

2004

SOLID CARBIDE THREAD MILLS



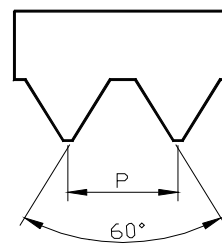
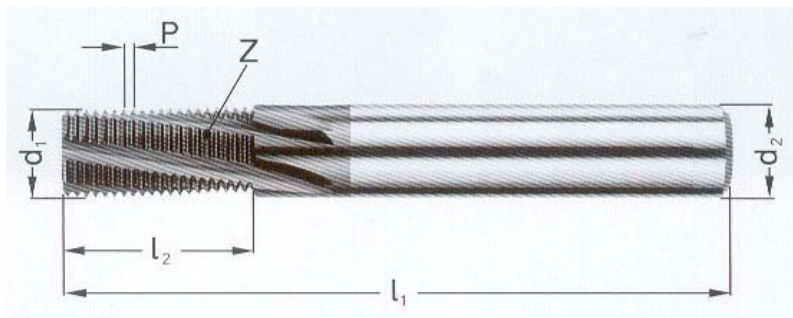
YG YG-1 CO.,LTD.

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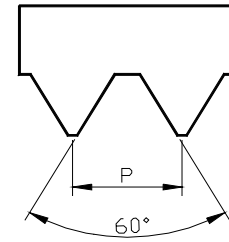
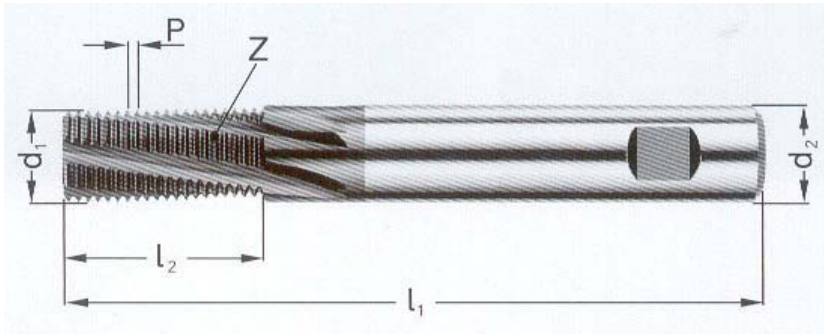
M Solid Carbide Thread Mill for ISO Metric Internal Thread – DIN 13



Material : Solid Carbide
 Shank : DIN 6535 HA
 Helix Angle : 15°
 Thread Length : 2×Nominal Diameter[D]

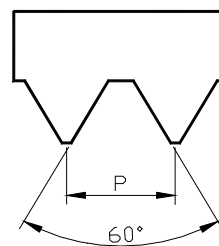
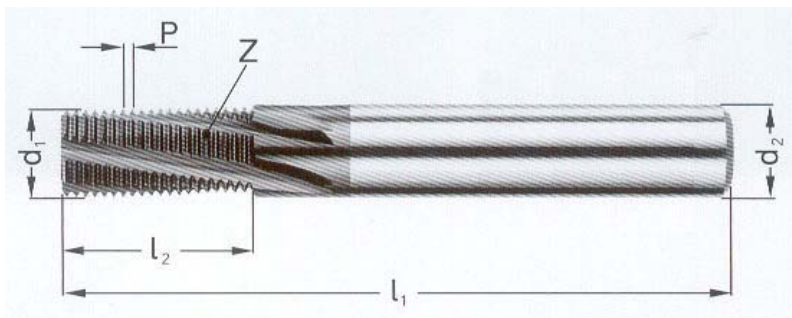
Nominal Diameter [D]	Pitch	Cutter Diameter	Over All Length	Thread Length	Shank Diameter	No. of Flute	EDP No.		
	P	d ₁	l ₁	l ₂	d ₂	Z	un coating	TiAlN	TiCN
M6	1.0	4.50	57	13.0	6	3	L1111310	L1211310	L1311310
M8	1.25	6.00	65	17.5	6	3	L1111360	L1211360	L1311360
M10	1.5	7.50	72	21.0	8	4	L1111420	L1211420	L1311420
M12	1.75	9.50	80	26.25	10	4	L1111500	L1211500	L1311500
M14	2.0	10.00	83	30.0	10	4	L1111540	L1211540	L1311540
M16	2.0	12.00	92	34.0	12	4	L1111600	L1211600	L1311600

M Solid Carbide Thread Mill for ISO Metric Internal Thread – DIN 13



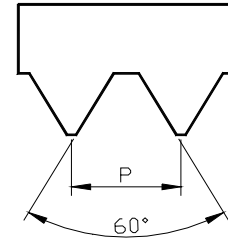
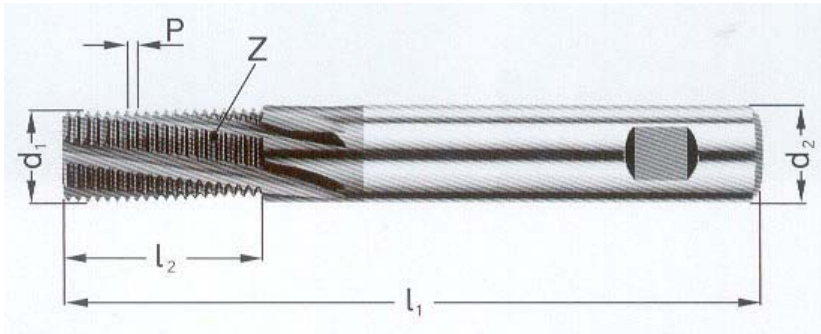
Material : Solid Carbide
 Shank : DIN 6535 HB
 Helix Angle : 15°
 Thread Length : 2×Nominal Diameter[D]

Nominal Diameter [D]	Pitch P	Cutter Diameter d ₁	Over All Length l ₁	Thread Length l ₂	Shank Diameter d ₂	No. of Flute Z	EDP No.		
							un coating	TiAlN	TiCN
M6	1.0	4.50	57	13.0	6	3	L1121310	L1221310	L1321310
M8	1.25	6.00	65	17.5	6	3	L1121360	L1221360	L1321360
M10	1.5	7.50	72	21.0	8	4	L1121420	L1221420	L1321420
M12	1.75	9.50	80	26.25	10	4	L1121500	L1221500	L1321500
M14	2.0	10.00	83	30.0	10	4	L1121540	L1221540	L1321540
M16	2.0	12.00	92	34.0	12	4	L1121600	L1221600	L1321600



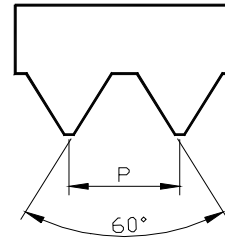
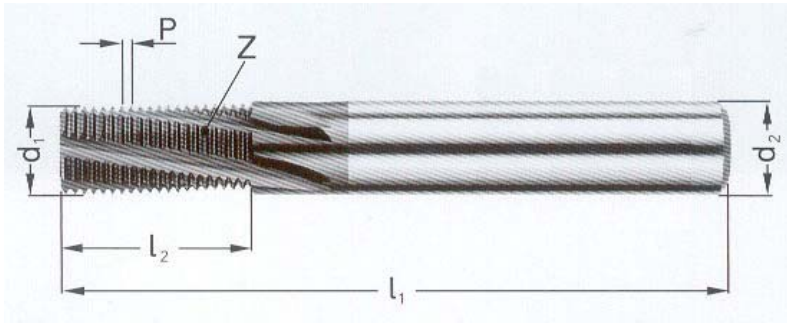
Material : Solid Carbide
Shank : DIN 6535 HA
Helix Angle : 15°
Thread Length : 1.5×Nominal Diameter[D]

Nominal Diameter [D]	Pitch P	Cutter Diameter d ₁	Over All Length l ₁	Thread Length l ₂	Shank Diameter d ₂	No. of Flute Z	EDP No.		
							un coating	TiAlN	TiCN
M8	0.75	6.00	57	12.75	6	3	L1112380	L1212380	L1312380
M8	1.0	6.00	57	13.00	6	3	L1112370	L1212370	L1312370
M10	1.0	8.00	63	16.00	8	4	L1112440	L1212440	L1312440
M12	1.0	9.50	72	19.00	10	4	L1112530	L1212530	L1312530
M12	1.25	9.50	72	18.75	10	4	L1112520	L1212520	L1312520
M12	1.5	9.50	72	19.50	10	4	L1112510	L1212510	L1312510
M14	1.0	10.00	83	22.00	10	4	L1112570	L1212570	L1312570
M14	1.5	10.00	83	22.50	10	4	L1112550	L1212550	L1312550
M16	1.0	12.00	83	25.00	12	4	L1112620	L1212620	L1312620
M16	1.5	12.00	83	25.50	12	4	L1112610	L1212610	L1312610
M18	1.0	14.00	92	28.00	14	5	L1112680	L1212680	L1312680
M18	1.5	14.00	92	28.50	14	5	L1112670	L1212670	L1312670
M20	1.0	16.00	92	31.00	16	5	L1112730	L1212730	L1312730
M20	1.5	16.00	92	31.50	16	5	L1112720	L1212720	L1312720



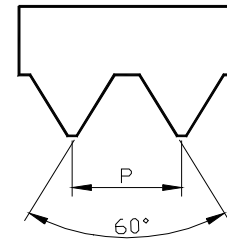
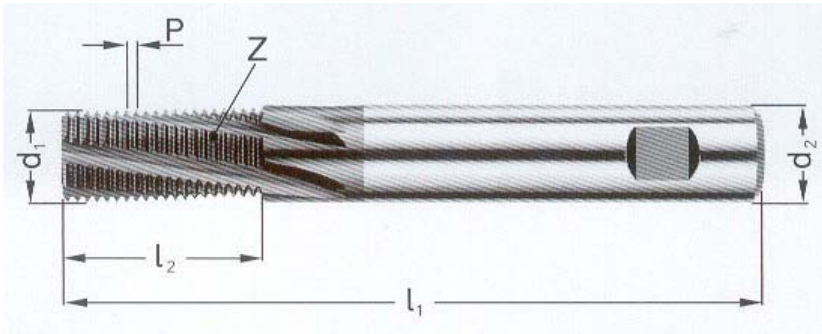
Material : Solid Carbide
Shank : DIN 6535 HB
Helix Angle : 15°
Thread Length : 1.5×Nominal Diameter[D]

Nominal Diameter [D]	Pitch	Cutter Diameter	Over All Length	Thread Length	Shank Diameter	No. of Flute	EDP No.		
	P	d ₁	l ₁	l ₂	d ₂	Z	un coating	TiAlN	TiCN
M8	0.75	6.00	57	12.75	6	3	L1122380	L1222380	L1322380
M8	1.0	6.00	57	13.00	6	3	L1122370	L1222370	L1322370
M10	1.0	8.00	63	16.00	8	4	L1122440	L1222440	L1322440
M12	1.0	9.50	72	19.00	10	4	L1122530	L1222530	L1322530
M12	1.25	9.50	72	18.75	10	4	L1122520	L1222520	L1322520
M12	1.5	9.50	72	19.50	10	4	L1122510	L1222510	L1322510
M14	1.0	10.00	83	22.00	10	4	L1122570	L1222570	L1322570
M14	1.5	10.00	83	22.50	10	4	L1122550	L1222550	L1322550
M16	1.0	12.00	83	25.00	12	4	L1122620	L1222620	L1322620
M16	1.5	12.00	83	25.50	12	4	L1122610	L1222610	L1322610
M18	1.0	14.00	92	28.00	14	5	L1122680	L1222680	L1322680
M18	1.5	14.00	92	28.50	14	5	L1122670	L1222670	L1322670
M20	1.0	16.00	92	31.00	16	5	L1122730	L1222730	L1322730
M20	1.5	16.00	92	31.50	16	5	L1122720	L1222720	L1322720



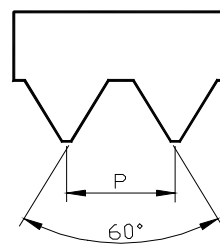
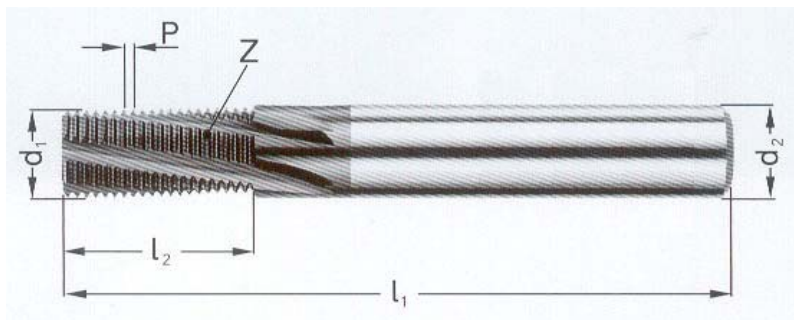
Material : Solid Carbide
Shank : DIN 6535 HA
Helix Angle : 15°
Thread Length : 2×Nominal Diameter[D]

Nominal Diameter [D]	Pitch	Cutter Diameter	Over All Length	Thread Length	Shank Diameter	No. of Flute	EDP No.		
	P	d ₁	l ₁	l ₂	d ₂	Z	un coating	TiAlN	TiCN
1/4"	20	4.5	57	14.00	6	3	L1113400	L1213400	L1313400
5/16"	18	5.80	65	16.90	6	3	L1113440	L1213440	L1313440
3/8"	16	7.00	72	20.60	8	4	L1113480	L1213480	L1313480
7/16"	14	8.00	72	23.60	8	4	L1113520	L1213520	L1313520
1/2"	13	9.50	80	27.40	10	4	L1113560	L1213560	L1313560
9/16"	12	10.00	83	31.80	10	4	L1113600	L1213600	L1313600
5/8"	11	12.00	92	34.60	12	4	L1113640	L1213640	L1313640
3/4"	10	14.00	104	40.60	14	5	L1113700	L1213700	L1313700



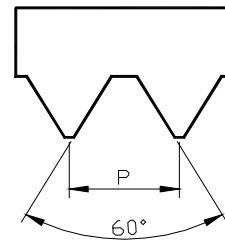
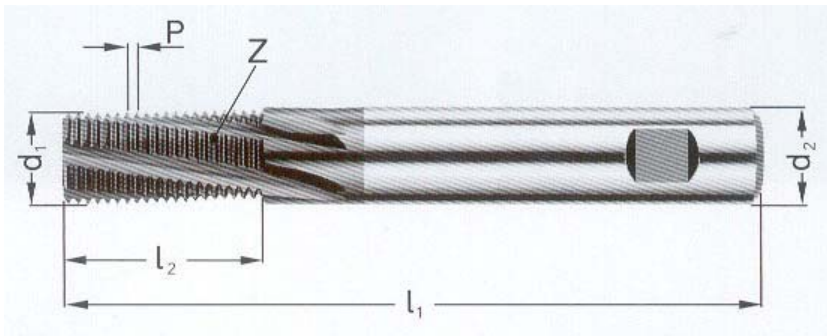
Material : Solid Carbide
Shank : DIN 6535 HB
Helix Angle : 15°
Thread Length : 2×Nominal Diameter[D]

Nominal Diameter [D]	Pitch	Cutter Diameter	Over All Length	Thread Length	Shank Diameter	No. of Flute	EDP No.		
	P	d ₁	l ₁	l ₂	d ₂	Z	un coating	TiAlN	TiCN
1/4"	20	4.5	57	14.00	6	3	L1123400	L1223400	L1323400
5/16"	18	5.80	65	16.90	6	3	L1123440	L1223440	L1323440
3/8"	16	7.00	72	20.60	8	4	L1123480	L1223480	L1323480
7/16"	14	8.00	72	23.60	8	4	L1123520	L1223520	L1323520
1/2"	13	9.50	80	27.40	10	4	L1123560	L1223560	L1323560
9/16"	12	10.00	83	31.80	10	4	L1123600	L1223600	L1323600
5/8"	11	12.00	92	34.60	12	4	L1123640	L1223640	L1322640
3/4"	10	14.00	104	40.60	14	5	L1123700	L1223700	L1323700



Material : Solid Carbide
 Shank : DIN 6535 HA
 Helix Angle : 15°
 Thread Length : 2×Nominal Diameter[D]

Nominal Diameter [D]	Pitch P	Cutter Diameter d ₁	Over All Length l ₁	Thread Length l ₂	Shank Diameter d ₂	No. of Flute Z	EDP No.		
							un coating	TiAlN	TiCN
1/4"	28	5.0	57	13.6	6	3	L1114420	L1214420	L1314420
5/16"	24	6.00	65	16.9	6	3	L1114460	L1214460	L1314460
3/8"	24	8.0	72	20.1	8	4	L1114500	L1214500	L1314500
7/16"	20	8.00	72	24.1	8	4	L1114540	L1214540	L1314540
1/2"	20	10.0	80	26.7	10	4	L1114580	L1214580	L1314580
9/16"	18	12.00	83	29.6	12	4	L1114620	L1214620	L1314620
5/8"	18	12.0	92	33.9	12	4	L1114660	L1214660	L1314660
3/4"	16	14.00	104	39.7	14	5	L1114720	L1214720	L1314720



Material : Solid Carbide
Shank : DIN 6535 HB
Helix Angle : 15°
Thread Length : 2×Nominal Diameter[D]

Nominal Diameter [D]	Pitch P	Cutter Diameter d ₁	Over All Length l ₁	Thread Length l ₂	Shank Diameter d ₂	No. of Flute Z	EDP No.		
							un coating	TiAlN	TiCN
1/4"	28	5.0	57	13.6	6	3	L1124420	L1224420	L1324420
5/16"	24	6.00	65	16.9	6	3	L1124460	L1224460	L1324460
3/8"	24	8.0	72	20.1	8	4	L1124500	L1224500	L1324500
7/16"	20	8.00	72	24.1	8	4	L1124540	L1224540	L1324540
1/2"	20	10.0	80	26.7	10	4	L1124580	L1224580	L1324580
9/16"	18	12.00	83	29.6	12	4	L1124620	L1224620	L1324620
5/8"	18	12.0	92	33.9	12	4	L1124660	L1224660	L1324660
3/4"	16	14.00	104	39.7	14	5	L1124720	L1224720	L1324720

RECOMMENDED CUTTING SPEED

Material	Cutting Speed (m/min)	Feed per Tooth (fz)	
		Cutter Diameter ≤ Φ8.0	Cutter Diameter > Φ8.0
Low Carbon Steel Medium Carbon Steel	80 - 250	0.03 0.07	0.05 0.15
High Carbon Steel	50 - 250	0.03 0.07	0.05 0.15
Alloy Steel	50 - 180	0.02 0.05	0.05 0.12
Heat Treated Steel	50 - 180	0.02 0.05	0.05 0.12
Stainless Steel	80 - 200	0.03 0.07	0.05 0.12
Cast Iron	50 - 180	0.03 0.07	0.05 0.15
Chrome-Nickel Alloys Titanium Alloys	20 - 80	0.02 0.05	0.04 0.10
Non Ferrous Material	100 - 400	0.04 0.10	0.08 0.25

TO CALCULATE SPEED & FEED RATES

*. Calculate R.P.M of cutter

$$N = \frac{1000 \times V}{d \times \pi}$$

N : R.P.M

V : Recommended Cutting Speed

d : Diameter of Cutter

*. Calculate Feed per Revolution

$$F_1 = fz \times Z \times N$$

F₁ : Feed at Cutting Edge

fz : Recommended Feed per Tooth

Z : Number of Teeth

*. Finally Calculate Feed at Tool Center Line

$$F_2 = \frac{F_1 \times (D - d)}{D}$$

F₂ : Feed at Center Line of Cutting

F₁ : Feed at Cutting Edge

D : Major Diameter of Component