



HARRY HERSBACH  
TOOLS BV

specialist in machining tools

2024



**COMBIDEX**®

solid solutions to improve your business

# SOLID CARBIDE THREAD MILLING

THREADING

MILLING

THREAD MILLING

TURNING

DRILLING

GROOVING & PARTING

**Combidex**

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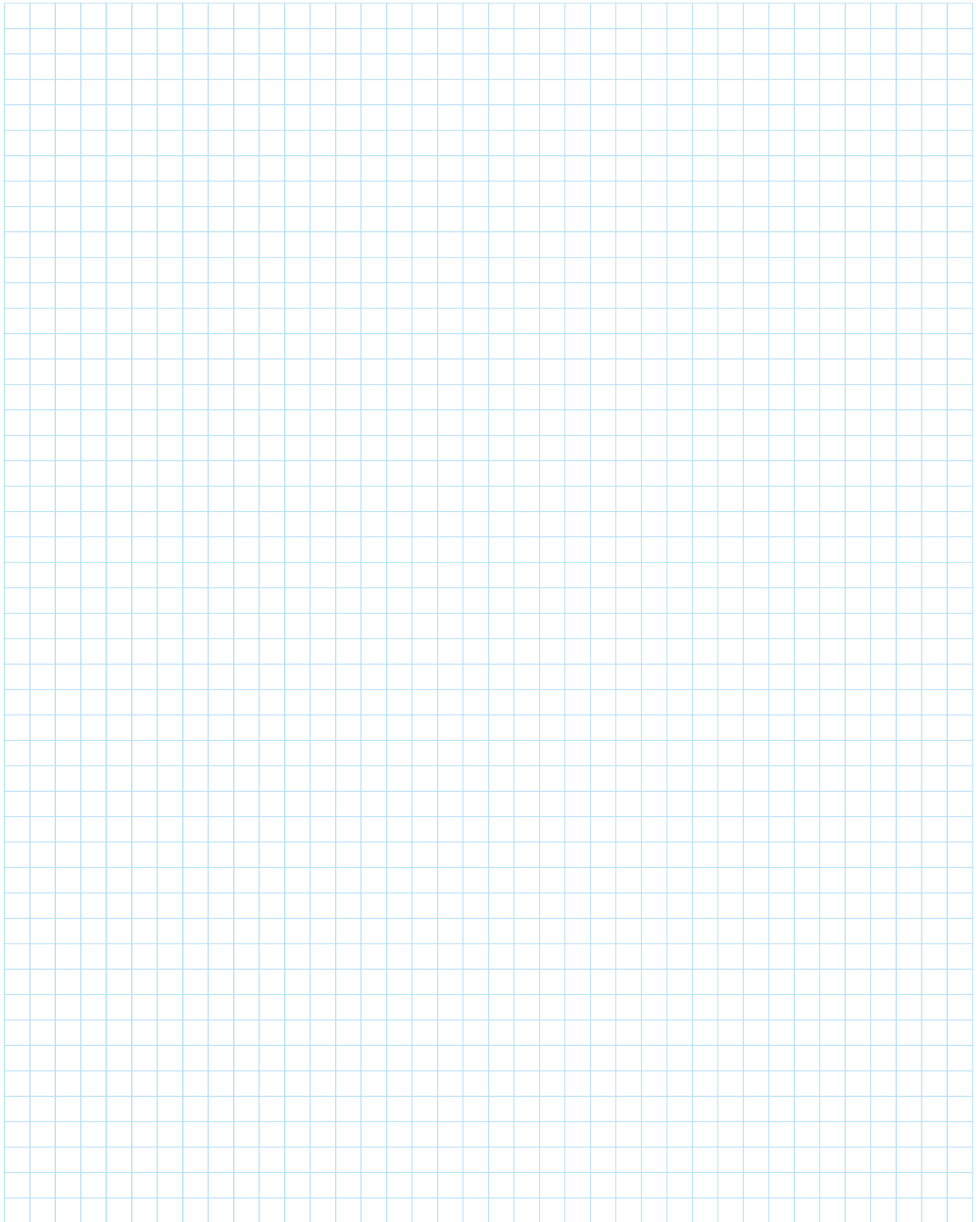
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# 1.1 SOLID CARBIDE THREAD MILLING | Technical information

## EXECUTION OF COMBIDEX THREAD MILLING

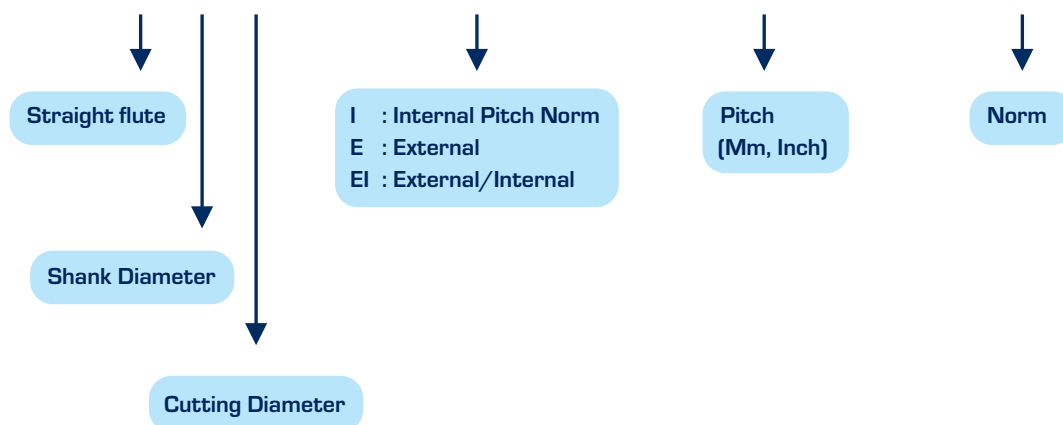
- Multi Flute Thread Mills, 3 - 5 - 6 Flutes.
- Thread Mill shanks are according to DIN 1834-B10 with Weldon - Flat (upon shank ø 6mm).

## MICRO-GRAIN CARBIDE

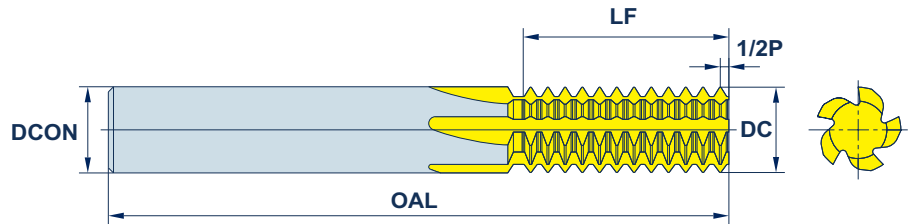
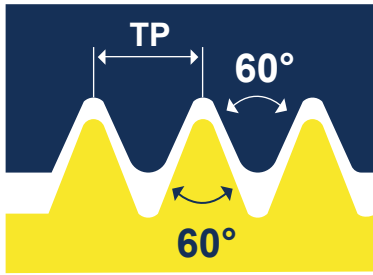
- Manufactured of the finest Micro-Grain Carbide with grainsize smaller than 1 µm.
- TiCN-coating available.

## ORDER EXAMPLE

ISO 60°	:	TMSC 06 059	I	1.50	ISO
UN 60°	:	TMSC 08 079	E	14	UN
BSW 55°	:	TMSC 16 159	EI	8	BSW
BSP 55°	:	TMSC 06 059	EI	28	BSP
BSPT 55°	:	TMSC 06 059	EI	28	BSPT
NPT 60°	:	TMSC 06 059	EI	27	NPT
NPTF 60°	:	TMSC 06 059	EI	27	NPTF
PG 80°	:	TMSC 08 079	EI	18	PG



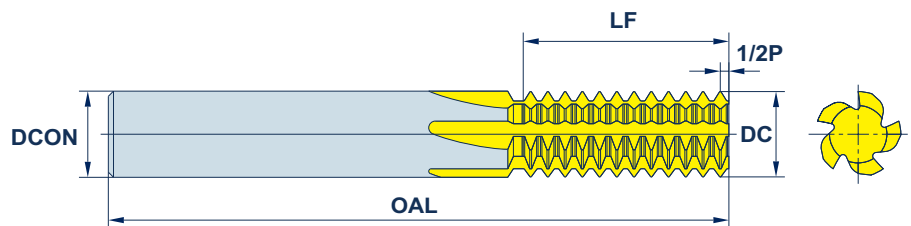
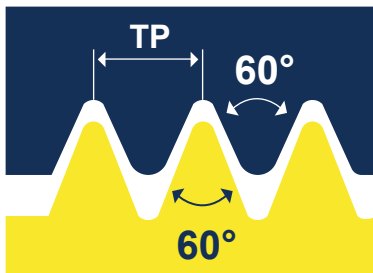
## 1.2 SC THREAD MILLING | ISO 60° - Standard internal (I)



Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	Pitch/mm
TMSC 03010-I0.35 ISO	M 1.6	-	3.00	1.00	38	2.45	0.205	3	0.35
TMSC 03013-I0.40 ISO	M 2	-	3.00	1.30	38	3.20	0.235	3	0.40
TMSC 03015-I0.45 ISO	M 2.5	-	3.00	1.50	38	3.60	0.264	3	0.45
TMSC 03021-I0.50 ISO	M 3	-	3.00	2.10	38	4.50	0.293	3	0.50
TMSC 03026-I0.70 ISO	M4	-	3.00	2.60	38	6.30	0.411	3	0.70
TMSC 04030-I0.75 ISO	M 4.5	-	4.00	3.00	42	6.75	0.440	3	0.75
TMSC 04036-I0.80 ISO	M 5	-	4.00	3.60	42	8.00	0.470	3	0.80
TMSC 06040-I1.00 ISO	M 6	-	6.00	4.00	57	9.00	0.587	3	1.00
TMSC 06050-I1.25 ISO	M 8	-	6.00	5.00	57	12.50	0.734	3	1.25
TMSC 06059-I1.50 ISO	M 10	-	6.00	5.90	57	15.00	0.881	5	1.50
TMSC 08079-I1.75 ISO	M 12	-	8.00	7.90	63	19.25	1.027	5	1.75
TMSC 10099-I2.00 ISO	M 16	-	10.00	9.90	72	24.00	1.174	5	2.00
TMSC 12119-I2.50 ISO	M 20	-	12.00	11.90	83	30.00	1.468	5	2.50
TMSC 16159-I3.00 ISO	M 24	-	16.00	15.90	92	36.00	1.761	6	3.00
TMSC 16159-I3.50 ISO	M 30*	-	16.00	15.90	92	38.50	2.055	6	3.50
TMSC 16159-I4.00 ISO	M 36*	-	16.00	15.90	92	40.00	2.348	6	4.00
TMSC 20199-I5.00 ISO	M 48*	-	20.00	19.90	104	40.00	2.935	6	5.00
TMSC 20199-I6.00 ISO	M 64*	-	20.00	19.90	104	36.00	3.522	6	6.00

\* 1.5 x M > L1

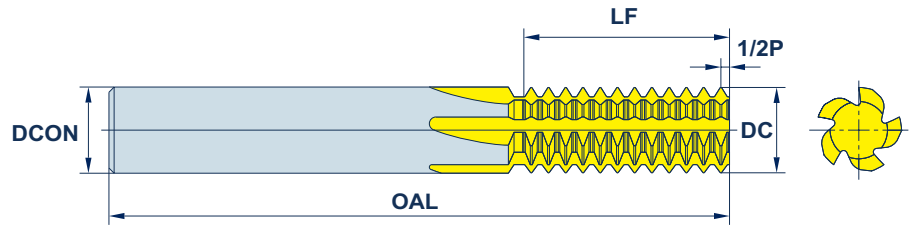
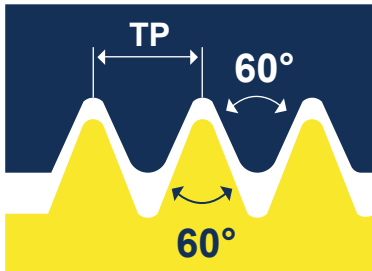
## 1.3 SC THREAD MILLING | ISO 60° - FINE PITCH INTERNAL (I)



Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	Pitch/mm
TMSC 06059-I0.75 ISO	-	M8 - M 11	6.0	5.90	57	15.0	0.440	5	0.75
TMSC 08079-I1.00 ISO	-	M12- M 30	8.0	7.90	63	20.0	0.5870	5	1.00
TMSC 10099-I1.50 ISO	-	M 14 - M 80	10.0	9.90	72	24.0	0.8810	5	1.50
TMSC 12119-I1.50 ISO	-	M 18 - M 80	12.0	11.90	83	30.0	0.8810	5	1.50
TMSC 12119-I2.00 ISO	-	M 18 - M 150	12.0	11.90	83	30.0	0.1740	5	2.00
TMSC 16159-I3.00 ISO	M24	M 30 - M 250	16.0	15.90	92	36.0	1.7610	6	3.00
TMSC 16159-I4.00 ISO	M 36*	M 36 - M 300	16.0	15.90	92	40.0	2.3480	6	4.00
TMSC 20199-I6.00 ISO	M 64*	M 70 - M 300	20.0	19.90	104	36.0	3.5220	6	6.00

\* 1.5 x M > L1

# 1.4 SC THREAD MILLING | ISO 60° FINE & NORMAL PITCH EXTERNAL (E)

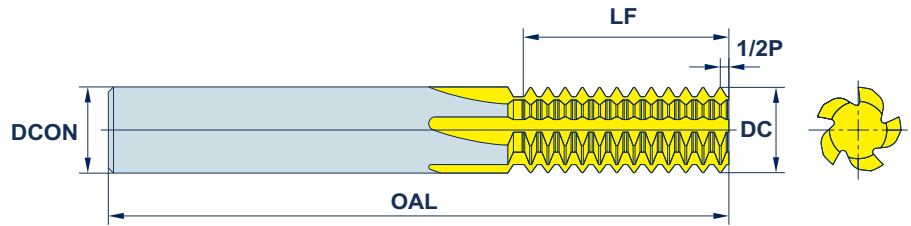
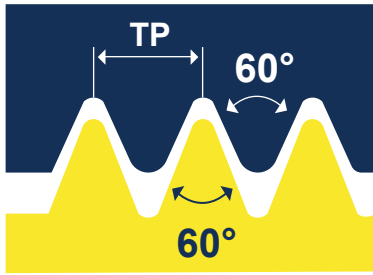


Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	Pitch/mm
TMSC 06059-E-0.50 ISO	M3	M 4 M 5.5	6.0	5.90	57	15.0	0.316	5	0.50
TMSC 08079-E-0.50 ISO	M3	M4 M 10	8.0	7.90	63	15.0	0.316	5	0.50
TMSC 08079-E-0.75 ISO	M 4.5	M6 M 11	8.0	7.90	63	20.0	0.475	5	0.75
TMSC 10099-E-1.00 ISO	M 6	M8 M 30	10.0	9.90	72	24.0	0.633	5	1.00
TMSC 12119-E-1.50 ISO	M 10	M 12 M 80	12.0	11.90	72	30.0	0.949	5	1.50
TMSC 12119-E-2.00 ISO	M 14	M 18 M150	12.0	11.90	83	30.0	1.265	5	2.00
TMSC 16159-E-3.00 ISO	M 24	M 30 - M 250	16.0	15.90	83	36.0	1.898	6	3.00
TMSC 16159-E-4.00 ISO	M 36*	M 36 - M 300	16.0	15.90	92	40.0	2.531	6	4.00
TMSC 20199-E-6.00 ISO	M 64*	M 70 - M 300	20.0	19.90	104	36.0	3.796	6	6.00

\* 1.5 x M > L1



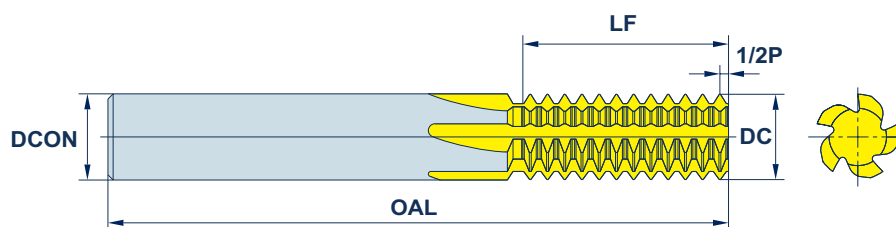
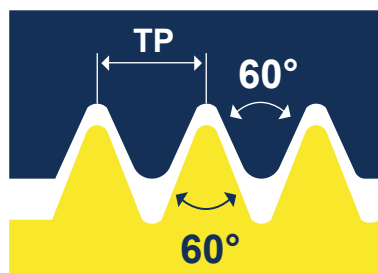
# 1.5 SC THREAD MILLING | UN 60° - INTERNAL THREAD (I)



Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 03015-I-64 UN	-	N° 2	3.00	1.50	38	3.175	0.233	3	64
TMSC 03015-I-56 UN	N° 2	N° 3	3.00	1.50	38	3.175	0.266	3	56
TMSC 03015-I-48 UN	NO 3	N° 4	3.00	1.50	38	3.704	0.311	3	48
TMSC 03021-I-44 UN		N° 5	3.00	2.10	38	4.618	0.339	3	44
TMSC 03021-I-40 UN	NO 4-5	N° 6	3.00	2.10	38	4.445	0.373	3	40
TMSC 04030-I-36 UN		N° 8	4.00	3.00	42	6.350	0.414	3	36
TMSC 04030-I-32 UN	NO 8	N° 10	4.00	3.00	42	6.350	0.466	3	32
TMSC 04036-I-28 UN		N° 12	4.00	3.60	42	8.165	0.532	3	28
TMSC 06040-I-24 UN	N° 12	5/16" - 3/8"	6.00	4.00	57	8.467	0.621	3	24
TMSC 06040-I-20 UN	1/4"	7/16" - 1/2"	6.00	4.00	57	10.160	0.745	3	20
TMSC 06050-I-18 UN	5/16"	9/16" - 5/8"	6.00	5.00	57	12.700	0.828	3	18
TMSC 06059-I-16 UN	3/8"	3/4"	6.00	5.90	57	14.287	0.932	5	16
TMSC 08079-I-14 UN	7/16"	7/8"	8.00	7.90	63	16.328	1.065	5	14
TMSC 08079-I-13 UN	1/2"	-	8.00	7.90	63	19.538	1.147	5	13
TMSC 10099-I-12 UN	9/16"	1" - 1" 1/2	10.00	9.90	72	23.283	1.243	5	12
TMSC 10099-I-11 UN	5/8"	-	10.00	9.90	72	23.091	1.356	5	11
TMSC 12119-I-10 UN	3/4"	-	12.00	11.90	83	27.940	1.491	5	10
TMSC 16159-I-9 UN	7/8"	-	16.00	15.90	92	33.337	1.657	6	9
TMSC 16159-I-8 UN	1"	-	16.00	15.90	92	38.100	1.864	6	8
TMSC 16159-I-7 UN	1" 1/8 - 1" 1/4 -	-	16.00	15.90	92	36.285	2.130	6	7
TMSC 20199-I-6 UN	1" 3/8 - 1" 1/2 -	-	20.00	19.90	104	38.100	2.485	6	6
TMSC 20199-I-5 UN	1" 3/4	-	20.00	19.90	104	35.560	2.982	6	5
TMSC 20199-I-4.5 UN	2"	-	20.00	19.90	104	39.511	3.314	6	4.5

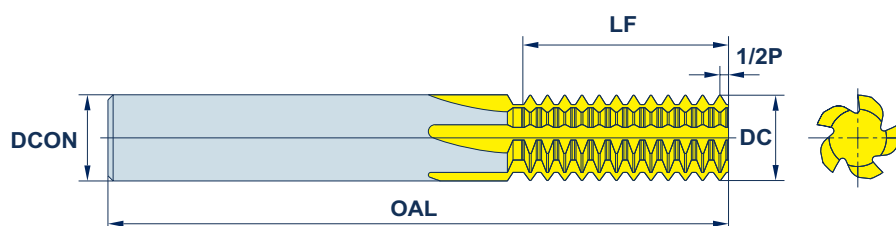
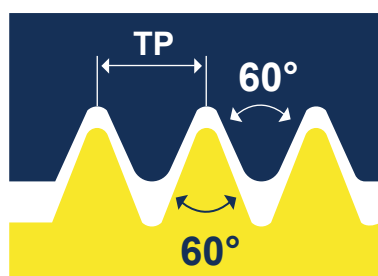


## 1.6 SC THREAD MILLING | UN 60° - STANDARD & FINE PITCH INTERNAL (I)



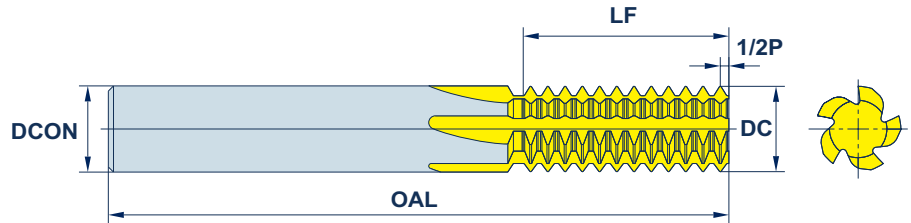
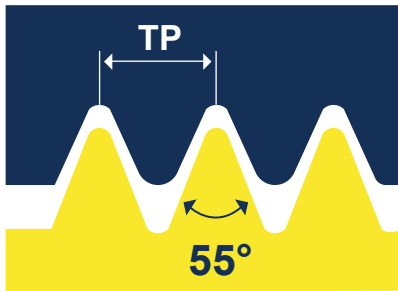
Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 06059-I-32 UN	-	5/16" - 1"	6.0	5.90	57	14.287	0.466	5	32
TMSC 08079-I-28 UN	-	7/16" - 1 1/2"	8.0	7.90	63	19.950	0.532	5	28
TMSC 10099-I-20 UN	-	9/16" - 3"	10.0	9.90	72	22.860	0.745	5	20
TMSC 12119-I-18 UN	-	9/16" - 1" 11/16	10.0	9.90	72	23.980	0.828	5	18
TMSC 12119-I-16 UN	-	5/8" - 6"	12.0	11.90	83	28.575	0.932	5	16
TMSC 16159-I-12 UN	-	5/8" - 6"	12.0	11.90	83	29.630	1.243	5	12
TMSC 16159-I-8 UN	1"	1 1/16" - 6"	16.0	15.90	92	38.100	1.864	6	8
TMSC 20199-I-6 UN	1 3/8"	1 1/16" - 6"	20.0	19.90	104	38.100	2.485	6	6

## 1.7 SC THREAD MILLING | UN 60° - STANDARD & FINE PITCH EXTERNAL (E)



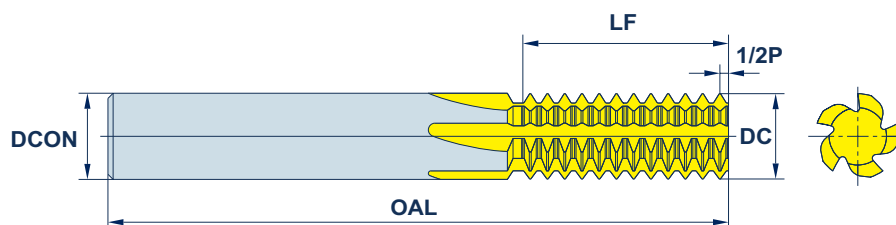
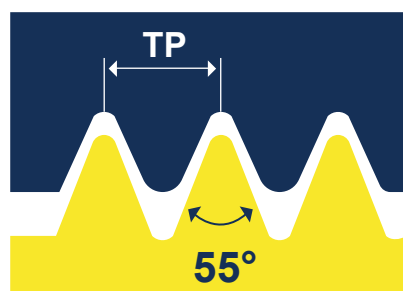
Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 06059-E-32 UN	N° 6	N° 10 - 1"	6.0	5.90	57	2.45	0.486	5	32
TMSC 08079-E-28 UN	-	N° 12 - 1" 1/2	8.0	7.90	63	3.20	0.556	5	28
TMSC 10099-E-20 UN	1/4"	7/16" - 3"	10.0	9.90	72	3.60	0.779	5	20
TMSC 10099-E-18 UN	5/16"	9/16" - 1" 11/16	10.0	9.90	72	4.50	0.865	5	18
TMSC 12119-E-16 UN	3/8"	7/16" - 6"	11.90	6.30	83	12.0	0.947	5	16
TMSC 12119-E-12 UN	9/16"	5/8" - 6"	11.90	6.75	83	12.0	1.298	5	12
TMSC 16159-E-8 UN	1"	1" 6"	15.90	8.00	92	16.0	1.947	6	8
TMSC 20199-E-6 UN	1" 3/8	1" 3/8 - 6"	19.90	9.00	104	20.0	2.597	6	6

# 1.8 SC THREAD MILLING | BSW 55° - EXTERNAL & INTERNAL THREAD (EI)



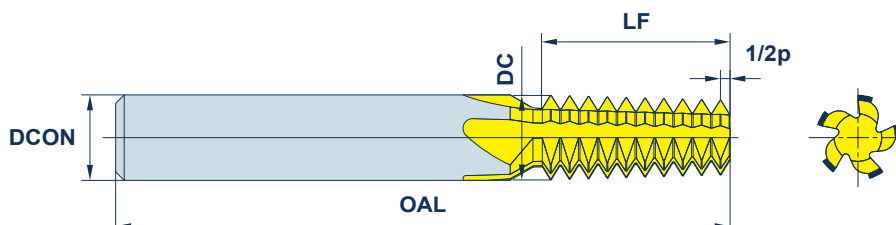
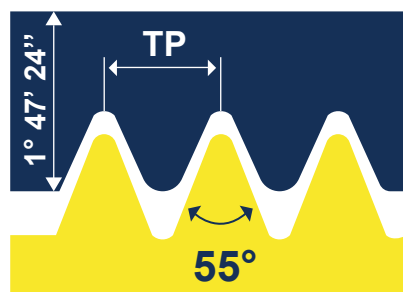
Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 03015-EI-48 BSW	3/32"	-	3.00	1.50	38	3.704	0.262	3	48
TMSC 03021-EI-40 BSW	1/8"	-	3.00	2.10	38	4.445	0.406	3	40
TMSC 03026-EI-32 BSW	5/32"	-	3.00	2.60	38	5.556	0.508	3	32
TMSC 06040-EI-20 BSW	1/4"	-	3.00	4.00	57	10.160	0.813	3	20
TMSC 06050-EI-18 BSW	5/16"	-	6.00	5.00	57	11.288	0.903	3	18
TMSC 06059-EI-16 BSW	3/8"	-	6.00	5.90	57	14.287	1.016	5	16
TMSC 08079-EI-14 BSW	7/16"	-	8.00	7.90	63	18.143	1.162	5	14
TMSC 08079-EI-12 BSW	1/2 - 9/16"	-	8.00	7.90	63	19.050	1.355	5	12
TMSC 10099-EI-11 BSW	5/8"	-	10.00	9.90	72	23.091	1.478	5	11
TMSC 12119-EI-10 BSW	3/4"	-	12.00	11.90	83	27.940	1.626	5	10
TMSC 12119-EI-9 BSW	7/8"	-	12.00	11.90	83	28.222	1.807	5	9
TMSC 16159-EI-8 BSW	1"	-	16.00	15.90	92	34.925	2.033	6	8
TMSC 16159-EI-1 BSW	1" 1/8 - 1" 1/4	-	16.00	15.90	92	36.286	2.323	6	7
TMSC 16159-EI-6 BSW	1" 3/8 - 1" 1/4	-	16.00	15.90	92	38.100	2.711	6	6
TMSC 20199-EI-5 BSW	1" 5/8 - 1"3/4	-	20.00	19.90	104	40.640	3.252	6	5
TMSC 20199-EI-4.5 BSW	1" 7/8 - 2"	-	20.00	19.90	104	39.511	3.614	6	4.5

## 1.9 SC THREAD MILLING | BSP 55° - EXTERNAL & INTERNAL THREAD (EI)



Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 06059-EI-28 BSP	1/16" - 1/8"	-	6.00	5.90	57	14.514	0.581	5	28
TMSC 08079-EI-19 BSP	1/4" - 3/8"	-	8.00	7.90	63	18.716	0.586	5	19
TMSC 12119-EI-14 BSP	1/2" - 7/8"	-	12.00	11.90	83	29.028	1.162	5	14
TMSC 16159-EI-11 BSP	1" - 3"	-	16.00	15.90	92	34.636	1.479	6	11

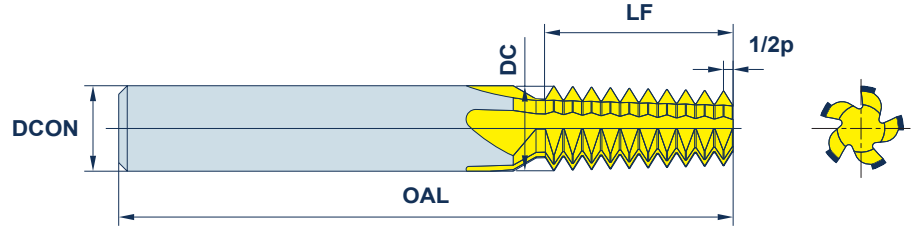
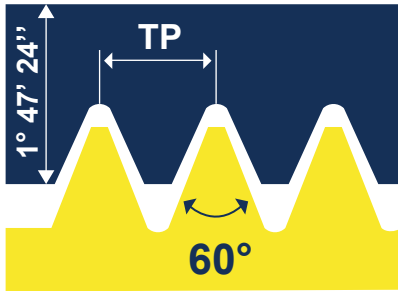
## 1.10 SC THREAD MILLING | BSPT 55° EXTERNAL & INTERNAL (EI)



### CONICAL 1/16 = 1°47'24"

Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	C/2 1°47"	TPI
TMSC 06059-EI-28 BSPT	1/16" - 1/8"	-	6.00	5.90	57	9.978	0.581	5	0.433	28
TMSC 08079-EI-19 BSPT	1/4" - 3/8"	-	8.00	7.90	63	14.705	0.586	5	0.577	19
TMSC 12119-EI-14 BSPT	1/2" - 7/8"	-	12.00	11.90	83	29.957	1.162	5	0.866	14
TMSC 16159-EI-11 BSPT	1" - 3"	-	16.00	15.90	92	39.250	1.479	6	1.155	11

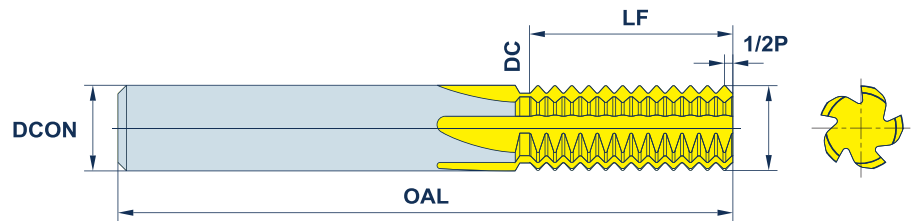
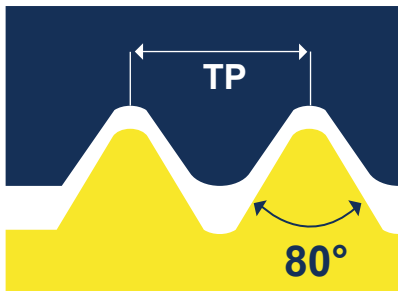
## 1.11 SC THREAD MILLING | NPT 60° - EXTERNAL & INTERNAL THREAD (EI)



CONICAL  $1/16 = 1^{\circ}47'24''$

Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	C/2 1°47"	TPI
TMSC 06059-EI-27 NPT	1/16" - 1/8"	-	6.00	5.90	57	9.407	0.75	5	0.293	27
TMSC 08079-EI-18 NPT	1/4" - 3/8"	-	8.00	7.90	63	14.111	1.128	5	0.440	18
TMSC 12119-EI-14 NPT	1/2" - 3/4"	-	12.00	11.90	83	19.957	1.451	5	0.625	14
TMSC 16159-EI-11.5 NPT	1 - 2"	-	16.00	15.90	92	26.505	1.767	6	0.825	11.5
TMSC 16159-EI-8 NPT	2" 1/2 - 3"	-	16.00	15.90	92	31.750	2.540	6	1.155	8
TMSC 20199-EI-8 NPT	2" 1/2 - 5"	-	20.00	19.90	104	38.100	2.540	6	1.185	8

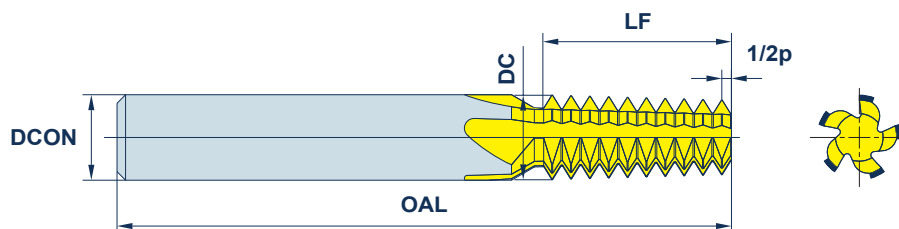
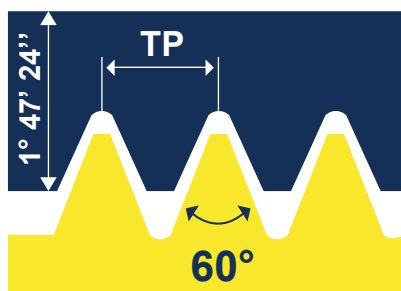
## 1.12 SC THREAD MILLING | PG 80° - EXTERNAL & INTERNAL THREAD (EI)



CONICAL  $1/16 = 1^{\circ}47'24''$

Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	TPI
TMSC 08079-EI-20 PG	7	-	8.00	7.90	63	19.050	0.610	5	20
TMSC 10099-EI-18 PG	9-11-13.5-16	-	10.00	9.90	72	23.989	0.670	5	18
TMSC 12119-EI-16 PG	36-42-48	-	12.00	11.90	83	28.575	0.760	5	16

# 1.13 SC THREAD MILLING | NPTF 60° - EXTERNAL & INTERNAL THREAD (EI)

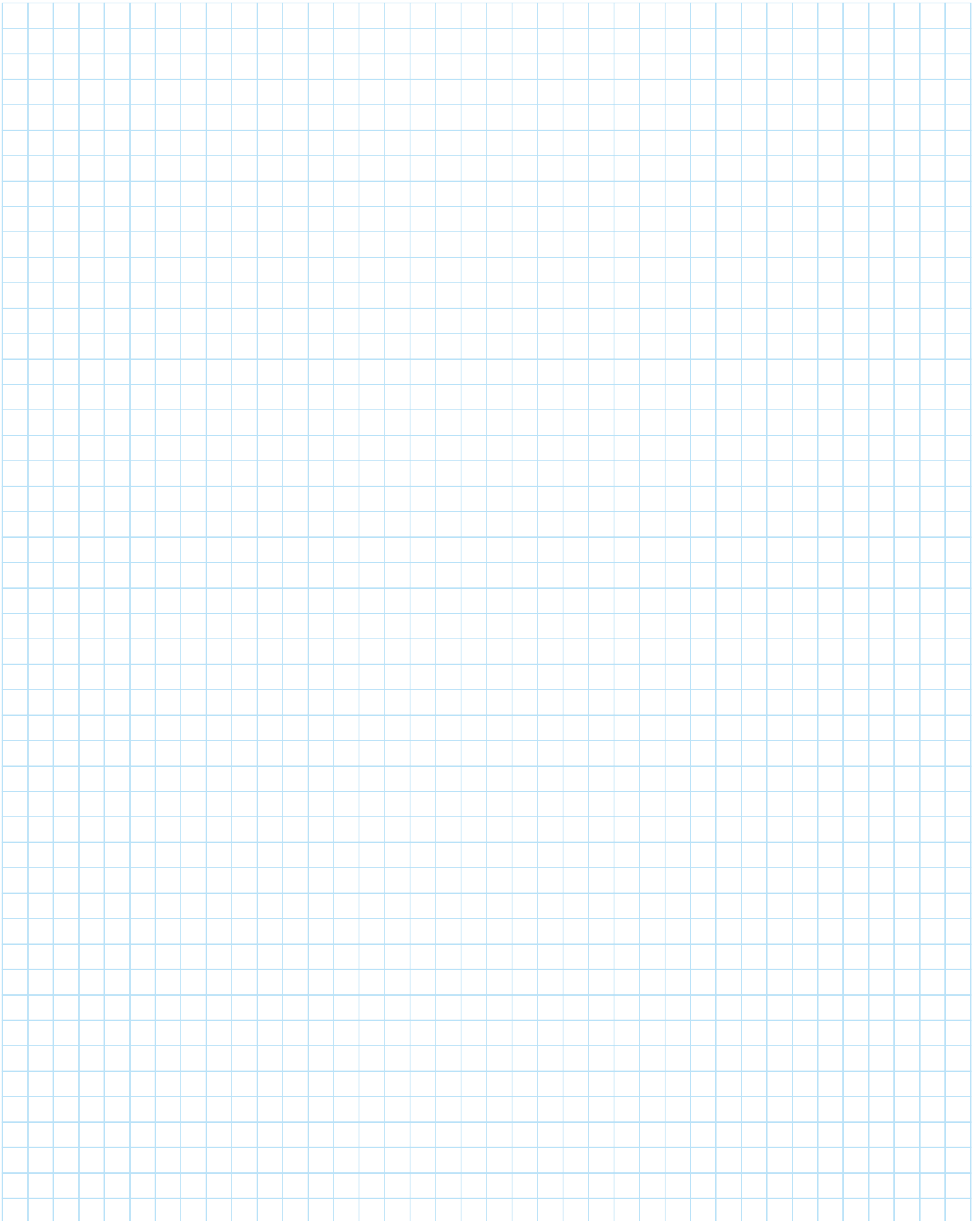


CONICAL 1/16 = 1°47'24"

Ordering code	Standaard	Fine	DCON	DC	OAL	LF	Profile Height	TP	C/2 1°47"	TPI
TMSC 08079-EI-18 NPTF	1/4 - 3/8"	-	8.00	7.90	63	14.111	1.128	5	0.440	18
TMSC 12119-EI-14 NPTF	1/2 - 3/4"	-	12.00	11.90	83	19.957	1.451	5	0.625	14
TMSC 16159-EI-11.5 NPTF	1 - 2"	-	16.00	15.90	92	26.505	1.767	6	0.825	11.5
TMSC 16159-EI-8 NPTF	NPTF 2"1/2 - 3"	-	16.00	15.90	92	31.750	2.540	6	1.155	8
TMSC 20199-EI-8 NPTF	2"1/2 - 5"	-	20.00	19.90	104	38.100	2.540	6	1.185	8

# 1.14 SC THREAD MILLING | Cutting data

ISO Standard	Material	Group	Vc (m/min)	Feed/Tooth
<b>P</b>	STEEL	< 500 N/mm <sup>2</sup>	120 - 200	0.003 - 0.03
	PLAIN CARBON	< 500 N/mm <sup>2</sup>	120 - 200	0.003 - 0.03
	LOW CARBON	< 500 N/mm <sup>2</sup>	120 - 200	0.003 - 0.03
	CARBON STEEL	500 - 800 N/mm <sup>2</sup>	100 - 180	0.003 - 0.03
	LOW ALLOYED STEEL	500 - 800 N/mm <sup>2</sup>	100 - 180	0.003 - 0.03
	ALLOYED STEEL	800 - 1000 N/mm <sup>2</sup>	60 - 140	0.003 - 0.03
	TOOL STEEL	800 - 1000 N/mm <sup>2</sup>	60 - 140	0.003 - 0.03
	HIGH ALLOYED STEEL	1000 - 1300 N/mm <sup>2</sup>	50 - 120	0.003 - 0.03
	TOOL STEEL	1000 - 1300 N/mm <sup>2</sup>	50 - 120	0.003 - 0.03
	HIGH ALLOYED TOOL STEEL	1000 - 1300 N/mm <sup>2</sup>	20 - 50	
<b>M</b>	STAINLESS STEEL	1000 - 1300 N/mm <sup>2</sup>	50 - 120	0.003 - 0.03
	AUSTENITIC/MARTENSITIC	1000 - 1300 N/mm <sup>2</sup>	50 - 120	0.003 - 0.03
	PRECIPITATION HARDENING STAINLESS STEEL	1000 - 1300 N/mm <sup>2</sup>	30 - 80	0.003 - 0.03
<b>K</b>	CAST IRON < 180 HB	800 - 1000 N/mm <sup>2</sup>	60 - 140	0.003 - 0.03
	CAST IRON > 180 HB	1000 - 1300 N/mm <sup>2</sup>	50 - 120	0.003 - 0.03
<b>N</b>	ALUMINIUM	1000 - 1300 N/mm <sup>2</sup>	100 - 2000	0.003 - 0.03
	ALUMINIUM ALLOYS	1000 - 1300 N/mm <sup>2</sup>	100 - 2000	0.003 - 0.03
	NON FERROUS	1000 - 1300 N/mm <sup>2</sup>	150 - 1500	0.003 - 0.03
	DUROPLASTICS	1000 - 1300 N/mm <sup>2</sup>	60 - 1000	0.003 - 0.03
	THERMOPLASTICS	1000 - 1300 N/mm <sup>2</sup>	60 - 1000	0.003 - 0.03
<b>S</b>	HEAT RESISTANT STEEL	1000 - 1300 N/mm <sup>2</sup>	30 - 80	0.003 - 0.03
	TITANIUM ALLOYS	1000 - 1300 N/mm <sup>2</sup>	30 - 80	0.003 - 0.03
	NICKEL BASE ALLOYS	1000 - 1300 N/mm <sup>2</sup>	20 - 50	0.003 - 0.03





**Combidex**

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