●	
2020F60 1.5 ISO	1.5	$\varnothing \geq 23$	20	20.0	36.0	60.0	105	6	●	
1212D42 2.0 ISO	2.0	$\varnothing \geq 16$	12	12.0	24.0	42.0	84	4	●	
1616E45 2.0 ISO	2.0	$\varnothing \geq 20$	16	12.0	26.0	45.0	105	5	●	
2020F56 2.0 ISO	2.0	$\varnothing \geq 24$	20	20.0	34.0	56.0	105	6	●	
1616D45 3.0 ISO	3.0	$\varnothing \geq 22$	16	16.0	30.0	45.0	105	4	●	
2020E54 3.0 ISO	3.0	$\varnothing \geq 26$	20	20.0	33.0	54.0	105	5	●	
2020D45 3.5 ISO	3.5	$\varnothing \geq 26$	20	20.0	28.0	45.5	105	4	●	
2525D64 4.0 ISO	4.0	$\varnothing \geq 31$	25	25.0	40.0	64.0	105	4	●	

●: Standard items



MTEC E-ISO

Solid carbide end mills for external threading

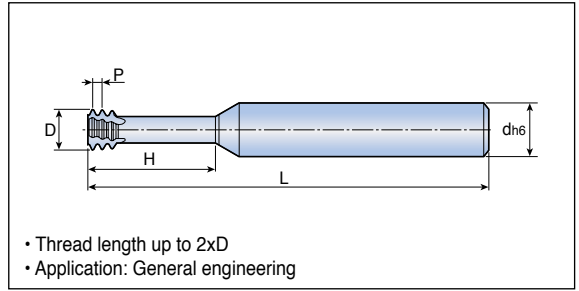
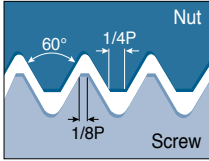


Designation	Pitch (mm)	Dimension (mm)				No. of flutes	Grade TT9030
		d	D	ap	L		
MTEC E 1010D16 1.0 ISO	1.0	10	10.0	16.5	73	4	●
1212E20 1.0 ISO	1.0	12	12.0	20.5	84	5	●
1010D16 1.25 ISO	1.25	10	10.0	16.9	73	4	●
1010D15 1.5 ISO	1.5	10	10.0	15.8	73	4	●
1212D20 1.5 ISO	1.5	12	12.0	20.3	84	4	●
1010C17 2.0 ISO	2.0	10	10.0	17.0	73	3	●
1212D21 2.0 ISO	2.0	12	12.0	21.0	84	4	●



●: Standard items

Short solid carbide end mills for internal threading

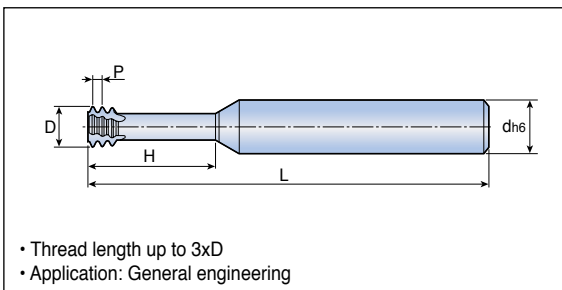
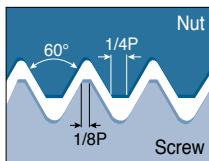


Designation				Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade TT9030	
						d	D	H	L			
MTECS	06016C4	0.4	ISO	0.40	M2	6	1.55	4.5	58	3	●	
	06017C5	0.45	ISO	0.45	M2.2	6	1.65	5.0	58	3	●	
	0602C5	0.45	ISO	0.45	M2.5	6	1.95	5.5	58	3	●	
	06024C6	0.5	ISO	0.50	M3	6	2.35	6.5	58	3	●	
	06028C7	0.6	ISO	0.60	M3.5	6	2.75	7.5	58	3	●	
	06031C9	0.7	ISO	0.70	M4	6	3.10	9.0	58	3	●	
	06038C12	0.8	ISO	0.80	M5	6	3.80	12.5	58	3	●	
	06047C14	1.0	ISO	1.00	M6	6	4.65	14.0	58	3	●	
	0606C18	1.25	ISO	1.25	M8	6	5.95	18.0	58	3	●	
	0808D25	0.75	ISO	0.75	M10	8	8.00	25.0	64	4	●	
	08078C23	1.5	ISO	1.50	M10	8	7.80	23.0	64	3	●	
	1009C26	1.75	ISO	1.75	M12	10	9.00	26.0	73	3	●	
	12118D35	2.0	ISO	2.00	M16	12	11.8	35.0	84	4	●	
	1615E43	2.5	ISO	2.50	M20	16	15.00	43.0	105	5	●	

●: Standard items



Short solid carbide end mills for internal threading

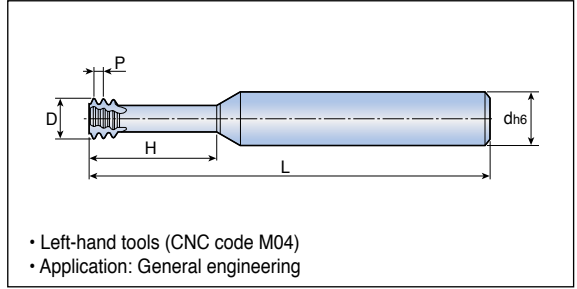
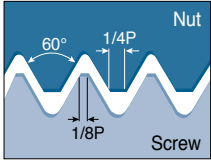


Designation	Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade
			d	D	H	L		
MTECS 03007C2 0.25 ISO	0.25	M1.0	3	0.72	2.5	39	3	●
03009C3 0.25 ISO	0.25	M1.2	3	0.90	3.0	39	3	●
03011C4 0.3 ISO ⁽¹⁾	0.30	M1.4	3	1.05	4.0	39	3	●
03012C5 0.35 ISO ⁽¹⁾	0.35	M1.6	3	1.20	5.0	39	3	●
03016C6 0.4 ISO ⁽¹⁾	0.40	M2	3	1.55	6.0	39	3	●
0602C7 0.45 ISO	0.45	M2.5	6	1.95	7.5	58	3	●
06024C9 0.5 ISO	0.50	M3	6	2.35	9.5	58	3	●
06028C10 0.6 ISO	0.60	M3.5	6	2.75	10.5	58	3	●
06031C12 0.7 ISO	0.70	M4	6	3.10	12.5	58	3	●
06038C16 0.8 ISO	0.80	M5	6	3.80	16.0	58	3	●
06047C20 1.0 ISO	1.00	M6	6	4.65	20.0	58	3	●
0606C24 1.25 ISO	1.25	M8	6	5.95	24.0	58	3	●



• ⁽¹⁾ Specially designed for the production of dental implants • Standard items

Short solid carbide end mills for internal threading of hardened steel

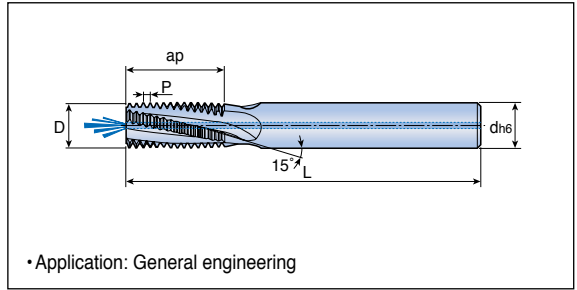
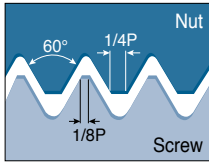


Designation	Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade TT1040
			d	D	H	L		
MTECSH 03011C4 0.3 ISO	0.30	M1.4	3	1.05	4.0	39	3	●
03012C5 0.35 ISO	0.35	M1.6	3	1.20	4.8	39	3	●
03016C6 0.4 ISO	0.40	M2	3	1.55	6.0	58	3	●
06016C4 0.4 ISO	0.40	M2	6	1.55	4.5	58	3	●
06017C5 0.45 ISO	0.45	M2.2	6	1.65	5.0	58	3	●
0602C5 0.45 ISO	0.45	M2.5	6	1.95	5.5	58	3	●
0602C7 0.45 ISO	0.45	M2.5	6	1.95	7.5	58	3	●
06024C6 0.5 ISO	0.50	M3	6	2.35	6.5	58	3	●
06024C9 0.5 ISO	0.50	M3	6	2.35	9.5	58	3	●
06028C7 0.6 ISO	0.60	M3.5	6	2.75	7.5	58	3	●
06031C9 0.7 ISO	0.70	M4	6	3.10	9.0	58	3	●
06031C12 0.7 ISO	0.70	M4	6	3.10	12.5	58	3	●
06038C12 0.8 ISO	0.80	M5	6	3.80	12.5	58	3	●
06038C16 0.8 ISO	0.80	M5	6	3.80	16.0	58	3	●
06047C14 1.0 ISO	1.00	M6	6	4.65	14.0	58	3	●
06047C20 1.0 ISO	1.00	M6	6	4.65	20.0	58	3	●
0606C18 1.25 ISO	1.25	M8	6	5.95	18.0	58	3	●
0606C24 1.25 ISO	1.25	M8	6	5.95	24.0	58	3	●
08078C23 1.5 ISO	1.50	M10	8	7.80	23.0	64	3	●
1009C26 1.75 ISO	1.75	M12	10	9.00	26.0	73	3	●
12118D35 2.0 ISO	2.00	M16	12	11.8	35.0	84	4	●

●: Standard items



Solid carbide end mills for internal threading with internal coolant hole

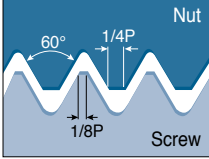
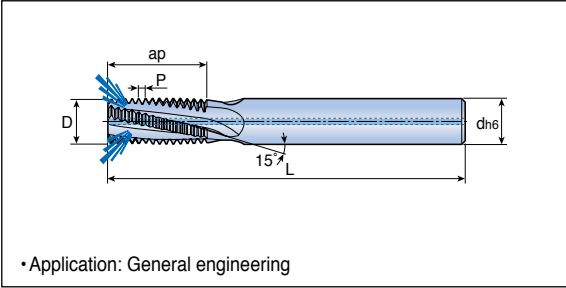


Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				No. of flutes	Grade TT9030
					d	D	ap	L		
MTECB 06032C6 32 UN	32	8	10	12	6	3.2	6.8	58	3	●
0808D18 32 UN	32	-	-	3/8	8	8.0	18.7	64	4	●
0606C14 32 UN	32	-	-	5/16	6	6.0	14.7	58	3	●
0605C11 28 UN	28	-	1/4	-	6	5.0	11.3	58	3	●
0606C14 28 UN	28	-	-	7/16-1/2	6	6.0	14.1	58	3	●
08066C14 24 UN	24	-	5/16	-	8	6.6	14.3	64	3	●
0808D21 24 UN	24	-	3/8	9/16-5/8	8	8.0	20.6	64	4	●
0808C21 20 UN	20	-	7/16	-	8	8.0	21.0	64	3	●
1010D22 20 UN	20	-	1/2	-	10	10.0	22.3	73	4	●
1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
06056C14 18 UN	18	5/16	-	-	6	5.6	14.8	58	3	●
12113D26 18 UN	18	-	9/16-5/8	11/8-15/8	12	11.3	26.1	84	4	●
08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
08077C20 14 UN	14	7/16	-	-	8	7.7	20.9	64	3	●
1616E37 14 UN	14	-	7/8	-	16	16.0	37.2	105	5	●
10092C22 13 UN	13	1/2	-	-	10	9.2	22.5	73	3	●
12105C26 12 UN	12	9/16	-	-	12	10.5	26.5	84	3	●
1616E41 12 UN	12	-	1-11/2	-	16	16.0	41.3	105	5	●
12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	105	4	●
1616C38 9 UN	9	7/8	-	-	16	16.0	38.1	105	3	●
20195D42 8 UN	8	1	-	-	20	19.5	42.9	105	4	●
2020D45 7 UN	7	1 1/8-1 1/4	-	-	20	20.0	45.3	105	4	●



●: Standard items

Solid carbide with internal coolant in the flutes for internal threading

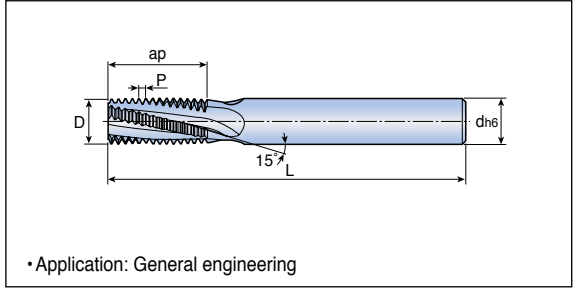
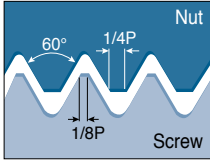


Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				No. of flutes	Grade TT9030
					d	D	ap	L		
MTECZ 0605C11 28 UN	28	-	1/4	-	6	5.0	11.3	58	3	●
0606C14 28 UN	28	-	-	7/16-1/2	6	6.0	14.1	58	3	●
08066C14 24 UN	24	-	5/16	-	8	6.6	14.3	64	3	●
0808D21 24 UN	24	-	3/8	9/16-5/8	8	8.0	20.6	64	4	●
0808C21 20 UN	20	-	7/16	-	8	8.0	21.0	64	3	●
1010D22 20 UN	20	-	1/2	-	10	10.0	22.3	73	4	●
1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
06056C14 18 UN	18	5/16	-	-	6	5.6	14.8	58	3	●
12113D26 18 UN	18	-	9/16-5/8	11/8-15/8	12	11.3	26.1	84	4	●
08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
08077C20 14 UN	14	7/16	-	-	8	7.7	20.9	64	3	●
1616E37 14 UN	14	-	7/8	-	16	16.0	37.2	101	5	●
10092C22 13 UN	13	1/2	-	-	10	9.2	22.5	73	3	●
12105C26 12 UN	12	9/16	-	-	12	10.5	26.5	84	3	●
12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	101	4	●



●: Standard items

Solid carbide threading end mills with internal threading



Designation	TPI	UNC	UNF	UNEf	Dimension (mm)				No. of flutes	Grade
					d	D	ap	L		
MTEC 06025C6 40 UN	40	5	-	-	6	2.5	6.0	62	3	●
06032C6 32 UN	32	8	10	12	6	3.2	6.8	58	3	●
0604C11 28 UN	28	-	1/4	-	6	4.0	11.3	58	3	●
0606C14 28 UN	28	-	-	7/6-1/2	6	6.0	14.5	58	3	●
0605C14 24 UN	24	-	5/16	-	6	5.0	14.8	58	3	●
0807C21 24 UN	24	-	3/8	9/16-5/8	8	7.0	20.0	64	3	●
06045C12 20 UN	20	1/4	-	-	6	4.5	12.1	58	3	●
0807C21 20 UN	20	-	7/16-1/2	-	8	7.0	20.0	64	3	●
1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
0605C14 18 UN	18	5/16	-	-	6	5.0	14.8	58	3	●
1010D26 18 UN	18	-	9/16-5/8	1 1/8-15/8	10	10.0	26.1	73	4	●
0606C16 16 UN	16	3/8	-	-	6	6.0	16.7	58	3	●
1212D31 16 UN	16	-	3/4	-	12	12.0	30.0	84	4	●
0807C20 14 UN	14	7/16	-	-	8	7.0	20.9	64	3	●
1615E37 14 UN	14	-	7/8	-	16	15.0	37.2	105	5	●
0808C22 13 UN	13	1/2	-	-	8	8.0	22.5	64	3	●
1010C26 12 UN	12	9/16	-	-	10	10.0	26.5	73	3	●
1616E41 12 UN	12	-	1 - 1/2	-	16	16.0	41.3	105	5	●
1010C28 11 UN	11	5/8	-	-	10	10.0	28.9	73	3	●
1212C34 10 UN	10	3/4	-	-	12	12.0	34.3	84	3	●
1615C38 9 UN	9	7/8	-	-	16	15.0	38.1	105	3	●
1616C42 8 UN	8	1	-	-	16	16.0	42.9	105	3	●
2020D45 7 UN	7	1 1/8-1 1/4	-	-	20	20.0	45.4	105	4	●

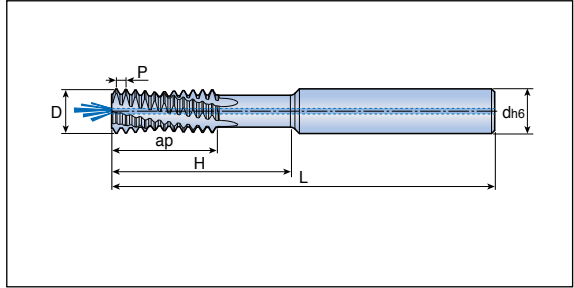
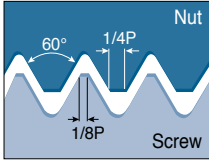


●: Standard items

MTECQ-UN

TS-THREAD

Solid carbide thread end mills with internal coolant holes and a reduced diameter neck for deep internal threading

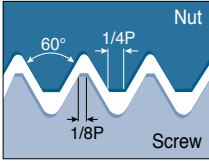
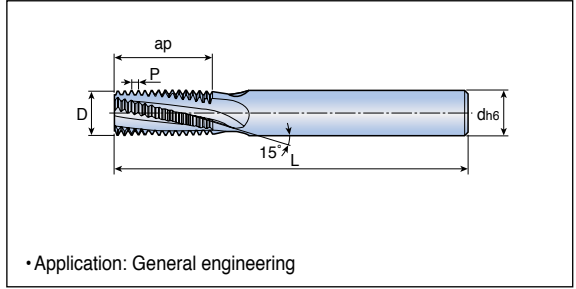


Designation	TPI	Thread size	Dimension (mm)					No. of flutes	Grade
			d	D	ap	H	L		
MTECQ 1010D30 20 UN	20	$\text{Ø} \geq 12$	10	10.0	17.8	30.5	73	4	●
1212E35 20 UN	20	$\text{Ø} \geq 14$	12	12.0	20.3	35.6	84	5	●
1616F43 20 UN	20	$\text{Ø} \geq 18$	16	16.0	25.4	43.2	105	6	●
1212D35 18 UN	18	$\text{Ø} \geq 15$	12	12.0	19.7	35.3	84	4	●
1212D35 16 UN	16	$\text{Ø} \geq 15$	12	12.0	20.7	35.0	84	4	●
1616E42 16 UN	16	$\text{Ø} \geq 19$	16	16.0	25.4	42.8	105	5	●
2020F58 16 UN	16	$\text{Ø} \geq 23$	20	20.0	36.6	58.8	105	6	●
1616E45 14 UN	14	$\text{Ø} \geq 20$	16	16.0	25.4	45.3	105	5	●
1212D42 12 UN	12	$\text{Ø} \geq 16$	12	12.0	25.4	42.3	84	4	●
2020E55 12 UN	12	$\text{Ø} \geq 24$	20	20.0	33.9	55.1	105	5	●

●: Standard items



Solid carbide end mills for external threading

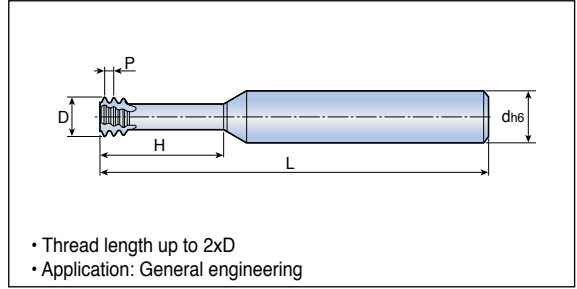
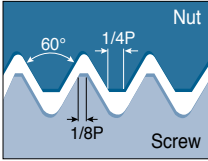


Designation	TPI	Dimension (mm)				No. of flutes	Grade TT9030
		d	D	ap	L		
MTEC E 1010D16 24 UN	24	10	10.0	16.4	73	4	●
1212E21 20 UN	20	12	12.0	21.0	84	5	●
1212D20 18 UN	18	12	12.0	20.5	84	4	●
1212D21 16 UN	16	12	12.0	21.4	84	4	●
1212D20 14 UN	14	12	12.0	20.9	84	4	●
1212D20 12 UN	12	12	12.0	20.1	84	4	●



●: Standard items

Short solid carbide end mills for internal threading

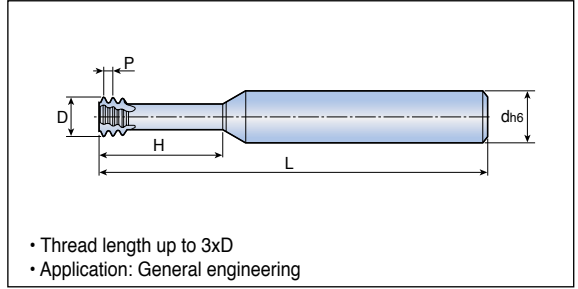


Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade TT9030
				d	D	H	L		
MTECS 06014C3 72 UN	72	-	1	6	1.45	3.7	58	3	●
06014C3 64 UN	64	1	2	6	1.40	3.8	58	3	●
06016C4 56 UN	56	2	3	6	1.65	4.4	58	3	●
06019C5 48 UN	48	3	4	6	1.90	5.2	58	3	●
06021C8 40 UN	40	4	-	6	2.10	8.0	58	3	●
06021C6 40 UN	40	4	-	6	2.10	6.3	58	3	●
06024C7 40 UN	40	5	6	6	2.45	7.0	58	3	●
06033C9 36 UN	36	-	8	6	3.30	9.0	58	3	●
06025C7 32 UN	32	6	-	6	2.55	7.1	58	3	●
06032C9 32 UN	32	8	-	6	3.20	9.5	58	3	●
06037C10 32 UN	32	-	10	6	3.70	10.5	58	3	●
06042C11 28 UN	28	-	12	6	4.20	11.0	58	3	●
0605C14 28 UN	28	-	1/4	6	5.00	14.5	58	3	●
06035C10 24 UN	24	10,12	-	6	3.50	10.6	64	3	●
08066C17 24 UN	24	-	5/16, 3/8	8	6.60	17.0	58	3	●
06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
0808C25 20 UN	20	-	7/16	8	8.00	25.0	64	3	●
0606C17 18 UN	18	5/16	-	6	6.00	17.0	58	3	●
1212D35 18 UN	18	-	5/8	12	12.00	35.0	84	4	●
08067C22 16 UN	16	3/8	-	8	6.70	22.0	64	3	●
08077C25 14 UN	14	7/16	-	8	7.70	25.0	64	3	●
10092C27 13 UN	13	1/2	-	10	9.20	27.5	73	3	●
12105C31 12 UN	12	9/16	-	12	10.50	31.5	84	3	●
12114C34 11 UN	11	5/8	-	12	11.40	34.5	84	3	●
16144D41 10 UN	10	3/4	-	16	14.40	41.5	105	4	●

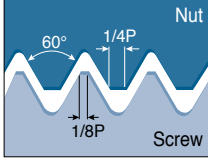
●: Standard items



Short solid carbide end mills for internal threading



- Thread length up to 3xD
- Application: General engineering



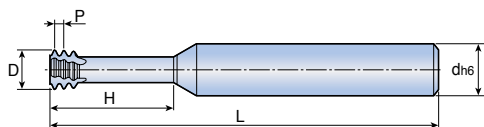
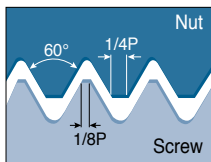
Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade TT9030
				d	D	H	L		
MTECS 06012C4 80 UN	80	-	0	6	1.15	4.0	58	3	●
03015C6 72 UN⁽¹⁾	72	-	1	3	1.45	6.0	58	3	●
03016C6 56 UN	56	2	3	3	1.65	6.6	39	3	●
06016C6 56 UN	56	2	3	6	1.65	6.6	58	3	●
06024C9 40 UN	40	5	6	6	2.45	9.6	58	3	●
06032C12 32 UN	32	8	-	6	3.20	12.5	58	3	●
06037C15 32 UN	32	-	10	6	3.70	15.0	58	3	●
06025C10 32 UN	32	6	-	6	2.55	10.5	58	3	●
0605C19 28 UN	28	-	1/4	6	5.00	19.0	58	3	●
08066C24 24 UN	24	-	5/16, 3/8	8	6.60	24.0	64	3	●
06047C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
0606C23 18 UN	18	5/16	-	6	6.00	23.0	58	3	●



• ⁽¹⁾ Specially designed for the production of dental implants

• Standard items

Short solid carbide end mills for internal threading of hardened steel (2xD)



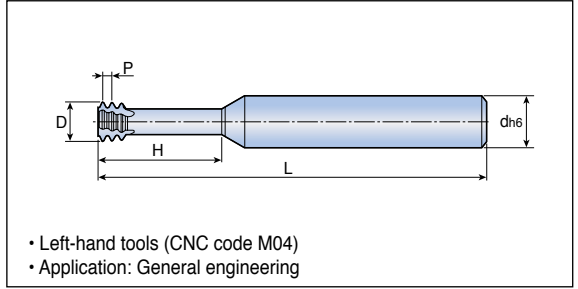
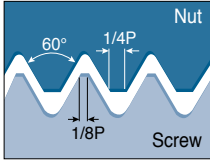
- Left-hand tools (CNC code M04)
- Application: General engineering

Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
				d	D	H	L		
MTECSH 06014C3 72 UN	72	-	1	6	1.45	3.7	58	3	●
06014C3 64 UN	64	1	2	6	1.40	3.8	58	3	●
06016C4 56 UN	56	2	3	6	1.65	4.4	58	3	●
06019C5 48 UN	48	3	4	6	1.90	5.2	58	3	●
06021C6 40 UN	40	4	-	6	2.10	6.3	58	3	●
06024C7 40 UN	40	5	6	6	2.45	7.0	58	3	●
06033C9 36 UN	36	-	8	6	3.30	9.0	58	3	●
06025C7 32 UN	32	6	-	6	2.55	7.1	58	3	●
06032C9 32 UN	32	8	-	6	3.20	9.5	58	3	●
06037C10 32 UN	32	-	10	6	3.70	10.5	58	3	●
06042C11 28 UN	28	-	12	6	4.20	11.0	58	3	●
0605C14 28 UN	28	-	1/4	6	5.00	14.5	58	3	●
06035C10 24 UN	24	10,12	-	6	3.50	10.6	58	3	●
08066C17 24 UN	24	-	5/16	8	6.60	17.0	64	3	●
06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
0808C25 20 UN	20	-	7/16	8	8.00	25.0	64	3	●
0606C17 18 UN	18	5/16	-	6	6.00	17.0	58	3	●
1212D35 18 UN	18	-	5/8	12	12.0	35.0	84	4	●
08067C22 16 UN	16	3/8	-	8	6.70	22.0	64	3	●
08077C25 14 UN	14	7/16	-	8	7.70	25.0	64	3	●
10092C27 13 UN	13	1/2	-	10	9.20	27.5	73	3	●
12105C37 12 UN	12	9/16	-	12	10.5	31.5	84	3	●
12114C34 11 UN	11	5/8	-	12	11.4	41.5	84	3	●

●: Standard items



Short solid carbide end mills for internal threading of hardened steel (3xD)

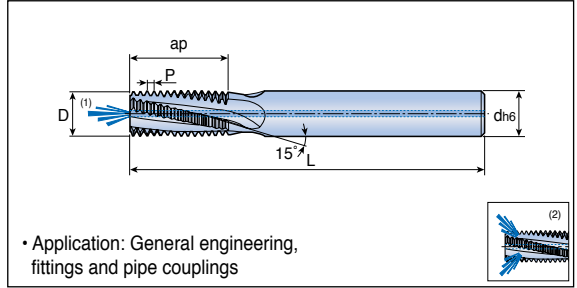
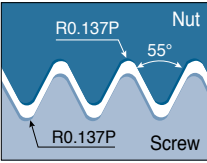


Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
				d	D	H	L		
MTECSH 06012C4 80 UN	80	-	0	6	1.15	4.00	58	3	●
06024C9 40 UN	40	5	6	6	2.45	9.60	58	3	●
06032C12 32 UN	32	8	-	6	3.20	12.5	58	3	●
06037C15 32 UN	32	-	10	6	3.70	15.0	58	3	●
0605C19 28 UN	28	-	1/4	6	5.00	19.0	58	3	●
08066C24 24 UN	24	-	5/16	8	6.60	24.0	64	3	●
06047C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
0606C23 18 UN	18	5/16	-	6	6.00	23.0	58	3	●



●: Standard items

Solid carbide threading end mills with internal coolant hole



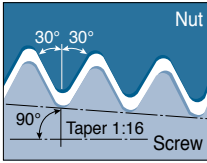
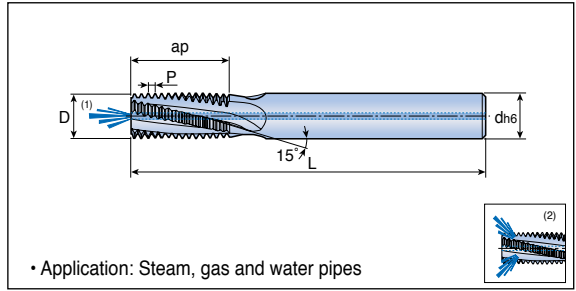
	Designation	TPI	BSP	Dimension (mm)				No. of flutes	Grade
				d	D	ap	L		
MTECB	08078C14 28 W	28	G1/8	8	7.8	14.1	64	3	●
	1010D16 19 W	19	G1/4-3/8	10	10.0	16.7	73	4	●
	1616E26 14 W	14	G1/2-7/8	16	16.0	26.3	105	5	●
	1616D38 11 W	11	$G \geq 1$	16	16.0	38.1	105	4	●
MTECZ	08078C14 28 W	28	G1/8	8	7.8	14.1	64	3	●
	1010D16 19 W	19	G1/4-3/8	10	10.0	16.7	73	4	●
	1616E26 14 W	14	G1/2-7/8	16	16.0	26.3	101	5	●
MTEC	0606C9 28 W	28	G1/8	6	6	9.5	58	3	●
	0808C14 19 W	19	G1/4-3/8	8	8	14.0	64	3	●
	1212D19 14 W	14	G1/2-7/8	12	12	19.0	84	4	●
	1212D26 14 W	14	G1/2-7/8	12	12	26.3	84	4	●
	1212C24 11 W	11	G1-1 1/2	12	12	24.2	84	3	●
	1616D38 11 W	11	G1-3	16	16	38.1	105	4	●



• ⁽¹⁾ B type ⁽²⁾ Z type ●: Standard items

MTECB-NPT / MTECZ-NPT / MTEC-NPT

Solid carbide end mills for internal or external threading



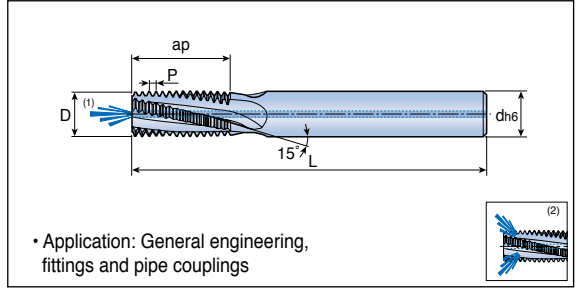
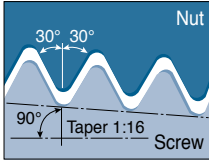
Designation	TPI	NPT	Dimension (mm)				No. of flutes	Grade			
			d	D	ap	L					
MTECB	08076C10	27	NPT	27	1/8	8	7.6	10.8	64	3	●
	1010D16	18	NPT	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	14	NPT	14	1/2-3/4	16	15.5	22.7	105	4	●
	2020D29	11.5	NPT	11.5	1-2	20	20.0	29.8	105	4	●
2020D39	8	NPT	8	$\geq 2\ 1/2$	20	20.0	39.7	105	4	●	
MTECZ	08076C10	27	NPT	27	1/8	8	7.6	10.8	64	3	●
	1010D16	18	NPT	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	14	NPT	14	1/2-3/4	16	15.5	22.7	101	4	●
MTEC	0606C9	27	NPT	27	1/8	6	6	9.9	58	3	●
	0808C14	18	NPT	18	1/4-3/8	8	8	14.8	64	3	●
	1212D20	14	NPT	14	1/2-3/4	12	12	20.9	84	4	●
	1616D27	11.5	NPT	11.5	1-2	16	16	27.6	105	4	●
	2020D39	8	NPT	8	$\geq 2\ 1/2$	20	20	39.7	105	4	●



● ⁽¹⁾ B type ⁽²⁾ Z type

●: Standard items

Solid carbide end mills for internal or external threading



• Application: General engineering, fittings and pipe couplings

Designation	TPI	NPTF	Dimension (mm)				No. of flutes	Grade			
			d	D	ap	L					
MTECB	08076C10	27	NPTF	27	1/8	8	7.8	10.8	64	3	●
	1010D16	18	NPTF	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	14	NPTF	14	1/2-3/4	16	15.5	22.7	105	4	●
	2020D29	11.5	NPTF	11.5	1-2	20	20.0	29.8	105	4	●
	2020D39	8	NPTF	8	≥ 2 1/2	20	20.0	39.7	105	4	●
MTECZ	08076C10	27	NPTF	27	1/8	8	7.6	10.8	64	3	●
	1010D16	18	NPTF	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	14	NPTF	14	1/2-3/4	16	15.5	22.7	101	4	●
MTEC	0606C9	27	NPTF	27	1/8	6	6	9.9	58	3	●
	0808C14	18	NPTF	18	1/4-3/8	8	8	14.8	64	3	●
	1212D20	14	NPTF	14	1/2-3/4	12	12	20.9	84	4	●
	1616D2	11.5	NPTF	11.5	1-2	16	16	27.6	105	4	●
	2020D39	8	NPTF	8	≥ 2 1/2	20	20	39.7	105	4	●

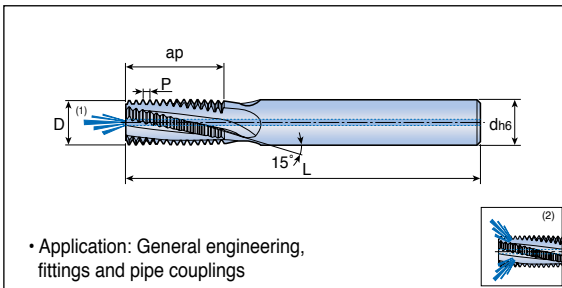
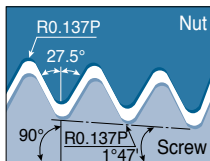
● (1) B type (2) Z type

Cutting Condition
C58-C59

●: Standard items

MTECB-BSPT / MTECZ-BSPT / MTEC-BSPT

Solid carbide end mills for internal or external threading



Designation	TPI	BSPT	Dimension (mm)				No. of flutes	Grade
			d	D	ap	L		
MTECB 08078C14 28 BSPT 1010D16 19 BSPT 1616E26 14 BSPT 1616D28 11 BSPT	28	RC1/8	8	7.8	14.1	64	4	•
	19	RC1/4-3/8	10	10.0	16.7	73	4	•
	14	RC1/2-7/8	16	16.0	26.3	105	4	•
	11	RC1-2	16	16.0	28.9	105	4	•
MTECZ 08078C14 28 BSPT 1010D16 19 BSPT 1616E26 14 BSPT 1616D28 11 BSPT	28	RC1/8	8	7.8	14.1	64	3	•
	19	RC1/4-3/8	10	10.0	16.7	73	4	•
	14	RC1/2-7/8	16	16.0	26.3	101	5	•
	11	RC1-2	16	16.0	28.9	101	4	•
MTEC 0606C9 28 BSPT 0808C14 19 BSPT 1212D19 14 BSPT 1616D28 11 BSPT	28	RC1/8	6	6	9.5	58	3	•
	19	RC1/4-3/8	8	8	14.0	64	3	•
	14	RC1/2-7/8	12	12	19.1	84	4	•
	11	RC1-2	16	16	28.9	105	4	•



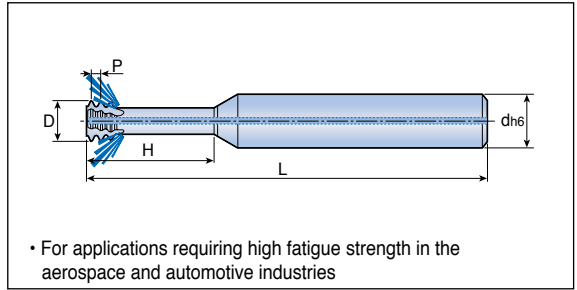
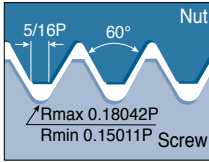
• (1) B type (2) Z type

• Standard items

MTECS-MJ / MTECS-UNJ

TS-THREAD

Thread mills for internal MJ and UNJ threads with coolant holes directed to the cutting edges

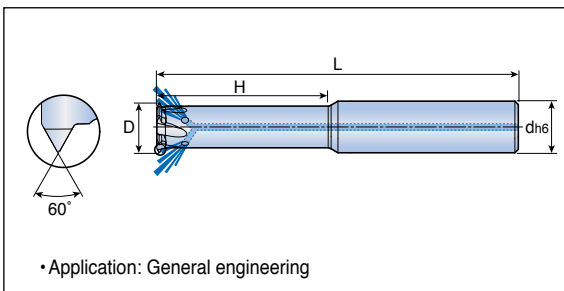
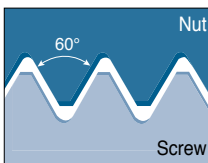


	Designation	Pitch (mm)	TPI	MJ size	UNJC	UNJF	Dimension (mm)				No. of flutes	Grade TT9030
							d	D	H	L		
MTECS	06032C10 0.7 MJ⁽¹⁾	0.7	-	MJ4	-	-	6	3.20	10.0	58	3	●
	06039C12 0.8 MJ⁽¹⁾	0.8	-	MJ5	-	-	6	3.90	12.5	58	3	●
	06048C15 1.0 MJ⁽¹⁾	1.0	-	MJ6	-	-	6	4.80	15.0	58	3	●
	08061C20 1.25 MJ	1.25	-	MJ8	-	-	8	6.10	20.0	64	3	●
	0808C25 1.5 MJ	1.5	-	MJ10	-	-	8	8.00	25.0	64	3	●
	10092C30 1.75 MJ	1.75	-	MJ12	-	-	10	9.20	30.0	73	3	●
	1010C35 2.0 MJ	2.0	-	MJ14, MJ16	-	-	10	10.00	35.0	73	3	●
MTECS	06033C10 32 UNJ⁽¹⁾	-	32	-	8	10	6	3.30	10.5	58	3	●
	08051C16 28 UNJ	-	28	-	-	1/4	8	5.10	16.0	64	3	●
	08067C20 24 UNJ	-	24	-	-	5/16, 3/8	8	6.70	20.0	64	3	●
	06049C16 20 UNJ⁽¹⁾	-	20	-	1/4	-	6	4.90	16.0	58	3	●
	0808C28 20 UNJ	-	20	-	-	7/16	8	8.00	28.0	64	3	●
	08061C20 18 UNJ	-	18	-	5/16	-	8	6.15	20.0	64	3	●
	08069C24 16 UNJ	-	16	-	3/8	-	8	6.90	24.0	64	3	●
	08079C25 14 UNJ	-	14	-	7/16	-	8	7.90	25.0	64	3	●
	10094C27 13 UNJ	-	13	-	1/2	-	10	9.40	27.5	73	3	●



●⁽¹⁾ Without coolant holes ●: Standard items

Partial profile solid carbide thread mills with coolant holes directed to the cutting edges for internal and external threads



Designation	Pitch		Thread dia.	Dimension (mm)				No. of flutes	Grade TT9030
	mm	TPI		d	D	H	L		
MTECI 0605D20 A60	Int. 0.5-0.8 Ext. 0.4-0.8	56-28	$\varnothing \geq 6$	6	5.0	20	58	4	●
0808D28 A60			$\varnothing \geq 9$	8	8.0	28	64	4	●
1212E38 A60			$\varnothing \geq 13$	12	12.0	38	84	4	●
0808D30 A60	Int. 1.0-1.75 Ext. 0.8-1.5	28-14	$\varnothing \geq 10$	8	8	30	64	4	●
1010D35 A60			$\varnothing \geq 12$	10	10	35	73	4	●
1212E39 A60			$\varnothing \geq 14$	12	12	39	84	5	●
1212E40 A60	Int. 2.3-3.0 Ext. 1.75-2.5	23-8	$\varnothing \geq 16$	12	12	40	84	5	●
1614E45 A60			$\varnothing \geq 18$	16	16	45	101	5	●
1616E50 A60			$\varnothing \geq 20$	16	16	50	101	5	●



●: Standard items

Tool Designation System

End mills

MT **E** **D25** - **1** - **W** **20** **(C)** - **21**

1 **2** **3** **4** **5** **6** **7** **8**

1 Mill thread

M - Mill
T - Thread

2 Tool type

E - End mills type

3 Cutting diameter

D25 - 25.0mm

4 Number of insert

1 1 insert
2 2 inserts

5 Shank type

W - Weldon shank
C - Cylindrical type

6 Shank diameter

20 - 20.0mm

7 Shank material

C Carbide shank

8 Insert size(ap)

12 12.0 mm
14 14.0 mm
21 21.0 mm
30 30.0 mm
40 40.0 mm

Cutters

MT **F** **D063** - **5** - **22** - **21**

1 **2** **3** **4** **5** **6**

1 Mill thread

M - Mill
T - Thread

2 Tool type

F - Facemill type

3 Cutting diameter

D063 - 63.0mm

4 Number of insert

4 4 inserts
5 5 inserts

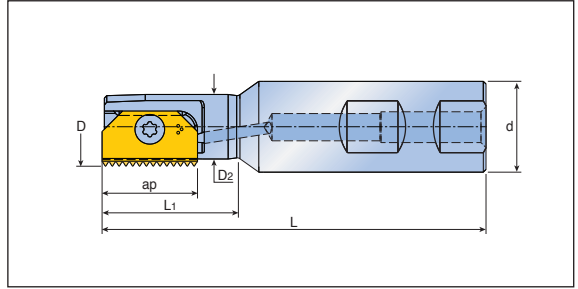
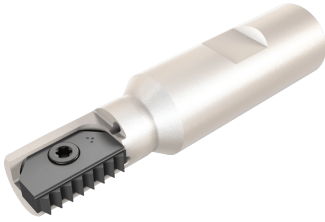
5 Bore diameter

22 22.0 mm
27 27.0 mm
32 32.0 mm

6 Insert size (ap)

21 21.0 mm
30 30.0 mm
40 40.0 mm

Indexable threading end mills

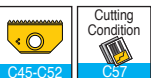


Designation	Dimension (mm)						Shank	Kg	Insert
	ap	D	d	D2	L1	L			
MTE D09.5-1-W20-12 ⁽¹⁾	12	9.5	20	7.5	15.5	85	W	0.16	TTMT12
D09.9-1-W20-12	12	9.9	20	7.5	16.0	85	W	0.16	TTMT12
D12.2-1-W20-14	14	12.2	20	8.6	20.0	75	W	0.15	TTMT14
D14.5-1-W20-14	14	14.5	20	11.2	25.0	85	W	0.16	TTMT14
D17.0-1-W20-14	14	17.0	20	12.8	30.0	85	W	0.23	TTMT14
D18-1-W20-21 ⁽²⁾	21	18.0	20	14.2	30.0	85	W	0.20	TTMT21
D21-1-W20-21	21	21.0	20	15.9	40.0	94	W	0.23	TTMT21
D25-1-W20-21	21	25.0	20	-	-	115	W	0.24	TTMT21
D29-1-W25-30	30	29.0	25	22.2	50.0	110	W	0.32	TTMT30
D31-1-W25-30	30	31.0	25	-	-	150	W	0.60	TTMT30
D38-1-W32-30	30	38.0	32	-	-	150	W	0.90	TTMT30
D48-1-W40-40	40	48.0	40	35.0	78.0	153	W	1.30	TTMT40
D48-1-W40-40-B	40	48.0	40	-	-	210	W	1.50	TTMT40

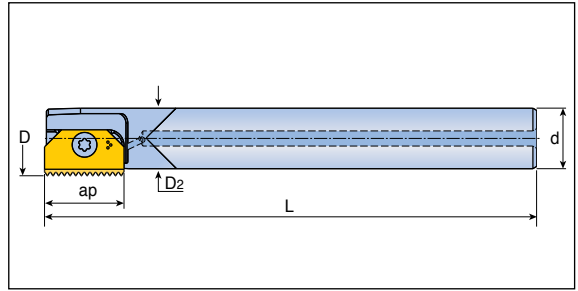
- Minimum bore should be one-third larger than DC (diameter)
- All end mills are equipped with a bore for internal coolant
- ⁽¹⁾ Not suitable for inserts: TTMT12 18 NPT, TTMT12 18 NPTF, TTMT12 19 BSPT
- ⁽²⁾ Not suitable for inserts: TTMT21 1 3.50 ISO, TTMT21 1 7 UN, TTMT21 11.5 NPT, TTMT21 11.5 NPTF

Spare parts

Designation	Screw	Torx Blade	Handle	
MTE D...12	SR M2.5-T8-MT	BLD T08/M7	SW4-SD	-
MTE D...14	S11	BLD T08/M7	SW4-SD	-
MTE D...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...30/40(-B)	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T



Cylindrical carbide shank

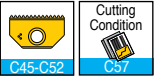


Designation	Dimension (mm)					Shank	Kg	Insert
	ap	D	d	D2	L			
MTE D09.9-1-C08C-12	12	9.9	8	8	127.0	C	0.10	TTMT12
D13.7-1-C10C-14	14	13.7	10	10	110.0	C	0.12	TTMT14
D13.7-1-C10C-14-B	14	13.7	10	10	153.5	C	0.17	TTMT14
D15.2-1-C12C-14	14	15.2	12	12	182.3	C	0.30	TTMT14
D21-1-C16C-21	21	21.0	16	16	130.0	C	0.35	TTMT21
D21-1-C16C-21-B	21	21.0	16	16	206.3	C	0.50	TTMT21
D27-1-C20C-30	30	27.0	20	20	263.0	C	1.20	TTMT30

• For holders with long overhang, reduce the cutting speed and feed rate, between 20 to 40% (depending on workpiece, material, pitch and overhang)

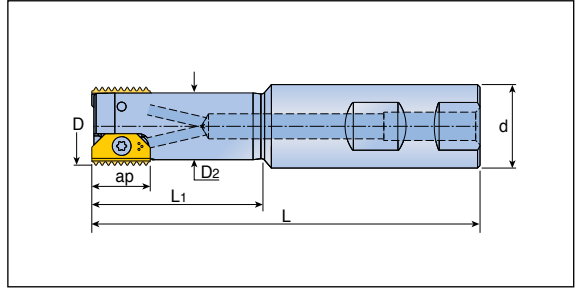
Spare parts

Designation	Screw	Torx Blade	Handle	
MTE D...C...12	SR M2.5-T8-MT	BLD T08/M7	SW4-SD	-
MTE D...C...14(-B)	S11	BLD T08/M7	SW4-SD	-
MTE D...C...21(-B)	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...C...30	SR M5-IP25-MT-S	BLD IP25/S7	-	SW6-T



MTE D (Double Insert)





Double insert thread milling end mills

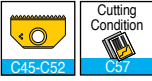


Designation	Dimension (mm)						Shank	Kg	Insert
	ap	D	d	D ₂	L ₁	L			
MTE D20.0-2-W20-14	14	20	20	16	41	93	W	0.20	TTMT14
D30-2-W25-21	21	30	25	24	52	108	W	0.40	TTMT21
D40-2-W32-30	30	40	32	30	70	130	W	0.70	TTMT30
D50-2-W40-40	40	50	40	38	78	153	W	0.80	TTMT40

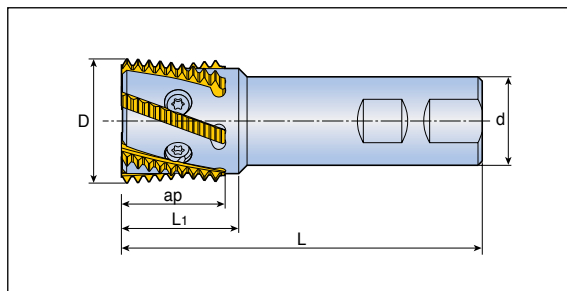
- Minimum bore should be one-third larger than D (diameter)
- All end mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx Blade	Handle	
				
MTE D...W...14	S11	BLD T08/M7	SW4-SD	-
MTE D...W...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...W...30/40	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T



End mills with coolant holes for helical threading inserts

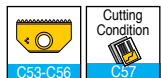


Designation		Dimension (mm)						Insert
		ap	D	d	L	L1		
TMTSRH 23-2	2	27	23	25	110	50	0.30	TMTH 23
32-5	5	32	32	32	130	60	0.65	TMTH 32
45-6	6	37	45	32	130	-	0.88	TMTH 45

• All end mills are equipped with a bore for internal coolant

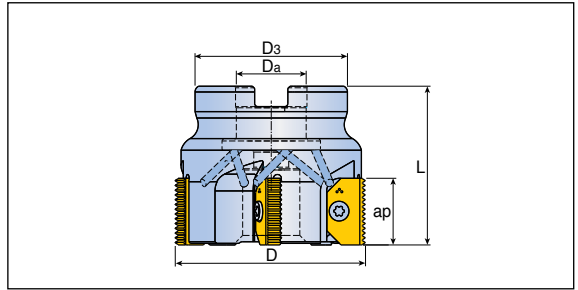
Spare parts

Designation	Screw	Torx wrench		
TMTSRH 23	TS23	TK21		
TMTSRH 32	TS32	TK22		
TMTSRH 45	TS45	TK40		



MTF D (Multi)

Multi-insert shell mills for large diameter threading

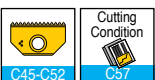


Designation		Dimension (mm)						Insert
		D	ap	D3	Da	L		
MTF D063-5-22-21	5	63	21	40	22	50	0.70	TTMT21
D063-4-22-30	4	63	30	48	22	50	0.60	TTMT30
D080-4-27-30	4	80	30	60	27	50	1.22	TTMT30
D080-4-27-40	4	80	40	60	27	65	1.22	TTMT30
D100-4-32-30	4	100	30	78	32	50	1.29	TTMT40
D100-4-32-40	4	100	40	78	32	65	1.22	TTMT40

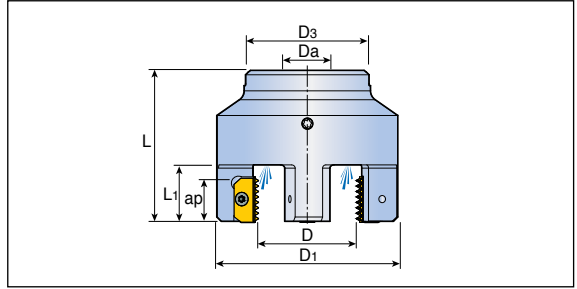
• All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Screw 1	Torx Blade	Handle	
MTF D063...21	SR M4-IP15-MT	SR M10X25 DIN912	BLD IP15/S7	SW6-SD	-
MTF D063...30	SR M5-IP25-MT	SR M10X25 DIN912	BLD IP25/S7	-	SW6-T
MTF D080...30/40	SR M5-IP25-MT	SR M12X25	BLD IP25/S7	-	SW6-T
MTF D100...30/40	SR M5-IP25-MT	SR M16X30 DIN912	BLD IP25/S7	-	SW6-T



External multi-tooth threading shell mills



Designation		Dimension (mm)									Insert
		ap	D	D1	D3	Da	L	L1			
MTFLE D20-3-22-21	3	21	20	58.2	48	22	63	27	0.70	TTMT21 E	
D30-3-22-21	3	21	30	68.2	48	22	63	27	0.90	TTMT21 E	
D45-4-27-21	4	21	45	83.2	60	27	67	27	1.40	TTMT21 E	

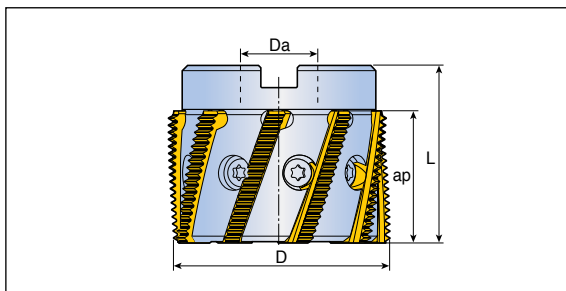
• All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx Blade	Handle	
	MTFLE D...21	 SR M4-IP15-MT	 BLD IP15/S7	 SW6-SD

 C45-C52	 Cutting Condition C57
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Helical shell mill for large thread diameters

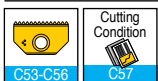


Designation		Dimension (mm)					Insert
		ap	D	Da	L		
TMFSRH 32-5M	5	32	32	16	52	0.15	TMTH 32
45-6M	6	37	45	22	60	0.30	TMTH 45
63-9	9	38	63	22	50	0.66	TMTH 63

• All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx wrench		
TMFSRH 32	TS32S	TK22		
TMFSRH 45	TS45S	TK40		
TMFSRH 63	TS63	TK40		



Insert Designation System

Thread milling inserts

TTMT(H) 30 E 1.5 ISO TT9030

1

2

3

4

5

6

1 TaeguTec mill thread

TT - TaeguTec
M - Mill
T - Thread
H - Helical insert

2 Insert size (l)

12 12.0 mm
14 14.0 mm
21 21.0 mm
30 30.0 mm
40 40.0 mm



3 Application

E - External
I - Internal
□ - External + internal

4 Thread pitch

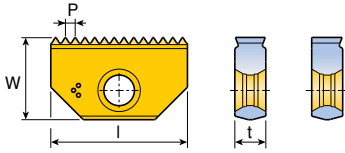
0.5 - 6.0 pitch (mm)
32 - 4 TPI

5 Thread standard

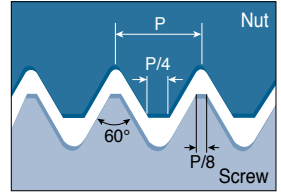
ISO
UN
WHIT
NPT
NPTF
BSPT

6 Grades

Coated
TT9030



TTMT12 I ⁽¹⁾



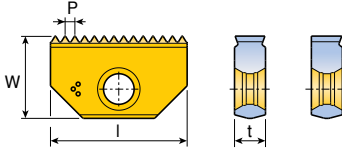
Insert	Designation	Pitch (mm)	Dimension (mm)			Grade
			l	W	t	
	TTMT12 I 0.5 ISO ⁽¹⁾	0.50	12	6.5	2.9	●
	TTMT12 I 0.75 ISO ⁽¹⁾	0.75	12	6.5	2.9	●
	TTMT12 I 1.0 ISO ⁽¹⁾	1.00	12	6.5	2.9	●
	TTMT12 I 1.25 ISO ⁽¹⁾	1.25	12	6.5	2.9	●
	TTMT12 I 1.5 ISO ⁽¹⁾	1.50	12	6.5	2.9	●
	TTMT14 I 0.5 ISO	0.50	14	7.9	3.2	●
	TTMT14 E/I 0.75 ISO	0.75	14	7.9	3.2	●
	TTMT14 E/I 1.0 ISO	1.00	14	7.9	3.2	●
	TTMT14 E/I 1.25 ISO	1.25	14	7.9	3.2	●
	TTMT14 E/I 1.5 ISO	1.50	14	7.9	3.2	●
	TTMT14 E/I 1.75 ISO	1.75	14	7.9	3.2	●
	TTMT14 E/I 2.0 ISO	2.00	14	7.9	3.2	●
	TTMT14 E/I 2.5 ISO	2.50	14	7.9	3.2	●
	TTMT21 E/I 1.0 ISO	1.00	21	12.6	4.8	●
	TTMT21 E/I 1.5 ISO	1.50	21	12.6	4.8	●
	TTMT21 I 1.75 ISO	1.75	21	12.6	4.8	●
	TTMT21 E/I 2.0 ISO	2.00	21	12.6	4.8	●
	TTMT21 E/I 2.5 ISO	2.50	21	12.6	4.8	●
	TTMT21 E/I 3.0 ISO	3.00	21	12.6	4.8	●
	TTMT21 I 3.5 ISO	3.50	21	12.6	4.8	●
	TTMT30 E/I 1.5 ISO	1.50	30	16.7	5.6	●
	TTMT30 E/I 2.0 ISO	2.00	30	16.7	5.6	●
	TTMT30 E/I 3.0 ISO	3.00	30	16.7	5.6	●
	TTMT30 E/I 3.5 ISO	3.50	30	16.7	5.6	●
	TTMT30 E/I 4.0 ISO	4.00	30	16.7	5.6	●
	TTMT30 I 4.5 ISO	4.50	30	16.7	5.6	●
	TTMT30 I 5.0 ISO	5.00	30	16.7	5.6	●
	TTMT40 E/I 1.5 ISO	1.50	40	20.8	6.4	●
	TTMT40 E/I 2.0 ISO	2.00	40	20.8	6.4	●
	TTMT40 E/I 3.0 ISO	3.00	40	20.8	6.4	●
	TTMT40 I 3.5 ISO	3.50	40	20.8	6.4	●
	TTMT40 E/I 4.0 ISO	4.00	40	20.8	6.4	●
TTMT40 I 4.5 ISO	4.50	40	20.8	6.4	●	
TTMT40 E/I 5.0 ISO	5.00	40	20.8	6.4	●	
TTMT40 I 5.5 ISO	5.50	40	20.8	6.4	●	
TTMT40 E/I 6.0 ISO	6.00	40	20.8	6.4	●	



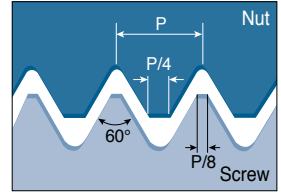
• ⁽¹⁾ TTMT12 insert is only available with a single cutting edge

●: Standard items

UN, UNC, UNF, UNEF, UNS



TTMT12 I ⁽¹⁾



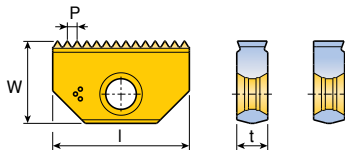
Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	
	TTMT12 I 32 UN ⁽¹⁾	32	12	6.5	2.9	●
	TTMT12 I 28 UN ⁽¹⁾	28	12	6.5	2.9	●
	TTMT12 I 24 UN ⁽¹⁾	24	12	6.5	2.9	●
	TTMT12 I 20 UN ⁽¹⁾	20	12	6.5	2.9	●
	TTMT12 I 18 UN ⁽¹⁾	18	12	6.5	2.9	●
	TTMT12 I 16 UN ⁽¹⁾	16	12	6.5	2.9	●
	TTMT14 E/I 32 UN	32	14	7.9	3.2	●
	TTMT14 E/I 28 UN	28	14	7.9	3.2	●
	TTMT14 I 27 UN	27	14	7.9	3.2	●
	TTMT14 E/I 24 UN	24	14	7.9	3.2	●
	TTMT14 E/I 20 UN	20	14	7.9	3.2	●
	TTMT14 E/I 18 UN	18	14	7.9	3.2	●
	TTMT14 E/I 16 UN	16	14	7.9	3.2	●
	TTMT14 E/I 14 UN	14	14	7.9	3.2	●
	TTMT14 E/I 12 UN	12	14	7.9	3.2	●
	TTMT14 I 11 UN	11	14	7.9	3.2	●
	TTMT14 I 10 UN	10	14	7.9	3.2	●
	TTMT21 E/I 24 UN	24	21	12.6	4.8	●
	TTMT21 E/I 20 UN	20	21	12.6	4.8	●
	TTMT21 E/I 18 UN	18	21	12.6	4.8	●
	TTMT21 E/I 16 UN	16	21	12.6	4.8	●
	TTMT21 E/I 14 UN	14	21	12.6	4.8	●
	TTMT21 E/I 12 UN	12	21	12.6	4.8	●
	TTMT21 E/I 10 UN	10	21	12.6	4.8	●
	TTMT21 I 8 UN	8	21	12.6	4.8	●
	TTMT21 I 7 UN	7	21	12.6	4.8	●
	TTMT30 E/I 20 UN	20	30	16.7	5.6	●
	TTMT30 E/I 18 UN	18	30	16.7	5.6	●
	TTMT30 E/I 16 UN	16	30	16.7	5.6	●
	TTMT30 E/I 14 UN	14	30	16.7	5.6	●
	TTMT30 E/I 12 UN	12	30	16.7	5.6	●
	TTMT30 E/I 10 UN	10	30	16.7	5.6	●
	TTMT30 E/I 8 UN	8	30	16.7	5.6	●
TTMT30 E/I 6 UN	6	30	16.7	5.6	●	
TTMT30 I 5 UN	5	30	16.7	5.6	●	



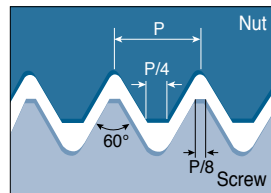
● ⁽¹⁾ TTMT12 insert is only available with a single cutting edge

●: Standard items

UN, UNC, UNF, UNEF, UNS



TTMT12 I ⁽¹⁾



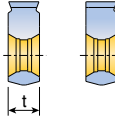
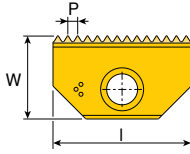
Insert	Designation	TPI	Dimension (mm)			Grade TT9030
			L	W	t	
	TTMT40 E/I 16 UN	16	40	20.8	6.4	●
	TTMT40 E/I 14 UN	14	40	20.8	6.4	●
	TTMT40 E/I 12 UN	12	40	20.8	6.4	●
	TTMT40 E/I 10 UN	10	40	20.8	6.4	●
	TTMT40 E/I 8 UN	8	40	20.8	6.4	●
	TTMT40 E/I 6 UN	6	40	20.8	6.4	●
	TTMT40 I 4.5 UN	4.5	40	20.8	6.4	●
	TTMT40 I 4 UN	4	40	20.8	6.4	●



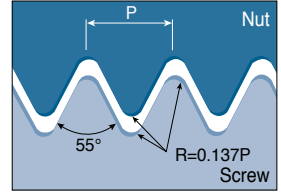
• ⁽¹⁾ TTMT12 insert is only available with a single cutting edge

●: Standard items

Whitworth (BSW, BSF, BSP)



TTMT12 I ⁽¹⁾

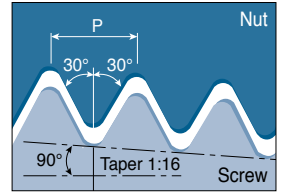
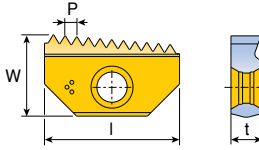


Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	
	TTMT12 19 W ⁽¹⁾	19	12	6.5	2.9	●
	TTMT14 24 W	24	14	7.9	3.2	●
	TTMT14 20 W	20	14	7.9	3.2	●
	TTMT14 19 W	19	14	7.9	3.2	●
	TTMT14 16 W	16	14	7.9	3.2	●
	TTMT14 14 W	14	14	7.9	3.2	●
	TTMT21 20 W	20	21	12.6	4.8	●
	TTMT21 19 W	19	21	12.6	4.8	●
	TTMT21 16 W	16	21	12.6	4.8	●
	TTMT21 14 W	14	21	12.6	4.8	●
	TTMT21 11 W	11	21	12.6	4.8	●
	TTMT30 16 W	16	30	16.7	5.6	●
	TTMT30 14 W	14	30	16.7	5.6	●
	TTMT30 11 W	11	30	16.7	5.6	●
	TTMT40 11 W	11	40	20.8	6.4	●
TTMT40 8 W	8	40	20.8	6.4	●	

MTE/F
 C37-C42
 • The same insert for external and internal threading
 • ⁽¹⁾ TTMT12 insert is only available with a single cutting edge
 ●: Standard items

TTMT-NPT

NPT - National pipe taper thread



Insert	Designation	TPI	Dimension (mm)			Grade
			L	W	t	
	TTMT12 18 NPT	18	12	6.5	2.9	●
	TTMT14 18 NPT	18	14	7.9	3.2	●
	TTMT14 14 NPT	14	14	7.9	3.2	●
	TTMT21 14 NPT	14	21	12.6	4.8	●
	TTMT21 11.5 NPT	11.5	21	12.6	4.8	●
	TTMT30 11.5 NPT	11.5	30	16.7	5.6	●
	TTMT30 8 NPT	8	30	16.7	5.6	●
	TTMT40 11.5 NPT	11.5	40	20.8	6.4	●
	TTMT40 8 NPT	8	40	20.8	6.4	●

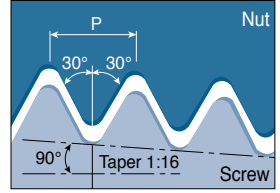
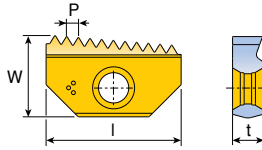


- The same insert for external and internal threading
- Conical pipe thread inserts are single-sided

●: Standard items

TTMT- NPTF

NPTF - National pipe thread tapered (Dryseal)

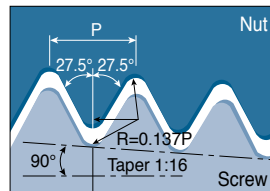
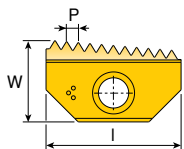


Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	
	TTMT12 18 NPTF	18	12	6.5	2.9	●
	TTMT14 18 NPTF	18	14	7.9	3.2	●
	TTMT14 14 NPTF	14	14	7.9	3.2	●
	TTMT21 14 NPTF	14	21	12.6	4.8	●
	TTMT21 11.5 NPTF	11.5	21	12.6	4.8	●
	TTMT30 11.5 NPTF	11.5	30	16.7	5.6	●
	TTMT30 8 NPTF	8	30	16.7	5.6	●
	TTMT40 11.5 NPTF	11.5	40	20.8	6.4	●
	TTMT40 8 NPTF	8	40	20.8	6.4	●

MTE/F • The same insert for external and internal threading
 C37-C42 • Conical pipe thread Inserts are single-sided

●: Standard items

BSPT - British standard pipe tapered

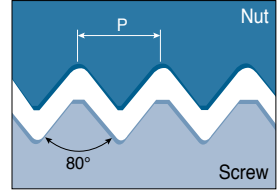
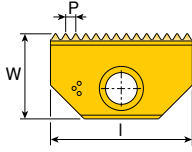



Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TTMT12 19 BSPT	19	12	6.5	2.9	●
	TTMT14 19 BSPT	19	14	7.9	3.2	●
	TTMT14 14 BSPT	14	14	7.9	3.2	●
	TTMT21 14 BSPT	14	21	12.6	4.8	●
	TTMT21 11 BSPT	11	21	12.6	4.8	●
	TTMT30 11 BSPT	11	30	16.7	5.6	●
	TTMT40 11 BSPT	11	40	20.8	6.4	●

MTE/F • The same insert for external and internal threading
 • Conical pipe thread inserts are single-sided

●: Standard items

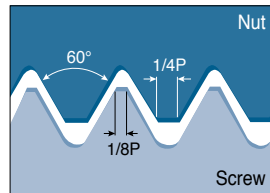
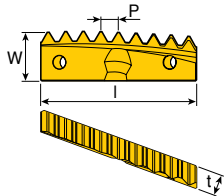
Electrical connectors (DIN 40430)



Insert	Designation	TPI	Thread size	Dimension (mm)			Grade
				l	W	t	
	TTMT14 18 PG	18	PG9, 11, 13.5, 16	14	7.9	3.2	●
	TTMT21 18 PG	18	PG16	21	12.6	4.8	●
	TTMT21 16 PG	16	PG21, 29, 36, 42, 48	21	12.6	4.8	●
	TTMT30 16 PG	16	PG36, 42, 48	30	16.7	5.6	●

TMTH-ISO

Helical inserts for ISO metric threads (Internal)

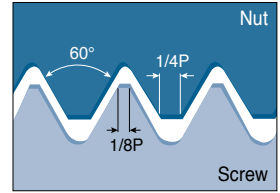
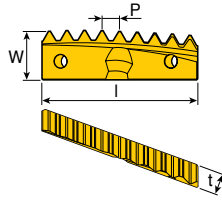


Insert	Designation	Pitch (mm)	Thread size	Dimension (mm)			Tool	Grade TT9030
				l	W	t		
	TMTH 23 1.0 ISO	1.0	≥M26	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 1.5 ISO	1.5	≥M27	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 2.0 ISO	2.0	≥M28	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 3.0 ISO	3.0	≥M30	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 1.0 ISO	1.0	≥M34	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 1.5 ISO	1.5	≥M35	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 2.0 ISO	2.0	≥M36	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 3.0 ISO	3.0	≥M38	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 4.0 ISO	4.0	≥M40	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 1.5 ISO	1.5	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 2.0 ISO	2.0	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 3.0 ISO	3.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 4.0 ISO	4.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 1.5 ISO	1.5	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 2.0 ISO	2.0	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 3.0 ISO	3.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●
TMTH 63 4.0 ISO	4.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●	
TMTH 63 6.0 ISO	6.0	≥M78	38	11.9	5.0	TMTSRH 63-9	●	



●: Standard items

Helical inserts for UN, UNC, UNF, UNEF, UNS threads (Internal)



Insert	Designation	TPI	Thread size	Dimension (mm)			Tool	Grade TT9030
				l	W	t		
	TMTH 23 24 UN	24	≥1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 20 UN	20	≥1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 18 UN	18	≥1 1/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 16 UN	16	≥1 1/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 14 UN	14	≥1 1/8"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 12 UN	12	≥1 1/8"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 8 UN	8	≥1 3/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 7 UN	7	≥1 1/4"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 20 UN	20	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 18 UN	18	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 16 UN	16	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 12 UN	12	≥1 7/16"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 8 UN	8	≥1 1/2"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 6 UN	6	≥1 9/16"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 16 UN	16	≥2"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 12 UN	12	≥2"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 8 UN	8	≥2 1/4"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 6 UN	6	≥2 1/4"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 16 UN	16	≥2 3/4"	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 12 UN	12	≥2 3/4"	38	11.9	5.0	TMTSRH 63-9	●
TMTH 63 8 UN	8	≥3"	38	11.9	5.0	TMTSRH 63-9	●	
TMTH 63 6 UN	6	≥3"	38	11.9	5.0	TMTSRH 63-9	●	

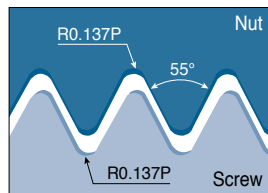
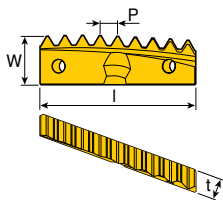
●: Standard items




TMTH-W

TS-THREAD

Helical inserts for whitworth threads, BSF, BSF, BSP (Internal and external)



Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade
			Internal	External	l	W	t		
	TMTH 23 11 W	11	≥G 1"	≥G 1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 W	11	≥G 1 1/8"	≥G 1"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 W	11	≥G 1 3/4"	≥G 1"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 W	11	≥G 2 1/2"	≥G 1"	38	11.9	5.0	TMTSRH 63-9	●

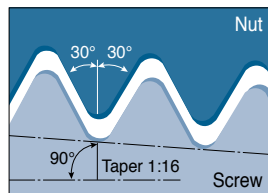
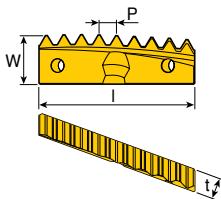



● Standard item

TMTH-NPT

TS-THREAD

Helical inserts for NPT threads (Internal and external)

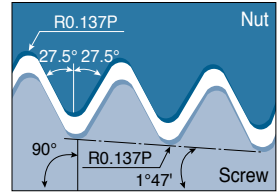
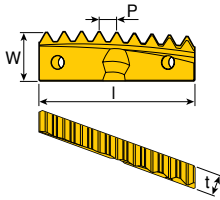


Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade
			Internal	External	l	W	t		
	TMTH 23 11.5 NPT	11.5	1"-2" NPT	1"-2" NPT	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11.5 NPT	11.5	1 1/4"-2" NPT	1"-2" NPT	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11.5 NPT	11.5	2" NPT	1"-2" NPT	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11.5 NPT	11.5	-	≥1" NPT	38	11.9	5.0	TMTSRH 63-9	●



● Standard items

Helical inserts for BSPT threads (Internal and external)



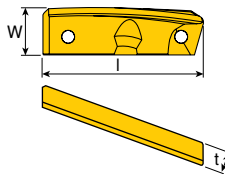
Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade TT9030
			Internal	External	l	W	t		
	TMTH 23 11 BSPT	11	≥1" BSPT	≥1" BSPT	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 BSPT	11	≥1 1/8" BSPT	≥1" BSPT	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 BSPT	11	≥1 3/4" BSPT	≥1" BSPT	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 BSPT	11	≥2 1/2" BSPT	≥1" BSPT	38	11.9	5.0	TMTSRH 63-9	●



●: Standard Item

TMTH-F

Helical long edge finishing insert



Designation	Dimension (mm)			Tool	Grade TT9030
	l	W	t		
TMTH 23F R0.2	27	8.0	3.5	TMTSRH 23-2	●
TMTH 23F R0.5	27	8.0	3.5	TMTSRH 23-2	●
TMTH 23F R1.0	27	8.0	3.5	TMTSRH 23-2	●
TMTH 32F R0.2	32	9.0	4.0	TMTSRH 32-5	●
TMTH 32F R0.5	32	9.0	4.0	TMTSRH 32-5	●
TMTH 32F R1.0	32	9.0	4.0	TMTSRH 32-5	●
TMTH 45F R0.2	37	11.9	5.0	TMTSRH 45-6	●



●: Standard items

Recommended Cutting Conditions

Machining data for indexable insert of threading cutters

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	
						TT9030	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	100-200
		>=0.25%C	Annealed	650	190	2	95-190
		<0.55%C	Quenched and tempered	850	250	3	90-180
		>=0.55%C	Annealed	750	220	4	90-170
			Quenched and tempered	1000	300	5	80-150
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Quenched and tempered	600	200	6	120-170	
			930	275	7	115-160	
			1000	300	8	105-150	
			1200	350	9	140	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	90-170	
Quenched and tempered		1100	325	11	75-145		
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	110-170	
		Martensitic	820	240	13	100-160	
		Austenitic	600	180	14	90-145	
K	Gray cast iron (GG)	Ferritic		160	15	65-135	
		Pearlitic		250	16	65-110	
	Cast iron nodular (GGG)	Ferritic		180	17	65-135	
		Pearlitic		260	18	60-100	
Malleable cast iron	Ferritic		130	19	65-135		
	Pearlitic		230	20	60-120		
N	Aluminum - Wrought alloy	Not cureable		60	21	110-260	
		Cured		100	22	110-200	
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	145-350
		Cured		90	24	145-275	
	>12% Si	High temp.		130	25	95-225	
	Copper alloys	>1% Pb	Free cutting		110	26	145-350
		Brass			90	27	145-350
		Electrolytic copper			100	28	145-350
	Non-metallic	Duroplastics, fiber plastics				29	90-370
		Hard rubber				30	80-330
S	High temp. alloys	Fe based	Annealed		200	31	20-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-30
			Cured		350	34	10-20
			Cast		320	35	15-25
	Titanium, Ti alloys		Rm 400			36	30-90
Alpha+beta alloys cured		Rm 1050			37	20-70	
H	Hardened steel	Hardened			55HRC	38	25-60
		Hardened			60HRC	39	20-40
	Chilled cast iron	Cast			400	40	25-60
	Cast iron nodular	Hardened			55HRC	41	20-50

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

• Feed rate: 0.05 - 0.15 mm/tooth

Recommended Cutting Conditions

Machining data for solid carbide threading end mills

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)		
						TT9030		
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	100-250	
		≥0.25%C	Annealed	650	190	2	80-210	
		<0.55%C	Quenched and tempered	850	250	3	65-170	
		≥0.55%C	Annealed	750	220	4	110-180	
			Quenched and tempered	1000	300	5	95-160	
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed		600	200	6	90-160
					930	275	7	65-200
			Quenched and tempered		1000	300	8	70-210
					1200	350	9	95-160
	High alloy steel, cast steel and tool steel		Annealed		680	200	10	130-170
			Quenched and tempered		1100	325	11	75-100
M	Stainless steel and cast steel	Ferritic / martensitic		680	200	12	110-170	
		Martensitic		820	240	13	70-155	
		Austenitic		600	180	14	85-100	
K	Gray cast iron (GG)	Ferritic			160	15	70-150	
		Pearlitic			250	16	110-140	
	Cast iron nodular (GGG)	Ferritic			180	17	120-160	
		Pearlitic			260	18	75-160	
	Malleable cast iron	Ferritic			130	19	120-160	
Pearlitic				230	20	110-140		
N	Aluminum - Wrought alloy	Not cureable			60	21	160-300	
		Cured			100	22		
	Aluminum-cast, alloyed	≤12% Si	Not cureable			75	23	
			Cured			90	24	
		>12% Si	High temp.			130	25	
	Copper alloys		>1% Pb	Free cutting			110	26
				Brass			90	27
				Electrolitic copper			100	28
	Non-metallic		Duroplastics, fiber plastics				29	100-400
			Hard rubber				30	
S	High temp. alloys	Fe based	Annealed			200	31	
			Cured			280	32	
		Ni or Co based	Annealed			250	33	20-80
			Cured			350	34	
			Cast			320	35	
	Titanium, Ti alloys			Rm 400			36	
			Alpha+beta alloys cured	Rm 1050			37	20-80
H	Hardened steel		Hardened			55HRC	38	55-65
			Hardened			60HRC	39	45-55
	Chilled cast iron	Cast			400	40	90-105	
	Cast iron nodular	Hardened			55HRC	41	55-65	

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

Machining data for solid carbide threading end mills

Feed (mm/tooth) for diameter (mm)											
Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø30
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.05	0.06	0.07	0.09	0.1	0.11	0.12	0.13	0.15	0.18	0.22	0.25
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05

• For cutters with long cutting flute, reduce feed rate by 40%

Recommended Cutting Conditions

Machining data for short solid carbide thread mills

ISO	Material	Hardness (HRC)	Cutting speed Vc (m/min)	Feed (mm/tooth) for diameter (mm)												
				Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø15
P	Low & medium carbon steels		60-120	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
	High carbon steels		60-90	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13	0.14	0.14	0.16	0.17	0.18
	Alloy steels, treated steels		50-80	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
	Cast steels		70-90	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
M	Stainless steels		60-90	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
K	Cast Iron		40-80	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	Aluminum		80-150	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
	Synthetics, duroplastics, thermoplastics		50-200	0.10	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.20	0.20
S	Nickel alloys, titanium alloys.		20-40	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
H	Hardened steel	45-50	60-70	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08				
		51-55	50-60	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07				
		56-62	40-50	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06				

• For more information of material groups, see the materials & grades "material conversion table"

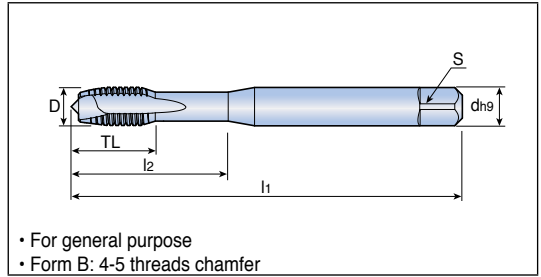
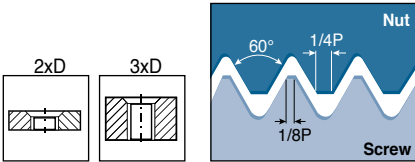
■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

T-TAP

Tapping



Straight flute with spiral point



Metric ISO standard thread DIN 13 standard

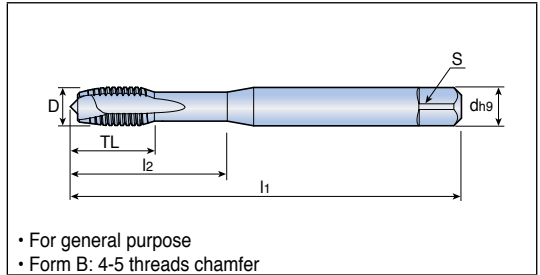
Designation			D	Pitch (mm)	Standard (DIN)	
Uncoated	Steam tempered	TiN coated				
TPH452B M2x0.4	TPH452B05 M2x0.4	TPH452B10 M2x0.4	M2	0.4	DIN371	
TPH452B M2.5x0.45	TPH452B05 M2.5x0.45	TPH452B10 M2.5x0.45	M2.5	0.45		
TPH452B M3x0.5	TPH452B05 M3x0.5	TPH452B10 M3x0.5	M3	0.5		
TPH452B M4x0.7	TPH452B05 M4x0.7	TPH452B10 M4x0.7	M4	0.7		
TPH452B M5x0.8	TPH452B05 M5x0.8	TPH452B10 M5x0.8	M5	0.8		
TPH452B M6x1.0	TPH452B05 M6x1.0	TPH452B10 M6x1.0	M6	1		
TPH452B M8x1.25	TPH452B05 M8x1.25	TPH452B10 M8x1.25	M8	1.25		
TPH452B M10x1.5	TPH452B05 M10x1.5	TPH452B10 M10x1.5	M10	1.5		
TPH652B M12x1.75	TPH652B05 M12x1.75	TPH652B10 M12x1.75	M12	1.75		DIN376
TPH652B M14x2.0	TPH652B05 M14x2.0	TPH652B10 M14x2.0	M14	2		
TPH652B M16x2.0	TPH652B05 M16x2.0	TPH652B10 M16x2.0	M16	2		
TPH652B M20x2.5	TPH652B05 M20x2.5	TPH652B10 M20x2.5	M20	2.5		

Metric ISO fine thread DIN 13 standard

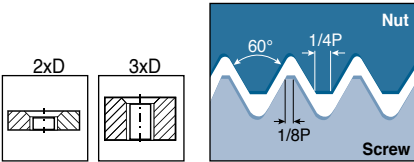
Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH552B MF8x1.0	TPH552B05 MF8x1.0	TPH552B10 MF8x1.0	M8	1	DIN374
TPH552B MF10x1.25	TPH552B05 MF10x1.25	TPH552B10 MF10x1.25	M10	1.25	
TPH552B MF12x1.5	TPH552B05 MF12x1.5	TPH552B10 MF12x1.5	M12	1.5	
TPH552B MF14x1.5	TPH552B05 MF14x1.5	TPH552B10 MF14x1.5	M14	1.5	
TPH552B MF16x1.5	TPH552B05 MF16x1.5	TPH552B10 MF16x1.5	M16	1.5	



Straight flute with spiral point



- For general purpose
- Form B: 4-5 threads chamfer

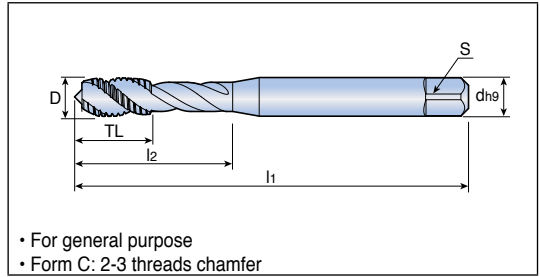
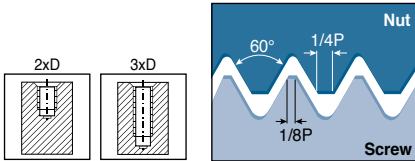


Tolerance	Dimension (mm)					
	l ₁	TL	l ₂	d	S	Core hole
ISO 2-6H	45	8	-	2.8	2.1	1.6
	50	9	-	2.8	2.1	2.05
	56	10	18	3.5	2.7	2.5
	63	12	21	4.5	3.4	3.3
	70	14	25	6	4.9	4.2
	80	16	30	6	4.9	5
	90	18	35	8	6.2	6.8
	100	20	39	10	8	8.5
ISO 2-6H	110	22	-	9	7	10.2
	110	24	-	11	9	12
	110	26	-	12	9	14
	140	30	-	16	12	17.5

Tolerance	Dimension (mm)					
	l ₁	TL	l ₂	d	S	Core hole
ISO 2-6H	90	15	-	6	4.9	7
	100	18	-	7	5.5	8.8
	100	18	-	9	7	10.5
	100	18	-	11	9	12.5
	100	18	-	12	9	14.5



Right hand spiral flute (40°)



Metric ISO standard thread DIN 13 standard

Designation			D	Pitch (mm)	Standard (DIN)	
Uncoated	Steam tempered	TiN coated				
TPH454C M2x0.4	TPH454C05 M2x0.4	TPH454C10 M2x0.4	M2	0.4	DIN371	
TPH454C M2.5x0.45	TPH454C05 M2.5x0.45	TPH454C10 M2.5x0.45	M2.5	0.45		
TPH454C M3x0.5	TPH454C05 M3x0.5	TPH454C10 M3x0.5	M3	0.5		
TPH454C M4x0.7	TPH454C05 M4x0.7	TPH454C10 M4x0.7	M4	0.7		
TPH454C M5x0.8	TPH454C05 M5x0.8	TPH454C10 M5x0.8	M5	0.8		
TPH454C M6x1.0	TPH454C05 M6x1.0	TPH454C10 M6x1.0	M6	1		
TPH454C M8x1.25	TPH454C05 M8x1.25	TPH454C10 M8x1.25	M8	1.25		
TPH454C M10x1.5	TPH454C05 M10x1.5	TPH454C10 M10x1.5	M10	1.5		
TPH654C M12x1.75	TPH654C05 M12x1.75	TPH654C10 M12x1.75	M12	1.75		DIN376
TPH654C M14x2.0	TPH654C05 M14x2.0	TPH654C10 M14x2.0	M14	2		
TPH654C M16x2.0	TPH654C05 M16x2.0	TPH654C10 M16x2.0	M16	2		
TPH654C M20x2.5	TPH654C05 M20x2.5	TPH654C10 M20x2.5	M20	2.5		

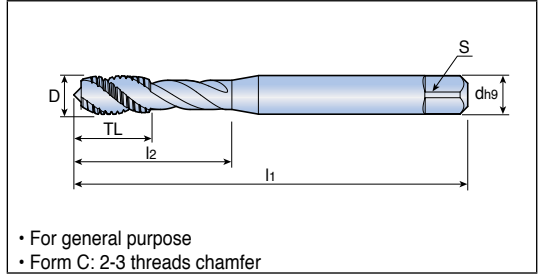
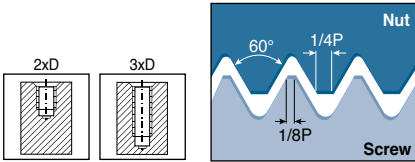
Metric ISO fine thread DIN 13 standard

Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH554C MF8x1.0	TPH554C05 MF8x1.0	TPH554C10 MF8x1.0	M8	1	DIN374
TPH554C MF10x1.25	TPH554C05 MF10x1.25	TPH554C10 MF10x1.25	M10	1.25	
TPH554C MF12x1.5	TPH554C05 MF12x1.5	TPH554C10 MF12x1.5	M12	1.5	
TPH554C MF14x1.5	TPH554C05 MF14x1.5	TPH554C10 MF14x1.5	M14	1.5	
TPH554C MF16x1.5	TPH554C05 MF16x1.5	TPH554C10 MF16x1.5	M16	1.5	



TPH...54C

Right hand spiral flute (40°)



Tolerance	Dimension (mm)					
	l ₁	TL	l ₂	d	S	Core hole
ISO 2-6H	45	6	10	2.8	2.1	1.6
	50	6	12	2.8	2.1	2.05
	56	7	18	3.5	2.7	2.5
	63	8	21	4.5	3.4	3.3
	70	10	25	6	4.9	4.2
	80	12	30	6	4.9	5
	90	15	35	8	6.2	6.8
	100	18	39	10	8	8.5
ISO 2-6H	110	18	-	9	7	10.2
	110	20	-	11	9	12
	110	20	-	12	9	14
	140	25	-	16	12	17.5

Tolerance	Dimension (mm)					
	l ₁	TL	l ₂	d	S	Core hole
ISO 2-6H	90	15	-	6	4.9	7
	100	18	--	7	5.5	8.8
	100	18	-	9	7	10.5
	100	18	-	11	9	12.5
	100	18	-	12	9	14.5



Recommended Cutting Conditions

T-TAP

Machining data for straight flute with spiral point tap

Cutting speed Vc(m/min)

ISO	Material	Condition	Straight flute with spiral point tap			Lubrication	
			Uncoated	Steam tempered	TiN coated		
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	5-25	5-25 *	15-45 *	E/O
		>=0.25%C	Annealed	5-20	5-20 *	10-40 *	E/O
		<0.55%C	Quenched and tempered	-	2-15 *	5-25 *	E/O
		>=0.55%C	Annealed	5-20	5-20 *	10-40 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Quenched and tempered	-	2-15 *	5-25 *	E/O	
		Annealed	5-25	5-25 *	15-45 *	E/O	
	High alloy steel, cast steel and tool steel	Annealed	5-20	5-20	10-40 *	E/O	
		Quenched and tempered	-	-	5-20	O/S	
M	Stainless steel and cast steel	Ferritic / martensitic	-	2-10 *	5-20 *	E/O	
		Martensitic	-	2-10 *	5-20 *	E/O	
		Austenitic	-	2-10 *	5-20 *	E/O	
K	Gray cast iron (GG)	Ferritic	10-15	10-25	15-45	E/D	
		Pearlitic	10-15	10-25	10-40	E/D	
	Cast iron nodular (GGG)	Ferritic	8-12	5-20	10-30	E/D	
		Pearlitic	8-12	5-15	10-25	E/D	
Malleable cast iron	Ferritic	10-15	10-25	15-45	E/D		
	Pearlitic	10-15	10-20	10-40	E/D		
N	Aluminum - wrought alloy	Not cureable	15-25 *	15-25	15-25	E/O	
		Cured	15-25 *	15-25	15-25	E/O	
	Aluminum-cast, alloyed	<=12% Si	Not cureable	15-20 *	10-20	15-40 *	E/O
		Cured	15-20 *	10-20	15-40 *	E/O	
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
		Brass	10-40	10-40	20-60	E/O	
	Non-metallic	Electrolytic copper	10-15 *	2-10	5-25	E/O	
Duroplastics, fiber plastics		-	10-20	10-20	D		
S	High temp. alloys	Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
			Cured	-	-	2-4	S
	Titanium, Ti alloys	Cast	-	-	2-4	S	
			-	-	4-6	S	
		Alpha+beta alloys cured	-	-	4-6	S	

* : Recommended

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

• **Lubrication** E: Emulsion O: Cutting oil S: Special cutting oil D: Dry/air

Recommended Cutting Conditions

Machining data for 40° right hand spiral flute tap

Cutting speed Vc (m/min)

ISO	Material	Condition	40° right hand spiral flute tap			Lubrication	
			Uncoated	Steam tempered	TiN coated		
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	5-25	5-25 *	15-45 *	E/O
		>=0.25%C	Annealed	5-20	5-20 *	10-40 *	E/O
		<0.55%C	Quenched and tempered	-	2-15 *	5-25 *	E/O
		>=0.55%C	Annealed	5-20	5-20 *	10-40 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Quenched and tempered	-	2-15 *	5-25 *	E/O	
		Annealed	5-25	5-25 *	15-45 *	E/O	
		Quenched and tempered	-	2-15 *	5-20 *	E/O	
		Annealed	5-20	5-20	10-40 *	E/O	
High alloy steel, cast steel and tool steel	Quenched and tempered	-	-	5-20	O/S		
	Ferritic / martensitic	-	2-10 *	5-20 *	E/O		
M	Stainless steel and cast steel	Martensitic	-	2-10 *	5-20 *	E/O	
		Austenitic	-	2-10 *	5-20 *	E/O	
		Ferritic	10-15	10-25	15-45	E/D	
K	Gray cast iron (GG)	Pearlitic	10-15	10-20	10-40	E/D	
		Ferritic	8-12	5-20	10-30	E/D	
	Cast iron nodular (GGG)	Pearlitic	8-12	5-15	10-25	E/D	
		Ferritic	10-15	10-25	15-45	E/D	
Malleable cast iron	Pearlitic	10-15	10-20	10-40	E/D		
	Not cureable	15-25 *	15-25	15-25	E/O		
N	Aluminum - wrought alloy	Cured	15-25 *	15-25	15-25	E/O	
		<=12% Si	Not cureable	15-20 *	10-20	15-40 *	E/O
	Aluminum-cast, alloyed	Cured	15-20 *	10-20	15-40 *	E/O	
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
		Brass	10-40	10-40	50-60	E/O	
	Non-metallic	Electrolitic copper	10-15 *	2-10	5-25	E/O	
		Duroplastics, fiber plastics	-	10-20	10-20	D	
S	High temp. alloys	Hard rubber	-	10-20	10-20	D	
		Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
	Cured		-	-	2-4	S	
	Titanium, Ti alloys	Cast	-	-	2-4	S	
		Alpha+beta alloys cured	-	-	4-6	S	

* : Recommended

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
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• **Lubrication**
E: Emulsion
O: Cutting oil
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D: Dry/air

