



Thread Milling Tools

METRIC

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EROJET IS A CUTTING TOOLS MANUFACTURER OF THREAD MILLING, THREAD TURNING AND GROOVING TOOLS

EROJET's tools reputation is built by advanced manufacturing processes with the high professionalism, efficiently and reliably, that's certified according to ISO 9001.

EROJET provides the right solution for specific needs, with outstanding customer service, Technical consultation and fast delivery.



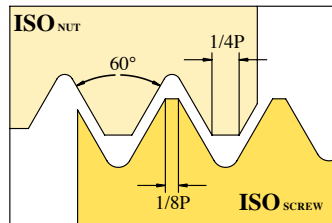
THREAD MILLING ADVANTAGES

- ✓ One tool can be used for right hand and left-hand thread.
- ✓ One tool can produce a wide variety of thread diameters of the same pitch.
- ✓ Produces threads with high surface finish, sizes and accuracy.
- ✓ Full thread to the bottom of hole.
- ✓ Small machines can produce large threads due to less spindle torque.
- ✓ cutting pressure for thin wall parts.
- ✓ Eliminates the need of removing broken taps.

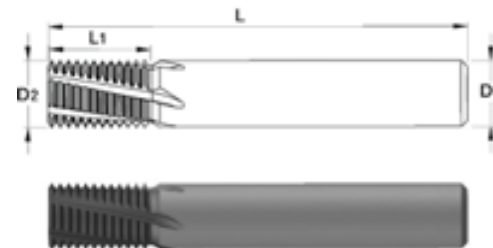
EROJET ORDERING CODE - SOLID THREAD MILLING

TMG	06	039	L10	0.8	ISO	K520C
SOLID THREAD MILLING TOOLS	SHANK DIAMETER (MM)	CUTTING DIAMETER	TOOL CUTTING LENGTH	PITCH	THREAD STANDARD	CARBIDE GRADE
FULL PROFILE - TMC = 3 TEETH - TMD = 3 TEETH - HARD MATERIALS - TMG = STD. HELICAL FLUTES MULTI-TEETH - TMGB=WITH THROUGH COOLANT - TMGN= THROUGH COOLANT WITH NECK RELIVE - TMGF = WITH FLUTE COOLANT - TMX = STD. STRAIGHT FLUTES - TMGE = MULTI TEETH FOR EXTERNAL THREADS	3	3.9 MM	L10= MM	0.8 MM	ISO	K520C
	4				UN	
	6				BSP	
	8				BSPT	
	10				NPT	
	12				NPTF	
	14				NPS	
	16				NPSE	
	20				UNJ	
					MJ	
PARTIAL PROFILE - TMP = SINGLE TOOTH - CMP = 90° CHAMFER - PM = PREPARATION FOR CONIC THREADS					PG	
					P60	
					P55	
					TR	
					ACME	

ISO 965-1:1999-11
DIN13: 2005-08



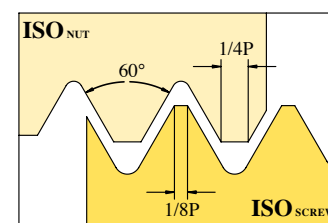
ISO METRIC INTERNAL



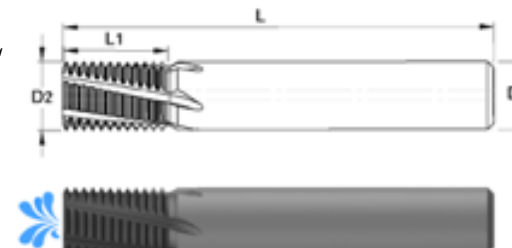
HELICAL FLUTES

	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M3.0x0.5	0.5	TMG06024L6 0.5ISO	57	6.5	6	2.4	3
2		M5.0x0.5		TMG06038L10 0.5ISO	57	10.3	6	3.8	3
3		M7.0x0.5		TMG06059L10 0.5ISO	57	10.2	6	5.9	3
4	M4.0x0.7		0.7	TMG06031L8 0.7ISO	57	8.7	6	3.1	3
5	M4.5x0.75	M5.0x0.75	0.75	TMG06036L10 0.75ISO	57	10.1	6	3.6	3
6		M8.0x0.75		TMG06059L10 0.75ISO	57	10.8	6	5.9	3
7		M10.0x0.75		TMG08079L15 0.75ISO	63	15.3	8	7.9	4
8		M12.0x0.75		TMG10099L24 0.75ISO	73	24.4	10	9.9	4
9	M5.0x0.8		0.8	TMG06039L10 0.8ISO	57	10.0	6	3.9	3
10	M6.0x1.0	M7.0x1.0	1.0	TMG06048L11 1.0ISO	57	11.5	6	4.8	3
11	M6.0x1.0	M7.0x1.0		TMG06048L14 1.0ISO	57	14.5	6	4.8	3
12		M8.0x1.0		TMG06059L12 1.0ISO	57	12.5	6	5.9	3
13		M10.0x1.0		TMG08079L17 1.0ISO	63	17.5	8	7.9	4
14		M12.0x1.0		TMG10099L20 1.0ISO	73	20.5	10	9.9	4
15	M8.0x1.25	M9.0x1.25	1.25	TMG06059L14 1.25ISO	57	14.4	6	5.9	3
16	M8.0x1.25	M9.0x1.25		TMG06059L19 1.25ISO	57	19.5	6	5.9	3
17	M10.0x1.5	M11.0x1.5	1.5	TMG08079L18 1.5ISO	63	18.5	8	7.9	3
18	M10.0x1.5	M11.0x1.5		TMG08079L24 1.5ISO	76	24.7	8	7.9	3
19		M13.0x1.5		TMG10099L21 1.5ISO	73	21.8	10	9.9	4
20		M15.0x1.5		TMG12119L26 1.5ISO	84	26.3	12	11.9	4
21		M20.0x1.5		TMG16159L35 1.5ISO	100	35.2	16	15.9	6
22	M12.0x1.75		1.75	TMG08079L22 1.75ISO	64	22.0	8	7.9	3
23	M12.0x1.75			TMG08079L29 1.75ISO	76	29.0	8	7.9	3
24	M12.0x1.75			TMG10092L21 1.75ISO	73	21.8	10	9.2	3
25	M12.0x1.75			TMG10092L29 1.75ISO	84	29.7	10	9.2	4
26	M14.0x2.0		2.0	TMG10099L25 2.0ISO	73	25.0	10	9.9	3
27	M14.0x2.0			TMG10099L39 2.0ISO	84	39.0	10	9.9	3
28	M16.0x2.0			TMG12119L27 2.0ISO	84	27.0	12	11.9	4
29	M16.0x2.0			TMG12119L39 2.0ISO	90	39.0	12	11.9	4
30		M20.0x2.0		TMG16159L37 2.0ISO	100	37.0	16	15.9	5
31		M24.0x2.0		TMG20199L43 2.0ISO	100	43.0	20	19.9	5
32	M20.0x2.5		2.5	TMG14139L33 2.5ISO	84	33.8	14	13.9	4
33				TMG14139L48 2.5ISO-L	100	48.8	14	13.9	4
34				TMG16159L36 2.5ISO	100	36.3	16	15.9	5
35	M24.0x3.0	M27.0x3.0	3.0	TMG16159L40 3.0ISO	100	40.5	16	15.9	3
36				TMG16159L58 3.0ISO-L	120	58.5	16	15.9	3
37				TMG20179L40 3.0ISO	100	40.5	20	17.9	4
38				TMG20179L58 3.0ISO-L	120	58.5	20	17.9	4
39	M27.0x3.0			TMG20199L43 3.0ISO	100	43.0	20	19.9	4

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ISO METRIC INTERNAL

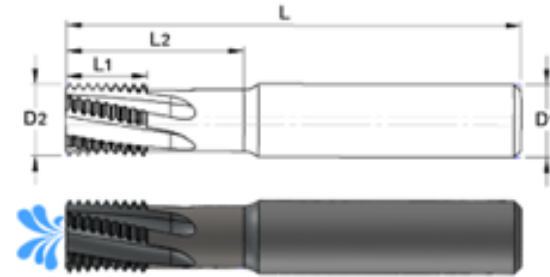
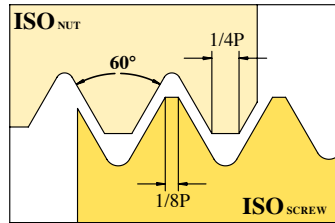


HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M5.0x0.5	0.5	TMGB06038L10 0.5ISO	57	10.3	6	3.8	3
2		M7.0x0.5		TMGB06059L10 0.5ISO	57	10.2	6	5.9	3
3	M4.0x0.7		0.7	TMGB06031L8 0.7ISO	57	8.7	6	3.1	3
4	M4.5x0.75	M5.0x0.75	0.75	TMGB06036L10 0.75ISO	57	10.1	6	3.6	3
5		M8.0x0.75		TMGB06059L10 0.75ISO	57	10.8	6	5.9	3
6		M10.0x0.75		TMGB08079L15 0.75ISO	63	15.3	8	7.9	4
7		M12.0x0.75		TMGB10099L24 0.75ISO	73	24.4	10	9.9	4
8	M5.0x0.8		0.8	TMGB06039L10 0.8ISO	57	10.0	6	3.9	3
9	M6.0x1.0	M7.0x1.0	1.0	TMGB06048L11 1.0ISO	57	11.5	6	4.8	3
10	M6.0x1.0	M7.0x1.0		TMGB06048L14 1.0ISO	57	14.5	6	4.8	3
11		M8.0x1.0		TMGB06059L12 1.0ISO	57	12.5	6	5.9	3
12		M10.0x1.0		TMGB08079L17 1.0ISO	63	17.5	8	7.9	4
13		M12.0x1.0		TMGB10099L20 1.0ISO	73	20.5	10	9.9	4
14	M8.0x1.25	M9.0x1.25	1.25	TMGB06059L14 1.25ISO	57	14.4	6	5.9	3
15	M8.0x1.25	M9.0x1.25		TMGB06059L19 1.25ISO	57	19.5	6	5.9	3
16	M10.0x1.5	M11.0x1.5	1.5	TMGB08079L18 1.5ISO	63	18.5	8	7.9	3
17	M10.0x1.5	M11.0x1.5		TMGB08079L24 1.5ISO	76	24.7	8	7.9	3
18		M13.0x1.5		TMGB10099L21 1.5ISO	73	21.8	10	9.9	4
19		M15.0x1.5		TMGB12119L26 1.5ISO	84	26.3	12	11.9	4
20		M20.0x1.5		TMGB16159L35 1.5ISO	100	35.2	16	15.9	6
21	M12.0x1.75		1.75	TMGB08079L22 1.75ISO	64	22.0	8	7.9	3
22	M12.0x1.75			TMGB08079L29 1.75ISO	76	29.0	8	7.9	3
23	M12.0x1.75			TMGB10092L21 1.75ISO	73	21.8	10	9.2	3
24	M12.0x1.75			TMGB10092L29 1.75ISO	84	29.7	10	9.2	4
25	M14.0x2.0		2.0	TMGB10099L25 2.0ISO	73	25.0	10	9.9	3
26	M14.0x2.0			TMGB10099L39 2.0ISO	84	39.0	10	9.9	3
27	M16.0x2.0			TMGB12119L27 2.0ISO	84	27.0	12	11.9	4
28	M16.0x2.0			TMGB12119L39 2.0ISO	90	39.0	12	11.9	4
29		M20.0x2.0		TMGB16159L37 2.0ISO	100	37.0	16	15.9	5
30		M24.0x2.0		TMGB20199L43 2.0ISO	100	43.0	20	19.9	5
31	M20.0x2.5		2.5	TMGB14139L33 2.5ISO	84	33.8	14	13.9	4
32				TMGB14139L48 2.5ISO-L	100	48.8	14	13.9	4
33				TMGB16159L36 2.5ISO	100	36.3	16	15.9	5
34	M24.0x3.0	M27.0x3.0	3.0	TMGB16159L40 3.0ISO	100	40.5	16	15.9	3
35				TMGB16159L58 3.0ISO-L	120	58.5	16	15.9	3
36				TMGB20179L40 3.0ISO	100	40.5	20	17.9	4
37				TMGB20179L58 3.0ISO-L	120	58.5	20	17.9	4
38	M27.0x3.0			TMGB20199L43 3.0ISO	100	43.0	20	19.9	4

ISO METRIC INTERNAL

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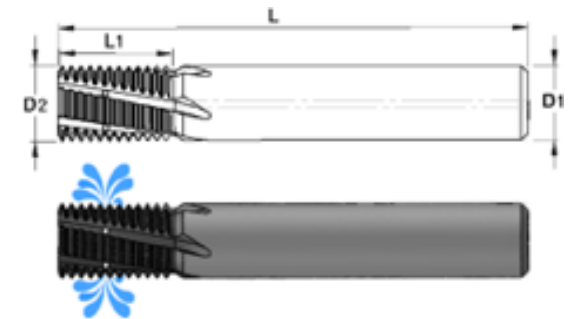
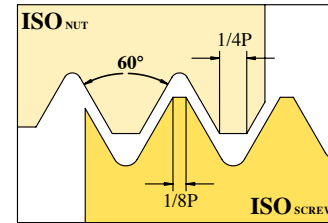


HELICAL FLUTES WITH NECK RELIEVED & INTERNAL FLUTE COOLANT

	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	L2	D1	D2	NO. OF FLUTES
	COARSE	FINE								
1	M12X1.0		1.0	TMGN10099L32 1.0ISO	73	18.0	32.0	10	9.90	4
2	M14X1.0			TMGN12119L38 1.0ISO	84	21.0	38.0	12	11.95	4
3	M18X1.0			TMGN16159L45 1.0ISO	100	26.0	45.0	16	15.95	6
4		M13X1.5	1.5	TMGN10099L30 1.5ISO	73	18.0	30.0	10	10.90	4
5		M15X1.5		TMGN12119L34 1.5ISO	84	19.5	34.5	12	11.95	4
6		M20X1.5		TMGN16129L43 1.5ISO	100	25.5	43.5	16	15.90	6
7		M24X1.5		TMGN20199L60 1.5ISO	100	36.0	60.0	20	19.90	6
8	M14X2.0		2.0	TMGN12119L42 2.0ISO	84	24.0	42.0	12	11.95	4
9	M16X2.0			TMGN16159L45 2.0ISO	100	26.0	45.0	16	15.90	5
10		M20X2.0		TMGN20119L56 2.0ISO	100	34.0	56.0	20	19.90	6
11	M20X3.0		3.0	TMGN16159L45 3.0ISO	100	30.0	45.0	16	15.90	4
12	M24.0x3.0	M27.0x3.0		TMGN20199L54 3.0ISO	100	33.0	54.0	20	19.90	5
13		M26X3.5	3.5	TMGN20199L45 3.5ISO	100	28.0	45.5	20	19.90	4
14		M31X4.0	4.0	TMGN20199L64 4.0ISO-L	160	40.0	64.0	20	19.90	4

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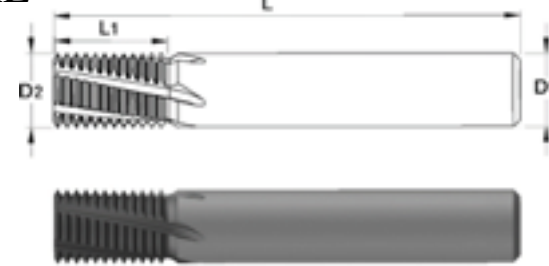
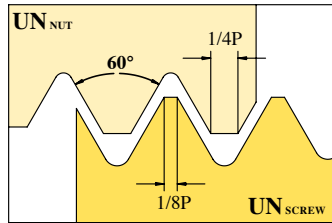
HELICAL FLUTES COOLANT

	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1	M6.0x1.0	M7.0x1.0	1.0	TMGF06048L11 1.0ISO	57	11.5	6	4.8	3
2		M8.0x1.0		TMGF06059L12 1.0ISO	57	12.5	6	5.9	3
3		M10.0x1.0		TMGF08079L17 1.0ISO	63	17.5	8	7.9	4
4	M8.0x1.25	M9.0x1.25	1.25	TMGF06059L14 1.25ISO	57	14.4	6	5.9	3
5	M8.0x1.25	M9.0x1.25		TMGF06059L19 1.25ISO	57	19.5	6	5.9	3
6	M10.0x1.5	M11.0x1.5	1.5	TMGF08079L18 1.5ISO	63	18.5	8	7.9	3
7		M13.0x1.5		TMGF10099L21 1.5ISO	73	21.8	10	9.9	4
8		M15.0x1.5		TMGF12119L26 1.5ISO	84	26.3	12	11.9	4
9		M20.0x1.5		TMGF16159L35 1.5ISO	100	35.2	16	15.9	6
10	M12.0x1.75		1.75	TMGF10092L21 1.75ISO	73	21.8	10	9.2	3
11	M12.0x1.75			TMGF10092L29 1.75ISO	73	29.7	10	9.2	4
12	M14.0x2.0		2.0	TMGF10099L25 2.0ISO	73	25.0	10	9.9	3
13	M16.0x2.0			TMGF12119L27 2.0ISO	84	27.0	12	11.9	4
14	M20.0x2.0			TMGF16159L36 2.5ISO	100	36.3	16	15.9	5

UN (UNC, UNF, UNEF)

INTERNAL

ANSI B1.1 - 1982



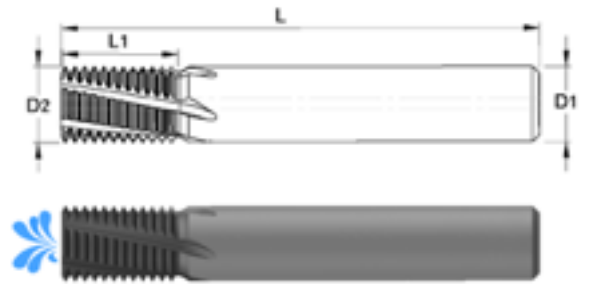
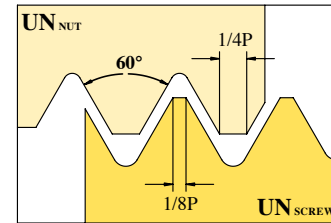
HELICAL FLUTES

	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	UNC	UNF	UNEF							
1	5"			40	TMG06025L6 40UN	57	6.0	6	2.5	3
2	8"	10"	12"	32	TMG06032L6 32UN	57	6.0	6	3.2	3
3			5/16"		TMG06059L14 32UN	57	14.0	6	5.9	3
4			3/8"		TMG08079L18 32UN	63	18.0	8	7.9	3
5		1/4"		28	TMG06051L12 28UN	57	12.2	6	5.1	3
6			7/16"-1/2"		TMG06059L14 28UN	57	14.3	6	5.9	3
7			7/16"-1/2"		TMG08079L15 28UN	63	15.8	8	7.9	4
8			7/16"-1/2"	24	TMG08079L21 28UN	63	20.6	8	7.9	4
9		5/16"			TMG06059L10 24UN	57	10.8	6	5.9	3
10		3/8"			TMG08079L15 24UN	63	15.3	8	7.9	4
11		9/16" ,5/8"		20	TMG12119L22 24UN	84	22.7	12	11.9	4
12	1/4"				TMG06048L12 20UN	57	12.0	6	4.8	3
13		7/16"			TMG08079L19 20UN	63	19.7	8	7.9	3
14		1/2"		18	TMG10099L22 20UN	73	22.5	10	9.9	4
15			3/4"-1"		TMG12119L26 20UN	84	26.0	12	11.9	4
16	5/16"				TMG06057L16 18UN	57	16.0	6	5.7	3
17		9/16" ,5/8"		16	TMG10099L23 18UN	73	23.5	10	9.9	4
18	3/8"				TMG08068L18 16UN	63	18.2	8	6.8	3
19		3/4"			TMG12119L26 16UN	84	26.2	12	11.9	4
20	7/16"			14	TMG08078L20 14UN	63	20.8	8	7.8	3
21		7/8"			TMG12119L24 14UN	84	24.5	12	11.9	4
22		7/8"			TMG16150L37 14UN	100	37.2	16	15.9	5
23	1/2"			13	TMG08079L22 13UN	64	22.5	8	7.9	3
24	1/2"				TMG10093L24 13UN	73	24.4	10	9.3	3
25	9/16"			12	TMG10099L26 12UN	73	31.1	12	9.9	4
26	9/16"				TMG12106L26 12UN	84	26.4	12	10.6	4
27		1"			TMG16159L39 12UN	100	39.1	16	15.9	5
28	5/8"			11	TMG10099L28 11UN	73	28.9	10	9.9	3
29	5/8"				TMG12115L31 11UN	84	31.1	12	11.5	3
30	3/4"			10	TMG12119L34 10UN	84	34.3	12	11.9	3
31	3/4"				TMG16143L36 10UN	100	36.8	16	14.3	4
32	7/8"			9	TMG16159L40 9UN	100	40.9	16	15.9	4
33	1"			8	TMG16159L42 8UN	100	42.8	16	15.9	3
34	1"				TMG20197L42 8UN	100	42.8	20	19.7	4
35	1 1/8" -1 1/4"			7	TMG20119L45 7UN	100	45.3	20	19.9	4

UN (UNC, UNF, UNEF)

INTERNAL

ANSI B1.1 - 1982

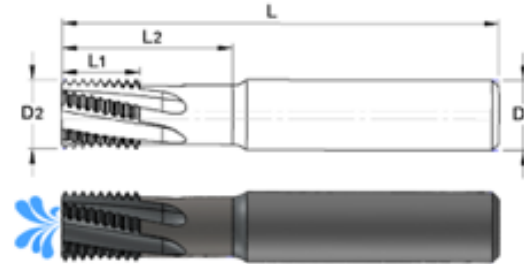
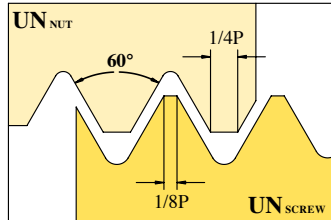


HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	UNC	UNF	UNEF							
1	8"	10"	12"	32	TMGB06032L6 32UN	57	6.0	6	3.2	3
2			5/16"		TMGB06059L14 32UN	57	14.0	6	5.9	3
3			3/8"		TMGB08079L18 32UN	63	18.0	8	7.9	3
4		1/4"		28	TMGB06051L12 28UN	57	12.2	6	5.1	3
5			7/16"-1/2"		TMGB06059L14 28UN	57	14.3	6	5.9	3
6			7/16"-1/2"		TMGB08079L15 28UN	63	15.8	8	7.9	4
7			7/16"-1/2"	24	TMGB08079L21 28UN	63	20.6	8	7.9	4
8		5/16"			TMGB06059L10 24UN	57	10.8	6	5.9	3
9		3/8"			TMGB08079L15 24UN	63	15.3	8	7.9	4
10		9/16" ,5/8"		20	TMGB12119L22 24UN	84	22.7	12	11.9	4
11	1/4"				TMGB06048L12 20UN	57	12.0	6	4.8	3
12		7/16"			TMGB08079L19 20UN	63	19.7	8	7.9	3
13		1/2"		18	TMGB10099L22 20UN	73	22.5	10	9.9	4
14			3/4"-1"		TMGB12119L26 20UN	84	26.0	12	11.9	4
15	5/16"				TMGB06057L16 18UN	57	16.0	6	5.7	3
16		9/16" ,5/8"		16	TMGB10099L23 18UN	73	23.5	10	9.9	4
17		3/4"			TMGB12119L26 16UN	84	26.2	12	11.9	4
18	7/16"			14	TMGB08078L20 14UN	63	20.8	8	7.8	3
19		7/8"			TMGB12119L24 14UN	84	24.5	12	11.9	4
20		7/8"			TMGB16150L37 14UN	100	37.2	16	15.9	5
21	1/2"			13	TMGB08079L22 13UN	64	22.5	8	7.9	3
22	1/2"				TMGB10093L24 13UN	73	24.4	10	9.3	3
23	9/16"			12	TMGB10099L26 12UN	73	31.1	12	9.9	4
24	9/16"				TMGB12106L26 12UN	84	26.4	12	10.6	4
25		1-1 1/2"			TMGB16159L39 12UN	100	39.1	16	15.9	5
26	5/8"			11	TMGB10099L28 11UN	73	28.9	10	9.9	3
27	5/8"				TMGB12115L31 11UN	84	31.1	12	11.5	3
28	3/4"			10	TMGB12119L34 10UN	84	34.3	12	11.9	3
29	3/4"				TMGB16143L36 10UN	100	36.8	16	14.3	4
30	7/8"			9	TMGB16159L40 9UN	100	40.9	16	15.9	4
31	1"			8	TMGB16159L42 8UN	100	42.8	16	15.9	3
32	1"				TMGB20197L42 8UN	100	42.8	20	19.7	4
33	1 1/8" -1 1/4"			7	TMGB20119L45 7UN	100	45.3	20	19.9	4

UN (UNC, UNF, UNEF) INTERNAL

ANSI B1.1 - 1982

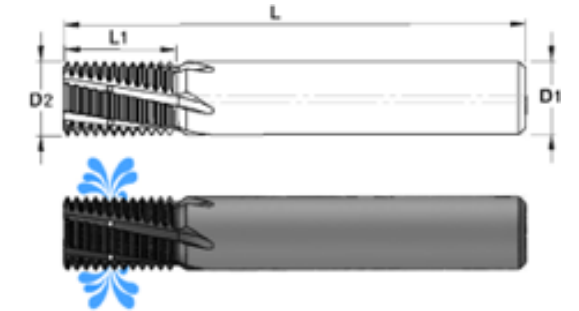
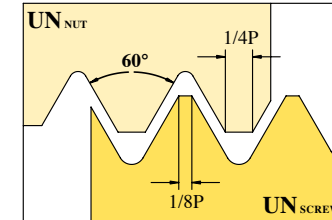


HELICAL FLUTES WITH NECK RELIEVED & INTERNAL FLUTE COOLANT

	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	L2	D1	D2	NO. OF FLUTES
	UNC	UNF	UNEF								
1		1/2"		20	TMGN10099L30 20UN	73	17.8	30.5	10	10.9	4
2			3/4-1"		TMGN12119L35 20UN	84	20.3	35.6	12	11.9	5
3		3/4"			TMGN16159L43 20UN	100	25.4	43.2	16	15.9	6
4		9/16"-5/8"	11/8 - 1 1/4"	18	TMGN12159L35 18UN	84	19.7	35.3	12	11.9	4
5		3/4"		16	TMGN12159L35 16UN	84	20.7	35.0	12	11.9	4
6		3/4"			TMGN16159L42 16UN	100	25.4	42.9	16	15.9	5
7		3/4"			TMGN20199L58 16UN	100	36.5	58.8	20	19.9	6
8		7/8"		14	TMGN16159L45 14UN	100	25.4	45.3	16	15.9	5
9	9/16"			12	TMGN12119L42 12UN	84	25.4	42.3	12	11.9	4
10		1" - 1 1/2"			TMGN20199L55 12UN	100	33.9	55.1	20	19.9	5

UN (UNC, UNF, UNEF) INTERNAL

ANSI B1.1 - 1982



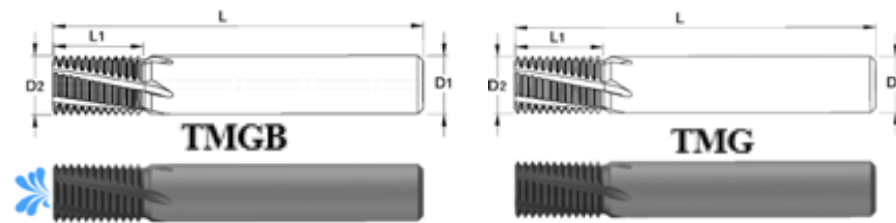
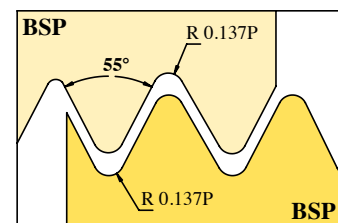
HELICAL FLUTES COOLANT

	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	UNC	UNF	UNEF							
1		1/4"		28	TMGF06050L11 28UN	57	11.3	6	5.0	3
2			7/16"-1/2"		TMGF06059L14 28UN	57	14.1	6	5.9	3
3		5/16"		24	TMGF08066L14 24UN	64	14.3	8	6.6	3
4		3/8"	9/16"-5/8"		TMGF08079L21 24UN	64	20.6	8	7.9	4
5		7/16"		20	TMGF08079L21 20UN	64	21.0	8	7.9	3
6		1/2"			TMGF10099L22 20UN	73	22.3	10	9.9	4
7			3/4"-1"		TMGF12119L27 20UN	84	27.3	12	11.9	5
8	5/16"			18	TMGF06056L14 18UN	57	14.8	6	5.6	3
9		9/16"-5/8"	11/8" - 1 5/8"		TMGF12113L26 18UN	84	26.1	12	11.3	4
10	3/8"			16	TMGF08067L16 16UN	64	16.7	8	6.7	3
11		3/4"			TMGF1211L31 16UN	84	31.0	12	11.9	4
12	7/16"			14	TMGF08077L20 14UN	64	20.9	8	7.7	3
13		7/8"			TMGF16159L37 14UN	100	37.2	16	15.9	5
14	1/2"			13	TMGF10092L22 13UN	73	22.5	10	9.2	3
15	9/16"			12	TMGF12100L26 12UN	84	26.5	12	10.5	3
16	5/8"			11	TMGF12114L28 11UN	84	28.9	12	11.4	3

BSP

INTERNAL / EXTERNAL

B.S. 84:1956



HELICAL FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	28	TMG06059L11 28BSP	57	11.3	6	5.9	3
2	1/8"		TMG08079L14 28BSP	63	14.0	8	7.9	3
3	1/4"-3/8"	19	TMG10099L16 19BSP	73	16.6	10	9.9	4
4	1/2"-7/8"	14	TMG12119L22 14BSP	84	22.7	12	11.9	4
5	1/2"-7/8"		TMG16159L31 14BSP	100	31.7	16	15.9	4
6	1"-2"	11	TMG16159L32 11BSP	100	32.1	16	15.9	4
7	1"-6"		TMG20199L40 11BSP	100	40.4	20	19.9	5

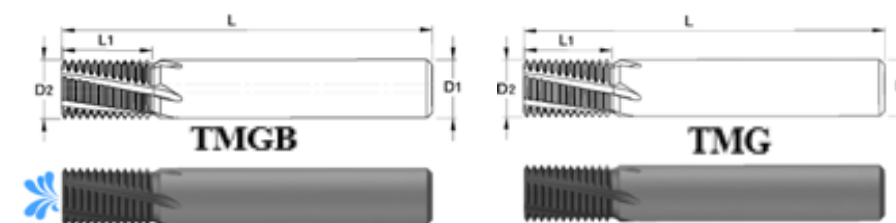
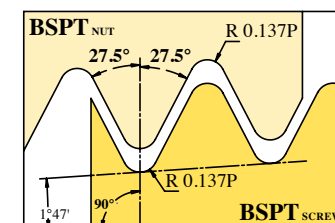
HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	28	TMGB06059L11 28BSP	57	11.3	6	5.9	3
2	1/8"		TMGB08079L14 28BSP	63	14.0	8	7.9	3
3	1/4"-3/8"	19	TMGB10099L16 19BSP	73	16.6	10	9.9	4
4	1/2"-7/8"	14	TMGB12119L22 14BSP	84	22.7	12	11.9	4
5	1/2"-7/8"		TMGB16159L31 14BSP	100	31.7	16	15.9	4
6	1"-2"	11	TMGB16159L32 11BSP	100	32.1	16	15.9	4
7	1"-6"		TMGB20199L40 11BSP	100	40.4	20	19.9	5

BSPT (Rc)

INTERNAL / EXTERNAL

B.S.21: 1985



HELICAL FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	28	TMG06059L11 28BSPT	57	11.3	6	5.9	3
2	1/8"		TMG08079L14 28BSPT	63	14.0	8	7.9	3
3	1/4"-3/8"	19	TMG10099L16 19BSPT	73	16.6	10	9.9	4
4	1/2"-7/8"	14	TMG12119L22 14BSPT	84	22.7	12	11.9	4
5	1/2"-7/8"		TMG16159L31 14BSPT	100	31.7	16	15.9	4
6	1"-2"	11	TMG16159L32 11BSPT	100	32.1	16	15.9	4
7	1"-6"		TMG20199L40 11BSPT	100	40.4	20	19.9	5

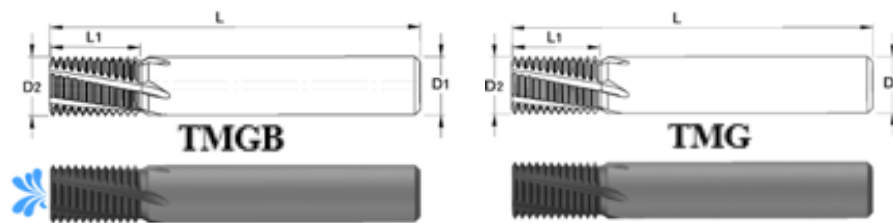
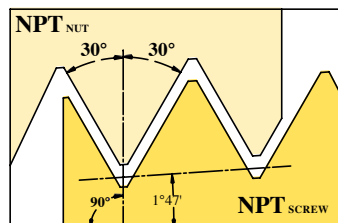
HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	28	TMGB06059L11 28BSPT	57	11.3	6	5.9	3
2	1/8"		TMGB08079L14 28BSPT	63	14.0	8	7.9	3
3	1/4"-3/8"	19	TMGB10099L16 19BSPT	73	16.6	10	9.9	4
4	1/2"-7/8"	14	TMGB12119L22 14BSPT	84	22.7	12	11.9	4
5	1/2"-7/8"		TMGB16159L31 14BSPT	100	31.7	16	15.9	4
6	1"-2"	11	TMGB16159L32 11BSPT	100	32.1	16	15.9	4
7	1"-6"		TMGB20199L40 11BSPT	100	40.4	20	19.9	5

NPT

INTERNAL / EXTERNAL

ANSI/ASME B 1.20.1-1983



HELICAL FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	TMG06059L9 27NPT	57	9.8	6	5.9	3
2	1/8"		TMG08077L10 27NPT	63	10.9	8	7.7	3
3	1/4"-3/8"	18	TMG08079L14 18NPT	63	14.8	8	7.9	3
4			TMG10099L16 18NPT	73	16.4	10	9.9	4
5	1/2"	14	TMG12119L20 14NPT	84	20.8	12	11.9	4
6	1/2"		TMG16159L20 14NPT	100	20.8	16	15.9	4
7	1"-2"	11.5	TMG16159L27 11.5NPT	100	15.9	16	27.6	4
8			TMG20199L29 11.5NPT	100	29.7	20	19.9	4
9	2 1/2"-6"	8	TMG20199L38 8NPT	100	38.1	20	19.9	4

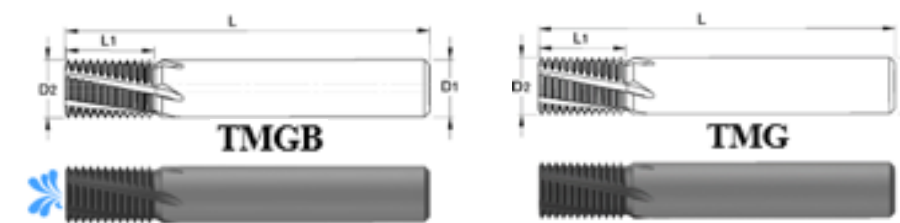
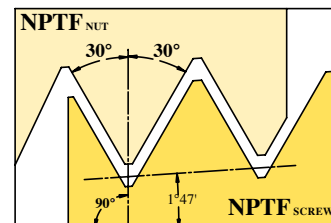
HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	TMGB06059L09 27NPT	57	9.8	6	5.9	3
2	1/8"		TMGB08077L10 27NPT	63	10.9	8	7.7	3
3	1/4"-3/8"	18	TMGB08079L14 18NPT	63	14.8	8	7.9	3
4			TMGB10099L16 18NPT	73	16.4	10	9.9	4
5	1/2"	14	TMGB12119L20 14NPT	84	20.8	12	11.9	4
6	1/2"		TMGB16159L20 14NPT	100	15.9	16	27.6	4
7	1"-2"	11.5	TMGB16159L27 11.5NPT	100	27.1	16	15.9	4
8	1"-2"		TMGB20199L29 11.5NPT	100	29.7	20	19.9	4
9	2 1/2"-6"	8	TMGB20199L38 8NPT	100	38.1	20	19.9	4

NPTF

INTERNAL / EXTERNAL

ANSI B 1.20.3-1976



HELICAL FLUTES

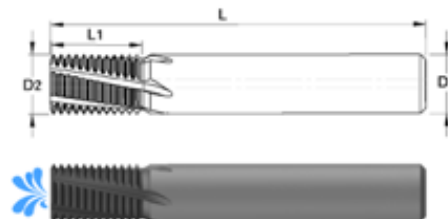
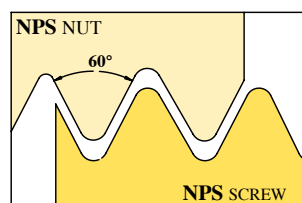
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	TMG06059L9 27NPTF	57	9.8	6	5.9	3
2	1/8"		TMG08077L10 27NPTF	63	10.9	8	7.7	3
3	1/4"-3/8"	18	TMG08079L14 18NPTF	63	14.8	8	7.9	3
4			TMG10099L16 18NPTF	73	16.4	10	9.9	4
5	1/2"	14	TMG12119L20 14NPTF	84	20.8	12	11.9	4
6	1/2"		TMG16159L20 14NPTF	100	20.8	16	15.9	4
7	1"-2"	11.5	TMG16159L27 11.5NPTF	100	15.9	16	27.6	4
8			TMG20199L29 11.5NPTF	100	29.7	20	19.9	4
9	2 1/2"-6"	8	TMG20199L38 8NPTF	100	38.1	20	19.9	4

HELICAL FLUTES WITH COOLANT HOLE

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	TMGB06059L09 27NPTF	57	9.8	6	5.9	3
2	1/8"		TMGB08077L10 27NPTF	63	10.9	8	7.7	3
3	1/4"-3/8"	18	TMGB08079L14 18NPTF	63	14.8	8	7.9	3
4			TMGB10099L16 18NPTF	73	16.4	10	9.9	4
5	1/2"	14	TMGB12119L20 14NPTF	84	20.8	12	11.9	4
6	1/2"		TMGB16159L20 14NPTF	100	15.9	16	27.6	4
7	1"-2"	11.5	TMGB16159L27 11.5NPTF	100	27.1	16	15.9	4
8	1"-2"		TMGB20199L29 11.5NPTF	100	29.7	20	19.9	4
9	2 1/2"-6"	8	TMGB20199L38 8NPTF	100	38.1	20	19.9	4

NPS

INTERNAL / EXTERNAL

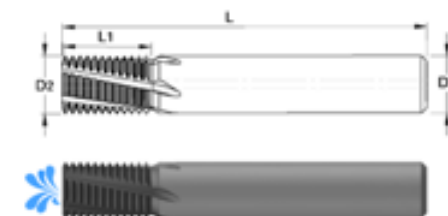
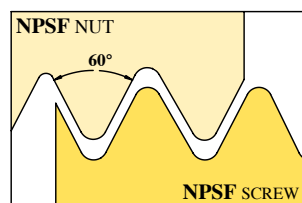


HELICAL FLUTES WITH COOLANT HOLE - (INCH SHANK)

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/8"	27	TMGB0312L4 27NPS	63	10.8	5/16"	7.6	3
2	1/4" - 3/8"	18	TMGB0375L6 18NPS	76	16.2	3/8"	9.5	4
3	1/2" - 3/4"	14	TMGB0625L8 14NPS	100	22.7	5/8"	15.5	4
4	1" - 2"	11.5	TMGB0750L11 11.5NPS	100	29.8	3/4"	19.0	4

NPSF

INTERNAL / EXTERNAL



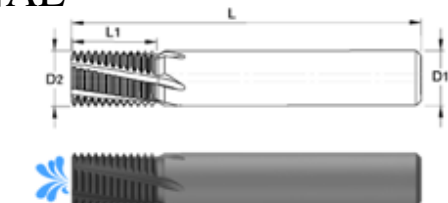
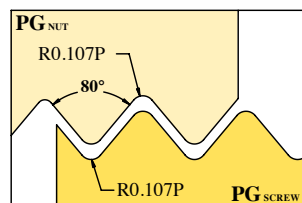
HELICAL FLUTES WITH COOLANT HOLE - (INCH SHANK)

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/8"	27	TMGB0312L4 27NPSF	63	10.8	5/16"	7.6	3
2	1/4" - 3/8"	18	TMGB0375L6 18NPSF	76	16.2	3/8"	9.5	4
3	1/2" - 3/4"	14	TMGB0625L8 14NPSF	100	22.7	5/8"	15.5	4
4	1" - 2"	11.5	TMGB0750L11 11.5NPSF	100	29.8	3/4"	19.0	4

PG

INTERNAL / EXTERNAL

DIN 40430 ; 1971



HELICAL FLUTES WITH COOLANT HOLE

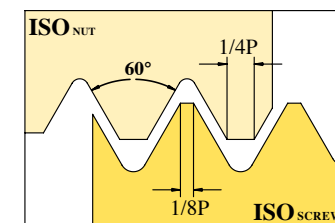
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1	PG 7	20	TMGB10099L19 20PG	73	19.7	10	9.9	3
2	PG 9, 11, 13.5, 16	18	TMGB12119L19 18PG	84	20.5	12	11.9	4
3	PG 21, 29, 36, 42, 48	16	TMGB12119L23 16PG	84	23.0	12	11.9	4

ISO METRIC

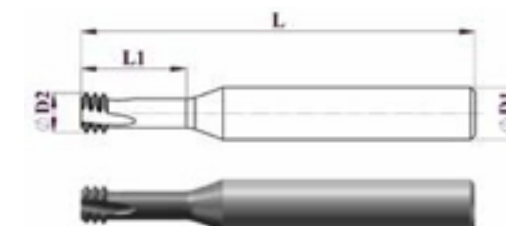
INTERNAL

ISO 965-1:1999-11

DIN13: 2005-08



D = NOMINAL THREAD

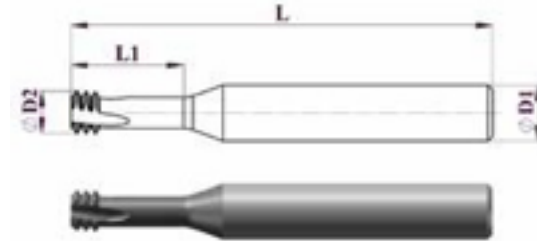
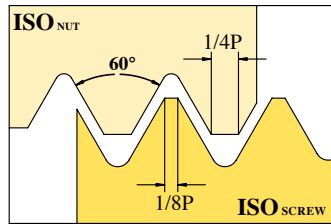


THREAD LENGTH - UP TO 2D

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M1.6x0.35	0.35	TMC03012L3 0.35ISO	39	3.3	3	1.20	3
2	M1.6x0.35		TMC06012L3 0.35ISO	57	3.3	6	1.20	3
3	M2.0x0.4	0.4	TMC03015L4 0.4ISO	39	4.4	3	1.54	3
4	M2.0x0.4		TMC06015L4 0.4ISO	57	4.4	6	1.54	3
5	M2.2x0.45	0.45	TMC03016L4 0.45ISO	39	4.8	3	1.63	3
6	M2.5x0.45		TMC06019L5 0.45ISO	57	5.3	6	1.96	3
7	M3.0x0.5	0.5	TMC03024L6 0.5ISO	39	6.4	3	2.40	3
8	M3.0x0.5		TMC06024L6 0.5ISO	57	6.4	6	2.40	3
9	M3.5x0.6	0.6	TMC06027L7 0.6ISO	57	7.4	6	2.75	3
10	M4.0x0.7	0.7	TMC06031L8 0.7ISO	57	8.6	6	3.15	3
11	M5.0x0.8	0.8	TMC06040L12 0.8ISO	57	12.0	6	4.00	3
12	M6.0x1.0	1.0	TMC06047L13 1.0ISO	57	13.0	6	4.75	3
13	M8.0x1.25	1.25	TMC06059L17 1.25ISO	57	17.3	6	5.95	3
14	M10.0x1.5	1.5	TMC08079L22 1.5ISO	63	22.0	8	7.90	3
15	M12.0x1.75	1.75	TMC10094L25 1.75ISO	73	25.5	10	9.40	3
16	M14x2.0	2.0	TMC10099L29 2.0ISO	73	29.0	10	9.95	3
17	M16x2.0		TMC12119L32 2.0ISO	84	33.0	12	11.95	4
18	M20x2.5	2.5	TMC16159L42 2.5ISO	100	42.0	16	15.90	5

ISO METRIC INTERNAL

ISO 965-1:1999-11
DIN13: 2005-08



D = NOMINAL THREAD

THREAD LENGTH – 3D UP TO 5D

	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M0.8x0.2	0.2	TMC03006L1 0.2ISO	39	1.8	3	0.60	3
2	M1.0x0.25	0.25	TMC03007L3 0.25ISO	39	2.9	3	0.72	3
3	M1.2x0.25		TMC03009L3 0.25ISO	39	3.0	3	0.90	3
4	M1.4x0.3	0.3	TMC03010L3 0.3ISO	39	3.9	3	1.06	3
5	M1.6x0.35	0.35	TMC03012L5 0.35ISO	39	5.1	3	1.20	3
6	M1.6x0.35		TMC06012L5 0.35ISO	57	5.1	6	1.20	3
7	M1.6x0.35		TMCL06012L5 0.35ISO	100	5.1	6	1.20	3
8	M1.8x0.35		TMC03014L5 0.35ISO	39	5.8	3	1.44	3
9	M2.0x0.4	0.4	TMC03015L6 0.4ISO	39	6.1	3	1.54	3
10	M2.0x0.4		TMC03015L10 0.4ISO	39	10.0	3	1.54	3
11	M2.0x0.4		TMC06015L6 0.4ISO	57	6.1	6	1.54	3
12	M2.0x0.4		TMCL06015L6 0.4ISO	100	6.1	6	1.54	3
13	M2.5x0.45	0.45	TMC03019L7 0.45ISO	39	7.6	3	1.96	3
14	M2.5x0.45		TMC03019L10 0.45ISO	39	10.5	3	1.96	3
15	M2.5x0.45		TMC06019L7 0.45ISO	57	7.6	6	1.96	3
16	M2.5x0.45		TMCL06019L7 0.45ISO	100	7.6	6	1.96	3
17	M3.0x0.5	0.5	TMC03024L9 0.5ISO	39	9.3	6	2.40	3
18	M3.0x0.5		TMC03024L12 0.5ISO	39	12.5	6	2.40	3
19	M3.0x0.5		TMC03024L15 0.5ISO	39	15.5	6	2.40	3
20	M3.0x0.5		TMC06024L9 0.5ISO	57	9.3	6	2.40	3

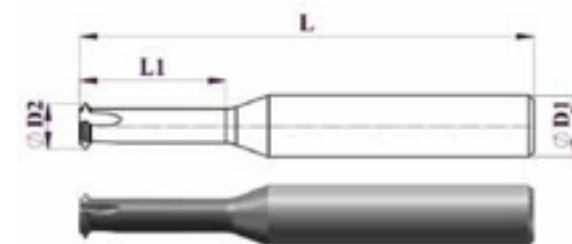
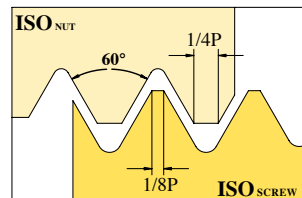
Thread Milling Tools

	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
21	M3.0x0.5	0.5	TMCL06024L9 0.5ISO	100	9.3	6	2.40	3
22	M6.0x0.5, M7.0x0.5		TMC06054L20 0.5ISO	57	20.1	6	5.40	3
23	M3.5x0.6	0.6	TMC06028L10 0.6ISO	57	10.5	6	2.75	3
24	M4.0x0.7	0.7	TMC06031L12 0.7ISO	57	12.4	6	3.15	3
25	M4.0x0.7		TMC06031L16 0.7ISO	57	16.0	6	3.15	3
26	M4.0x0.7		TMCL06031L12 0.7ISO	100	12.4	6	3.15	3
27	M10x0.75	0.75	TMC08079L25 0.75ISO	63	25.1	8	7.90	3
28	M5.0x0.8	0.8	TMC06040L15 0.8ISO	57	15.6	6	4.00	3
29	M5.0x0.8		TMC06040L21 0.8ISO	57	21.0	6	4.00	3
30	M5.0x0.8		TMCL06040L15 0.8ISO	100	15.6	6	4.00	3
31	M6.0x1.0	1.0	TMC06047L19 1.0ISO	57	19.0	6	4.75	3
32	M6.0x1.0		TMCL06047L19 1.0ISO	100	19.0	6	4.75	3
33	M6.0x1.0		TMC06047L24 1.0ISO	57	24.0	6	4.75	3
34	M8.0x1.25	1.25	TMC06059L24 1.25ISO	57	24.3	6	5.95	3
35	M8.0x1.25		TMCL06059L24 1.25ISO	100	24.3	6	5.95	3
36	M10x1.5	1.5	TMC08079L31 1.5ISO	76	31.0	8	7.90	3
37	M10x1.5		TMC08079L41 1.5ISO	76	40.3	8	7.90	3
38	M10x1.5		TMCL08079L31 1.5ISO	100	31.0	8	7.90	3
39	M12.0x1.75	1.75	TMC10094L36 1.75ISO	73	36.0	10	9.40	3
40	M16x2.0	2.0	TMCL12119L48 2.0ISO	100	48.0	12	11.95	4



ISO INTERNAL

ISO 965-1:1999-11

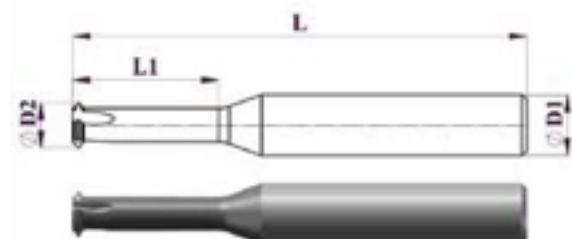
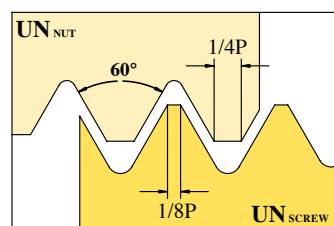


SINGLE TEETH FULL PROFILE

	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M0.8 x 0.2	0.2	TMP03006L1 0.2ISO	39	1.8	3	0.60	3
2	M1.0 x 0.25	0.25	TMP03007L3 0.25ISO	39	2.9	3	0.72	3
3	M1.2 x 0.25		TMP03009L3 0.25ISO	39	3.0	3	0.90	3
4	M1.4 x 0.3	0.3	TMP03010L3 0.3ISO	39	3.9	3	1.06	3
5	M1.6 x 0.35	0.35	TMP03012L5 0.35ISO	39	5.1	3	1.20	3
6			TMP06012L5 0.35ISO	57	5.1	6	1.20	3

UN INTERNAL

ANSI B1.1 - 1982

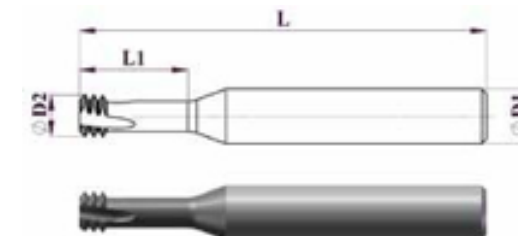
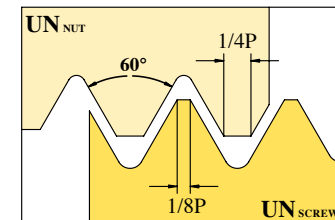


SINGLE TEETH FULL PROFILE

	UNC	UNF	PITCH TPI						
1		0-80	80	TMP03011L3 80UN	39	3.9	3	1.18	3
2		1-72	72	TMP03014L5 72UN	39	5.8	3	1.44	3
3	2-56	3-56	56	TMP03016L6 56UN	39	6.8	3	1.66	3
4	4-40		40	TMP03021L8 40UN	39	8.1	3	2.12	3

UN INTERNAL

ANSI B1.1 - 1982

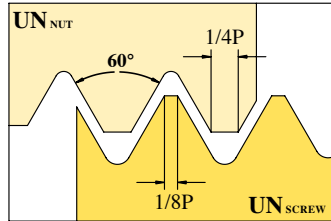


THREAD LENGTH - UP TO 2D

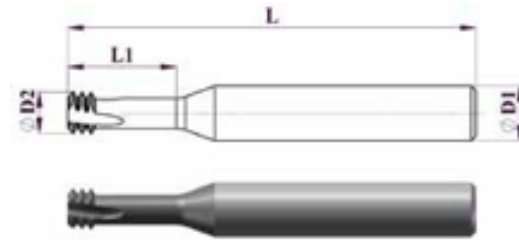
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		1"-72"	72	TMC03014L3 72UN	39	3.8	3	1.44	3
2	1"-64"	2"-64"	64	TMC03014L3 64UN	39	3.9	3	1.40	3
3	2"-56"	3"-56"	56	TMC03016L4 56UN	39	4.6	3	1.66	3
4	2"-56"	3"-56"		TMC06016L4 56UN	57	4.6	6	1.66	3
5	3"-48"	4"-48"	48	TMC06018L5 48UN	57	5.4	6	1.88	3
6	4"-40"		40	TMC06021L6 40UN	57	6.2	6	2.12	3
7	5"-40"	6"-40"		TMC06024L7 40UN	57	7.1	6	2.46	3
8		8"-36"	36	TMC06033L8 36UN	57	8.8	6	3.31	3
9	6"-32"		32	TMC06025L7 32UN	57	7.3	6	2.57	3
10	8"-32"			TMC06032L10 32UN	57	10.1	6	3.22	3
11		10"-32"		TMC06037L10 32UN	57	10.5	6	3.70	3
12		1/4"-28"	28	TMC06052L14 28UN	57	14.0	6	5.20	3
13	10"-24"		24	TMC06035L10 24UN	57	10.4	6	3.55	3
14		5/16"-24"		TMC08066L16 24UN	63	16.7	8	6.65	3
15	1/4"-20"	7/16"-20"	20	TMC06048L13 20UN	57	13.7	6	4.85	3
16		7/16"-20"		TMC08079L24 20UN	63	24.0	8	7.95	3
17		7/16"-20"		TMCL08079L24 20UN	100	24.0	8	7.95	3
18	5/16"-18"		18	TMC06059L16 18UN	57	16.5	6	5.95	3
19		5/8"-18"		TMC12119L34 18UN	84	34.0	12	11.90	4
20	3/8"-16"		16	TMC08069L21 16UN	63	21.0	8	6.90	3
21	7/16"-14"		14	TMC08079L23 14UN	63	23.5	8	7.95	3
22	1/2"-13"		13	TMC10093L27 13UN	73	27.0	10	9.30	3
23	9/16"-12"		12	TMC10099L29 12UN	63	29.0	10	9.95	3
24	5/8"-11"		11	TMC12115L33 11UN	84	33.0	12	11.50	3
25	3/4"		10	TMC16144L41 10UN	100	41.6	16	14.40	4

UN INTERNAL

ANSI B1.1 - 1982



D = NOMINAL THREAD SIZE



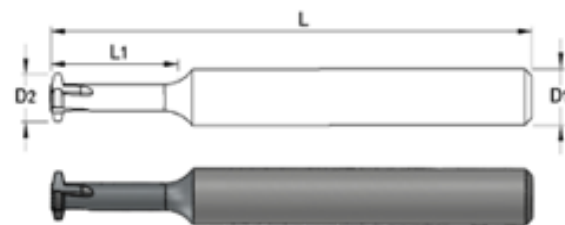
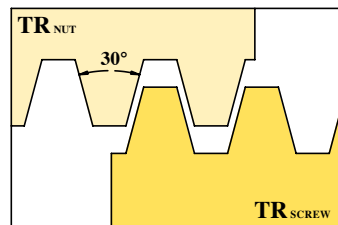
THREAD LENGTH – 3D UP TO 4D

	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
		0-80"	80	TMC03011L3 80UN	39	3.9	3	1.18	3
2		0-80"		TMC03011L8 80UN	39	8.0	3	1.18	3
3		1"-72"	72	TMC03014L5 72UN	39	5.8	3	1.44	3
4		1"-72"		TMC06014L5 72UN	57	5.8	6	1.44	3
5	1"-64"	2"-64"	64	TMC06014L4 64UN	57	3.8	6	1.40	3
6	2"-56"	3"-56"	56	TMC03016L6 56UN	39	6.8	3	1.66	3
7	2"-56"	3"-56"		TMC03016L9 56UN	39	9.2	3	1.66	3
8	2"-56"	3"-56"		TMC03016L11 56UN	39	11.4	3	1.66	3
9	2"-56"	3"-56"		TMC06016L6 56UN	57	6.8	6	1.66	3
10	2"-56"	3"-56"		TMCL06016L6 56UN	100	6.8	6	1.66	3
11	2"-56"	3"-56"		TMC06016L9 56UN	57	9.0	6	1.66	3
12	2"-56"	3"-56"		TMCL06016L9 56UN	100	9.0	6	1.66	3
13	4"-40"		40	TMC03021L8 40UN	39	8.1	3	2.12	3
14	4"-40"			TMC03021L12 40UN	39	12.0	3	2.12	3
15	4"-40"			TMC06021L8 40UN	57	8.1	6	2.12	3
16	4"-40"	6"-40"		TMCL06021L8 40UN	100	8.1	6	2.12	3
17	5"-40"			TMC06024L9 40UN	57	9.8	6	2.46	3
18	6"-32"		32	TMC03025L10 32UN	39	10.7	3	2.57	3
19	6"-32"			TMC03025L14 32UN	39	14.8	3	2.57	3
20	6"-32"			TMC06025L10 32UN	57	10.7	6	2.57	3
21	6"-32"			TMCL06025L10 32UN	100	10.7	6	2.57	3
22	8"-32"	10"-32"		TMC06032L12 32UN	57	12.7	6	3.22	3
23	8"-32"	10"-32"		TMC06032L17 32UN	57	17.5	6	3.22	3
24	8"-32"	10"-32"		TMCL06032L12 32UN	100	12.7	6	3.22	3

	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
25		10"-32"	32	TMC06037L15 32UN	57	15.5	6	3.70	3
26		10"-32"		TMC06037L20 32UN	57	20.0	6	3.70	3
27		10"-32"		TMCL06037L15 32UN	100	15.5	6	3.70	3
28		12"-28"	28	TMC06042L16 28UN	57	16.0	6	4.20	3
29		1/4"-28"		TMC06052L19 28UN	57	19.3	6	5.20	3
30		1/4"-28"		TMCL06052L19 28UN	100	19.3	6	5.20	3
31		5/16"-24"	24	TMC08066L24 24UN	63	24.2	8	6.65	3
32	1/4"-20"	7/16"-20"	20	TMC06048L19 20UN	57	19.4	6	4.85	3
33	1/4"-20"	7/16"-20"		TMCL06048L19 20UN	100	19.4	6	4.85	3
34	5/16"-18"		18	TMC06059L23 18UN	57	23.0	6	5.90	3
35	3/8"-16"		16	TMC08069L28 16UN	63	28.5	8	6.90	3
36	7/16"-14"		14	TMC08079L35 14UN	63	35.2	8	7.90	3
37	1/2"-13"		13	TMC10093L40 13UN	73	40.1	8	9.30	3
38	9/16"-12"		12	TMC12105L45 12UN	84	45.0	12	10.5	3
39	5/8"-11"		11	TMC12115L50 11UN	84	50.0	12	11.50	3
40	3/4"		10	TMC16144L59 10UN	100	59.7	16	14.40	4

TRAPEZ INTERNAL

DIN 103:1977
ISO 2901:1993

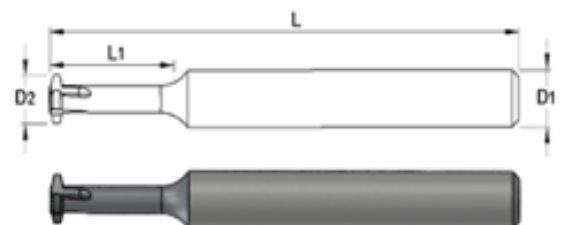
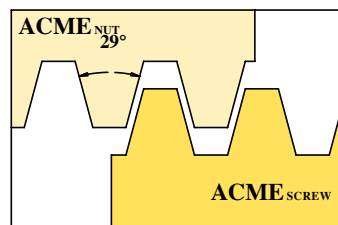


SINGLE TEETH SEMI-FULL PROFILE

	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	TR8X1.5, TR9X1.5	1.5	TMP06055L13 1.5TR	58	13.5	6	5.5	3
2	TR10X2, TR11X2	2	TMP08066L21 2TR	64	21.0	8	6.6	3
3	TR12X2, TR14X2		TMP10086L25 2TR	73	25.0	10	8.6	4
4	TR12X3	3	TMP08070L25 3TR	64	25.0	8	7.0	3
5	TR14X3, TR22X3		TMP10089L29 3TR	73	29.0	10	8.9	4
6	TR16X4, TR18X4, TR20x4	4	TMP10092L33 4TR	73	33.0	10	9.2	3
7	TR22X5, TR24X5, TR26X5	5	TMP14135L45 5TR	100	45.0	14	13.5	4

ACME INTERNAL

ANSI/ASME 1.5-1988

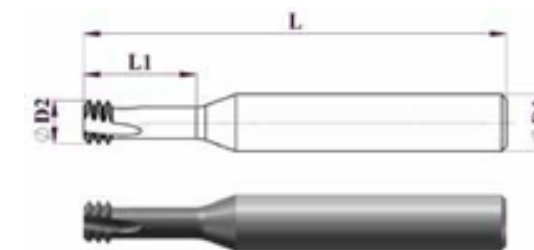
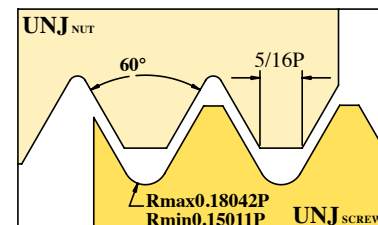


SINGLE TEETH SEMI-FULL PROFILE (INCH SHANK)

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/4-16	16	TMP02050L4 16ACME	64	9.7	1/4"	4.3	3
2	5/16-14	14	TMP02050L6 14ACME	64	15.2	1/4"	5.2	3
3	3/8-12 7/16-12	12	TMP02050L8 12ACME	64	19.1	1/4"	6.1	3
4	1/2-10	10	TMP03075L10 10ACME	76	25.4	3/8"	8.3	4
5	5/8-8	8	TMP0500L11 8ACME	89	27.9	1/2"	10.4	4
6	3/4-6 7/8-6	6	TMP0500L12 6ACME	89	30.5	1/2"	12.0	4
7	1-5 1 1/8-5 1 1/4-5	5	TMP06025L15 5ACME	102	38.1	5/8"	15.9	5

UNJ INTERNAL

MIL-S-8879A

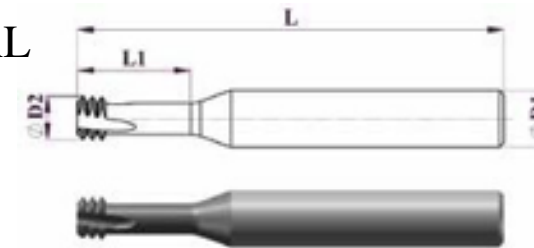
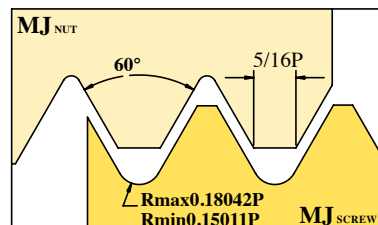


THREAD LENGTH - UP TO 3D

	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNJ	FINE UNJF							
1	4"	6"	40	TMC06021L8 40UNJ	57	8.0	6	2.10	3
2	6"		32	TMC06025L10 32UNJ	57	10.7	6	2.5	3
3	8"	10		TMC06033L12 32UNJ	57	12.0	6	3.30	3
4		1/4"	28	TMC06054L19 28UNJ	57	19.0	6	5.40	3
5	1/4"			TMC08051L16 28UNJ	63	16.0	6	5.10	3
6		5/16", 3/8"	24	TMC08067L24 24UNJ	63	24.0	8	6.70	3
7	1/4"		20	TMC06050L19 20UNJ	57	19.0	6	5.00	3
8		7/16"		TMC08079L28 20UNJ	63	28.0	8	7.90	3
9	5/16"		18	TMC08064L24 18UNJ	63	24.0	8	6.40	3
10	3/8"		16	TMC08069L24 16UNJ	63	24.0	8	6.90	3
11	7/16"		14	TMC08079L26 14UNJ	63	26.0	8	7.90	3
12	1/2"		13	TMC10099L28 13UNJ	73	28.0	10	9.90	3

MJ INTERNAL

ISO 5855-1:1989



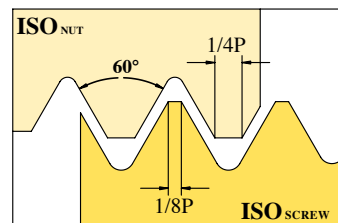
THREAD LENGTH - UP TO 3D

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	MJ4.0	0.7	TMC06032L12 0.7MJ	57	12.0	6	3.20	3
2	MJ5.0	0.8	TMC06040L15 0.8MJ	57	15.0	6	4.00	3
3	MJ6.0	1.0	TMC06048L18 1.0MJ	57	18.0	6	4.80	3
4	MJ8.0	1.25	TMC08065L24 1.25MJ	63	24.0	8	6.50	3
5	MJ10.0	1.5	TMC08079L31 1.5MJ	63	31.0	8	7.90	3
6	MJ12.0	1.75	TMC10094L31 1.75MJ	73	31.0	10	9.40	3
7	MJ14.0, MJ16.0	2.0	TMC10099L36 2.0MJ	73	36.0	10	9.90	3

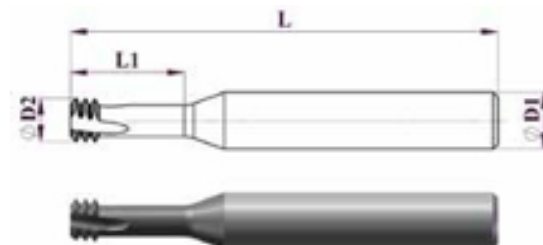
HARD MATERIALS – UP TO 62 HRc

ISO METRIC INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08



D = NOMINAL THREAD SIZE



THREAD LENGTH – UP TO 3D

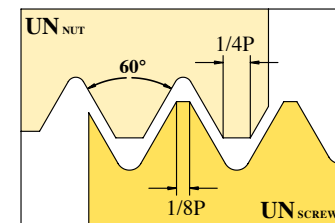
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M1.6x0.35	0.35	TMD06012L3 0.35ISO	57	3.3	6	1.20	3
2	M1.6x0.35		TMD06012L5 0.35ISO	57	5.1	6	1.20	3
3	M2.0x0.4	0.4	TMD06015L4 0.4ISO	57	4.4	6	1.54	3
4	M2.0x0.4		TMD06015L6 0.4ISO	57	6.1	6	1.54	3
5	M2.2x0.45	0.45	TMD06016L4 0.45ISO	57	4.8	6	1.63	3
6	M2.5x0.45		TMD06019L5 0.45ISO	57	5.3	6	1.96	3
7	M2.5x0.45		TMD06019L7 0.45ISO	57	7.6	6	1.96	3
8	M3.0x0.5	0.5	TMD06024L6 0.5ISO	57	6.4	6	2.40	3
9	M3.0x0.5		TMD06024L9 0.5ISO	57	9.3	6	2.40	3
10	M3.5x0.6	0.6	TMD06027L7 0.6ISO	57	7.4	6	2.75	3
11	M4.0x0.7	0.7	TMD06031L8 0.7ISO	57	8.6	6	3.15	3
12	M4.0x0.7		TMD06031L12 0.7ISO	57	12.4	6	3.15	3
13	M5.0x0.8	0.8	TMD06040L12 0.8ISO	57	12.0	6	4.0	3
14	M5.0x0.8		TMD06040L15 0.8ISO	57	15.6	6	4.00	3
15	M6.0x1.0	1.0	TMD06047L13 1.0ISO	57	13.0	6	4.75	3
16	M6.0x1.0		TMD06047L19 1.0ISO	57	19.0	6	4.75	3
17	M8.0x1.25	1.25	TMD06059L17 1.25ISO	57	17.3	6	5.95	3
18	M8.0x1.25		TMD06059L24 1.25ISO	57	24.3	6	5.95	3
19	M10.0x1.5	1.5	TMD08079L22 1.5ISO	63	22.0	8	7.90	3
20	M10.0x1.5		TMD08079L31 1.5ISO	63	31.0	8	7.90	3
21	M12.0x1.75	1.75	TMD10094L36 1.75ISO	73	36.0	10	9.40	3
22	M12.0x1.75		TMD10094L25 1.75ISO	73	25.5	10	9.40	3

*LEFT HAND CUTTING, CNC CODE: M04

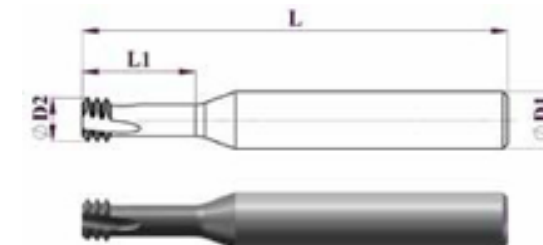
HARD MATERIALS – UP TO 62 HRc

UN INTERNAL

ANSI B1.1 - 1982



D = NOMINAL THREAD SIZE



THREAD LENGTH – UP TO 3D

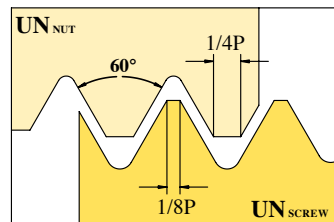
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		1"-72"	72	TMD06014L3 72UN	57	3.8	6	1.44	3
2		1"-72"		TMD06014L5 72UN	57	5.8	6	1.44	3
3	1"-64"	2"-64"	64	TMD06014L3 64UN	57	3.9	6	1.40	3
4	2"-56"	3"-56"	56	TMD06016L4 56UN	57	4.6	6	1.66	3
5	2"-56"			TMD06016L6 56UN	57	6.5	6	1.6	3
6	3"-48"	4"-48"	48	TMD06018L5 48UN	57	5.4	6	1.88	3
7	4"-40"		40	TMD06021L6 40UN	57	6.2	6	2.12	3
8	5"-40"	6"-40"		TMD06024L7 40UN	57	7.1	6	2.46	3
9	5"-40"	6"-40"		TMD06024L9 40UN	57	9.8	6	2.46	3
10		8"-36"	36	TMD06033L8 36UN	57	8.8	6	3.31	3
11	6"-32"		32	TMD06025L7 32UN	57	7.8	6	2.57	3
12	8"-32"	10"-32"		TMD06032L10 32UN	57	10.3	6	3.22	3
13	8"-32"	10"-32"		TMD06032L12 32UN	57	12.7	6	3.22	3
14		1/4"-28"	28	TMD06052L14 28UN	57	14.0	6	5.20	3
15		1/4"-28"		TMD06052L19 28UN	57	19.3	6	5.20	3
16	10"-24"		24	TMD06035L10 24UN	57	10.4	6	3.55	3
17		5/16"-24"		TMD08066L16 24UN	64	16.7	8	6.65	3
18		5/16"-24"	20	TMD08066L24 24UN	63	24.2	8	6.65	3
19	1/4"-20"	7/16"-20"		TMD06048L13 20UN	57	13.7	6	4.85	3
20	1/4"-20"	7/16"-20"		TMD06048L19 20UN	57	19.4	6	4.85	3
21		7/16"-20"		TMD08079L24 20UN	63	24.0	8	7.95	3

*LEFT HAND CUTTING, CNC CODE: M04

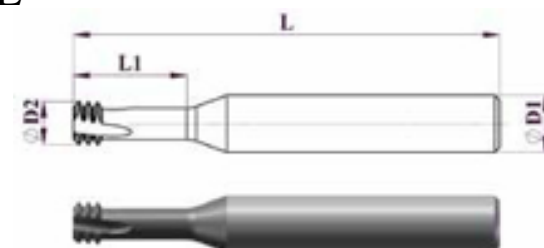
HARD MATERIALS – UP TO 62 HRc

UN INTERNAL

ANSI B1.1 - 1982



D = NOMINAL THREAD SIZE



THREAD LENGTH – UP TO 3D

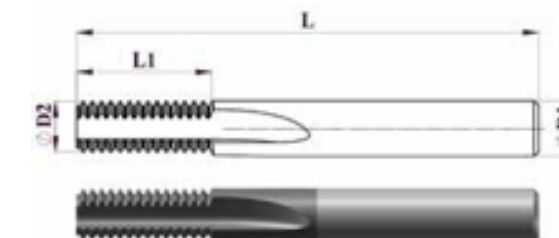
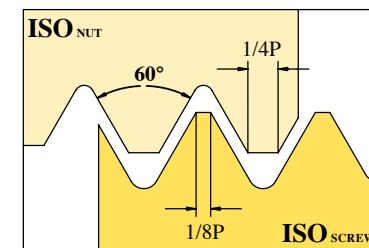
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
22	5/16"		18	TMD06059L16 18UN	57	16.5	6	5.95	3
23		5/8"-18"		TMD12119L34 18UN	84	34.0	12	11.90	4
24	3/8"		16	TMD08069L20 16UN	63	20.0	8	6.90	3
25	7/16"-14"		14	TMD08079L24 14UN	63	24.9	8	7.95	3
26	1/2"-13"		13	TMD10093L22 13UN	73	22.0	10	9.3	3
27	1/2"-13"			TMD10093L27 13UN	73	27.5	10	9.3	3
28	9/16"		12	TMD12105L31 12UN	84	31.5	12	10.5	3
29	5/8"		11	TMD12114L34 11UN	84	34.5	12	11.4	3
30	3/4"		10	TMD16144L41 10UN	100	41.5	16	14.4	4

*LEFT HAND CUTTING, CNC CODE: M04



ISO METRIC INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08

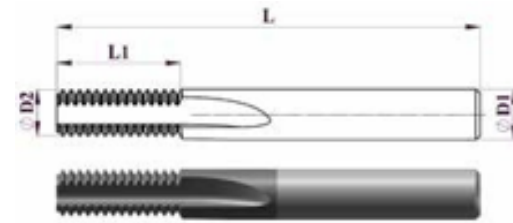
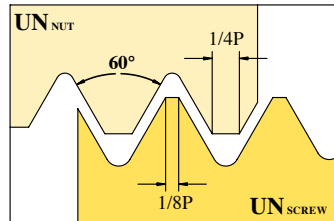


STRAIGHT FLUTES

	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M8.0X0.75	0.75	TMX06059L10 0.75ISO	57	10.8	6	5.9	3
2	M5.0x0.8		0.8	TMX06039L10 0.8ISO	57	10.0	6	3.9	3
3	M6.0x1.0	M7.0x1.0	1.0	TMX06048L11 1.0ISO	57	11.5	6	4.8	3
4		M10.0x1.0		TMX08079L17 1.0ISO	63	17.5	8	7.9	4
5		M12x1.0		TMX10099L20 1.0ISO	73	20.5	10	9.9	4
6	M8.0x1.25	M9.0x1.25	1.25	TMX06059L14 1.25ISO	57	14.4	6	5.9	3
7	M10x1.5	M11.0x1.5	1.5	TMX08079L18 1.5ISO	63	18.5	8	7.9	3
8		M13.0x1.5		TMX10099L21 1.5ISO	73	21.8	10	9.9	4
9		M15.0x1.5		TMX12119L26 1.5ISO	84	26.3	12	11.9	4
10	M12.0x1.75		1.75	TMX08079L18 1.75ISO	64	18.0	8	7.9	3
11	M14.0x2.0		2.0	TMX10099L25 2.0ISO	73	25.0	10	9.9	3
12	M16.0x2.0			TMX12119L27 2.0ISO	84	27.0	12	11.9	4
13	M20.0x2.5		2.5	TMX12119L30 2.5ISO	84	30.0	12	11.9	4
14	M24.0x3.0	M27.0x3.0	3.0	TMX16159L40 3.0ISO	100	40.5	16	15.9	4

UN (UNC, UNF, UNEF) INTERNAL

ANSI B1.1 - 1982

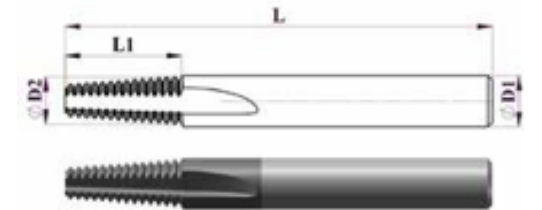
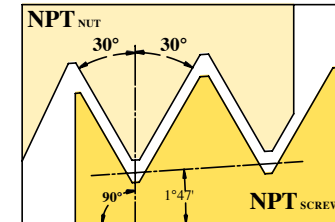


STRAIGHT FLUTES

	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	UNC	UNF	UNEF							
1			5/16"	32	TMX06059L14 32UN	57	14.0	6	5.9	3
2		1/4"	7/16"-1/2"	28	TMX06051L12 28UN	57	12.2	6	5.1	3
3			7/16"-1/2"		TMX08079L15 28UN	63	15.8	8	7.9	4
4		5/16"		24	TMX06059L10 24UN	57	10.8	6	5.9	3
5	1/4"			20	TMX06048L12 20UN	57	12.0	6	4.8	3
6		7/16"			TMX08079L19 20UN	63	19.7	8	7.9	3
7		1/2"			TMX10099L22 20UN	73	22.5	10	9.9	4
8	5/16"			18	TMX06057L16 18UN	57	16.0	6	5.7	3
9		9/16"-5/8"			TMX08079L18 18UN	63	18.5	8	7.9	3
10	3/8"			16	TMX08068L18 16UN	63	18.2	8	6.8	3
11		3/4"			TMX12119L26 16UN	84	26.2	12	11.9	4
12	7/16"			14	TMX08078L20 14UN	63	20.8	8	7.8	3
13		7/8"			TMX12119L24 14UN	84	24.5	12	11.9	4
14	1/2"			13	TMX10093L24 13UN	73	24.4	10	9.3	3
15	9/16"			12	TMX12119L27 12UN	84	26.4	12	10.6	4
16		1"			TMX16159L39 12UN	100	39.1	16	15.9	5
17	5/8"			11	TMX12115L31 11UN	84	31.1	12	11.5	4
18	3/4"			10	TMX16143L36 10UN	100	36.8	16	14.3	4
19	7/8"			9	TMX16159L40 9UN	100	40.9	16	15.9	4
20	1"			8	TMX20197L39 8UN	100	39.7	20	19.7	4

NPT INTERNAL / EXTERNAL

ANSI/ASME B 1.20.1-1983

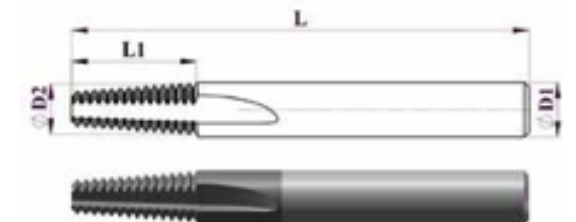
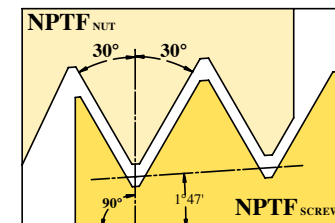


STRAIGHT FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	27	TMX06059L09 27NPT	57	9.8	6	5.9	3
2	1/4"-3/8"	18	TMX10099L16 18NPT	73	16.2	10	9.9	4
3	1/2"	14	TMX12119L20 14NPT	83	20.8	12	11.9	4
4	1"-2"	11.5	TMX20199L29 11.5NPT	100	29.7	20	19.9	4
5	2 1/2"-6"	8	TMX20199L38 8NPT	100	38.1	20	19.9	4

NPTF INTERNAL / EXTERNAL

ANSI B 1.20.3-1976



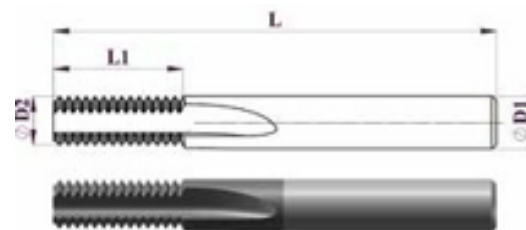
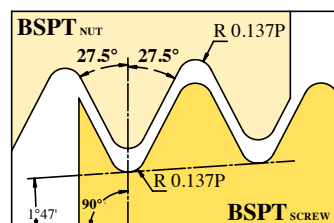
STRAIGHT FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	27	TMX06059L09 27NPTF	57	9.9	6	5.9	3
2	1/4"-3/8"	18	TMX10099L16 18NPTF	73	16.2	10	9.9	4
3	1/2"	14	TMX12119L20 14NPTF	83	20.8	12	11.9	4
4	1"-2"	11.5	TMX20199L29 11.5NPTF	100	29.7	20	19.9	4
5	2 1/2"-6"	8	TMX20199L38 8NPTF	100	38.1	20	19.9	4

BSP (G)

INTERNAL / EXTERNAL

B.S.21: 1985



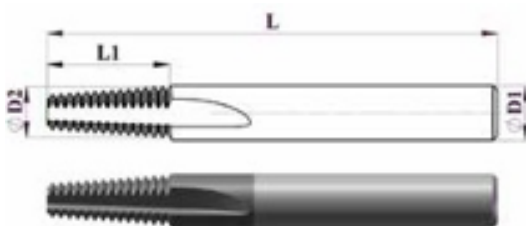
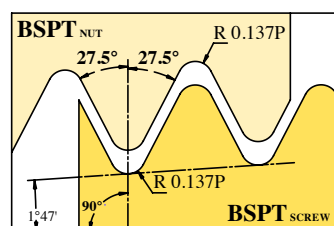
STRAIGHT FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	28	TMX06059L11 28BSP	57	11.3	6	5.9	3
2	1/4"-3/8"	19	TMX10099L16 19BSP	73	16.6	10	9.9	4
3	1/2"-7/8"	14	TMX12119L22 14BSP	83	22.7	12	11.9	4
4	1"-2"	11	TMX16159L32 11BSP	100	32.1	16	15.9	4

BSPT (Rc)

INTERNAL / EXTERNAL

B.S.21: 1985

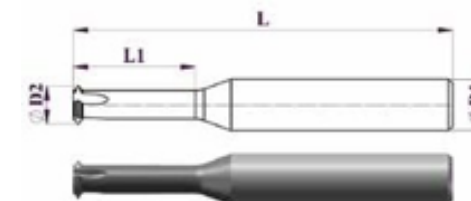
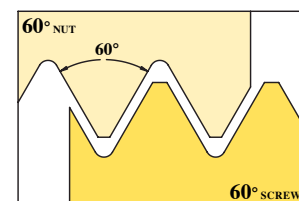


STRAIGHT FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	28	TMX06059L11 28BSPT	57	11.3	6	5.9	3
2	1/4"-3/8"	19	TMX10099L16 19BSPT	73	16.6	10	9.9	4
3	1/2"-7/8"	14	TMX12119L22 14BSPT	83	22.7	12	11.9	4
4	1"-2"	11	TMX16159L32 11BSPT	100	32.1	16	15.9	4

PARTIAL PROFILE 60°

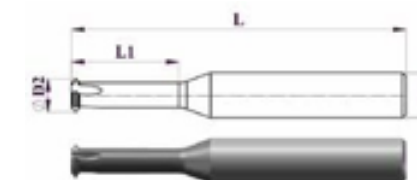
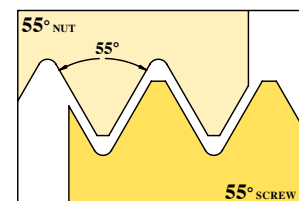
INTERNAL / EXTERNAL



	THREAD SIZE		ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES	MIN. HOLE DIAMETER
	MM	TPI							
1	0.25-0.35	100-72	TMP03012L3 P60	39	3.1	3	1.15	3	1.4
2	0.35-0.45	72-56	TMP03014L4 P60	39	3.7	3	1.40	3	1.6
3	0.35-0.6	72-40	TMP03019L6 P60	39	6	3	1.95	3	2.0
4	0.5-0.8	48-32	TMP03024L7 P60	39	7.7	3	2.45	3	2.6
5			TMP04031L10 P60	51	10	4	3.15	3	3.3
6			TMP06031L10 P60	57	10	6	3.15	3	3.3
7	0.5-1.0	48-24	TMP04040L12 P60	51	12	4	4.0	3	4.2
8			TMP06040L12 P60	57	12	6	6.0	3	4.2
9	0.5-1.25	48-20	TMP06047L15 P60	57	15	6	4.7	3	4.9
10	0.5-0.8 0.4-0.8	56-28 64-32	TMP06054L20 P60	57	20.1	6	5.0	3	5.2
11	0.5-1.25	48-20	TMP06060L18 P60	57	18	6	6.0	3	6.3
12	0.75-1.5	32-16	TMP0808L24 P60	63	24	8	8.0	3	8.3
13			TMP0808L31 P60	63	30.5	8	8.0	3	8.3
14	1.0-2.5	24-10	TMP10100L30 P60	73	30	10	10.0	4	10.4
15			TMP10100L36 P60	73	35.5	10	10.0	4	10.4
16			TMP12120L36 P60	84	36	12	12.0	4	12.5
17	2.0-3.0	13-8, 15-10	TMP16140L45 P60	100	45	16	14.0	5	14.5
18	13-8, 15-10		TMP16160L50 P60	100	50	16	10.0	5	16.5

PARTIAL PROFILE 55°

INTERNAL / EXTERNAL

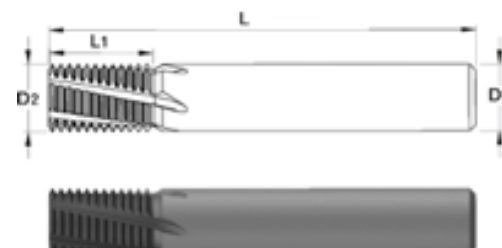
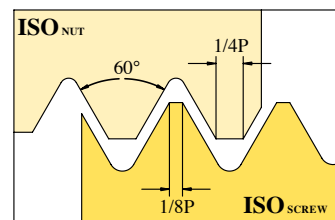


	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	40-32	TMP03023L7 P55	39	7.0	3	2.25	3
2	28-20	TMP06044L14 P55	57	14.0	6	4.35	3
3	28-18	TMP06059L20 P55	57	20.5	6	5.85	3
4	20-14	TMP08070L23 P55	63	23.0	8	7.00	3

EXTERNAL THREADS

ISO METRIC EXTERNAL

ISO 965-1:1999-11
DIN13: 2005-08

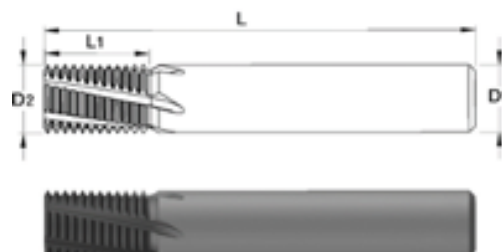
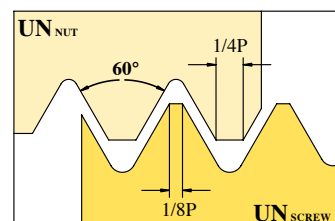


HELICAL FLUTES

	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1.0	TMGE10099L18 1.0ISO	73	18.0	10	9.9	4
2		TMGE12119L21 1.0ISO	84	20.5	12	11.9	5
3	1.25	TMGE10099L17 1.25ISO	73	16.9	10	9.9	4
4	1.5	TMGE10099L21 1.5ISO	73	21.8	10	9.9	4
5		TMGE12119L26 1.5ISO	84	26.3	12	11.9	4
6	1.75	TMGE12119L20 1.75ISO	84	20.2	12	11.9	4
7	2.0	TMGE10099L17 2.0ISO	73	17.1	10	9.9	3
8		TMGE12119L21 2.0ISO	84	21.1	12	11.9	4

UN (UNC, UNF, UNEF) EXTERNAL

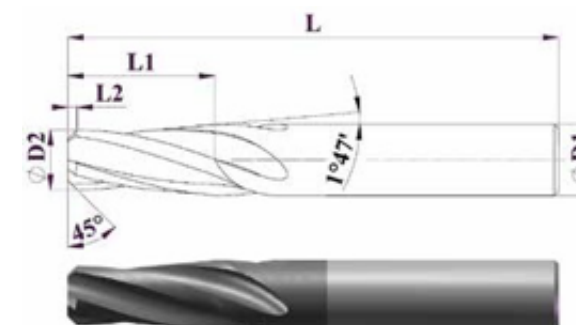
ANSI B1.1 - 1982



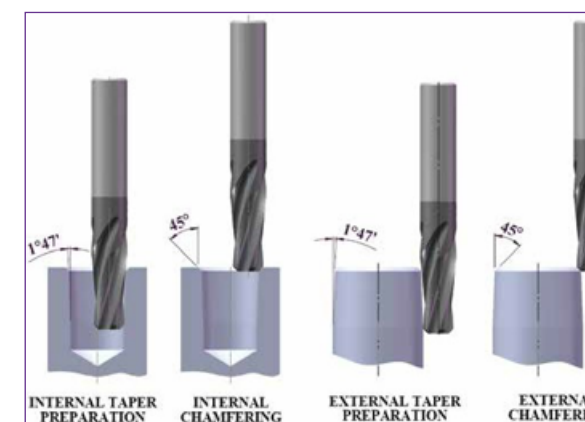
HELICAL FLUTES

	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	24	TMGE10099L16 24UN	73	16.5	10.0	9.9	4
2	20	TMGE12119L21 20UN	84	21.1	12.0	11.9	5
3	18	TMGE12119L21 18UN	84	20.6	12.0	11.9	4
4	16	TMGE12119L21 16UN	84	21.6	12.0	11.9	4
5	14	TMGE12119L21 14UN	84	21.0	12.0	11.9	4

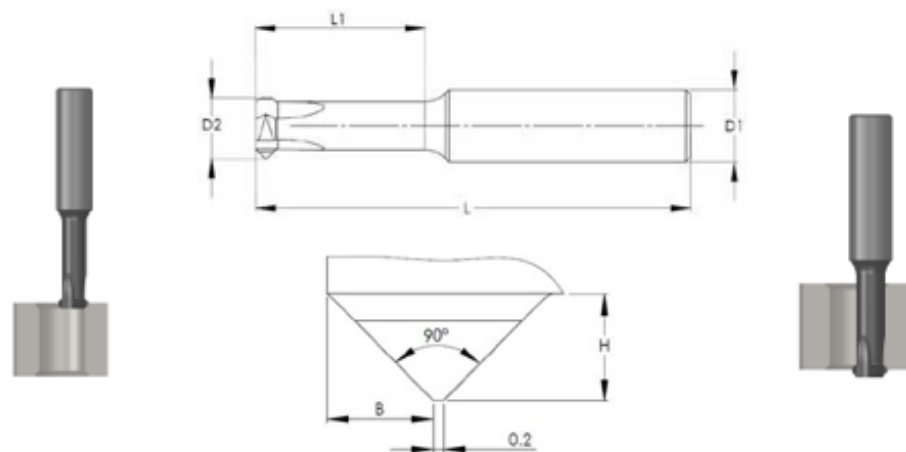
TAPER END MILL & 45° CHAMFER (BSPT, NPT, NPTF) INTERNAL / EXTERNAL



	ORDERING CODE	D1	D2	L	L1	L2	NO. OF FLUTES
1	PM0605L15	6	5	58	15	1.0	4
2	PM1084L25	10	8.4	73	25	1.4	4
3	PM1299L33	12	9.9	84	33	1.8	4



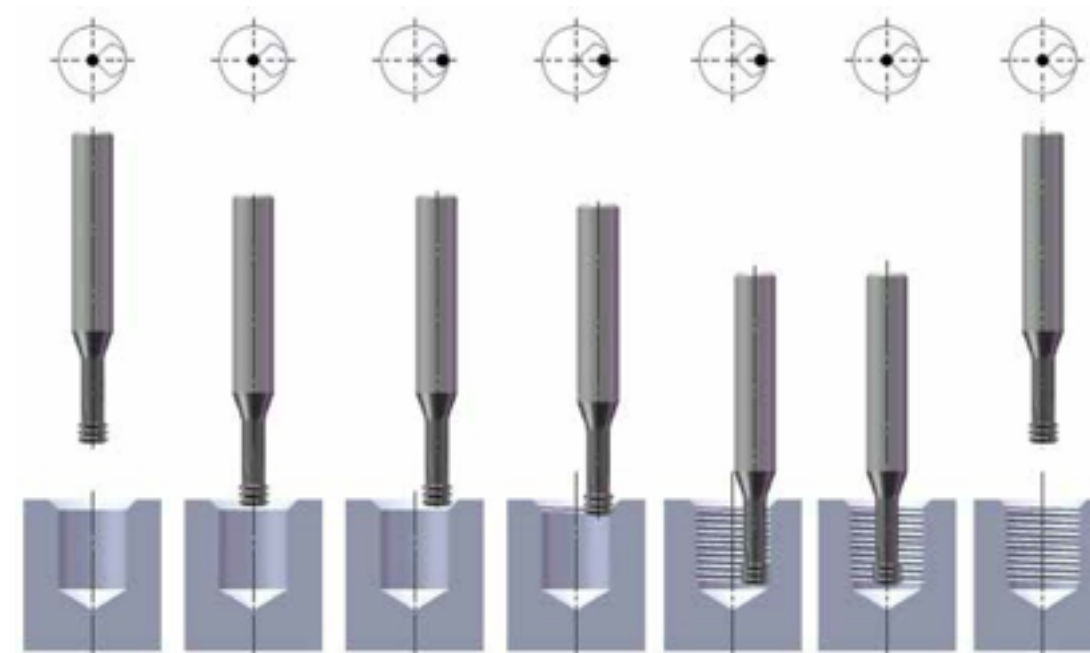
CHAMFERS TOOLS 90°



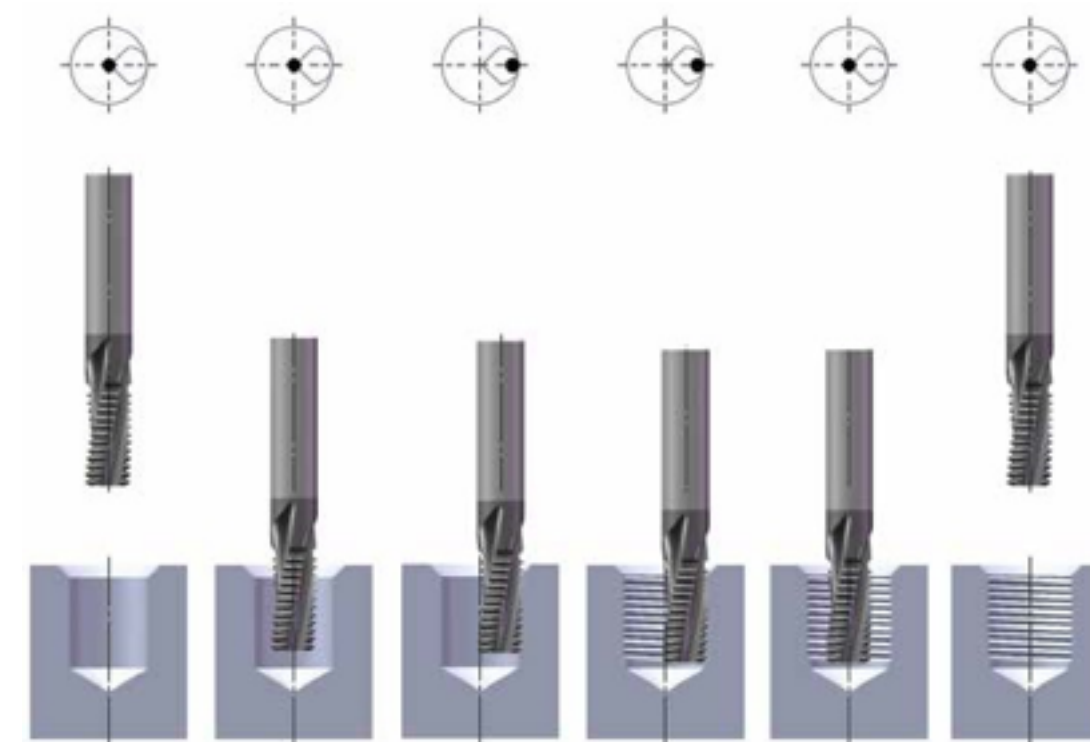
	ORDERING CODE	L	D1	D2	L1	H	B	a	NO. OF FLUTES
1	CMP03015L4 P90	39	3	1.5	4	0.3	0.4	90°	3
2	CMP03020L5 P90	39	3	2.0	5	0.4	0.5	90°	3
3	CMP03025L6 P90	39	3	2.5	6	0.5	0.6	90°	3
4	CMP03030L12 P90	39	3	3.0	12	0.6	0.7	90°	3
5	CMP04031L8 P90	51	4	3.1	8	0.6	0.6	90°	3
6	CMP04031L12 P90	51	4	3.1	12	0.6	0.6	90°	3
7	CMP04035L12 P90	51	4	4.0	14	0.7	0.8	90°	3
8	CMP04039L10 P90	51	4	3.9	10	0.8	0.9	90°	3
9	CMP04039L16 P90	51	4	3.9	16	0.8	0.9	90°	3
10	CMP05045L18 P90	51	5	4.5	18	1.0	1.1	90°	3
11	CMP06045L11 P90	57	6	4.5	11	1.1	1.2	90°	3
12	CMP06049L12 P90	57	6	4.9	12	1.1	1.2	90°	3
13	CMP06049L20 P90	57	6	4.9	20	1.1	1.2	90°	3
14	CMP06055L13 A90	57	6	5.5	13.8	1.3	1.4	90°	3
15	CMP06055L22 P90	57	6	5.5	22	1.2	1.3	90°	3
16	CMP06059L14 P90	57	6	5.9	14	1.5	1.6	90°	3
17	CMP06059L24 P90	57	6	5.9	24	1.5	1.6	90°	3
18	CMP08079L20 P90	63	8	7.9	20	1.6	1.7	90°	3
19	CMP08079L30 P90	63	8	7.9	30	1.6	1.7	90°	3
20	CMP10100L35 P90	73	10	10	35	1.8	1.9	90°	5
21	CMP12120L42 P90	84	12	12	42	2.1	2.2	90°	6

TECHNICAL SECTION

THREAD MILLING CYCLE (TMC, TMD TYPES)



THREAD MILLING CYCLE (TMG, TMX TYPES)



TECHNICAL SECTION

MACHINING CONDITIONS

CARBIDE GRADE: K520C

AN ADVANCED PVD TiAlN COATED GRADE OVER A TOUGH WEAR-RESISTANT SUBMICRON
SUBSTRATE FOR GENERAL PURPOSE MACHINING OF STEEL, STAINLESS STEEL, SUPERALLOYS.

ISO	MATERIAL	HARDNESS HB	CUTTING SPEED M/MIN	FEED MM/TOOTH CUTTING DIAMETERS						
				1.5-3	3-5	5-7	7-9	9-11	11-14	14-20
P	NON-ALLOY STEEL FREE MACHINING STEEL	130	70-130	0.03	0.04	0.06	0.07	0.09	0.09	0.12
	LOW CARBON ALLOY STEEL	200	60-120	0.02	0.04	0.05	0.06	0.08	0.08	0.10
	HIGH CARBON ALLOY STEEL	240	60-110	0.02	0.03	0.04	0.05	0.05	0.05	0.08
	TOOL STEEL CAST STEEL	270	60-100	0.02	0.03	0.04	0.05	0.05	0.05	0.06
	HEAT TREATED STEEL	400	50-80	0.01	0.02	0.03	0.03	0.04	0.04	0.05
M	300 STAINLESS STEEL : (303,304,316)	200	70-100	0.02	0.02	0.03	0.04	0.05	0.05	0.07
	400 STAINLESS STEEL : (420, 440)	240	70-90	0.02	0.02	0.03	0.04	0.04	0.04	0.06
	17-4 PH, 15-5 PH, 13-8MO PH	400	60-80	0.015	0.02	0.02	0.03	0.03	0.03	0.04
K	GREY CAST IRON	190	60-110	0.02	0.03	0.06	0.07	0.08	0.09	0.11
	NODULAR CAST IRON	180	60-90	0.02	0.03	0.05	0.06	0.08	0.09	0.12
	MALLEABLE CAST IRON	240	60-90	0.02	0.02	0.03	0.05	0.07	0.08	0.11
N	WROUGHT ALUMINUM: (2024, 6061, 7075...)	80	80-300	0.03	0.04	0.06	0.07	0.10	0.13	0.15
	CAST ALUMINUM :	90	100-300	0.03	0.04	0.06	0.07	0.11	0.13	0.16
	COPPER ALLOYS: BRASS, BRONZE, COPPER SILICON	100	60-250	0.03	0.04	0.06	0.07	0.11	0.13	0.16
	NON METALIC: Rubber, Polypropylene, Thermoplastics (PVC), Thermosetting Plastics (FIBERGLASS), Polyamides,		100-400	0.05	0.06	0.08	0.09	0.13	0.15	0.18
S	TITANIUM : PURE TITANIUM: 99.0Ti ALPHA ALLOYS:Ti 5Al2.5Sn BETA ALLOYS: Ti 1 3V11Cr3Al ALPHA-BETA ALLOYS : Ti 6Al4V		40-80 30-60 20-50 20-50	0.02 0.02 0.02 0.02	0.02 0.02 0.02 0.02	0.02 0.02 0.02 0.02	0.03 0.03 0.03 0.02	0.04 0.03 0.03 0.03	0.04 0.04 0.03 0.03	0.05 0.05 0.04 0.04
	COBALT BASE ALLOYS : STELLITE	350	20-40	0.01	0.01	0.01	0.02	0.02	0.03	0.03
	NIKEL BASE ALLOYS: INCONEL, HASTELLOY, WASPALLOY, KOVAR	300	20-40	0.01	0.01	0.01	0.02	0.02	0.03	0.03
	HIGH TEMPERATURE ALLOYS: IRON BASED : INCOLOY	270	25-50	0.01	0.01	0.01	0.02	0.02	0.03	0.03
H	HARDENED STEEL	56 HRc	25-50	0.01	0.01	0.02	0.02	0.02	0.03	0.03
	HARDENED CAST IRON	50 HRc	25-40	0.01	0.01	0.02	0.02	0.02	0.03	0.03

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
CHIPPING IN CUTTING EDGES	UNSTABLE CONDITIONS	CHECK TOOL AND WORKPIECE CLAMPING AND STABILITY
	FEED RATE TOO HIGH	DECREASE FEED PER TOOTH
	DEPTH OF CUT LARGE	INCREASE THE NUMBER OF THREAD MILLING PASSES
EXCESSIVE WEAR	INCORRECT CUTTING SPEED	DECREASE CUTTING SPEED
	INCORRECT FEED PER TOOTH	INCREASE FEED PER TOOTH
	INSUFFICIENT COOLANT	- CHECK STABILITY - INCREASE THE COOLANT FLOW - CHANGE TO CLIMB MILLING
VIBRATIONS	CUTTING SPEED TOO HIGH	CHANGE CUTTING SPEED
	INCORRECT TOOL AND WORKPIECE INSTALLTION	CHECK SABILITY OF WORKPIECE
	LARGE DEPTH OF CUT STABILITY: TOOL/MACHINE, WORKPIECE/WORKPIECE CLAMPING	CHANGE TO NUMBER OF PASSES
	CONCENTRICITY	MAKE SURE TOOL OVERHANG IN THE HOLDING DEVICE AS SHORT AS POSSIBLE
BAD SURFACE FINISH ON WORKPIECE		- INCREASE CUTTING SPEED - DECREASE FEED PER TOOTH - CHECK STABILITY AND OVERHANG OF TOOLS
SMALL DIFFERENCE BETWEEN GAUGES (GO/NOT GO)	RATIO TOO CLOSE (TOOL CUTTING DIAMETER / THREAD DIAMETER)	CHOOSE TOOL WITH SMALLER CUTTING DIAMETER



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