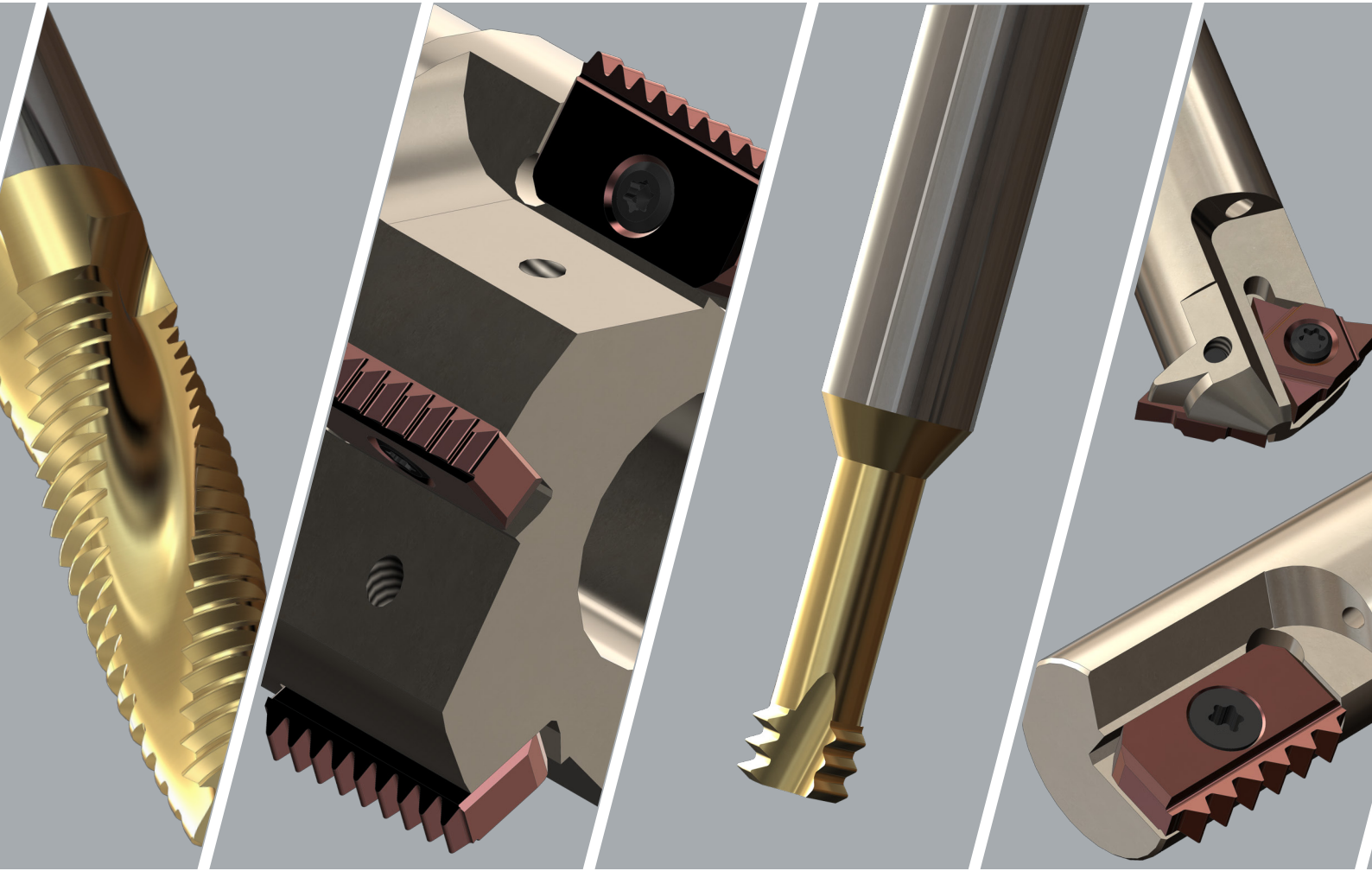




THREADMILLING

SOLID CARBIDE	THREADMILL IDENTIFICATION	3
	ISO METRIC	
	SOLID	
	ISO	4
	ISO FINE	4
	THROUGH HOLE COOLANT	
	ISO	5
	ISO FINE	5
	UNIFIED	
	UNC	6
	UNF	6
	UNEF	6
	WHITWORTH	
	BSW	7
	BSF	7
	BSP	8
	PIPE THREADS	
BSPT	9	
NPT	10	
NPTF	11	
HIGH PERFORMANCE	ISO	12
	UNC	12
LONG REACH	ISO UN	
	ISO	13
	UNC	13
	PARTIAL PROFILE	14
	TRAPEZOIDAL	14
	ACME	15
STUB ACME	15	

TECHNICAL	SOLID CARBIDE	16
INDEXABLE	EXTERNAL	
	ISO	17
	UNIFIED	17
	INTERNAL	
	ISO	18
	UNIFIED	18
	ACME	19
	TRAPEZOIDAL	19
	EXTERNAL/INTERNAL	
	WHITWORTH	19
	PG	19
	NPT	20
	NPTF	20
BSPT	20	
INDEXABLE U-STYLE	PARTIAL PROFILE	
	60°	21
	55°	21
INDEXABLE TOOLING	DOUBLE INSERT	22
	SINGLE INSERT	22
	U-STYLE INSERT	22
SHELL MILL	INDEXABLE INSERTS	23
	ON-EDGE INSERTS	23
TECHNICAL	INDEXABLE	23

THREADMILL IDENTIFICATION

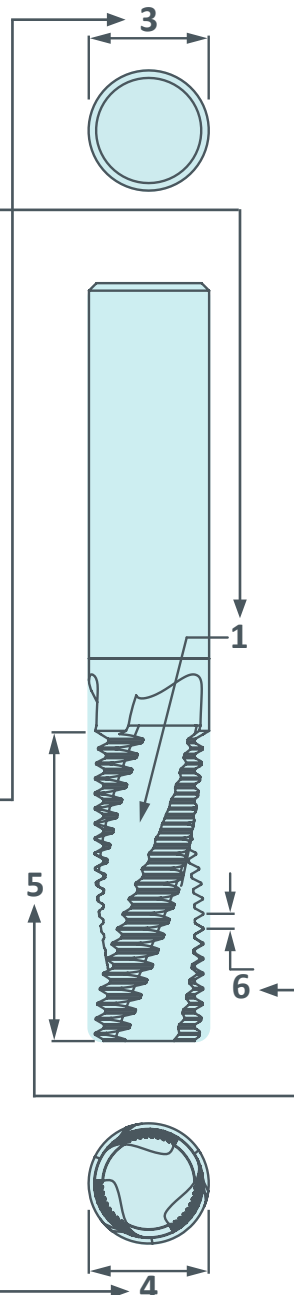
1	2	3	4	5	6	7	8
TMR	N	16	139	L40	2.5	ISO	C

1 LINE OF THREADMILL	
TMR	HELICAL FLUTES
PMR	HELICAL FLUTES
TMS	STRAIGHT FLUTES
HMR	HELICAL IN-FLUTE COOLANT

2 TOOL TYPE	
E	EXTERNAL THREAD
N	INTERNAL THREAD
X	EXTERNAL & INTERNAL THREAD

3 TOOL SHANK DIAMETER	
04	4.00 mm
06	6.00 mm
08	8.00 mm
10	10.00 mm
12	12.00 mm
14	14.00 mm
16	16.00 mm
18	18.00 mm
20	20.00 mm

4 CUTTING DIAMETER	
139	13.90 mm



5 CUTTING LENGTH	
L40	40.00 mm

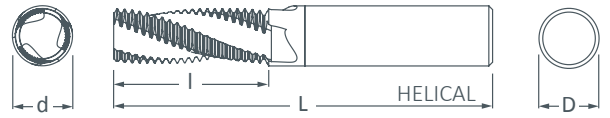
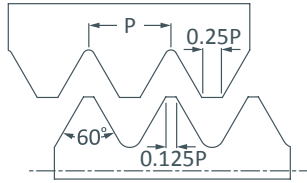
6 THREAD PITCH/TPI	
2.5	2.5 mm PITCH
10	10 TPI

7 THREAD FORM	
ISO	ISO
UNC	UNIFIED COARSE
UNF	UNIFIED FINE
UNEF	UNIFIED EXTRA FINE
BSW	BRITISH STANDARD WHITWORTH
BSF	BRITISH STANDARD FINE
BSP	BRITISH STANDARD PIPE
BSPT	BRITISH STANDARD PIPE TAPER
NPT	NATIONAL PIPE THREAD
NPTF	NATIONAL PIPE THREAD FUEL
ACME	GENERAL PURPOSE ACME

8 THROUGH HOLE COOLANT	
C	WITH THROUGH HOLE COOLANT

SOLID CARBIDE

ISO METRIC



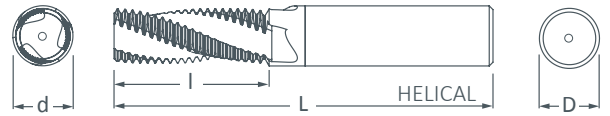
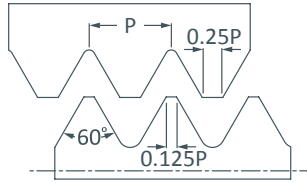
ISO HELICAL FLUTE

THREAD	PITCH (mm)	DESCRPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
M3	0.50	TMRN 04 022 L06 0.5ISO	2.20	6.00	4.00	45.00	12	3
M4	0.70	TMRN 04 028 L08 0.7ISO	2.80	8.40	4.00	45.00	12	3
M5	0.80	TMRN 04 035 L10 0.8ISO	3.50	10.40	4.00	45.00	13	3
M6	1.00	TMRN 04 039 L12 1.0ISO	3.90	12.00	4.00	45.00	12	3
M8	1.25	TMRN 06 058 L16 1.25ISO	5.80	16.25	6.00	57.00	13	3
M10	1.50	TMRN 08 077 L21 1.5ISO	7.70	21.00	8.00	63.00	14	3
M12	1.75	TMRN 10 087 L25 1.75ISO	8.70	24.50	10.00	73.00	14	4
M14	2.00	TMRN 10 099 L28 2.0ISO	9.90	28.00	10.00	73.00	14	4
M16	2.00	TMRN 12 119 L32 2.0ISO	11.90	32.00	12.00	83.00	16	4
M18-M22	2.50	TMRN 16 139 L40 2.5ISO	13.90	40.00	16.00	92.00	16	5
M24	3.00	TMRN 16 159 L42 3.0ISO	15.90	42.00	16.00	92.00	14	4

ISO FINE HELICAL FLUTE

THREAD	PITCH (mm)	DESCRPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
M6	0.75	TMRN 04 039 L12 0.75ISO	3.90	12.00	4.00	45.00	16	3
M8	1.00	TMRN 06 059 L16 1.0ISO	5.90	16.00	6.00	57.00	16	3
M10	1.25	TMRN 08 077 L20 1.25ISO	7.70	20.00	8.00	63.00	16	3
M12	1.50	TMRN 10 094 L24 1.5ISO	9.40	24.00	10.00	73.00	16	4
M16	1.50	TMRN 12 119 L33 1.5ISO	11.90	33.00	12.00	83.00	22	4
M16	2.00	TMRN 12 119 L32 2.0ISO	11.90	32.00	12.00	83.00	16	4

ISO METRIC



ISO HELICAL FLUTE THROUGH HOLE COOLANT

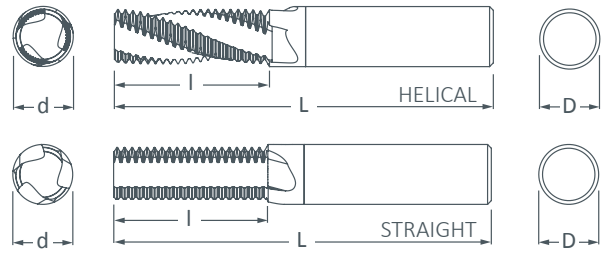
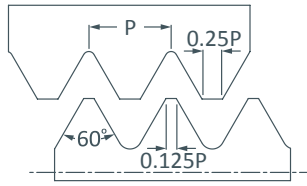
THREAD	PITCH (mm)	DESCRPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
M3	0.50	TMRN 04 024 L06 0.5ISO-C	2.40	6.20	4.00	45.00	12	3
M4	0.70	TMRN 04 031 L08 0.7ISO-C	3.15	8.70	4.00	45.00	12	3
M5	0.80	TMRN 04 039 L12 0.8ISO-C	3.90	10.80	4.00	45.00	13	3
M6	1.00	TMRN 06 048 L12 1.0ISO-C	4.80	12.50	6.00	57.00	12	3
M8	1.25	TMRN 08 065 L16 1.25ISO-C	6.50	16.90	8.00	61.00	13	3
M10	1.50	TMRN 10 082 L20 1.5ISO-C	8.20	20.20	10.00	73.00	13	3
M12	1.75	TMRN 10 099 L25 1.75ISO-C	9.90	25.40	10.00	73.00	14	4
M14	2.00	TMRN 12 116 L29 2.0ISO-C	11.60	29.00	12.00	80.00	14	4
M16	2.00	TMRN 14 136 L33 2.0ISO-C	13.60	33.00	14.00	92.00	16	4
M20	2.50	TMRN 18 171 L41 2.5ISO-C	17.10	41.20	18.00	102.00	16	4
M24	3.00	TMRN 20 199 L49 3.0ISO-C	19.90	49.50	20.00	102.00	16	4

ISO FINE HELICAL FLUTE THROUGH HOLE COOLANT

THREAD	PITCH (mm)	DESCRPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
M6	0.75	TMRN 06 050 L12 0.75ISO-C	5.00	12.40	6.00	57.00	16	3
M8	1.00	TMRN 08 067 L16 1.0ISO-C	6.70	16.50	8.00	61.00	16	3
M10	1.25	TMRN 10 085 L20 1.25ISO-C	8.50	20.60	10.00	73.00	16	3
M12	1.50	TMRN 10 099 L24 1.5ISO-C	9.90	24.70	10.00	73.00	16	4
M16	1.50	TMRN 14 139 L32 1.5ISO-C	13.90	32.20	14.00	92.00	21	4
M17-M80	2.00	TMRN 12 116 L29 2.0ISO-C	11.60	29.00	12.00	80.00	14	4

SOLID CARBIDE

UNIFIED



UNC UNIFIED COARSE HELICAL FLUTE ●

THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
NO. 12	24	TMRN 06 041 L09 24UNC	4.10	9.00	6.00	62	8	3
1/4"	20	TMRN 06 047 L10 20UNC	4.70	10.20	6.00	58	8	3
5/16"	18	TMRN 06 053 L13 18UNC	5.30	12.70	6.00	58	9	3
3/8"	16	TMRN 08 065 L14 16UNC	6.50	14.30	8.00	64	9	3
7/16"	14	TMRN 08 079 L18 14UNC	7.90	18.10	8.00	64	10	3
1/2"	13	TMRN 10 089 L21 13UNC	8.90	21.40	10.00	73	11	3
9/16"	12	TMRN 10 099 L23 12UNC	9.90	23.30	10.00	73	11	3
5/8"	11	TMRN 12 114 L28 11UNC	11.40	27.80	12.00	84	12	3
3/4"	10	TMRN 16 144 L31 10UNC	14.40	30.50	16.00	100	12	4
7/8"	9	TMRN 16 159 L37 9UNC	15.90	36.70	16.00	100	13	4
1"	8	TMRN 20 192 L38 8UNC	19.20	38.10	20.00	120	12	5

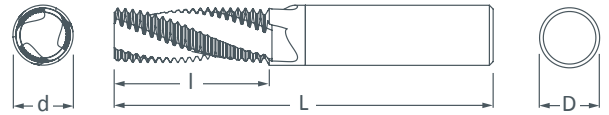
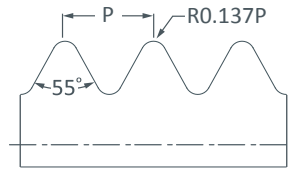
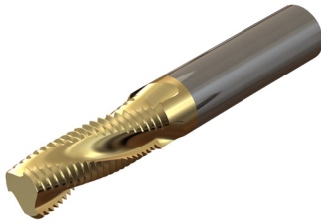
UNF UNIFIED FINE HELICAL & STRAIGHT FLUTE ●

THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
NO. 8	36	TMSN 04 030 L06 36UNF	3.00	6.40	4.00	50	9	2
NO. 10	32	TMRN 04 030 L06 32UNF	3.00	6.40	4.00	50	9	3
NO. 12	28	TMRN 04 036 L08 28UNF	3.60	8.20	4.00	50	9	3
1/4"	28	TMRN 06 045 L10 28UNF	4.50	10.00	6.00	58	11	3
5/16" 3/8"	24	TMRN 06 058 L15 24UNF	5.80	14.80	6.00	58	14	3
7/16" 1/2"	20	TMRN 10 085 L23 20UNF	8.50	22.90	10.00	73	18	3
9/16" 5/8"	18	TMRN 12 113 L25 18UNF	11.30	25.40	12.00	84	18	4
3/4"	16	TMRN 16 156 L37 16UNF	15.60	36.50	16.00	100	23	4
7/8"	14	TMRN 16 159 L40 14UNF	15.90	39.90	16.00	100	22	4
1" 1 1/2"	12	TMRN 16 159 L38 12UNF	15.90	38.10	16.00	100	18	4

UNEF UNIFIED EXTRA FINE HELICAL FLUTE

THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
7/16" 1/2"	28	TMRN 10 090 L24 28UNEF	9.00	23.60	10.00	73	26	3
9/16" 11/16"	24	TMRN 12 117 L30 24UNEF	11.70	29.60	12.00	84	28	4
3/4" 1"	20	TMRN 16 159 L39 20UNEF	15.90	39.40	16.00	100	31	4

WHITWORTH

BSW BRITISH STANDARD WHITWORTH HELICAL FLUTE ●

THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/4"	20	TMRX 06 040 L11 20BSW	4.00	11.40	6.00	58	9	3
5/16"	18	TMRX 06 053 L14 18BSW	5.30	14.10	6.00	58	10	3
3/8"	16	TMRX 08 065 L16 16BSW	6.50	15.90	8.00	64	10	3
7/16"	14	TMRX 08 076 L18 14BSW	7.60	18.10	8.00	64	10	3
1/2" 9/16"	12	TMRX 10 086 L23 12BSW	8.60	23.30	10.00	73	11	3
5/8" 11/16"	11	TMRX 12 112 L25 11BSW	11.20	25.40	12.00	84	11	3

BSF BRITISH STANDARD FINE HELICAL FLUTE ●

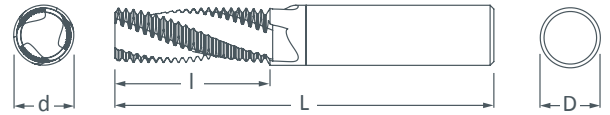
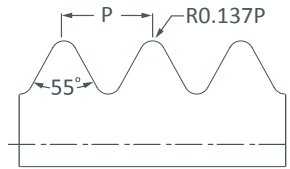
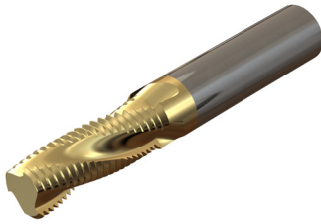
THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
5/16"	22	TMRX 06 055 L14 22BSF	5.50	13.90	6.00	58	12	3
3/8"	20	TMRX 08 068 L17 20BSF	6.80	16.50	8.00	64	13	3
7/16"	18	TMRX 08 079 L18 18BSF	7.90	18.30	8.00	64	13	3
1/2" 9/16"	16	TMRX 10 093 L22 16BSF	9.30	22.20	10.00	73	14	3
5/8" 11/16"	14	TMRX 12 119 L29 14BSF	11.90	29.00	12.00	84	15	3
3/4"	12	TMRX 16 145 L34 12BSF	14.50	33.90	16.00	100	16	4
7/8"	11	TMRX 16 159 L37 11BSF	15.90	36.80	16.00	100	16	4

● THROUGH HOLE COOLANT ALSO AVAILABLE

SOLID CARBIDE

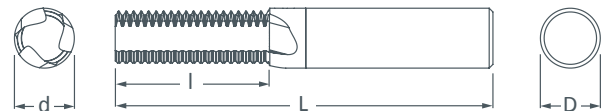
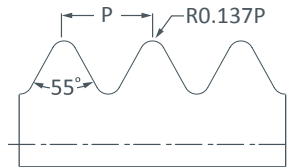
WHITWORTH

BSP BRITISH STANDARD PIPE HELICAL FLUTE ●



THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	28	TMRX 06 059 L09 28BSP	5.90	9.10	6.00	58	10	3
1/8"	28	TMRX 08 076 L15 28BSP	7.60	15.40	8.00	64	17	3
1/4" 3/8"	19	TMRX 08 079 L13 19BSP	7.90	13.40	8.00	64	10	3
3/8"	19	TMRX 10 099 L21 19BSP	9.90	21.40	10.00	73	16	3
1/2" 5/8"	14	TMRX 12 119 L18 14BSP	11.90	18.10	12.00	84	10	4
3/4" 7/8"	14	TMRX 16 159 L38 14BSP	15.90	38.10	16.00	100	21	4
1" - 6"	11	TMRX 16 159 L42 11BSP	15.90	41.60	16.00	100	18	4
1" - 6"	11	TMRX 20 199 L42 11BSP	19.90	41.60	20.00	120	18	4

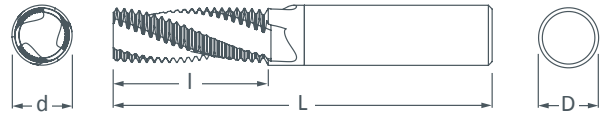
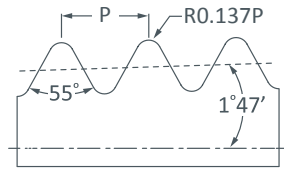
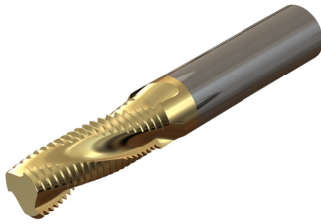
BSP BRITISH STANDARD PIPE STRAIGHT FLUTE



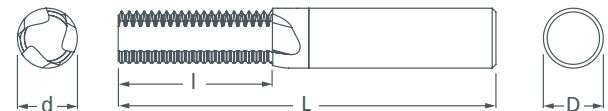
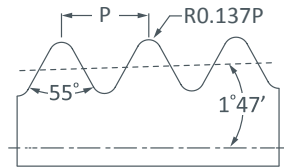
THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	28	TMSX 06 059 L09 28BSP	5.90	9.10	6.00	58	10	3
1/4" 3/8"	19	TMSX 08 079 L13 19BSP	7.90	13.40	8.00	64	10	3
1/2"	14	TMSX 12 119 L18 14BSP	11.90	18.10	12.00	84	10	4
1"	11	TMSX 16 159 L42 11BSP	15.90	41.60	16.00	100	18	4

● THROUGH HOLE COOLANT ALSO AVAILABLE

PIPE THREADS

BSPT BRITISH STANDARD PIPE TAPER HELICAL FLUTE ●

THREAD	TPI	DESCRIPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	28	TMRX 06 059 L09 28BSPT	5.90	9.10	6.00	58	11	3
1/8"	28	TMRX 08 076 L10 28BSPT	7.60	10.00	8.00	64	11	4
1/4"	19	TMRX 08 079 L13 19BSPT	7.90	13.00	8.00	64	11	4
1/4" 3/8"	19	TMRX 10 099 L15 19BSPT	9.90	14.70	10.00	73	11	4
1/2"	14	TMRX 12 119 L18 14BSPT	11.90	18.10	12.00	84	10	4
1/2" 3/4" 7/8"	14	TMRX 16 159 L22 14BSPT	15.90	21.80	16.00	100	12	4
1" - 4"	11	TMRX 16 159 L37 11BSPT	15.90	36.90	16.00	100	18	4
2" - 6"	11	TMRX 20 199 L42 11BSPT	19.90	41.60	20.00	120	18	4

BSPT BRITISH STANDARD PIPE TAPER STRAIGHT FLUTE

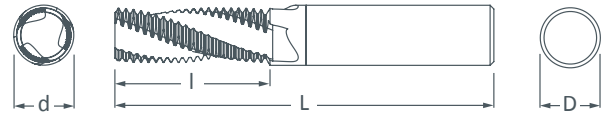
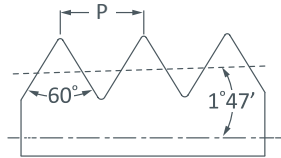
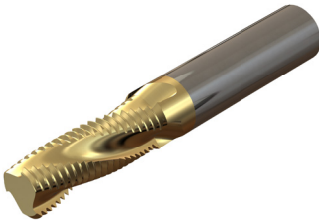
THREAD	TPI	DESCRIPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	28	TMSX 06 059 L09 28BSPT	5.90	9.10	6.00	58	11	3
1/8"	28	TMSX 08 076 L10 28BSPT	7.60	10.00	8.00	64	11	4
1/4"	19	TMSX 08 079 L13 19BSPT	7.90	13.00	8.00	64	11	4
1/4" 3/8"	19	TMSX 10 099 L15 19BSPT	9.90	14.70	10.00	73	11	4
1/2"	14	TMSX 12 119 L18 14BSPT	11.90	18.10	12.00	84	10	4
1/2" 3/4" 7/8"	14	TMSX 16 159 L22 14BSPT	15.90	21.80	16.00	100	12	4
1" - 4"	11	TMSX 16 159 L37 11BSPT	15.90	36.90	16.00	100	18	4
2" - 6"	11	TMSX 20 199 L42 11BSPT	19.90	41.60	20.00	120	18	4

● THROUGH HOLE COOLANT ALSO AVAILABLE

SOLID CARBIDE

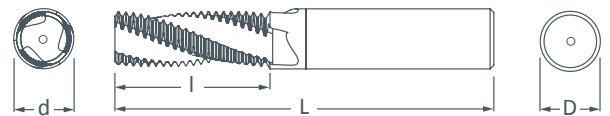
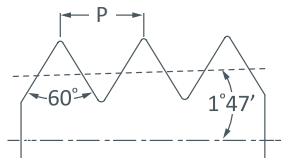
PIPE THREADS

NPT NATIONAL PIPE TAPER HELICAL FLUTE



THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16"	27	TMRX 06 053 L09 27NPT	5.30	9.40	6.00	57.00	10	3
1/8"	27	TMRX 08 075 L09 27NPT	7.50	9.40	8.00	63.00	10	4
1/4"	18	TMRX 10 094 L14 18NPT	9.40	14.10	10.00	73.00	10	4
3/8"	18	TMRX 12 119 L14 18NPT	11.90	14.10	12.00	83.00	10	4
1/2" / 3/4"	14	TMRX 16 155 L25 14NPT	15.50	25.40	16.00	92.00	14	5
1" / 2"	11.5	TMRX 20 199 L33 11.5NPT	19.90	33.10	20.00	104.00	15	5
2 1/2" / 3"	8	TMRX 20 199 L38 8NPT	19.90	38.10	20.00	104.00	12	4

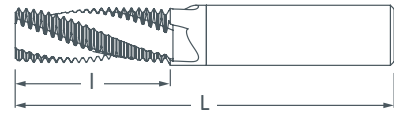
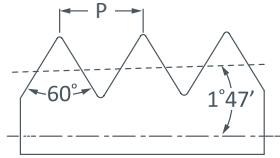
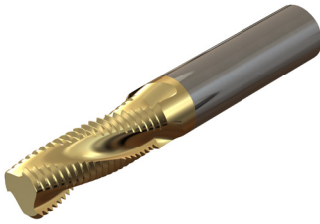
NPT NATIONAL PIPE TAPER HELICAL FLUTE THROUGH HOLE COOLANT



THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16"	27	TMRX 06 059 L09 27NPT-C	5.90	9.90	6.00	57.00	10	3
1/8"	27	TMRX 08 077 L09 27NPT-C	7.65	9.90	8.00	61.00	10	3
1/4"	18	TMRX 10 099 L14 18NPT-C	9.90	14.80	10.00	73.00	10	3
3/8"	18	TMRX 12 112 L14 18NPT-C	11.15	14.80	12.00	73.00	10	4
1/2" / 3/4"	14	TMRX 16 142 L18 14NPT-C	14.25	19.00	16.00	92.00	10	4
1" / 2"	11.5	TMRX 20 196 L22 11.5NPT-C	19.60	23.20	20.00	102.00	10	4
2 1/2" / 3"	8	TMRX 20 196 L32 8NPT-C	19.60	33.30	20.00	102.00	10	4

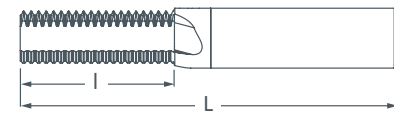
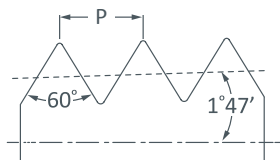
PIPE THREADS

NPTF NATIONAL PIPE TAPER FUEL HELICAL FLUTE ●



THREAD	PITCH (mm)	DESCRIPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	27	TMRX 06 059 L09 27NPTF	5.90	9.40	6.00	58	10	3
1/8"	27	TMRX 08 076 L09 27NPTF	7.60	9.40	8.00	64	10	4
1/4" 3/8"	18	TMRX 08 079 L14 18NPTF	7.90	14.10	8.00	64	10	4
3/8"	18	TMRX 10 099 L14 18NPTF	9.90	14.10	10.00	73	10	4
1/2" 3/4"	14	TMRX 12 119 L20 14NPTF	11.90	20.00	12.00	84	11	4
1/2" 3/4"	14	TMRX 16 159 L20 14NPTF	15.90	20.00	16.00	100	11	4
1" - 2"	11.5	TMRX 16 159 L27 11.5NPTF	15.90	26.50	16.00	100	12	4
2 1/2" - 4"	8	TMRX 20 199 L45 8NPTF	19.90	44.50	20.00	120	14	4

NPTF NATIONAL PIPE TAPER FUEL STRAIGHT FLUTE



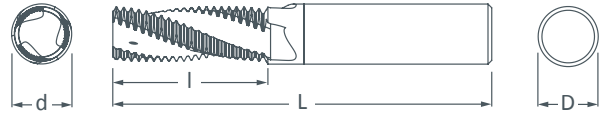
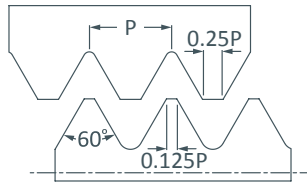
THREAD	PITCH (mm)	DESCRIPTION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/16" 1/8"	27	TMSX 06 059 L09 27NPTF	5.90	9.40	6.00	58	10	3
1/8"	27	TMSX 08 076 L09 27NPTF	7.60	9.40	8.00	64	10	4
1/4" 3/8"	18	TMSX 08 079 L14 18NPTF	7.90	14.10	8.00	64	10	4
3/8"	18	TMSX 10 099 L14 18NPTF	9.90	14.10	10.00	73	10	4
1/2" 3/4"	14	TMSX 12 119 L20 14NPTF	11.90	20.00	12.00	84	11	4
1/2" 3/4"	14	TMSX 16 159 L20 14NPTF	15.90	20.00	16.00	100	11	4
1" - 2"	11.5	TMSX 16 159 L27 11.5NPTF	15.90	26.50	16.00	100	12	4
2 1/2" - 4"	8	TMSX 20 199 L45 8NPTF	19.90	44.50	20.00	120	14	4

● THROUGH HOLE COOLANT ALSO AVAILABLE

HIGH PERFORMANCE

ISO METRIC

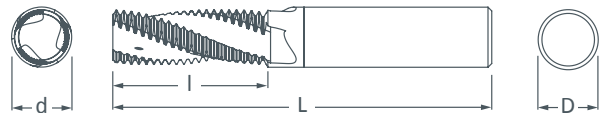
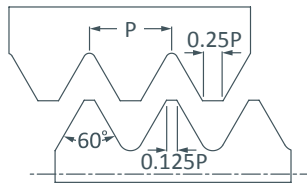
ISO HELICAL FLUTE INFLUTE THROUGH COOLANT



THREAD	PITCH (mm)	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
M6	1.00	HMRN 06 045 L15 1.0ISO-C	4.50	15.00	6.00	58.00	15	4
M8	1.25	HMRN 08 060 L20 1.25ISO-C	6.00	20.00	8.00	64.00	16	4
M10	1.50	HMRN 10 075 L25 1.5ISO-C	7.50	24.00	10.00	73.00	16	5
M12	1.75	HMRN 10 090 L30 1.75ISO-C	9.00	29.80	10.00	73.00	17	5
M14	2.00	HMRN 12 105 L34 2.0ISO-C	10.50	34.00	12.00	80.00	17	5

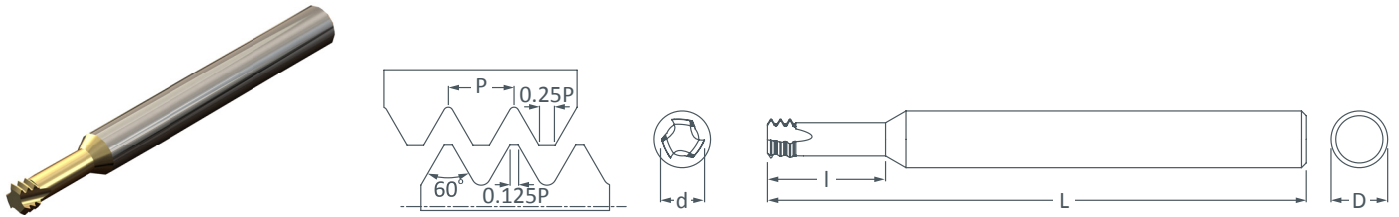
UNIFIED

UNC UNIFIED COARSE HELICAL FLUTE INFLUTE THROUGH COOLANT



THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/4"	20	HMRN 06 048 L16 20UNC-C	4.76	16.50	6.00	58.00	13	4
5/16"	18	HMRN 06 059 L20 18UNC-C	5.90	19.80	6.00	64.00	14	4
3/8"	16	HMRN 08 072 L24 16UNC-C	7.19	23.80	8.00	64.00	15	4
7/16"	14	HMRN 10 083 L29 14UNC-C	8.34	29.00	10.00	73.00	16	5
9/16"	12	HMRN 12 107 L34 12UNC-C	10.72	33.90	12.00	80.00	16	5

ISO UN



ISO HELICAL FLUTE

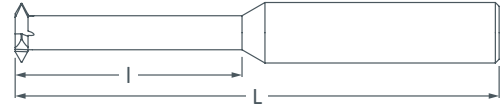
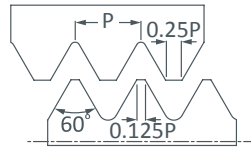
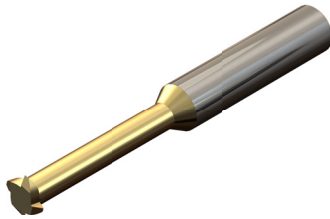
THREAD		PITCH (mm)	DESCRPITION	THREADMILL DIMENSIONS (mm)					
COARSE	FINE			d	l	D	L	PITCHES	FLUTES
M1.6		0.35	PMRN 03 012 L5 0.35ISO	1.20	5.00	3.00	30.00	3	3
M2		0.40	PMRN 03 016 L6 0.4ISO	1.55	6.20	3.00	30.00	3	3
M2.5		0.45	PMRN 03 019 L7 0.45ISO	1.95	7.70	3.00	30.00	3	3
M3	M3.5-M16	0.50	PMRN 03 024 L9 0.5ISO	2.40	9.20	3.00	30.00	3	3
M4		0.70	PMRN 06 031 L12 0.7ISO	3.15	12.30	6.00	57.00	3	3
M5		0.80	PMRN 06 040 L15 0.8ISO	4.05	15.40	6.00	57.00	3	3
M6	M8-M40	1.00	PMRN 06 048 L18 1.0ISO	4.80	18.50	6.00	57.00	3	3
M8		1.25	PMRN 08 065 L24 1.25ISO	6.50	24.60	8.00	63.00	3	3
M10	M12-M48	1.50	PMRN 10 082 L20 1.5ISO	8.20	20.80	10.00	73.00	3	3

UNC UNIFIED COARSE & UNF UNIFIED FINE HELICAL FLUTE

THREAD		TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
UNC	UNF			d	l	D	L	PITCHES	FLUTES
	No.1-72	72	PMRN 03 014 L5 72UN	1.45	5.75	3.00	30.00	3	3
No.2-56	No.3-56	56	PMRN 03 016 L7 56UN	1.65	7.00	3.00	30.00	3	3
No.4 No.5-40	No.6-40	40	PMRN 03 021 L9 40UN	2.10	9.00	3.00	30.00	3	3
No.6 No.8-32	No.10-32	32	PMRN 03 025 L11 32UN	2.55	11.00	3.00	30.00	3	3
	1/4" x 28	28	PMRN 06 052 L19 28UN	5.25	19.60	6.00	57.00	3	3
	5/16" x 24	24	PMRN 08 066 L24 24UN	6.68	24.50	8.00	63.00	3	3
1/4" x 20	7/16" x 20	20	PMRN 06 048 L19 20UN	4.88	19.80	6.00	57.00	3	3

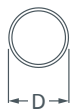
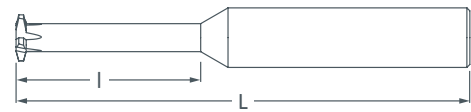
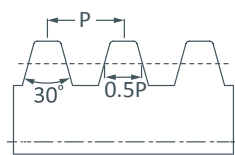
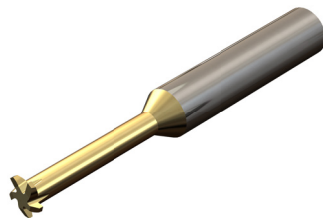
LONG REACH

PARTIAL PROFILE



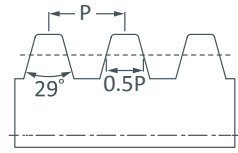
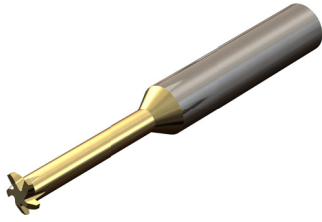
THREAD	PITCH (mm)	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
				d	l	D	L	PITCHES	FLUTES
$\varnothing > 6.00$	INT 0.5-0.8 EXT 0.4-0.8	56-28 64-32	PMRN 06 059 L20 A60	5.90	20.00	6.00	58	1	4
$\varnothing > 9.00$			PMRN 08 079 L28 A60	7.90	28.00	8.00	64	1	4
$\varnothing > 13.00$			PMRN 12 119 L38 A60	11.90	38.00	12.00	84	1	5
$\varnothing > 10.00$	INT 1.0-1.75 EXT 0.8-1.5	28-14 32-16	PMRN 08 079 L30 B60	7.90	30.00	8.00	64	1	4
$\varnothing > 12.00$			PMRN 10 099 L35 B60	9.90	35.00	10.00	73	1	4
$\varnothing > 14.00$			PMRN 12 119 L39 B60	11.90	39.00	12.00	84	1	5
$\varnothing > 16.00$	INT 2.0-3.0 EXT 1.75-2.5	13-8 15-10	PMRN 12 119 L40 C60	11.90	40.00	12.00	84	1	5
$\varnothing > 18.00$			PMRN 16 140 L45 C60	14.00	45.00	16.00	100	1	5
$\varnothing > 20.00$			PMRN 16 159 L50 C60	15.90	50.00	16.00	100	1	5

TRAPEZOIDAL



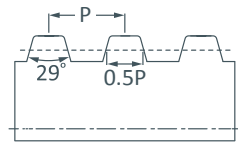
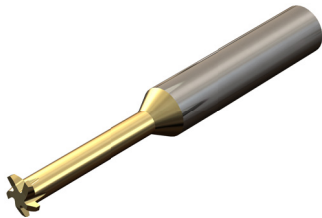
THREAD	PITCH (mm)	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
$\varnothing 9.00 - 14.00$	2.00	PMRN 06 056 L30 2.0TR	5.60	30.00	6.00	58	1	4
$\varnothing 10.00 - 14.00$	3.00	PMRN 10 087 L30 3.0TR	8.70	30.00	10.00	84	1	5
$\varnothing 16.00 - 20.00$	4.00	PMRN 10 099 L40 4.0TR	9.90	40.00	10.00	84	1	5

ACME



THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/4	16	PMRN 06 043 L13 16ACME	4.30	12.70	6.00	58	1	4
5/16	14	PMRN 06 051 L19 14ACME	5.10	19.10	6.00	58	1	4
3/8 - 7/16	12	PMRN 06 059 L23 12ACME	5.90	22.90	6.00	58	1	4
1/2	10	PMRN 08 079 L19 10ACME	7.90	30.50	8.00	64	1	4
5/8	8	PMRN 12 102 L33 8ACME	10.20	33.00	12.00	84	1	5
3/4 - 7/8	6	PMRN 12 119 L33 6ACME	11.90	33.00	12.00	84	1	5
1 - 1 1/4	5	PMRN 16 157 L45 5ACME	15.70	44.50	16.00	100	1	5
1 3/8 - 1 3/4	4	PMRN 18 179 L64 4ACME	17.90	63.50	18.00	100	1	5

STUB ACME



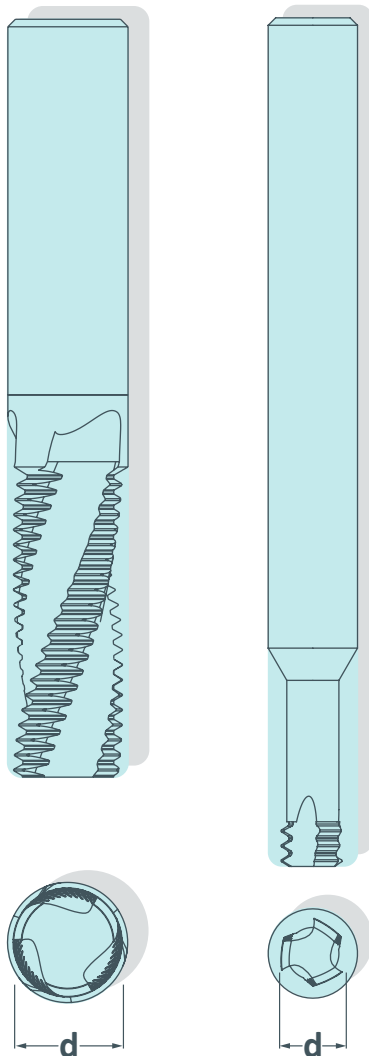
THREAD	TPI	DESCRPITION	THREADMILL DIMENSIONS (mm)					
			d	l	D	L	PITCHES	FLUTES
1/4	16	PMRN 06 043 L13 16STACME	4.30	12.70	6.00	58	1	4
5/16	14	PMRN 06 051 L19 14STACME	5.10	19.10	6.00	58	1	4
3/8 - 7/16	12	PMRN 06 059 L23 12STACME	5.90	22.90	6.00	58	1	4
1/2	10	PMRN 08 079 L19 10STACME	7.90	30.50	8.00	64	1	4
5/8	8	PMRN 12 102 L33 8STACME	10.20	33.00	12.00	84	1	5
3/4 - 7/8	6	PMRN 12 119 L33 6STACME	11.90	33.00	12.00	84	1	5
1 - 1 1/4	5	PMRN 16 157 L45 5STACME	15.70	44.50	16.00	100	1	5
1 3/8 - 1 3/4	4	PMRN 18 179 L64 4STACME	17.90	63.50	18.00	100	1	5

TECHNICAL DATA

SOLID CARBIDE THREADMILLING DATA

RECOMMENDED CUTTING SPEEDS & FEEDS

MATERIAL	CUTTING SPEEDS		FEED/TOOTH f_z		
	PTC2	DBC	TMRN	TMSN/PMRN	TMRN-C/HMRN
LOW/MEDIUM CARBON STEEL	140 - 230		0.030 - 0.070	0.010 - 0.050	0.050 - 0.150
HIGH CARBON STEEL	120 - 200		0.030 - 0.070	0.010 - 0.050	0.050 - 0.150
STAINLESS STEEL	60 - 170		0.030 - 0.070	0.010 - 0.050	0.050 - 0.150
CAST IRON	12 - 180		0.030 - 0.070	0.007 - 0.020	0.050 - 0.150
NON FERROUS 400	150 - 300		0.040 - 0.100	0.020 - 0.075	0.080 - 0.250
NICKEL CHROME ALLOYS	20 - 40	20 - 40	0.020 - 0.050	0.015 - 0.035	0.040 - 0.100
TITANIUM ALLOYS	70 - 120	70 - 120	0.020 - 0.050	0.015 - 0.035	0.040 - 0.110
IRON BASED ALLOYS	20 - 50		0.020 - 0.050	0.015 - 0.035	0.040 - 0.120
COBALT BASED ALLOYS	20 - 50	20 - 50	0.020 - 0.050	0.015 - 0.035	0.040 - 0.130

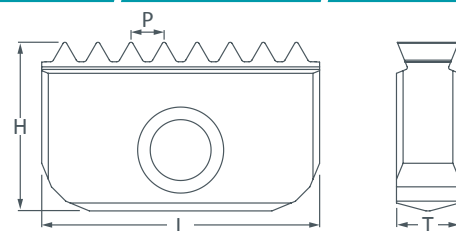
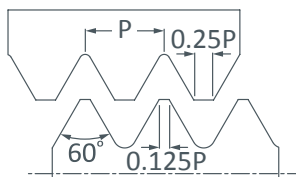
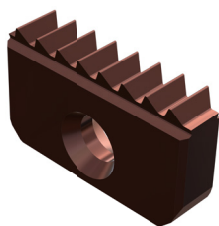


DIAMETER CORRECTION FACTORS

THREADMILL DIAMETER (d)	CORRECTION FACTOR
$\leq 4.00\text{mm } \varnothing$	$0.50 \times f_z$
$4.00 - 8.00\text{mm } \varnothing$	$0.75 \times f_z$
$8.00 - 12.00\text{mm } \varnothing$	$0.90 \times f_z$
$12.00\text{mm} < \varnothing$	AS PER TABLE

EXAMPLE

MATERIAL	THREADMILL
STAINLESS STEEL	TMRN 08 079 L18 14UNC
FEED FROM TABLE x CORRECTION FACTOR	ACTUAL FEED (f_z)
0.050×0.75	0.038

EXTERNAL **ISO & UNIFIED** *DOUBLE SIDED***ISO** *DIN13 - 60° INC.*

PITCH (mm)	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
1.5	PTM14	PTM14 E 1.5ISO	0.217	9	14.00	8.02	3.10
1.75		PTM14 E 1.75ISO	0.253	8			
2.0		PTM14 E 2.0ISO	0.289	7			
2.5		PTM14 E 2.5ISO	0.361	5			
1.5	PTM21	PTM21 E 1.5ISO	0.217	14	21.00	12.74	4.70
1.75		PTM21 E 1.75ISO	0.253	12			
2.0		PTM21 E 2.0ISO	0.289	10			
2.5		PTM21 E 2.5ISO	0.361	8			
3.0		PTM21 E 3.0ISO	0.433	7			
3.5		PTM21 E 3.5ISO	0.505	6			
4.0	PTM30	PTM30 E 4.0ISO	0.678	5	30.00	16.00	5.50
5.0	PTM40	PTM40 E 5.0ISO	0.723	4	40.00	20.00	6.30
6.0		PTM40 E 6.0ISO	0.868	3			

UNIFIED *ASME/ANSI B1.1 - 60° INC.*

TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
16	PTM14	PTM14 E 16UN	0.229	9	14.00	8.02	3.10
14		PTM14 E 14UN	0.262	7			
12		PTM14 E 12UN	0.306	6			
11		PTM14 E 11UN	0.333	6			
10		PTM14 E 10UN	0.367	5			
16	PTM21	PTM21 E 16UN	0.229	13	21.00	12.74	4.70
14		PTM21 E 14UN	0.262	11			
12		PTM21 E 12UN	0.306	10			
11		PTM21 E 11UN	0.333	9			
10		PTM21 E 10UN	0.367	8			
9		PTM21 E 9UN	0.407	7			
8		PTM21 E 8UN	0.458	6			
8	PTM30	PTM30 E 8UN	0.458	9	30.00	16.00	5.50
6		PTM30 E 6UN	0.612	7			
8	PTM40	PTM40 E 8UN	0.458	9	40.00	20.00	6.30
6		PTM40 E 6UN	0.612	7			

INDEXABLE THREADMILLS

INTERNAL ISO & UNIFIED *DOUBLE SIDED*

ISO *DIN13 - 60° INC.*

PITCH (mm)	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
1.5	PTM14	PTM14 N 1.5ISO	0.108	9	14.00	8.02	3.10
1.75		PTM14 N 1.75ISO	0.126	8			
2.0		PTM14 N 2.0ISO	0.144	7			
2.5		PTM14 N 2.5ISO	0.180	5			
1.5	PTM21	PTM21 N 1.5ISO	0.108	14	21.00	12.74	4.70
1.75		PTM21 N 1.75ISO	0.126	12			
2.0		PTM21 N 2.0ISO	0.144	10			
2.5		PTM21 N 2.5ISO	0.180	8			
3.0		PTM21 N 3.0ISO	0.217	7			
3.5		PTM21 N 3.5ISO	0.253	6			
4.0	PTM30	PTM30 N 4.0ISO	0.289	7	30.00	16.00	5.50
4.5		PTM30 N 4.5ISO	0.325	6			
5.0		PTM30 N 5.0ISO	0.362	6			
5.0	PTM40	PTM40 N 5.0ISO	0.362	8	40.00	20.00	6.30
5.5		PTM40 N 5.5ISO	0.398	7			
6.0		PTM40 N 6.0ISO	0.434	6			

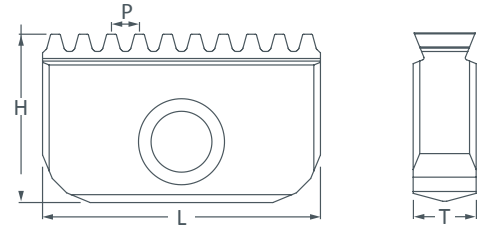
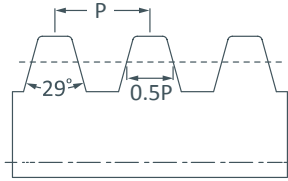
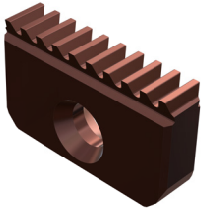
UNIFIED *ASME/ANSI B1.1 - 60° INC.*

TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
16	PTM14	PTM14 N 16UN	0.115	8	14.00	8.02	3.10
14		PTM14 N 14UN	0.131	7			
12		PTM14 N 12UN	0.153	6			
11		PTM14 N 11UN	0.167	6			
10		PTM14 N 10UN	0.183	5			
16	PTM21	PTM21 N 16UN	0.115	13	21.00	12.74	4.70
14		PTM21 N 14UN	0.131	11			
12		PTM21 N 12UN	0.153	10			
11		PTM21 N 11UN	0.167	9			
10		PTM21 N 10UN	0.183	8			
9		PTM21 N 9UN	0.204	7			
8		PTM21 N 8UN	0.229	6			
8	PTM30	PTM30 N 8UN	0.299	9	30.00	16.00	5.50
6		PTM30 N 6UN	0.306	7			
5		PTM30 N 5UN	0.367	5			
8	PTM40	PTM40 N 8UN	0.229	12	40.00	20.00	6.30
6		PTM40 N 6UN	0.308	9			
4.5		PTM40 N 4.5UN	0.408	7			
4		PTM40 N 4UN	0.459	6			

* SINGLE EDGE INSERTS

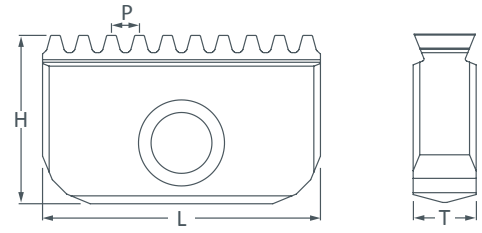
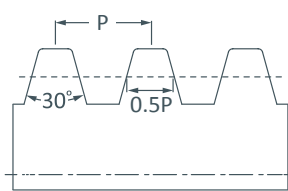
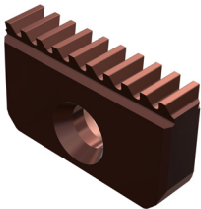
INTERNAL *DOUBLE SIDED*

ACME ASME/ANSI B1.5 - 29° INC.



TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
12	PTM21	PTM21 N 12ACME	-	9	21.00	12.74	4.70
10		PTM21 N 10ACME	-	8			

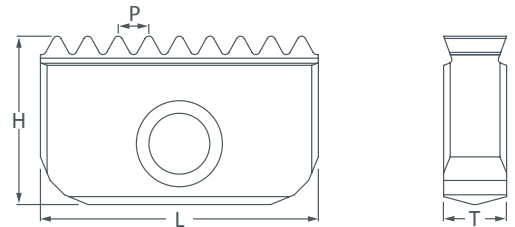
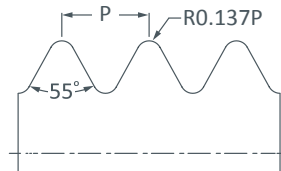
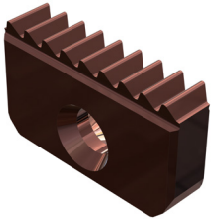
TRAPEZOIDAL DIN103/BS5346 - 30° INC.



PITCH (mm)	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
2.00	PTM21	PTM21 N 2.0TR	-	9	21.00	12.74	4.70
2.50		PTM21 N 2.5TR	-	8			

EXTERNAL & INTERNAL *DOUBLE SIDED*

WHITWORTH DIN2999/BS84 - 55° INC.

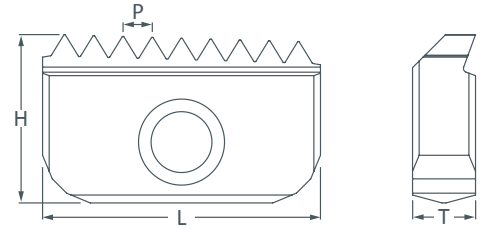
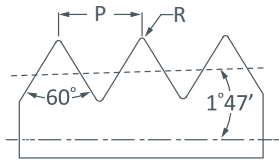
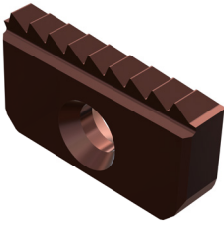


TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
16	PTM14	PTM14 X 16W	0.218	8	14.00	8.02	3.10
14		PTM14 X 14W	0.249	7			
12		PTM14 X 12W	0.291	6			
11		PTM14 X 11W	0.317	6			
10		PTM14 X 10W	0.349	5			
16	PTM21	PTM21 X 16W	0.218	13	21.00	12.74	4.70
14		PTM21 X 14W	0.249	11			
12		PTM21 X 12W	0.291	9			
11		PTM21 X 11W	0.317	9			
10		PTM21 X 10W	0.349	8			
9		PTM21 X 9W	0.388	7			
8		PTM21 X 8W	0.436	6			
11	PTM30	PTM30 X 11W	0.317	13	30.00	16.00	5.50
8	PTM40	PTM40 X 8W	0.436	12	40.00	20.00	6.30

INDEXABLE THREADMILLS

EXTERNAL & INTERNAL *SINGLE SIDED*

NPT ASME/ANSI B1.20.1 - 60° INC. - 1/16 TAPER

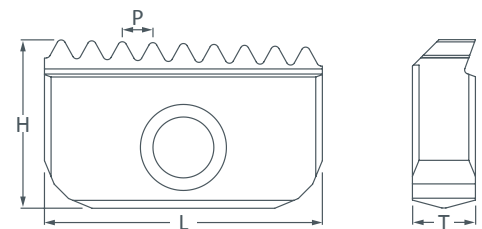
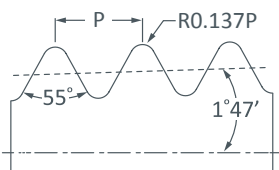
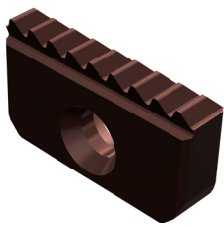


TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
18	PTM14	PTM14 XS 18NPT	0.057	9	14.00	8.02	3.10
14		PTM14 XS 14NPT	0.067	7			
18	PTM21	PTM21 XS 18NPT	0.057	14	21.00	12.74	4.70
14		PTM21 XS 14NPT	0.067	11			
11.5		PTM21 XS 11.5NPT	0.073	9			
8	PTM30	PTM30 XS 8NPT	0.087	9	30.00	16.00	5.50

NPTF ASME/ANSI B1.20.3 - 60° INC. - 1/16 TAPER

TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
18	PTM14	PTM14 XS 18NPTF	0.110	9	14.00	8.02	3.10
14		PTM14 XS 14NPTF	0.110	7			
18	PTM21	PTM21 XS 18NPTF	0.110	14	21.00	12.74	4.70
14		PTM21 XS 14NPTF	0.110	11			
11.5		PTM21 XS 11.5NPTF	0.133	9			

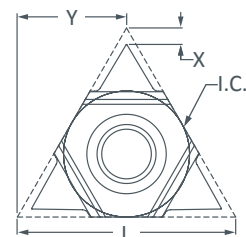
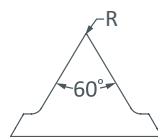
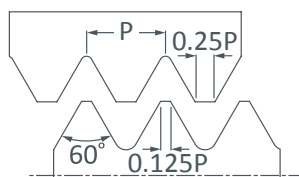
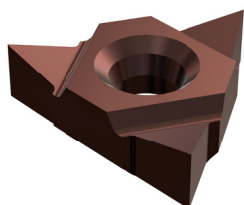
BSPT BS21 - 55° INC. - 1/16 TAPER



TPI	BLANK	DESCRIPTION	R (MAX)	NO. OF TEETH	L	H	T
28	PTM14	PTM14 XS 28BSPT	0.125	15	14.00	8.02	3.10
14		PTM14 XS 14BSPT	0.249	7			
19		PTM14 XS 19BSPT	0.184	10			
14	PTM21	PTM21 XS 14BSPT	0.249	11	21.00	12.74	4.70
11		PTM21 XS 11BSPT	0.317	9			

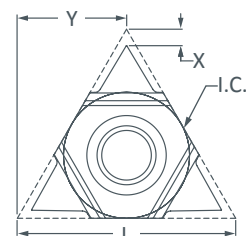
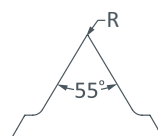
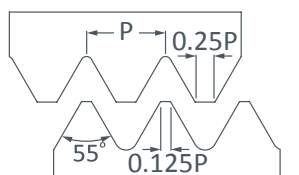
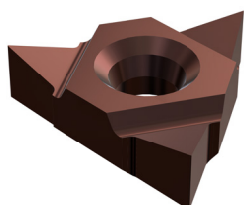
U-STYLE

PARTIAL PROFILE 60° INC.



L	I.C.	PITCH (mm)	TPI	DESCRIPTION	R. MAX.	X	Y	T
11	6.35 (1/4")	0.50 - 1.50	48 - 16	T11NU 60	0.04	0.40	5.50	3.35
16	9.525 (3/8")	0.50 - 3.00	48 - 8	T16NU 60	0.04	0.60	8.00	3.60
22	12.70 (1/2")	5.00 - 6.00	5-4	T22NU 60	0.36	0.80	11.00	4.90

PARTIAL PROFILE 55° INC.

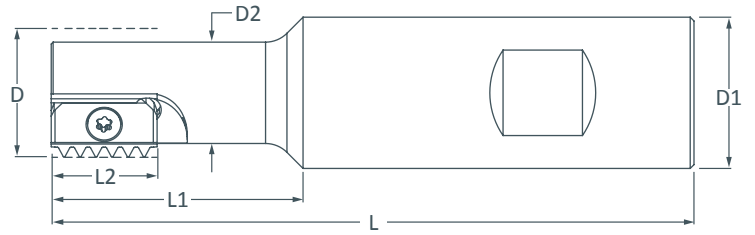


L	I.C.	PITCH (mm)	TPI	DESCRIPTION	R. MAX.	X	Y	T
11	6.35 (1/4")	0.50 - 1.50	48 - 16	T11NU 55	0.04	0.40	5.50	3.35
16	9.525 (3/8")	0.50 - 3.00	48 - 8	T16NU 55	0.04	0.60	8.00	3.60
22	12.70 (1/2")	5.00 - 6.00	5-4	T22NU 55	0.36	0.80	11.00	4.90

INDEXABLE TOOLHOLDERS

EXTERNAL & INTERNAL

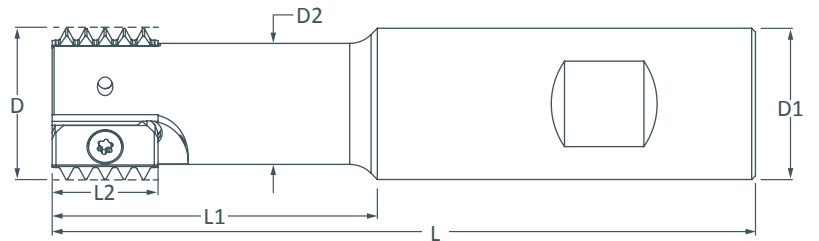
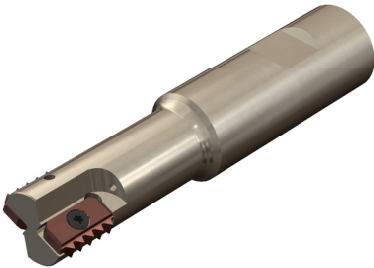
SINGLE INSERT HOLDER



PTM30 & PTM40 TOOLING AVAILABLE ON REQUEST

INSERT SIZE	TOOLHOLDER	DIMENSIONS						SPARES	
		D	D1	D2	L	L1	L2	SCREW	TORQ KEY
PTM14	TIMR2012 L20F 14 1	12.00	20.00	8.90	75.00	20.00	14.00	PTS14	T7
	TIMR2014 L25H 14 1	14.00	20.00	11.20	85.00	25.00	14.00		
	TIMR2017 L30H 14 1	17.00	20.00	13.40	85.00	30.00	14.00		
PTM21	TIMR2018 L30H 21 1	18.00	20.00	14.40	85.00	30.00	21.00	PTS21	T20
	TIMR2021 L40H 21 1	21.00	20.00	16.50	108.00	40.00	21.00		

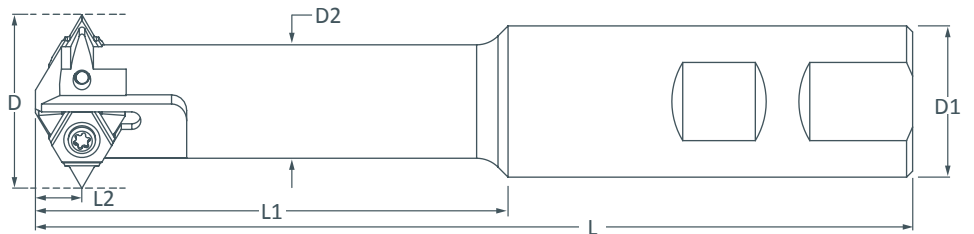
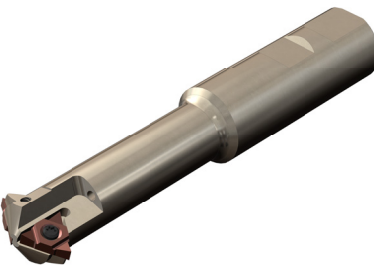
DOUBLE INSERT HOLDER



PTM30 & PTM40 TOOLING AVAILABLE ON REQUEST

INSERT SIZE	TOOLHOLDER	DIMENSIONS						SPARES	
		D	D1	D2	L	L1	L2	SCREW	TORQ KEY
PTM14	TIMR2020 L41H 14 2	20.00	20.00	8.90	75.00	41.00	14.00	PTS14	T7
PTM21	TIMR2530 L50H 21 2	30.00	25.00	24.40	108.00	50.00	21.00	PTS21	T20

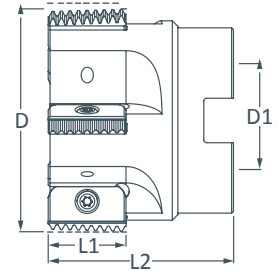
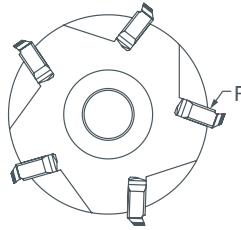
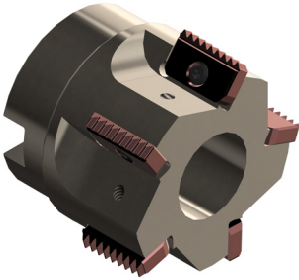
U-STYLE LAYDOWN



INSERT SIZE	TOOLHOLDER	DIMENSIONS						SPARES	
		D	D1	D2	L	L1	L2	SCREW	TORQ KEY
11NU	PSR0020 50 19 2 T11U	19.05	20.00	12.50	125.00	50.00	4.50	S11	T9
16NU	PSR0025 75 29 2 T16U	28.60	25.00	18.75	145.00	75.00	6.70	S16	T10
22NU	PSR0032 100 36 2 T22U	36.00	32.00	25.00	175.00	100.00	8.95	S22	T15

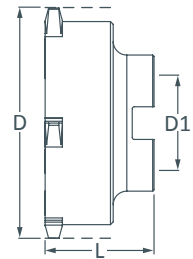
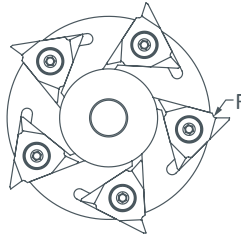
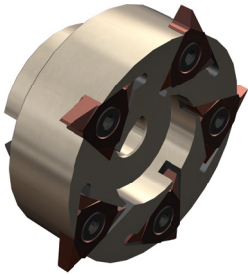
MULTI INSERT SHELL MILL

INDEXABLE INSERTS



INSERT SIZE	TOOLHOLDER	DIMENSIONS				FLUTES	SPARES	
		D	D1	L1	L2	F	SCREW	TORQ KEY
PTM21	TIMR 5063 L50C 21 5	63.00	22.00	50.00	75.00	5	PTS21	T20

ON-EDGE INSERTS



INSERT SIZE	TOOLHOLDER	DIMENSIONS			FLUTES	SPARES
		D	D1	L	F	SCREW
TNEC43	TIMR 4050 P03 C43	50.00	16.00	40.00	3	VS22
TNEC54	TIMR 4061 P03 C54	61.00	48.00	40.00	3	VS27
TNEC54	TIMR 4089 P05 C54	89.00	22.00	40.00	5	VS27

INDEXABLE THREADMILLING CUTTING DATA

RECOMMENDED CUTTING SPEEDS & FEEDS

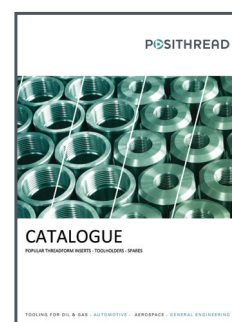
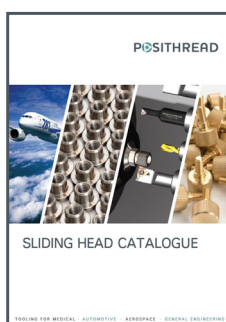
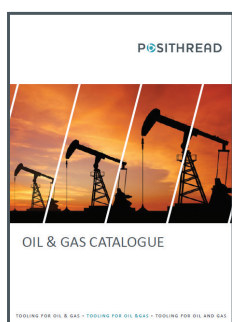
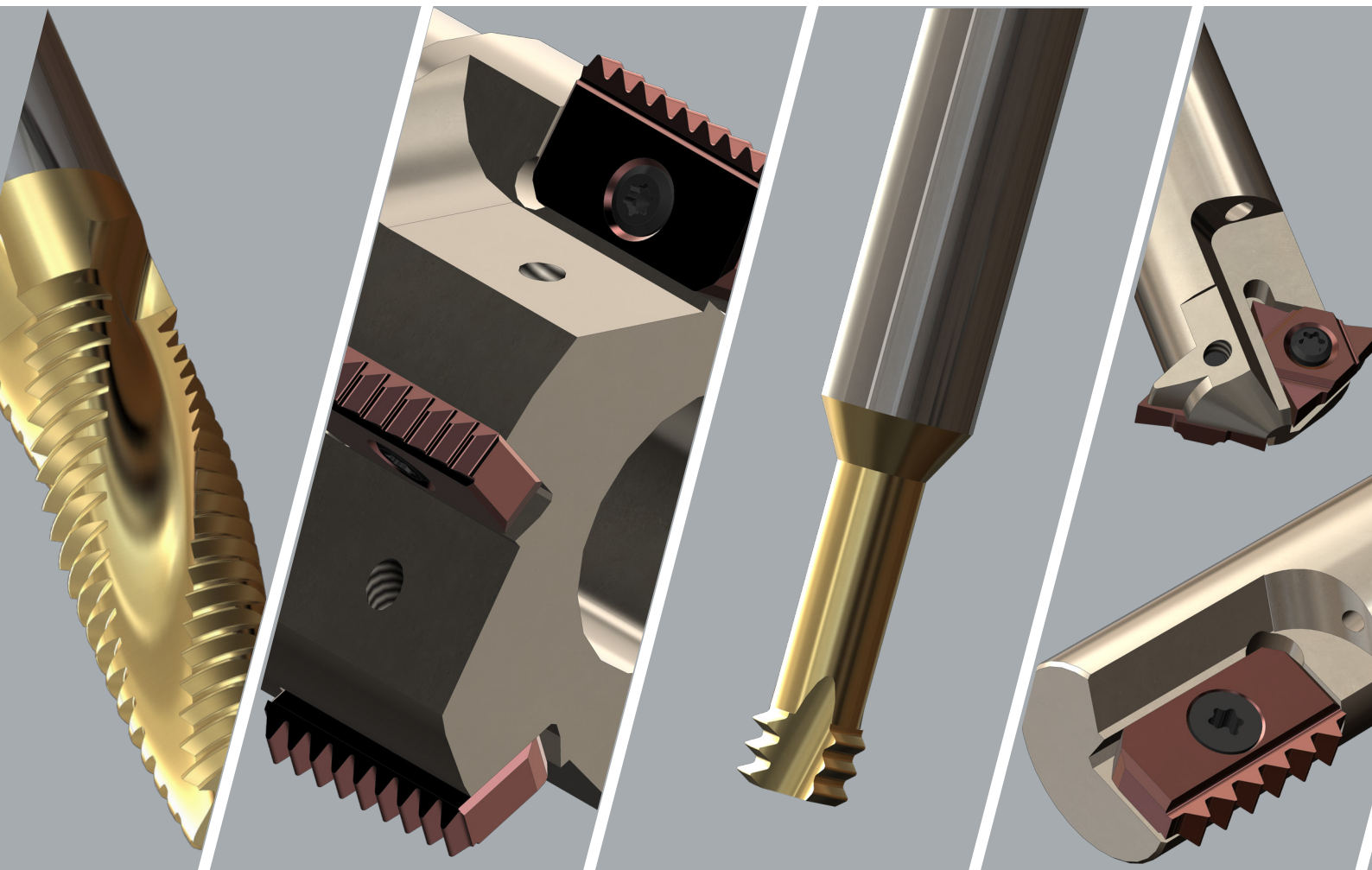
MATERIAL	CUTTING SPEED	FEED/TOOTH fz
	DBC	PTM
LOW/MEDIUM CARBON STEEL	140 - 230	0.20
HIGH CARBON STEEL	120 - 200	0.18
STAINLESS STEEL	60 - 170	0.15
CAST IRON	120 - 180	0.20
NON FERROUS 400	150 - 300	0.20
NICKEL CHROME ALLOYS	20 - 50	0.12
TITANIUM ALLOYS	80 - 120	0.15
IRON BASED ALLOYS	20 - 50	0.15
COBALT BASED ALLOYS	20 - 50	0.12

CORRECTION FACTORS

INDEXABLE BLANK SIZE	CORRECTION FACTOR
PTM14	0.75 x fz
PTM21	1.00 x fz

EXAMPLE

FEED FROM TABLE x CORRECTION FACTOR	ACTUAL FEED (fz)
0.15 x 0.75	0.12



POSIThread

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