Thread Milling

TYCarb®

Solid Carbide

- mini thread mills
- helical flute, solid & coolant through
- HardCut for machining hard materials

Indexable Insert Thread Mills

- including helical indexable thread mills

Advantages of Mini Thread Mills

MTS

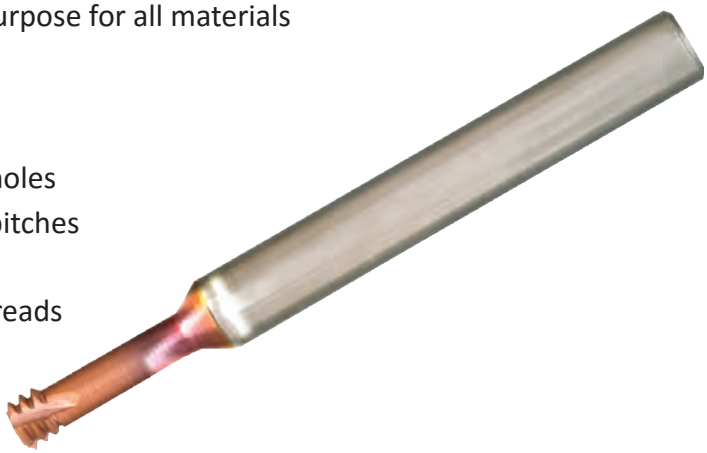
- Threading from ISO M1 x 0.25 and 0-80UN
- Short machining time
- No broken taps
- Working in high cutting speed
- Low cutting forces thanks to the short profile
- Machining of hardened materials up to 45 HRc.

Carbide Grade TT7

Sub-Micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20).
To be run at medium to high cutting speeds. General purpose for all materials

MTI- For Threading Deep Parts

- Enables machining in deep holes
- Coolant through the flutes is very effective for deep holes
- Same tool can produce a wide range of threads and pitches
- Helical flutes allow smooth cutting action
- Same tool can produce both External and Internal threads
- Shorter machining time due to multi (3 to 5) flutes
- Longer tool life due to special triple coating



Carbide Grade TT8

Sub-micron grade with advanced PVD triple coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

Carbide Grade TT11

Ultra-fine Sub-micron grade with advanced PVD triple blue coating

Mini Thread Mills

MTS

Mini Thread Mill
MTSH=HARDCUT

0250

Shank Diameter
Metric
03 = 3mm
06 = 6mm
08 = 8mm
10 = 10mm
12 = 12mm
16 = 16mm

Inch
0250 = 1/4
0312 = 5/16
0375 = 3/8
0500 = 1/2
0625 = 5/8

C

No. of Flutes
C = 3
D = 4
E = 5

35

The approx.
cutting length

0.7

Thread
Pitch

ISO

Thread Profile
ISO
UN
G55
UNJ
MJ

-L

Long
L = 4.1"

MTI

MTI= Thread Mills
Partial Profile
60°

06

Shank Diameter
Metric
03 = 3mm
06 = 6mm
08 = 8mm
10 = 10mm
12 = 12mm
16 = 16mm

05

Cutting Diameter
05 = .197
08 = .315
10 = .394
12 = .472
14 = .551
16 = .620

D

No. of Flutes
C = 3
D = 4
E = 5

20

Approximate
Cutting Length
20 = .79
28 = 1.10
30 = 1.18
35 = 1.38
38 = 1.50
39 = 1.54
40 = 1.57
45 = 1.77
50 = 1.97

A60

Thread Profile
Partial Profile 60˚
Partial Profile 55˚
ISO
UN
ACME

Mini Thread Mills

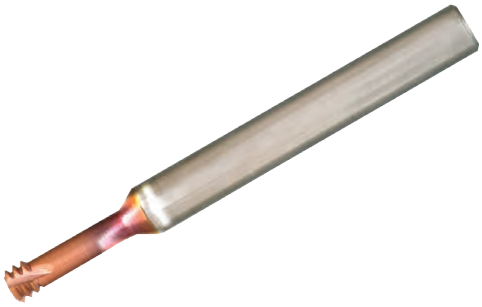
ISO Tools for Internal Thread Depth up to 2 X D1

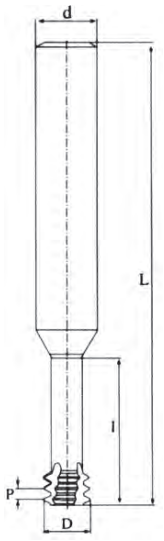
Designation	Pitch mm	D¹	d	D	No. of Flutes	l	L
MTS03007C2-0.25ISO	.25	M1	3mm	.028	3	.10	1.5
MTS03009C3-0.25ISO	.25	M1.2	3mm	.035	3	.12	1.5
MTS0250C18-0.4ISO	.40	M2	1/4	.061	3	.18	2.5
MTS06016C4-0.4ISO-L	.40	M2	6mm	.061	3	.18	4.1
MTS0250C20-0.45ISO	.45	M2.2	1/4	.065	3	.20	2.5
MTS0250C22-0.45ISO	.45	M2.5	1/4	.077	3	.22	2.5
MTS0602C5-0.45ISO-L	.45	M2.5	6mm	.077	3	.22	4.1
MTS0250C26-0.5ISO	.50	M3	1/4	.093	3	.26	2.5
MTS06024C6-0.5ISO-L	.50	M3	6mm	.093	3	.26	4.1
MTS0250C30-0.6ISO	.60	M3.5	1/4	.108	3	.30	2.5
MTS0250C35-0.7ISO	.70	M4	1/4	.122	3	.35	2.5
MTS0808D25-0.75ISO	.75	M10	8mm	.315	4	.98	2.5
MTS0250C49-0.8ISO	.80	M5	1/4	.150	3	.49	2.5
MTS0250C55-1.0ISO	1.0	M6	1/4	.183	3	.55	2.5
MTS0250C71-1.25ISO	1.25	M8	1/4	.234	3	.71	2.5
MTS0312C91-1.5ISO	1.50	M10	5/16	.307	3	.91	2.5
MTS0375C10-1.75ISO	1.75	M12	3/8	.354	3	1.02	3.0
MTS0500D13-2.0ISO	2.0	M16	1/2	.465	4	1.38	3.5
MTS0625E16-2.5ISO	2.5	M20	5/8	.591	5	1.69	4.0

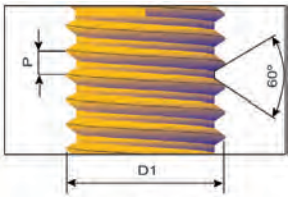
ISO Tools for Internal Thread Depth up to 3 X D1

Designation	Pitch mm	D¹	d	D	No. of Flutes	l	L
*MTS03011C4-0.3ISO	.30	M1.4	3mm	.041	3	.16	1.5
*MTS03012C5-0.35 ISO	.35	M1.6	3mm	.047	3	.19	1.5
*MTS03016C6-0.4ISO	.40	M2	3mm	.061	3	.24	1.5
*MTS03017C7-0.45 ISO	.45	M2.2	3mm	.065	3	.28	1.5
MTS0250C30-0.45 ISO	.45	M2.5	1/4	.077	3	.30	2.5
MTS0250C37-0.5ISO	.50	M3	1/4	.093	3	.37	2.5
MTS06024C9-0.5ISO-L	.50	M3	6mm	.093	3	.37	4.1
MTS06054D20-0.5ISO	.50	M6, M7	6mm	.211	4	.79	2.3
MTS06028C10-0.6ISO	.60	M3.5	6mm	.108	3	.41	2.3
MTS0250C49-0.7ISO	.70	M4	1/4	.122	3	.49	2.5
MTS06031C12-0.7ISO-L	.70	M4	6mm	.122	3	.49	4.1
MTS0250C63-0.8ISO	.80	M5	1/4	.150	3	.63	2.5
MTS06038C16-0.8ISO-L	.80	M5	6mm	.150	3	.63	4.1
MTS0250C79-1.0ISO	1.0	M6	1/4	.183	3	.79	2.5
MTS06047C20-1.0ISO-L	1.0	M6	6mm	.183	3	.79	4.1
MTS0250C94-1.25 ISO	1.25	M8	1/4	.234	3	.94	2.5
MTS08078C31-1.5ISO	1.50	M10	8mm	.307	3	1.24	2.5
MTS1009C37-1.75 ISO	1.75	M12	10mm	.354	3	1.49	2.9
MTS12118D50-2.0ISO	2.0	M16	12mm	.465	4	1.97	4.1

*Specially designed for the production of dental implants
- Machining Titanium, surgical stainless steels and hardened materials up to 45 HRc.
- Suitable for high speed air turbine machines (30,000-40,000 RPM) and for standard machining centers (6,000 RPM and higher)
- Can also be used for general purpose threading







MTS
- Threading from ISO M1 x 0.25 and 0-80UN
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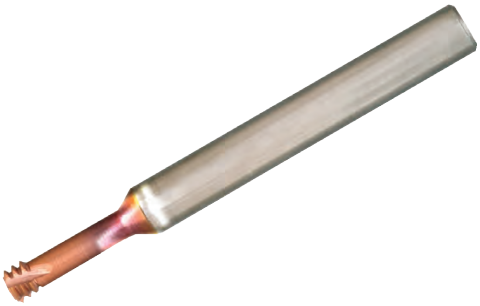
Mini Thread Mills

ISO Tools for Internal Thread Depth up to 4 x D1

Designation	Pitch mm	D[1]	d mm	D	No. of Flutes	l	L
MTS03024C12-0.5ISO	.5	M3	3	.094	3	.49	1.5
MTS06031C16-0.7ISO	.7	M4	6	.122	3	.66	2.3
MTS0604C20-0.8ISO	.8	M5	6	.157	3	.82	2.3
MTS06048C25-1.0ISO	1	M6	6	.189	3	.98	2.3

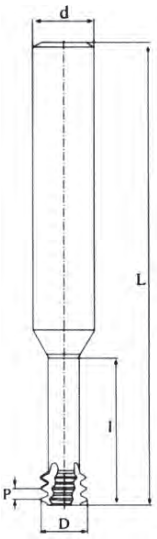


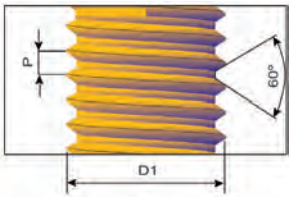
ISO Tools for Internal Thread Depth up to 5 x D1

Designation	Pitch mm	D[1]	d mm	D	No. of Flutes	l	L
MTS03024C15-0.5ISO	0.5	M3	3	.094	3	0.61	1.5

UN Tools for Internal Thread Depth up to 2 x D1

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTS0250C15-72UN	72		1	1/4	.057	3	.15	2.5
MTS0250C15-64UN	64	1	2	1/4	.055	3	.15	2.5
MTS0250C17-56UN	56	2	3	1/4	.065	3	.17	2.5
MTS0250C20-48UN	48	3	4	1/4	.075	3	.20	2.5
MTS0250C25-40UN	40	4		1/4	.083	3	.25	2.5
MTS06021C6-40UN-L	40	4		6mm	.083	3	.25	4.1
MTS0250C28-40UN	40	5	6	1/4	.096	3	.28	2.5
MTS0250C35-36UN	36		8	1/4	.130	3	.35	2.5
MTS0250C28-32UN	32	6		1/4	.100	3	.28	2.5
MTS06025C7-32UN-L	32	6		6mm	.100	3	.28	4.1
MTS0250C37-32UN	32	8		1/4	.126	3	.37	2.5
MTS06032C9-32UN-L	32	8		6mm	.126	3	.37	4.1
MTS0250C41-32UN	32		10	1/4	.146	3	.41	2.5
MTS0250C43-28UN	28		12	1/4	.165	3	.43	2.5
MTS0250C57-28UN	28		1/4	1/4	.197	3	.57	2.5
MTS0250C42-24UN	24	10, 12		1/4	.138	3	.42	2.5
MTS0312C67-24UN	24		5/16, 3/8	5/16	.260	3	.67	2.5
MTS0250C55-20UN	20	1/4		1/4	.187	3	.55	2.5
MTS0312C98-20UN	20		7/16	5/16	.312	3	.98	2.5
MTS0250C67-18UN	18	5/16		1/4	236	3	.67	2.5
MTS0500D14-18UN	18	5/8		1/2	.500	4	1.38	3.5
MTS0312C87-16UN	16	3/8		5/16	.264	3	.87	2.5
MTS0312C98-14UN	14	7/16		5/16	.303	3	.98	2.5
MTS0375C10-13UN	13	1/2		3/8	.362	3	1.08	3.0
MTS0500C12-12UN	12	9/16		1/2	.413	3	1.24	3.5
MTS0500C13-11UN	11	5/8		1/2	.449	3	1.36	3.5
MTS0625C16-10UN	10	3/4		5/8	.567	4	1.63	4.0





MTS

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Carbide Grade TT7

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Mini Thread Mills

UN Tools for Internal Thread Depth up to 3 x D1

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTS0250C16-80UN	80		0	1/4	.045	3	.16	2.5
*MTS03015C6-72UN	72		1	3mm	.057	3	.24	1.5
MTS03016C6-56UN	56	2	3	3mm	.065	3	.26	1.5
MTS0250C26-56UN	56	2	3	1/4	.065	3	.26	2.5
MTS06016C6-56UN-L	56	2	3	6mm	.065	3	.26	4.1
MTS03021C8-40UN	40	4		3mm	.083	3	.31	2.3
MTS0250C31-40UN	40	4		1/4	.083	3	.31	2.5
MTS06021C8-40UN-L	40	4		6mm	.083	3	.31	4.1
MTS0250C38-40UN	40	5	6	1/4	.096	3	.38	2.5
MTS03025C10-32UN	32	6		3mm	.100	3	.41	1.5
MTS0250C40-32UN	32	6		1/4	.100	3	.41	2.5
MTS06025C10-32UN-L	32	6		6mm	.100	3	.41	4.1
MTS0250C49-32UN	32	8		1/4	.126	3	.49	2.5
MTS06032C12-32UN-L	32	8		6mm	.126	3	.49	4.1
MTS0250C59-32UN	32		10	1/4	.146	3	.59	2.5
MTS06037C15-32UN-L	32		10	6mm	.146	3	.59	4.1
MTS0250C75-28UN	28		1/4	1/4	.197	3	.75	2.5
MTS0605C19-28UN-L	28		1/4	6mm	.197	3	.75	4.1
MTS06035C15-24UN	24	10, 12		6mm	.138	3	.61	2.3
MTS0312C94-24UN	24		5/16, 3/8	5/16	.260	3	.94	2.5
MTS0250C75-20UN	20	1/4		1/4	.187	3	.75	2.5
MTS06047C19-20UN-L	20	1/4		6mm	.187	3	.75	4.1
MTS0808C34-20UN	20		7/16	8mm	.315	3	1.36	2.5
MTS0250C91-18UN	18	5/16		1/4	.236	3	.91	2.5
MTS1212D49-18UN	18	5/8		12mm	.472	4	1.93	4.1
MTS08067C30-16UN	16	3/8		8mm	.264	3	1.19	2.5
MTS08077C35-14UN	14	7/16		8mm	.303	3	1.39	2.5
MTS10092C40-13UN	13	1/2		10mm	.362	3	1.58	2.9
MTS12105C45-12UN	12	9/16		12mm	.413	3	1.77	4.1
MTS12114C50-11UN	11	5/8		12mm	.449	3	1.97	4.1
MTS16144D59-10UN	10	3/4		16mm	.567	4	2.35	4.1

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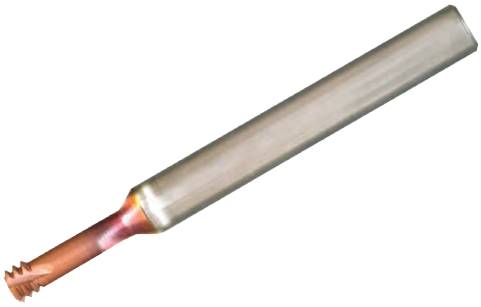

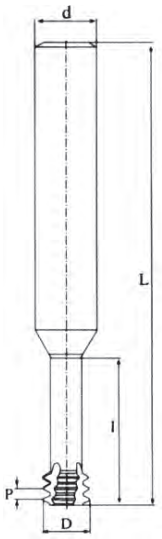

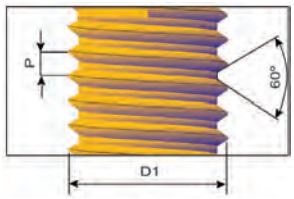

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Sub-Micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). To be run at medium to high cutting speeds. General purpose for all materials.

UN Tools for Internal Thread Depth up to 4 x D1- Metric Shanks

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTS03016C9-56UN	56	2	3	3mm	.065	3	.36	1.5
MTS03021C12-40UN	40	4		3mm	.083	3	.47	1.5
MTS03025C14-32UN	32	6		3mm	.100	3	.58	1.5

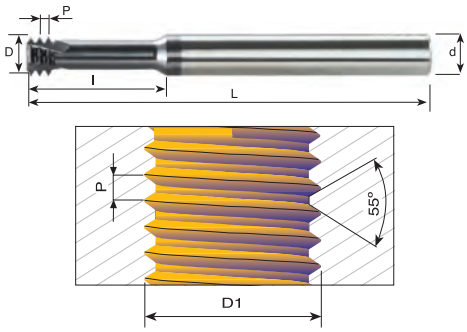
UN Tools for Internal Thread Depth up to 5 x D1 - Metric Shanks

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTS03012C8-80UN	80		0	3mm	.045	3	.31	1.5
MTS03016C11-56UN	56	2	3	3mm	.065	3	.45	1.5

Mini Thread Mills

G 55° BSW, BSP for Internal and External Thread Depth up to 2 x D1 - Metric Shanks

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTS08078C19-28W	28	G 1/8	8	.307	3	0.77	2.5
MTS1010D30-19W	19	G 1/4 - 3/8	10	.393	4	1.18	2.9
MTS1212D37-14W	14	G 1/2 - 7/8	12	.472	4	1.46	3.3
MTS1616D44-11W	11	G ≥ 1	16	.630	4	1.73	4.1



UNJ Tools for Internal Thread Depth up to 2 x D1 - Metric Shanks

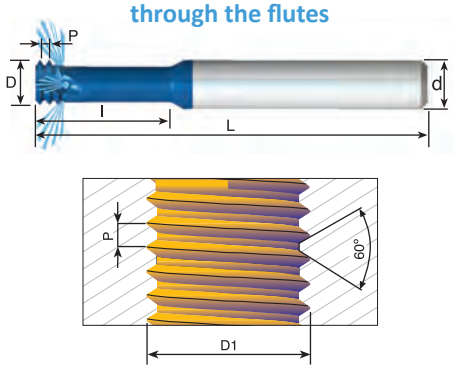
with Internal Coolant Through the Flutes

Designation	Pitch TPI	UNJC	UNJF	d mm	D	No. of Flutes	l	L
MTS06033C10-32UNJ	* 32	8	10	6	.130	3	.41	2.3
MTS08051C16-28UNJ	28		1/4	8	.201	3	.63	2.5
MTS08067C20-24UNJ	24		5/16, 3/8	8	.264	3	.79	2.5
MTS06049C16-20UNJ	* 20	1/4		6	.193	3	.63	2.3
MTS0808C28-20UNJ	20		7/16	8	.315	3	1.10	2.5
MTS08061C20-18UNJ	18	5/16		8	.242	3	.79	2.5
MTS08069C24-16UNJ	16	3/8		8	.272	3	.94	2.5
MTS08079C25-14UNJ	14	7/16		8	.311	3	.98	2.5
MTS10094C27-13UNJ	13	1/2		10	.370	3	1.08	2.9

*Cutters without coolant

Carbide Grade TT8: Sub Micron grade with advanced PVD triple coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

with internal coolant through the flutes



MJ Tools for Internal Thread Depth up to 2 x D1 - Metric Shanks

with Internal Coolant Through the Flutes

Designation	Pitch TPI	D1	d mm	D	No. of Flutes	l	L
MTS06032C10-0.7MJ	* 0.7	MJ4	6	.126	3	.39	2.3
MTS06039C12-0.8MJ	* 0.8	MJ5	6	.154	3	.49	2.3
MTS06048C15-1.0MJ	* 1.0	MJ6	6	.189	3	.59	2.3
MTS08061C20-1.25MJ	1.25	MJ8	8	.240	3	.79	2.5
MTS0808C25-1.5MJ	1.5	MJ10	8	.315	3	.98	2.5
MTS10092C30-1.75MJ	1.75	MJ12	10	.362	3	1.18	2.9
MTS1010C35-2.0MJ	2.0	MJ14, MJ16	10	.394	3	1.38	2.9

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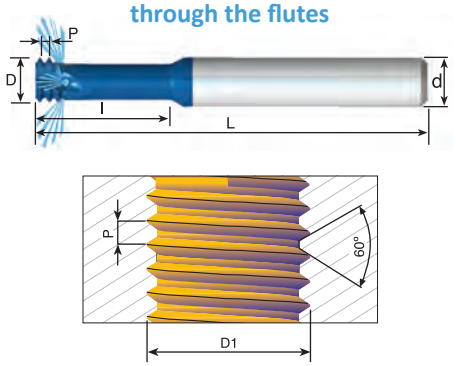
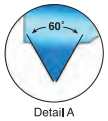
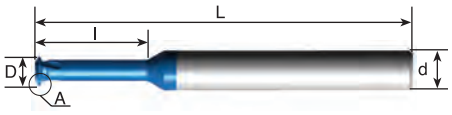


Mini Thread Mills

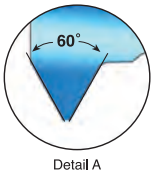


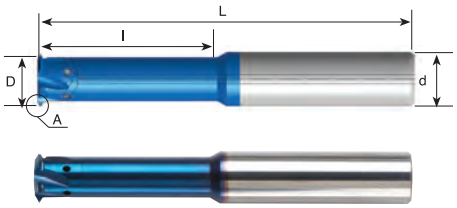


Partial Profile 60° for Internal and External Thread- Metric Shanks

Designation	Pitch mm	Pitch TPI	M coarse	M fine	UN, UNC, UNS, UNF, UNEF	d mm	D	No. of Flutes	l	L
MTI03012C3-A60	0.25 - 0.35	100 - 72	M1.6 x 0.35	M1.6 x 0.25 M1.8 x 0.25 M2.0 x 0.25	0-80 UNF	3	.045	3	.12	1.5
MTI03014C4-A60	0.35 - 0.45	72 - 56	M2 x 0.4 M2.2 x 0.45	M2 x 0.35 M2.2 x 0.35	1-64 UNC, 1-72 UNF, 2-56 UNC, 2-64 UNF	3	.055	3	.15	1.5
MTI03019C5-A60	0.35 - 0.6	72 - 40	M2.5 x 0.45	M2.5 x 0.35 M3 x 0.35	3-84 UNC, 3-56 UNF, 4-40 UNC, 4-48 UNF	3	.075	3	.20	1.5
MTI03024C7-A60	0.5 - 0.8	48 - 32	M3 x 0.5 M3.5 x 0.6	M3.5 x 0.5	5-40 UNC, 5-44 UNF, 6-32 UNC, 6-40 UNF	3	.096	3	.28	1.5
MTI06032C9-A60	0.5 - 1.0	48 - 24	M4 x 0.7 M4.5 x 0.75	M4 x 0.5	8-32 UNC, 8-36 UNF, 10-24 UNC, 10-28 UNS, 10-32 UNF	6	.126	3	.37	2.3
MTI0604C12-A60	0.5 - 1.0	48 - 24	M5 x 0.8 M6 x 1.0	M5 x 0.5 M5.5 x 0.5 M5 x 0.75	10-36 UNS, 10-40 UNS, 10-48 UNS, 12-24 UNC, 12-28 UNF	6	.157	3	.49	2.3

with internal coolant through the flutes





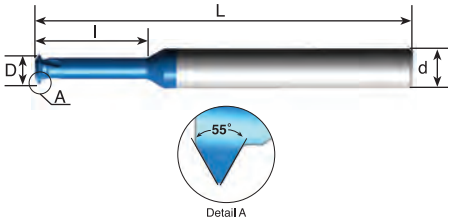
Partial Profile 60° for Internal and External Thread- Metric Shanks For Threading Deep Parts

Designation	Pitch mm	Pitch TPI	Thread Dia. (mm)	d mm	D	No. of Flutes	l	L
MTI0605D20-A60	Int. 0.5 - 0.8 Ext. 0.4 - 0.8	56 - 28 64 - 32	Ø ≥ 6	6	.197	4	.79	2.3
MTI0808D28-A60			Ø ≥ 9	8	.315	4	1.10	2.5
MTI1212E38-A60			Ø ≥ 13	12	.472	5	1.50	3.3
MTI0808D30-A60	Int. 1.0 - 1.75 Ext. 0.8 - 1.5	28 - 14 32 - 16	Ø ≥ 10	8	.315	4	1.18	2.5
MTI1010D35-A60			Ø ≥ 12	10	.394	4	1.38	2.9
MTI1212E39-A60			Ø ≥ 14	12	.472	5	1.54	3.3
MTI1212E40-A60	Int. 2.0 - 3.0 Ext. 1.75 - 2.5	13 - 8 15 - 10	Ø ≥ 16	12	.472	5	1.57	3.3
MTI1614E45-A60			Ø ≥ 18	16	.551	5	1.77	4.0
MTI1616E50-A60			Ø ≥ 20	16	.630	5	1.97	4.0

Mini Thread Mills

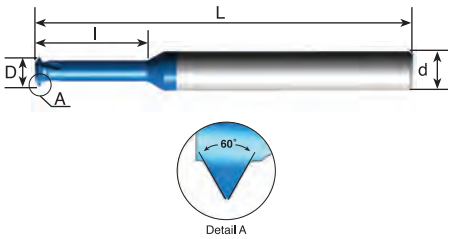
Partial Profile 55° for Internal and External Thread - Metric Shanks

Designation	Pitch TPI	d mm	D	No. of Flutes	l	L
MTI03023C7-A55	40 - 32	3	.089	3	.28	1.5
MTI06044C14-A55	28 - 20	6	.171	3	.55	2.3
MTI06059C20-A55	28 - 18	6	.23	3	.81	2.3
MTI0807C23-A55	20 - 14	8	.276	3	.91	2.5



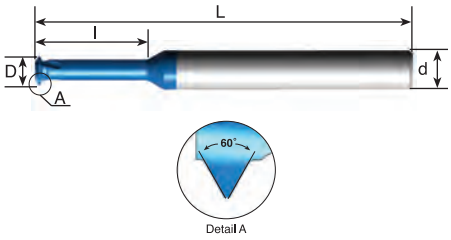
ISO Tools for Internal Thread Depth up to 3.5 x D1- Metric Shanks

Designation	Pitch mm	M coarse	M fine	d mm	D	No. of Flutes	l	L
MTI03007C3-0.25ISO	.25	M1 x 0.25		3	.028	3	.14	1.5
MTI03009C4-0.25ISO	.25	M1.2 x 0.25	M1.4 x 0.25 M1.6 x 0.25	3	.035	3	.17	1.5
MTI03011C5-0.3ISO	.30	M1.4 x 0.3		3	.041	3	.20	1.5
MTI03012C6-0.35ISO	.35	M1.6 x 0.35	M2 x 0.35 M2.2 x 0.35	3	.047	3	.22	1.5
MTI03016C7-0.4ISO	.40	M2 x 0.4		3	.061	3	.28	1.5
MTI03024C10-0.5ISO	.50	M3 x 0.5	M3.5 x 0.5 M4 x 0.5	3	.093	3	.42	1.5



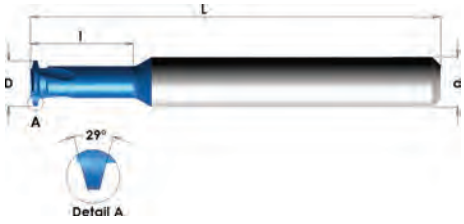
UN Tools for Internal Thread Depth up to 3.5 x D1 - Metric Shanks

Designation	Pitch TPI	UNC	UNF	d mm	D	No. of Flutes	l	L
MTI03012C5-80UN	80		0	3	.045	3	.22	1.5
MTI03015C7-72UN	72		1	3	.057	3	.26	1.5
MTI03016C9-56UN	56	2	3	3	.065	3	.35	1.5
MTI03021C10-40UN	40	4		3	.083	3	.40	1.5



ACME Tools for Internal Thread

Designation	Pitch TPI	Thread size	d	D	No. of Flutes	l	L
MTI0250C04-16ACME	16	1/4 - 16	1/4	.170	3	.38	2.5
MTI0250C06-14ACME	14	5/16 - 14	1/4	.205	3	.60	2.5
MTI0250C08-12ACME	12	3/8 - 12 7/16 - 12	1/4	.240	3	.75	2.5
MTI0375D10-10ACME	10	1/2 - 10	3/8	.327	4	1.00	3.0
MTI0500D11-8ACME	8	5/8 - 8	1/2	.410	4	1.10	3.5
MTI0500D11-6ACME	6	3/4 - 6 7/8 - 6	1/2	.473	4	1.10	3.5
MTI0625E15-5ACME	5	1 - 5 $1^{1/8}$ - 5 $1^{1/4}$ - 5	5/8	.625	5	1.50	4.0

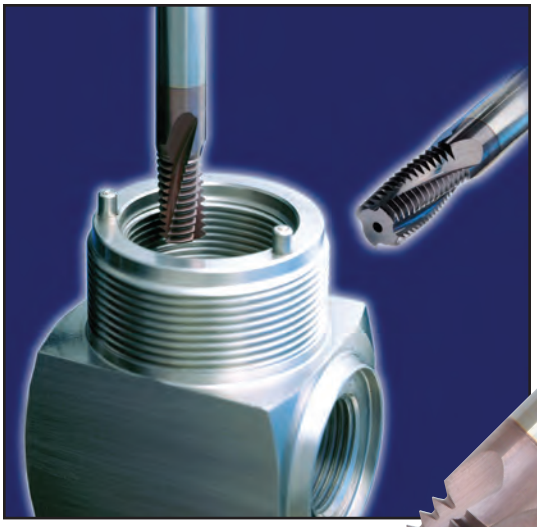


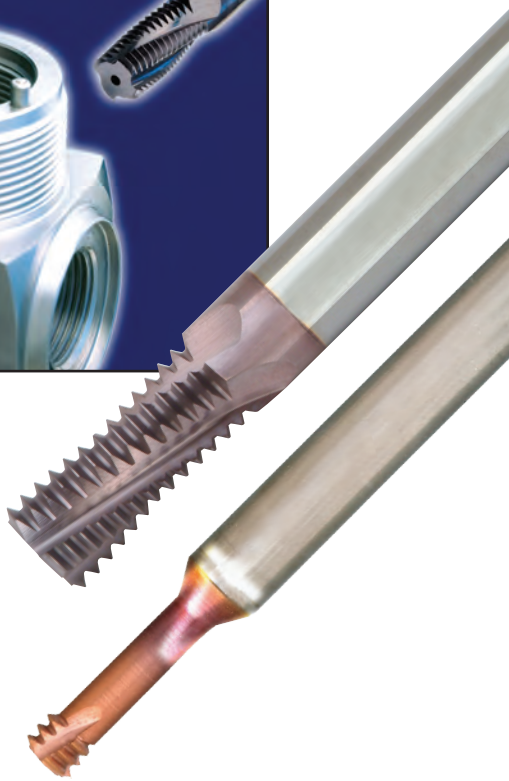
Solid Carbide Thread Mills

	MT		0250	C	06	1.0	ISO
E = External	Mill Thread	G: General Purpose B: With Internal Coolant Z: Internal coolant through the flutes Q: Tools for threading deep holes, neck relieved	Shank Dia. 0250 = 1/4 0312 = 5/16 0375 = 3/8 0500 = 1/2 0625 = 5/8 0750 = 3/4	No. of Flutes C = 3 D = 4 E = 5 F = 6	The approx. cutting length	Thread Pitch	Thread Profile ISO UN W BSPT NPT NPTF NPS NPSF PG

Advantages of Solid Carbide Thread Mills

- Thread is generated in one pass
- Longer tool life due to special multi-layer coating
- Helical flutes allow smooth cutting action
- Same tool can be used for a variety of materials
- Shorter machining time due to multi, 3 to 6, flutes
- Excellent surface finish
- 2.2 mm and up cutting diameter
- Low cutting pressure allows thin wall machining
- Threads up to shoulder in blind hole
- Same tool used for R.H and L.H. threads





Thread Mills with Internal Coolant:

- Coolant fluid washes the chips out of the hole
- Increased tool life

MTB - Thread Mills with internal coolant bore for blind holes

MTZ - Thread Mills with internal coolant through the flutes

MTQ - Thread Mills that include relieved neck for deep work pieces

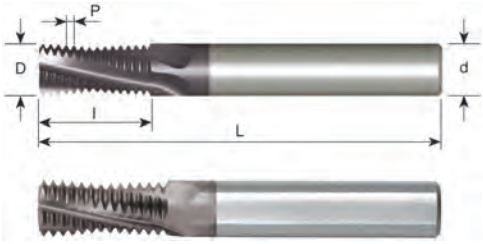
Carbide Grade TT7

Sub-Micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). To be run at medium to high cutting speeds. General purpose for all materials

G Mill Thread

TyCarb presents a new line of cost effective solid carbide thread mills that provide high performance and increased efficiency.

UN Tools for Internal Threading



Designation	Pitch TPI	UNC	UNF	UNEF	d	D	No. of flutes	l	L
MTG0250C02-32UN	32	6			1/4	.100	3	.20	2.5
MTG0250C03-32UN	32	8	10	12	1/4	.126	3	.27	2.5
MTG0250C04-28UN	28		1/4		1/4	.197	3	.44	2.5
MTG0250C05-24UN	24		5/16		1/4	.250	3	.56	2.5
MTG0312D08-24UN	24		3/8	9/16, 5/8	5/16	.312	4	.81	2.5
MTG0250C04-20UN	20	1/4			1/4	.185	3	.48	2.5
MTG0312C08-20UN	20		7/16		5/16	.312	3	.83	2.5
MTG0375D08-20UN	20		1/2	3/4, 1	3/8	.375	4	.88	3.0
MTG0250C05-18UN	18	5/16			1/4	.236	3	.58	2.5
MTG0375D10-18UN	18		9/16 - 5/8	$1^{1/8}$ - $1^{5/8}$	3/8	.375	4	1.03	3.0
MTG0250C06-16UN	16	3/8			1/4	.250	3	.66	2.5
MTG0500D12-16UN	16		3/4		1/2	.500	4	1.22	3.5
MTG0312C08-14UN	14	7/16			5/16	.312	3	.82	2.5
MTG0500D12-14UN	14		7/8		1/2	.500	4	1.25	3.5
MTG0375D09-13UN	13	1/2			3/8	.375	4	.96	3.0
MTG0375C10-12UN	12	9/16			3/8	.375	3	1.04	3.0
MTG0500C11-11UN	11	5/8			1/2	.449	3	1.14	3.5
MTG0500D13-10UN	10	3/4			1/2	.500	4	1.35	3.5
MTG0625C15-9UN	9	7/8			5/8	.625	3	1.50	4.0
MTG0625C17-8UN	8	1			5/8	.625	3	1.69	4..0
MTG0750D17-7UN	7	$1^{1/8}$ - $1^{1/4}$			3/7	.750	4	1.78	4.0

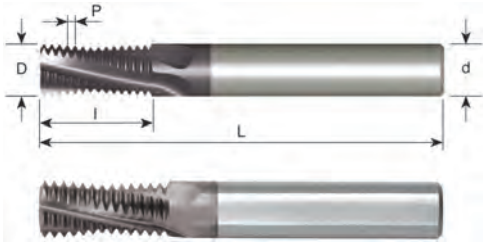
ISO Tools for Internal Threading

Designation	Pitch mm	M coarse	M fine mm	d	D	No. of flutes	l	L
MTG0250C02-0.5ISO	0.5	M3	Ø ≥ 4	1/4	.093	3	.21	2.5
MTG0250C03-0.7ISO	0.7	M4	Ø ≥ 5	1/4	.122	3	.29	2.5
MTG0250C04-0.75ISO	0.75		Ø ≥ 6	1/4	.177	3	.40	2.5
MTG0250C04-1.0ISO	1.0	M6	Ø ≥ 7	1/4	.181	3	.41	2.5
MTG0250C06-1.0ISO	1.0	M6	Ø ≥ 7	1/4	.181	3	.60	2.5
MTG0312D07-1.0ISO	1.0		Ø ≥ 10	5/16	.312	4	.65	2.5
MTG0250C05-1.25ISO	1.25	M8	Ø ≥ 10	1/4	.250	3	.57	2.5
MTG0250C07-1.25ISO	1.25	M8	Ø ≥ 10	1/4	.250	3	.76	2.5
MTG0312C09-1.5ISO	1.5	M10	Ø ≥ 12	5/16	.307	3	.98	2.5
MTG0375D09-1.5ISO	1.5		Ø ≥ 14	3/8	.375	4	.86	3.0
MTG0625F13-1.5ISO	1.5		Ø ≥ 20	5/8	.625	6	1.33	4.0
MTG0312C08-1.75ISO	1.75	M12	Ø ≥ 14	5/16	.313	3	.79	2.5
MTG0375C11-2.0ISO	2.0	M16	Ø ≥ 17	3/8	.375	3	1.06	3.0
MTG0625E13-2.5ISO	2.5	M20	Ø ≥ 22	5/8	.591	5	1.33	4.0

G Mill Thread

NPT Same Tool for Internal and External Thread

Designation	Pitch TPI	Standard	d	D	No. of flutes	l	L
MTG0250C03-27NPT	27	1/16	1/4	.230	3	.39	2.5
MTG0250C04-27NPT	27	1/8	1/4	.250	3	.39	2.5
MTG0312C05-18NPT	18	1/4 - 3/8	5/16	.312	3	.58	2.5
MTG0500D08-14NPT	14	1/2 - 3/4	1/2	.500	4	.82	3.5
MTG0625D10-11.5NPT	11.5	1 - 2	5/8	.625	4	1.09	4.0
MTG0750D15-8NPT	8	$\geq 2^{1/2}$	3/4	.750	4	1.56	4.0



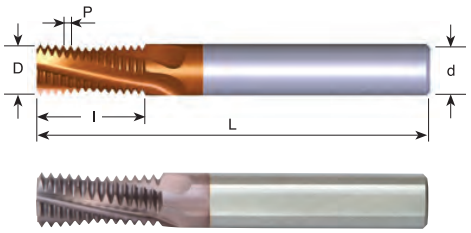
NPTF Same Tool for Internal and External Thread

Designation	Pitch TPI	Standard	d	D	No. of flutes	l	L
MTG0250C03-27NPTF	27	1/16	1/4	.230	3	.39	2.5
MTG0250C04-27NPTF	27	1/8	1/4	.250	3	.39	2.5
MTG0312C05-18NPTF	18	1/4 - 3/8	5/16	.312	3	.58	2.5
MTG0500D08-14NPTF	14	1/2 - 3/4	1/2	.500	4	.82	3.5
MTG0625D10-11.5NPTF	11.5	1 - 2	5/8	.625	4	1.09	4.0
MTG0750D15-8NPTF	8	$\geq 2^{1/2}$	3/4	.750	4	1.56	4.0

Solid Carbide Thread Mills

ISO- Tools for Internal Thread

Designation	Pitch mm	M coarse	M fine mm	d	D	No. of Flutes	l	L
MT0250C02-0.5ISO	0.5	M3	ø ≥ 4	1/4	.087	3	.21	2.5
MT0250C04-0.5ISO	0.5		ø ≥ 5	1/4	.150	3	.41	2.5
MT0250C03-0.7ISO	0.7	M4	ø ≥ 5	1/4	.122	3	.29	2.5
MT0250C04-0.75ISO	0.75		ø ≥ 6	1/4	.177	3	.40	2.5
MT0250C04-0.8ISO	0.8	M5	ø ≥ 6	1/4	.142	3	.36	2.5
MT0250C04-1.0ISO	1.0	M6	ø ≥ 7	1/4	.157	3	.41	2.5
MT0250C06-1.0ISO	1.0	M6	ø ≥ 7	1/4	.157	3	.57	2.5
MT0250C05-1.0ISO	1.0		ø ≥ 9	1/4	.236	3	.49	2.5
MT0312D07-1.0ISO	1.0		ø ≥ 10	5/16	.313	4	.65	2.5
MT0250C06-1.25ISO	1.25	M8	ø ≥ 10	1/4	.197	3	.57	2.5
MT0250C07-1.25ISO	1.25	M8	ø ≥ 10	1/4	.197	3	.76	2.5
MT0312C07-1.5ISO	1.5	M10	ø ≥ 12	5/16	.276	3	.68	2.5
MT0312C09-1.5ISO	1.5	M10	ø ≥ 12	5/16	.276	3	.98	2.5
MT0375D09-1.5ISO	1.5		ø ≥ 14	3/8	.375	4	.86	3.0
MT0625F13-1.5ISO	1.5		ø ≥ 20	5/8	.625	6	1.33	4.0
MT0312C08-1.75ISO	1.75	M12	ø ≥ 14	5/16	.313	3	.79	2.5
MT0312C11-1.75ISO	1.75	M12	ø ≥ 14	5/16	.313	3	1.14	2.5
MT0375C11-2.0ISO	2.0	M16	ø ≥ 17	3/8	.375	3	1.06	3.0
MT0375C15-2.0ISO	2.0	M16	ø ≥ 17	3/8	.375	3	1.54	4.0
MT0500D11-2.0ISO	2.0		ø ≥ 18	1/2	.472	4	1.06	3.5
MT0750F16-2.0ISO	2.0		ø ≥ 26	3/4	.750	6	1.61	4.0
MT0625D13-2.5ISO	2.5	M20	ø ≥ 22	5/8	.551	4	1.33	4.0
MT0625D19-2.5ISO	2.5	M20	ø ≥ 22	5/8	.551	4	1.92	4.0
MT0625C16-3.0ISO	3.0	M24	ø ≥ 25	5/8	.625	3	1.59	4.0
MT0625C23-3.0ISO	3.0	M24	ø ≥ 25	5/8	.625	3	2.31	4.5
MT0750D17-3.0ISO	3.0	M27	ø ≥ 28	3/4	.750	4	1.71	4.0

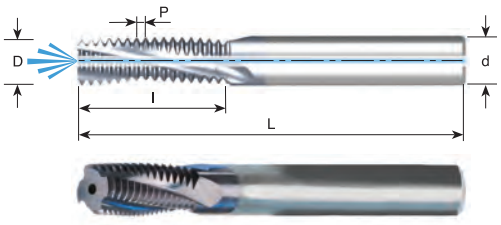


Solid Carbide Thread Mills

ISO- Tools for Internal Thread *with Internal Coolant Bore*

Designation	Pitch mm	M coarse	M fine mm	d	D	No. of Flutes	l	L
MTB0250C04-0.5ISO	0.5		ø ≥ 5	1/4	.150	3	.41	2.5
MTB0250C02-0.7ISO	0.7	M4	ø ≥ 5	1/4	.122	3	.29	2.5
MTB0250C04-0.75ISO	0.75		ø ≥ 6	1/4	.177	3	.40	2.5
MTB0250C03-0.8ISO	0.8	M5	ø ≥ 6	1/4	.150	3	.36	2.5
MTB0250C04-1.0ISO	1.0	M6	ø ≥ 7	1/4	.181	3	.41	2.5
MTB0250C06-1.0ISO	1.0	M6	ø ≥ 7	1/4	.181	3	.60	2.5
MTB0250C05-1.0ISO	1.0		ø ≥ 9	1/4	.250	3	.50	2.5
MTB0312D06-1.0ISO	1.0		ø ≥ 10	5/16	.312	4	.65	2.5
MTB0375D09-1.0ISO	1.0		ø ≥ 12	3/8	.375	4	.96	3.0
MTB0250C05-1.25ISO	1.25	M8	ø ≥ 10	1/4	.250	3	.57	2.5
MTB0250C07-1.25ISO	1.25	M8	ø ≥ 10	1/4	.250	3	.76	2.5
MTB0312C06-1.5ISO	1.5	M10	ø ≥ 12	5/16	.307	3	.67	2.5
MTB0312C09-1.5ISO	1.5	M10	ø ≥ 12	5/16	.307	3	.98	2.5
MTB0375D08-1.5ISO	1.5		ø ≥ 14	3/8	.375	4	.86	3.0
MTB0500D10-1.5ISO	1.5		ø ≥ 16	1/2	.500	4	1.04	4.0
MTB0625F13-1.5ISO	1.5		ø ≥ 20	5/8	.625	6	1.33	4.0
MTB0375C07-1.75ISO	1.75	M12	ø ≥ 12	3/8	.354	3	.79	3.0
MTB0375C11-1.75ISO	1.75	M12	ø ≥ 12	3/8	.354	3	1.14	3.0
MTB0375C10-2.0ISO	2.0	M14	ø ≥ 15	3/8	.375	3	1.06	3.0
MTB0500D10-2.0ISO	2.0	M16	ø ≥ 17	1/2	.465	4	1.06	4.0
MTB0500D15-2.0ISO	2.0	M16	ø ≥ 17	1/2	.465	4	1.54	4.0
MTB0750F16-2.0ISO	2.0		ø ≥ 26	3/4	.750	6	1.61	4.0
MTB0625E13-2.5ISO	2.5	M20	ø ≥ 22	5/8	.591	5	1.33	4.0
MTB0625E19-2.5ISO	2.5	M20	ø ≥ 22	5/8	.591	5	1.92	4.0
MTB0750D15-3.0ISO	3.0	M24	ø ≥ 25	3/4	.709	4	1.59	4.0
MTB0750D17-3.0ISO	3.0	M27	ø ≥ 27	3/4	.750	4	1.71	4.0

with internal coolant bore

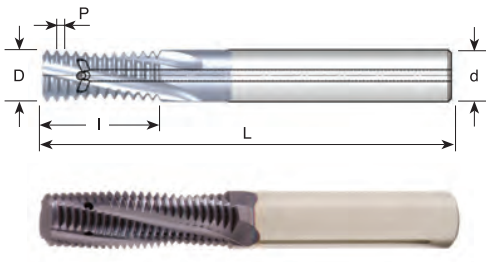


ISO- Tools for Internal Thread - Metric Shanks

with Internal Coolant Through the Flutes

Designation	Pitch mm	M coarse	M fine mm	d mm	D	No. of Flutes	l	L
MTZ06048C10-1.0ISO	1.0	M6	ø ≥ 7	6	.189	3	.41	2.3
MTZ0606C12-1.0ISO	1.0		ø ≥ 9	6	.236	3	.49	2.3
MTZ0808D16-1.0ISO	1.0		ø ≥ 10	8	.315	4	.65	2.5
MTZ0606C14-1.25ISO	1.25	M8	ø ≥ 10	6	.236	3	.57	2.3
MTZ0606C19-1.25ISO	1.25	M8	ø ≥ 10	6	.236	3	.76	2.3
MTZ08078C17-1.5ISO	1.5	M10	ø ≥ 12	8	.307	3	.67	2.5
MTZ1010D21-1.5ISO	1.5		ø ≥ 14	10	.394	4	.86	2.9
MTZ1212D26-1.5ISO	1.5		ø ≥ 16	12	.472	4	1.03	3.3
MTZ1616E33-1.5ISO	1.5		ø ≥ 20	16	.630	5	1.33	4.0
MTZ1009C20-1.75ISO	1.75	M12	ø ≥ 12	10	.354	3	.79	2.9
MTZ1009C28-1.75ISO	1.75	M12	ø ≥ 12	10	.354	3	1.14	2.9
MTZ1010C27-2.0ISO	2.0	M14	ø ≥ 15	10	.394	3	1.06	2.9
MTZ12118D27-2.0ISO	2.0	M16	ø ≥ 17	12	.465	4	1.06	3.3
MTZ1615E33-2.5ISO	2.5	M20	ø ≥ 22	16	.591	5	1.33	4.0

with internal coolant through the flutes



Solid Carbide Thread Mills

Thread mills with relieved neck and internal coolant for milling medium and large threads on relatively deep work pieces.

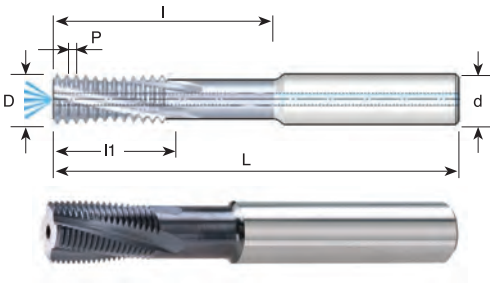
Carbide Grade: TT7
- To perform medium and large threads on relatively deep work pieces
- To use overhang according to the application
- To perform deep threads at the bottom of the application

Advantages
- Provides high rigidity and stability (anti-vibration)
- Accomplishes deep threads in one pass
- Relatively low cutting forces due to short cutting length
- Threads length up to 3xD

ISO- Tools for Internal Thread- with Relieved Neck - Metric Shanks
with Internal Coolant Bore

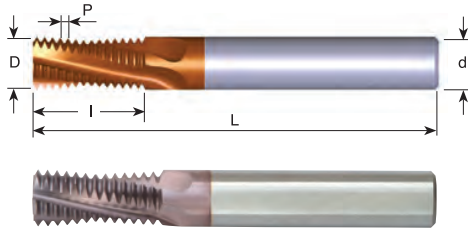
Designation	Pitch mm	M fine mm	d mm	D	No. of Flutes	l1	l	L
MTQ1010D32-1.0ISO	1.0	ø ≥ 12	10	.394	4	.71	1.26	2.9
MTQ1212D38-1.0ISO	1.0	ø ≥ 14	12	.472	4	.83	1.50	3.3
MTQ1616F45-1.0ISO	1.0	ø ≥ 18	16	.630	6	1.02	1.77	4.1
MTQ1010D30-1.5ISO	1.5	ø ≥ 13	10	.394	4	.71	1.18	2.9
MTQ1212D34-1.5ISO	1.5	ø ≥ 15	12	.472	4	.77	1.36	3.3
MTQ1616F43-1.5ISO	1.5	ø ≥ 19	16	.630	6	1.00	1.71	4.1
MTQ2020F60-1.5ISO	1.5	ø ≥ 23	20	.787	6	1.42	2.36	4.1
MTQ1212D42-2.0ISO	2.0	ø ≥ 16	12	.472	4	.94	1.65	3.3
MTQ1616E45-2.0ISO	2.0	ø ≥ 20	16	.630	5	1.02	1.77	4.1
MTQ2020F56-2.0ISO	2.0	ø ≥ 24	20	.787	6	1.34	2.20	4.1
MTQ1616D45-3.0ISO	3.0	ø ≥ 22	16	.630	4	1.18	1.77	4.1
MTQ2020E54-3.0ISO	3.0	ø ≥ 26	20	.787	5	1.30	2.13	4.1
MTQ2020D45-3.5ISO	3.5	ø ≥ 26	20	.787	4	1.10	1.79	4.1
MTQ2525D64-4.0ISO	4.0	ø ≥ 31	25	.984	4	1.58	2.52	6.3

with internal coolant bore



G (55°) BSF, BSP- Same Tool for Internal and External Thread
Metric Shanks

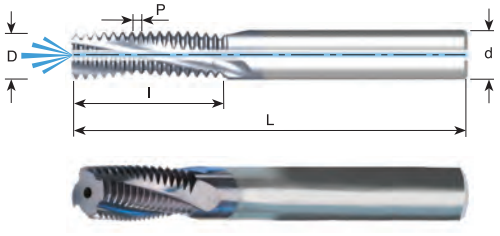
Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MT0606C9-28W	28	G1/8	6	.236	3	.38	2.3
MT0808C14-19W	19	G1/4 - 3/8	8	.315	3	.55	2.5
MT1212D19-14W	14	G1/2 - 7/8	12	.472	4	.75	3.3
MT1212D26-14W	14	G1/2 - 7/8	12	.472	4	1.04	3.3
MT1212C24-11W	11	G1 - $1^{1/2}$	12	.472	3	.95	3.3
MT1616D38-11W	11	G ≥ 1	16	.630	4	1.50	4.1
MT2020E47-11W	11	G ≥ 1	20	.787	5	1.86	4.1



Same Tool for Internal and External Thread - Metric Shanks
with Internal Coolant Bore

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTB08078C14-28W	28	G1/8	8	.307	3	.56	2.5
MTB1010D16-19W	19	G1/4 - 3/8	10	.394	4	.66	2.9
MTB1616E26-14W	14	G1/2- 7/8	16	.630	5	1.04	4.1
MTB1616D38-11W	11	G ≥ 1	16	.630	4	1.50	4.1
MTB2020E47-11W	11	G ≥ 1	20	.787	5	1.86	4.1

with internal coolant bore

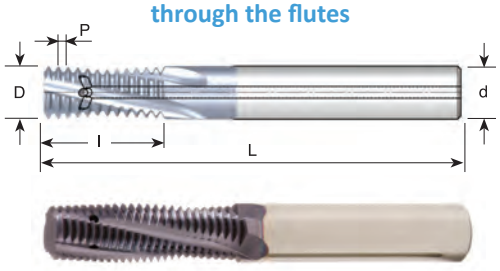


Solid Carbide Thread Mills

G (55°) BSF, BSP- Same Tool for Internal and External Thread Metric Shanks *with Internal Coolant Through the Flutes*

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTZ08078C14-28W	28	G1/8	8	.307	3	.56	2.5
MTZ1010D16-19W	19	G1/4 - 3/8	10	.394	4	.66	2.9
MTZ1616E26-14W	14	G1/2 - 7/8	16	.630	5	1.04	4.0
MTZ1616D38-11W	11	G ≥ 1	16	.630	4	1.50	4.0

with internal coolant through the flutes

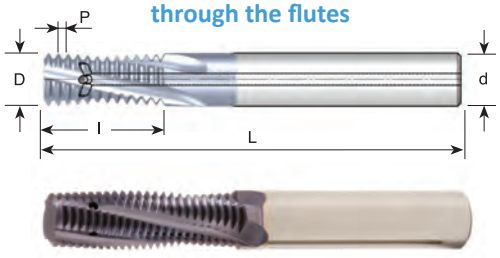


WHITWORTH BSW- Same Tool for Internal and External Thread Metric Shanks *with Internal Coolant Through the Flutes*

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTZ06045C12-20W*	20	1/4	6	.181	3	.48	2.3
MTZ06053C14-18W	18	5/16	6	.209	3	.58	2.3
MTZ08064C16-16W	16	3/8	8	.268	3	.66	2.5
MTZ10092D24-16W	16	1/2	10	.362	4	.97	2.9
MTZ08078D20-14W	14	7/16	8	.307	4	.82	2.5
MTZ10085D24-12W	12	1/2	10	.339	4	.96	2.9
MTZ12109D28-11W	11	5/8	12	.429	4	1.14	3.3

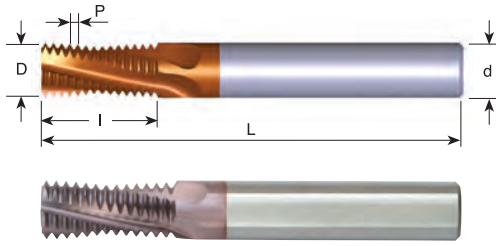
* Cutter without coolant

with internal coolant through the flutes



UN- Tools for Internal Thread

Designation	Pitch TPI	UNC	UNF	UNEF	d	D	No. of Flutes	l	L
MT0250C02-40UN	40	5			1/4	.098	3	.24	2.5
MT0250C02-32UN	32	8	10	12	1/4	.126	3	.27	2.5
MT0250C04-28UN	28		1/4		1/4	.157	3	.45	2.5
MT0250C05-28UN	28			7/16 - 1/2	1/4	.236	3	.57	2.5
MT0250C06-24UN	24		5/16		1/4	.197	3	.56	2.5
MT0312C08-24UN	24		3/8	9/16 - 5/8	5/16	.276	3	.81	2.5
MT0250C05-20UN	20	1/4			1/4	.177	3	.48	2.5
MT0312C08-20UN	20		7/16 - 1/2		5/16	.276	3	.83	2.5
MT0500E11-20UN	20			3/4 - 1	1/2	.472	5	1.08	3.5
MT0250C06-18UN	18	5/16			1/4	.197	3	.58	2.5
MT0375D10-18UN	18		9/16 - 5/8	$1^{1/8}$ - $1^{5/8}$	3/8	.375	4	1.03	3.0
MT0250C07-16UN	16	3/8			1/4	.236	3	.66	2.5
MT0500D12-16UN	16		3/4		1/2	.472	4	1.22	3.5
MT0312C08-14UN	14	7/16			5/16	.276	3	.82	2.5
MT0625E15-14UN	14		7/8		5/8	.591	5	1.46	4.0
MT0312C09-13UN	13	1/2			5/16	.313	3	.88	2.5
MT0375C10-12UN	12	9/16			3/8	.375	3	1.04	3.0
MT0625E16-12UN	12		$1 - 1^{1/2}$		5/8	.625	5	1.63	4.0
MT0375C11-11UN	11	5/8			3/8	.375	3	1.14	3.0
MT0500C14-10UN	10	3/4			1/2	.472	3	1.35	3.5
MT0625C15-9UN	9	7/8			5/8	.591	3	1.50	4.0
MT0625C17-8UN	8	1			5/8	.625	3	1.69	4.0
MT0750D17-7UN	7	$1^{1/8}$ - $1^{1/4}$			3/4	.750	4	1.78	4.0

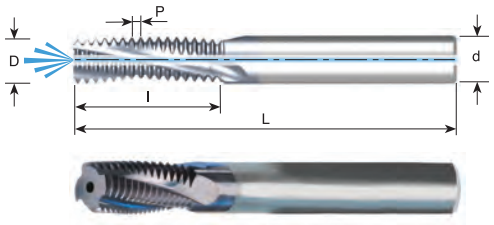


Solid Carbide Thread Mills

UN- Tools for Internal Thread *with Internal Coolant Bore*

Designation	Pitch TPI	UNC	UNF	UNEF	d	D	No. of Flutes	l	L
MTB0250C02-32UN	32	8	10	12	1/4	.126	3	.27	2.5
MTB0250C05-32UN	32			5/16	1/4	.250	3	.58	2.5
MTB0312D07-32UN	32			3/8	5/16	.312	4	.74	2.5
MTB0250C04-28UN	28		1/4		1/4	.197	3	.44	2.5
MTB0250C05-28UN	28			7/16 - 1/2	1/4	.250	3	.56	2.5
MTB0312C05-24UN	24		5/16		5/16	.260	3	.56	2.5
MTB0312D08-24UN	24		3/8	9/16 - 5/8	5/16	.312	4	.81	2.5
MTB0250C04-20UN	20	1/4			1/4	.185	3	.48	2.5
MTB0312C08-20UN	20		7/16		5/16	.312	3	.83	2.5
MTB0375D08-20UN	20		1/2		3/8	.375	4	.88	3.0
MTB0500E10-20UN	20			3/4 - 1	1/2	.500	5	1.07	4.0
MTB0250C05-18UN	18	5/16			1/4	.220	3	.58	2.5
MTB0500D10-18UN	18		9/16 - 5/8	$1^{1/8}$ - $1^{5/8}$	1/2	.445	4	1.03	4.0
MTB0312C06-16UN	16	3/8			5/16	.264	3	.66	2.5
MTB0500D12-16UN	16		3/4		1/2	.500	4	1.22	4.0
MTB0312C08-14UN	14	7/16			5/16	.303	3	.82	2.5
MTB0625E14-14UN	14		7/8		5/8	.625	5	1.46	4.0
MTB0375C08-13UN	13	1/2			3/8	.362	3	.89	3.0
MTB0500C10-12UN	12	9/16			1/2	.413	3	1.04	4.0
MTB0625E16-12UN	12		1 - $1^{1/2}$		5/8	.625	5	1.63	4.0
MTB0500C11-11UN	11	5/8			1/2	.449	3	1.14	4.0
MTB0625D13-10UN	10	3/4			5/8	.567	4	1.35	4.0
MTB0625C15-9UN	9	7/8			5/8	.625	3	1.50	4.0
MTB0750D16-8UN	8	1			3/4	.750	4	1.69	4.0
MTB0750D17-7UN	7	$1^{1/8}$ - $1^{1/4}$			3/4	.750	4	1.78	4.0

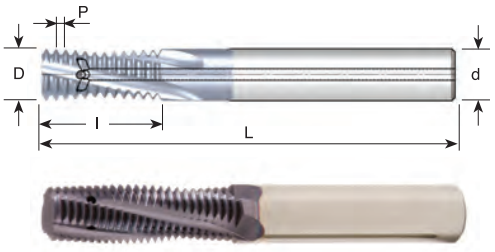
with internal coolant bore



UN- Tools for Internal Thread - Metric Shanks
with Internal Coolant Through the Flutes

Designation	Pitch TPI	UNC	UNF	UNEF	d mm	D	No. of Flutes	l	L
MTZ0605C11-28UN	28		1/4		6	.197	3	.44	2.3
MTZ0606C14-28UN	28			7/16 - 1/2	6	.236	3	.56	2.3
MTZ08066C14-24UN	24		5/16		8	.260	3	.56	2.5
MTZ0808D21-24UN	24		3/8	9/16 - 5/8	8	.315	4	.81	2.5
MTZ0808C21-20UN	20		7/16		8	.315	3	.83	2.5
MTZ1010D22-20UN	20		1/2		10	.394	4	.88	2.9
MTZ1212E27-20UN	20			3/4 - 1	12	.472	5	1.07	3.3
MTZ06056C14-18UN	18	5/16			6	.220	3	.58	2.3
MTZ12113D26-18UN	18		9/16 - 5/8	$1^{1/8}$ - $1^{5/8}$	12	.445	4	1.03	3.3
MTZ08067C16-16UN	16	3/8			8	.264	3	.66	2.5
MTZ1212D31-16UN	16		3/4		12	.472	4	1.22	3.3
MTZ08077C20-14UN	14	7/16			8	.303	3	.82	2.5
MTZ1616E37-14UN	14		7/8		16	.630	5	1.46	4.0
MTZ10092C22-13UN	13	1/2			10	.362	3	.89	2.9
MTZ12105C26-12UN	12	9/16			12	.413	3	1.04	3.3
MTZ12114C28-11UN	11	5/8			12	.449	3	1.14	3.3
MTZ16144D34-10UN	10	3/4			16	.567	4	1.35	4.0

with internal coolant through the flutes



Solid Carbide Thread Mills

Thread mills with relieved neck and internal coolant for milling medium and large threads on relatively deep work pieces.

Carbide Grade: TT7
- To produce medium and large threads on relatively deep work pieces
- To use overhang according to the application
- To perform deep threads at the bottom of the application

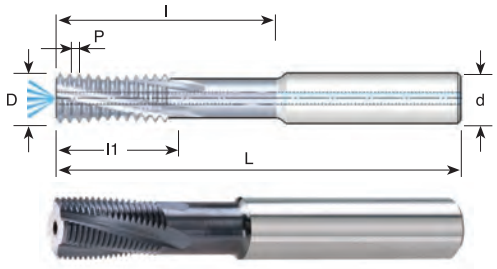
Advantages
- Provides high rigidity and stability (anti-vibration)
- Accomplishes deep threads in one pass
- Relatively low cutting forces due to short cutting length
- Threads length up to 3xD

UN- Tools for Internal Thread- with Relieved Neck - Metric Shanks

with Internal Coolant Bore

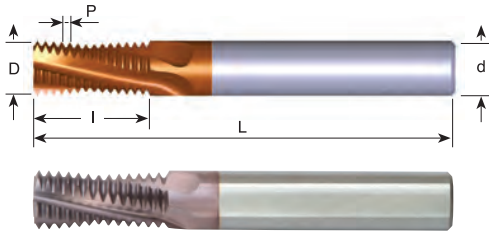
Designation	Pitch TPI	Thread Size mm	d mm	D	No. of Flutes	l1	l	L
MTQ1010D30-20UN	20	ø ≥ 12	10	.394	4	.70	1.20	2.9
MTQ1212E35-20UN	20	ø ≥ 14	12	.472	5	.80	1.40	3.3
MTQ1616F43-20UN	20	ø ≥ 18	16	.630	6	1.00	1.70	4.1
MTQ1212D35-18UN	18	ø ≥ 15	12	.472	4	.78	1.39	3.3
MTQ1212D35-16UN	16	ø ≥ 15	12	.472	4	.81	1.38	3.3
MTQ1616E42-16UN	16	ø ≥ 19	16	.630	5	1.00	1.69	4.1
MTQ2020F58-16UN	16	ø ≥ 23	20	.787	6	1.44	2.31	4.1
MTQ1616E45-14UN	14	ø ≥ 20	16	.630	5	1.00	1.78	4.1
MTQ1212D42-12UN	12	ø ≥ 16	12	.472	4	1.00	1.67	3.3
MTQ2020E55-12UN	12	ø ≥ 24	20	.787	5	1.33	2.17	4.1

with internal coolant bore



BSPT- Same Tool for Internal & External Thread - Metric Shanks

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MT0606C9-28BSPT	28	RC1/8	6	.236	3	.38	2.3
MT0808C14-19BSPT	19	RC1/4-3/8	8	.315	3	.55	2.5
MT1212D19-14BSPT	14	RC1/2-7/8	12	.472	4	.75	3.3
MT1616D28-11BSPT	11	RC1-2	16	.630	4	1.14	4.1

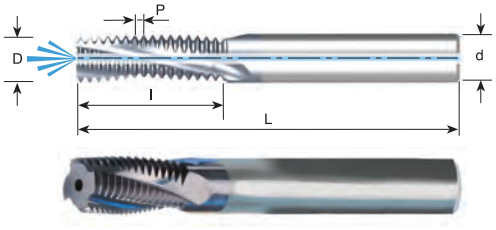


BSPT- Same Tool for Internal & External Thread - Metric Shanks

with Internal Coolant Bore

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTB08078C14-28BSPT	28	RC1/8	8	.307	3	.56	2.5
MTB1010D16-19BSPT	19	RC1/4-3/8	10	.394	4	.66	2.9
MTB1616E26-14BSPT	14	RC1/2-7/8	16	.630	5	1.04	4.1
MTB1616D28-11BSPT	11	RC1-2	16	.630	4	1.14	4.1

with internal coolant bore

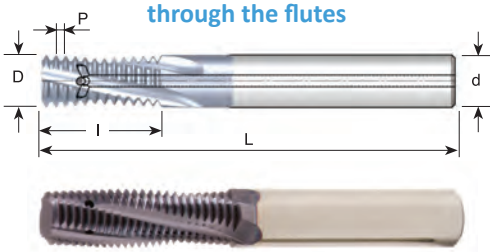


BSPT- Same Tool for Internal & External Thread - Metric Shanks

with Internal Coolant Through the Flutes

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTZ08078C14-28BSPT	28	RC1/8	8	.307	3	.56	2.5
MTZ1010D16-19BSPT	19	RC1/4-3/8	10	.394	4	.66	2.9
MTZ1616E26-14BSPT	14	RC1/2-7/8	16	.630	5	1.04	4.0
MTZ1616D28-11BSPT	11	RC1-2	16	.630	4	1.14	4.0

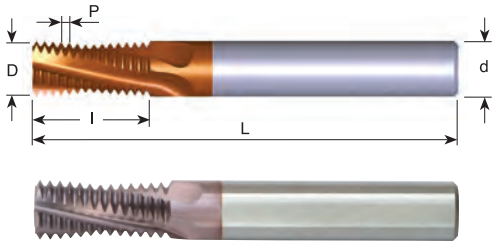
with internal coolant through the flutes



Solid Carbide Thread Mills

NPT- Same Tool for Internal & External Thread

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MT0250C03-27NPT	27	1/16	1/4	.230	3	.39	2.5
MT0250C04-27NPT	27	1/8	1/4	.250	3	.39	2.5
MT0312C06-18NPT	18	1/4 - 3/8	5/16	.312	3	.58	2.5
MT0500D08-14NPT	14	1/2 - 3/4	1/2	.500	4	.82	3.5
MT0625D11-11.5NPT	11.5	1 - 2	5/8	.625	4	1.09	4.0
MT0750D16-8NPT	8	$\geq 2^{1/2}$	3/4	.750	4	1.56	4.0

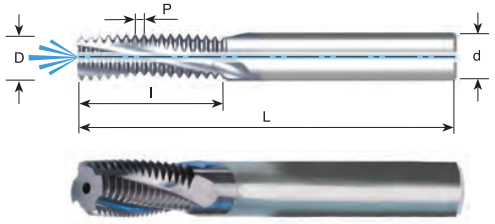


NPT- Same Tool for Internal & External Thread

with Internal Coolant Bore

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MTB0312C04-27NPT	27	1/8	5/16	.299	3	.43	2.5
MTB0375D06-18NPT	18	1/4 - 3/8	3/8	.375	4	.64	3.0
MTB0625D08-14NPT	14	1/2 - 3/4	5/8	.610	4	.89	4.0
MTB0750D11-11.5NPT	11.5	1 - 2	3/4	.750	4	1.17	4.0
MTB0750D15-8NPT	8	$\geq 2^{1/2}$	3/4	.750	4	1.56	4.0

with internal coolant bore

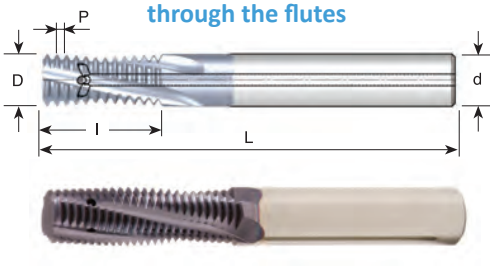


NPT- Same Tool for Internal & External Thread - Metric Shanks

with Internal Coolant through the Flutes

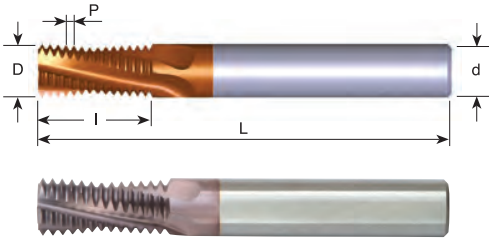
Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTZ08076C10-27NPT	27	1/8	8	.299	3	.43	2.5
MTZ1010D16-18NPT	18	1/4 - 3/8	10	.394	4	.64	2.9
MTZ16155D22-14NPT	14	1/2 - 3/4	16	.610	4	.89	4.0

with internal coolant through the flutes



NPTF- Same Tool for Internal & External Thread

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MT0250C03-27NPTF	27	1/16	1/4	.230	3	.39	2.5
MT0250C04-27NPTF	27	1/8	1/4	.250	3	.39	2.5
MT0312C06-18NPTF	18	1/4-3/8	5/16	.312	3	.58	2.5
MT0500D08-14NPTF	14	1/2-3/4	1/2	.500	4	.82	3.5
MT0625D11-11.5NPTF	11.5	1-2	5/8	.625	4	1.09	4.0
MT0750D16-8NPTF	8	$\geq 2^{1/2}$	3/4	.750	4	1.56	4.0

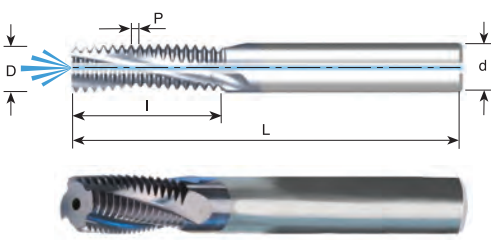


NPTF- Same Tool for Internal & External Thread

with Internal Coolant bore

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MTB0312C04-27NPTF	27	1/8	5/16	.299	3	.43	2.5
MTB0375D06-18NPTF	18	1/4 - 3/8	3/8	.375	4	.64	3.0
MTB0625D08-14NPTF	14	1/2 - 3/4	5/8	.610	4	.89	4.0
MTB0750D11-11.5NPTF	11.5	1 - 2	3/4	.750	4	1.17	4.0
MTB0750D15-8NPTF	8	$\geq 2^{1/2}$	3/4	.750	4	1.57	4.0

with internal coolant bore

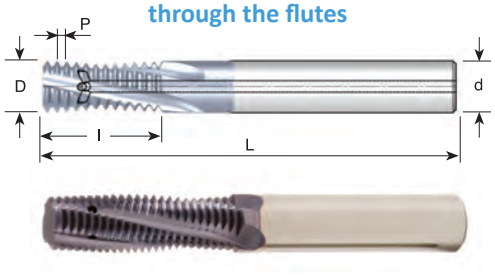


Solid Carbide Thread Mills

NPTF- Same Tool for Internal & External Thread - Metric Shanks
with Internal Coolant Through the Flutes

Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTZ08076C10-27NPTF	27	1/8	8	.299	3	.43	2.5
MTZ1010D16-18NPTF	18	1/4 - 3/8	10	.394	4	.64	2.9
MTZ16155D22-14NPTF	14	1/2 - 3/4	16	.610	4	.89	4.0

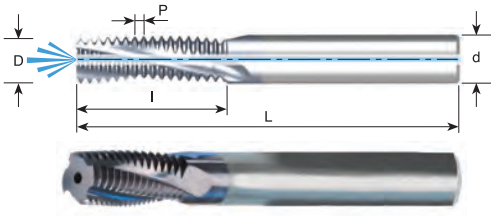
with internal coolant through the flutes



NPS- Same Tool for Internal & External Thread
with Internal Coolant Bore

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MTB0312C04-27NPS	27	1/8	5/16	.299	3	.43	2.5
MTB0375D06-18NPS	18	1/4 - 3/8	3/8	.375	4	.64	3.0
MTB0625D08-14NPS	14	1/2 - 3/4	5/8	.610	4	.89	4.0
MTB0750D11-11.5NPS	11.5	1 - 2	3/4	.750	4	1.17	4.0

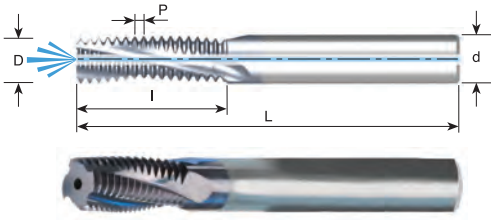
with internal coolant bore



NPSF- Same Tool for Internal & External Thread
with Internal Coolant Bore

Designation	Pitch TPI	Standard	d	D	No. of Flutes	l	L
MTB0312C04-27NPSF	27	1/8	5/16	.299	3	.43	2.5
MTB0375D06-18NPSF	18	1/4 - 3/8	3/8	.375	4	.64	3.0
MTB0625D08-14NPSF	14	1/2 - 3/4	5/8	.610	4	.89	4.0
MTB0750D11-11.5NPSF	11.5	1 - 2	3/4	.750	4	1.17	4.0

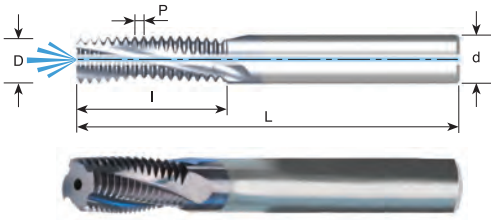
with internal coolant bore



PG- DIN 40430- Same Tool for Internal & External Thread Metric Shanks *with Internal Coolant Bore*

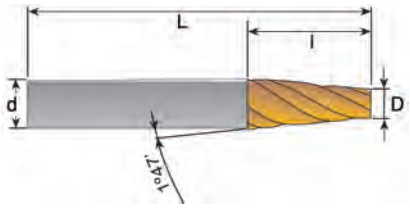
Designation	Pitch TPI	Standard	d mm	D	No. of Flutes	l	L
MTB1010D19-20PG	20	Pg 7	10	.394	4	.78	2.9
MTB1212D20-18PG	18	Pg 9, 11, 13.5, 16	12	.472	4	.81	3.3
MTB1212D23-16PG	16	Pg 21, 29, 36, 42, 48	12	.472	4	.91	3.3

with internal coolant bore



Solid Carbide Tapered End Mills

Solid Carbide Tapered End Mills



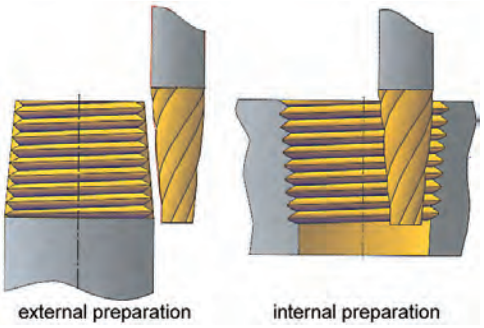
Used for milling the workpiece in preparation of the thread milling or tapping operation of NPT type threads.

Advantages:

- Increases the tool life of thread milling cutters and indexable inserts, NPT type taps
- Equal and uniform load along the cutting edge of the thread mill cutter
- Shorter machining time during the thread mill operation, due to the preparation of the workpiece

Solid Carbide Tapered End Mills

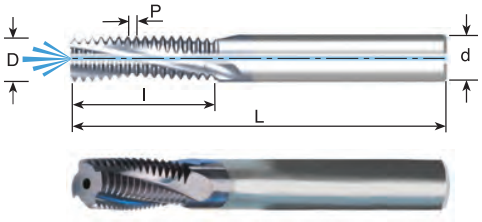
Designation	d	D	l	L	No. of Flutes	Size
Standard Length						
TP4RC-SQ0375 TL25	3/8	.32	.95	3	4	NPT 1/8" - 1" NPTF 1/8" - 1" BSPT 1/8" - 1"
TP4RC-SQ0500 TL25	1/2	.42	1.26	3.5	4	NPT 1/4" - 3" NPTF 1/4" - 3" BSPT 1/4" - 3"
Extended Length						
TP4LC-SQ0500 TL25	1/2	.42	1.26	6.0	4	NPT 1/4" - 3" NPTF 1/4" - 3" BSPT 1/4" - 3"



Solid Carbide Helical Thread Mills

UN Tools for Internal Threading

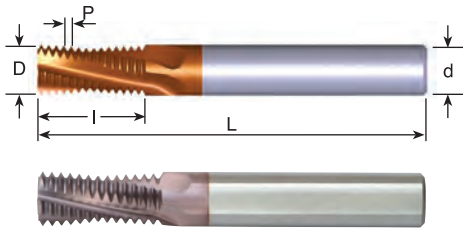
with internal coolant bore



Designation	Pitch TPI	UNC	UNF	UNEF	d	D	No. of Flutes	l	L
MTB0250C02-32UN	32	8	10	12	1/4	.126	3	.27	2.5
MTB0250C05-32UN	32			5/16	1/4	.250	3	.58	2.5
MTB0312D07-32UN	32			3/8	5/16	.312	4	.74	2.5
MTB0250C04-28UN	28		1/4		1/4	.197	3	.44	2.5
MTB0250C05-28UN	28			7/16 - 1/2	1/4	.250	3	.56	2.5
MTB0312C05-24UN	24		5/16		5/16	.260	3	.56	2.5
MTB0312D08-24UN	24		3/8	9/16 - 5/8	5/16	.312	4	.81	2.5
MTB0250C04-20UN	20	1/4			1/4	.185	3	.48	2.5
MTB0312C08-20UN	20		7/16		5/16	.312	3	.83	2.5
MTB0375D08-20UN	20		1/2		3/8	.375	4	.88	3.0
MTB0500E10-20UN	20			3/4 - 1	1/2	.500	5	1.07	4.0
MTB0250C05-18UN	18	5/16			1/4	.220	3	.58	2.5
MTB0500D10-18UN	18		9/16 - 5/8	$1^{1/8}$ - $1^{5/8}$	1/2	.445	4	1.03	4.0
MTB0312C06-16UN	16	3/8			5/16	.264	3	.66	2.5
MTB0500D12-16UN	16		3/4		1/2	.500	4	1.22	4.0
MTB0312C08-14UN	14	7/16			5/16	.303	3	.82	2.5
MTB0625E14-14UN	14		7/8		5/8	.625	5	1.46	4.0
MTB0375C08-13UN	13	1/2			3/8	.362	3	.89	3.0
MTB0500C10-12UN	12	9/16			1/2	.413	3	1.04	4.0
MTB0625E16-12UN	12		1 - $1^{1/2}$		5/8	.625	5	1.63	4.0
MTB0500C11-11UN	11	5/8			1/2	.449	3	1.14	4.0
MTB0625D13-10UN	10	3/4			5/8	.567	4	1.35	4.0
MTB0625C15-9UN	9	7/8			5/8	.625	3	1.50	4.0
MTB0750D16-8UN	8	1			3/4	.750	4	1.69	4.0
MTB0750D17-7UN	7	$1^{1/8}$ - $1^{1/4}$			3/4	.750	4	1.78	4.0

Solid Carbide Helical Thread Mills

ISO Tools for Internal Threading

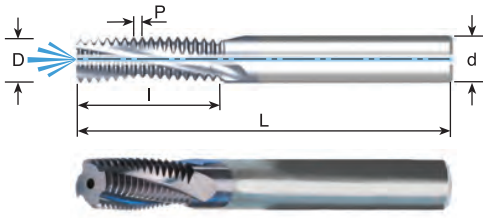


Designation	Pitch mm	M coarse	M fine	d	D	No. of Flutes	l	L
MT0250C02-0.5ISO	0.5	M3	ø ≥ 4	1/4	.087	3	.21	2.5
MT0250C04-0.5ISO	0.5		ø ≥ 5	1/4	.150	3	.41	2.5
MT0250C03-0.7ISO	0.7	M4	ø ≥ 5	1/4	.122	3	.29	2.5
MT0250C04-0.75ISO	0.75		ø ≥ 6	1/4	.177	3	.40	2.5
MT0250C04-0.8ISO	0.8	M5	ø ≥ 6	1/4	.142	3	.36	2.5
MT0250C04-1.0ISO	1.0	M6	ø ≥ 7	1/4	.157	3	.41	2.5
MT0250C06-1.0ISO	1.0	M6	ø ≥ 7	1/4	.157	3	.57	2.5
MT0250C05-1.0ISO	1.0		ø ≥ 9	1/4	.236	3	.49	2.5
MT0312D07-1.0ISO	1.0		ø ≥ 10	5/16	.313	4	.65	2.5
MT0250C06-1.25ISO	1.25	M8	ø ≥ 10	1/4	.197	3	.57	2.5
MT0250C07-1.25ISO	1.25	M8	ø ≥ 10	1/4	.197	3	.76	2.5
MT0312C07-1.5ISO	1.5	M10	ø ≥ 12	5/16	.276	3	.68	2.5
MT0312C09-1.5ISO	1.5	M10	ø ≥ 12	5/16	.276	3	.98	2.5
MT0375D09-1.5ISO	1.5		ø ≥ 14	3/8	.375	4	.86	3.0
MT0625F13-1.5ISO	1.5		ø ≥ 20	5/8	.625	6	1.33	4.0
MT0312C08-1.75ISO	1.75	M12	ø ≥ 14	5/16	.313	3	.79	2.5
MT0312C11-1.75ISO	1.75	M12	ø ≥ 14	5/16	.313	3	1.14	2.5
MT0375C11-2.0ISO	2.0	M16	ø ≥ 17	3/8	.375	3	1.06	3.0
MT0375C15-2.0ISO	2.0	M16	ø ≥ 17	3/8	.375	3	1.54	4.0
MT0500D11-2.0ISO	2.0		ø ≥ 18	1/2	.472	4	1.06	3.5
MT0750F16-2.0ISO	2.0		ø ≥ 26	3/4	.750	6	1.61	4.0
MT0625D13-2.5ISO	2.5	M20	ø ≥ 22	5/8	.551	4	1.33	4.0
MT0625D19-2.5ISO	2.5	M20	ø ≥ 22	5/8	.551	4	1.92	4.0
MT0625C16-3.0ISO	3.0	M24	ø ≥ 25	5/8	.625	3	1.59	4.0
MT0625C23-3.0ISO	3.0	M24	ø ≥ 25	5/8	.625	3	2.31	4.5
MT0750D17-3.0ISO	3.0	M27	ø ≥ 28	3/4	.750	4	1.71	4.0

Solid Carbide Helical Thread Mills

ISO Tools for Internal Threading

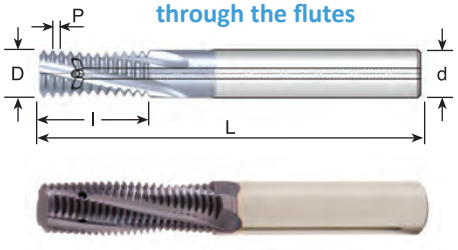
with internal coolant bore



Designation	Pitch mm	M coarse	M fine	d	D	No. of Flutes	l	L
MTB0250C04-0.5ISO	0.5		ø ≥ 5	1/4	.150	3	.41	2.5
MTB0250C02-0.7ISO	0.7	M4	ø ≥ 5	1/4	.122	3	.29	2.5
MTB0250C04-0.75ISO	0.75		ø ≥ 6	1/4	.177	3	.40	2.5
MTB0250C03-0.8ISO	0.8	M5	ø ≥ 6	1/4	.150	3	.36	2.5
MTB0250C04-1.0ISO	1.0	M6	ø ≥ 7	1/4	.181	3	.41	2.5
MTB0250C06-1.0ISO	1.0	M6	ø ≥ 7	1/4	.181	3	.60	2.5
MTB0250C05-1.0ISO	1.0		ø ≥ 9	1/4	.250	3	.50	2.5
MTB0312D06-1.0ISO	1.0		ø ≥ 10	5/16	.312	4	.65	2.5
MTB0375D09-1.0ISO	1.0		ø ≥ 12	3/8	.375	4	.96	3.0
MTB0250C05-1.25ISO	1.25	M8	ø ≥ 10	1/4	.250	3	.57	2.5
MTB0250C07-1.25ISO	1.25	M8	ø ≥ 10	1/4	.250	3	.76	2.5
MTB0312C06-1.5ISO	1.5	M10	ø ≥ 12	5/16	.307	3	.67	2.5
MTB0312C09-1.5ISO	1.5	M10	ø ≥ 12	5/16	.307	3	.98	2.5
MTB0375D08-1.5ISO	1.5		ø ≥ 14	3/8	.375	4	.86	3.0
MTB0500D10-1.5ISO	1.5		ø ≥ 16	1/2	.500	4	1.04	4.0
MTB0625F13-1.5ISO	1.5		ø ≥ 20	5/8	.625	6	1.33	4.0
MTB0375C07-1.75ISO	1.75	M12	ø ≥ 12	3/8	.354	3	.79	3.0
MTB0375C11-1.75ISO	1.75	M12	ø ≥ 12	3/8	.354	3	1.14	3.0
MTB0375C10-2.0ISO	2.0	M14	ø ≥ 15	3/8	.375	3	1.06	3.0
MTB0500D10-2.0ISO	2.0	M16	ø ≥ 17	1/2	.465	4	1.06	4.0
MTB0500D15-2.0ISO	2.0	M16	ø ≥ 17	1/2	.465	4	1.54	4.0
MTB0750F16-2.0ISO	2.0		ø ≥ 26	3/4	.750	6	1.61	4.0
MTB0625E13-2.5ISO	2.5	M20	ø ≥ 22	5/8	.591	5	1.33	4.0
MTB0625E19-2.5ISO	2.5	M20	ø ≥ 22	5/8	.591	5	1.92	4.0
MTB0750D15-3.0ISO	3.0	M24	ø ≥ 25	3/4	.709	4	1.59	4.0
MTB0750D17-3.0ISO	3.0	M27	ø ≥ 27	3/4	.750	4	1.71	4.0

ISO tools for Internal Threading

with internal coolant through the flutes



Designation	Pitch mm	M coarse	M fine	d	D	No. of Flutes	l	L
MTZ06048C10-1.0ISO	1.0	M6	ø ≥ 7	6	.189	3	.41	2.3
MTZ0606C12-1.0ISO	1.0		ø ≥ 9	6	.236	3	.49	2.3
MTZ0808D16-1.0ISO	1.0		ø ≥ 10	8	.315	4	.65	2.5
MTZ0606C14-1.25ISO	1.25	M8	ø ≥ 10	6	.236	3	.57	2.3
MTZ0606C19-1.25ISO	1.25	M8	ø ≥ 10	6	.236	3	.76	2.3
MTZ08078C17-1.5ISO	1.5	M10	ø ≥ 12	8	.307	3	.67	2.5
MTZ1010D21-1.5ISO	1.5		ø ≥ 14	10	.394	4	.86	2.9
MTZ1212D26-1.5ISO	1.5		ø ≥ 16	12	.472	4	1.03	3.3
MTZ1616E33-1.5ISO	1.5		ø ≥ 20	16	.630	5	1.33	4.0
MTZ1009C20-1.75ISO	1.75	M12	ø ≥ 12	10	.354	3	.79	2.9
MTZ1009C28-1.75ISO	1.75	M12	ø ≥ 12	10	.354	3	1.14	2.9
MTZ1010C27-2.0ISO	2.0	M14	ø ≥ 15	10	.394	3	1.06	2.9
MTZ12118D27-2.0ISO	2.0	M16	ø ≥ 17	12	.465	4	1.06	3.3
MTZ1615E33-2.5ISO	2.5	M20	ø ≥ 22	16	.591	5	1.33	4.0

HardCut Solid Carbide Thread Mills for Machining Hard Materials

Mini Thread Mill MTSH Ordering Codes

MTSH	0250	C	35	0.7	ISO
HardCut Mini Thread Mill	Shank Dia. 0250 = 1/4 0312 = 5/16 0375 = 3/8	No. of Flutes C=3 D=4	The approx. cutting length	Thread Pitch	Thread Profile ISO UN

MTH Ordering Codes

MTH	06	04	C	9	0.8	ISO
HardCut Thread Mill	Shank Dia. 06 = 6mm 08 = 8mm 10 = 10mm 12 = 12mm	Cutting Diameter 04 = 4mm	No. of Flutes C=3 D=4	The approx. cutting length	Thread Pitch	Thread Profile ISO UN

MTSH Type

Offering solid carbide thread mill tools designed specifically for the machining of hardened materials up to 62HRc. These tools provide high performance, improved cut and an excellent surface finish.

MTH Type

- Hardened steels and cast iron up to 62 HRc
- Titanium alloys
- Threading from ISO M1.4 x 0.3 and 0-80UN
- Working at high cutting speeds
- Low cutting forces thanks to the short profile
- High temperature alloys
- Super Alloys (Hastelloy, Inconel, Nickel Base Alloys).
- Perfect solution for the Die and Mold industry
- Short machining time

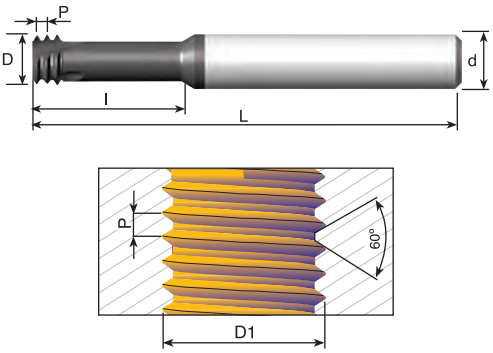
HardCut MTSH & MTH Types Advantages

- Same tool performs thread milling and chamfering - saves machining time
- Increased cutting diameter - better rigidity and stability
- Coating provides high wear and heat resistance
- Ultra fine grade - dedicated for hardened materials
- Short chips are produced, insure high process security
- Short cycle time - increases productivity
- Thread length up to 2xD

Carbide Grade TT9 / TT11: Ultra fine sub-micron grade with Advanced PVD Triple Coating

HardCut MTSH Thread Mills

ISO Tools for Internal Thread Depth up to 2 X D1



Designation	Pitch mm	D¹	d	D	No. of Flutes	l	L
MTSH0250C18-0.4ISO	0.4	M2	1/4	.061	3	.18	2.5
MTSH0250C20-0.45ISO	0.45	M2.2	1/4	.065	3	.20	2.5
MTSH0250C22-0.45ISO	0.45	M2.5	1/4	.077	3	.22	2.5
MTSH0250C26-0.5ISO	0.5	M3	1/4	.093	3	.26	2.5
MTSH0250C30-0.6ISO	0.6	M3.5	1/4	.108	3	.30	2.5
MTSH0250C35-0.7ISO	0.7	M4	1/4	.122	3	.35	2.5
MTSH0250C49-0.8ISO	0.8	M5	1/4	.150	3	.49	2.5
MTSH0250C55-1.0ISO	1.0	M6	1/4	.183	3	.55	2.5
MTSH0250C71-1.25ISO	1.25	M8	1/4	.234	3	.71	2.5
MTSH0312C91-1.5ISO	1.5	M10	5/16	.307	3	.91	2.5
MTSH0375C10-1.75ISO	1.75	M12	3/8	.354	3	1.02	3.0
MTSH12118D35-2.0ISO	2.0	M16	12mm	.465	4	1.38	3.3

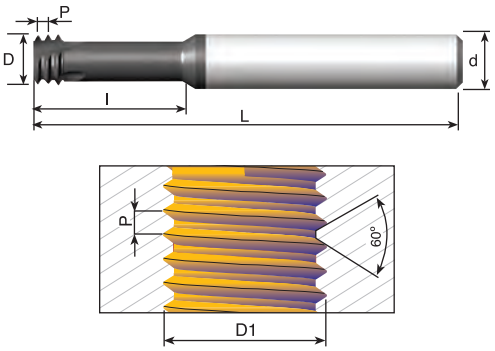
ISO Tools for Internal Thread Depth up to 3 X D1

Designation	Pitch mm	D¹	d	D	No. of Flutes	l	L
MTSH03011C4-0.3ISO	0.3	M1.4	3mm	.041	3	.16	1.5
MTSH03012C5-0.35ISO	0.35	M1.6	3mm	.047	3	.19	1.5
MTSH03016C6-0.4ISO	0.4	M2	3mm	.061	3	.24	1.5
MTSH0250C30-0.45ISO	0.45	M2.5	1/4	.077	3	.30	2.5
MTSH0250C37-0.5ISO	0.5	M3	1/4	.093	3	.37	2.5
MTSH0250C49-0.7ISO	0.7	M4	1/4	.122	3	.49	2.5
MTSH0250C63-0.8ISO	0.8	M5	1/4	.150	3	.63	2.5
MTSH0250C79-1.0ISO	1.0	M6	1/4	.183	3	.79	2.5
MTSH0250C94-1.25ISO	1.25	M8	1/4	.234	3	.94	2.5

HardCut MTSH Thread Mills

UN Tools for Internal Thread Depth up to 2 X D1

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTSH0250C15-72UN	72		1	1/4	.057	3	.15	2.5
MTSH0250C15-64UN	64	1	2	1/4	.055	3	.15	2.5
MTSH0250C17-56UN	56	2	3	1/4	.065	3	.17	2.5
MTSH0250C20-48UN	48	3	4	1/4	.075	3	.20	2.5
MTSH0250C25-40UN	40	4		1/4	.083	3	.25	2.5
MTSH0250C28-40UN	40	5	6	1/4	.096	3	.28	2.5
MTSH0250C35-36UN	36		8	1/4	.130	3	.35	2.5
MTSH0250C28-32UN	32	6		1/4	.100	3	.28	2.5
MTSH0250C37-32UN	32	8		1/4	.126	3	.37	2.5
MTSH0250C41-32UN	32		10	1/4	.146	3	.41	2.5
MTSH0250C43-28UN	28		12	1/4	.165	3	.43	2.5
MTSH0250C57-28UN	28		1/4	1/4	.197	3	.57	2.5
MTSH0250C42-24UN	24	10, 12		1/4	.138	3	.42	2.5
MTSH0312C67-24UN	24		5/16, 3/8	5/16	.260	3	.67	2.5
MTSH0250C55-20UN	20	1/4		1/4	.187	3	.55	2.5
MTSH0312C98-20UN	20		7/16	5/16	.312	3	.98	2.5
MTSH0250C67-18UN	18	5/16		1/4	.236	3	.67	2.5
MTSH1212D35-18UN	18		5/8	12mm	.472	4	1.38	3.3
MTSH0312C87-16UN	16	3/8		5/16	.264	3	.87	2.5
MTSH0312C98-14UN	14	7/16		5/16	.303	3	.98	2.5
MTSH0375C10-13UN	13	1/2		3/8	.362	3	1.08	3.0
MTSH12105C31-12UN	12	9/16		12mm	.413	3	1.24	3.3
MTSH12114C34-11UN	11	5/8		12mm	.449	3	1.36	3.3



For left hand cutting
For CNC code use M04

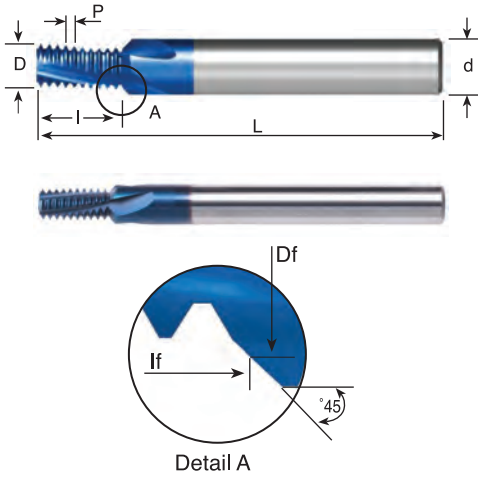
UN Tools for Internal Thread Depth up to 3 X D1

Designation	Pitch TPI	UNC	UNF	d	D	No. of Flutes	l	L
MTSH0250C16-80UN	80		0	1/4	.045	3	.16	2.5
MTSH03015C6-72UN	72		1	3mm	.057	3	.24	1.5
MTSH0250C26-56UN	56	2	3	1/4	.065	3	.26	2.5
MTSH0250C31-40UN	40	4		1/4	.083	3	.31	2.5
MTSH0250C38-40UN	40	5	6	1/4	.096	3	.38	2.5
MTSH0250C40-32UN	32	6		1/4	.100	3	.41	2.5
MTSH0250C49-32UN	32	8		1/4	.126	3	.49	2.5
MTSH0250C59-32UN	32		10	1/4	.146	3	.59	2.5
MTSH0250C75-28UN	28		1/4	1/4	.197	3	.75	2.5
MTSH0312C94-24UN	24		5/16, 3/8	5/16	.260	3	.94	2.5
MTSH0250C75-20UN	20	1/4		1/4	.187	3	.75	2.5
MTSH0250C91-18UN	18	5/16		1/4	.236	3	.91	2.5

HardCut MTH Thread Mills

ISO Tools for Internal Thread - Metric Shanks

Designation	Pitch mm	M coarse	M fine	d mm	D	Df	No. of Flutes	l	lf	L
MTH06024C5-0.5ISO	0.5	M3	ø ≥ 4	6	.094	.142	3	.209	.232	2.3
MTH06031C7-0.7ISO	0.7	M4	ø ≥ 5	6	.122	.169	3	.291	.315	2.3
MTH0604C9-0.8ISO	0.8	M5	ø ≥ 6	6	.157	.205	3	.362	.386	2.3
MTH08048D10-1.0ISO	1.0	M6	ø ≥ 7	8	.189	.252	4	.413	.445	2.5
MTH0806D13-1.0ISO	1.0		ø ≥ 9	8	.236	.299	4	.531	.563	2.5
MTH1008D16-1.0ISO	1.0		ø ≥ 10	10	.315	.378	4	.650	.681	2.9
MTH0806D14-1.25ISO	1.25	M8	ø ≥ 10	8	.236	.299	4	.567	.598	2.5
MTH1008D17-1.5ISO	1.5	M10	ø ≥ 12	10	.315	.386	4	.681	.717	2.9
MTH1210D21-1.5ISO	1.5		ø ≥ 14	12	.394	.465	4	.858	.894	3.3
MTH12095D20-1.75ISO	1.75	M12	ø ≥ 12	12	.374	.453	4	.791	.831	3.3



UN Tools for Internal Thread - Metric Shanks

Designation	Pitch TPI	UNC	UNF	UNEF	d mm	D	DF	No. of Flutes	l	lf	L
MTH06025C6-40UN	40	5	6		6	.098	.146	3	.236	.260	2.3
MTH06026C5-32UN	32	6			6	.102	.150	3	.232	.256	2.3
MTH06032C7-32UN	32	8			6	.126	.173	3	.295	.319	2.3
MTH06038C9-32UN	32		10	12	6	.150	.197	3	.358	.382	2.3
MTH08052D11-28UN	28		1/4		8	.205	.268	4	.445	.476	2.5
MTH12096D20-28UN	28			7/16, 1/2	12	.378	.441	4	.803	.835	3.3
MTH08066D14-24UN	24		5/16, 3/8	9/16, 5/8, 11/16	8	.260	.315	4	.563	.591	2.5
MTH06048C12-20UN	20	1/4			6	.189	.236	3	.476	.500	2.3
MTH12092D21-20UN	20		7/16, 1/2	3/4, 1	12	.362	.425	4	.827	.858	3.3
MTH08057C14-18UN	18	5/16	9/16, 5/8	11/16	8	.224	.295	3	.583	.618	2.5
MTH10074C16-16UN	16	3/8	3/4		10	.291	.362	3	.657	.693	2.9
MTH10085D20-14UN	14	7/16	7/8		10	.335	.390	4	.823	.850	2.9
MTH12094D22-13UN	13	1/2			12	.370	.449	4	.886	.925	3.3

DMT 3 in 1 - * Drill, Thread, Chamfer Ordering Codes

D	MT	H	06	04	C	14	1.0	ISO	-D
Drill	Mill Thread	Steels, hardened materials Stainless steels, Super alloys	Shank Dia. 06 = 6mm 08 = 8mm 10 = 10mm 12 = 12mm	Cutting Dia. 04 = 4mm	No. of Flutes C=3 D=4	The approx. cutting length	Thread Pitch	Thread Profile ISO UN	Without internal coolant

DMT 3 in 1 - *Drill, Thread, Chamfer

High Performance tools with internal coolant supply for the production of internal threads. *Circular movement produces the thread hole, the thread and a chamfer in one work process.

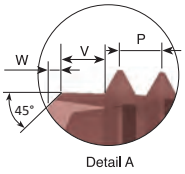
Advantages

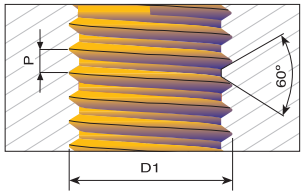
- Cancels the need for drilling the hole
- No time lost for tool change, since drilling, chamfering and thread milling are done with one tool
- Short cycle time and high performance reduces machining costs
- Same tool for right-hand or left-hand threads
- Suitable for both blind and through holes
- Cuts a wide range of materials
- Full Profile thread

Carbide Grade TT7: Sub-micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10-K20).

Carbide Grade TT11: Ultra-fine Sub-micron grade with advanced PVD triple Blue coating (for DMTH)

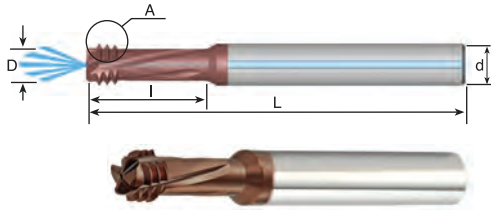
DMT 3 in 1 - *Drill, Thread, Chamfer





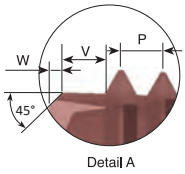
For left hand cutting
For CNC code use M04

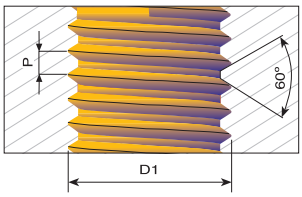
with internal coolant bore



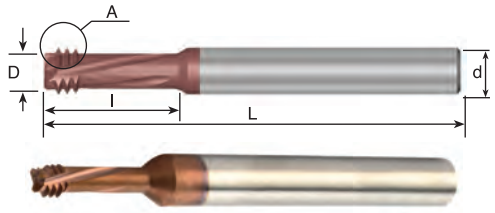
ISO Tools for Internal Thread Depth up to 2 X D1- Metric Shanks *with Internal Coolant Bore*

Designation	Pitch mm	D¹	d mm	D	No. of Flutes	l	W	V	L
DMT08047C14-1.0ISO	1	M6 - M9	8	.185	3	.55	.016	.039	2.5
DMT08061D18-1.25ISO	1.25	M8 - M12	8	.240	4	.71	.020	.049	2.5
DMT08078D23-1.5ISO	1.5	M10 - M15	8	.307	4	.91	.024	.059	2.5
DMT1009D26-1.75ISO	1.75	M12	10	.354	4	1.02	.024	.069	2.9
DMT12118D35-2.0ISO	2	M16 - M23	12	.465	4	1.38	.024	.079	3.3



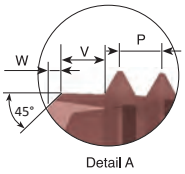


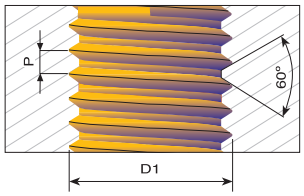
For left hand cutting
For CNC code use M04



ISO Tools for Internal Thread Depth up to 2 X D1 - Metric Shanks

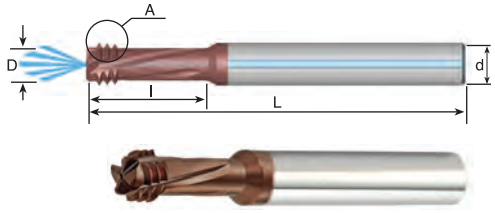
Designation	Pitch mm	D¹	d mm	D	No. of Flutes	l	W	V	L
DMT06032C11-0.7ISO-D	0.7	M4	6	.124	3	.46	.008	.028	2.3
DMT0604C14-0.8ISO-D	0.8	M5	6	.157	3	.57	.012	.031	2.3





For left hand cutting
For CNC code use M04

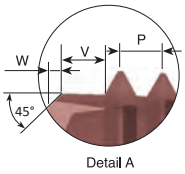
with internal coolant bore

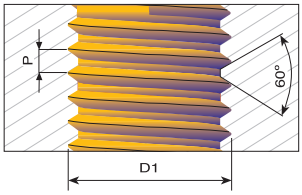


UN Tools for Internal Thread Depth up to 2 X D1 - Metric Shanks

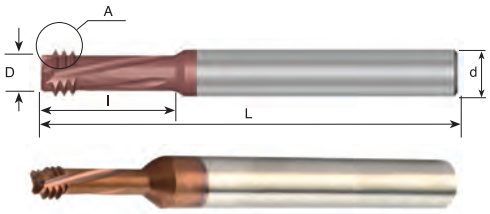
Designation	Pitch TPI	UN, UNEF, UNF, UNC, UNS	d mm	D	No. of Flutes	l	W	V	L
DMT0805C14-28UN	28	1/4 - 3/8	8	.197	3	.57	.016	.035	2.5
DMT08065D17-24UN	24	5/16 - 1/2	8	.256	4	.67	.020	.041	2.5
DMT08048C14-20UN	20	1/4 - 3/8	8	.189	3	.55	.016	.049	2.5
DMT0806D17-18UN	18	5/16 - 7/16	8	.236	4	.67	.020	.055	2.5
DMT08067C22-16UN	16	3/8 - 1/2	8	.264	3	.87	.020	.063	2.5

DMT 3 in 1 - *Drill, Thread, Chamfer





For left hand cutting
For CNC code use M04

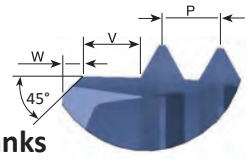


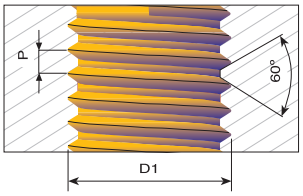
UN Tools for Internal Thread Depth up to 2.5 X D1 - Metric Shanks

Designation	Pitch TPI	UNC	UNF	d mm	D	No. of Flutes	l	W	V	L
DMT06033C12-36UN-D	36		8	6	.130	3	.47	.008	.028	2.3
DMT06032C12-32UN-D	32	8		6	.126	3	.48	.012	.031	2.3
DMT06038C14-32UN-D	32		10	6	.150	3	.55	.012	.031	2.3

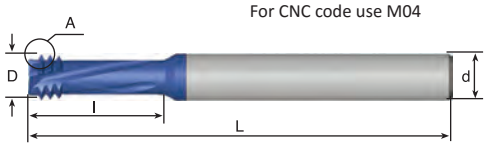
DMTH

The new DMTH tools expand the range of the existing DMT line providing the ability to cut steels, hardened materials, stainless steels and super alloys.



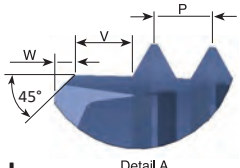


For left hand cutting
For CNC code use M04



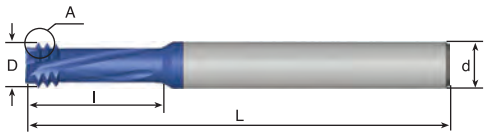
ISO Tools for Internal Thread Depth up to 2 X D1 - Metric Shanks

Designation	Pitch mm	D[1]	d mm	D	No. of Flutes	l	W	V	L
DMTH08047C14-1.0ISO	1.0	M6 - M9	8	.185	3	.57	.016	.039	2.5
DMTH08061D19-1.25ISO	1.25	M8 - M12	8	.240	4	.75	.020	.049	2.5
DMTH08078D23-1.5ISO	1.5	M10 - M15	8	.307	4	.93	.024	.059	2.5
DMTH1009D28-1.75ISO	1.75	M12	10	.354	4	1.11	.024	.069	2.9
DMTH12118D36-2.0ISO	2.0	M16 - M23	12	.465	4	1.44	.024	.079	3.3



UN Tools for Internal Thread Depth up to 2 X D1 - Metric Shanks

Designation	Pitch TPI	UN, UNEF, UNF, UNC, UNS	d mm	D	No. of Flutes	l	W	V	L
DMTH06021C7-40UN	40	4	6	.083	3	.28	.004	.024	2.3
DMTH06026C8-32UN	32	6	6	.102	3	.34	.004	.031	2.3
DMTH0805C14-28UN	28	1/4 - 3/8	8	.197	3	.59	.016	.035	2.5
DMTH08065D18-24UN	24	5/16 - 1/2	8	.256	4	.73	.020	.041	2.5
DMTH08048C15-20UN	20	1/4 - 3/8	8	.189	3	.61	.016	.049	2.5
DMTH0806D19-18UN	18	5/16 - 7/16	8	.236	4	.76	.020	.055	2.5
DMTH08067C22-16UN	16	3/8 - 1/2	8	.264	3	.90	.020	.063	2.5
DMTH10092C30-13UN	13	1/2	10	.362	3	1.18	.024	.079	2.9
DMTH12114C37-11UN	11	5/8	12	.449	3	1.46	.024	.091	3.3



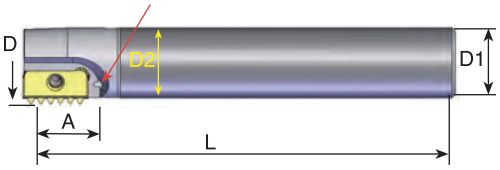
Thread Mill Toolholders

Long Carbide Shank Toolholders

Designation	A mm	D	D¹	D²	L	Insert Screw	Torx key
SR0390K12C	12	.39	.312	.312	5.0	S12	K12
SR0500J14C	14	.50	.375	.375	6.0	S14	K14
SR0620K14C	14	.62	.500	.500	7.0	S14	K14
SR0820M21C	21	.82	.625	.625	8.0	S21	K21

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

with internal coolant bore

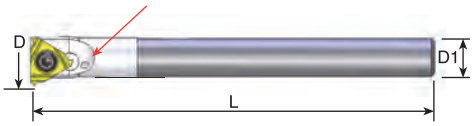


Carbide Shank Toolholders for Single Point Threading

Designation	Insert Length	Pitch Range mm	Pitch Range TPI	D	D¹	L	Insert Screw	Torx key
* SR0250H08C	08	0.5 - 1.75	48 - 14	.35	.25	4.0	S08	K08
** SR0375M11C	11	0.5 - 2.00	48 - 11	.50	.38	6.0	S11	K11

For Inserts see the Thread Turning Tools section of this Catalogue
For an internal application use an internal R.H. insert.
* Without coolant bore ** For an external application use an external L.H. insert.

with internal coolant bore

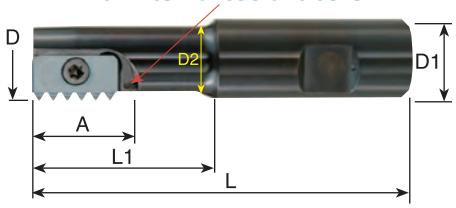


Single Insert Toolholders

Designation	A mm	D	D¹	D²	L	L¹	Insert Screw	Torx Key
SR0375H12	12	.37	.75	.30	3.35	.51	S12	K12
*SR0390H12	12	.39	.75	.30	3.35	.51	S12	K12
SR0500F14	14	.50	.75	.37	2.95	.70	S14	K14
SR0540F14	14	.54	.75	.38	2.98	.77	S14	K14
SR0570H14	14	.57	.75	.41	3.20	1.00	S14	K14
SR0670H14	14	.67	.75	.53	3.35	1.18	S14	K14
SR0790H21	21	.79	.75	.61	3.70	1.57	S21	K21
SR0790K21	21	.79	.75	.61	5.00	2.25	S21	K21
SR1140J30	30	1.14	1.00	.88	4.27	1.85	S30	K30
SR1500P40	40	1.50	1.25	1.13	7.00	4.25	S40	K40
SR1500R40	40	1.50	1.25	1.13	8.00	5.25	S40	K40
SR1730M40	40	1.73	1.50	1.38	6.02	3.19	S40	K40

*For conical inserts: 12-18 NPT, 12-18 NPTF, 12-19 BSPT

with internal coolant bore

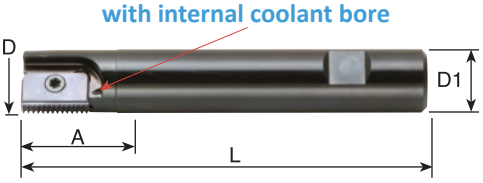


Long Shank Toolholders

Designation	A mm	D	D¹	L	Insert Screw	Torx Key
SR0940K21	21	.94	.75	5.00	S21	K21
SR1240M30	30	1.24	1.00	6.00	S30	K30
SR1500M30	30	1.50	1.25	6.00	S30	K30

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

with internal coolant bore

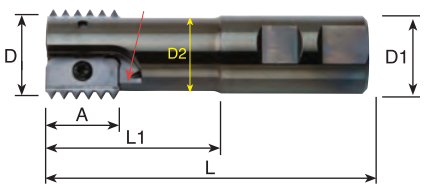


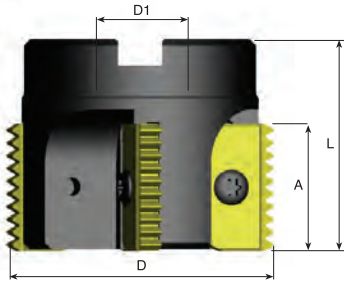
Toolholders

Twin Insert Toolholders

Designation	A mm	D	D¹	D²	L	L¹	No. of Inserts	Insert Screw	Torx Key
SR0790H14-2	14	.79	.75	.63	3.66	1.54	2	S14	K14
SR1180J21-2	21	1.18	1.00	.95	4.25	1.97	2	S21	K21
SR1580L30-2	30	1.57	1.25	1.18	5.12	2.80	2	S30	K30
SR1970M40-2	40	1.97	1.50	1.49	6.02	3.35	2	S40	K40

with internal coolant bore



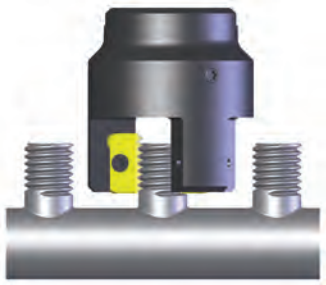


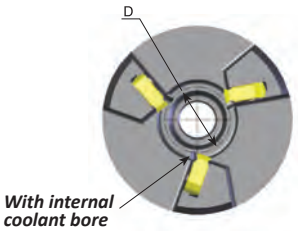
Multi Insert Toolholders

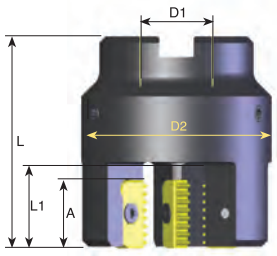
Designation	A mm	D	D¹	L	No. of Inserts	Insert Screw	Torx key
SR2480C21-5	21	2.48	.75	1.97	5	S21	K21
SR2480C30-4	30	2.48	.75	1.97	4	S30	K30
SR3150D30-4	30	3.15	1.00	2.16	4	S30	K30
SR3940D30-4	30	3.94	1.25	2.36	4	S30	K30
SR3940D30-8	30	3.94	1.25	2.36	8	S30	K30
SR3150D40-4	40	3.15	1.00	2.56	4	S40	K40
SR3940E40-4	40	3.94	1.25	2.76	4	S40	K40
SR3940E40-6	40	3.94	1.25	2.76	6	S40	K40

External Multi Insert Toolholders

- Reduced machining time
- Optimal coolant supply







External Multi Insert Toolholders

Designation	A mm	D	D¹	D²	L	L¹	No. of Inserts	Insert Screw	Torx key
SLE0790D21-3	21	.79	.75	2.28	2.56	.95	3	S21	K21
SLE1180D21-3	21	1.18	.75	2.68	2.56	.95	3	S21	K21
SLE1770E21-4	21	1.77	1.00	3.27	2.76	.95	4	S21	K21

Inserts for Indexable Thread Mills

UN

Pitch TPI		Insert Size A				
		12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
32	Ext.		14 E 32 UN			
	Int.	* 12 I 32 UN	14 I 32 UN			
28	Ext.		14 E 28 UN			
	Int.	* 12 I 28 UN	14 I 28 UN			
27	Ext.					
	Int.		14 I 27 UN			
24	Ext.		14 E 24 UN	21 E 24 UN		
	Int.	* 12 I 24 UN	14 I 24 UN	21 I 24 UN		
20	Ext.		14 E 20 UN	21 E 20 UN	30 E 20 UN	
	Int.	* 12 I 20 UN	14 I 20 UN	21 I 20 UN	30 I 20 UN	
18	Ext.		14 E 18 UN	21 E 18 UN	30 E 18 UN	
	Int.	* 12 I 18 UN	14 I 18 UN	21 I 18 UN	30 I 18 UN	
16	Ext.		14 E 16 UN	21 E 16 UN	30 E 16 UN	40 E 16 UN
	Int.	* 12 I 16 UN	14 I 16 UN	21 I 16 UN	30 I 16 UN	40 I 16 UN
14	Ext.		14 E 14 UN	21 E 14 UN	30 E 14 UN	40 E 14 UN
	Int.		14 I 14 UN	21 I 14 UN	30 I 14 UN	40 I 14 UN
12	Ext.		14 E 12 UN	21 E 12 UN	30 E 12 UN	40 E 12 UN
	Int.		14 I 12 UN	21 I 12 UN	30 I 12 UN	40 I 12 UN
11	Ext.		14 E 11 UN	21 E 11 UN		
	Int.		14 I 11 UN			
10	Ext.		14 E 10 UN	21 E 10 UN	30 E 10 UN	40 E 10 UN
	Int.		14 I 10 UN	21 I 10 UN	30 I 10 UN	40 I 10 UN
9	Ext.					
	Int.		* **14 I 9 UN			
8	Ext.				30 E 8 UN	40 E 8 UN
	Int.			21 I 8 UN	30 I 8 UN	40 I 8 UN
7	Ext.					
	Int.			21 I 7 UN		
6	Ext.				30 E 6 UN	40 E 6 UN
	Int.				30 I 6 UN	40 I 6 UN
5	Ext.					
	Int.				30 I 5 UN	
4.5	Ext					
	Int.					40 I 4.5UN
4	Ext					
	Int.					40 I 4 UN

* One cutting edge. ** Cannot be used with carbide shank Toolholders

NPT- Same Insert for Ext. & Int. Thread. One Sided.

Pitch TPI	Insert Size A				
	12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
18	12-18 NPT	14-18 NPT			
14		14-14 NPT	21-14 NPT		
11.5			21-11.5 NPT	30-11.5 NPT	40-11.5 NPT
8				30- 8 NPT	40- 8 NPT

NPTF- Same Insert for Ext. & Int. Thread. One Sided.

Pitch TPI	Insert Size A				
	12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
18	12-18 NPTF	14-18 NPTF			
14		14-14 NPTF	21-14 NPTF		
11.5			21-11.5 NPTF	30-11.5 NPTF	40-11.5 NPTF
8				30-8 NPTF	40-8 NPTF

ISO

Pitch MM		Insert Size A				
		12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
0.5	Ext.	* 12 I 0.5 ISO				
	Int.		14 I 0.5 ISO			
0.75	Ext.	* 12 I 0.75 ISO	14 E 0.75 ISO			
	Int.		14 I 0.75 ISO			
1.0	Ext.	* 12 I 1.0 ISO	14 E 1.0 ISO	21 E 1.0 ISO		
	Int.		14 I 1.0 ISO	21 I 1.0 ISO		
1.25	Ext.	* 12 I 1.25 ISO	14 E 1.25 ISO			
	Int.		14 I 1.25 ISO			
1.5	Ext.	* 12 I 1.5 ISO	14 E 1.5 ISO	21 E 1.5 ISO	30 E 1.5 ISO	40 E 1.5 ISO
	Int.		14 I 1.5 ISO	21 I 1.5 ISO	30 I 1.5 ISO	40 I 1.5 ISO
1.75	Ext.		14 E 1.75 ISO			
	Int.		14 I 1.75 ISO	21 I 1.75 ISO		
2.0	Ext.		14 E 2.0 ISO	21 E 2.0 ISO	30 E 2.0 ISO	40 E 2.0 ISO
	Int.		14 I 2.0 ISO	21 I 2.0 ISO	30 I 2.0 ISO	40 I 2.0 ISO
2.5	Ext.		14 E 2.5 ISO	21 E 2.5 ISO		
	Int.		14 I 2.5 ISO	21 I 2.5 ISO		
3.0	Ext.			21 E 3.0 ISO	30 E 3.0 ISO	40 E 3.0 ISO
	Int.			21 I 3.0 ISO	30 I 3.0 ISO	40 I 3.0 ISO
3.5	Ext.				30 E 3.5 ISO	
	Int.			21 I 3.5 ISO	30 I 3.5 ISO	40 I 3.5 ISO
4.0	Ext.				30 E 4.0 ISO	40 E 4.0 ISO
	Int.				30 I 4.0 ISO	40 I 4.0 ISO
4.5	Ext.					
	Int.				30 I 4.5 ISO	40 I 4.5 ISO
5.0	Ext.					40 E 5.0 ISO
	Int.				30 I 5.0 ISO	40 I 5.0 ISO
5.5	Ext.					
	Int.				30 I 5.5 ISO	40 I 5.5 ISO
6.0	Ext.					40 E 6.0 ISO
	Int.					40 I 6.0 ISO

BSPT - Same Insert for Ext. & Int. Thread. One Sided.

Pitch TPI	Insert Size A				
	12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
19	12-19 BSPT	14-19 BSPT			
14		14-14 BSPT	21-14 BSPT		
11			21-11 BSPT	30-11 BSPT	40-11 BSPT

WHIT BSW, BSF, BSP- Same Insert for Ext. & Int. Thread

Pitch TPI	Insert Size A				
	12mm .472	14mm .551	21mm .827	30mm 1.181	40mm 1.575
24		14-24 W			
20		14-20 W	21-20 W		
19	* 12-19 W	14-19 W	21-19 W		
16		14-16 W	21-16 W	30-16 W	
14		14-14 W	21-14 W	30-14 W	
11		14-11 W	21-11 W	30-11 W	40-11 W
8					40-8 W

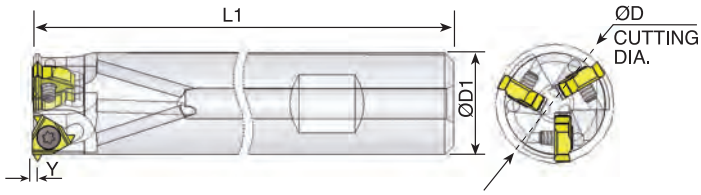
* One cutting edge.

D-Thread Toolholders & Inserts

D-Thread Mill Inserts & Toolholders for machining deep parts

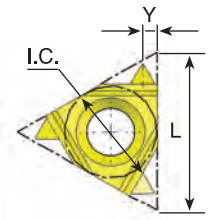
Advantages:

- Improved productivity due to multi-insert toolholders
- Low cutting resistance due to the single point inserts
- Partial Profile, standard or U-type inserts for a wide range of threads
- Holder allows for a long overhang and includes internal coolant
- Inserts with three cutting edges, reduces tooling costs
- Same insert and toolholder for both external and internal thread



D-Thread Toolholders

Designation	Insert Size L mm	Insert Size I.C.	Y	D	D¹	L¹	No. of Inserts	Insert Screw	Torx key
SR0925Q11	11	1/4	.04	.925	.75	7.5	3	SE11	K11



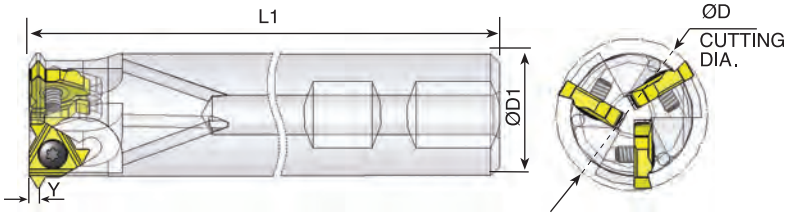
Partial 60° Size 11

Designation		Pitch Range mm	Pitch Range TPI
116OD	INT.	1.0 - 2.0	24 - 12
	EXT.	0.75 - 1.5	32 - 14

Coated Grade: PK25

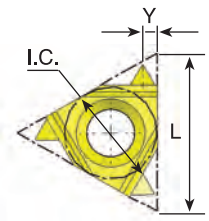
Partial 55° Size 11

Designation	Pitch Range TPI	
1155D	INT / EXT.	24 - 14



D-Thread Toolholders

Designation	Insert Size L mm	Insert Size I.C.	Y	D	D¹	L¹	No. of Inserts	Insert Screw	Torx key
SR1220R16	16	3/8	.07	1.22	1	8.86	3	SE16	K16



Partial 60° Size 16

Designation		Pitch Range mm	Pitch Range TPI
166OD	INT.	2.5 - 3.5	10 - 7
	EXT.	2.0 - 3.0	12 - 8

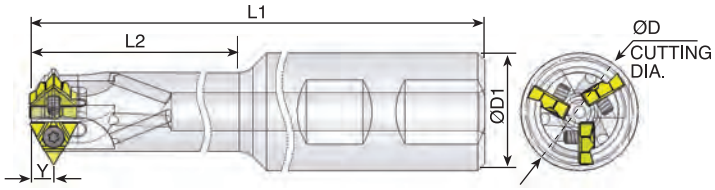
Coated Grade: PK25

Partial 55° Size 16

Designation	Pitch Range TPI	
1655D	INT / EXT.	12 - 8

D-Thread Toolholders & Inserts

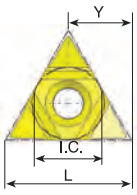
D-Thread Mill Inserts & Toolholders for machining deep parts



D-Thread Toolholders

Designation	Insert Size		Y	D	D¹	L¹	L²	No. of Inserts	Insert Screw	Torx key
	L mm	I.C.								
* SR0580M11U	11U	1/4U	.20	.580	.625	5.9	2.16	1	SE11	K11
**SR0810M11U	11U	1/4U	.20	.810	1	5.9	2.56	2	SE11	K11
SR0905M11U	11U	1/4U	.20	.905	1	5.9	3.46	3	SE11	K11

* Pitch limitations: for partial 60° - INT. - 10-9 TPI, EX. -12 - 10 TPI; for partial 55° - 12 - 9 TPI
** Pitch limitations: for partial 60° - INT. - 10-8 TPI, EX. -12 - 9 TPI; for partial 55° - 12 - 9 TPI



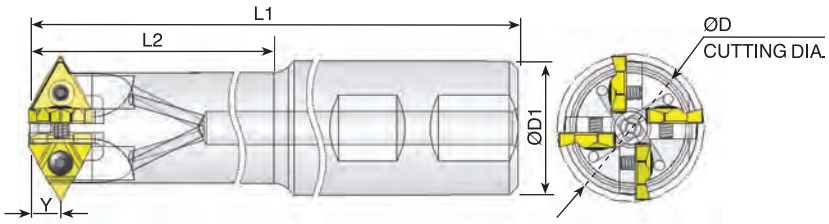
Partial 60° Size 11U

Designation	Pitch Range		
		mm	TPI
11U6OD	INT.	2.5 - 4.0	10 - 6
	EXT.	2.0 - 3.0	12 - 8

Coated Grade: PK25

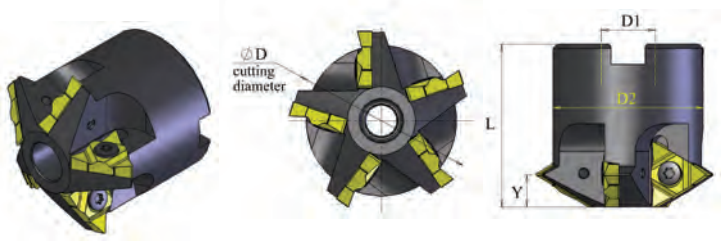
Partial 55° Size 11U

Designation	Pitch Range	
		TPI
11U55D	INT / EXT.	12 - 7



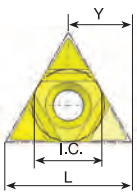
D-Thread Toolholders

Designation	Insert Size		Y	D	D¹	L¹	L²	No. of Inserts	Insert Screw	Torx key
	L mm	I.C.								
SR1400R16U	16U	3/8U	.30	1.40	1.25	8.66	6.1	4	SE16	K16



D-Thread Toolholders

Designation	Insert Size		Y	D	D¹	D²	L	No. of Inserts	Insert Screw	Torx key
	L mm	I.C.								
SR1710B16U - 5	16U	3/8U	.30	1.71	0.5	1.39	1.5	5	SE16	K16



Partial 60° Size 16U

Designation	Pitch Range		
		mm	TPI
16U6OD	INT.	4.0 - 6.0	6 - 4
	EXT.	3.0 - 5.0	8 - 5

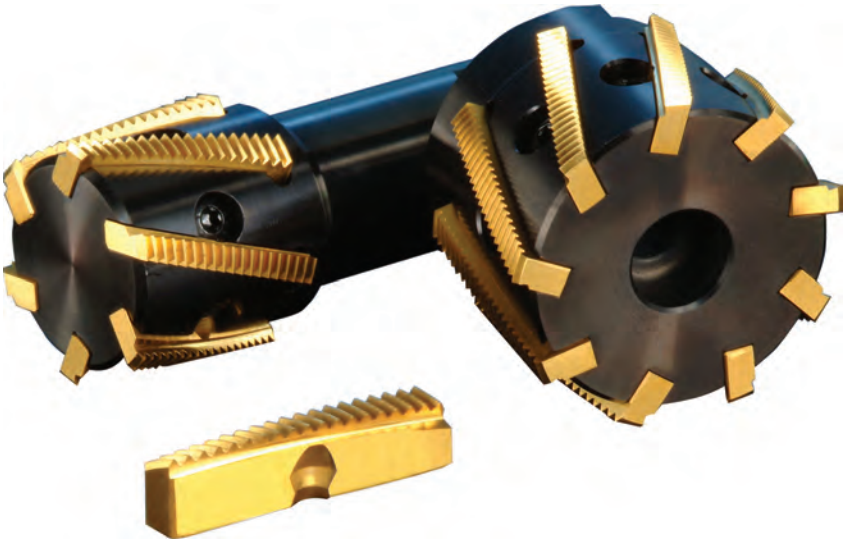
Coated Grade: PK25

Partial 55° Size 16U

Designation	Pitch Range	
		TPI
16U55D	INT / EXT.	6 - 4.5

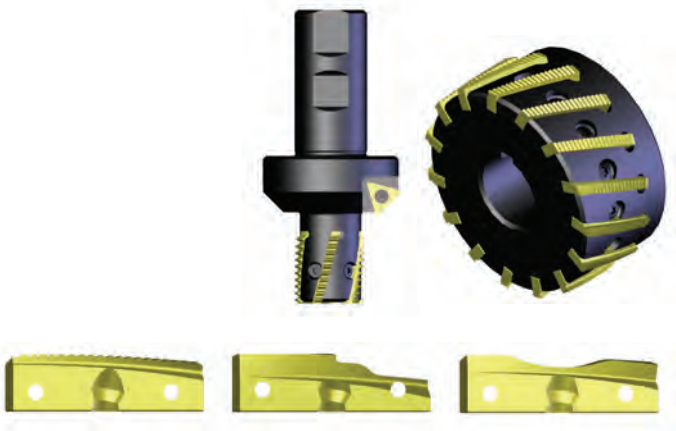
Helical Thread Mill Toolholders & Inserts

Advantages



- The spiral designed tools enable a smooth cutting operation at a high feed rate and reduced machining time
- The tools suit a wide range of applications, from machining small components in small machining centers to heavy-duty applications in high power milling machines
- Spiral fluted toolholders hold 1 to 9 inserts in a comparatively small cutting diameter
- The unique clamping method enables optimal indexability
- Spiral tools reduce vibration and chatter
- High grade finish is achieved in all applications: threading, end milling, roughing and finishing
- Inserts are available in TT7 Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade, which can be used with all materials

Special Tools

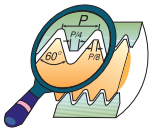


In addition to standard products, TyCarb offers special tools and inserts according to customers' requests. The toolholders are multi-purpose, making them suitable for both roughing and finishing inserts. Special tools are supplied in short delivery times.

Carbide Grade TT7

Inserts are available in Sub-Micron grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). General purpose for all materials.

Helical Thread Mill Inserts



Helical inserts have one cutting edge

ISO Inserts- for Helical Thread Mills

Insert Size	Figure	Pitch mm		Designation	M Coarse	M Fine	Toolholder
H13	1	1.0	Int.	H13I1.0ISO		≥ 15	SRH13...
		1.5	Int.	H13I1.5ISO		≥ 16	
		2.0	Int.	H13I2.0ISO	M16	≥ 17	
H15	1	1.0	Int.	H15I1.0ISO		≥ 17	SRH15...
		1.5	Int.	H15I1.5ISO		≥ 18	
		2.0	Int.	H15I2.0ISO		≥ 19	
		2.5	Int.	H15I2.5ISO	M18	≥ 20	
H17	1	1.0	Int.	H17I1.0ISO		≥ 19	SRH17...
		1.5	Int.	H17I1.5ISO		≥ 20	
		2.0	Int.	H17I2.0ISO		≥ 21	
		2.5	Int.	H17I2.5ISO	M20, M22	≥ 22	
H19	1	2.0	Int.	H19I2.0ISO		≥ 23	SRH19...
		3.0	Int.	H19I3.0ISO	M24	≥ 25	
H23	2	1.0	Ext.	H23E1.0ISO			SRH23...
			Int.	H23I1.0ISO		≥ 25	
		1.5	Ext.	H23E1.5ISO			
			Int.	H23I1.5ISO		≥ 26	
		2.0	Ext.	H23E2.0ISO			
			Int.	H23I2.0ISO		≥ 27	
		3.0	Ext.	H23E3.0ISO			
			Int.	H23I3.0ISO	M27	≥ 29	
		3.5	Int.	H23I3.5ISO	M30, M33	≥ 30	
		4.0	Int.	H23I4.0ISO	M36	≥ 31	
H32	2	1.0	Int.	H32I1.0ISO		≥ 34	SRH32...
		1.5	Ext.	H32E1.5ISO			
			Int.	H32I1.5ISO		≥ 35	
		2.0	Ext.	H32E2.0ISO			
			Int.	H32I2.0ISO		≥ 36	
		3.0	Ext.	H32E3.0ISO			
			Int.	H32I3.0ISO		≥ 38	
		3.5	Int.	H32I3.5ISO		≥ 39	
		4.0	Ext.	H32E4.0ISO			
			Int.	H32I4.0ISO	M39	≥ 40	
		4.5	Int.	H32I4.5ISO	M42, M45	≥ 41	
		5.0	Int.	H32I5.0ISO	M48	≥ 42	
H45	2	1.5	Ext.	H45E1.5ISO			SRH45...
			Int.	H45I1.5ISO		≥ 48	
		2.0	Ext.	H45E2.0ISO			
			Int.	H45I2.0ISO		≥ 49	
		3.0	Int.	H45I3.0ISO		≥ 51	
		3.5	Int.	H45I3.5ISO		≥ 52	
		4.0	Int.	H45I4.0ISO		≥ 53	
		4.5	Int.	H45I4.5ISO		≥ 54	
		5.0	Int.	H45I5.0ISO	M52	≥ 55	
		5.5	Int.	H45I5.5ISO	M56, M60	≥ 56	
		6.0	Int.	H45I6.0ISO	M64, M68	≥ 57	
H63	2	1.5	Int.	H63I1.5ISO		≥ 66	SRH63...
		2.0	Int.	H63I2.0ISO		≥ 67	
		3.0	Int.	H63I3.0ISO		≥ 69	
		4.0	Int.	H63I4.0ISO		≥ 71	
		6.0	Int.	H63I6.0ISO		≥ 75	

UN Inserts- for Helical Thread Mills

Insert Size	Figure	Pitch TPI		Designation	UN	UNC	UNF	UNS	Tool-holder
H13	1	16	Int.	H13I16UN	5/8, 11/16				SRH13...
		14	Int.	H13I14UN				5/8	
		12	Int.	H13I12UN	11/16				
H15	1	16	Int.	H15I16UN			3/4		SRH15...
		14	Int.	H15I14UN				3/4	
		12	Int.	H15I12UN	3/4, 13/16				
		10	Int.	H15I10UN				7/8, 1	
H17	1	16	Int.	H17I16UN	13/16, 1				SRH17...
		14	Int.	H17I14UN			7/8, 1		
		12	Int.	H17I12UN	7/8				
		9	Int.	H17I9UN		7/8			
H19	1	12	Int.	H19I12UN	15/16		1		SRH19...
		8	Int.	H19I8UN	$1^{1/16}$, $1^{1/8}$	1			
H23		32	Int.	H23I32UN	1			1 - $1^{1/4}$	SRH23...
		24	Int.	H23I24UN					
		20	Ext.	H23E20UN					
			Int.	H23I20UN	$1^{1/16}$ - $1^{5/16}$				
		18	Ext.	H23E18UN					
			Int.	H23I18UN				1	
		16	Ext.	H23E16UN					
			Int.	H23I16UN	$1^{1/16}$ - $1^{5/16}$				
		14	Ext.	H23E14UN					
			Int.	H23I14UN				≥ $1^{1/8}$	
		12	Ext.	H23E12UN					
			Int.	H23I12UN	$1^{1/16}$ - $1^{3/16}$		$1^{1/8}$		
		10	Ext.	H23E10UN					
			Int.	H23I10UN				≥ $1^{1/8}$	
		8	Ext.	H23E8UN					
			Int.	H23I8UN	$1^{3/16}$ - $1^{5/16}$				
		7	Ext.	H23E7UN					
			Int.	H23I7UN		$1^{1/4}$			
H28		12	Int.	H28I12UN	$1^{5/16}$		$1^{1/4}$, $1^{3/8}$		SRH28...
		8	Int.	H28I8UN	$1^{3/8}$ - $1^{7/16}$				
		6	Int.	H28I6UN	$1^{3/8}$ - $1^{9/16}$	$1^{1/2}$			
H32		24	Ext.	H32E24UN				≥ $1^{3/8}$	SRH32...
		20	Ext.	H32E20UN					
		20	Int.	H32I20UN	≥ $1^{3/8}$				
		18	Ext.	H32E18UN					
		18	Int.	H32I18UN				≥ $1^{3/4}$	
		16	Ext.	H32E16UN					
		16	Int.	H32I16UN	$1^{3/8}$ - $1^{7/8}$				
		12	Ext.	H32E12UN					
		12	Int.	H32I12UN	$1^{7/16}$ - $1^{7/8}$		$1^{1/2}$		
		8	Ext.	H32E8UN					
		8	Int.	H32I8UN	$1^{1/2}$ - 2				
		6	Ext.	H32E6UN					
		6	Int.	H32I6UN	$1^{5/8}$ - $1^{7/8}$				
		5	Int.	H32I5UN		$1^{3/4}$			
H40		6	Int.	H40I6UN	$1^{15/16}$, 2				SRH40...
		4.5	Int.	H40I4.5UN		2			
H45		16	Int.	H45I16UN	$1^{15/16}$ - $2^{1/2}$			$2^{1/16}$ - 2	SRH45...
		12	Int.	H45I12UN	$1^{15/16}$ - $2^{5/8}$				
		8	Int.	H45I8UN	$2^{1/8}$ - $2^{5/8}$				
		6	Int.	H45I6UN	$2^{1/8}$ - $2^{3/4}$				
		4.5	Int.	H45I4.5UN		$2^{1/4}$ - $2^{3/4}$			
		4	Int.	H45I4UN					
H63		16	Int.	H63I16UN	≥ $2^{5/8}$				SRH63...
		12	Int.	H63I12UN	≥ $2^{3/4}$				
		8	Int.	H63I8UN	≥ $2^{3/4}$				
		6	Int.	H63I6UN	≥ $2^{7/8}$				
		4	Int.	H63I4UN		≥ 3			

Helical Thread Mill Inserts

Helical inserts have one cutting edge

Whitworth- Same Insert for Internal & External Thread

Insert Size	Figure	Pitch TPI	Designation	Thread Size	Toolholder
H13	1	19	**H13-19W**	G 3/8	SRH13...
H15	1	14	**H15-14W**	G 1/2	SRH15...
H17	1	14	**H17-14W**	G 1/2 - 5/8	SRH17...
		11	**H17-11W**	G ≥ 1"	
H19	1	14	**H19-14W**	G 3/4 - 7/8	SRH19...
		11	**H19-11W**	G ≥ 1"	
H23	2	14	**H23-14W**	Int. G 7/8" Ext. ≥ G 1/2"	SRH23...
		11	**H23-11W**	≥ G1"	
H32	2	14	**H32-14W**	Ext. ≥ G 1/2"	SRH32...
		11	**H32-11W**	Int. ≥ G 1-1/8" Ext. ≥ G 1"	
H45	2	11	**H45-11W**	Int. ≥ G 1-5/8" Ext. ≥ G 1"	SRH45...
H63	2	11	**H63-11W**	Int. ≥ G 2-3/8" Ext. ≥ G 1"	SRH63...

Helical inserts have one cutting edge

BSPT- Same Insert for Internal & External Thread

Insert Size	Figure	Pitch TPI	Designation	Thread Size	Toolholder
H13	1	19	**H13-19 BSPT**	3/8	SRH13...
H15	1	14	**H15-14 BSPT**	1/2 - 3/4	SRH15...
H17	1	14	**H17-14 BSPT**	1/2 - 3/4	SRH17...
H23	2	11	**H23-11 BSPT**	≥ 1" BSPT	SRH23...
H32	2	11	**H32-11 BSPT**	Int. ≥ 1-1/8" BSPT Ext. ≥ 1" BSPT	SRH32...
H45	2	11	**H45-11 BSPT**	Int. ≥ 1-3/4" BSPT Ext. ≥ 1" BSPT	SRH45...
H63	2	11	**H63-11 BSPT**	Int. ≥ 2-1/2" BSPT Ext. ≥ 1" BSPT	SRH63...

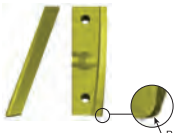
Helical inserts have one cutting edge

NPT- Same Insert for Internal & External Thread

Insert Size	Figure	Pitch TPI	Designation	Thread Size	Toolholder
H13	1	18	**H13-18 NPT**	3/8	SRH13...
H15	1	14	**H15-14 NPT**	1/2 - 3/4	SRH15...
H17	1	14	**H17-14 NPT**	1/2 - 3/4	SRH17...
H23	2	11.5	**H23-11.5 NPT**	1"-2" NPT	SRH23...
H32	2	11.5	**H32-11.5 NPT**	Int. 1-1/4"-2" NPT Ext. 1" - 2" NPT	SRH32...
H45	2	11.5	**H45-11.5 NPT**	Int. ≥ G 1-5/8" Ext. ≥ G 1"	SRH45...
		8	**H45-8 NPT**	≥ 2-1/2" NPT	
H63	2	11.5	**H63-11.5 NPT**	Ext. 1-2" NPT	SRH63...
		8	**H63-8 NPT**	≥ 3" NPT	

NPTF- Same Insert for Internal & External Thread

Insert Size	Figure	Pitch TPI	Designation	Thread Size	Toolholder
H13	1	18	**H13-18NPTF**	3/8	SRH13...
H15	1	14	**H15-14NPTF**	1/2 - 3/4	SRH15...
H17	1	14	**H17-14NPTF**	1/2 - 3/4	SRH17...
H23	2	11.5	**H23-11.5 NPTF**	1"-2"	SRH23...
H32	2	11.5	**H32-11.5 NPTF**	Int. 1-1/4"-2" Ext. 1" - 2"	SRH32...



Helical inserts have one cutting edge

Helical Finishing Inserts

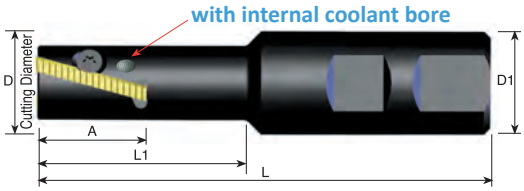
Insert Size	R	Designation	Toolholder
H23	0.2	**H23 F R 0.2**	SR 091 H23 - 2 SR 091 H23M - 2
	0.5	**H23 F R 0.5**	
	1.0	**H23 F R 1.0**	
H32	0.2	**H32 F R 0.2**	SR 126 H32 - 5 SR 126 H32P - 5
	0.5	**H32 F R 0.5**	
	1.0	**H32 F R 1.0**	
H45	0.2	**H45 F R 0.2**	SR 177 H45 - 6 SR 177 H45 - 6M
	0.5	**H45 F R 0.5**	
	1.0	**H45 F R 1.0**	
	1.5	**H45 F R 1.5**	
	2.0	**H45 F R 2.0**	
H63	0.2	**H63 F R 0.2**	SR 248 H63 - 9
	0.5	**H63 F R 0.5**	
	1.0	**H63 F R 1.0**	
	1.5	**H63 F R 1.5**	
	2.0	**H63 F R 2.0**	

Helical Thread Mill Toolholders

SR...-

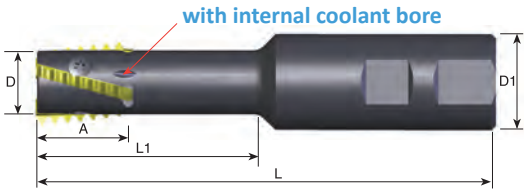
Designation	Insert Type	Insert Size A	D	D¹	L¹	L	No. of Inserts	Screw	Key
SR0510H13-1	H13	1.06	.51	.75	1.38	3.54	1	S13	K16
SR0590H15-1	H15	1.06	.59	.75	1.57	3.74	1	S15	K16
*SR0670H17-2	H17	1.06	.67	.75	1.18	3.35	2	S17	K16
*SR0670H17J-2	H17	1.06	.67	.75	1.77	3.94	2	S17	K16
SR0750H19-3	H19	1.06	.75	.75	1.18	3.35	3	S19	K16
SR0750H19J-3	H19	1.06	.75	.75	2.16	4.33	3	S19	K16

*When using NPT, NPTF, BSPT inserts, the cutting diameter D = .71



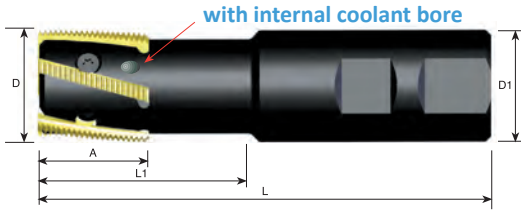
SR091-...

Designation	A	D	D¹	L	L¹	No. of Inserts	Screw	Key
SR091H23-2	1.06	.91	1.0	4.5	2.00	2	S23	K21
SR091H23M-2	1.06	.91	1.0	6.0	3.07	2	S23	K21



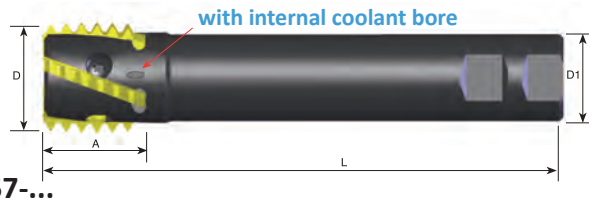
SR110-...

Designation	A	D	D¹	L	L¹	No. of Inserts	Screw	Key
SR110H28-3	1.26	1.10	1.25	6.0	3.0	3	S32S	K22



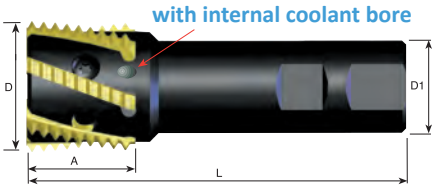
SR126-...

Designation	A	D	D¹	L	L¹	No. of Inserts	Screw	Key
SR126H32-5	1.26	1.26	1.25	5.0	2.36	5	S32	K22
SR126H32P-5	1.26	1.26	1.25	7.0	3.58	5	S32	K22



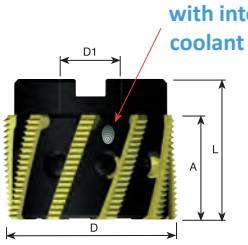
SR157-...

Designation	A	D	D¹	L	No. of Inserts	Screw	Key
SR157H40-4	1.46	1.57	1.25	7.5	4	S45S	K40



SR177-...

Designation	A	D	D¹	L	No. of Inserts	Screw	Key
SR177H45-6	1.46	1.77	1.25	5.0	6	S45S	K40



SR177-... / SR248-...

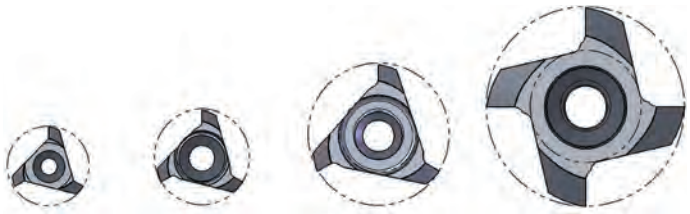
Designation	A	D	D¹	L	No. of Inserts	Screw	Key
SR177H45-6M	1.46	1.77	.50	1.91	6	S45	K40
SR248H63-9	1.50	2.48	.75	2.00	9	S63	K40

CMT Vertical Thread Mill Toolholders & Inserts

Presenting a new family of vertical thread milling indexable inserts and toolholders to perform a wide variety of threads.

Advantages:

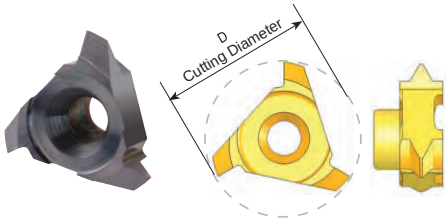
- Ground profile inserts for high precision and excellent performance
- Working at high machining parameters, with high surface quality
- Solid and accurate clamping method enables full repeatability
- Same insert for right-hand or left-hand threads
- Toolholders include weldon shank and coolant bore
- Chamfer inserts are also available



C10 *3 flutes* | C12 *3 flutes* | C18 *3 flutes* | C25 *4 flutes*

Partial Profile 60°- for Internal & External Thread

Insert Type	Pitch Range mm	Pitch Range TPI	Designation	D	Thread Diameter (min) Pitch Low Range	Thread Diameter (min) Pitch High Range	Holder Code
C10	Int. 0.5 - 0.8	56 - 28	C10A60	.39	ø ≥ .43	ø ≥ .47	H1, 2, 12, 13
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 2.0	28 - 13	C10G60		ø ≥ .47	ø ≥ .55	H1, 2, 12
	Ex. 0.8 - 1.75	32 - 15					
C12	Int. 0.5 - 0.8	56 - 28	C12A60	.47	ø ≥ .51	ø ≥ .55	H3, 4, 5, 14
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 2.0	28 - 13	C12G60	.49	ø ≥ .55	ø ≥ .63	
	Ex. 0.8 - 1.75	32 - 15					
C18	Int. 0.5 - 0.8	56 - 28	C18A60	.70	ø ≥ .75		H6, 7, 8, 9, 15
	Ex. 0.4 - 0.8	64 - 32					
	Int. 1.0 - 1.75	28 - 14	C18G60		ø ≥ .79	ø ≥ .83	
	Ex. 0.8 - 1.5	32 - 16					
	Int. 2.0 - 3.0	13 - 8	C18D60		ø ≥ .83	ø ≥ .91	
	Ex. 1.75 - 2.5	15 - 10					
C25	Int. 1.5 - 2.5	16 - 10	C25G60	.98	ø ≥ 1.10	ø ≥ 1.18	H10, 11, 16, 17
	Ex. 1.0 - 2.0	28 - 13					
	Int. 3.0 - 5.0	8 - 5	C25N60		ø ≥ 1.18	ø ≥ 1.34	
	Ex. 2.5 - 4.5	10 - 6					
	Int. 5.0 - 6.0	5 - 4	C25Q60		ø ≥ 1.34	ø ≥ 1.38	
	Ex. 4.5 - 5.0	6 - 5					



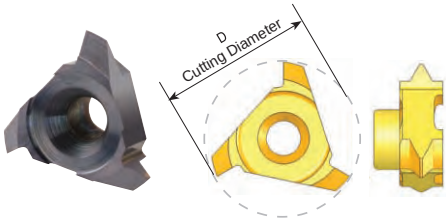
CMT Vertical Thread Mill Inserts

CMT Ordering Codes

C	18	I	12	UN	TT7
CMT Line	Cutting Dia. 10 = 10mm 12 = 12mm 18 = 17.8mm 25 = 25mm	I = Internal	Thread Pitch A, D, G, N, Q= Partial Profile C= Chamfer and Grooving W = Grooving	Thread Profile 60° & 55° ISO, UN, Whitworth, Trapez, Acme Chamfering	Carbide Grade TT7

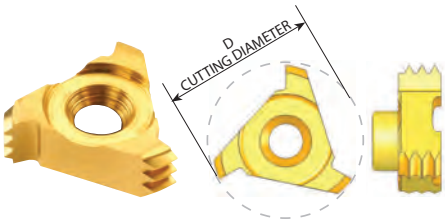
Partial Profile 55°- for Internal & External Thread

Designation	Insert Type	Pitch Range TPI	D	Thread Diameter (min)	Holder Code
C10G55	C10	19 - 14	.39	ø ≥ .51	H1, 2, 12
C12G55	C12	28 - 19	.47	ø ≥ .55	H3, 4, 5, 14
C12N55		14 - 11	.48	ø ≥ .63	
C18G55	C18	14 - 8	.71	ø ≥ .91	H6, 7, 8, 9, 15
C25N55	C25	7 - 5	.98	ø ≥ 1.22	H10, 11, 16, 17

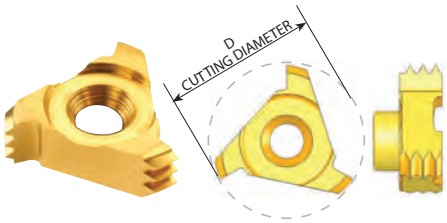


Full Profile ISO - for Internal Thread

Designation	Insert Type	Pitch mm	M Coarse	M Fine	Number of Teeth	D	Holder Code
C10I0.5ISO	C10	0.5		ø ≥ .39	6	.35	H1, 2, 12, 13
C10I1.0ISO		1.0		ø ≥ .47	3	.39	
C10I1.5ISO		1.5		ø ≥ .51	2		
C10I2.0ISO		2.0	M14	ø ≥ .55	1	.39	H1, 2, 12
C12I0.5ISO	C12	0.5		ø ≥ .51	6	.47	H3, 4, 5, 14
C12I0.75ISO		0.75		ø ≥ .51	4		
C12I1.0ISO		1.0		ø ≥ .55	3		
C12I1.5ISO		1.5		ø ≥ .59	2		
C12I2.0ISO		2.0	M16	ø ≥ .63	1	.49	
C12I2.5ISO		2.5	M18, M20	ø ≥ .67	1	.47	H3, 4, 5
C12I3.0ISO		3.0		ø ≥ .67	1	.49	
C18I0.5ISO	C18	0.5		ø ≥ .77	9	.70	H6, 7, 8, 9, 15
C18I0.75ISO		0.75		ø ≥ .77	6		
C18I1.0ISO		1.0		ø ≥ .79	5		
C18I1.5ISO		1.5		ø ≥ .79	3		
C18I2.0ISO		2.0		ø ≥ .83	2		
C18I2.5ISO		2.5	M22	ø ≥ .87	2		
C18I3.0ISO		3.0	M24, M27	ø ≥ .91	1		
C18I3.5ISO		3.5	M30, M33	ø ≥ .94	1		
C25I3.0ISO	C25	3.0	M32, M33	ø ≥ 1.18	2	.98	H10, 11, 16, 17
C25I4.0ISO		4.0	M36, M39	ø ≥ 1.26	1		
C25I4.5ISO		4.5	M45	ø ≥ 1.30	1		
C25I5.0ISO		5.0	M48, M52	ø ≥ 1.34	1		
C25I5.5ISO		5.5	M60	ø ≥ 1.38	1		
C25I6.0ISO		6.0	M64, M68	ø ≥ 1.42	1		



CMT Vertical Thread Mill Inserts



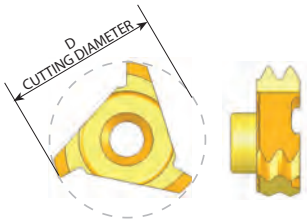
Full Profile UN - for Internal Thread

Designation	Insert Type	Pitch TPI	Nominal Size	UNC	UNF	UNEF	Number of Teeth	D	Holder Code
C10I20UN	C10	20			1/2		2	.39	H1, 2, 12, 13
C10I18UN		18			9/16		2		
C10I12UN		12	5/8, 11/16, 3/4	9/16			1	.39	H1, 2, 12
C12I32UN	C12	32	9/16, 5/8				3	.47	H3, 4, 5, 14
C12I28UN		28	9/16, 5/8, 11/16				3		
C12I24UN		24				9/16, 5/8, 11/16	2		
C12I20UN		20	9/16, 5/8, 11/16			3/4	2		
C12I18UN		18			5/8		2		
C12I16UN		16	5/8, 11/16		3/4		1		
C12I11UN		11		5/8			1	.47	H3, 4, 5
C12I10UN		10		3/4			1		
C18I32UN	C18	32	3/4, 13/16, 7/8				6	.70	H6, 7, 8, 9, 15
C18I28UN		28	3/4, 13/16, 7/8				5		
C18I24UN		24					4		
C18I20UN		20	$1^{1/16}$, 1.1/8			13/16, 7/8, 15/16	3		
C18I18UN		18					3		
C18I16UN		16	7/8, 1				3		
C18I14UN		14			7/8		2		
C18I12UN		12	7/8		$1, 1^{1/8}$		2		
C18I11UN		11					2		
C18I9UN		9		7/8			1		
C18I8UN		8		1			1		
C25I8UN	C25	8	$1^{3/16}$, $1^{1/4}$, $1^{5/16}$				2	.98	H10, 11, 16, 17
C25I7UN		7		$1^{1/4}$			1		
C25I6UN		6	$1^{7/16}$, $1^{9/16}$	$1^{3/8}$, $1^{1/2}$			1		
C25I5UN		5		1 3/4			1		
C25I4UN		4		$2^{1/2}$, $2^{3/4}$			1		

CMT Vertical Thread Mill Inserts

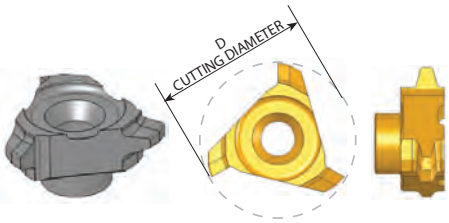
G55° - BSW, BSF, BSP for Internal & External Thread

Designation	Insert Type	Pitch TPI	Standard	Number of Teeth	D	Holder Code
C10 19 W	C10	19	G 1/4	2	.39	H1, 2, 12, 13
C12 19 W	C12	19	G 3/8	2	.47	H3, 4, 5, 14
C18 14 W	C18	14	G 7/8	2	.70	H6, 7, 8, 9, 15
C18 11 W		11	G≥1	2		



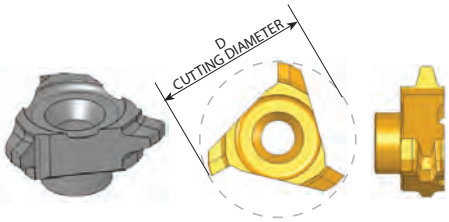
Trapez - DIN 103 for Internal Thread

Designation	Insert Type	Pitch MM	Standard	D	Holder Code
C10 I 2 TR	C10	2.0	ø ≥ .63	.39	H1, 2, 12,
C18 I 3 TR	C18	3.0	ø ≥ .94	.70	H6, 7, 8, 9, 15
C18 I 4 TR		4.0	ø ≥ 1.02		H15
C18 I 5 TR		5.0	ø ≥ 1.10		
C25 I 6 TR	C25	6.0	ø ≥ 1.42	.98	H10, 11, 16, 17



ACME - for Internal Thread

Designation	Insert Type	Pitch TPI	Standard	D	Holder Code
C18 I 5 ACME	C18	5	$1^{1/8}$, $1^{1/4}$	.71	Metric CRC 1218 P
C25 I 4 ACME	C25	4	$1^{1/2}$, $1^{3/4}$, 2	.98	H10, 11, 16, 17



CMT Vertical Thread Mill Inserts

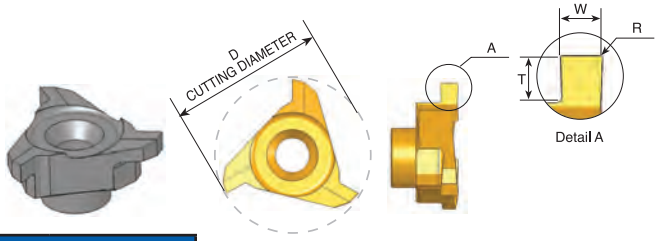
Chamfering & Grooving

Advantages:

- Optimal for deburring, back chamfering and grooving
- Double side cutting
- General purpose for all materials

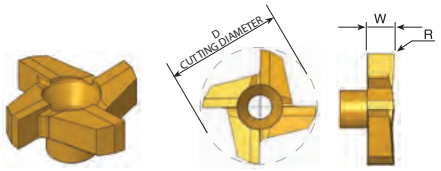
Insert Type	Designation	D	H	W	A	Holder Code
C10	**C10 C90**	.39	.051	.016	90˚	H1, 2, 12
C12	**C12 C90**	.47	.053	.012		H3, 4, 5
C18	**C18 C90**	.70	.077	.043		H6, 7, 8, 9, 15
C25	**C25 C90**	.98	.098	.039		H10, 11, 16, 17

Groove Milling



Insert Type	Designation	D	W ± .001	T max.	R	Groove Dia. (min.)	Holder Code
C10	**C10 W08**	.39	.031	.03	.004	ø > .39	H1, 2, 12, 13
	C10 W09		.035	.04			
	C10 W10		.039	.04			
C12	**C12 W08**	.47	.031	.03	.004	ø > .47	H3, 4, 5, 14
	C12 W10		.039	.04			
C18	**C18 W10**	.70	.039	.06	.004	ø > .70	H6, 7, 8, 9, 15
	C18 W12		.047	.06			
	C18 W15		.059	.08			
	C18 W20		.079	.11			H15
C25	**C25 W20**	.98	.079	.12	.008	ø > .98	H10, 11, 16, 17
	C25 W25		.098	.12			
	C25 W30		.118	.12			
	C25 W35		.138	.14			
	C25 W40		.157	.14			
	C25 W50		.197	.14			

For Face Milling & Finishing

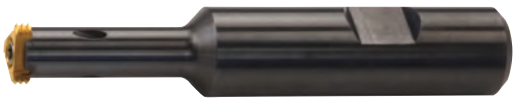


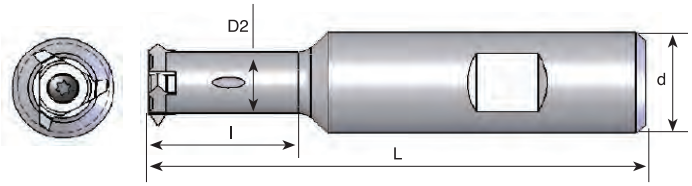
Insert Type	Designation	D	W	R	Holder Code
C18	**C18 F R0.1**	.70	.20	.004	H6, 7, 8, 9, 15
C25	**C25 F R0.2**	.98	.24	.008	H10, 11, 16, 17

CMT Vertical Thread Mill Toolholders

S	RC	0750	H	18
Clamping Method S= Screw C = Carbide Shank		Shank Diameter	Length of Toolholders	Cutting Diameter 10 = 10mm 12 = 12mm 18 = 17.8mm 25 = 25mm

with internal coolant

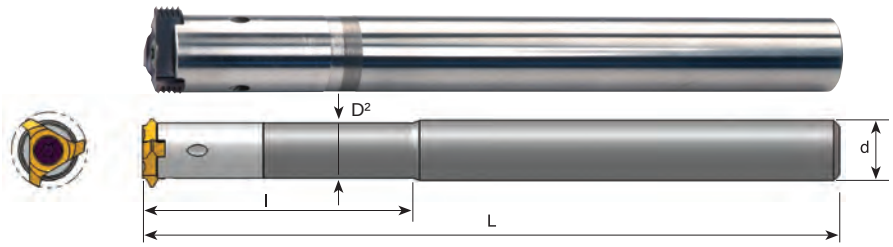




Steel Toolholders *with Internal Coolant*

Tool No.	Designation	Insert Type	d	D²	l	L	Insert Screw	Torx Key
H1	SRC 0500 E10	C10	.500	.29	.75	2.8	S5	K5
H2	SRC 0625 G10		.625		.75	3.5		
H3	SRC 0500 E12	C12	.500	.35	.98	2.8	S10	K10
H4	SRC 0625 G12		.625		.98	3.5		
H5	SRC 0625 H12		.625		1.38	4.0		
H6	SRC 0625 H18	C18	.625	.54	1.89	4.0	S16	K16
H7	SRC 0750 H18		.750		1.26	4.0		
H8	SRC 0750 J18		.750		1.89	4.5		
H9	SRC 0750 L18		.750		2.91	5.5		
H10	SRC 1000 J25	C25	1.00	.69	1.77	4.5	S27	K27
H11	SRC 1000 M25				3.15	5.9		

with internal coolant bore



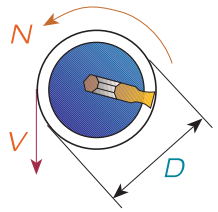
Carbide Shank Toolholders *with Internal Coolant Bore*

Tool No.	Designation	Insert Type	d	D²	l	L	Insert Screw	Torx Key
H12	CRC 0312 L13 K10	C10	.312	.287	1.38	5.0	S5	K5
H13	CRC 0312 K10		.312	.312	-	5.0		
H14	CRC 0375 M12	C12	.375	.375	-	6.0	S10	K10
H15	CRC 0500 P18	C18	.500	.500	-	7.0	S16	K16
H16	CRC 0625 R25	C25	.625	.625	-	8.2	S27	K27
H17	CRC 0750 L33 S25		.750	.689	3.35	10.0		

Conversion of Cutting Speed to Rotational Speed

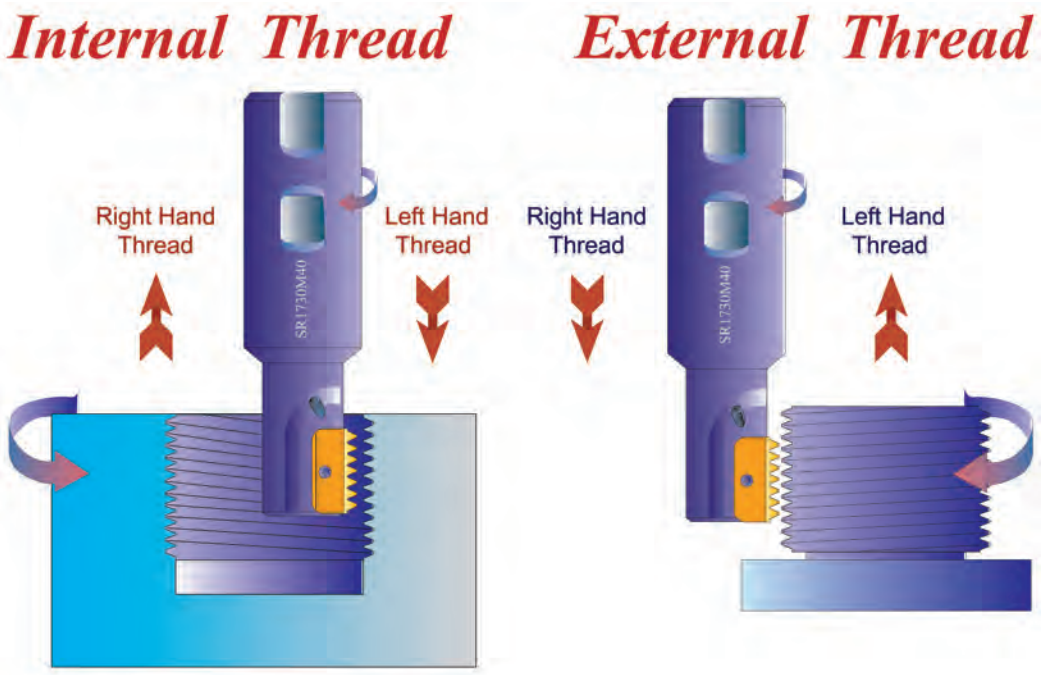
Conversion of selected cutting speed to rotational speed is calculated by the following formula:

$$N = \frac{V \times 12}{\pi \times D} = \frac{400 \times 12}{3.14 \times 1.25} = 1222 \text{ RPM}$$



Example: **V=400 ft/min.**
D=1.25

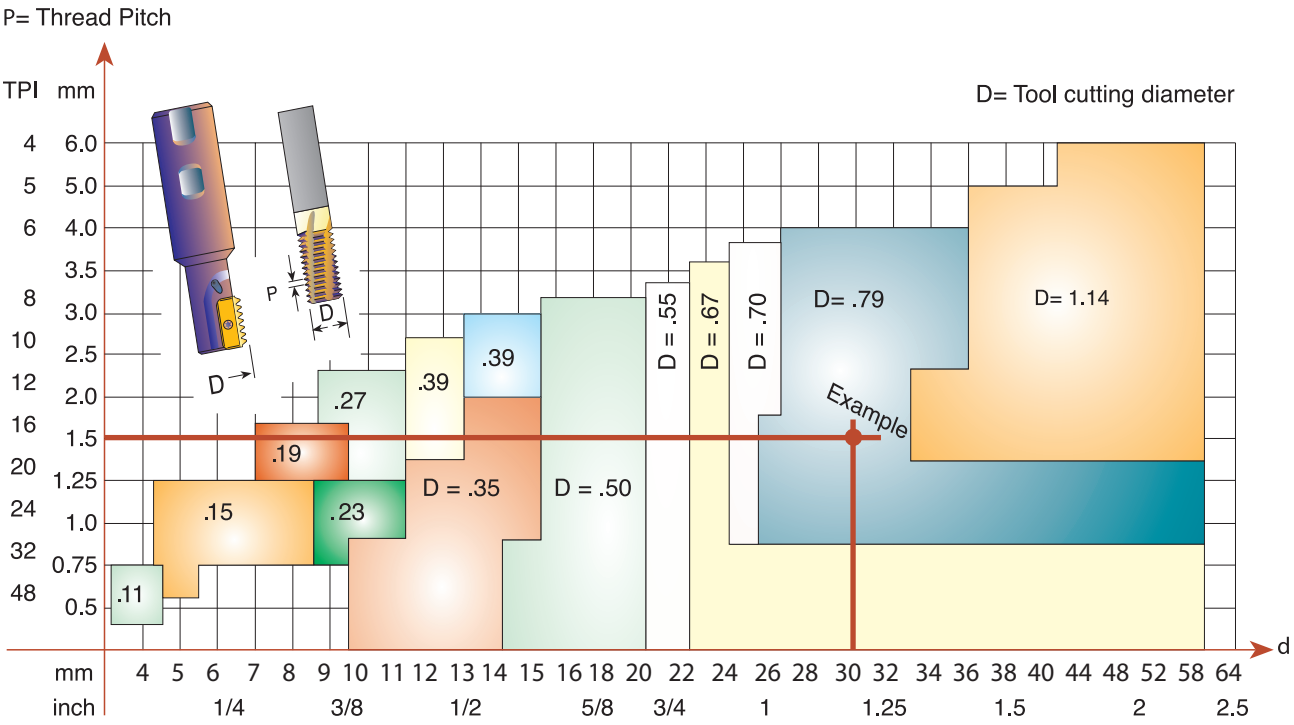
D= Cutting Diameter



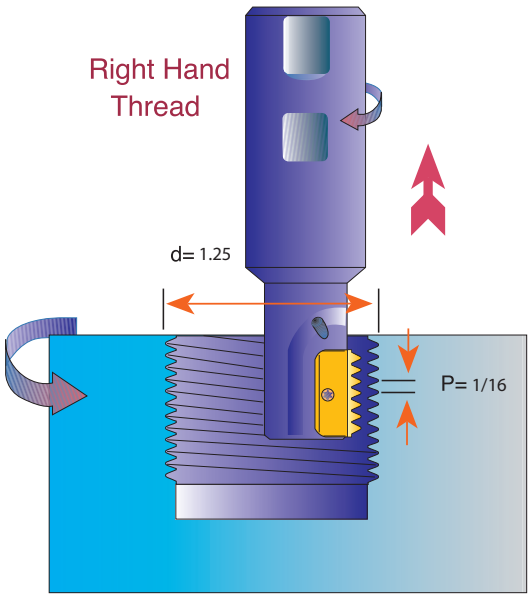
Tool Selection

For Indexable and Solid Carbide Thread Mills

The following chart provides a fairly accurate visual selection tool for Internal Threading.
The chart is suitable for the following thread forms: ISO, UN, WHIT, NPT, NPTF, BSPT and PG.



Any tool with a small cutting diameter can produce larger diameter threads.
Example: Internal thread 1¼ x 16UN:
Find a Milling Tool to produce d=1.25 Internal right hand UN thread with a thread pitch P=1/16 inch
As can be seen from the chart above, the two red lines intersect at a selected tool with a cutting diameter of D=.79 inch
Chosen toolholder: SR0790 H21
Insert: 21 I 16 UN TT7

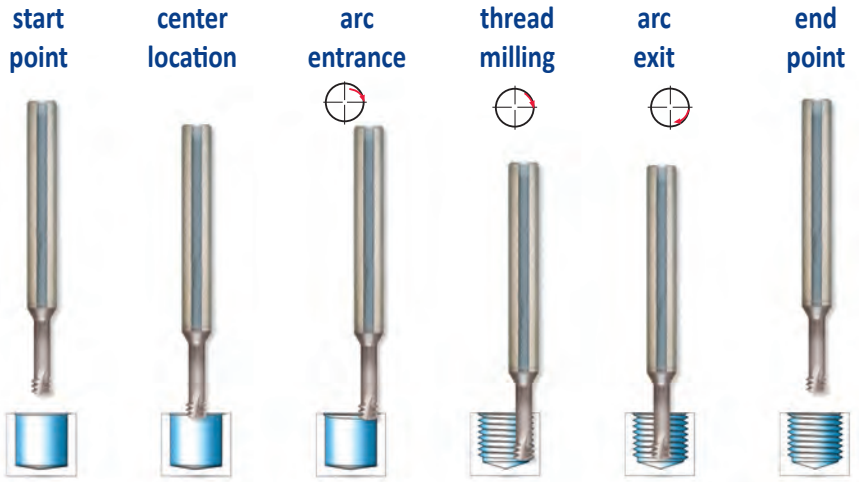


If you need assistance, please call your local distributor and ask for help in selecting the appropriate tool as well as for a CNC program to suit your CNC milling machine.

Thread Mill Technical Section

Mini Thread Mill - MTS & MTI Types

ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D													
			Ø .04	Ø .06	Ø .08	Ø.12	Ø.16	Ø .20	Ø.24	Ø .28	Ø.31	Ø.35	Ø.39	Ø.47	Ø.55	Ø.63
P	Low and Medium Carbon Steels < 0.55%C	200 - 390	.0016	.0020	.0020	.0028	.0035	.0043	.0051	.0055	.0059	.0063	.0063	.0067	.0071	.0071
	High Carbon Steels ≥ 0.55%C	200 - 300	.0012	.0016	.0020	.0024	.0031	.0035	.0039	.0047	.0051	.0055	.0055	.0063	.0067	.0071
	Alloy Steels, Treated Steels	160 - 260	.0012	.0016	.0016	.0020	.0020	.0024	.0028	.0028	.0031	.0035	.0039	.0047	.0051	.0055
M	Stainless Steels - Free Cutting	230 - 330	.0008	.0012	.0012	.0016	.0020	.0024	.0024	.0028	.0031	.0035	.0039	.0043	.0047	.0051
	Cast Steels - Austenitic	200 - 300	.0008	.0012	.0012	.0016	.0020	.0024	.0024	.0028	.0031	.0035	.0039	.0043	.0047	.0051
	Cast Steels	230 - 300	.0012	.0016	.0016	.0020	.0020	.0024	.0028	.0028	.0031	.0035	.0039	.0047	.0051	.0055
K	Cast Iron	130 - 260	.0016	.0020	.0020	.0028	.0035	.0043	.0051	.0055	.0059	.0063	.0063	.0067	.0071	.0071
N	Aluminum ≤ 12% Si, Copper	330 - 660	.0016	.0020	.0020	.0028	.0035	.0043	.0051	.0055	.0059	.0063	.0063	.0067	.0071	.0071
	Aluminum > 12% Si	200 - 460	.0012	.0012	.0012	.0016	.0020	.0024	.0024	.0028	.0031	.0035	.0039	.0043	.0051	.0054
	Synthetics, Duroplastics, Thermoplastics	160 - 660	.0035	.0039	.0043	.0047	.0055	.0063	.0071	.0075	.0075	.0075	.0075	.0075	.0079	.0079
S	Nickel Alloys, Titanium Alloys	70 - 130	.0012	.0012	.0012	.0016	.0016	.0020	.0024	.0024	.0024	.0028	.0028	.0028	.0031	.0031



Mini Thread Mill vs. Taps

Features	Mini Thread Mill	Taps
Thread surface quality	High	Medium
Thread geometry	Very accurate	Medium
Thread tolerances	4H, 5H, 6H with std cutter	6H with standard tap, 4H with specific tap
Machining time	Same as tap or shorter	Short
Tool breakage	Almost not possible	Could happen often
Machining load	Very low	High
Range of thread diameters	Wide range of diameters	Specific tap for each diameter
Right/Left hand threading	Same cutter	Specific tap for each
Geometric shape	Full profile	Partial profile

TT7: Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade which can be used with all materials; it should be run at medium to high cutting speeds.

TT8 Sub-Micron Grade with Aluminum Titanium Nitride (AlTiN) multi-layer coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

TT11: Ultra-fine sub-micron grade with advanced PVD triple coating.

Cutting Data - MTG Type

	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D									
			Ø 3/32	Ø 1/8	Ø 5/32	Ø 1/4	Ø 5/16	Ø 3/8	Ø 1/2	Ø 19/32	Ø 5/8	Ø 3/4
P	Low & Medium Carbon Steels < 0.55%C	330 - 820	.0012	.0016	.002	.002	.003	.003	.004	.004	.005	.006
	High Carbon Steels ≥ 0.55%C	360 - 590	.0009	.0011	.001	.002	.002	.003	.003	.004	.004	.005
	Alloy Steels, Treated Steels	300 - 520	.0008	.0009	.001	.001	.002	.002	.002	.002	.003	.003
M	Stainless Steels - Free Cutting	200 - 520	.0008	.0012	.001	.002	.002	.002	.002	.003	.003	.004
	Stainless steel - austenitic	200 - 390	.0008	.0008	.001	.001	.002	.002	.002	.002	.003	.003
	Cast steels	430 - 560	.0008	.0009	.001	.001	.002	.002	.002	.002	.003	.003
K	Cast iron	230 - 490	.0011	.0014	.002	.002	.003	.003	.004	.004	.005	.006
N	Aluminum ≤ 10% Si Copper	490 - 1150	.0011	.0014	.002	.002	.003	.003	.004	.004	.005	.006
	Aluminum > 10% Si	330 - 820	.0008	.0009	.001	.001	.002	.002	.002	.002	.003	.003
	Synthetics, Duroplastics, Thermoplastics	330 - 1310	.0021	.0024	.003	.003	.004	.004	.005	.005	.006	.007
S	Nickel Alloys, Titanium Alloys	70 - 260	.0009	.0009	.0010	.0010	.0011	.0012	.0013	.0014	.0015	.0017

For cutters with long cutting edge length, reduce feed rate by 40%

Thread Mill Solid Carbide Grades, Speed & Feed Selection

MT, MTB, MTZ, EMT Types

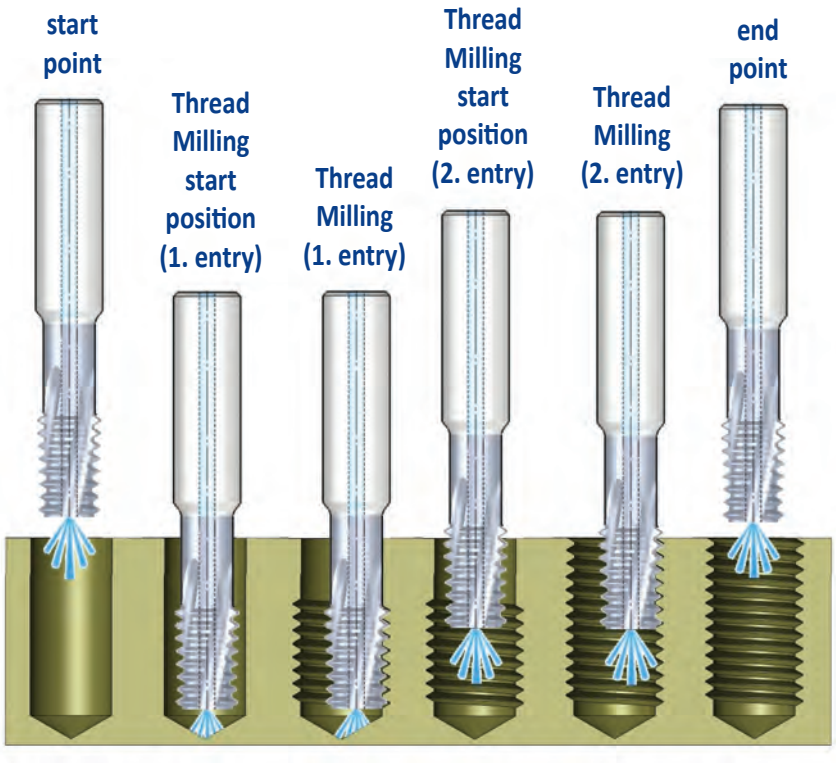
ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D									
			Ø .08	Ø.12	Ø.16	Ø.24	Ø.31	Ø.39	Ø.47	Ø.55	Ø.63	Ø.79	Ø.98
P	Low and Medium Carbon Steels < 0.55%C	330 - 820	.0012	.0016	.0016	.0024	.0028	.0032	.0037	.0042	.0047	.0057	.0070
	High Carbon Steels ≥ 0.55%C	360 - 590	.0009	.0011	.0013	.0018	.0022	.0026	.0031	.0035	.0039	.0048	.0059
	Alloy Steels, Treated Steels	300 - 520	.0008	.0009	.0010	.0013	.0016	.0018	.0021	.0023	.0026	.0031	.0038
M	Stainless Steels - Free Cutting	200 - 520	.0008	.0012	.0010	.0016	.0020	.0024	.0024	.0028	.0031	.0035	.0043
	Stainless Steels - Austenitic	200 - 390	.0008	.0008	.0010	.0012	.0016	.0020	.0020	.0024	.0028	.0031	.0039
	Cast Steels	430 - 560	.0008	.0009	.0010	.0013	.0016	.0018	.0021	.0023	.0026	.0031	.0038
K	Cast Iron	230 - 490	.0011	.0014	.002	.0022	.0027	.0032	.0037	.0042	.0047	.0057	.0070
N	Aluminum ≤ 12% Si, Copper	490 - 1150	.0011	.0014	.002	.0022	.0027	.0032	.0037	.0042	.0047	.0057	.0070
	Aluminum > 12% Si	330 - 820	.0008	.0009	.0010	.0013	.0016	.0018	.0021	.0023	.0026	.0031	.0038
	Synthetics, Duroplastics, Thermoplastics	330 - 1310	.0021	.0024	.003	.0032	.0038	.0043	.0049	.0054	.0060	.0071	.0085
S	Nickel Alloys, Titanium Alloys	70 - 260	.0009	.0009	.0010	.0010	.0011	.0012	.0013	.0014	.0015	.0017	.0019

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

TT7: Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade which can be used with all materials; it should be run at medium to high cutting speeds.

Cutting Data - MTQ Type

ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D					
			Ø .39	Ø .47	Ø.55	Ø .63	Ø .79	Ø .98
P	Low and Medium Carbon Steels < 0.55%C	330 - 820	.0022	.0026	.0029	.0033	.0040	.0049
	High Carbon Steels ≥ 0.55%C	360 - 590	.0018	.0021	.0025	.0028	.0034	.0041
	Alloy Steels, Treated Steels	300 - 520	.0013	.0014	.0016	.0018	.0022	.0026
M	Stainless Steels - Free Cutting	200 - 520	.0017	.0017	.0019	.0022	.0025	.0030
	Stainless Steels - Austenitic	200 - 390	.0014	.0014	.0017	.0019	.0022	.0028
	Cast Steels	430 - 560	.0013	.0014	.0016	.0018	.0022	.0026
K	Cast Iron	230 - 490	.0022	.0026	.0029	.0033	.0040	.0049
N	Aluminum ≤ 12% Si, Copper	490 - 1150	.0022	.0026	.0029	.0033	.0040	.0049
	Aluminum > 12% Si	330 - 820	.0013	.0014	.0016	.0018	.0022	.0026
	Synthetics, Duroplastics, Thermoplastics	330 - 1310	.0030	.0034	.0038	.0042	.0050	.0059
S	Nickel Alloys, Titanium Alloys	70 - 260	.0009	.0009	.0010	.0010	.0012	.0013

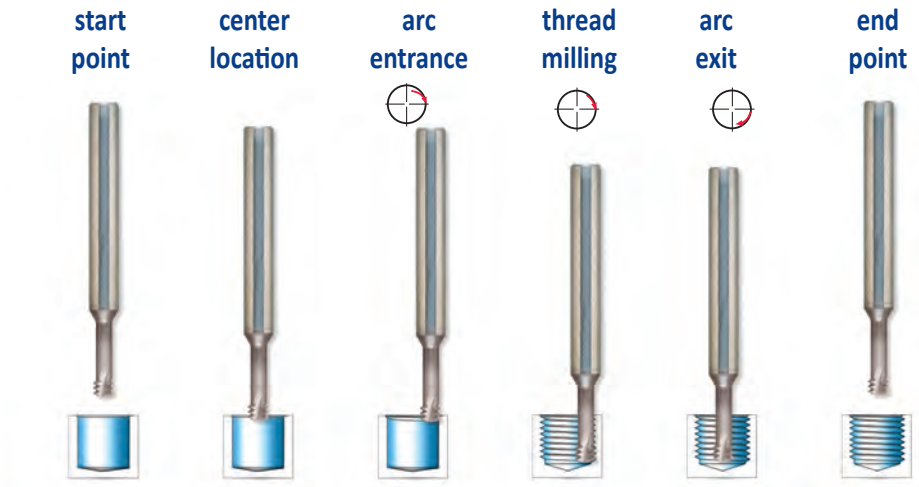


TT7: Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade which can be used with all materials; it should be run at medium to high cutting speeds.

Mini Thread Mill - MTSH Type

Left hand cutting for CNC code use M04

ISO	Materials	Hardness HRc	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D													
				Ø.04	Ø.06	Ø.08	Ø.12	Ø.16	Ø.20	Ø.24	Ø.28	Ø.31	Ø.35	Ø.39	Ø.47	Ø.55	Ø.63
S	Nickel Alloys, Titanium Alloys & High Temp Alloys		70 - 130	.0012	.0012	.0012	.0016	.0016	.0020	.0024	.0024	.0024	.0028	.0028	.0028	.0031	.0031
H	Hardened Steels	45 - 50	200 - 230	.0012	.0016	.0016	.0020	.0020	.0024	.0024	.0028	.0028	.0031	.0031	.0035	.0039	.0043
		51 - 55	160 - 220	.0008	.0012	.0012	.0016	.0016	.0020	.0020	.0024	.0024	.0028	.0028	.0031	.0035	.0039
		56 - 62	130 - 160	.0004	.0008	.0008	.0012	.0012	.0016	.0016	.0020	.0020	.0024	.0024	.0028	.0031	.0035

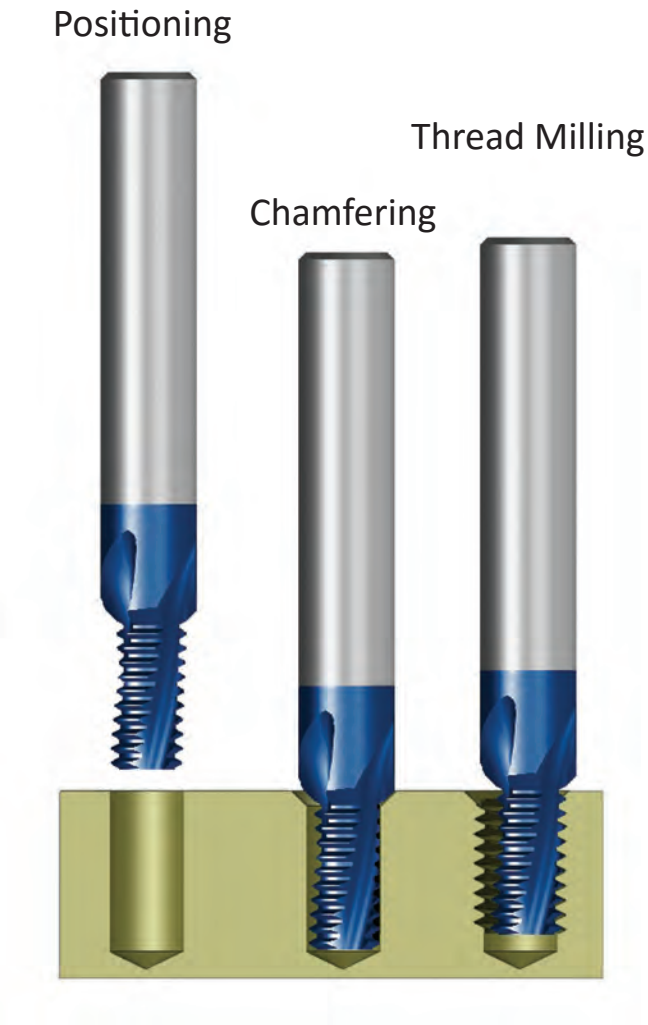


Case Study	
Application	Internal Thread (M4 x 0.7)
Thread Depth	8.0 mm
Workpiece Material	Tool Steel: D2
Hardness	60-62 (HRc)
Cutter Description	MTSH0250C35 0.7 ISO
Machining Conditions	Cutting Speed: 144 ft / min Feed: .0012 Inch / Tooth
Machine	Mori Seiki VN5000
Control	Fanuc
Cooling Lubricant	Emulsion
Tool Life (No. of Threads)	84

Mini Thread Mill - MTH Type

ISO	Materials	Hardness HRc	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D								
				Ø.10	Ø.12	Ø.16	Ø.20	Ø.24	Ø.28	Ø.31	Ø.35	Ø.39
S	Nickel Alloys, Titanium Alloys & High Temp Alloys		66 - 164	.0008	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0016
H	Hardened Steels Cast Iron	45 - 50 51 - 55 56 - 62	230 - 262 197 - 230 131 - 164	.0008 .0004 .0002	.0012 .0008 .0004	.0012 .0008 .0004	.0016 .0012 .0008	.0016 .0012 .0008	.0020 .0016 .0012	.0020 .0016 .0012	.0024 .0020 .0016	.0028 .0024 .0020

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



Thread Mill Technical Section

DMT Type

ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cuting Dia. = D						
			Ø .16	Ø .20	Ø .24	Ø.31	Ø .35	Ø.39	Ø .47
P	Low and Medium Carbon Steels < 0.55%C	200 - 395	.0012	.0012	.0016	.0020	.0020	.0020	.0020
	High Carbon Steels ≥ 0.55%C	200 - 295	.0008	.0012	.0012	.0016	.0016	.0016	.0020
	Alloy Steels, Treated Steels	165 - 260	.0008	.0008	.0008	.0008	.0012	.0012	.0016
M	Stainless Steels - Free Cutting	230 - 330	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Stainless Steels - Austenitic	200 - 295	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Cast Steels	230 - 295	.0008	.0008	.0008	.0008	.0012	.0012	.0016
K	Cast Iron	130 - 260	.0012	.0012	.0016	.0020	.0020	.0020	.0020
N	Aluminum ≤ 12% Si, Copper	330 - 655	.0012	.0012	.0016	.0020	.0020	.0020	.0020
	Aluminum > 12% Si	200 - 460	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Synthetics, Duroplastics, Thermoplastics	165 - 655	.0016	.0020	.0020	.0024	.0024	.0024	.0024

DMTH Type

ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D							
			Ø .08	Ø.12	Ø.16	Ø.20	Ø.24	Ø.31	Ø.35	Ø.39	Ø.47
P	Low and Medium Carbon Steels < 0.55%C	190 - 390	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0020	.0020
	High Carbon Steels ≥ 0.55%C	190 - 290	.0008	.0008	.0008	.0012	.0012	.0016	.0016	.0016	.0020
	Alloy Steels, Treated Steels	160 - 260	.0008	.0008	.0008	.0008	.0008	.0008	.0012	.0012	.0016
M	Stainless Steels - Free Cutting	230 - 330	.0008	.0008	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Stainless Steels - Austenitic	190 - 290	.0008	.0008	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Cast Steels	230 - 290	.0008	.0008	.0008	.0008	.0008	.0008	.0012	.0012	.0016
K	Cast Iron	130 - 260	.0012	.0012	.0012	.0012	.0016	.0020	.0020	.0020	.0020
N	Aluminum ≤ 10% Si, Copper	330 - 650	.0012	.0012	.0012	.0012	.0016	.0020	.0020	.0020	.0020
	Aluminum > 10% Si	190 - 460	.0008	.0008	.0008	.0008	.0008	.0008	.0012	.0012	.0012
	Synthetics, Duroplastics, Thermoplastics	160 - 650	.0016	.0020	.0016	.0020	.0020	.0024	.0024	.0024	.0024
S	Nickel Alloys, Titanium Alloys, Hi Temp	65 - 130	.0008	.0012	.0012	.0016	.0020	.0020	.0024	.0024	.0024
H	Hardened Steel 45 - 50 HRc	190 - 230	.0008	.0008	.0008	.0012	.0016	.0016	.0020	.0020	.0020
	Hardened Steel 50 - 55 HRc	160 - 190	.0004	.0004	.0004	.0008	.0012	.0012	.0016	.0016	.0016

TT7: Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade which can be used with all materials; it should be run at medium to high cutting speeds.

TT8 Sub-Micron Grade with Aluminum Titanium Nitride (AlTiN) multi-layer coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation, for high performance, and normal machining conditions. General purpose for all materials.

TT11: Ultra-fine sub-micron grade with advanced PVD triple coating.

Thread Mill Technical Section

Thread Mill Inserts

Recommended Feed Rate: .002 - .006

ISO	Materials	Cutting Speed ft / min TT7
P	Low and Medium Carbon Steels	380 - 920
	High Carbon Steels	430 - 660
	Alloy Steels, Treated Steels	340 - 590
M	Stainless Steels	430 - 620
	Cast Steels	490 - 620
K	Cast Iron	260 - 560
N	Non-Ferrous & Aluminum	590 - 1120
	Synthetics, Duroplastics, Thermoplastics	380 - 1500
S	Nickel Alloys, Titanium Alloys	80 - 300

D-Thread

Recommended Feed Rate: .003 - .006

ISO	Materials	Cutting Speed ft / min
P	Low and Medium Carbon Steels < 0.55%C	330 - 670
	High Carbon Steels ≥ 0.55%C	330 - 590
	Alloy Steels, Treated Steels	330 - 460
M	Stainless Steels - Free Cutting	280 - 410
	Cast Steels - Austenitic	260 - 380
	Cast Steels	380 - 510
K	Cast Iron	250 - 510
N	Aluminum ≤ 12% Si, Copper	490 - 980
	Aluminum > 12% Si	490 - 980
	Synthetics, Duroplastics, Thermoplastics	330 - 1150
S	Nickel Alloys, Titanium Alloys	150 - 310

Helical Finish

ISO	Materials	Cutting Speed ft / min
P	Low and Medium Carbon Steels	660 - 1080
	High Carbon Steels	560 - 770
	Alloy Steels, Treated Steels	330 - 640
M	Stainless Steels	590 - 755
	Cast Steels	590 - 755
K	Cast Iron	660 - 1150
N	Non-Ferrous & Aluminum	1640 - 3610
	Synthetics, Duroplastics, Thermoplastics	1310 - 4920
S	Nickel Alloys, Titanium Alloys	100 - 180

Helical Thread Mill Inserts

Recommended Feed Rate: .002 - .006

ISO	Materials	Cutting Speed ft / min TT7
P	Low and Medium Carbon Steels	480 - 1200
	High Carbon Steels	540 - 840
	Alloy Steels, Treated Steels	440 - 755
M	Stainless Steels	540 - 800
	Cast Steels	620 - 800
K	Cast Iron	330 - 720
N	Non-Ferrous & Aluminum	755 - 1440
	Synthetics, Duroplastics, Thermoplastics	480 - 1940
S	Nickel Alloys, Titanium Alloys	100 - 380

As you may note, cutting speed is shown in range terms. In most standard cases choosing a speed in the middle of the range would be a good choice for a start.For hard metals reduce cutting speed.

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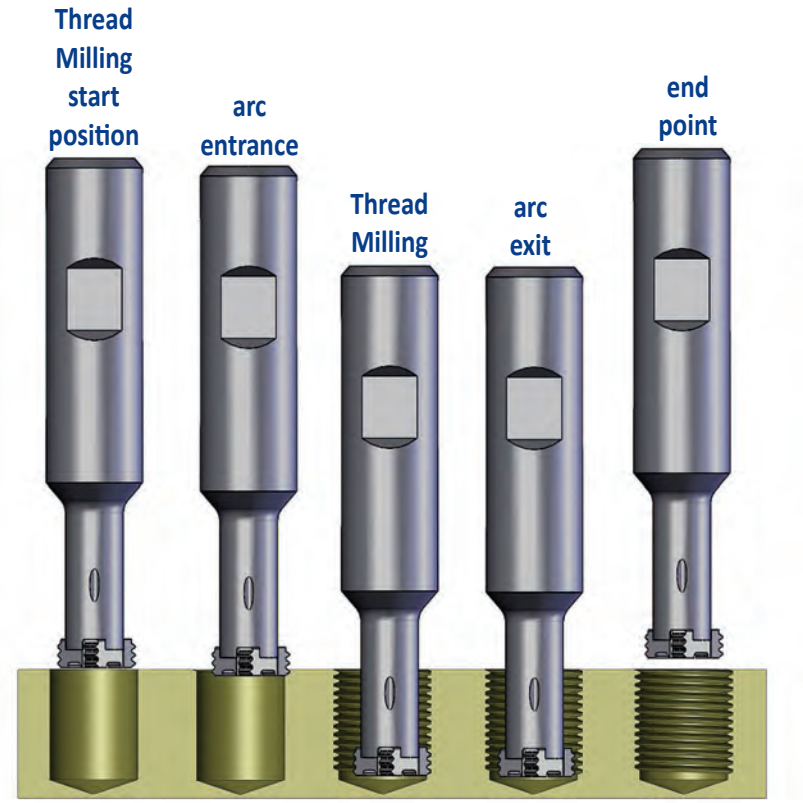
Cutting Data - CMT Type

ISO	Materials	Cutting Speed ft / min	Feed inch / tooth Cutting Dia. = D			
			Ø .39	Ø .47	Ø .70	Ø .98
P	Low and Medium Carbon Steels < 0.55%C	197 - 394	.0063	.0067	.0079	.0087
	High Carbon Steels ≥ 0.55%C	197 - 295	.0055	.0063	.0079	.0087
	Alloy Steels, Treated Steels	164 - 262	.0039	.0047	.0063	.0071
M	Stainless Steels - Free Cutting	230 - 328	.0039	.0043	.0059	.0067
	Stainless Steels - Austenitic	197 - 295	.0039	.0043	.0059	.0067
	Cast Steels	230 - 295	.0039	.0047	.0063	.0071
K	Cast Iron	131 - 262	.0063	.0067	.0079	.0087
N	Aluminum ≤ 12% Si, Copper	328 - 656	.0063	.0067	.0079	.0087
	Aluminum > 12% Si	197 - 459	.0039	.0043	.0061	.0071
	Synthetics, Duroplastics, Thermoplastics	164 - 656	.0075	.0075	.0087	.0094
S	Nickel Alloys, Titanium Alloys	66 - 131	.0028	.0028	.0039	.0047
H	Hardened Steel 45 - 50 HRc	197 - 230	.0035	.0035	.0051	.0059
	Hardened Steel 50 - 55 HRc	164 - 197	.0031	.0031	.0047	.0055



TT7: Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade which can be used with all materials; it should be run at medium to high cutting speeds.

TYCarb®

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