EROJET
Advanced cutting tools

Thread Milling Tools

METRIC

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

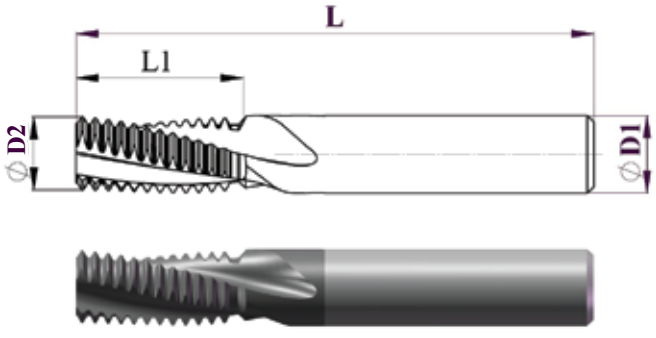
- ✔ **One tool can be used for right hand and left hand thread.**
- ✔ **One tool can produce a wide variety of thread diameters of the same pitch.**
- ✔ **Produces threads with high surface finish, sizes and accuracy.**
- ✔ **Full thread to the bottom of hole.**
- ✔ **Small machines can produce large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

EROJET ORDERING CODE - SOLID THREAD MILLING

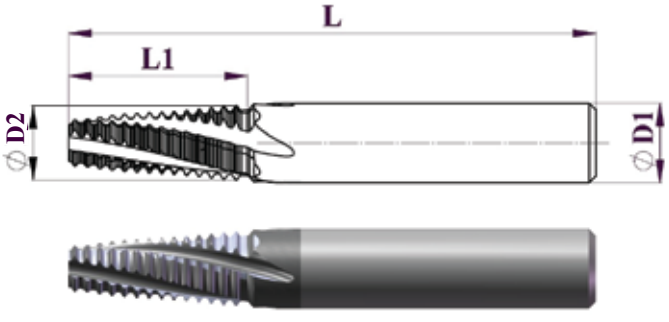
TMG	06	039	L10	0.8	ISO	K520C
SOLID THREAD MILLING INTERNAL TOOLS	SHANK DIAMETER (MM)	CUTTING DIAMETER	TOOL CUTTING LENGTH	PITCH	THREAD STANDARD	CARBIDE GRADE
PARTIAL PROFILE : **TMP** = SINGLE TOOTH **FULL PROFILE :** **TMC** = 3 TEETH **TMCL** = 3 TEETH –LONG **TMD** = 3 TEETH - HM **TMG** = REGULAR -helical **TMGB** = Through Coolant **TMX** = REULAR-straight **CMP** = Chamfer **PM** = Preparation	**Ø 3** **Ø 4** **Ø 6** **Ø 8** **Ø 10** **Ø 12** **Ø 16** **Ø 20**	**Ø 3.9 MM**	**L10=10 MM**	**0.8 MM** MM: 0.35-3.0 / TPI: 72-8	**ISO** **UN** **BSP** **BSPT** **NPT** **NPTF** **UNJ** **MJ**	**K520C**

SOLID THREAD MILLING TOOLS

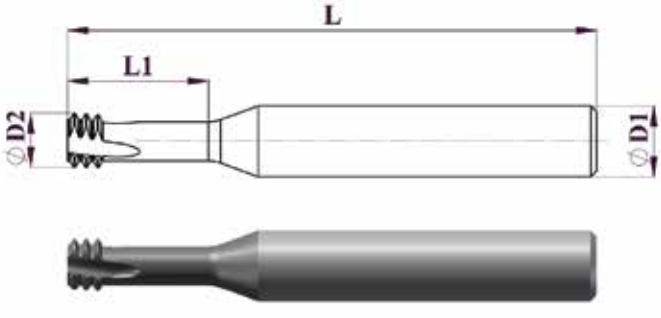
STANDARD – HELICAL FLUTES



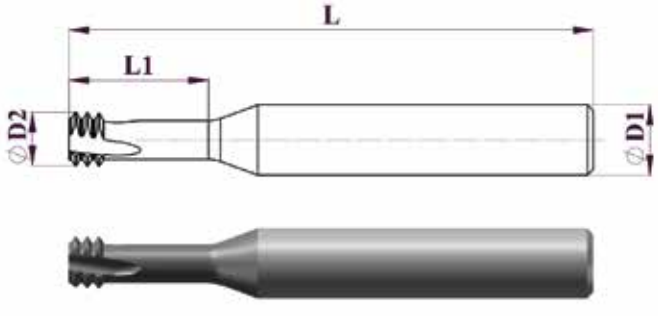
STANDARD TAPER – HELICAL FLUTES



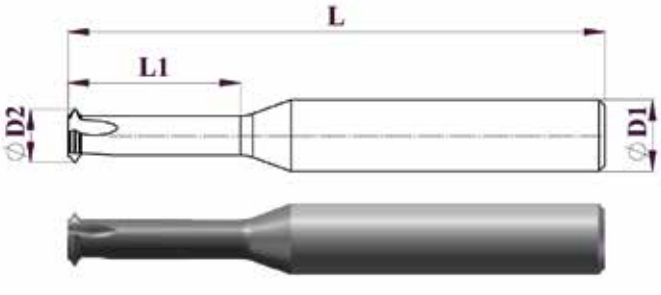
MINIATURE TOOLS – FOR HARD MATERIAL



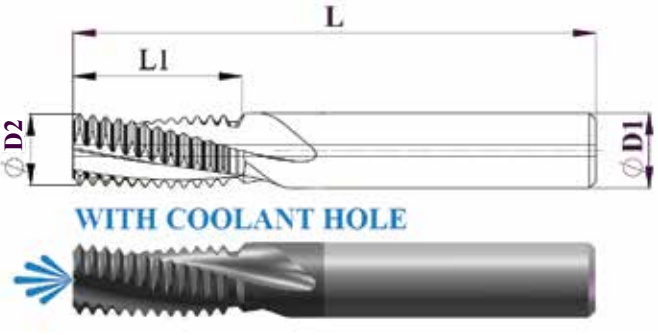
MINIATURE TOOLS – GENERAL PURPOSE



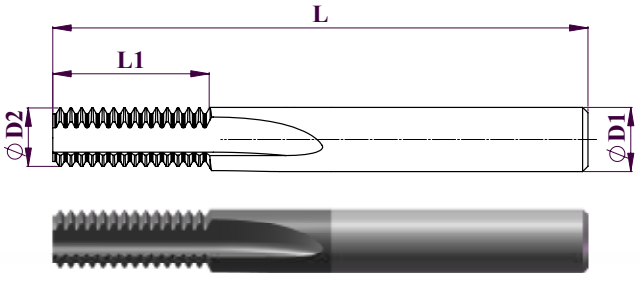
PARTIAL PROFILE



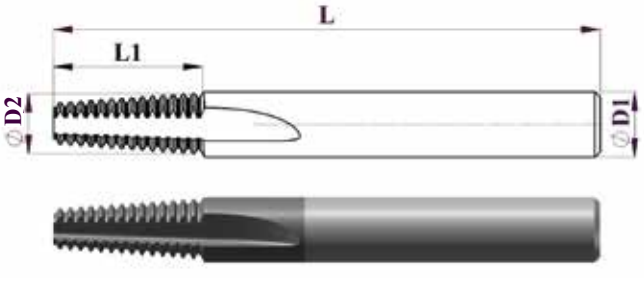
HELICAL FLUTES WITH COOLANT



STANDARD – STRAIGHT FLUTES



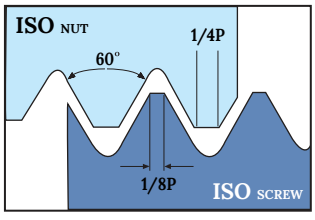
STANDARD TAPER – STRAIGHT FLUTES

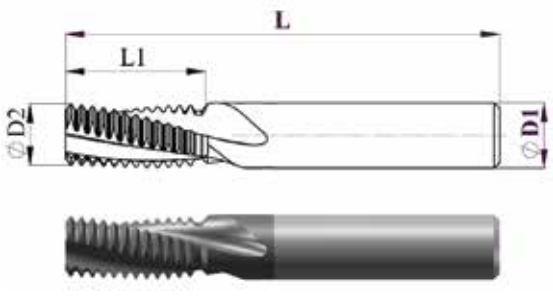


ISO METRIC

INTERNAL

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





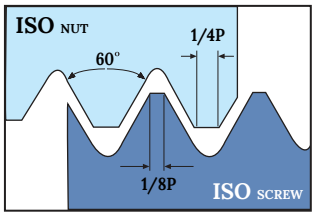
HELICAL FLUTES

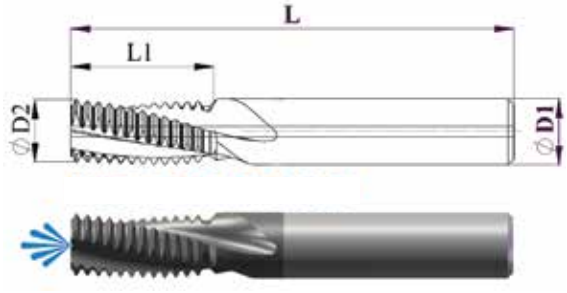
	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M5.0x0.5	0.50	**TMG06038L10 0.5ISO**	57	10.3	6	3.8	3
2		M7.0x0.5	0.50	**TMG06059L10 0.5ISO**	57	10.2	6	5.9	3
3	M4.5x0.75	M5.0x0.75	0.75	**TMG06036L10 0.75ISO**	57	10.1	6	3.6	3
4		M8.0x0.75	0.75	**TMG06059L10 0.75ISO**	57	10.8	6	5.9	3
5		M10.0x0.75	0.75	**TMG08079L15 0.75ISO**	63	15.3	8	7.9	4
6	M5.0x0.8		0.8	**TMG06039L10 0.8ISO**	57	10.0	6	3.9	3
7	M6.0x1.0	M7.0x1.0	1.0	**TMG06048L11 1.0ISO**	57	11.5	6	4.8	3
8	M6.0x1.0	M7.0x1.0	1.0	**TMG06048L14 1.0ISO**	57	14.5	6	4.8	3
9		M8.0x1.0	1.0	**TMG06059L12 1.0ISO**	57	12.5	6	5.9	3
10		M10.0x1.0	1.0	**TMG08079L17 1.0ISO**	63	17.5	8	7.9	4
11		M12.0x1.0	1.0	**TMG10099L20 1.0ISO**	73	20.5	10	9.9	4
12	M8.0x1.25	M9.0x1.25	1.25	**TMG06059L14 1.25ISO**	57	14.4	6	5.9	3
13	M8.0x1.25	M9.0x1.25	1.25	**TMG06059L19 1.25ISO**	57	19.5	6	5.9	3
14	M10.0x1.5	M11.0x1.5	1.5	**TMG08079L18 1.5ISO**	63	18.5	8	7.9	3
15		M13.0x1.5	1.5	**TMG10099L21 1.5ISO**	73	21.8	10	9.9	4
16		M15.0x1.5	1.5	**TMG12119L26 1.5ISO**	84	26.3	12	11.9	4
17		M20.0x1.5	1.5	**TMG16159L35 1.5ISO**	105	35.2	16	15.9	6
18	M12.0x1.75		1.75	**TMG10092L21 1.75ISO**	73	21.8	10	9.2	3
19	M14.0x2.0		2.0	**TMG10099L25 2.0ISO**	73	25.0	10	9.9	3
20	M16.0x2.0		2.0	**TMG12119L27 2.0ISO**	84	27.0	12	11.9	4
21		M20.0x2.0	2.0	**TMG16159L37 2.0ISO**	105	37.0	16	15.9	5
22	M20.0x2.5		2.5	**TMG16159L36 2.5ISO**	105	36.3	16	15.9	5
23	M24.0x3.0	M27.0x3.0	3.0	**TMG16159L40 3.0ISO**	105	40.5	16	15.9	3
24	M27.0x3.0		3.0	**TMG20199L43 3.0ISO**	105	43.0	20	19.9	4

ISO METRIC

INTERNAL

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





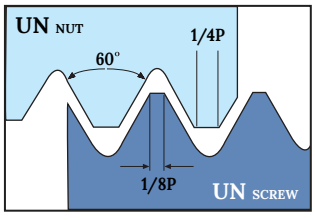
HELICAL FLUTES WITH COOLANT HOLE

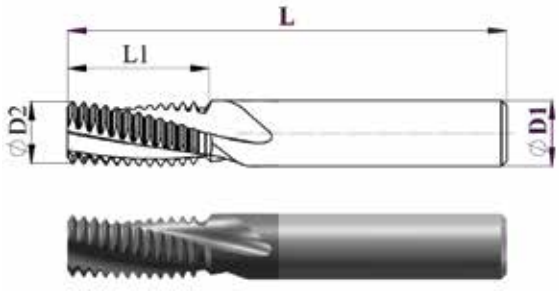
	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M5.0x0.5	0.50	TMGB06038L10 0.5ISO	57	10.3	6	3.8	3
2		M7.0x0.5	0.50	TMGB06059L10 0.5ISO	57	10.2	6	5.9	3
3	M4.5x0.75	M5.0x0.75	0.75	TMGB06036L10 0.75ISO	57	10.1	6	3.6	3
4		M8.0x0.75	0.75	TMGB06059L10 0.75ISO	57	10.8	6	5.9	3
5		M10.0x0.75	0.75	TMGB08079L15 0.75ISO	63	15.3	8	7.9	4
6	M5.0x0.8		0.8	TMGB06039L10 0.8ISO	57	10.0	6	3.9	3
7	M6.0x1.0	M7.0x1.0	1.0	TMGB06048L11 1.0ISO	57	11.5	6	4.8	3
8	M6.0x1.0	M7.0x1.0	1.0	TMGB06048L14 1.0ISO	57	14.5	6	4.8	3
9		M8.0x1.0	1.0	TMGB06059L12 1.0ISO	57	12.5	6	5.9	3
10		M10.0x1.0	1.0	TMGB08079L17 1.0ISO	63	17.5	8	7.9	4
11		M12.0x1.0	1.0	TMGB10099L20 1.0ISO	73	20.5	10	9.9	4
12	M8.0x1.25	M9.0x1.25	1.25	TMGB06059L14 1.25ISO	57	14.4	6	5.9	3
13	M8.0x1.25	M9.0x1.25	1.25	TMGB06059L19 1.25ISO	57	19.5	6	5.9	3
14	M10.0x1.5	M11.0x1.5	1.5	TMGB08079L18 1.5ISO	63	18.5	8	7.9	3
15		M13.0x1.5	1.5	TMGB10099L21 1.5ISO	73	21.8	10	9.9	4
16		M15.0x1.5	1.5	TMGB12119L26 1.5ISO	84	26.3	12	11.9	4
17		M20.0x1.5	1.5	TMGB16159L35 1.5ISO	105	35.2	16	15.9	6
18	M12.0x1.75		1.75	TMGB10092L21 1.75ISO	73	21.8	10	9.2	3
19	M14.0x2.0		2.0	TMGB10099L25 2.0ISO	73	25.0	10	9.9	3
20	M16.0x2.0		2.0	TMGB12119L27 2.0ISO	84	27.0	12	11.9	4
21		M20.0x2.0	2.0	TMGB16159L37 2.0ISO	105	37.0	16	15.9	5
22	M20.0x2.5		2.5	TMGB16159L36 2.5ISO	105	36.3	16	15.9	5
23	M24.0x3.0	M27.0x3.0	3.0	TMGB16159L40 3.0ISO	105	40.5	16	15.9	3
24	M27.0x3.0		3.0	TMGB20199L43 3.0ISO	105	43.0	20	19.9	4

UN (UNC, UNF, UNEF)

INTERNAL

ANSI B1.1 - 1982





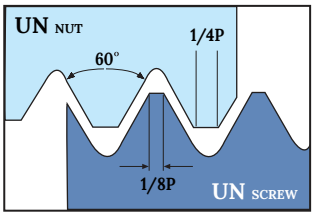
HELICAL FLUTES

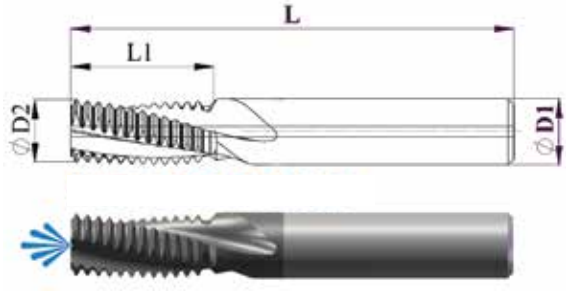
	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF	EXTRA FINE UNEF							
1			5/16"	32	**TMG06059L14 32UN**	57	14.0	6	5.9	3
2			3/8"	32	**TMG08079L18 32UN**	63	18.0	8	7.9	3
3		1/4"		28	**TMG06051L12 28UN**	57	12.2	6	5.1	3
4			7/16"-1/2"	28	**TMG08079L15 28UN**	63	15.8	8	7.9	4
5		5/16"		24	**TMG06059L10 24UN**	57	10.8	6	5.9	3
6		3/8"		24	**TMG08079L15 24UN**	63	15.3	8	7.9	4
7		9/16" ,5/8"		24	**TMG12119L22 24UN**	84	22.7	12	11.9	4
8	1/4"			20	**TMG06048L12 20UN**	57	12.0	6	4.8	3
9		7/16"		20	**TMG08079L19 20UN**	63	19.7	8	7.9	3
10		1/2"		20	**TMG10099L22 20UN**	73	22.5	10	9.9	4
11			3/4"-1"	20	**TMG12119L26 20UN**	84	26.0	12	11.9	4
12	5/16"			18	**TMG06057L16 18UN**	57	16.0	6	5.7	3
13		9/16" ,5/8"		18	**TMG10099L23 18UN**	73	23.5	10	9.9	4
14	3/8"			16	**TMG08068L18 16UN**	63	18.2	8	6.8	3
15		3/4"		16	**TMG12119L26 16UN**	84	26.2	12	11.9	4
16	7/16"			14	**TMG08078L20 14UN**	63	20.8	8	7.8	3
17		7/8"		14	**TMG12119L24 14UN**	84	24.5	12	11.9	4
18	1/2"			13	**TMG10093L24 13UN**	73	24.4	10	9.3	3
19	9/16"			12	**TMG12106L26 12UN**	84	26.4	12	10.6	4
20		1"		12	**TMG16159L39 12UN**	105	39.1	16	15.9	5
21	5/8"			11	**TMG12115L31 11UN**	84	31.1	12	11.5	3
22	3/4"			10	**TMG16143L36 10UN**	105	36.8	16	14.3	4
23	7/8"			9	**TMG16159L40 9UN**	105	40.9	16	15.9	4
24	1"			8	**TMG20197L42 8UN**	105	42.8	20	19.7	4

UN (UNC, UNF, UNEF)

INTERNAL

ANSI B1.1 - 1982





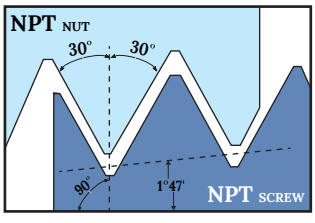
HELICAL FLUTES WITH COOLANT HOLE

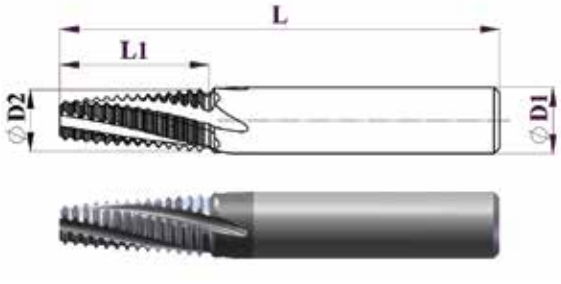
	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF	EXTRA FINE UNEF							
1			5/16"	32	**TMGB06059L14 32UN**	57	14.0	6	5.9	3
2			3/8"	32	**TMGB08079L18 32UN**	63	18.0	8	7.9	3
3		1/4"		28	**TMGB06051L12 28UN**	57	12.2	6	5.1	3
4			7/16"-1/2"	28	**TMGB08079L15 28UN**	63	15.8	8	7.9	4
5		5/16"		24	**TMGB06059L10 24UN**	57	10.8	6	5.9	3
6		3/8"		24	**TMGB08079L15 24UN**	63	15.3	8	7.9	4
7		9/16" ,5/8"		24	**TMGB12119L22 24UN**	84	22.7	12	11.9	4
8	1/4"			20	**TMGB06048L12 20UN**	57	12.0	6	4.8	3
9		7/16"		20	**TMGB08079L19 20UN**	63	19.7	8	7.9	3
10		1/2"		20	**TMGB10099L22 20UN**	73	22.5	10	9.9	4
11			3/4"-1"	20	**TMGB12119L26 20UN**	84	26.0	12	11.9	4
12	5/16"			18	**TMGB06057L16 18UN**	57	16.0	6	5.7	3
13		9/16" ,5/8"		18	**TMGB10099L23 18UN**	73	23.5	10	9.9	4
14	3/8"			16	**TMGB08068L18 16UN**	63	18.2	8	6.8	3
15		3/4"		16	**TMGB12119L26 16UN**	84	26.2	12	11.9	4
16	7/16"			14	**TMGB08078L20 14UN**	63	20.8	8	7.8	3
17		7/8"		14	**TMGB12119L24 14UN**	84	24.5	12	11.9	4
18	1/2"			13	**TMGB10093L24 13UN**	73	24.4	10	9.3	3
19	9/16"			12	**TMGB12106L26 12UN**	84	26.4	12	10.6	4
20		1"		12	**TMGB16159L39 12UN**	105	39.1	16	15.9	5
21	5/8"			11	**TMGB12115L31 11UN**	84	31.1	12	11.5	3
22	3/4"			10	**TMGB16143L36 10UN**	105	36.8	16	14.3	4
23	7/8"			9	**TMGB16159L40 9UN**	105	40.9	16	15.9	4
24	1"			8	**TMGB20197L42 8UN**	105	42.8	20	19.7	4

NPT

INTERNAL / EXTERNAL

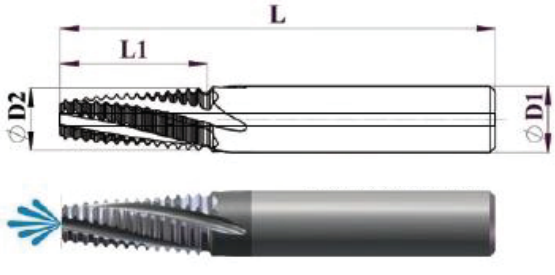
ANSI/ASME B 1.20.1-1983





HELICAL FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	**TMG06059L09 27NPT**	57	9.8	6	5.9	3
2	1/8"	27	**TMG08077L10 27NPT**	63	10.9	8	7.7	3
3	1/4"-3/8"	18	**TMG10099L16 18NPT**	73	16.4	10	9.9	4
4	1/2"	14	**TMG12119L20 14NPT**	84	20.8	12	11.9	4
5	1/2"	14	**TMG16159L20 14NPT**	93	20.8	16	15.9	4
6	1"-2"	11.5	**TMG20199L29 11.5NPT**	105	29.7	20	19.9	4
7	2 1/2"-6"	8	**TMG20199L38 8NPT**	105	38.1	20	19.9	4



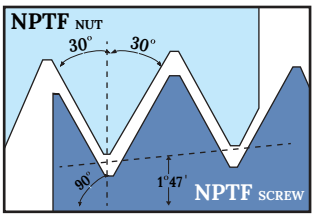
HELICAL FLUTES WITH COOLANT HOLE

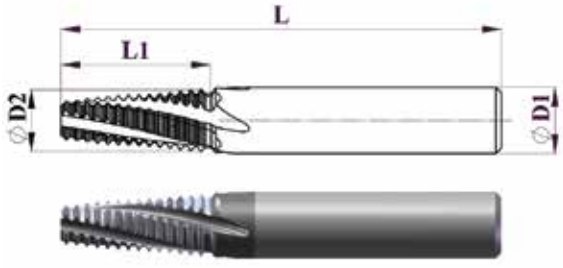
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	**TMGB06059L09 27NPT**	57	9.8	6	5.9	3
2	1/8"	27	**TMGB08077L10 27NPT**	63	10.9	8	7.7	3
3	1/4"-3/8"	18	**TMGB10099L16 18NPT**	73	16.4	10	9.9	4
4	1/2"	14	**TMGB12119L20 14NPT**	84	20.8	12	11.9	4
5	1/2"	14	**TMGB16159L20 14NPT**	93	20.8	16	15.9	4
6	1"-2"	11.5	**TMGB20199L29 11.5NPT**	105	29.7	20	19.9	4
7	2 1/2"-6"	8	**TMGB20199L38 8NPT**	105	38.1	20	19.9	4

NPTF

INTERNAL / EXTERNAL

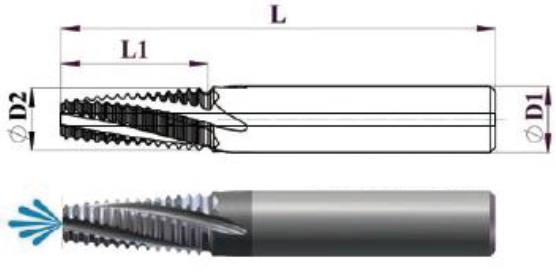
ANSI B 1.20.3-1976





HELICAL FLUTES

	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	**TMG06059L09 27NPTF**	57	9.9	6	5.9	3
2	1/8"	27	**TMG08077L10 27NPTF**	63	10.8	8	7.7	3
3	1/4"-3/8"	18	**TMG10099L16 18NPTF**	73	16.2	10	9.9	4
4	1/2"	14	**TMG12119L20 14NPTF**	84	20.8	12	11.9	4
5	1"-2"	11.5	**TMG20199L29 11.5NPTF**	105	29.7	20	19.9	4
6	2 1/2"-6"	8	**TMG20199L38 8NPTF**	105	38.1	20	19.9	4



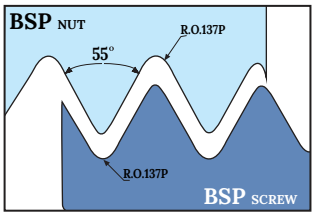
HELICAL FLUTES WITH COOLANT HOLE

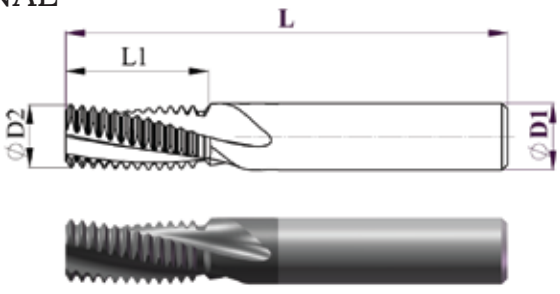
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	27	**TMGB06059L09 27NPTF**	57	9.9	6	5.9	3
2	1/8"	27	**TMGB08077L10 27NPTF**	63	10.8	8	7.7	3
3	1/4"-3/8"	18	**TMGB10099L16 18NPTF**	73	16.2	10	9.9	4
4	1/2"	14	**TMGB12119L20 14NPTF**	84	20.8	12	11.9	4
5	1"-2"	11.5	**TMGB20199L29 11.5NPTF**	105	29.7	20	19.9	4
6	2 1/2"-6"	8	**TMGB20199L38 8NPTF**	105	38.1	20	19.9	4

BSP (G)

INTERNAL / EXTERNAL

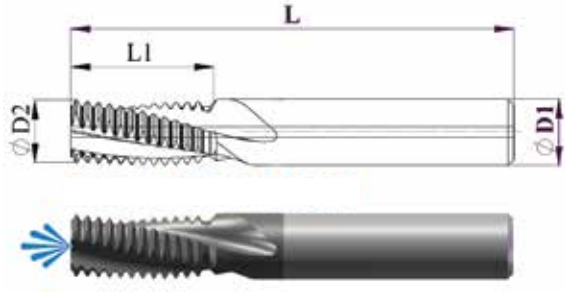
B.S.84: 1956
ISO 228 - 1: 1994





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"	28	**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"	11	**TMG16159L32 11BSP**	105	32.1	16	15.9	4
6	1"-6"	11	**TMG20199L40 11BSP**	105	40.4	20	19.9	5



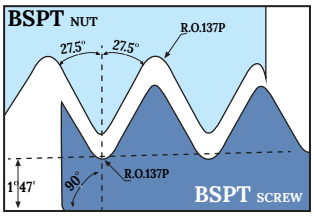
HELICAL FLUTES WITH COOLANT HOLE

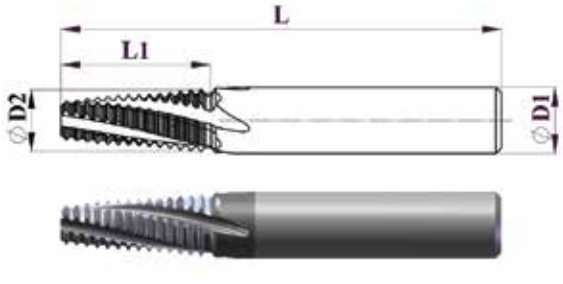
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"	28	**TMGB06059L11 28BSP**	57	11.3	6	5.9	3
2	1/8"	28	**TMGB08079L14 28BSP**	63	14.0	8	7.9	3
3	1/4"-3/8"	19	**TMGB10099L16 19BSP**	73	16.6	10	9.9	4
4	1/2"-7/8"	14	**TMGB12119L22 14BSP**	84	22.7	12	11.9	4
5	1"-2"	11	**TMGB16159L32 11BSP**	105	32.1	16	15.9	4
6	1"-6"	11	**TMGB20199L40 11BSP**	105	40.4	20	19.9	5

BSPT (Rc)

INTERNAL / EXTERNAL

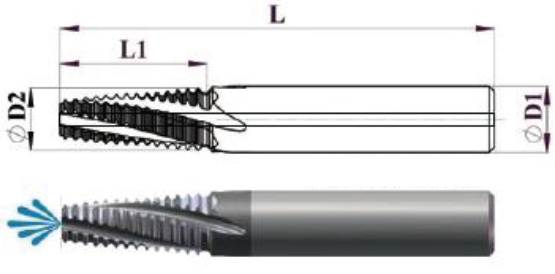
B.S.21: 1985





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"	28	**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"	11	**TMG16159L32 11BSPT**	105	32.1	16	15.9	4
6	1"-6"	11	**TMG20199L40 11BSPT**	105	40.4	20	19.9	5

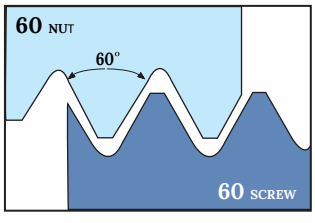


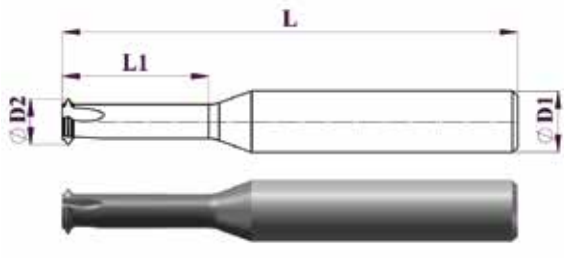
HELICAL FLUTES WITH COOLANT HOLE

	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"	28	**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"	11	**TMGB16159L32 11BSPT**	105	32.1	16	15.9	4
6	1"-6"	11	**TMGB20199L40 11BSPT**	105	40.4	20	19.9	5

PARTIAL PROFILE 60°

INTERNAL / EXTERNAL





HELICAL FLUTES

	PITCH RANGE		ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES	MIN. HOLE DIAMETER
	MM	TPI							
1	0.35-0.6	72-40	**TMP03019L6 P60**	39	6	3	1.95	3	2.0
2	0.5-0.8	48-32	**TMP03024L7 P60**	39	7.7	3	2.45	3	2.6
3	0.5-0.8	48-32	**TMP04031L10 P60**	51	10	4	3.15	3	3.3
4	0.5-1.0	48-24	**TMP0404L12 P60**	51	12	4	4.0	3	4.2
5	0.5-1.25	48-20	**TMP06047L15 P60**	57	15	6	4.7	3	4.9
6	0.5-1.25	48-20	**TMP06060L18 P60**	57	18	6	6.0	3	6.3
7	0.75-1.5	32-16	**TMP0808L24 P60**	63	24	8	8.0	3	8.3
8	1.0-2.5	24-10	**TMP10100L30 P60**	73	30	10	10.0	4	10.4
9	1.0-2.5	24-10	**TMP12120L36 P60**	84	36	12	12.0	4	12.5

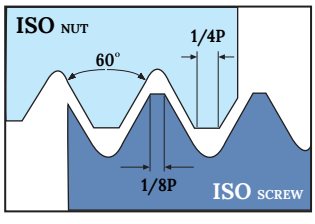
SAME TOOL CAN BE USED FOR THE FOLLOWING OPERATIONS :

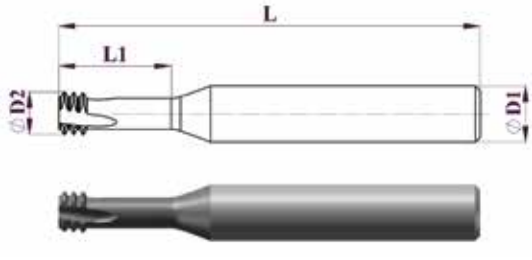
- ✔ THREAD MILLING OF EXTERNAL OR INTERNAL THREAD
- ✔ THREAD MILLING OF ISO AND UN STANDARDS
- ✔ CHAMFERING, BACK CHAMFERING, DEBURRING
- ✔ MILLING OF "V" GROOVES

ISO METRIC

INTERNAL

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



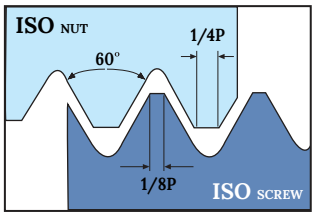


D = NOMINAL THREAD SIZE

THREAD LENGTH – UP TO 2D

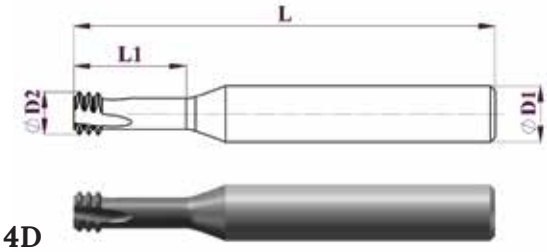
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M1.6x0.35	0.35	**TMC03012L3 0.35ISO**	39	3.3	3	1.20	3
2	M1.6x0.35	0.35	**TMC06012L3 0.35ISO**	57	3.3	6	1.20	3
3	M2.0x0.4	0.4	**TMC03015L4 0.4ISO**	39	4.4	3	1.54	3
4	M2.0x0.4	0.4	**TMC06015L4 0.4ISO**	57	4.4	6	1.54	3
5	M2.2x0.45	0.45	**TMC03016L4 0.45ISO**	39	4.8	3	1.63	3
6	M2.5x0.45	0.45	**TMC06019L5 0.45ISO**	57	5.3	6	1.96	3
7	M3.0x0.5	0.5	**TMC06024L6 0.5ISO**	57	6.4	6	2.40	3
8	M3.5x0.6	0.6	**TMC06027L7 0.6ISO**	57	7.4	6	2.75	3
9	M4.0x0.7	0.7	**TMC06031L8 0.7ISO**	57	8.6	6	3.15	3
10	M5.0x0.8	0.8	**TMC06040L12 0.8ISO**	57	12.0	6	4.00	3
11	M6.0x1.0	1.0	**TMC06047L13 1.0ISO**	57	13.0	6	4.75	3
12	M8.0x1.25	1.25	**TMC06059L17 1.25ISO**	57	17.3	6	5.95	3
13	M10.0x1.5	1.5	**TMC08079L22 1.5ISO**	63	22.0	8	7.90	3
14	M12.0x1.75	1.75	**TMC10094L25 1.75ISO**	73	25.5	10	9.40	3
15	M14x2.0	2.0	**TMC10099L29 2.0ISO**	73	29.0	10	9.95	3
16	M16x2.0	2.0	**TMC12119L32 2.0ISO**	84	33.0	12	11.95	4
17	M20X2.5	2.5	**TMC16159L42 2.5ISO**	105	42.0	16	15.90	5

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



ISO METRIC

INTERNAL



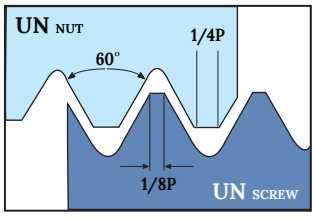
THREAD LENGTH – 3D UP TO 4D

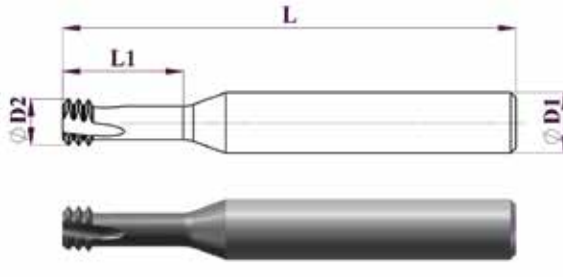
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M0.8x0.2	0.2	**TMC03006L1 0.2ISO**	39	1.8	3	0.60	3
2	M1.0x0.25	0.25	**TMC03007L3 0.25ISO**	39	2.9	3	0.72	3
3	M1.2x0.25	0.25	**TMC03009L3 0.25ISO**	39	3.0	3	0.90	3
4	M1.4x0.3	0.3	**TMC03010L3 0.3ISO**	39	3.9	3	1.06	3
5	M1.6x0.35	0.35	**TMC03012L5 0.35ISO**	39	5.1	3	1.20	3
6	M1.6x0.35	0.35	**TMC06012L5 0.35ISO**	57	5.1	6	1.20	3
7	M2.0x0.4	0.4	**TMC03015L6 0.4ISO**	39	6.1	3	1.54	3
8	M2.0x0.4	0.4	**TMC03015L10 0.4ISO**	39	10.0	3	1.54	3
9	M2.0x0.4	0.4	**TMC06015L6 0.4ISO**	57	6.1	6	1.54	3
10	M2.0x0.4	0.4	**TMCL06015L6 0.4ISO**	100	6.1	6	1.54	3
11	M2.5x0.45	0.45	**TMC06019L7 0.45ISO**	39	7.6	6	1.96	3
12	M2.5x0.45	0.45	**TMCL06019L7 0.45ISO**	100	7.6	6	1.96	3
13	M3.0x0.5	0.5	**TMC06024L9 0.5ISO**	57	9.3	6	2.40	3
14	M3.0x0.5	0.5	**TMCL06024L9 0.5ISO**	100	9.3	6	2.40	3
15	M3.5x0.6	0.6	**TMC06027L10 0.6ISO**	57	10.6	6	2.75	3
16	M4.0x0.7	0.7	**TMC06031L12 0.7ISO**	57	12.4	6	3.15	3
17	M4.0x0.7	0.7	**TMC06031L16 0.7ISO**	57	16.0	6	3.15	3
18	M4.0x0.7	0.7	**TMCL06031L12 0.7ISO**	100	12.4	6	3.15	3
19	M5.0x0.8	0.8	**TMC06040L15 0.8ISO**	57	15.6	6	4.00	3
20	M5.0x0.8	0.8	**TMC06040L21 0.8ISO**	57	21.0	6	4.00	3
21	M5.0x0.8	0.8	**TMCL06040L15 0.8ISO**	100	15.6	6	4.00	3
22	M6.0x1.0	1.0	**TMC06047L19 1.0ISO**	57	19.0	6	4.75	3
23	M6.0x1.0	1.0	**TMCL06047L19 1.0ISO**	100	19.0	6	4.75	3
24	M6.0x1.0	1.0	**TMC06047L24 1.0ISO**	57	24.0	6	4.75	3
25	M8.0x1.25	1.25	**TMC06059L24 1.25ISO**	57	24.3	6	5.95	3
26	M8.0x1.25	1.25	**TMCL06059L24 1.25ISO**	100	24.3	6	5.95	3
27	M10x1.5	1.5	**TMC08079L31 1.5ISO**	63	31.0	8	7.90	3
28	M10x1.5	1.5	**TMCL08079L31 1.5ISO**	100	31.0	8	7.90	3
29	M12.0x1.75	1.75	**TMC10094L36 1.75ISO**	73	36.0	10	9.40	3
30	M16x2.0	2.0	**TMCL12119L48 2.0ISO**	100	48.0	12	11.95	4

UN

INTERNAL

ANSI B1.1 - 1982





THREAD LENGTH – UP TO 2D

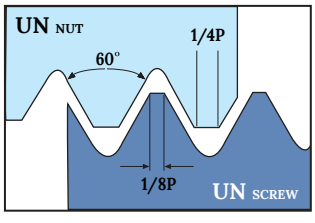
D = NOMINAL THREAD SIZE

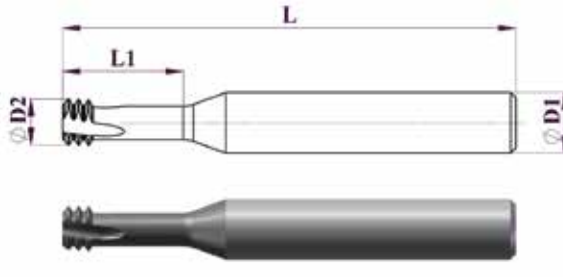
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		1-72	72	TMC03014L3 72UN	39	3.8	3	1.44	3
2	1-64	2-64	64	TMC03014L3 64UN	39	3.9	3	1.40	3
3	2-56	3-56	56	TMC03016L4 56UN	39	4.6	3	1.66	3
4	2-56	3-56	56	TMC06016L4 56UN	57	4.6	6	1.66	3
5	3-48	4-48	48	TMC06018L5 48UN	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	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		32	TMC06032L10 32UN	57	10.1	6	3.22	3
11		10-32	32	TMC06037L10 32UN	57	10.5	6	3.70	3
12		12-28	28	TMC06042L10 28UN	57	10.9	6	4.20	3
13		1/4"-28	28	TMC06052L14 28UN	57	14.0	6	5.20	3
14	10-24		24	TMC06035L10 24UN	57	10.4	6	3.55	3
15		5/16"-24	24	TMC08066L16 24UN	63	16.7	8	6.65	3
16	1/4"-20	7/16"-20	20	TMC06048L13 20UN	57	13.7	6	4.85	3
17		7/16"-20	20	TMC08079L24 20UN	63	24.0	8	7.95	3
18	5/16"-18		18	TMC06059L16 18UN	57	16.5	6	5.95	3
19		5/8"-18	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

UN

INTERNAL

ANSI B1.1 - 1982





THREAD LENGTH – UP TO 3D

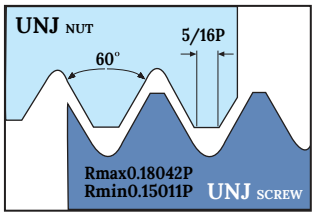
D = NOMINAL THREAD SIZE

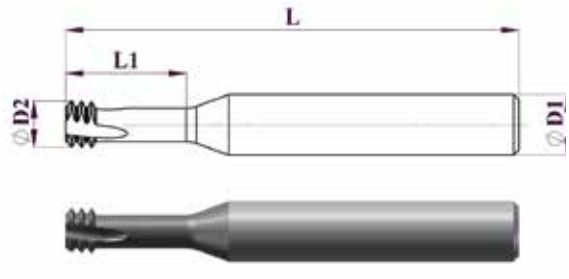
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		0-80	80	TMC03011L3 80UN	39	3.9	3	1.18	3
2		1-72	72	TMC03014L5 72UN	39	5.8	3	1.44	3
3		1-72	72	TMC06014L5 72UN	57	5.8	6	1.44	3
4	2-56	3-56	56	TMC03016L6 56UN	39	6.8	3	1.66	3
5	2-56	3-56	56	TMC06016L6 56UN	57	6.8	6	1.66	3
6	2-56	3-56	56	TMCL06016L6 56UN	100	6.8	6	1.66	3
7	4-40		40	TMC06021L8 40UN	57	8.1	6	2.12	3
8	4-40		40	TMCL06021L8 40UN	100	8.1	6	2.12	3
9	5-40		40	TMC06024L9 40UN	57	9.8	6	2.46	3
10	6-32	6-40	32	TMC06025L10 32UN	57	10.7	6	2.57	3
11	6-32		32	TMCL06025L10 32UN	100	10.7	6	2.57	3
12	8-32		32	TMC06032L12 32UN	57	12.7	6	3.22	3
13		10-32	32	TMC06037L15 32UN	57	15.5	6	3.70	3
14		10-32	32	TMCL06037L15 32UN	100	15.5	6	3.70	3
15		12-28	28	TMC06042L16 28UN	57	16.0	6	4.20	3
16		1/4"-28	28	TMC06052L19 28UN	57	19.3	6	5.20	3
17		1/4"-28	28	TMCL06052L19 28UN	100	19.3	6	5.20	3
18		5/16"-24	24	TMC08066L24 24UN	63	24.2	8	6.65	3
19	1/4"-20	7/16"-20	20	TMC06048L19 20UN	57	19.4	6	4.85	3
20	1/4"-20	7/16"-20	20	TMCL06048L19 20UN	100	19.4	6	4.85	3
21	5/16"-18		18	TMC06059L23 18UN	57	23.0	6	5.90	3
22	3/8"-16		16	TMC08069L28 16UN	63	28.5	8	6.90	3

UNJ

INTERNAL

MIL-S-8879A



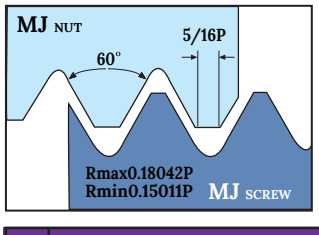


D = NOMINAL THREAD SIZE

THREAD LENGTH – UP TO 3D

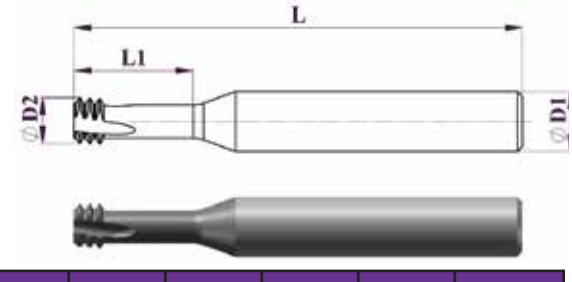
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNJC	FINE UNJF							
1	4	6	40	**TMC06021L8 40UNJ**	57	8.0	6	2.10	3
2	8	10	32	**TMC06033L12 32UNJ**	57	12.0	6	3.30	3
3		1/4"	28	**TMC06054L19 28UNJ**	57	19.0	6	5.40	3
4		5/16" , 3/8"	24	**TMC08067L24 24UNJ**	63	24.0	8	6.70	3
5	1/4"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

ISO 5855-1:1989



MJ

INTERNAL

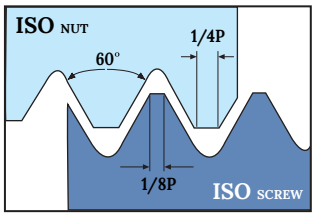


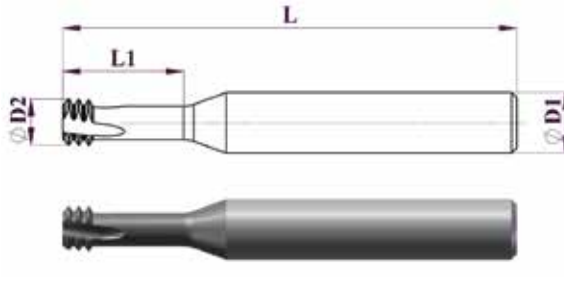
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	MJ4.0	0.7	**TMC06032L12 0.7MJ**	57	12.0	6	3.20	3
2	MJ5.0	0.8	**TMC06040L15 0.8MJ**	57	15.0	6	4.00	3
3	MJ6.0	1.0	**TMC06048L18 1.0MJ**	57	18.0	6	4.80	3
4	MJ8.0	1.25	**TMC08065L24 1.25MJ**	63	24.0	8	6.50	3
5	MJ10.0	1.5	**TMC08079L31 1.5MJ**	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

ISO METRIC

INTERNAL

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





LEFT HAND CUTTING, CNC CODE: M04

THREAD LENGTH – UP TO 2D

D = NOMINAL THREAD SIZE

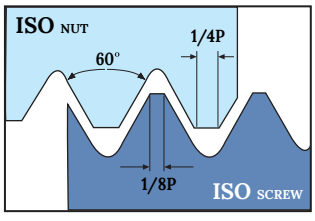
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M1.6x0.35	0.35	**TMD06012L3 0.35ISO**	57	3.3	6	1.20	3
2	M2.0x0.4	0.4	**TMD06015L4 0.4ISO**	57	4.4	6	1.54	3
3	M2.2x0.45	0.45	**TMD06016L4 0.45ISO**	57	4.8	6	1.63	3
4	M2.5x0.45	0.45	**TMD06019L5 0.45ISO**	57	5.3	6	1.96	3
5	M3.0x0.5	0.5	**TMD06024L6 0.5ISO**	57	6.4	6	2.40	3
6	M3.5x0.6	0.6	**TMD06027L7 0.6ISO**	57	7.4	6	2.75	3
7	M4.0x0.7	0.7	**TMD06031L8 0.7ISO**	57	8.6	6	3.15	3
8	M5.0x0.8	0.8	**TMD06040L12 0.8ISO**	57	12.0	6	4.0	3
9	M6.0x1.0	1.0	**TMD06047L13 1.0ISO**	57	13.0	6	4.75	3
10	M8.0x1.25	1.25	**TMD06059L17 1.25ISO**	57	17.3	6	5.95	3
11	M10.0x1.5	1.5	**TMD08079L22 1.5ISO**	63	22.0	8	7.90	3

MINIATURE TOOLS FOR HARD MATERIAL – UP TO 62 HRc

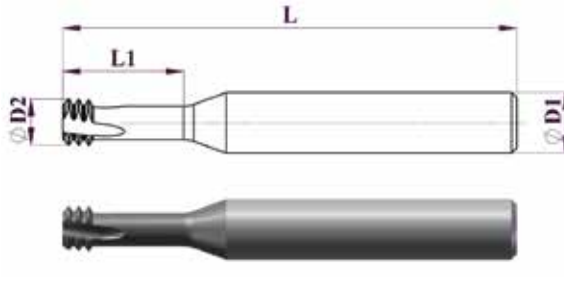
ISO METRIC

INTERNAL

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



LEFT HAND CUTTING, CNC CODE: M04



D = NOMINAL THREAD SIZE

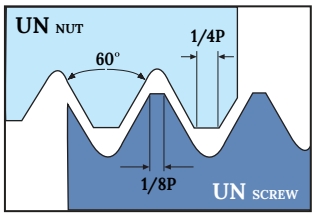
THREAD LENGTH – UP TO 3D

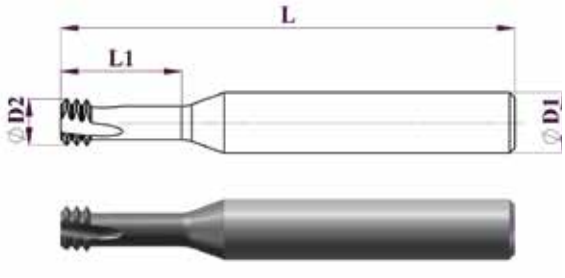
	THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	M1.6x0.35	0.35	**TMD06012L5 0.35ISO**	57	5.1	6	1.20	3
2	M2.0x0.4	0.4	**TMD06015L6 0.4ISO**	57	6.1	6	1.54	3
3	M2.5x0.45	0.45	**TMD06019L7 0.45ISO**	57	7.6	6	1.96	3
4	M3.0x0.5	0.5	**TMD06024L9 0.5ISO**	57	9.3	6	2.40	3
5	M4.0x0.7	0.7	**TMD06031L12 0.7ISO**	57	12.4	6	3.15	3
6	M5.0x0.8	0.8	**TMD06040L15 0.8ISO**	57	15.6	6	4.00	3
7	M6.0x1.0	1.0	**TMD06047L19 1.0ISO**	57	19.0	6	4.75	3
8	M8.0x1.25	1.25	**TMD06059L24 1.25ISO**	57	24.3	6	5.95	3
9	M10.0x1.5	1.5	**TMD08079L31 1.5ISO**	63	31.0	8	7.90	3
10	M12.0x1.75	1.75	**TMD10094L25 1.75ISO**	73	25.5	10	9.40	3

MINIATURE TOOLS FOR HARD MATERIAL – UP TO 62 HRc

UN
INTERNAL

ANSI B1.1-1982





LEFT HAND CUTTING, CNC CODE: M04

D = NOMINAL THREAD SIZE

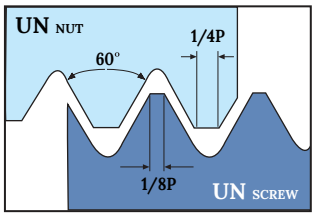
THREAD LENGTH – UP TO 2D

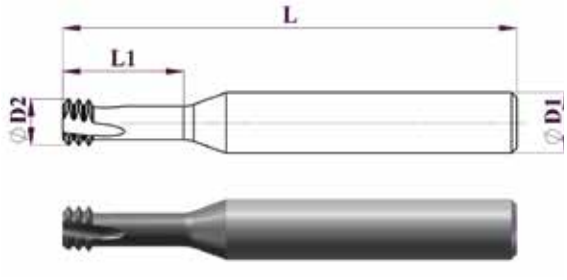
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		1-72	72	**TMD06014L3 72UN**	57	3.8	6	1.44	3
2	1-64	2-64	64	**TMD06014L3 64UN**	57	3.9	6	1.40	3
3	2-56	3-56	56	**TMD06016L4 56UN**	57	4.6	6	1.66	3
4	3-48	4-48	48	**TMD06018L5 48UN**	57	5.4	6	1.88	3
5	4-40		40	**TMD06021L6 40UN**	57	6.2	6	2.12	3
6	5-40	6-40	40	**TMD06024L7 40UN**	57	7.1	6	2.46	3
7		8-36	36	**TMD06033L8 36UN**	57	8.8	6	3.31	3
8	6-32		32	**TMD06025L7 32UN**	57	7.8	6	2.57	3
9	8-32	10-32	32	**TMD06032L10 32UN**	57	10.3	6	3.22	3
10		1/4"-28	28	**TMD06052L14 28UN**	57	14.0	6	5.20	3
11	10-24		24	**TMD06035L10 24UN**	57	10.4	6	3.55	3
12		5/16"-24	24	**TMD08066L16 24UN**	64	16.7	8	6.65	3
13	1/4"-20	7/16"-20	20	**TMD06048L13 20UN**	57	13.7	6	4.85	3
14		7/16"-20	20	**TMD08079L24 20UN**	64	24.0	8	7.95	3
15	5/16"		18	**TMD06059L16 18UN**	57	16.5	6	5.95	3
16	3/8"		16	**TMD08069L20 16UN**	63	20.0	8	6.90	3
17	7/16"-14		14	**TMD08079L23 14UN**	63	23.5	8	7.95	3

MINIATURE TOOLS FOR HARD MATERIAL – UP TO 62 HRc

UN
INTERNAL

ANSI B1.1-1982





LEFT HAND CUTTING, CNC CODE: M04

D = NOMINAL THREAD SIZE

THREAD LENGTH – UP TO 3D

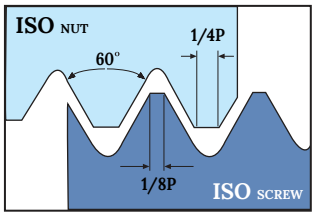
	THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF							
1		1-72	72	**TMD06014L5 72UN**	57	5.8	6	1.44	3
2	5-40	6-40	40	**TMD06024L9 40UN**	57	9.8	6	2.46	3
3	8-32	10-32	32	**TMD06032L12 32UN**	57	12.7	6	3.22	3
4		1/4"-28	28	**TMD06052L19 28UN**	57	19.3	6	5.20	3
5		5/16"-24	24	**TMD08066L24 24UN**	63	24.2	8	6.65	3
6	1/4"-20	7/16"-20	20	**TMD06048L19 20UN**	57	19.4	6	4.85	3
7		7/16"-20	20	**TMD08079L24 20UN**	63	24.0	8	7.95	3
8		5/8"-18	18	**TMD12119L34 18UN**	84	34.0	12	11.90	4
9	3/8"-16		16	**TMD08069L21 16UN**	63	21.0	8	6.90	3

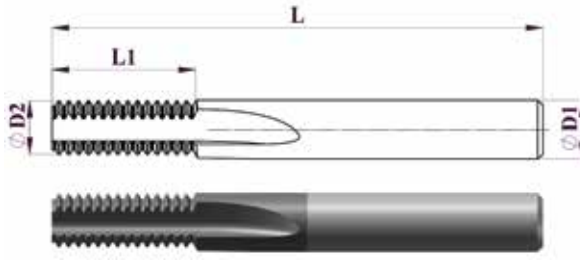
MINIATURE TOOLS FOR HARD MATERIAL – UP TO 62 HRc

ISO METRIC

INTERNAL

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





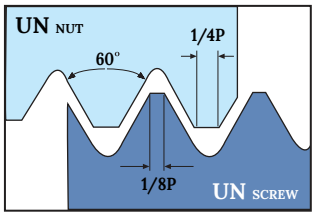
STRAIGHT FLUTES

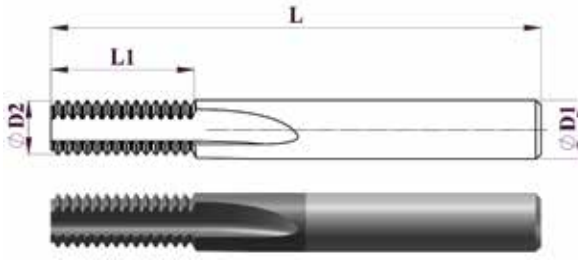
	THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE	FINE							
1		M8.0X0.75	0.75	**TMX06059L10 0.75ISO**	57	10.8	6	5.9	3
2	M5.0x0.8		0.8	**TMX06039L10 0.8ISO**	57	10.0	6	3.9	3
3	M6.0x1.0	M7.0x1.0	1.0	**TMX06048L11 1.0ISO**	57	11.5	6	4.8	3
4		M10.0x1.0	1.0	**TMX08079L17 1.0ISO**	63	17.5	8	7.9	4
5		M12x1.0	1.0	**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	1.5	**TMX10099L21 1.5ISO**	73	21.8	10	9.9	4
9		M15.0x1.5	1.5	**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		2.0	**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**	105	40.5	16	15.9	4

UN (UNC, UNF, UNEF)

INTERNAL

ANSI B1.1-1982





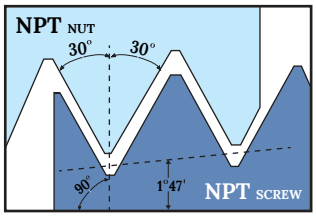
STRAIGHT FLUTES

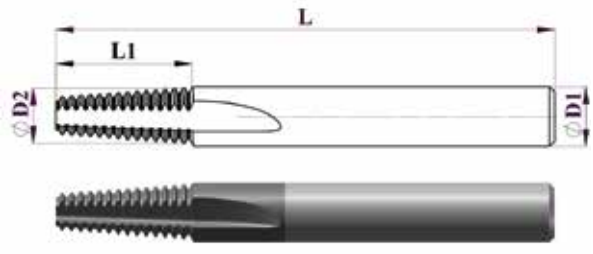
	THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
	COARSE UNC	FINE UNF	EXTRA FINE UNEF							
1		1/4"	5/16"	32	**TMX06059L14 32UN**	57	14.0	6	5.9	3
2				28	**TMX06051L12 28UN**	57	12.2	6	5.1	3
3		5/16"	7/16"-1/2"	28	**TMX08079L15 28UN**	63	15.8	8	7.9	4
4	1/4"			24	**TMX06059L10 24UN**	57	10.8	6	5.9	3
5		7/16"		20	**TMX06048L12 20UN**	57	12.0	6	4.8	3
6		1/2"		20	**TMX08079L19 20UN**	63	19.7	8	7.9	3
7	5/16"			20	**TMX10099L17 20UN**	73	17.5	10	9.9	4
8		9/16"-5/8"		18	**TMX06057L16 18UN**	57	16.0	6	5.7	3
9	3/8"			18	**TMX08079L18 18UN**	63	18.5	8	7.9	3
10		3/4"		16	**TMX08068L18 16UN**	63	18.2	8	6.8	3
11	7/16"			16	**TMX12119L26 16UN**	84	26.2	12	11.9	4
12		7/8"		14	**TMX08078L20 14UN**	63	20.8	8	7.8	3
13	1/2"			14	**TMX12119L24 14UN**	84	24.5	12	11.9	4
14	9/16"			13	**TMX10093L24 13UN**	73	24.4	10	9.3	3
15		1		12	**TMX12119L27 12UN**	84	26.4	12	10.6	4
16	5/8"			12	**TMX16159L39 12UN**	105	39.1	16	15.9	5
17	3/4"			11	**TMX12115L31 11UN**	84	31.1	12	11.5	4
18	7/8"			10	**TMX16143L36 10UN**	105	36.8	16	14.3	4
19	1			9	**TMX16159L40 9UN**	105	40.9	16	15.9	4
20				8	**TMX20197L39 8UN**	105	39.7	20	19.7	4

NPT

INTERNAL / EXTERNAL

ANSI/ASME B 1.20.1-1983





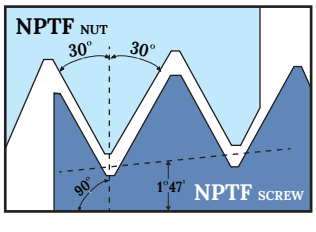
STRAIGHT FLUTES

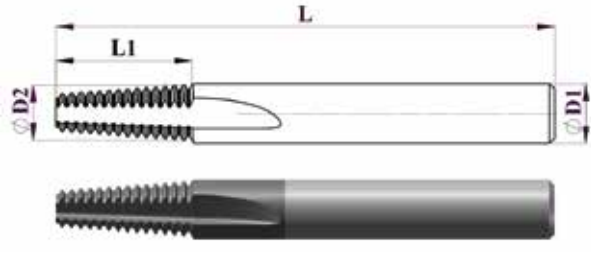
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	27	**TMX06059L09 27NPT**	57	9.8	6	5.9	3
2	1/4"-3/8"	18	**TMX10099L16 18NPT**	73	16.2	10	9.9	4
3	1/2"	14	**TMX12119L20 14NPT**	83	20.8	12	11.9	4
4	1"-2"	11.5	**TMX20199L29 11.5NPT**	105	29.7	20	19.9	4
5	2 1/2"-6"	8	**TMX20199L38 8NPT**	105	38.1	20	19.9	4

NPTF

INTERNAL / EXTERNAL

ANSI B 1.20.3-1976





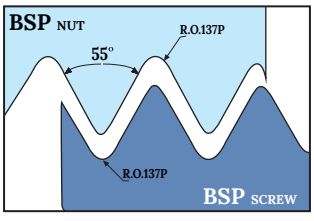
STRAIGHT FLUTES

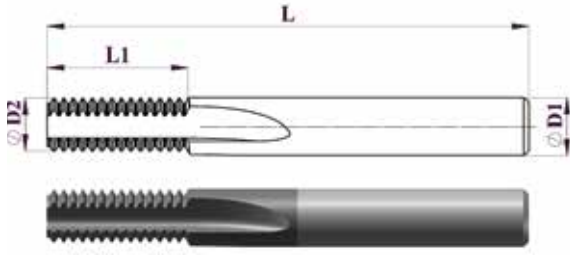
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	27	**TMX06059L09 27NPTF**	57	9.9	6	5.9	3
2	1/4"-3/8"	18	**TMX10099L16 18NPTF**	73	16.2	10	9.9	4
3	1/2"	14	**TMX12119L20 14NPTF**	83	20.8	12	11.9	4
4	1"-2"	11.5	**TMX20199L29 11.5NPTF**	105	29.7	20	19.9	4
5	2 1/2"-6"	8	**TMX20199L38 8NPTF**	105	38.1	20	19.9	4

BSP (G)

INTERNAL / EXTERNAL

B.S.84: 1956
ISO 228 - 1: 1994





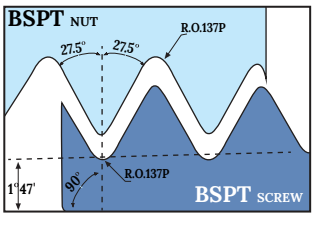
STRAIGHT FLUTES

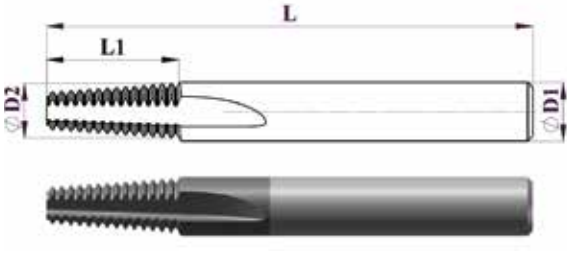
	THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	NO. OF FLUTES
1	1/16"-1/8"	28	**TMX06059L11 28BSP**	57	11.3	6	5.9	3
2	1/4"-3/8"	19	**TMX10099L16 19BSP**	73	16.6	10	9.9	4
3	1/2"-7/8"	14	**TMX12119L22 14BSP**	83	22.7	12	11.9	4
4	1"-2"	11	**TMX16159L32 11BSP**	105	32.1	16	15.9	4

BSPT (Rc)

INTERNAL / EXTERNAL

B.S.21: 1985

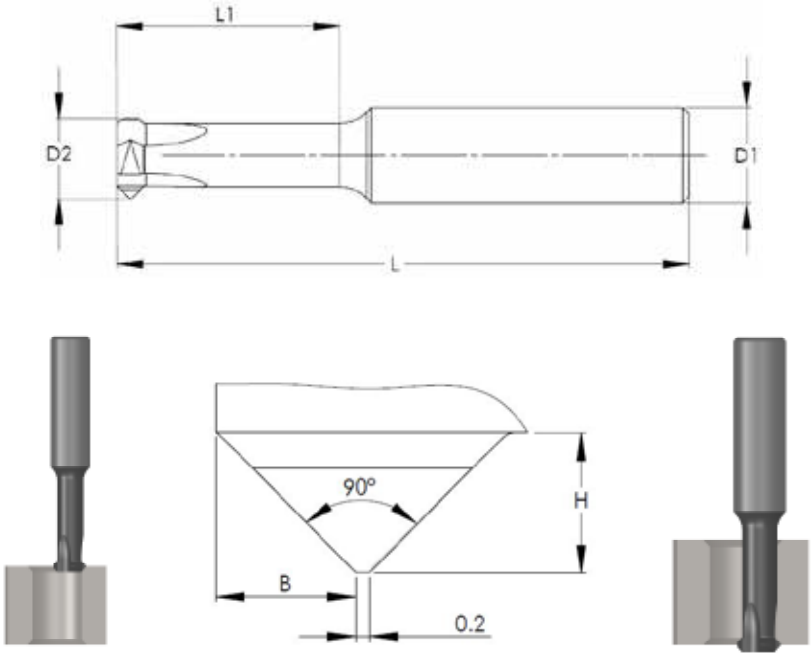




STRAIGHT FLUTES

	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**	105	32.1	16	15.9	4

CHAMFERS TOOLS



L1-SHORT

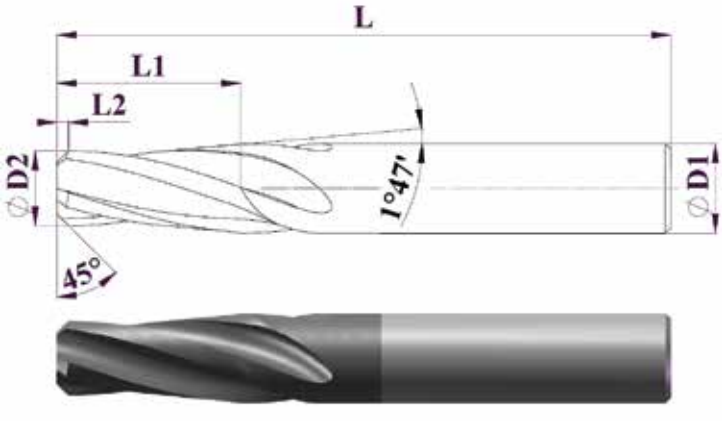
	ORDERING CODE	D1	D2	L1	H	B	a	NO. OF FLUTES	L
1	CMP03015L4 P90	3	1.5	4	0.3	0.4	90°	3	39
2	CMP03020L5 P90	3	2.0	5	0.4	0.5	90°	3	39
3	CMP03025L6 P90	3	2.5	6	0.5	0.6	90°	3	39
4	CMP04031L8 P90	4	3.1	8	0.6	0.6	90°	3	51
5	CMP04039L10 P90	4	3.9	10	0.8	0.9	90°	3	51
6	CMP06045L11 P90	6	4.5	11	1.1	1.2	90°	3	58
7	CMP06049L12 P90	6	4.9	12	1.1	1.2	90°	3	58
8	CMP06059L14 P90	6	5.9	14	1.5	1.6	90°	3	58
9	CMP08079L20 P90	8	7.9	20	1.6	1.7	90°	3	64

L1-LONG

	ORDERING CODE	D1	D2	L1	H	B	a	NO. OF FLUTES	L
1	CMP04031L12 P90	4	3.1	12	0.6	0.6	90°	3	51
2	CMP04039L16 P90	4	3.9	16	0.8	0.9	90°	3	51
3	CMP06049L20 P90	6	4.9	20	1.1	1.2	90°	3	58
4	CMP06059L24 P90	6	5.9	24	1.5	1.6	90°	3	58
5	CMP08079L30 P90	8	7.9	30	1.6	1.7	90°	3	64

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

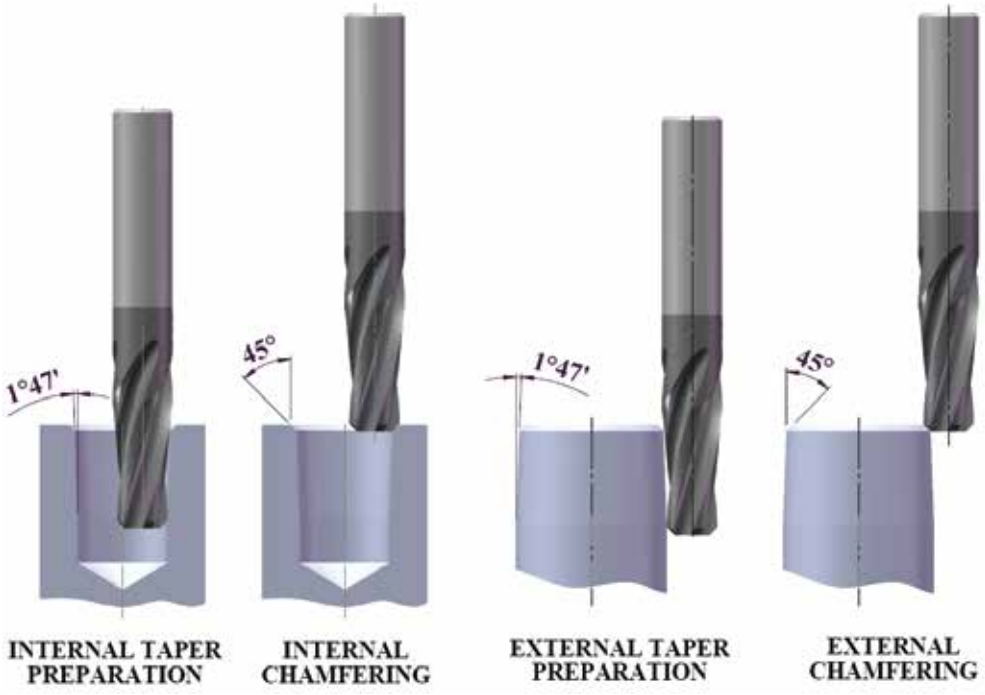
INTERNAL / EXTERNAL



	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

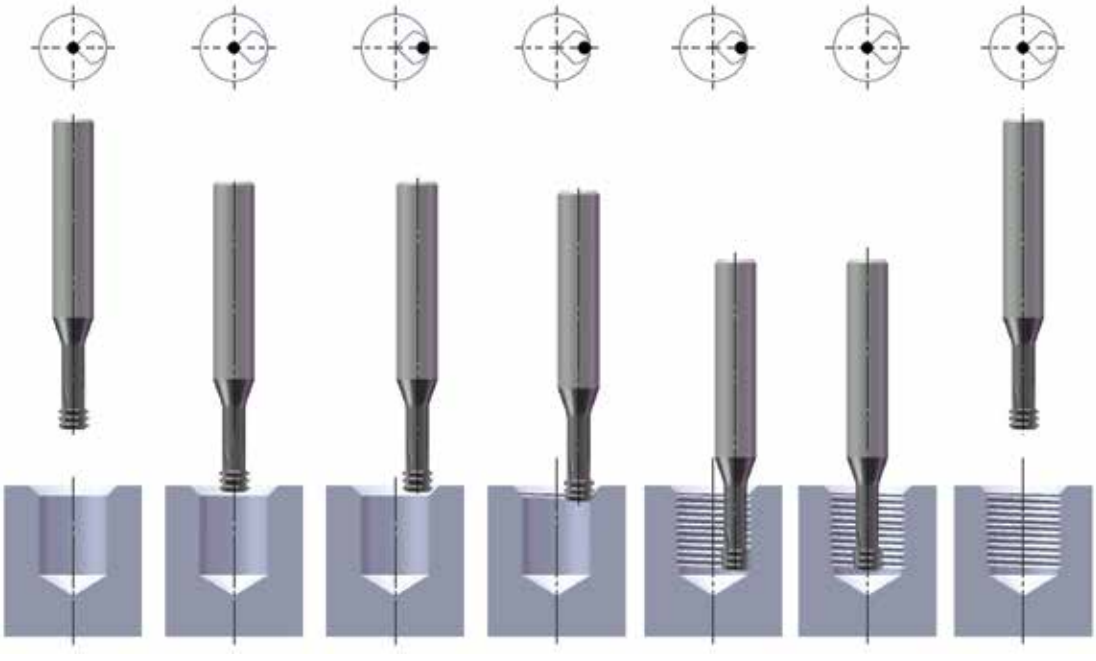
SAME TOOL CAN BE USED FOR THE FOLLOWING OPERATIONS:

- ✔ CONIC MILLING PREPARATION FOR CONIC THREADS (EXTERNAL & INTERNAL)
- ✔ CHAMFERING

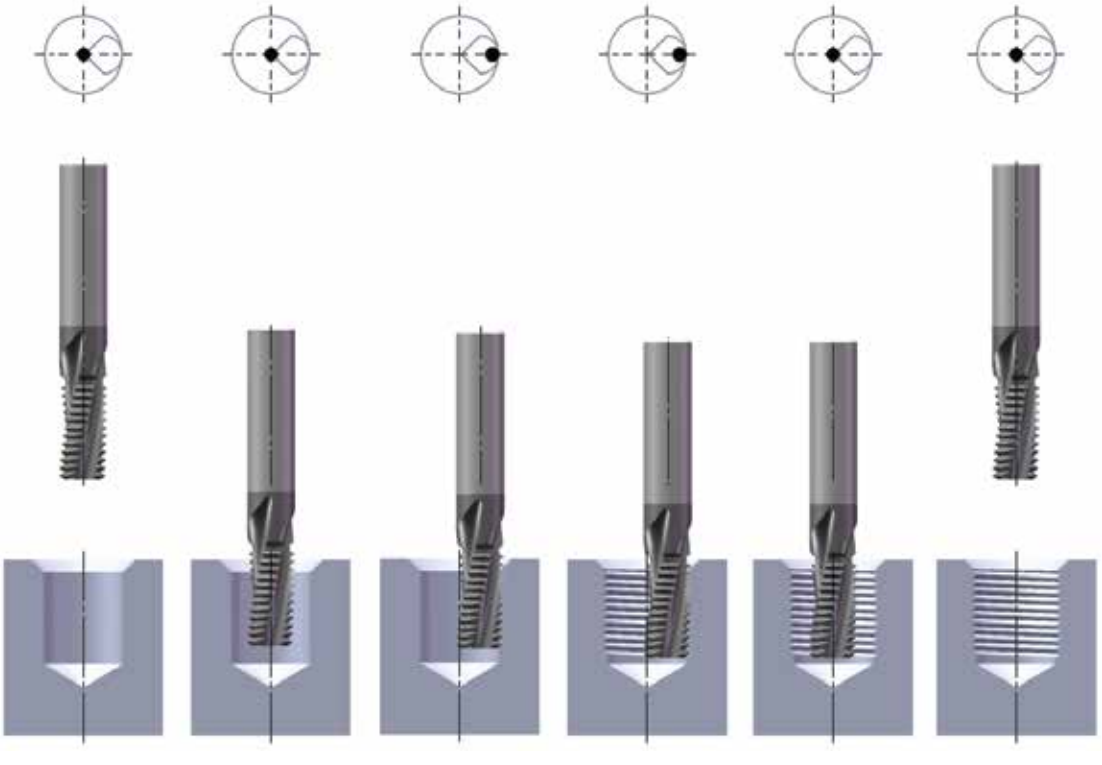


TECHNICAL SECTION

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 TEMPRERATURE 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

EROJET

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