THREAD MAKING

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THREAD MAKING

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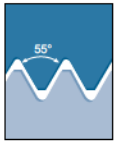
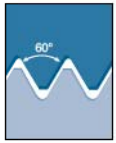
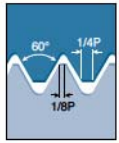
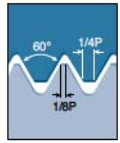
Tool Selection Guide

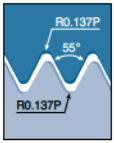
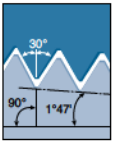
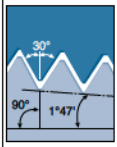
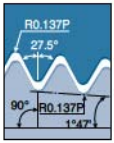
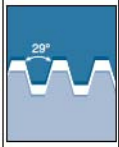
Threading inserts

Thread		T-THREAD			
		55° thread	60° thread	Metric ISO	American UN
					
Pages		C25	C26	C27 - C31	C32 - C36
Type of threading		Partial profile	Partial profile	Full profile	Full profile
Application		General use for 55° thread forms for wide range of pitches	General use for 60° thread forms for wide range of pitches	General usage for all industries	General usage for all industries
 M - type	ER	●	●	●	●
	IR	●	●	●	●
 Regular type	ER/IR	●	●	●	●
	EL/IL	●	●	●	●
 B - type	ER	●	●	●	●
	IR	●	●	●	●
 U - type	IRL	●	●	●	●
	EIRL	●	●		
	ERL			●	●
 Multi-tooth type	ER			●	●
	IR			●	●

ER: External right hand **EL**: External left hand **IR**: Internal right hand **IL**: Internal left hand
ERL: External right / left hand **IRL**: Internal Right / left hand **EIRL**: External / internal right / left hand

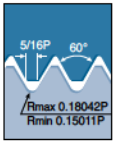
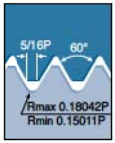
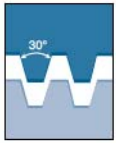
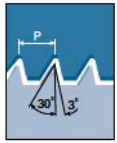
Tool Selection Guide

Threading inserts

T-THREAD					
Whitworth	**NPT**	**NPTF**	**BSPT**	**STUB ACME**	**ACME**
					
C37 - C41	C42 - C43	C44	C45	C46	C47
Full profile	Full profile	Full profile	Full profile	Partial profile	Partial profile
General industries. Pipe fittings and couplings	Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Shallow ACME profile for motion transmission	Motion transmission. Feed screws
●	●		●		
●	●		●		
●	●	●	●	●	●
●	●	●	●	●	●
●	●		●		
●	●		●		
					●
●					
					●
●	●				
●	●				

Tool Selection Guide

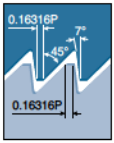
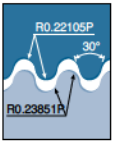
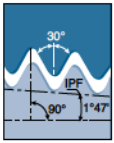
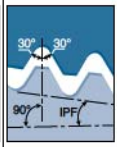
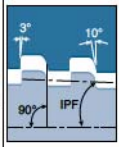
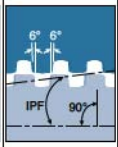
Threading inserts

Thread		T-THREAD			
		UNJ	MJ	Trapez DIN 103	Sagengenwinde DIN 513
					
Pages		C48 - C49	C50	C51	C53
Type of threading		Full profile	Full profile	Partial profile	Full profile
Application		Aviation and aerospace industry	Aviation and aerospace industry	Motion transmission. Feed screws	For high force in one direction
 M - type	ER				
	IR				
 Regular type	ER/IR	●	●	●	●
	EL/IL	●		●	●
 B - type	ER				
	IR				
 U - type	ER/IR				●
	EL/IL				●
	ERL/IRL			●	
 Multi-tooth type	ER				
	IR				

ER: External right hand **EL**: External left hand **IR**: Internal right hand **IL**: Internal left hand
ERL: External right / left hand **IRL**: Internal Right / left hand **EIRL**: External / internal right / left hand

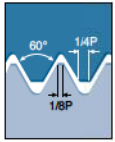
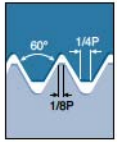
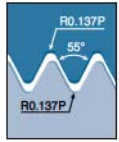
Tool Selection Guide

Threading inserts

T-THREAD					
American buttress	Round DIN 405	API round	API	Buttress casing	Extreme line casing
					
C54	C55	C56 - C57	C58	C59	C59
Full profile	Full profile	Full profile	Full profile	Full profile	Full profile
For high force in one direction	Pipe coupling in fire fighting, chemical and food industries	60° thread with large radius in the oil and gas industry	60° thread form for pipe connections in the oil and gas industry	Tube and casings in the oil and gas industry	Tube and casings in the oil and gas industry
	•				
	•				
•	•	•	•	•	•
•	•				
•					
•					

Tool Selection Guide

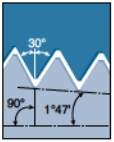
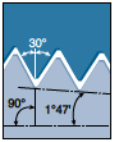
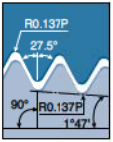
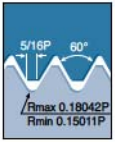
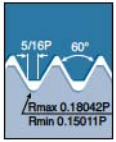
Solid carbide threading end mills

Thread		TS-THREAD		
		Metric ISO	American UN	Whitworth
				
Application		General usage for all industries	General usage for all industries	General industies. Pipe fittings and couplings
TMTEC	 General type	● C71	● C79	● C86
TMTECB	 Internal coolant hole	● C69	● C77	● C86
TMTECZ	 Internal coolant in the flutes	● C70	● C78	● C86
TMTECS	 Short head	● C74-C75	● C82-C83	
TMTECSH	 Short head for hard materials	● C76	● C84-C85	
TMTECQ	 Reduced neck diameter for deep threading	● C72	● C80	
TMTECI	 Partial profile	● C91	● C91	
TMTEC E	 External threading	● C73	● C81	

• For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

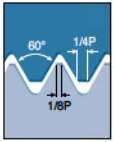
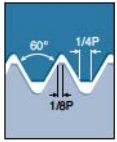
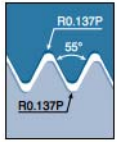
Tool Selection Guide

Solid carbide threading end mills

TS-THREAD				
NPT	**NPTF**	**BSPT**	**UNJ**	**MJ**
				
Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Aviation and aerospace industry	Aviation and aerospace industry
● C87	● C88	● C89		
● C87	● C88	● C89		
● C87	● C88	● C89		
			● C90	● C90

Tool Selection Guide

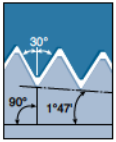
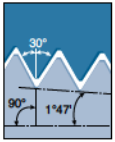
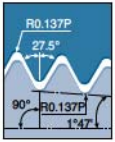
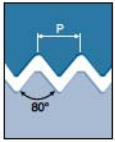
Indexable insert type

	TS-THREAD		
	Metric IS0	**American UN**	**Whitworth**
Thread			
Insert page	C101, C109	C102, C103, C110	C104, C111
Application	General usage for all industries	General usage for all industries	General industies. Pipe fittings and couplings
TMTSR C93  Single insert	•	•	•
TMTSR -C C94  Solid carbide shank	•	•	•
TMTSR -2 C95  Twin insert	•	•	•
TMTSRH C96  Helical end mill	•	•	•
TMTSR -00 C97  Large diameter thread	•	•	•
TMTSLE C98  Multi tooth-external threading	•	•	•
TMTSRH C99  Helical shell mill	•	•	•

• For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

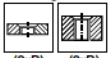
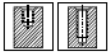
Tool Selection Guide

Indexable insert type

TS-THREAD			
NPT	**NPTF**	**BSPT**	**PG**
			
C105, C111	C106	C107, C112	C108
Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Electrical connector
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	
•	•	•	•
•	•	•	•
•	•	•	

Tool Selection Guide

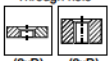
Straight flute with spiral point tap

Series		T-TAP Straight flute with spiral point tap		
		TPH...52B 	TPH...52B05 	TPH...52B10 
Pages		C118	C118	C118
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form B 4-5 threads chamfer	Form B 4-5 threads chamfer	Form B 4-5 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xD) (3xD)	●	●	●
	Blind hole  (2xD) (3xD)			

● Recommended, ○ Suitable

Tool Selection Guide

40° right hand spiral flute tap

Series		T-TAP 40° right hand spiral flute tap		
		TPH...54C 	TPH...54C05 	TPH...54C10 
Pages		C120	C120	C120
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form C 2-3 threads chamfer	Form C 2-3 threads chamfer	Form C 2-3 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xD) (3xD)			
	Blind hole  (2xD) (3xD)	●	●	●

● Recommended, ○ Suitable

Grades

Thread making grades

Grades	ISO	Characteristics & applications
TT7010 PVD coated	P05 – P25 K05 – K25	General machining of steel and cast iron
TT8010 PVD coated	P30 – P50 M30 – M50 S30 – S50	Toughest grade in threading product line For a wide range of threading on low carbon steel & low carbon alloy steel Medium to low speed threading of stainless steel and exotic materials
TT9030 PVD coated	P20 – P40 M20 – M40 S20 – S40	General machining of steel General machining of stainless steel General machining of heat-resistant alloy

T-THREAD

Thread Turning

Contents

Holder Designation System

S	E	R	2020	K	16	□
1	2	3	4	5	6	7

1 Clamping system

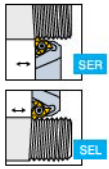
S - Screw clamping

2 Application

E - External
I - Internal

3 Hand of tool

R - Right-hand
L - Left-hand



4 Shank size

External toolholders
Shank: hxb

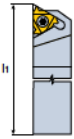
2020: 20×20 mm

Internal toolholders
Neck diameter

0025: Neck diameter 25 mm

5 Tool length

	mm
D	60
F	80
H	100
K	125
L	140
M	150
P	170
R	200
S	250
T	300
U	350
V	400



6 Insert size

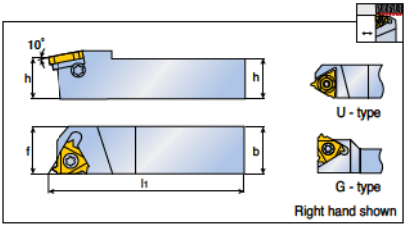
l (mm)	d
06	3.968 mm = 5/32"
08	4.762 mm = 3/16"
08U	4.762 mm = 3/16"
11	6.350 mm = 1/4"
16	9.525 mm = 3/8"
22	12.700 mm = 1/2"
22U	12.700 mm = 1/2"
27	15.875 mm = 5/8"
27U	15.875 mm = 5/8"

7 Optional specifications

U - For U-type inserts
B - Bore for coolant
C - Carbide shank
D - Drop head
G - Gang tool
AD - Short type
SP - Special

SER/L

External threading toolholders



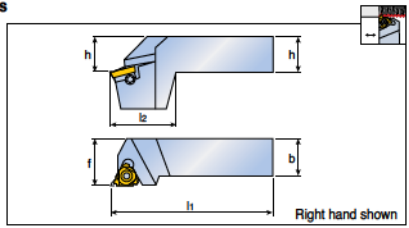
Designation		Dimension (mm)				Insert[2]
		h	b	l1	f	
SER	0808 H11 [1]	8	8	100	11	11 ER...
	1616 K16G	16	16	125	21.7	16 ER...
	4040 R27	40	40	200	40	27 ER...
SER/L	1010 H11 [1]	10	10	100	11	11 ER/L...
	1212 F16	12	12	80	16	16 ER/L...
	1616 H16	16	16	100	16	16 ER/L...
	2020-16-AD	20	20	67	25	16 ER/L...
	2020 K16	20	20	125	20	16 ER/L...
	2525 M16	25	25	150	25	16 ER/L...
	3232 P16	32	32	170	32	16 ER/L...
	2525 M22	25	25	150	25	22 ER/L...
	3232 P22	32	32	170	32	22 ER/L...
	4040 R22	40	40	200	40	22 ER/L...
	2525 M22U	25	25	150	28	22 UERL...
	3232 P22U	32	32	170	32	22 UERL...
	4040 R22U	40	40	200	40	22 UERL...
	2525 M27	25	25	150	25	27 ER/L...
	3232 P27	32	32	170	32	27 ER/L...
	2525 M27U	25	25	150	32	27 UERL...
	3232 P27U	32	32	170	32	27 UERL...
	4040 R27U	40	40	200	40	27 UERL...

- [1] Toolholders without anvil
- [2] Right-hand inserts (ER) for right-hand tools (SER)
- All Toolholders are made with 1.5° helix angle
- For multi-tooth inserts, use anvils AE16M or AI16M
- Please check for spare parts C21 page

Contents

SER...D

External threading drophead toolholders

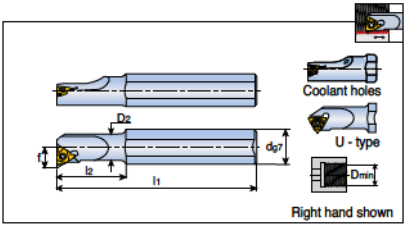


Designation		Dimension (mm)					Insert
		h	b	l1	f	l2	
SER	2020 K16D	20	20	125	25	38	16 ER...
	2525 M16D	25	25	150	32	38	16 ER...
	2525 M22D	25	25	150	32	38	22 ER...

- All Toolholders are made with 1.5° helix angle
- Please check for spare parts C21 page

SIR/L

Internal threading toolholders



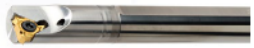
	Designation	Dimension (mm)						Coolant	Insert [2]
		d	D2	l1	l2	Dmin	f		
SIR/L	0005 H06 [1]	12	5.1	100	12	6.4	4.3	X	06 IR/L...
	0007 K08 [1]	16	6.6	125	18	7.8	5.3	X	08 IR/L...
	0008 K08U [1]	16	7.4	125	21	9.0	6.4	X	08 UIRL...
	0010 H11 [1]	10	10	100	-	12	7.4	X	11 IR/L...
SIR	0010 H11B [1]	10	10	100	-	12	7.4	•	11 IR...
SIR/L	0010 K11 [1]	16	10	125	25	12	6.5	X	11 IR/L...
	0010 K11B [1]	16	10	125	25	12	7.4	•	11 IR/L...
	0013 L11 [1]	16	13	140	32	15	8.9	X	11 IR/L...
	0013 M16 [1]	16	13	150	32	16	10.0	X	16 IR/L...
	0013 M16B [1]	16	13	150	32	16	10.2	•	16 IR/L...
	0016 P16 [1]	20	16	170	40	19	11.4	X	16 IR/L...
	0016 P16B [1]	20	16	170	40	19	11.7	•	16 IR/L...
	0020-16-AD	20	20	80	-	24	13.7	X	16 IR/L...
	0020 P16	20	20	170	-	24	13.4	X	16 IR/L...
	0020 P16B	20	20	170	-	24	13.7	•	16 IR/L...
	0025-16-AD	25	25	120	-	29	16.3	X	16 IR/L...
	0025 R16	25	25	200	-	29	16.3	X	16 IR/L...
	0025 R16B	25	25	200	-	29	16.2	•	16 IR/L...
	0032 S16	32	32	250	-	36	19.6	X	16 IR/L...
	0040 T16	40	40	300	-	44	23.8	X	16 IR/L...
	0050 U16	50	50	350	-	54	28.7	X	16 IR/L...
	0020 P22 [1]	20	20	170	-	24	15.6	X	22 IR/L...
	0025 R22	25	25	200	-	29	17.2	X	22 IR/L...
	0025 R22B	25	25	200	-	29	18.1	•	22 IR/L...
	0032 S22	32	32	250	-	38	21.5	X	22 IR/L...
	0040 T22	40	40	300	-	46	25.8	X	22 IR/L...
	0050 U22	50	50	350	-	56	30.6	X	22 IR/L...
	0032 S22U	32	32	250	-	38	25.5	X	22 UIRL...
	0040 T22U	40	40	300	-	46	29.5	X	22 UIRL...
	0032 S27	32	32	250	-	40	22.4	X	27 IR/L...
	0040 T27	40	40	300	-	48	26.4	X	27 IR/L...
	0050 U27	50	50	350	-	58	31.4	X	27 IR/L...
	0060 V27	60	60	400	-	68	36.4	X	27 IR/L...
	0032 S27U	32	32	250	-	40	24.7	X	27 UIRL...
	0040 T27U	40	40	300	-	48	29.4	X	27 UIRL...
	0050 U27U	50	50	350	-	58	34.3	X	27 UIRL...
	0060 V27U	60	60	400	-	68	39.3	X	27 UIRL...

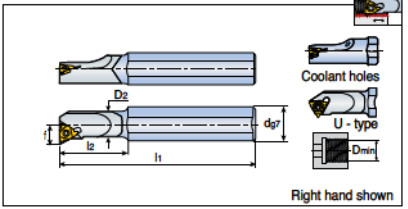
- [1] Toolholders without anvil
- [2] Right-hand inserts (IR) for right-hand tools (SIR)
- All Toolholders are made with 1.5° helix angle
- Please check for spare parts C21 page

Contents

SIR/L...C

Solid carbide threading bars for high rigidity





Designation		Dimension (mm)						Coolant	Insert [2]
		d	D2	l1	l2	Dmin	f		
SIR/L	0005 H06C [1]	6	5.1	100	25	6.4	4.3	•	06 IR/L...
	0007 K08C [1]	8	6.6	125	30	7.8	5.3	•	08 IR/L...
	0008 K08UC [1]	8	7.3	125	35	9.0	6.4	•	08 UIRL...
	0010 M11C [1]	10	10	150	-	12	7.4	•	11 IR/L...
	0012 P11C [1]	12	12	170	-	15	8.4	•	11 IR/L...
	0016 R16C [1]	16	16	200	-	19	11.7	•	16 IR/L...
	0020 S16C	20	20	250	-	28	13.7	•	16 IR/L...
	0025 S16C	25	25	250	-	28	16.2	•	16 IR/L...

- [1] Toolholders without anvil
- All Toolholders are made with 1.5° helix angle
- Please check for spare parts C21 page
- [2] Right-hand inserts (IR) for right-hand tools (SIR)
- All carbide shank Toolholders are coolant through type

Spare Parts

SER/L

Designation	Insert screw	Anvil screw	Anvil int./ext. right	Anvil int./ext. left	Torx wrench
					
SER 0808 H11	S11				T-8/5
SER/L 1010 H11	S11				T-8/5
SEL 1212 F16	S16	A16		AI16	T-10/5
SER 1212 F16	S16	A16	AE16		T-10/5
SEL 1616 H16	S16	A16		AI16	T-10/5
SER 1616 H16	S16	A16	AE16		T-10/5
SER 1616 K16G	S16	A16	AE16		T-10/5
SEL 2020-16-AD	S16	A16		AI16	T-10/5
SER 2020-16-AD	S16	A16	AE16		T-10/5
SEL 2020 K16	S16	A16		AI16	T-10/5
SER 2020 K16	S16	A16	AE16		T-10/5
SEL 2525 M16	S16	A16		AI16	T-10/5
SER 2525 M16	S16	A16	AE16		T-10/5
SEL 3232 P16	S16	A16		AI16	T-10/5
SER 3232 P16	S16	A16	AE16		T-10/5
SEL 2525 M22	S22	A22		AI22	T-20/5
SER 2525 M22	S22	A22	AE22		T-20/5
SEL 3232 P22	S22	A22		AI22	T-20/5
SER 3232 P22	S22	A22	AE22		T-20/5
SEL 4040 R22	S22	A22		AI22	T-20/5
SER 4040 R22	S22	A22	AE22		T-20/5
SEL 2525 M22U	S22	A22		AI22U	T-20/5
SER 2525 M22U	S22	A22	AE22U		T-20/5
SEL 3232 P22U	S22	A22		AI22U	T-20/5
SER 3232 P22U	S22	A22	AE22U		T-20/5
SEL 4040 R22U	S22	A22		AI22U	T-20/5
SEL 2525 M27	TS40	A27		AI27	TK40
SER 2525 M27	TS40	A27	AE27		TK40
SEL 3232 P27	TS40	A27		AI27	TK40
SER 3232 P27	TS40	A27	AE27		TK40
SER 4040 R27	TS40	A27	AE27		TK40
SEL 2525 M27U	TS40	A27		AI27U	TK40
SEL 3232 P27U	TS40	A27		AI27U	TK40
SER 3232 P27U	TS40	A27	AE27U		TK40
SEL 4040 R27U	TS40	A27		AI27U	TK40

SER-D

Designation	Insert screw	Anvil screw	Anvil int./ext. right	Anvil int./ext. left	Torx wrench
					
SER 2525 M16D	S16	A16	AE16		T-10/5
SER 2525 M22D	S22	A22	AE22		T-20/5

Spare Parts

SIR/L

Designation	Insert screw	Anvil screw	Anvil int./ext. right	Anvil int./ext. left	Torx wrench
					
SIR/L 0005 H06	TS 20038I				T-6/5
SIR/L 0005 H06CB	TS 20038I				T-6/5
SIR 0005 H06-W	TS 20038I				T-6/5
SIR/L 0007 K08	TS 20054I				T-6/5
SIR/L 0007 K08CB	TS 20054I				T-6/5
SIR/L 0008 K08U	TS 20054I				T-6/5
SIR 0008 K08UCB	TS 20054I				T-6/5
SIR/L 0010 H11	S11				T-8/5
SIR 0010 H11B	S11				T-8/5
SIR/L 0010 K11	S11				T-8/5
SIR/L 0010 K11B	S11				T-8/5
SIR/L 0010 M11CB	S11				T-8/5
SIR/L 0012 P11CB	S11				T-8/5
SIR/L 0013 L11	S11				T-8/5
SIR/L 0013 M16	S16S				T-10/5
SIR/L 0013 M16B	S16S				T-10/5
SIR/L 0016 P16	S16S				T-10/5
SIR/L 0016 P16B	S16S				T-10/5
SIR 0016 R16CB	S16S				T-10/5
SIL 0020-16-AD	S16	A16	AE16		T-10/5
SIR 0020-16-AD	S16	A16		AI16	T-10/5
SIL 0020 P16	S16	A16	AE16		T-10/5
SIR 0020 P16	S16	A16		AI16	T-10/5
SIL 0020 P16B	S16	A16	AE16		T-10/5
SIR 0020 P16B	S16	A16		AI16	T-10/5
SIR 0020 S16CB	S16	A16		AI16	T-10/5
SIL 0025-16-AD	S16	A16	AE16		T-10/5
SIR 0025-16-AD	S16	A16		AI16	T-10/5
SIL 0025 R16	S16	A16	AE16		T-10/5
SIR 0025 R16	S16	A16		AI16	T-10/5
SIL 0025 R16B	S16	A16	AE16		T-10/5
SIR 0025 R16B	S16	A16		AI16	T-10/5
SIR 0025 S16CB	S16	A16		AI16	T-10/5
SIL 0032 S16	S16	A16	AE16		T-10/5
SIR 0032 S16	S16	A16		AI16	T-10/5
SIL 0040 T16	S16	A16	AE16		T-10/5
SIR 0040 T16	S16	A16		AI16	T-10/5
SIL 0050 U16	S16	A16	AE16		T-10/5
SIR 0050 U16	S16	A16		AI16	T-10/5

Spare Parts

SIR/L

Designation	Insert screw	Anvil screw	Anvil int./ext. right	Anvil int./ext. left	Torx wrench
					
SIL 0020 P22	S22S				T-20/5
SIR 0020 P22	S22S				T-20/5
SIL 0025 R22	S22	A22	AE22		T-20/5
SIR 0025 R22	S22	A22		AI22	T-20/5
SIL 0025 R22B	S22	A22	AE22		T-20/5
SIR 0025 R22B	S22	A22		AI22	T-20/5
SIL 0032 S22	S22	A22	AE22		T-20/5
SIR 0032 S22	S22	A22		AI22	T-20/5
SIL 0040 T22	S22	A22	AE22		T-20/5
SIR 0040 T22	S22	A22		AI22	T-20/5
SIL 0050 U22	S22	A22	AE22		T-20/5
SIR 0050 U22	S22	A22		AI22	T-20/5
SIL 0032 S22U	S22	A22	AE22U		T-20/5
SIR 0032 S22U	S22	A22		AI22U	T-20/5
SIR 0040 T22U	S22	A22		AI22U	T-20/5
SIL 0032 S27	TS40	A27	AE27		TK40
SIR 0032 S27	TS40	A27		AI27	TK40
SIL 0040 T27	TS40	A27	AE27		TK40
SIR 0040 T27	TS40	A27		AI27	TK40
SIL 0050 U27	TS40	A27	AE27		TK40
SIR 0050 U27	TS40	A27		AI27	TK40
SIL 0060 V27	TS40	A27	AE27		TK40
SIR 0060 V27	TS40	A27		AI27	TK40
SIL 0032 S27U	TS40	A27	AE27U		TK40
SIR 0032 S27U	TS40	A27		AI27U	TK40
SIR 0040 T27U	TS40	A27		AI27U	TK40
SIL 0050 U27U	TS40	A27	AE27U		TK40
SIR 0050 U27U	TS40	A27		AI27U	TK40
SIL 0060 V27U	TS40	A27	AE27U		TK40
SIR 0060 V27U	TS40	A27		AI27U	TK40

Insert Designation System

16	E	R	M	1.50	ISO	2M	TT9030
1	2	3	4	5	6	7	8

1 Insert size

l (mm)	d
06	3.968 mm = 5/32"
08	4.762 mm = 3/16"
11	6.350 mm = 1/4"
16	9.525 mm = 3/8"
22	12.700 mm = 1/2"
27	15.875 mm = 5/8"

2 Application

E - External
I - Internal
UE - U-type, external
UI - U-type, Internal
UEI - U-type, external and internal

U-type Regular type

3 Hand of tool

R - Right-hand
L - Left-hand
RL - Right and left-hand

4 Type

M - With a chip breaker
B - Peripherally ground & chip breaker
□ - No indication regular type

5 Pitch

Full profile
Value by number
0.35 - 9.0 **mm**
72 - 2 **TPI**

Partial profile
Range by letter

	mm	TPI
A	0.5 - 1.5	48 - 16
AG	0.5 - 3.0	48 - 8
G	1.75 - 3.0	14 - 8
N	3.5 - 5.0	7 - 5
U	5.5 - 6.0	4.5 - 4
Q	5.5 - 9.0	4.5 - 2.75

6 Thread standard

60 - Partial profile 60°
55 - Partial profile 55°
ISO - ISO metric
UN - American UN
W - Whitworth
BSPT - British BSPT
RND - Round DIN 405
TR - Trapeze DIN 103
ACME - ACME
STACME - Stub ACME
ABUT - American buttress
UNJ - UNJ
MJ - MJ
NPT - NPT
API RD - API round
BUT - API buttress casing
API - API
EL - Extreme line casing
SAGE - Segengewinde DIN 513

7 No. of teeth (Optional)

2M - 2 teeth
3M - 3 teeth

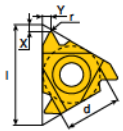
8 Grades

Coated
TT7010
TT8010
TT9030

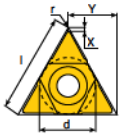
Uncoated
P30

Partial Profile 55°

External & internal



External right-hand shown
(Internal left-hand)



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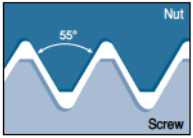


• Application: General industry

Insert	Designation	Pitch		Dimension (mm)					Coated			Uncoated
		mm	TPI	d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External	11ER/L A 55	0.5-1.5	48-16	1/4"	11	0.05	0.8	0.9	•	•		•
	16ER/L A 55	0.5-1.5	48-16	3/8"	16	0.05	0.8	0.9	•	•		•
	16ER/L AG 55	0.5-3.0	48-8	3/8"	16	0.05	1.2	1.7	•	•	•	•
Regular	16ERB AG 55	0.5-3.0	48-8	3/8"	16	0.05	1.2	1.7		•		
	16ERM AG 55	0.5-3.0	48-8	3/8"	16	0.07	1.2	1.7	•	•		•
	16ER/L G 55	1.75-3.0	14-8	3/8"	16	0.20	1.2	1.7	•	•		•
	16ERB G 55	1.75-3.0	14-8	3/8"	16	0.20	1.2	1.7		•		
B/M	16ERM G 55	1.75-3.0	14-8	3/8"	16	0.23	1.2	1.7	•	•		•
	22ER/L N 55	3.5-5.0	7-5	1/2"	22	0.42	1.7	2.5	•	•		•
	27ER Q 55	5.5-6.0	4.5-4	5/8"	27	0.60	2.0	2.9	•	•		
Internal	06IR/L A 55	0.5-1.25	48-20	5/32"	6	0.05	0.5	0.6			•	
	08IR/L A 55	0.5-1.5	48-16	3/16"	8	0.05	0.6	0.7			•	
	11IR/L A 55	0.5-1.5	48-16	1/4"	11	0.05	0.8	0.9	•	•	•	•
	16IR A 55	0.5-1.5	48-16	3/8"	16	0.05	0.8	0.9	•	•		•
Regular	16IR/L AG 55	0.5-3.0	48-8	3/8"	16	0.05	1.2	1.7	•	•	•	•
	16IRB AG 55	0.5-3.0	48-8	3/8"	16	0.05	1.2	1.7		•		
	16IRM AG 55	0.5-3.0	48-8	3/8"	16	0.05	1.2	1.7	•	•		•
	16IR/L G 55	1.75-3.0	14-8	3/8"	16	0.20	1.2	1.7	•	•		•
B/M	16IRB G 55	1.75-3.0	14-8	3/8"	16	0.20	1.2	1.7		•		
	16IRM G 55	1.75-3.0	14-8	3/8"	16	0.20	1.2	1.7	•	•		•
	22IR/L N 55	3.5-5.0	7-5	1/2"	22	0.42	1.7	2.5	•	•		•
	27IR/L Q 55	5.5-6.0	4.5-4	5/8"	27	0.60	2.0	2.9	•	•		•
U	08UIRL U 55	1.75-2.0	14-11	3/16"	8	0.10	0.9	4.0			•	
	22UEIRL U 55	5.5-8.0	4.5-3.25	1/2"	22	0.60	0.9	11.0	•			•
	27UEIRL U 55	6.5-9.0	4-2.75	5/8"	27	0.81	1.2	13.7	•			

Cutting Condition
C17-C20 C60-C66

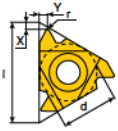
• ERB / ERM / IRB / IRM with pressed chip breaker

●: Standard item

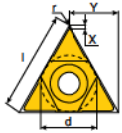
Partial Profile 60°

T-THREAD

External & internal



External right-hand shown
(Internal left-hand)



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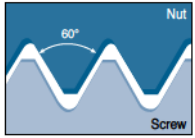


• Application: General industry

Insert	Designation	Pitch		Dimension (mm)					Coated			Uncoated
		mm	TPI	d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External	11ER/L A 60	0.5-1.5	48-16	1/4″	11	0.05	0.8	0.9	•	•		•
	16ER/L A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9	•	•	•	•
	16ERB A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9		•		
	16ERM A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9	•	•		•
Regular	16ER/L AG 60	0.5-3.0	48-8	3/8″	16	0.05	1.2	1.7	•	•	•	•
	16ERB AG 60	0.5-3.0	48-8	3/8″	16	0.05	1.2	1.7		•		
	16ERM AG 60	0.5-3.0	48-8	3/8″	16	0.06	1.2	1.7	•	•		•
	16ER/L G 60	1.75-3.0	14-8	3/8″	16	0.17	1.2	1.7	•	•	•	•
	16ERB G 60	1.75-3.0	14-8	3/8″	16	0.17	1.2	1.7		•		
B/M	16ERM G 60	1.75-3.0	14-8	3/8″	16	0.17	1.2	1.7	•	•		•
	22ER/L N 60	3.5-5.0	7-5	1/2″	22	0.32	1.7	2.5	•	•	•	•
	22ERM N 60	3.5-5.0	7-5	1/2″	22	0.32	1.7	2.5	•	•		•
	27ER/L Q 60	5.5-6.0	4.5-4	5/8″	27	0.63	2.1	3.1	•		•	•
Internal	06IR/L A 60	0.5-1.25	48-20	5/32″	6	0.05	0.6	0.6			•	
	06IRM A 60	0.5-1.25	48-20	5/32″	6	0.05	0.5	0.6			•	
	08IR/L A 60	0.5-1.5	48-16	3/16″	8	0.05	0.6	0.7			•	
	08IRM A 60	0.5-1.5	48-16	3/16″	8	0.05	0.6	0.7		•	•	
	11IR/L A 60	0.5-1.5	48-16	1/4″	11	0.05	0.8	0.9	•	•	•	•
Regular	11IRM A 60	0.5-1.5	48-16	1/4″	11	0.05	0.7	0.9	•	•		•
	16IR/L A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9	•	•	•	•
	16IRB A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9		•		
	16IRM A 60	0.5-1.5	48-16	3/8″	16	0.05	0.8	0.9	•	•		•
	16IR/L AG 60	0.5-3.0	48-8	3/8″	16	0.05	1.2	1.7	•	•	•	•
	16IRB AG 60	0.5-3.0	48-8	3/8″	16	0.05	1.2	1.7			•	
	16IRM AG 60	0.5-3.0	48-8	3/8″	16	0.05	1.2	1.7	•	•		•
B/M	16IR/L G 60	1.75-3.0	14-8	3/8″	16	0.12	1.2	1.7	•	•	•	•
	16IRB G 60	1.75-3.0	14-8	3/8″	16	0.12	1.2	1.7		•		
	16IRM G 60	1.75-3.0	14-8	3/8″	16	0.10	1.2	1.7	•	•		•
	22IR/L N 60	3.5-5.0	7-5	1/2″	22	0.22	1.7	2.5	•	•	•	•
	22IRM N 60	3.5-5.0	7-5	1/2″	22	0.19	1.7	2.5	•	•		•
	27IR/L Q 60	5.5- 6.0	4.5-4	5/8″	27	0.31	2.1	3.1	•	•		•
U	08UIRL U 60	1.75-2.0	14-11	3/16″	8	0.10	0.8	4.0			•	
	22UEIRL U 60	5.5-8.0	4.5-3.25	1/2″	22	0.28	0.6	11.0	•			•
	27UEIRL U 60	6.5-9.0	4-2.75	5/8″	27	0.28	1.0	13.7	•			•

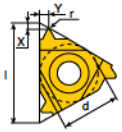
Cutting Condition
C17-C20 C60-C66

• ERB / ERM / IRB / IRM with pressed chip breaker

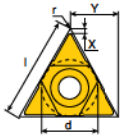
•: Standard item

External ISO Metric

Full profile (DIN13 12-1986 class: 6G)



External right-hand shown
(Internal left-hand)



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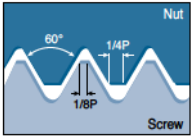


• Application: General industry

Insert	Designation	Pitch (mm)	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External	11ER/L 0.35 ISO	0.35	1/4"	11	0.04	0.8	0.4		•		•
	11ER 0.40 ISO	0.40	1/4"	11	0.04	0.7	0.4		•		
	11ER 0.45 ISO	0.45	1/4"	11	0.05	0.7	0.4			•	
	11ER/L 0.50 ISO	0.50	1/4"	11	0.05	0.6	0.6	•	•	•	•
	11ER 0.60 ISO	0.60	1/4"	11	0.07	0.6	0.6		•		•
	11ER 0.70 ISO	0.70	1/4"	11	0.07	0.6	0.6	•	•		•
	11ER/L 0.75 ISO	0.75	1/4"	11	0.08	0.6	0.6	•	•		•
	11ER 0.80 ISO	0.80	1/4"	11	0.09	0.6	0.6	•	•		•
	11ER/L 1.00 ISO	1.00	1/4"	11	0.12	0.7	0.7	•	•		•
	11ER 1.25 ISO	1.25	1/4"	11	0.15	0.8	0.9	•	•		•
	11ER/L 1.50 ISO	1.50	1/4"	11	0.18	0.8	1.0	•	•		•
	11ER 1.75 ISO	1.75	1/4"	11	0.21	0.8	1.1	•			
	16ER/L 0.35 ISO	0.35	3/8"	16	0.04	0.8	0.4	•	•		
	16ER/L 0.40 ISO	0.40	3/8"	16	0.04	0.7	0.4		•		•
	16ER 0.45 ISO	0.45	3/8"	16	0.05	0.7	0.4	•	•		
	16ER/L 0.50 ISO	0.50	3/8"	16	0.04	0.6	0.6	•	•		•
	16ER 0.60 ISO	0.60	3/8"	16	0.07	0.6	0.6	•	•		•
	16ER/L 0.70 ISO	0.70	3/8"	16	0.07	0.6	0.6	•	•		•
	16ER/L 0.75 ISO	0.75	3/8"	16	0.08	0.6	0.6	•	•		•
	16ERM 0.75 ISO	0.75	3/8"	16	0.08	0.6	0.6		•		
	16ER/L 0.80 ISO	0.80	3/8"	16	0.09	0.6	0.6	•	•		•
	16ERB 0.80 ISO	0.80	3/8"	16	0.09	0.6	0.6		•		
	16ER/L 1.00 ISO	1.00	3/8"	16	0.12	0.7	0.7	•	•	•	•
	16ERB 1.00 ISO	1.00	3/8"	16	0.12	0.7	0.7		•		
	16ERM 1.00 ISO	1.00	3/8"	16	0.11	0.7	0.7	•	•		•
	16ER/L 1.25 ISO	1.25	3/8"	16	0.15	0.8	0.9	•	•		•
	16ERB 1.25 ISO	1.25	3/8"	16	0.15	0.8	0.9		•		
	16ERM 1.25 ISO	1.25	3/8"	16	0.14	0.8	0.9	•	•		•
	16ER/L 1.50 ISO	1.50	3/8"	16	0.18	0.8	1.0	•	•	•	•
	16ERB 1.50 ISO	1.50	3/8"	16	0.18	0.8	1.0		•		
	16ERM 1.50 ISO	1.50	3/8"	16	0.19	0.8	1.0	•	•		•
	16ER/L 1.75 ISO	1.75	3/8"	16	0.21	0.9	1.2	•	•	•	•
	16ERB 1.75 ISO	1.75	3/8"	16	0.21	0.9	1.2		•		
	16ERM 1.75 ISO	1.75	3/8"	16	0.20	0.9	1.2	•	•		•

Cutting Condition

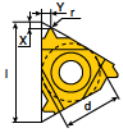
C17-C20 C60-C66

• ERB / ERM with pressed chip breaker

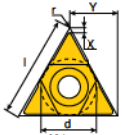
•: Standard item

External ISO Metric

Full profile (DIN13 12-1986 class: 6G)



External right-hand shown
(Internal left-hand)



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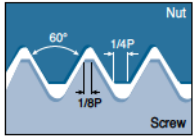


• Application: General industry

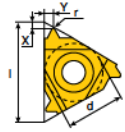
Insert	Designation	Pitch (mm)	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External	**16ER/L 2.00 ISO**	2.00	3/8"	16	0.25	1.0	1.3	•	•	•	•
	**16ERB 2.00 ISO**	2.00	3/8"	16	0.25	1.0	1.3		•		
	16ERM 2.00 ISO	2.00	3/8"	16	0.24	1.0	1.3	•	•		•
Regular	**16ER/L 2.50 ISO**	2.50	3/8"	16	0.31	1.1	1.5	•	•		•
	16ERB 2.50 ISO	2.50	3/8"	16	0.31	1.1	1.5		•		
	**16ERM 2.50 ISO**	2.50	3/8"	16	0.30	1.1	1.5	•	•		•
	16ER/L 3.00 ISO	3.00	3/8"	16	0.38	1.2	1.6	•	•	•	•
B/M	**16ERB 3.00 ISO**	3.00	3/8"	16	0.38	1.2	1.6		•		
	16ERM 3.00 ISO	3.00	3/8"	16	0.38	1.2	1.6	•	•		•
	22ER/L 3.50 ISO	3.50	1/2"	22	0.44	1.6	2.3	•	•	•	•
	22ERM 3.50 ISO	3.50	1/2"	22	0.44	1.6	2.3		•		
	22ER/L 4.00 ISO	4.00	1/2"	22	0.52	1.6	2.3	•	•		•
	22ERM 4.00 ISO	4.00	1/2"	22	0.52	1.6	2.3		•		
	22ER/L 4.50 ISO	4.50	1/2"	22	0.58	1.7	2.4	•	•		•
	22ER/L 5.00 ISO	5.00	1/2"	22	0.64	1.7	2.5	•	•		•
	22ER/L 6.00 ISO	6.00	1/2"	22	0.78	2.0	2.7	•			
	27ER/L 5.50 ISO	5.50	5/8"	27	0.70	1.9	2.7	•	•		
	27ER/L 6.00 ISO	6.00	5/8"	27	0.78	2.0	2.9	•	•	•	•
	22UERL5.50 ISO	5.50	1/2"	22	0.70	2.3	11.0	•		•	
	**22UERL6.00 ISO**	6.00	1/2"	22	0.78	2.6	11.0	•	•	•	
U	**27UERL8.00 ISO**	8.00	5/8"	27	1.08	2.4	13.7	•	•		

• ERB / ERM with pressed chip breaker

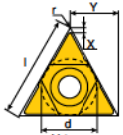
•: Standard item

Internal ISO Metric

Full profile (DIN13 12-1986 class: 6H)



External right-hand shown
(Internal left-hand)



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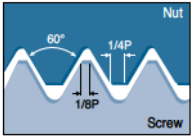


• Application: General industry

Insert	Designation	Pitch (mm)	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal Regular	06IR/L 0.50 ISO	0.50	5/32"	6	0.03	0.9	0.5			•	
	06IR/L 0.75 ISO	0.75	5/32"	6	0.04	0.8	0.5			•	
	06IR/L 1.00 ISO	1.00	5/32"	6	0.05	0.7	0.6			•	
	06IR/L 1.25 ISO	1.25	5/32"	6	0.07	0.6	0.6			•	
	08IR/L 0.50 ISO	0.50	3/16"	8	0.05	0.6	0.5			•	
	08IR 0.75 ISO	0.75	3/16"	8	0.04	0.6	0.5			•	
	08IR/L 1.00 ISO	1.00	3/16"	8	0.05	0.6	0.6		•	•	
	08IR/L 1.25 ISO	1.25	3/16"	8	0.07	0.6	0.7			•	
	08IR/L 1.50 ISO	1.50	3/16"	8	0.08	0.6	0.7			•	
	08IR/L 1.75 ISO	1.75	3/16"	8	0.10	0.6	0.8			•	
B/M	11IR/L 0.35 ISO	0.35	1/4"	11	0.02	0.8	0.3		•		
	11IR 0.40 ISO	0.40	1/4"	11	0.02	0.8	0.4		•		
	11IR/L 0.50 ISO	0.50	1/4"	11	0.03	0.6	0.6	•	•		•
	11IR 0.70 ISO	0.70	1/4"	11	0.04	0.6	0.6		•		
	11IR/L 0.75 ISO	0.75	1/4"	11	0.08	0.6	0.6	•	•		•
	11IR 0.80 ISO	0.80	1/4"	11	0.04	0.6	0.6	•		•	
	11IR/L 1.00 ISO	1.00	1/4"	11	0.05	0.6	0.7	•	•	•	•
	11IRM 1.00 ISO	1.00	1/4"	11	0.05	0.6	0.7		•		
	11IR/L 1.25 ISO	1.25	1/4"	11	0.07	0.8	0.8	•	•		•
	11IR/L 1.50 ISO	1.50	1/4"	11	0.08	0.8	1.0	•	•	•	•
	11IRM 1.50 ISO	1.50	1/4"	11	0.08	0.8	1.0	•	•		
	11IR/L 1.75 ISO	1.75	1/4"	11	0.10	0.8	1.1	•	•		•
	11IR/L 2.00 ISO	2.00	1/4"	11	0.12	0.8	0.9	•	•	•	
	16IR 0.35 ISO	0.35	3/8"	16	0.02	0.8	0.3		•		
	16IR/L 0.40 ISO	0.40	3/8"	16	0.02	0.8	0.4		•		
	16IL 0.45 ISO	0.45	3/8"	16	0.02	0.8	0.4		•		
	16IR/L 0.50 ISO	0.50	3/8"	16	0.03	0.6	0.6	•	•		•
	16IR/L 0.60 ISO	0.60	3/8"	16	0.03	0.6	0.6		•		•
	16IR/L 0.70 ISO	0.70	3/8"	16	0.04	0.6	0.6	•	•		•
	16IR/L 0.75 ISO	0.75	3/8"	16	0.04	0.6	0.6	•	•	•	•
	16IR/L 0.80 ISO	0.80	3/8"	16	0.04	0.6	0.6	•			•
	16IR/L 1.00 ISO	1.00	3/8"	16	0.05	0.6	0.7	•	•		•
	16IRB 1.00 ISO	1.00	3/8"	16	0.05	0.6	0.7		•		
	16IRM 1.00 ISO	1.00	3/8"	16	0.05	0.6	0.7	•	•		•

C17-C20 C60-C66

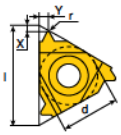
Cutting Condition

• IRB / IRM with pressed chip breaker

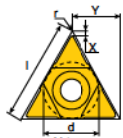
•: Standard item

Internal ISO Metric

Full profile (DIN13 12-1986 class: 6H)



External right-hand shown
(Internal left-hand)



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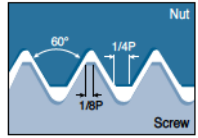


• Application: General industry

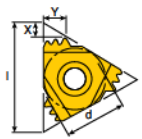
Insert	Designation	Pitch (mm)	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal  Regular	16IR/L 1.25 ISO	1.25	3/8"	16	0.07	0.8	0.9	•	•	•	•
	16IRB 1.25 ISO	1.25	3/8"	16	0.07	0.8	0.9		•		
	16IRM 1.25 ISO	1.25	3/8"	16	0.06	0.8	0.9	•	•		•
	16IR/L 1.50 ISO	1.50	3/8"	16	0.08	0.8	1.0	•	•	•	•
	16IRB 1.50 ISO	1.50	3/8"	16	0.08	0.8	1.0		•		
 B/M	16IRM 1.50 ISO	1.50	3/8"	16	0.08	0.8	1.0	•	•		•
	16IR/L 1.75 ISO	1.75	3/8"	16	0.10	0.9	1.2	•	•		•
	16IRB 1.75 ISO	1.75	3/8"	16	0.10	0.9	1.2		•		
	16IRM 1.75 ISO	1.75	3/8"	16	0.10	0.9	1.2	•	•		•
	16IR/L 2.00 ISO	2.00	3/8"	16	0.12	1.0	1.3	•	•	•	•
	16IRB 2.00 ISO	2.00	3/8"	16	0.12	1.0	1.3		•		
	16IRM 2.00 ISO	2.00	3/8"	16	0.11	1.0	1.3	•	•		•
	16IR/L 2.50 ISO	2.50	3/8"	16	0.15	1.1	1.5	•	•	•	•
	16IRB 2.50 ISO	2.50	3/8"	16	0.15	1.1	1.5		•		
	16IRM 2.50 ISO	2.50	3/8"	16	0.14	1.1	1.5	•	•		•
	16IR/L 3.00 ISO	3.00	3/8"	16	0.18	1.1	1.5	•	•	•	•
	16IRB 3.00 ISO	3.00	3/8"	16	0.18	1.1	1.5		•		
	16IRM 3.00 ISO	3.00	3/8"	16	0.17	1.1	1.5	•	•		•
	22IL 3.00 ISO	3.00	1/2"	22	0.17	1.1	1.5			•	
	22IR/L 3.50 ISO	3.50	1/2"	22	0.22	1.6	2.3	•	•		•
	22IR/L 4.00 ISO	4.00	1/2"	22	0.25	1.6	2.3	•	•		•
	22IR/L 4.50 ISO	4.50	1/2"	22	0.29	1.6	2.4	•	•		•
	22IR/L 5.00 ISO	5.00	1/2"	22	0.32	1.6	2.3	•	•		•
	27IR/L 5.50 ISO	5.50	5/8"	27	0.35	1.6	2.3	•	•	•	
	27IR/L 6.00 ISO	6.00	5/8"	27	0.39	1.8	2.5	•	•		•
 U	08UIRL 2.00 ISO	2.00	3/16"	8	0.12	0.9	4.0			•	
	22UIRL 5.50 ISO	5.50	1/2"	22	0.35	2.4	11.0	•			•
	22UIRL 6.00 ISO	6.00	1/2"	22	0.39	2.1	11.0	•			•
	27UIRL 8.00 ISO	8.00	5/8"	27	0.53	2.4	13.7		•		

• IRB / IRM with pressed chip breaker

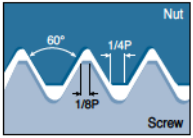
•: Standard item

External & Internal ISO Metric

Full profile, multi-tooth



External right-hand shown
(Internal left-hand)



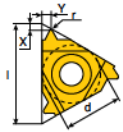
• Application: General industry

Insert	Designation	Pitch (mm)	Dimension (mm)				No. of Teeth	Coated			Uncoated
			d	l	X	Y		TT7010	TT9030	TT8010	P30
Internal / External 	16ER 0.75 ISO 3M	0.75	3/8"	16	1.3	1.9	3		•		
	16ER/IR 1.00 ISO 3M	1.0	3/8"	16	1.7	2.5	3		•		
	16ER/IR 1.50 ISO 2M	1.5	3/8"	16	1.5	2.3	2	•	•		
	16ER/IR 2.00 ISO 2M	2.00	3/8"	16	2.0	3.0	2		•		
	22ER/IR 1.50 ISO 3M	1.5	1/2"	22	2.3	3.7	3	•	•		
	22ER/IR 2.00 ISO 2M	2.0	1/2"	22	2.0	3.0	2		•		
	22ER/IR 2.00 ISO 3M	2.0	1/2"	22	3.1	5.0	3	•	•		
	27ER/IR 3.00 ISO 2M	3.0	5/8"	27	2.9	4.6	2		•		

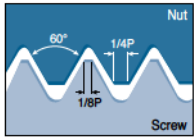
•: Standard item

External American UN

Full profile, UN, UNC, UNF, UNEF



External right-hand shown
(Internal left-hand)



• Application: General industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External Regular	11ER 44 UN	44	1/4"	11	0.05	0.6	0.6		•		
	11ER 36 UN	36	1/4"	11	0.07	0.6	0.6		•		
	11ER 32 UN	32	1/4"	11	0.09	0.6	0.6		•		
	11ER/L 28 UN	28	1/4"	11	0.10	0.6	0.7		•		•
	11ER/L 24 UN	24	1/4"	11	0.12	0.7	0.8		•		
	11ER/L 20 UN	20	1/4"	11	0.15	0.8	0.9	•	•		
	11ER 18 UN	18	1/4"	11	0.17	0.8	1.0		•		
B/M	11ER 16 UN	16	1/4"	11	0.18	0.9	1.1	•	•		•
	16ER 72 UN	72	3/8"	16	-	0.8	0.4		•		
	16ER 56 UN	56	3/8"	16	0.04	0.7	0.4		•		
	16ER 48 UN	48	3/8"	16	0.05	0.6	0.6		•	•	
	16ER/L 40 UN	40	3/8"	16	0.06	0.6	0.6		•	•	
	16ER/L 36 UN	36	3/8"	16	0.07	0.6	0.6		•		•
	16ER/L 32 UN	32	3/8"	16	0.09	0.6	0.6	•	•		•
	16ER/L 28 UN	28	3/8"	16	0.10	0.6	0.7	•	•		•
	16ER/L 24 UN	24	3/8"	16	0.12	0.7	0.8	•	•	•	•
	16ERB 24 UN	24	3/8"	16	0.12	0.7	0.8		•		
	16ERM 24 UN	24	3/8"	16	0.11	0.7	0.8	•	•		•
	16ER/L 20 UN	20	3/8"	16	0.15	0.8	0.9	•	•		•
	16ERB 20 UN	20	3/8"	16	0.15	0.8	0.9		•		
	16ERM 20 UN	20	3/8"	16	0.14	0.8	0.9	•	•		•
	16ER/L 18 UN	18	3/8"	16	0.17	0.8	1.0	•	•		•
	16ERB 18 UN	18	3/8"	16	0.17	0.8	1.0		•		
	16ERM 18 UN	18	3/8"	16	0.15	0.8	1.0	•	•	•	•
	16ER/L 16 UN	16	3/8"	16	0.18	0.9	1.1	•	•	•	•
	16ERB 16 UN	16	3/8"	16	0.18	0.9	1.1		•		
	16ERM 16 UN	16	3/8"	16	0.19	0.9	1.1	•	•		•
	16ER/L 14 UN	14	3/8"	16	0.22	1.0	1.2	•	•		•
	16ERB 14 UN	14	3/8"	16	0.22	1.0	1.2		•		
	16ERM 14 UN	14	3/8"	16	0.22	1.0	1.2	•	•		•
	16ER/L 13 UN	13	3/8"	16	0.24	1.0	1.3	•	•		•
	16ERB 13 UN	13	3/8"	16	0.24	1.0	1.3		•		
	16ERM 13 UN	13	3/8"	16	0.24	1.0	1.3		•		

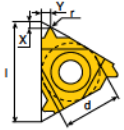
Cutting Condition
C17-C20 C60-C66

• ERB / ERM with pressed chip breaker
• Tolerance: Class 2A

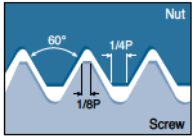
•: Standard item

External American UN

Full profile, UN, UNC, UNF, UNEF



External right-hand shown
(Internal left-hand)



- Application: General industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External Regular	16ER/L 12 UN	12	3/8″	16	0.26	1.1	1.4	•	•		•
	16ERB 12 UN	12	3/8″	16	0.26	1.1	1.4		•		
	16ERM 12 UN	12	3/8″	16	0.25	1.1	1.4	•	•		•
	16ER 11.5 UN	11.5	3/8″	16	0.27	1.1	1.5	•	•		•
	16ER/L 11 UN	11	3/8″	16	0.28	1.1	1.5	•	•		•
	16ERB 11 UN	11	3/8″	16	0.28	1.1	1.5		•		
B/M	16ER/L 10 UN	10	3/8″	16	0.32	1.1	1.5	•	•		•
	16ERB 10 UN	10	3/8″	16	0.32	1.1	1.5		•		
	16ER/L 9 UN	9	3/8″	16	0.36	1.2	1.7		•		•
	16ERB 9 UN	9	3/8″	16	0.36	1.2	1.7		•		
	16ER/L 8 UN	8	3/8″	16	0.41	1.2	1.6	•	•		•
	16ERB 8 UN	8	3/8″	16	0.41	1.2	1.6		•		
	16ERM 8 UN	8	3/8″	16	0.41	1.2	1.6	•	•		•
	22ER 7 UN	7	1/2″	22	0.47	1.6	2.3	•			•
	22ER/L 6 UN	6	1/2″	22	0.67	1.6	2.3	•	•		•
	22ER 5 UN	5	1/2″	22	0.67	1.7	2.5	•	•		•
	27ER 4.5 UN	4.5	5/8″	27	0.75	1.9	2.7		•		•
	27ER/L 4 UN	4	5/8″	27	0.85	2.1	3.0	•			•

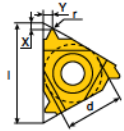
Cutting Condition
C17-C20 C60-C66

- ERB / ERM with pressed chip breaker
- Tolerance: Class 2A

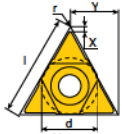
•: Standard item

Internal American UN

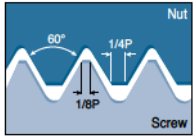
Full profile, UN, UNC, UNF, UNEF



External right-hand shown
(Internal left-hand)



U-type



• Application: General industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal	**06IR 32 UN**	32	5/32″	6	0.04	0.8	0.5			•	
	06IL 28 UN	28	5/32″	6	0.04	0.8	0.6			•	
	06IR/L 24 UN	24	5/32″	6	0.05	0.7	0.6			•	
	06IR/L 20 UN	20	5/32″	6	0.06	0.6	0.6			•	
	06IR/L 18 UN	18	5/32″	6	0.07	0.6	0.7			•	
	08IR 32 UN	32	3/16″	8	0.04	0.6	0.5			•	
	08IR/L 28 UN	28	3/16″	8	0.04	0.6	0.6			•	
	08IR/L 24 UN	24	3/16″	8	0.05	0.6	0.6			•	
	08IR/L 20 UN	20	3/16″	8	0.06	0.6	0.7			•	
	08IR 18 UN	18	3/16″	8	0.07	0.6	0.7			•	
	08IR/L 16 UN	16	3/16″	8	0.09	0.6	0.7			•	
	08IR 14 UN	14	3/16″	8	0.10	0.6	0.8		•	•	
	11IR 64 UN	64	1/4″	11	0.02	0.8	0.4		•		
	11IR 36 UN	36	1/4″	11	0.04	0.6	0.6		•		
	11IR/L 32 UN	32	1/4″	11	0.04	0.6	0.6		•		•
	11IR/L 28 UN	28	1/4″	11	0.04	0.6	0.7		•		
	11IR/L 24 UN	24	1/4″	11	0.05	0.7	0.8	•	•		•
	11IR/L 20 UN	20	1/4″	11	0.06	0.8	0.9		•		•
	11IR/L 18 UN	18	1/4″	11	0.07	0.8	1.0	•	•		•
	11IR/L 16 UN	16	1/4″	11	0.09	0.9	1.1	•	•	•	•
	11IR/L 14 UN	14	1/4″	11	0.10	0.9	1.1	•	•		•
	11IR 12 UN	12	1/4″	11	0.12	0.9	1.1	•			
	11IR 11 UN	11	1/4″	11	0.14	0.8	1.1	•			
	16IR 44 UN	44	3/8″	16	0.03	0.6	0.6		•		
	16IR 32 UN	32	3/8″	16	0.04	0.6	0.6	•	•		•
	16IR 27 UN	27	3/8″	16	0.04	0.7	0.8				•
	16IR/L 28 UN	28	3/8″	16	0.04	0.6	0.7		•		•
	16IR 24 UN	24	3/8″	16	0.05	0.7	0.8	•	•		•
	16IRB 24 UN	24	3/8″	16	0.05	0.7	0.8		•		
	16IR/L 20 UN	20	3/8″	16	0.06	0.8	0.9	•	•		•
	16IRB 20 UN	20	3/8″	16	0.06	0.8	0.9		•		
	16IRM 20 UN	20	3/8″	16	0.06	0.8	0.9	•	•		•
	16IR/L 18 UN	18	3/8″	16	0.07	0.8	1.0	•	•		•
	16IRB 18 UN	18	3/8″	16	0.07	0.8	1.0		•		
	16IRM 18 UN	18	3/8″	16	0.08	0.8	1.0	•	•		•

Regular

B/M

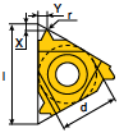
Cutting Condition
C17-C20 C60-C66

• IRB / IRM with pressed chip breaker
• Tolerance: Class 2B, ANSI B1, 3M-1986

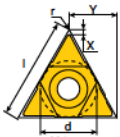
•: Standard item

Internal American UN

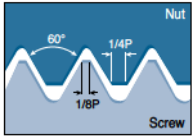
Full profile, UN, UNC, UNF, UNEF



External right-hand shown
(Internal left-hand)



U-type



• Application: General industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal Regular	16IR/L 16 UN	16	3/8"	16	0.09	0.9	1.1	•	•		•
	16IRB 16 UN	16	3/8"	16	0.09	0.9	1.1		•		
	16IRM 16 UN	16	3/8"	16	0.09	0.9	1.1	•	•		•
	16IR/L 14 UN	14	3/8"	16	0.10	0.9	1.2	•	•		•
	16IRB 14 UN	14	3/8"	16	0.10	0.9	1.2		•		
	16IRM 14 UN	14	3/8"	16	0.11	0.9	1.2	•	•		•
	16IR/L 13 UN	13	3/8"	16	0.11	1.0	1.3		•		•
	16IR/L 12 UN	12	3/8"	16	0.12	1.1	1.4	•	•	•	•
	16IRM 12 UN	12	3/8"	16	0.12	1.1	1.4	•	•		•
	16IR 11.5 UN	11.5	3/8"	16	0.13	1.1	1.5		•		•
	16IR 11 UN	11	3/8"	16	0.14	1.1	1.5	•	•		•
	16IR/L 10 UN	10	3/8"	16	0.15	1.1	1.5	•	•		•
	16IRB 10 UN	10	3/8"	16	0.15	1.1	1.5		•		
	16IR 9 UN	9	3/8"	16	0.17	1.2	1.7		•		
	16IR/L 8 UN	8	3/8"	16	0.19	1.1	1.5	•	•		•
	16IRB 8 UN	8	3/8"	16	0.19	1.1	1.5		•		
	16IRM 8 UN	8	3/8"	16	0.20	1.1	1.5	•	•		•
	22IR/L 7 UN	7	1/2"	22	0.22	1.6	2.3	•	•	•	
	22IR/L 6 UN	6	1/2"	22	0.26	1.6	2.3	•	•		•
	22IR 5 UN	5	1/2"	22	0.32	1.6	2.3	•			•
	27IR 4.5 UN	4.5	5/8"	27	0.36	1.7	2.4	•			
	27IR/L 4 UN	4	5/8"	27	0.41	1.8	2.7	•	•		•
Internal U	08UIRL 13 UN	13	3/16"	8	0.10	1.0	4.0		•		
	08UIRL 12 UN	12	3/16"	8	0.10	0.9	4.0	•			
	08UIRL 11 UN	11	3/16"	8	0.10	0.9	4.0	•			
	22UIRL 4.5 UN	4.5	1/2"	22	0.36	2.4	11.0	•			
	22UIRL 4 UN	4	1/2"	22	0.41	2.4	11.0		•		

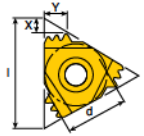
Cutting Condition
C17-C20 C60-C66

• IRB / IRM with pressed chip breaker
• Tolerance: Class 2B, ANSI B1, 3M-1986

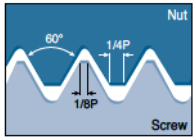
•: Standard item

External & Internal American UN

Full profile, multi-tooth, UN, UNC, UNF, UNEF



External right-hand shown
(Internal left-hand)



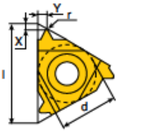
• Application: General industry

Insert	Designation	TPI	Dimension (mm)				No. of Teeth	Coated			Uncoated
			d	l	X	Y		TT7010	TT9030	TT8010	P30
Internal / External 	16ER/IR 16 UN 2M	16	3/8"	16	1.5	2.3	2		•		
	16ER 12 UN 2M	12	3/8"	16	2.2	3.4	2		•		
	22ER/IR 16 UN 3M	16	3/8"	22	2.5	4.0	3		•		
	22ER/IR 12 UN 2M	12	1/2"	22	2.2	3.4	2		•		
	22ER/IR 12 UN 3M	12	1/2"	22	3.3	5.3	3		•		•
	27ER/IR 8 UN 2M	8	5/8"	27	3.1	4.9	2		•		

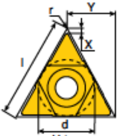
•: Standard item

External Whitworth

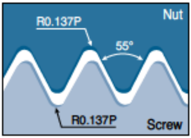
Full profile, BSW, BSF, BSP (B.S. 84-1956 DIN 259)



External right-hand shown
(Internal left-hand)



U-type



- Application: General industry, fittings and pipe coupings

Insert	Designation	TPI	Dimension (mm) d	l	r	X	Y	Coated TT7010	TT9030	TT8010	Uncoated P30
External  Regular  B/M	11ER 36 W	36	1/4"	11	0.07	0.6	0.6		●		
	11ER 20 W	20	1/4"	11	0.14	0.8	0.9				●
	11ER/L 19 W	19	1/4"	11	0.15	0.8	1.0		●		
	11ER 18 W	18	1/4"	11	0.16	0.8	1.0	●			
	11ER 16 W	16	1/4"	11	0.18	0.9	1.1				●
	11ER 14 W	14	1/4"	11	0.21	0.9	1.1	●			●
	16ER/L 32 W	32	3/8"	16	0.09	0.6	0.6		●		●
	16ER/L 28 W	28	3/8"	16	0.09	0.6	0.7	●	●		●
	16ER 26 W	26	3/8"	16	0.10	0.7	0.7	●	●		●
	16ER/L 24 W	24	3/8"	16	0.11	0.7	0.8	●	●		●
	16ER/L 22 W	22	3/8"	16	0.13	0.8	0.9	●	●		●
	16ER 20 W	20	3/8"	16	0.14	0.8	0.9	●	●	●	●
	16ER/L 19 W	19	3/8"	16	0.15	0.8	1.0	●	●	●	●
	16ERB 19 W	19	3/8"	16	0.15	0.8	1.0		●		
	16ERM 19 W	19	3/8"	16	0.16	0.8	1.0	●	●		●
	16ER/L 18 W	18	3/8"	16	0.16	0.8	1.0	●	●		●
	16ER/L 16 W	16	3/8"	16	0.18	0.9	1.1	●	●		●
	16ERB 16 W	16	3/8"	16	0.18	0.9	1.1		●		
	16ERM 16 W	16	3/8"	16	0.20	0.9	1.1	●	●		●
	16ER/L 14 W	14	3/8"	16	0.21	1.0	1.2	●	●	●	●
	16ERB 14 W	14	3/8"	16	0.21	1.0	1.2		●		
	16ERM 14 W	14	3/8"	16	0.24	1.0	1.2	●	●		●
	16ER/L 12 W	12	3/8"	16	0.25	1.1	1.4	●	●		●
	16ER/L 11 W	11	3/8"	16	0.27	1.1	1.5	●	●	●	●
	16ERB 11 W	11	3/8"	16	0.27	1.1	1.5		●		
	16ERM 11 W	11	3/8"	16	0.27	1.1	1.5	●	●		●
	16ER/L 10 W	10	3/8"	16	0.31	1.1	1.5	●	●		●
	16ERB 10 W	10	3/8"	16	0.31	1.1	1.5		●		
	16ER 9 W	9	3/8"	16	0.34	1.2	1.7	●			●
	16ER/L 8 W	8	3/8"	16	0.39	1.2	1.5	●	●		●
	22ER 7 W	7	1/2"	22	0.45	1.6	2.3		●		●
	22ER 6 W	6	1/2"	22	0.52	1.6	2.3	●	●		●
	22ER 5 W	5	1/2"	22	0.65	1.7	2.4	●			●
	27ER 4.5 W	4.5	5/8"	27	0.73	1.8	2.6				●
	27ER 4 W	4	5/8"	27	0.82	2.0	2.9		●		●

●: Standard item

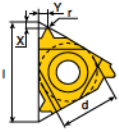
C17-C20
Cutting Condition C60-C68

- ERB / ERM with pressed chip breaker
- Tolerance: Medium class

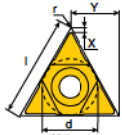
Contents

Internal Whitworth

Full profile, BSW, BSF, BSP (B.S. 84-1956 DIN 259)



External right-hand shown
(Internal left-hand)



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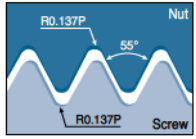


• Application: General industry, fittings and pipe coupings

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal Regular	06IR 26 W	26	5/32″	6	0.10	0.7	0.6			•	
	06IR 20 W	20	5/32″	6	0.14	0.6	0.7			•	
	08IR 28 W	28	3/16″	8	0.09	0.6	0.6			•	
	08IR 24 W	24	3/16″	8	0.11	0.6	0.6			•	
	08IR 20 W	20	3/16″	8	0.14	0.6	0.7			•	
B/M	08IR/L 19 W	19	3/16″	8	0.15	0.6	0.7			•	
	08IR 18 W	18	3/16″	8	0.16	0.6	0.7			•	
	08IR 16 W	16	3/16″	8	0.18	0.6	0.7			•	
	11IR 36 W	36	1/4″	11	0.07	0.6	0.6				
	11IR 28 W	28	1/4″	11	0.10	0.6	0.7	•			
	11IR 26 W	26	1/4″	11	0.10	0.7	0.7			•	•
	11IR/L 24 W	24	1/4″	11	0.11	0.7	0.8	•	•		
	11IR 20 W	20	1/4″	11	0.14	0.8	0.9	•	•		•
	11IR 19 W	19	1/4″	11	0.15	0.8	1.0	•	•		•
	11IR/L 18 W	18	1/4″	11	0.16	0.8	1.0	•	•		•
	11IR 16 W	16	1/4″	11	0.18	0.9	1.1	•			•
	11IR/L 14 W	14	1/4″	11	0.21	0.9	1.1	•	•	•	•
	11IL 12 W	12	1/4″	11	0.27	1.0	1.1		•		

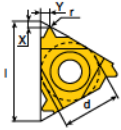
Cutting Condition
C17-C20 C60-C66

• Tolerance: Medium class

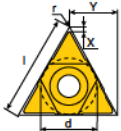
•: Standard item

Internal Whitworth

Full profile, BSW, BSF, BSP (B.S. 84-1956 DIN 259)



External right-hand shown
(Internal left-hand)



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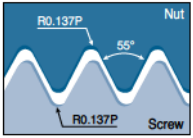


- Application: General industry, fittings and pipe coupings

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal Regular	16IR 40 W	40	3/8″	16	0.06	0.6	0.6				●
	16IR/L 32 W	32	3/8″	16	0.09	0.6	0.6				●
	16IR/L 28 W	28	3/8″	16	0.09	0.6	0.7	●			●
	16IR 26 W	26	3/8″	16	0.10	0.7	0.7	●	●		●
	16IR/L 24 W	24	3/8″	16	0.11	0.7	0.8	●	●		●
	16IR/L 22 W	22	3/8″	16	0.13	0.8	0.9	●	●		●
	16IR/L 20 W	20	3/8″	16	0.14	0.8	0.9	●	●		●
B/M	16IRM 20 W	20	3/8″	16	0.14	0.8	0.9		●		
	16IR/L 19 W	19	3/8″	16	0.15	0.8	1.0	●	●		●
	16IRB 19 W	19	3/8″	16	0.15	0.8	1.0		●		
	16IRM 19 W	19	3/8″	16	0.15	0.8	1.0	●			●
	16IR/L 18 W	18	3/8″	16	0.16	0.8	1.0	●	●		●
	16IR/L 16 W	16	3/8″	16	0.18	0.9	1.1				●
	16IRB 16 W	16	3/8″	16	0.18	0.9	1.1		●		
	16IRM 16 W	16	3/8″	16	0.18	0.9	1.1	●	●		
	16IR/L 14 W	14	3/8″	16	0.21	1.0	1.2	●	●	●	●
	16IRB 14 W	14	3/8″	16	0.21	1.0	1.2		●		
	16IRM 14 W	14	3/8″	16	0.21	1.0	1.2	●	●		●
	16IR/L 12 W	12	3/8″	16	0.25	1.1	1.4	●	●		●
	16IR/L 11 W	11	3/8″	16	0.27	1.1	1.5	●	●	●	●
	16IRB 11 W	11	3/8″	16	0.27	1.1	1.5		●		
	16IRM 11 W	11	3/8″	16	0.27	1.1	1.5	●	●		●
	16IR/L 10 W	10	3/8″	16	0.31	1.1	1.5	●	●		●
	16IRB 10 W	10	3/8″	16	0.31	1.1	1.5		●		
	16IR/L 9 W	9	3/8″	16	0.34	1.2	1.7	●			●
	16IR/L 8 W	8	3/8″	16	0.39	1.2	1.5	●	●		●
	22IR 7 W	7	1/2″	22	0.45	1.6	2.3		●		●
	22IR 6 W	6	1/2″	22	0.52	1.6	2.3	●			●
	22IR/L 5 W	5	1/2″	22	0.65	1.7	2.4	●			●
	27IR 4.5 W	4.5	5/8″	27	0.73	1.8	2.6	●			
	27IR 4 W	4	5/8″	27	0.82	2.0	2.9		●		

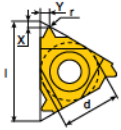
Cutting Condition
C17-C20 C60-C66

- IRB / IRM with pressed chip breaker
- Tolerance: Medium class

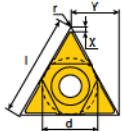
●: Standard item

Internal Whitworth

Full profile, BSW, BSF, BSP (B.S. 84-1956 DIN 259)



External right-hand shown
(Internal left-hand)



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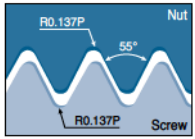


• Application: General industry, fittings and pipe coupings

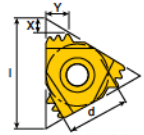
Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal / External  U	08UIRL 12 W	12	3/16″	8	0.25	0.9	4.0			•	
	22UEIRL 4.5 W	4.5	1/2″	22	0.73	2.3	11.0				•
	22UEIRL 4 W	4	1/2″	22	0.73	1.8	11.0				•
	27UEIRL 3.5 W	3.5	5/8″	27	0.95	2.1	13.7	•	•		
	27UEIRL 3 W	3	5/8″	27	1.12	2.3	13.7	•			
	27UEIRL 2.75 W	2.75	5/8″	27	1.21	2.4	13.7				•

• Tolerance: Medium class

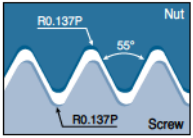
•: Standard item

External & Internal Whitworth

Full profile, multi-tooth, BSW, BSF, BSP



External right-hand shown
(Internal left-hand)



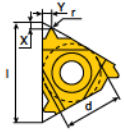
- Application: General industry, fittings and pipe coupings

Insert	Designation	TPI	Dimension (mm)				No. of teeth	Coated			Uncoated
			d	l	X	Y		TT7010	TT9030	TT8010	P30
Internal / External 	16ER/IR 14 W 2M	14	3/8″	16	1.7	2.7	2		●		
	22ER/IR 14 W 3M	14	1/2″	22	2.8	4.5	3		●		
	22ER/IR 11 W 2M	11	1/2″	22	2.3	3.4	2		●		

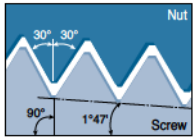
●: Standard item

External & Internal NPT

Full profile, national pipe threads (ANSI/ASME B1.20.1-1983)



External right-hand shown
(Internal left-hand)



• Application: Steam, gas and water pipes

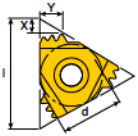
Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External	16ER 27 NPT	27	3/8"	16	0.04	0.7	0.8	•	•		•
	16ER/L 18 NPT	18	3/8"	16	0.06	0.8	1.0	•	•		•
	16ERB 18 NPT	18	3/8"	16	0.06	0.8	1.0		•		
	16ERM 18 NPT	18	3/8"	16	0.05	0.8	1.0	•	•		
	16ER/L 14 NPT	14	3/8"	16	0.07	0.9	1.2	•	•	•	•
	16ERB 14 NPT	14	3/8"	16	0.07	0.9	1.2		•		
	16ERM 14 NPT	14	3/8"	16	0.05	0.9	1.2	•	•		•
B/M	16ER/L 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5	•	•		•
	16ERB 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5		•		
	16ERM 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5	•	•		•
	16ER 8 NPT	8	3/8"	16	0.12	1.3	1.8	•	•		•
	16ERB 8 NPT	8	3/8"	16	0.12	1.3	1.8		•		
	16ERM 8 NPT	8	3/8"	16	0.15	1.3	1.8	•	•		•
Internal	06IR 27 NPT	27	5/32"	6	0.04	0.6	0.6			•	•
	08IR 27 NPT	27	3/16"	8	0.04	0.6	0.6			•	
	08IR/L 18 NPT	18	3/16"	8	0.06	0.6	0.6			•	•
	11IR 27 NPT	27	1/4"	11	0.04	0.7	0.8	•			
	11IR/L 18 NPT	18	1/4"	11	0.06	0.8	1.0	•	•	•	
	11IR/L 14 NPT	14	1/4"	11	0.07	0.8	1.0	•		•	
	16IR 27 NPT	27	3/8"	16	0.04	0.7	0.8		•		•
B/M	16IR 18 NPT	18	3/8"	16	0.06	0.8	1.0	•	•		•
	16IR/L 14 NPT	14	3/8"	16	0.07	0.9	1.2	•	•	•	•
	16IRB 14 NPT	14	3/8"	16	0.07	0.9	1.2		•		
	16IRM 14 NPT	14	3/8"	16	0.05	0.9	1.2	•	•		•
	16IR/L 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5	•	•	•	•
	16IRB 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5		•		
	16IRM 11.5 NPT	11.5	3/8"	16	0.09	1.1	1.5	•	•		•
	16IR/L 8 NPT	8	3/8"	16	0.12	1.3	1.8	•	•		•
	16IRB 8 NPT	8	3/8"	16	0.12	1.3	1.8		•		
	16IRM 8 NPT	8	3/8"	16	0.12	1.3	1.8		•		

• ERB / ERM / IRB / IRM with pressed chip breaker

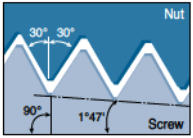
●: Standard item

External & Internal NPT

Full profile, multi-tooth, national pipe threads



External right-hand shown
(Internal left-hand)



• Application: Steam, gas and water pipes

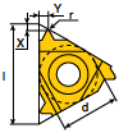
Insert	Designation	TPI	Dimension (mm)				No. of teeth	Coated			Uncoated
			d	l	X	Y		TT7010	TT9030	TT8010	P30
Internal / External 	22ER/IR 11.5 NPT 2M	11.5	1/2"	22	2.3	3.5	2		•		
	27ER/IR 11.5 NPT 3M	11.5	5/8"	27	3.3	5.5	3		•		
	27ER/IR 8 NPT 2M	8	5/8"	27	3.1	5.0	2		•		

•: Standard item

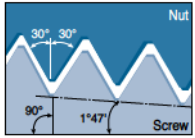
Cutting Condition
C17-C20 C60-C66

External & Internal NPTF

Full profile, national pipe threads-dryseal (ANSI / ASME B1.20.1-1976)



External right-hand shown
(Internal left-hand)



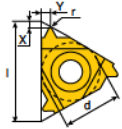
• Application: Steam, gas and water pipes

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External  Regular	11ER 18 NPTF	18	1/4"	11	0.05	0.8	1.0	●			
	11ER 14 NPTF	14	1/4"	11	0.07	0.8	1.0		●		
	16ER 27 NPTF	27	3/8"	16	0.04	0.7	0.7		●		●
	16ER 18 NPTF	18	3/8"	16	0.06	0.8	1.0		●		
	16ER 14 NPTF	14	3/8"	16	0.07	0.9	1.2	●	●		●
	16ER 11.5NPTF	11.5	3/8"	16	0.09	1.1	1.5		●		●
Internal  Regular	06IR 27 NPTF	27	5/32"	6	0.04	0.7	0.6			●	
	08IR 27 NPTF	27	3/16"	8	0.04	0.6	0.6			●	
	08IR 18 NPTF	18	3/16"	8	0.06	0.6	0.6			●	
	11IR 18 NPTF	18	1/4"	11	0.06	0.8	1.0		●		
	11IR 14 NPTF	14	1/4"	11	0.07	0.8	1.0		●		
	16IR 18 NPTF	18	3/8"	16	0.06	0.8	1.0		●		
	16IR/L14 NPTF	14	3/8"	16	0.07	0.9	1.2	●	●		
	16IR 11.5NPTF	11.5	3/8"	16	0.09	1.1	1.5	●	●		
	16IR 8 NPTF	8	3/8"	16	0.10	1.3	1.8		●		

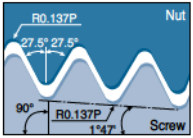
●: Standard item

External & Internal BSPT

Full profile, british standard pipe (B.S. 21-1957)



External right-hand shown
(Internal left-hand)



• Application: Steam, gas and water pipes

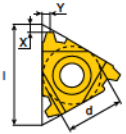
Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External  B/M 	16ER 28 BSPT	28	3/8″	16	0.11	0.6	0.6	•	•		
	16ER/L 19 BSPT	19	3/8″	16	0.16	0.8	0.9	•	•		•
	16ER/L 14 BSPT	14	3/8″	16	0.21	1.0	1.2	•	•		•
	16ERB 14 BSPT	14	3/8″	16	0.21	1.0	1.2		•		
	16ERM 14 BSPT	14	3/8″	16	0.21	1.0	1.2		•		
	16ER/L 11 BSPT	11	3/8″	16	0.28	1.1	1.5	•	•		•
	16ERB 11 BSPT	11	3/8″	16	0.28	1.1	1.5		•		
	16ERM 11 BSPT	11	3/8″	16	0.28	1.1	1.5		•		
Internal  B/M 	06IR 28 BSPT	28	5/32′	6	0.11	0.7	0.6			•	
	08IR 28 BSPT	28	3/16′	8	0.11	0.6	0.6			•	
	08IR 19 BSPT	19	3/16′	8	0.16	0.6	0.6			•	
	11IR 19 BSPT	19	1/4″	11	0.16	0.8	0.9	•	•		
	11IR/L 14 BSPT	14	1/4″	11	0.21	0.9	1.0	•	•		
	16IR 28 BSPT	28	3/8″	16	0.11	0.6	0.6	•			
	16IR 19 BSPT	19	3/8″	16	0.16	0.8	0.9	•			•
	16IR/L 14 BSPT	14	3/8″	16	0.21	1.0	1.2	•	•		•
	16IRB 14 BSPT	14	3/8″	16	0.21	1.0	1.2		•		
	16IRM 14 BSPT	14	3/8″	16	0.21	1.0	1.2		•		
	16IR/L 11 BSPT	11	3/8″	16	0.28	1.1	1.5	•	•	•	•
	16IRB 11 BSPT	11	3/8″	16	0.28	1.1	1.5		•		
	16IRM 11 BSPT	11	3/8″	16	0.28	1.1	1.5		•		

• ERB / ERM / IRB / IRM with pressed chip breaker

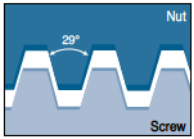
●: Standard item

External & Internal STUB ACME

ASME / ANSI B.1.8-1988: 2G



External right-hand shown
(Internal left-hand)



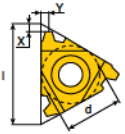
• Application: Control valves and modified ACME thread forms

Insert	Designation	TPI	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External 	16ER/L 16 STACME	16	3/8"	16	1.0	1.0	•	•		•
	16ER/L 14 STACME	14	3/8"	16	1.1	1.1				•
	16ER/L 12 STACME	12	3/8"	16	1.2	1.2	•	•		•
	16ER/L 10 STACME	10	3/8"	16	1.3	1.3				•
	16ER/L 8 STACME	8	3/8"	16	1.5	1.5	•	•		•
	16ER/L 6 STACME	6	3/8"	16	1.8	1.8	•	•		
	22ER/L 5 STACME	5	1/2"	22	2.0	2.3	•	•		•
	27ER/L 4 STACME	4	5/8"	27	2.3	2.4	•			•
	27ER/L 3 STACME	3	5/8"	27	2.8	2.9	•	•	•	
Internal 	16IR/L 16 STACME	16	3/8"	16	1.0	1.0				•
	16IR/L 14 STACME	14	3/8"	16	1.1	1.1				•
	16IR/L 12 STACME	12	3/8"	16	1.2	1.2	•	•		•
	16IR/L 10 STACME	10	3/8"	16	1.3	1.3				•
	16IR/L 8 STACME	8	3/8"	16	1.5	1.5				•
	16IR/L 6 STACME	6	3/8"	16	1.8	1.8	•	•		
	22IR/L 5 STACME	5	1/2"	22	2.0	2.3	•			•
	22UIR 3 STACME	3	1/2"	22	3.3	11.0	•			
	27IR/L 4 STACME	4	5/8"	27	2.3	2.4	•	•		•
	27IR/L 3 STACME	3	5/8"	27	2.8	2.9	•			

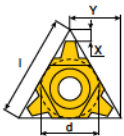
•: Standard item

External & Internal ACME

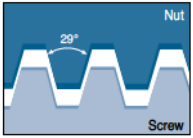
ASME / ANSI B.1.8-1988 class 3G



External right-hand shown
(Internal left-hand)



U-type



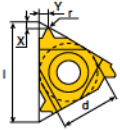
• Application: Feed screws

Insert	Designation	TPI	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External 	11ER 16 ACME	16	1/4"	11	0.9	1.0		•		
	16ER/L 16 ACME	16	3/8"	16	0.9	1.0		•		•
	16ER/L 14 ACME	14	3/8"	16	1.0	1.2				•
	16ER/L 12 ACME	12	3/8"	16	1.1	1.2	•	•		•
	16ER/L 10 ACME	10	3/8"	16	1.3	1.3	•			•
	16ER/L 8 ACME	8	3/8"	16	1.5	1.5	•	•		•
	22ER/L 6 ACME	6	1/2"	22	1.8	2.1	•	•		•
	22ER/L 5 ACME	5	1/2"	22	2.0	2.3	•	•		•
	22ER/L 4 ACME	4	1/2"	22	2.1	2.2		•		
	27ER/L 4 ACME	4	5/8"	27	2.3	2.7	•	•	•	•
Internal 	16IR/L 16 ACME	16	3/8"	16	0.9	1.0	•			•
	16IR/L 14 ACME	14	3/8"	16	1.0	1.2				•
	16IR/L 12 ACME	12	3/8"	16	1.1	1.2	•	•		•
	16IR/L 10 ACME	10	3/8"	16	1.3	1.3	•			•
	16IR/L 8 ACME	8	3/8"	16	1.5	1.5	•	•		•
	22IR/L 6 ACME	6	1/2"	22	1.8	2.1	•	•		•
	22IR/L 5 ACME	5	1/2"	22	2.0	2.3	•	•		•
	22IR 4 ACME	4	1/2"	22	2.1	2.2		•		
	27IR/L 4 ACME	4	5/8"	27	2.3	2.7	•	•	•	•
Internal / External  U	22UERL 4 ACME	4	1/2"	22	2.3	11		•		•
	27UERL 3 ACME	3	5/8"	27	2.8	13.7	•	•		
	22UIRL 4 ACME	4	1/2"	22	2.3	11				•
	27UIRL 3 ACME	3	5/8"	27	2.8	13.7	•	•		

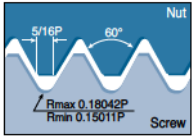
•: Standard item

External UNJ

Full profile (MIL-S-8879C 9-1992 class 3A)



External right-hand shown
(Internal left-hand)



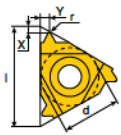
• Application: Aircraft and aerospace industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External 	11ER 28 UNJ	28	1/4″	11	0.04	0.6	0.6		•		
	11ER 24 UNJ	24	1/4″	11	0.05	0.7	0.8		•		
	11ER/L 20 UNJ	20	1/4″	11	0.06	0.8	0.9		•		
	11EL 18 UNJ	18	1/4″	11	0.07	0.8	1.0		•		
	16ER 48 UNJ	48	3/8″	16	0.03	0.6	0.6		•		
	16ER 44 UNJ	44	3/8″	16	0.03	0.6	0.6		•		
	16ER 40 UNJ	40	3/8″	16	0.03	0.6	0.6		•		
	16ER 36 UNJ	36	3/8″	16	0.04	0.6	0.6		•		
	16ER/L 32 UNJ	32	3/8″	16	0.04	0.6	0.6		•		•
	16ER 28 UNJ	28	3/8″	16	0.04	0.6	0.6	•	•		•
	16ER/L 24 UNJ	24	3/8″	16	0.05	0.7	0.8	•	•		•
	16ER/L 20 UNJ	20	3/8″	16	0.06	0.8	0.9	•	•		•
	16ER/L 18 UNJ	18	3/8″	16	0.07	0.8	1.0	•	•		•
	16ER/L 16 UNJ	16	3/8″	16	0.09	0.8	1.0	•	•		•
	16ER/L 14 UNJ	14	3/8″	16	0.10	1.0	1.2	•	•		•
	16ER 13 UNJ	13	3/8″	16	0.12	1.1	1.3		•		
	16ER/L 12 UNJ	12	3/8″	16	0.12	1.1	1.4	•	•		•
	16ER 11 UNJ	11	3/8″	16	0.13	1.1	1.5		•		
	16ER 10 UNJ	10	3/8″	16	0.15	1.1	1.5		•		•
	16ER/L 8 UNJ	8	3/8″	16	0.15	1.2	1.6	•			•

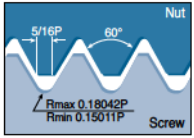
•: Standard item

Internal UNJ

Full profile



External right-hand shown
(Internal left-hand)



• Application: Aircraft and aerospace industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
Internal 	08IR 20 UNJ	20	3/16″	8	0.06	0.8	0.9			•	
	08IR 18 UNJ	18	3/16″	8	0.07	0.8	1.0			•	
	11IR 32 UNJ	32	1/4″	11	0.04	0.6	0.6		•		
	11IR 28 UNJ	28	1/4″	11	0.04	0.6	0.6		•		
	11IR 24 UNJ	24	1/4″	11	0.05	0.7	0.8		•		
	11IR 20 UNJ	20	1/4″	11	0.06	0.8	0.9		•		
	11IR 18 UNJ	18	1/4″	11	0.07	0.8	1.0		•		
	11IR 16 UNJ	16	1/4″	11	0.09	0.8	1.0		•		
	16IR 28 UNJ	28	3/8″	16	0.04	0.6	0.6				•
	16IR 24 UNJ	24	3/8″	16	0.05	0.7	0.8				•
	16IR 20 UNJ	20	3/8″	16	0.06	0.8	0.9		•		•
	16IR 18 UNJ	18	3/8″	16	0.07	0.8	1.0				•
	16IR/L 16 UNJ	16	3/8″	16	0.09	0.8	1.0	•	•		•
	16IR 14 UNJ	14	3/8″	16	0.10	1.0	1.2		•		•
	16IR/L 12 UNJ	12	3/8″	16	0.12	1.1	1.4	•	•		•
	16IR/L 8 UNJ	8	3/8″	16	0.19	1.2	1.6		•		•

•: Standard item

Cutting Condition
C17-C20 C60-C66

Contents

C
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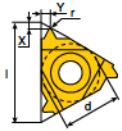
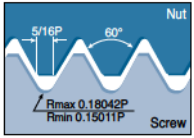
External & Internal MJ

T-THREAD

Full profile (ISO 5855)



External right-hand shown
(Internal left-hand)



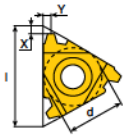
- Application: Aircraft and aerospace industry

Insert	Designation	Pitch (mm)	Dimension (mm)					Coated			Uncoated
			d	l	r	X	Y	TT7010	TT9030	TT8010	P30
External 	**16ER 1.00 MJ**	1.00	3/8"	16	0.16	0.7	0.8		•		
	16ER 1.25 MJ	1.25	3/8"	16	0.20	0.8	0.9		•		
	16ER 1.50 MJ	1.50	3/8"	16	0.23	0.8	1.0	•			
	16ER 2.00 MJ	2.00	3/8"	16	0.32	1.0	1.3		•		
Internal 	**11IR 1.00 MJ**	1.00	1/4"	11	0.05	0.7	0.8		•		
	11IR 1.25 MJ	1.25	1/4"	11	0.07	0.8	0.9		•		
	11IR 1.50 MJ	1.50	1/4"	11	0.08	0.8	1.0		•		
	11IR 2.00 MJ	2.00	1/4"	11	0.12	0.9	1.0		•		
	16IR 1.00 MJ	1.00	3/8"	16	0.05	0.7	0.8		•		
	16IR 1.25 MJ	1.25	3/8"	16	0.07	0.8	0.9		•		
	16IR 1.50 MJ	1.50	3/8"	16	0.08	0.8	1.0		•		

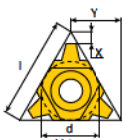
•: Standard item

External & Internal Trapez

DIN 103



External right-hand shown
(Internal left-hand)



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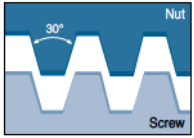


• Application: Feed screws

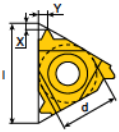
Insert	Designation	Pitch (mm)	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External 	16ER/L 1.5 TR	1.5	3/8″	16	1.0	1.1	•	•		•
	16ER/L 2 TR	2.0	3/8″	16	1.0	1.3	•	•		•
	16ER/L 3 TR	3.0	3/8″	16	1.3	1.5	•	•	•	•
	22ER/L 4 TR	4.0	1/2″	22	1.8	1.9	•	•		•
	22ER/L 5 TR	5.0	1/2″	22	2.0	2.4	•	•	•	•
	22ER/L 6 TR	6.0	1/2″	22	2.0	2.4		•		
	27ER/L 6 TR	6.0	5/8″	27	2.3	2.7	•	•		
	27ER/L 7 TR	7.0	5/8″	27	2.2	2.6	•	•		
Internal 	08IR/L 1.5 TR(1)	1.5	3/16″	8	0.6	0.6			•	
	16IR 1.5 TR	1.5	3/8″	16	1.0	1.1			•	
	16IR/L 2 TR	2.0	3/8″	16	1.0	1.3	•	•		•
	16IR/L 3 TR	3.0	3/8″	16	1.3	1.5	•	•	•	•
	22IR/L 4 TR	4.0	1/2″	22	1.8	1.9	•	•		•
	22IR/L 5 TR	5.0	1/2″	22	2.0	2.4	•	•	•	•
	22IR/L 6 TR	6.0	1/2″	22	2.0	2.4	•	•	•	•
	27IR/L 6 TR	6.0	5/8″	27	2.3	2.7	•	•		
	27IR/L 7 TR	7.0	5/8″	27	2.2	2.6	•			
Internal / External  U	22UERL 6 TR	6.0	1/2″	22	2.0	11.0	•	•	•	•
	22UERL 7 TR	7.0	1/2″	22	2.3	11.0	•			•
	22UERL 8 TR	8.0	1/2″	22	2.5	11.0	•			•
	27UERL 8 TR	8.0	5/8″	27	2.5	13.7	•	•	•	
	27UERL 9 TR	9.0	5/8″	27	3.0	13.7	•	•		
	27UERL 10 TR(1)	10.0	5/8″	27	3.2	13.7	•	•		
	08UIRL 2 TR	2.0	3/16″	8	0.9	4.0			•	
	22UIRL 6 TR	6.0	1/2″	22	2.0	11.0	•	•		•
	22UIRL 7 TR	7.0	1/2″	22	2.3	11.0	•			•
	27UIRL 8 TR	8.0	5/8″	27	2.5	13.7	•	•	•	•
	27UIRL 9 TR	9.0	5/8″	27	3.0	13.7	•	•		
	27UIRL 10 TR(1)	10.0	5/8″	27	3.2	13.7		•		

•: Standard item

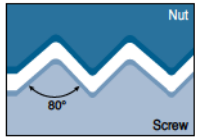
• (1) One cutting edge only
• DIN 103 04 / 1977, 150 2901 / 1977 Class 7H (7E)

External & Internal PG

Full profile (DIN 40430)



External right-hand shown
(Internal left-hand)



• Application: Electrical industry

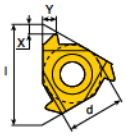
Insert	Designation	Pitch (mm)	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External 	16ER 16 PG	16	3/8"	16	0.8	1.0		•		•
	16ER 18 PG	18	3/8"	16	0.8	0.9		•		
	16ER 20 PG	20	3/8"	16	0.7	0.8		•		
Internal 	11IR 18 PG	18	1/4"	11	0.8	0.9	•	•		
	16IR/L 16 PG	16	3/8"	16	0.8	1.0		•		•
	16IR 18 PG	18	3/8"	16	0.8	0.9		•		
	16IL 20 PG	20	3/8"	16	0.8	1.0		•		

•: Standard item

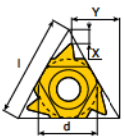
External & Internal Sagengenwinde

T-THREAD

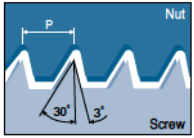
DIN 513



External right-hand shown
(Internal left-hand)



U-type



• Application: For high forces in one direction

Insert	Designation	Pitch (mm)	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External	16ER/L 2 SAGE	2.0	3/8"	16	1.1	1.6		•		
	22ER/L 3 SAGE	3.0	1/2"	22	1.5	2.4		•		
	22ER/L 4 SAGE	4.0	1/2"	22	1.9	3.1	•	•		
External U	22UER/L 5 SAGE	5.0(1)	1/2"	22	1.2	11.6	•	•		
	22UER/L 6 SAGE	6.0(1)	1/2"	22	1.2	11.7		•		
Internal	16IR/L 2 SAGE	2.0	3/8"	16	1.2	1.7		•		
	22IR/L 3 SAGE	3.0	1/2"	22	1.9	2.9	•	•		
	22IR 4 SAGE	4.0	1/2"	22	2.3	3.5		•		
Internal U	22UIR 5 SAGE	5.0(1)	1/2"	22	1.9	11.7	•	•		
	22UIR 6 SAGE	6.0(1)	1/2"	22	2.1	11.9		•		

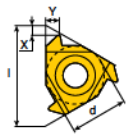
Cutting Condition
C17-C20 C60-C66

• (1) Requires special anvil

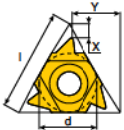
•: Standard item

External & Internal American Buttress

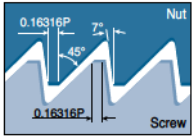
T-THREAD



External right-hand shown
(Internal left-hand)



U-type



• Application: For high forces in one direction

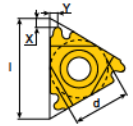
Insert	Designation	TPI	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External	11ER 20 ABUT	20	1/4"	11	1.0	1.3	•	•		
	11ER 16 ABUT	16	1/4"	11	1.0	1.5				
	16ER 20 ABUT	20	3/8"	16	1.0	1.3		•		
	16ER/L 16 ABUT	16	3/8"	16	1.1	1.5	•	•		
	16ER/L 12 ABUT	12	3/8"	16	1.4	2.0	•	•		•
	16ER/L 10 ABUT	10	3/8"	16	1.5	2.3		•		•
	22ER 8 ABUT	8	1/2"	22	2.1	3.3	•			
	22ER 6 ABUT	6	1/2"	22	2.1	3.4		•		
External U	22UER 4 ABUT	4	1/2"	22	2.3	9.5	•			•
	27UER/L 3 ABUT	3	5/8"	27	3.1	11.7	•			
Internal	11IR 20 ABUT	20	1/4"	11	1.0	1.3		•		
	11IR/L 16 ABUT	16	1/4"	11	1.0	1.5	•	•	•	
	16IR 20 ABUT	20	3/8"	16	1.0	1.3	•	•		
	16IR/L 16 ABUT	16	3/8"	16	1.0	1.5	•	•		
	16IR/L 12 ABUT	12	3/8"	16	1.4	2.0	•	•		•
	16IR/L 10 ABUT	10	3/8"	16	1.5	2.3	•	•		•
	22IR 8 ABUT	8	1/2"	22	2.1	3.3		•		
	22IR/L 6 ABUT	6	1/2"	22	2.1	3.4		•		•
Internal U	22UIR 4 ABUT	4	1/2"	22	2.3	9.5				•
	27UIR/L 3 ABUT	3	5/8"	27	3.1	11.7		•		

• ANSI B1.9-1973 class 2

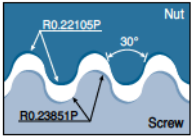
•: Standard item

External & Internal Round

DIN 405



External right-hand shown
(Internal left-hand)



• Application: Pipe coupings in fire fighting and food industries

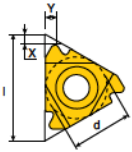
Insert	Designation	TPI	Dimension (mm)				Coated			Uncoated
			d	l	X	Y	TT7010	TT9030	TT8010	P30
External 	16ER/L10 RND	10	3/8"	16	1.1	1.2	●	●		●
	16ER/L 8 RND	8	3/8"	16	1.4	1.3	●	●		●
	16ERM 8 RND	8	3/8"	16	1.4	1.3		●		
	16ER/L 6 RND	6	3/8"	16	1.5	1.7	●	●		●
	16ERM 6 RND	6	3/8"	16	1.5	1.7		●		
	22ER/L 6 RND	6	1/2"	22	1.5	1.7	●	●	●	●
	22ER/L 4 RND	4	1/2"	22	2.2	2.3	●	●		●
	27ER 4 RND	4	5/8"	27	2.2	2.3	●			●
Internal 	16IR 10 RND	10	3/8"	16	1.1	1.2	●	●		●
	16IR/L 8 RND	8	3/8"	16	1.4	1.4	●	●		●
	16IR/L 6 RND	6	3/8"	16	1.4	1.5	●	●	●	
	16IRM 6 RND	6	3/8"	16	1.4	1.5	●	●		●
	22IR 6 RND	6	1/2"	22	1.5	1.7	●	●		●
	22IR/L 4 RND	4	1/2"	22	2.2	2.3	●	●		●
	27IR/L 4 RND	4	5/8"	27	2.2	2.3	●	●		●

• ERM / IRM with pressed chip breaker
• Tolerance class 7H

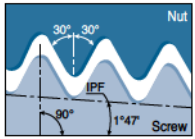
●: Standard item

API - Oil Threads

Round profile



External right-hand shown
(Internal left-hand)



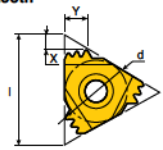
• Application: Oil & gas industry

Insert	Designation	TPI	Dimension (mm)					Coated			Uncoated
			d	l	IPF	X	Y	TT7010	TT9030	TT8010	P30
External 	16ER 10 API RD	10	3/8"	16	0.75	1.5	1.4	•	•		•
	16ER/L 8 API RD	8	3/8"	16	0.75	1.3	1.6	•	•		•
Internal 	16IR/L 10 API RD	10	3/8"	16	0.75	1.5	1.4	•	•	•	•
	16IR/L 8 API RD	8	3/8"	16	0.75	1.3	1.6	•			•

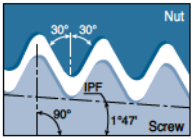
•: Standard item

API - Oil Threads

Round profile, multi-tooth



External right-hand shown
(Internal left-hand)



• Application: Oil & gas industry

Insert	Designation	TPI	Dimension (mm)					No. of Teeth	Coated			Uncoated
			d	l	IPF	X	Y		TT7010	TT9030	TT8010	P30
Internal / External 	22ER/IR 10 API RD 2M	10	1/2"	22	0.75	2.4	3.7	2		•		
	27ER/IR 10 API RD 3M	10	5/8"	27	0.75	3.8	6.2	3		•		
	27ER/IR 8 API RD 2M	8	5/8"	27	0.75	3.0	4.5	2		•		


C17-C20

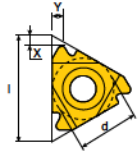
Cutting Condition

C60-C66

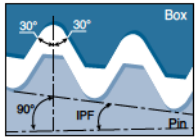
• API Spec 5B8-1996

•: Standard item

API - Oil Thread Profile



External right-hand shown
(Internal left-hand)



• Application: Oil & gas industry

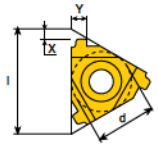
Insert	Designation	TPI	Dimension (mm)					Connection No. or size	Coated			Uncoated
			d	l	IPF	X	Y		TT7010	TT9030	TT8010	P30
External 	22ER/L 5 API 403[1]	5	1/2"	22	3	1.8	2.5	2.375"-4.5"REG	•	•		•
	27ER/L 4 API 382[2]	4	5/8"	27	2	2.1	2.8	NC23-NC50	•	•		
	27ER 4 API 383[2]	4	5/8"	27	3	2.1	2.8	NC56-NC77	•	•		
	27ER/L 4 API 502[3]	4	5/8"	27	2	2.0	3.0	6-5/8"REG	•	•		•
	27ER 4 API 503[3]	4	5/8"	27	3	2.0	3.0	5-1/2, 7-5/8, 8-5/8"REG	•	•		•
Internal 	22IR/L 5 API 403[1]	5	1/2"	22	3	1.8	2.5	2.375"-4.5"REG	•	•		•
	27IR/L 4 API 382[2]	4	5/8"	27	2	2.1	2.8	NC23-NC50	•	•		•
	27IR 4 API 383[2]	4	5/8"	27	3	2.1	2.8	NC56-NC77		•		
	27IR/L 4 API 502[3]	4	5/8"	27	2	2.0	3.0	6-5/8"REG	•			•
	27IR/L 4 API 503[3]	4	5/8"	27	3	2.0	3.0	5-1/2, 7-5/8, 8-5/8"REG	•			•

• [1] V-0.040 [2] V-0.038R [3] V-0.050
• 0.050, API spec 74-1994

•: Standard item

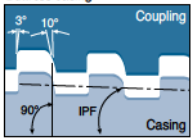
Buttress Casing / Extreme Line Casing

T-THREAD

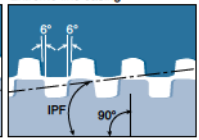


External right-hand shown
(Internal left-hand)

Buttress casing



Extreme line casing



• Application: Oil & gas industry

Insert	Designation	TPI	Dimension (mm)					Connection No. or size	Coated			Uncoated
			d	l	IPF	X	Y		TT7010	TT9030	TT8010	P30
 Buttress	22ER/IR 5 BUT 0.75	5	1/2″	22	0.75	2.2	2.4	4-1/2″ - 13-3/8″	•	•		•
	22ER/IR 5 BUT 1.0	5	1/2″	22	1.0	2.3	2.4	16″ - 20″	•			
 Extreme line casing	22ER 6 EL 1.5	6	1/2″	22	1.5	1.9	1.9	5″ - 7-5/8″	•	•		
	22IR 6 EL 1.5	6	1/2″	22	1.5	1.9	1.9	5″ - 7-5/8″		•		
	22ER 5 EL 1.25	5	1/2″	22	1.25	2.4	2.3	8-5/8″ - 10-3/4″	•	•		
	22IR 5 EL 1.25	5	1/2″	22	1.25	2.4	2.3	8-5/8″ - 10-3/4″	•			

• ANSI B1.9-1973 class 2

•: Standard item

Recommended Cutting Conditions

T-THREAD

According to DIN/ISO513 and VDI 3323

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1
		0.25-0.25 %C	Annealed	650	190	2
		0.25-0.25 %C	Quenched and tempered	850	250	3
		0.55-0.80 %C	Annealed	750	220	4
		0.55-0.80 %C	Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12
			Martensitic	820	240	13
			Austenitic	600	180	14
K	Gray cast iron (GG)		Ferritic		160	15
			Pearlitic		250	16
	Cast iron nodular (GGG)		Ferritic		180	17
			Pearlitic		260	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum - Wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics			29
			Hard rubber			30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys			Rm 400		36
			Alpha+beta alloys cured	Rm 1050		37
H	Hardened steel		Hardened		55HRC	38
			Hardened		60HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron nodular		Hardened		55HRC	41

• For more information of material groups, see the Technical Guide "material conversion table".

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

Cutting speed (m/min)					
Coated			Uncoated		
TT7010	TT9030	TT8010	P30		
120-200	140-220	85-125	80-120		
120-200	140-220	85-125	80-120		
110-190	130-210	80-120	70-110		
110-190	130-210	80-120	70-110		
90-170	110-190	70-100	65-95		
70-120	70-120	50-70	70-110		
90-170	110-190	70-100	65-95		
80-120	100-140	60-100	70-110		
70-120	90-140	40-80	40-80		
70-100	70-100	40-70	40-70		
40-80	40-80	40-70	40-70		
85-125	90-130	40-70	40-70		
120-180	130-190	80-120	80-120		
50-100	60-110	40-60	40-60		
-	100-140	80-120	-		
-	110-150	80-120	-		
-	110-150	80-120	-		
-	80-120	80-120	-		
-	110-150	60-100	-		
-	80-120	55-95	-		
-	1300-1500	700-900	-		
-	400-600	330-430	-		
-	500-800	350-450	-		
-	370-470	300-360	-		
-	200-280	150-210	-		
-	260-340	160-240	-		
-	350-450	250-310	-		
-	100-140	80-120	-		
-	250-350	160-200	-		
-	250-350	150-210	-		
-	50-70	20-50	-		
-	30-50	20-50	-		
-	30-50	20-40	-		
-	20-40	15-30	-		
-	20-40	15-30	-		
-	120-140	90-110	-		
-	40-60	20-50	-		
-	30-60	20-35	-		
-	20-40	20-30	-		
-	20-40	20-30	-		
-	20-30	15-25	-		

Cutting Data

Maximum depth of first cut for CNC control / external threading - M-type inserts

Full profile	Pitch		Insert designation	No. of passes		Max. depth for first pass (D1) mm Low carbon steel	
	mm	TPI		Min.	Max.	Eq.(2)	Dim.(3)
ISO metric	1.00		16 ERM 1.00 ISO	5	9	0.34	0.51
	1.25		16 ERM 1.25 ISO	6	11	0.42	0.63
	1.50		16 ERM 1.50 ISO	6	12	0.46	0.69
	1.75		16 ERM 1.75 ISO	8	13	0.48	0.72
	2.00		16 ERM 2.00 ISO	8	14	0.50	0.75
	2.50		16 ERM 2.50 ISO	10	15	0.53	0.80
	3.00		16 ERM 3.00 ISO	12	17	0.56	0.84
American UN		24	16 ERM 24 UN	5	9	0.34	0.51
		20	16 ERM 20 UN	6	10	0.42	0.63
		18	16 ERM 18 UN	6	11	0.46	0.69
		16	16 ERM 16 UN	7	12	0.47	0.71
		14	16 ERM 14 UN	6	13	0.46	0.69
		12	16 ERM 12 UN	8	14	0.50	0.75
		8	16 ERM 8 UN	12	17	0.56	0.84
British BSW		19	16 ERM 19 W	6	11	0.35	0.52
		16	16 ERM 16 W	7	12	0.47	0.71
		14	16 ERM 14 W	8	13	0.50	0.75
		11	16 ERM 11 W	9	14	0.44	0.66
NPT		18	16 ERM 18 NPT	10	20	0.24	0.36
		14	16 ERM 14 NPT	13	26	0.24	0.36
		11.5	16 ERM 11.5 NPT	15	24	0.27	0.40
		8	16 ERM 8 NPT	17	30	0.31	0.46
Round		6	16 ERM 6 RND	9	20	0.42	0.63
Partial profile 60°		48-16	16 ERM A 60	(1)		0.22	0.33
		14-8	16 ERM G 60			0.50	0.75
		48-8	16 ERM AG 60			0.24	0.36
		7-5	16 ERM N 60			0.41	0.62
Partial profile 55°		14-8	16 ERM G 55			0.50	0.75
		48-8	16 ERM AG 55			0.22	0.33

- (1) As per the number of passes for the relevant pitch
(2) Equal depth of cut method
(3) Diminished depth of cut for each pass method

Max. depth for first pass (D_1) mm							
High carbon steel		Alloy steel		Stainless steel		Nonferrous aluminum	
Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]
0.31	0.46	0.27	0.41	0.22	0.33	0.48	0.71
0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
0.41	0.62	0.37	0.55	0.30	0.45	0.64	0.97
0.43	0.65	0.38	0.58	0.31	0.47	0.67	1.01
0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
0.48	0.72	0.42	0.64	0.34	0.52	0.74	1.12
0.50	0.76	0.45	0.67	0.36	0.55	0.78	1.18
0.31	0.46	0.27	0.41	0.22	0.33	0.48	0.71
0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
0.41	0.62	0.37	0.55	0.30	0.45	0.64	0.97
0.42	0.64	0.38	0.57	0.31	0.46	0.66	0.99
0.41	0.62	0.37	0.55	0.28	0.41	0.64	0.97
0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
0.50	0.76	0.45	0.67	0.36	0.55	0.78	1.18
0.32	0.47	0.28	0.42	0.21	0.31	0.49	0.73
0.42	0.64	0.38	0.57	0.31	0.46	0.66	0.99
0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
0.40	0.59	0.35	0.53	0.29	0.43	0.62	0.92
0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
0.22	0.32	0.19	0.29	0.14	0.22	0.34	0.50
0.24	0.36	0.22	0.32	0.18	0.26	0.38	0.56
0.28	0.41	0.25	0.37	0.20	0.30	0.43	0.64
0.38	0.57	0.34	0.50	0.27	0.41	0.59	0.88
0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
0.37	0.56	0.33	0.50	0.27	0.40	0.57	0.87
0.45	0.68	0.40	0.60	0.33	0.49	0.70	1.05
0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46

Cutting Data

Maximum depth of first cut for CNC control / external threading - M-type inserts

Full profile	Pitch		Insert designation	No. of passes		Max. depth for first pass (D1) mm Low carbon steel	
	mm	TPI		Min.	Max.	Eq.(2)	Dim.(3)
ISO metric	1.50		11 IRM 1.50 ISO	10	20	0.20	0.30
	1.00		16 IRM 1.00 ISO	9	16	0.14	0.20
	1.25		16 IRM 1.25 ISO	9	16	0.19	0.28
	1.50		16 IRM 1.50 ISO	10	20	0.20	0.30
	1.75		16 IRM 1.75 ISO	11	18	0.21	0.32
	2.00		16 IRM 2.00 ISO	12	21	0.22	0.33
	2.50		16 IRM 2.50 ISO	14	21	0.23	0.34
	3.00		16 IRM 3.00 ISO	16	22	0.24	0.35
American UN		20	16 IRM 20 UN	7	13	0.20	0.30
		18	16 IRM 18 UN	8	15	0.20	0.30
		16	16 IRM 16 UN	11	19	0.20	0.30
		14	16 IRM 14 UN	11	20	0.21	0.31
		12	16 IRM 12 UN	12	21	0.23	0.34
		8	16 IRM 8 UN	14	20	0.24	0.36
British BSW		19	16 IRM 19 W	7	12	0.28	0.42
		16	16 IRM 16 W	9	14	0.26	0.39
		14	16 IRM 14 W	10	16	0.27	0.41
		11	16 IRM 11 W	12	19	0.31	0.46
NPT		14	16 IRM 14 NPT	21	35	0.13	0.20
		11.5	16 IRM 11.5 NPT	21	33	0.17	0.25
		8	16 IRM 8 NPT	20	34	0.23	0.34
Round		6	16 IRM 6 RND	12	24	0.30	0.46
Partial profile 60°		48-16	06 IRM A 60	(1)		0.22	0.33
		48-16	08 IRM A 60			0.13	0.20
		48-16	11 IRM A 60			0.13	0.20
		48-16	16 IRM A 60			0.13	0.20
		14-8	16 IRM G 60			0.22	0.33
		48-8	16 IRM AG 60			0.14	0.21
		7-5	22 IRM N 60			0.23	0.34
Partial profile 55°		14-8	16 IRM G 55			0.34	0.50
		48-8	16 IRM AG 55			0.14	0.20

- (1) As per the number of passes for the relevant pitch
  (2) Equal depth of cut method
  (3) Diminished depth of cut for each pass method

Number of cutting passes for regular type inserts

Pitch mm	0.5	1.0	1.5	2.0	2.5	3.0	4.0	6.0
TPI	48	24	16	12	10	8	6	4
Number of passes	4-6	5-9	5-12	6-14	7-15	8-17	10-20	11-22

- For mini-tools (06IR or 08IR) add 1-3 passes. Increase for hard materials

Max. depth for first pass (D1) mm							
High carbon steel		Alloy steel		Stainless steel		Nonferrous aluminum	
Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]	Eq.[2]	Dim.[3]
0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
0.13	0.18	0.11	0.16	0.09	0.13	0.20	0.28
0.17	0.25	0.15	0.22	0.12	0.18	0.27	0.39
0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
0.19	0.29	0.17	0.26	0.14	0.21	0.29	0.45
0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
0.21	0.31	0.18	0.27	0.15	0.22	0.32	0.48
0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
0.18	0.27	0.16	0.24	0.12	0.18	0.28	0.42
0.18	0.27	0.16	0.24	0.13	0.20	0.28	0.42
0.19	0.28	0.17	0.25	0.13	0.19	0.29	0.43
0.21	0.31	0.18	0.27	0.15	0.22	0.32	0.48
0.22	0.32	0.19	0.29	0.16	0.23	0.34	0.50
0.25	0.38	0.22	0.34	0.17	0.25	0.39	0.59
0.23	0.35	0.21	0.31	0.17	0.25	0.36	0.55
0.24	0.37	0.22	0.33	0.18	0.27	0.38	0.57
0.28	0.41	0.25	0.37	0.20	0.30	0.43	0.64
0.12	0.18	0.10	0.16	0.08	0.12	0.18	0.28
0.15	0.23	0.14	0.20	0.11	0.16	0.24	0.35
0.21	0.31	0.18	0.27	0.14	0.20	0.32	0.48
0.27	0.41	0.24	0.37	0.20	0.30	0.42	0.64
0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
0.12	0.18	0.10	0.16	0.08	0.13	0.18	0.28
0.20	0.30	0.18	0.26	0.14	0.21	0.31	0.46
0.13	0.19	0.11	0.17	0.09	0.14	0.20	0.29
0.21	0.31	0.18	0.27	0.15	0.22	0.32	0.48
0.31	0.45	0.27	0.40	0.22	0.33	0.48	0.70
0.13	0.18	0.11	0.16	0.09	0.13	0.20	0.28

Recommended Number of Passes

T-THREAD

For multi-tooth insert

Full profile	Insert description	No. of passes	1st pass	2nd pass	3rd pass	4th pass	External / internal
ISO metric	16 ER 1.0 ISO 3M	2	0.39	0.24	-	-	External
	16 ER 1.5 ISO 2M	3	0.40	0.31	0.21	-	External
	22 ER 1.5 ISO 3M	2	0.54	0.38	-	-	External
	22 ER 2.0 ISO 2M	3	0.56	0.42	0.27	-	External
	22 ER 2.0 ISO 3M	2	0.75	0.50	-	-	External
	27 ER 3.0 ISO 2M	4	0.60	0.52	0.44	0.30	External
	16 IR 1.0 ISO 3M	2	0.32	0.26	-	-	Internal
	16 IR 1.5 ISO 2M	3	0.36	0.29	0.22	-	Internal
	22 IR 1.5 ISO 3M	2	0.49	0.38	-	-	Internal
	22 IR 2.0 ISO 2M	3	0.50	0.40	0.25	-	Internal
	22 IR 2.0 ISO 3M	2	0.72	0.43	-	-	Internal
	27 IR 3.0 ISO 2M	4	0.57	0.45	0.38	0.33	Internal
UN	16 ER 16 UN 2M	3	0.45	0.32	0.20	-	External
	22 ER 16 UN 3M	2	0.60	0.37	-	-	External
	22 ER 12 UN 2M	3	0.60	0.39	0.31	-	External
	22 ER 12 UN 3M	2	0.80	0.50	-	-	External
	27 ER 8 UN 2M	4	0.63	0.55	0.42	0.36	External
	16 IR 16 UN 2M	3	0.40	0.29	0.23	-	Internal
	22 IR 16 UN 3M	2	0.57	0.35	-	-	Internal
	22 IR 12 UN 2M	3	0.55	0.39	0.28	-	Internal
	22 IR 12 UN 3M	2	0.75	0.47	-	-	Internal
	27 IR 8 UN 2M	4	0.65	0.49	0.42	0.27	Internal
NPT	22 ER 11.5 NPT 2M	4	0.55	0.46	0.35	0.32	External
	27 ER 11.5 NPT 3M	3	0.75	0.57	0.36	-	External
	27 ER 8 NPT 2M	4	0.80	0.62	0.54	0.45	External
	22 IR 11.5 NPT 2M	4	0.55	0.46	0.35	0.32	Internal
	27 IR 11.5 NPT 3M	3	0.75	0.57	0.36	-	Internal
	27 IR 8 NPT 2M	4	0.80	0.62	0.54	0.45	Internal
Whitworth	16 ER 14 W 2M	3	0.51	0.39	0.26	-	External
	22 ER 14 W 3M	2	0.72	0.44	-	-	External
	22 ER 11 W 2M	3	0.65	0.46	0.37	-	External
	16 IR 14 W 2M	3	0.51	0.39	0.26	-	Internal
	22 IR 14 W 3M	2	0.72	0.44	-	-	Internal
	22 IR 11 W 2M	3	0.65	0.46	0.37	-	Internal
API round	22 ER 10 API RD 2M	3	0.58	0.53	0.30	-	External
	27 ER 10 API RD 3M	2	0.98	0.43	-	-	External
	27 ER 8 API RD 2M	3	0.82	0.59	0.40	-	External
	22 IR 10 API RD 2M	3	0.58	0.53	0.30	-	Internal
	27 IR 10 API RD 3M	2	0.98	0.43	-	-	Internal
	27 IR 8 API RD 2M	3	0.82	0.59	0.40	-	Internal

TS-THREAD

Thread Milling

Contents

Designation System

Solid carbide end mill

TMTEC□	06	04	C	14	1.0	ISO	TT9030
1	2	3	4	5	6	7	8	9

1 TaeguTec mill thread

- **T** - TaeguTec
- **MT** - Mill thread
- **E** - End mill
- **C** - Carbide

2 End mill type

- **B** - Axial coolant bore
- **Z** - Coolant hole in the flutes
- **S** - Short head
- **SH** - Short head for threading hard materials
- **Q** - Reduced diameter neck
- **I** - Partial profile

3 Shank diameter

- **06** 6.0 mm
- **10** 10.0 mm

4 Cutting diameter

- **031** 3.1 mm
- **04** 4.0 mm

5 No. of flutes

- **C** - 3 flutes
- **D** - 4 flutes
- **E** - 5 flutes
- **F** - 6 flutes

6 Length of thread (ap)

- **10** 10.0 mm

7 Thread pitch

- **0.25-4.0** pitch (mm)
- **72-7** TPI

8 Thread standard

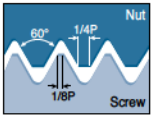
- **ISO** - ISO Metric
- **UN** - American UN
- **W** - Whitworth
- **NPT** - NPT
- **NPTF** - NPTF
- **BSPT** - British BSPT
- **UNJ** - UNJ
- **MJ** - MJ

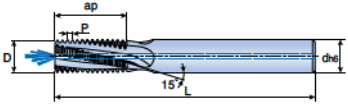
9 Grades

Coated
TT9030
TT1040

TMTECB-ISO

Solid carbide threading end mills with internal coolant hole





- Application: General engineering

Designation	Pitch (mm)	M coarse	M fine	Dimension (mm)				No. of flutes	Grade TT9030
				d	D	ap	L		
TMTECB 06038C10 0.5 ISO	0.5	-	Ø ≥ 5	6	3.8	10.3	58	3	●
06031C7 0.7 ISO	0.7	M4	Ø ≥ 5	6	3.1	7.4	58	3	●
06045C10 0.75 ISO	0.75	-	Ø ≥ 6	6	4.5	10.1	58	3	●
1010D24 0.75 ISO	0.75	-	Ø ≥ 12	10	10.0	24.4	73	4	●
06038C9 0.8 ISO	0.8	M5	Ø ≥ 6	6	3.8	9.2	58	3	●
06046C10 1.0 ISO	1.0	M6	Ø ≥ 7	6	4.6	10.5	58	3	●
06046C14 1.0 ISO	1.0	M6	Ø ≥ 7	6	4.6	14.5	58	3	●
0606C12 1.0 ISO	1.0	-	Ø ≥ 9	6	6.0	12.5	58	3	●
0808D16 1.0 ISO	1.0	-	Ø ≥ 10	8	8.0	16.5	64	4	●
1010D24 1.0 ISO	1.0	-	Ø ≥ 12	10	10.0	24.5	73	4	●
0606C14 1.25 ISO	1.25	M8	Ø ≥ 10	6	6.0	14.4	58	3	●
0606C19 1.25 ISO	1.25	M8	Ø ≥ 10	6	6.0	19.4	58	3	●
08078C17 1.5 ISO	1.5	M10	Ø ≥ 12	8	7.8	17.0	64	3	●
08078C24 1.5 ISO	1.5	M10	Ø ≥ 12	8	7.8	24.8	64	3	●
1010D21 1.5 ISO	1.5	-	Ø ≥ 14	10	10.0	21.8	73	4	●
1212D26 1.5 ISO	1.5	-	Ø ≥ 16	12	12.0	26.3	84	4	●
1616F33 1.5 ISO	1.5	-	Ø ≥ 20	16	16.0	33.8	105	6	●
1009C20 1.75 ISO	1.75	M12	Ø ≥ 12	10	9.0	20.1	73	3	●
1009C28 1.75 ISO	1.75	M12	Ø ≥ 12	10	9.0	28.9	73	3	●
1010C27 2.0 ISO	2.0	M14	Ø ≥ 15	10	10.0	27.0	73	3	●
12118D27 2.0 ISO	2.0	M16	Ø ≥ 17	12	11.8	27.0	84	4	●
12118D39 2.0 ISO	2.0	M16	Ø ≥ 17	12	11.8	39.0	105	4	●
2020F41 2.0 ISO	2.0	-	Ø ≥ 26	20	20.0	41.0	105	6	●
1615E33 2.5 ISO	2.5	M20	Ø ≥ 22	16	15.0	33.8	105	5	●
1615E48 2.5 ISO	2.5	M20	Ø ≥ 22	16	15.0	48.8	105	5	●
2018D40 3.0 ISO	3.0	M24	Ø ≥ 25	20	18.0	40.5	105	4	●
2018D58 3.0 ISO	3.0	M24	Ø ≥ 25	20	18.0	58.5	120	4	●
2020D43 3.0 ISO	3.0	M27	Ø ≥ 27	20	20.0	43.5	105	4	●

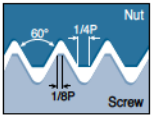
Cutting Condition C114-C115

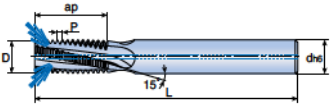
●: Standard item

TMTECZ-ISO

TS-THREAD

Solid carbide with internal coolant in the flutes, for internal threading





- Application: General engineering

Designation	Pitch (mm)	M coarse	M fine	Dimension (mm) d	D	ap	L	No. of flutes	Grade TT9030
TMTECZ 06048C10 1.0 ISO	1.0	M6	Ø ≥ 7	6	4.8	10.5	58	3	●
0606C12 1.0 ISO	1.0	-	Ø ≥ 9	6	6.0	12.5	58	3	●
0808D16 1.0 ISO	1.0	-	Ø ≥ 10	8	8.0	16.5	64	4	●
0606C14 1.25 ISO	1.25	M8	Ø ≥ 10	6	6.0	14.4	58	3	●
0606C19 1.25 ISO	1.25	M8	Ø ≥ 10	6	6.0	19.4	58	3	●
08078C17 1.5 ISO	1.5	M10	Ø ≥ 12	8	7.8	17.0	64	3	●
1010D21 1.5 ISO	1.5	-	Ø ≥ 14	10	10.0	21.8	73	4	●
1212D26 1.5 ISO	1.5	-	Ø ≥ 16	12	12.0	26.3	84	4	●
1616E33 1.5 ISO	1.5	-	Ø ≥ 20	16	16.0	33.8	101	5	●
1009C20 1.75 ISO	1.75	M12	Ø ≥ 12	10	9.0	20.1	73	3	●
1009C28 1.75 ISO	1.75	M12	Ø ≥ 12	10	9.0	28.9	73	3	●
1010C27 2.0 ISO	2.0	M14	Ø ≥ 15	10	10.0	27.0	73	3	●
12118D27 2.0 ISO	2.0	M16	Ø ≥ 17	12	11.8	27.0	84	4	●
1615E33 2.5 ISO	2.5	M20	Ø ≥ 22	16	15.0	33.8	101	5	●

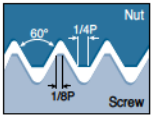
●: Standard item

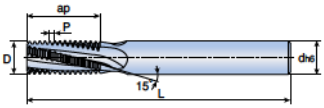
Cutting Condition C114-C115

TMTEC-ISO

TS-THREAD

Solid carbide threading end mills for internal threading





• Application: General engineering

Designation				Pitch (mm)	M coarse	M fine	Dimension (mm)				No. of flutes	Grade TT9030
							d	D	ap	L		
TMTEC	06022C5	0.5	ISO	0.5	M3	Ø ≥ 4	6	2.2	5.3	58	3	•
	06038C10	0.5	ISO	0.5	-	Ø ≥ 5	6	3.8	10.4	58	3	•
	06031C7	0.7	ISO	0.7	M4	Ø ≥ 5	6	3.1	7.4	58	3	•
	06045C10	0.75	ISO	0.75	-	Ø ≥ 6	6	4.5	10.1	58	3	•
	06036C9	0.8	ISO	0.8	M5	Ø ≥ 6	6	3.6	9.2	58	3	•
	0604C10	1.0	ISO	1.0	M6	Ø ≥ 7	6	4	10.5	58	3	•
	0604C14	1.0	ISO	1.0	M6	Ø ≥ 7	6	4	14.5	58	3	•
	0606C12	1.0	ISO	1.0	-	Ø ≥ 9	6	6	12.5	58	3	•
	0808D16	1.0	ISO	1.0	-	Ø ≥ 10	8	8	16.5	64	4	•
	0605C14	1.25	ISO	1.25	M8	Ø ≥ 10	6	5	14.4	58	3	•
	0605C19	1.25	ISO	1.25	M8	Ø ≥ 10	6	5	19.4	58	3	•
	0807C17	1.5	ISO	1.5	M10	Ø ≥ 12	8	7	17.3	64	3	•
	0807C24	1.5	ISO	1.5	M10	Ø ≥ 12	8	7	24.8	76	3	•
	1010D21	1.5	ISO	1.5	-	Ø ≥ 14	10	10	21.8	73	4	•
	1616F33	1.5	ISO	1.5	-	Ø ≥ 20	16	16	33.8	105	6	•
	0808C20	1.75	ISO	1.75	M12	Ø ≥ 14	8	8	20.1	64	3	•
	0808C28	1.75	ISO	1.75	M12	Ø ≥ 14	8	8	28.9	76	3	•
	1010C27	2.0	ISO	2.0	M16	Ø ≥ 17	10	10	27.0	73	3	•
	1010C39	2.0	ISO	2.0	M16	Ø ≥ 17	10	10	39.0	105	3	•
	1212D27	2.0	ISO	2.0	-	Ø ≥ 18	12	12	27.0	84	4	•
	2020F41	2.0	ISO	2.0	-	Ø ≥ 26	20	20	41.0	105	6	•
	1414D33	2.5	ISO	2.5	M20	Ø ≥ 22	14	14	33.8	84	4	•
	1414D48	2.5	ISO	2.5	M20	Ø ≥ 22	14	14	48.8	105	4	•
	1616C40	3.0	ISO	3.0	M24	Ø ≥ 25	16	16	40.5	105	3	•
	1616C58	3.0	ISO	3.0	M24	Ø ≥ 25	16	16	58.5	120	3	•
	2020D43	3.0	ISO	3.0	M27	Ø ≥ 28	20	20	43.5	105	4	•

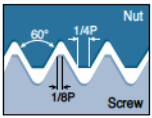
Cutting Condition C114-C115

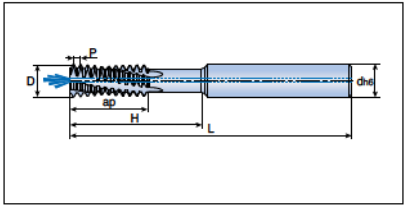
•: Standard item

TMTECQ-ISO

TS-THREAD

Solid carbide thread end mills with internal coolant holes and a reduced diameter neck for deep internal threading





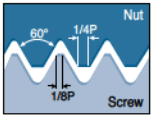
Designation		Pitch (mm)	Thread size	Dimension (mm)					No. of flutes	Grade TT9030
				d	D	ap	H	L		
TMTECQ	1010D32 1.0 ISO	1.0	Ø ≥ 12	10	10.0	18.0	32.0	73	4	●
	1212D38 1.0 ISO	1.0	Ø ≥ 14	12	12.0	21.0	38.0	84	4	●
	1616F45 1.0 ISO	1.0	Ø ≥ 18	16	16.0	26.0	45.0	105	6	●
	1010D30 1.5 ISO	1.5	Ø ≥ 13	10	10.0	18.0	30.0	73	4	●
	1212D34 1.5 ISO	1.5	Ø ≥ 15	12	12.0	19.5	34.5	84	4	●
	1616F43 1.5 ISO	1.5	Ø ≥ 19	16	16.0	25.5	43.5	105	6	●
	2020F60 1.5 ISO	1.5	Ø ≥ 23	20	20.0	36.0	60.0	105	6	●
	1212D42 2.0 ISO	2.0	Ø ≥ 16	12	12.0	24.0	42.0	84	4	●
	1616E45 2.0 ISO	2.0	Ø ≥ 20	16	12.0	26.0	45.0	105	5	●
	2020F56 2.0 ISO	2.0	Ø ≥ 24	20	20.0	34.0	56.0	105	6	●
	1616D45 3.0 ISO	3.0	Ø ≥ 22	16	16.0	30.0	45.0	105	4	●
	2020E54 3.0 ISO	3.0	Ø ≥ 26	20	20.0	33.0	54.0	105	5	●
	2020D45 3.5 ISO	3.5	Ø ≥ 26	20	20.0	28.0	45.5	105	4	●
	2525D64 4.0 ISO	4.0	Ø ≥ 31	25	25.0	40.0	64.0	105	4	●

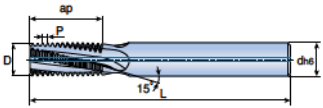
●: Standard item

Cutting Condition C114-C115

TMTEC E-ISO

Solid carbide end mills for external threading





• Application: General engineering

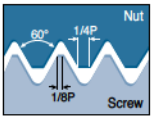
Designation		Pitch (mm)	Dimension (mm)				No. of flutes	Grade TT9030
			d	D	ap	L		
TMTEC E	1010D16 1.0 ISO	1.0	10	10.0	16.5	73	4	●
	1212E20 1.0 ISO	1.0	12	12.0	20.5	84	5	●
	1010D16 1.25 ISO	1.25	10	10.0	16.9	73	4	●
	1010D15 1.5 ISO	1.5	10	10.0	15.8	73	4	●
	1212D20 1.5 ISO	1.5	12	12.0	20.3	84	4	●
	1010D20 1.75 ISO	1.75	12	12.0	20.1	84	4	●
	1010C17 2.0 ISO	2.0	10	10.0	17.0	73	3	●
	1212D21 2.0 ISO	2.0	12	12.0	21.0	84	4	●

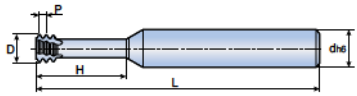
●: Standard item

Cutting Condition C114-C115

TMTECS-ISO

Short solid carbide end mills for internal threading





- Thread length up to 2xD
- Application: General engineering

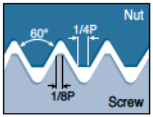
Designation	Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade
			d	D	H	L		TT9030
TMTECS 06016C4 0.4 ISO	0.40	M2	6	1.55	4.5	58	3	●
06017C5 0.45 ISO	0.45	M2.2	6	1.65	5.0	58	3	●
0602C5 0.45 ISO	0.45	M2.5	6	1.95	5.5	58	3	●
06024C6 0.5 ISO	0.50	M3	6	2.35	6.5	58	3	●
06028C7 0.6 ISO	0.60	M3.5	6	2.75	7.5	58	3	●
06031C9 0.7 ISO	0.70	M4	6	3.10	9.0	58	3	●
06038C12 0.8 ISO	0.80	M5	6	3.80	12.5	58	3	●
06047C14 1.0 ISO	1.00	M6	6	4.65	14.0	58	3	●
0606C18 1.25 ISO	1.25	M8	6	5.95	18.0	58	3	●
0808D25 0.75 ISO	0.75	M10	8	8.00	25.0	64	4	●
08078C23 1.5 ISO	1.50	M10	8	7.80	23.0	64	3	●
1009C26 1.75 ISO	1.75	M12	10	9.00	26.0	73	3	●
12118D35 2.0 ISO	2.00	M16	12	11.8	35.0	84	4	●
1615E43 2.5 ISO	2.50	M20	16	15.00	43.0	105	5	●

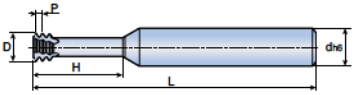
●: Standard item

Cutting Condition C116

TMTECS-ISO

Short solid carbide end mills for internal threading





- Thread length up to 3xD
- Application: General engineering

Designation	Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade
			d	D	H	L		TT9030
TMTECS 03007C2 0.25 ISO	0.25	M1.0	3	0.72	2.5	39	3	●
03009C3 0.25 ISO	0.25	M1.2	3	0.90	3.0	39	3	●
03011C4 0.3 ISO(1)	0.30	M1.4	3	1.05	4.0	39	3	●
03012C5 0.35 ISO(1)	0.35	M1.6	3	1.20	5.0	39	3	●
03016C6 0.4 ISO(1)	0.40	M2	3	1.55	6.0	39	3	●
0602C7 0.45 ISO	0.45	M2.5	6	1.95	7.5	58	3	●
06024C9 0.5 ISO	0.50	M3	6	2.35	9.5	58	3	●
06028C10 0.6 ISO	0.60	M3.5	6	2.75	10.5	58	3	●
06031C12 0.7 ISO	0.70	M4	6	3.10	12.5	58	3	●
06038C16 0.8 ISO	0.80	M5	6	3.80	16.0	58	3	●
06047C20 1.0 ISO	1.00	M6	6	4.65	20.0	58	3	●
0606C24 1.25 ISO	1.25	M8	6	5.95	24.0	58	3	●

Cutting Condition C116

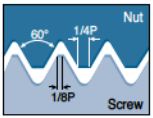
• (1) Specially designed for the production of dental implants

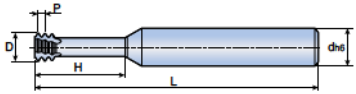
●: Standard item

TMTECSH-ISO

TS-THREAD

Short solid carbide end mills for internal threading of hardened steel





- Left-hand tools (CNC code M04)
- Application: General engineering

Designation	Pitch (mm)	Thread size	Dimension (mm)				No. of flutes	Grade TT1040
			d	D	H	L		
TMTECSH 03011C4 0.3 ISO	0.30	M1.4	3	1.05	4.0	39	3	●
03012C5 0.35 ISO	0.35	M1.6	3	1.20	4.8	39	3	●
03016C6 0.4 ISO	0.40	M2	3	1.55	6.0	58	3	●
06016C4 0.4 ISO	0.40	M2	6	1.55	4.5	58	3	●
06017C5 0.45 ISO	0.45	M2.2	6	1.65	5.0	58	3	●
0602C5 0.45 ISO	0.45	M2.5	6	1.95	5.5	58	3	●
06024C6 0.5 ISO	0.50	M3	6	2.35	6.5	58	3	●
06028C7 0.6 ISO	0.60	M3.5	6	2.75	7.5	58	3	●
06031C9 0.7 ISO	0.70	M4	6	3.10	9.0	58	3	●
06038C12 0.8 ISO	0.80	M5	6	3.80	12.5	58	3	●
06047C14 1.0 ISO	1.00	M6	6	4.65	14.0	58	3	●
0606C18 1.25 ISO	1.25	M8	6	5.95	18.0	58	3	●
08078C23 1.5 ISO	1.50	M10	8	7.80	23.0	64	3	●
1009C26 1.75 ISO	1.75	M12	10	9.00	26.0	73	3	●
12118D35 2.0 ISO	2.00	M16	12	11.8	35.0	84	4	●

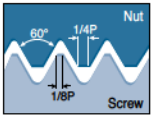
●: Standard item

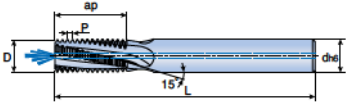
Cutting Condition C116

TMTECB-UN

TS-THREAD

Solid carbide end mills for internal threading with internal coolant hole





- Application: General engineering

Designation		TPI	UNC	UNF	UNEF	Dimension (mm)				No. of flutes	Grade
						d	D	ap	L		TT9030
TMTECB	06032C6 32 UN	32	8	10	12	6	3.2	6.8	58	3	●
	0808D18 32 UN	32	-	-	3/8	8	8.0	18.7	64	4	●
	0606C14 32 UN	32	-	-	5/16	6	6.0	14.7	58	3	●
	0605C11 28 UN	28	-	1/4	-	6	5.0	11.3	58	3	●
	0606C14 28 UN	28	-	-	7/16-1/2	6	6.0	14.1	58	3	●
	08066C14 24 UN	24	-	5/16	-	8	6.6	14.3	64	3	●
	0808D21 24 UN	24	-	3/8	9/16-5/8	8	8.0	20.6	64	4	●
	06047C12 20 UN	20	1/4	-	-	6	4.7	12.1	58	3	●
	0808C21 20 UN	20	-	7/16	-	8	8.0	21.0	64	3	●
	1010D22 20 UN	20	-	1/2	-	10	10.0	22.3	73	4	●
	1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
	06056C14 18 UN	18	5/16	-	-	6	5.6	14.8	58	3	●
	12113D26 18 UN	18	-	9/16-5/8	11/8-15/8	12	11.3	26.1	84	4	●
	08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
	1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
	08077C20 14 UN	14	7/16	-	-	8	7.7	20.9	64	3	●
	1616E37 14 UN	14	-	7/8	-	16	16.0	37.2	105	5	●
	10092C22 13 UN	13	1/2	-	-	10	9.2	22.5	73	3	●
	12105C26 12 UN	12	9/16	-	-	12	10.5	26.5	84	3	●
	1616E41 12 UN	12	-	1-1 1/2	-	16	16.0	41.3	105	5	●
	12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
	16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	105	4	●
	1616C38 9 UN	9	7/8	-	-	16	16.0	38.1	105	3	●
	20196D42 8 UN	8	1	-	-	20	19.5	42.9	105	4	●
	2020D45 7 UN	7	1 1/8-1 1/4	-	-	20	20.0	45.3	105	4	●

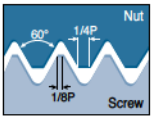
●: Standard item

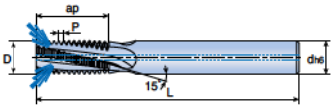
Cutting Condition C114-C115

TMTECZ-UN

TS-THREAD

Solid carbide with internal coolant in the flutes for internal threading





• Application: General engineering

Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				No. of flutes	Grade
					d	D	ap	L		TT9030
TMTECZ 0605C11 28 UN	28	-	1/4	-	6	5.0	11.3	58	3	●
0606C14 28 UN	28	-	-	7/16-1/2	6	6.0	14.1	58	3	●
08066C14 24 UN	24	-	5/16	-	8	6.6	14.3	64	3	●
0808D21 24 UN	24	-	3/8	9/16-5/8	8	8.0	20.6	64	4	●
0808C21 20 UN	20	-	7/16	-	8	8.0	21.0	64	3	●
1010D22 20 UN	20	-	1/2	-	10	10.0	22.3	73	4	●
1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
06056C14 18 UN	18	5/16	-	-	6	5.6	14.8	58	3	●
12113D26 18 UN	18	-	9/16-5/8	1 1/8-1 5/8	12	11.3	26.1	84	4	●
08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
08077C20 14 UN	14	7/16	-	-	8	7.7	20.9	64	3	●
1616E37 14 UN	14	-	7/8	-	16	16.0	37.2	101	5	●
10092C22 13 UN	13	1/2	-	-	10	9.2	22.5	73	3	●
12105C26 12 UN	12	9/16	-	-	12	10.5	26.5	84	3	●
12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	101	4	●

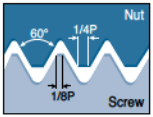
●: Standard item

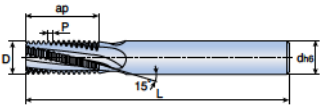
Cutting Condition C114-C115

TMTEC-UN

TS-THREAD

Solid carbide threading end mills with internal threading





- Application: General engineering

Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				No. of flutes	Grade
					d	D	ap	L		TT9030
TMTEC 06025C6 40 UN	40	5	-	-	6	2.5	6.0	62	3	●
06032C6 32 UN	32	8	10	12	6	3.2	6.8	58	3	●
0604C11 28 UN	28	-	1/4	-	6	4.0	11.3	58	3	●
0606C14 28 UN	28	-	-	7/6-1/2	6	6.0	14.5	58	3	●
0605C14 24 UN	24	-	5/16	-	6	5.0	14.8	58	3	●
0807C21 24 UN	24	-	3/8	9/16-5/8	8	7.0	20.0	64	3	●
06045C12 20 UN	20	1/4	-	-	6	4.5	12.1	58	3	●
0807C21 20 UN	20	-	7/16-1/2	-	8	7.0	20.0	64	3	●
1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
0605C14 18 UN	18	5/16	-	-	6	5.0	14.8	58	3	●
1010D26 18 UN	18	-	9/16-5/8	1 1/8-1 5/8	10	10.0	26.1	73	4	●
0606C16 16 UN	16	3/8	-	-	6	6.0	16.7	58	3	●
1212D31 16 UN	16	-	3/4	-	12	12.0	30.0	84	4	●
0807C20 14 UN	14	7/16	-	-	8	7.0	20.9	64	3	●
1615E37 14 UN	14	-	7/8	-	16	15.0	37.2	105	5	●
0808C22 13 UN	13	1/2	-	-	8	8.0	22.5	64	3	●
1016C26 12 UN	12	9/16	-	-	10	10.0	26.5	73	3	●
1616E41 12 UN	12	-	1 -1 1/2	-	16	16.0	41.3	105	5	●
1010C28 11 UN	11	5/8	-	-	10	10.0	28.9	73	3	●
1212C34 10 UN	10	3/4	-	-	12	12.0	34.3	84	3	●
1615C38 9 UN	9	7/8	-	-	16	15.0	38.1	105	3	●
1616C42 8 UN	8	1	-	-	16	16.0	42.9	105	3	●
2020D45 7 UN	7	1 1/8-1 1/4	-	-	20	20.0	45.4	105	4	●

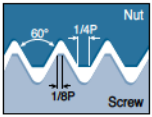
●: Standard item

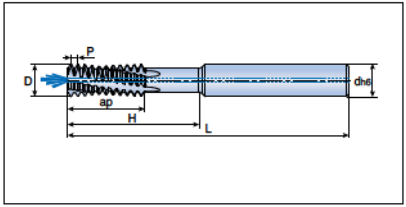
Cutting Condition C114-C115

TMTECQ-UN

TS-THREAD

Solid carbide thread end mills with internal coolant holes and a reduced diameter neck for deep internal threading





Designation		TPI	Thread size	Dimension (mm)					No. of flutes	Grade TT9030
				d	D	ap	H	L		
TMTECQ	1010D30 20 UN	20	Ø ≥ 12	10	10.0	17.8	30.5	73	4	●
	1212E35 20 UN	20	Ø ≥ 14	12	12.0	20.3	35.6	84	5	●
	1616F43 20 UN	20	Ø ≥ 18	16	16.0	25.4	43.2	105	6	●
	1212D35 18 UN	18	Ø ≥ 15	12	12.0	19.7	35.3	84	4	●
	1212D35 16 UN	16	Ø ≥ 15	12	12.0	20.7	35.0	84	4	●
	1616E42 16 UN	16	Ø ≥ 19	16	16.0	25.4	42.8	105	5	●
	2020F58 16 UN	16	Ø ≥ 23	20	20.0	36.6	58.8	105	6	●
	1616E45 14 UN	14	Ø ≥ 20	16	16.0	25.4	45.3	105	5	●
	1212D42 12 UN	12	Ø ≥ 16	12	12.0	25.4	42.3	84	4	●
	2020E55 12 UN	12	Ø ≥ 24	20	20.0	33.9	55.1	105	5	●

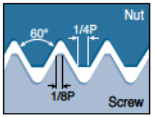
●: Standard item

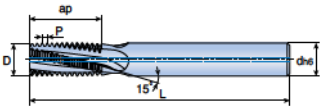
Cutting Condition C114-C115

TMTEC E-UN

TS-THREAD

Solid carbide end mills for external threading





• Application: General engineering

Designation		TPI	Dimension (mm)				No. of flutes	Grade TT9030
			d	D	ap	L		
TMTEC E	1010D16 24 UN	24	10	10.0	16.4	73	4	●
	1212E21 20 UN	20	12	12.0	21.0	84	5	●
	1212D20 18 UN	18	12	12.0	20.5	84	4	●
	1212D21 16 UN	16	12	12.0	21.4	84	4	●
	1212D20 14 UN	14	12	12.0	20.9	84	4	●
	1212D20 12 UN	12	12	12.0	20.1	84	4	●

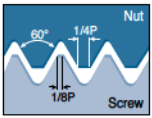
●: Standard item

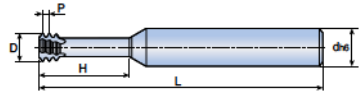
Cutting Condition C114-C115

TMTECS-UN

TS-THREAD

Short solid carbide end mills for internal threading





- Thread length up to 2xD
- Application: General engineering

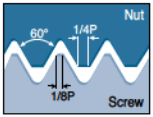
Designation		TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
					d	D	H	L		TT9030
TMTECS	06014C3 72 UN	72	-	1	6	1.45	3.7	58	3	●
	06014C3 64 UN	64	1	2	6	1.40	3.8	58	3	●
	06016C4 56 UN	56	2	3	6	1.65	4.4	58	3	●
	06019C5 48 UN	48	3	4	6	1.90	5.2	58	3	●
	06021C8 40 UN	40	4	-	6	2.10	8.0	58	3	●
	06021C6 40 UN	40	4	-	6	2.10	6.3	58	3	●
	06024C7 40 UN	40	5	6	6	2.45	7.0	58	3	●
	06033C9 36 UN	36	-	8	6	3.30	9.0	58	3	●
	06025C7 32 UN	32	6	-	6	2.55	7.1	58	3	●
	06032C9 32 UN	32	8	-	6	3.20	9.5	58	3	●
	06037C10 32 UN	32	-	10	6	3.70	10.5	58	3	●
	06042C11 28 UN	28	-	12	6	4.20	11.0	58	3	●
	0605C14 28 UN	28	-	1/4	6	5.00	14.5	58	3	●
	06035C10 24 UN	24	10,12	-	6	3.50	10.6	64	3	●
	08066C17 24 UN	24	-	5/16, 3/8	8	6.60	17.0	58	3	●
	06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
	0808C25 20 UN	20	-	7/16	8	8.00	25.0	64	3	●
	0606C17 18 UN	18	5/16		6	6.00	17.0	58	3	●
	1212D35 18 UN	18	-	5/8	12	12.00	35.0	84	4	●
	08067C22 16 UN	16	3/8	-	8	6.70	22.0	64	3	●
	08077C25 14 UN	14	7/16	-	8	7.70	25.0	64	3	●
	10092C27 13 UN	13	1/2	-	10	9.20	27.5	73	3	●
	12105C31 12 UN	12	9/16	-	12	10.50	31.5	84	3	●
	12114C34 11 UN	11	5/8	-	12	11.40	34.5	84	3	●
	16144D41 10 UN	10	3/4	-	16	14.40	41.5	105	4	●

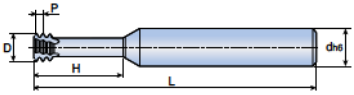
●: Standard item

Cutting Condition C116

TMTECS-UN

Short solid carbide end mills for internal threading





- Thread length up to 3xD
- Application: General engineering

Designation		TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
					d	D	H	L		TT9030
TMTECS	06012C4 80 UN	80	-	0	6	1.15	4.0	58	3	●
	03015C6 72 UN(1)	72	-	1	3	1.45	6.0	58	3	●
	03016C6 56 UN	56	2	3	3	1.65	6.6	39	3	●
	06016C6 56 UN	56	2	3	6	1.65	6.6	58	3	●
	06024C9 40 UN	40	5	6	6	2.45	9.6	58	3	●
	03026C10 32 UN	32	6	-	3	2.55	10.5	39	3	●
	06032C12 32 UN	32	8	-	6	3.20	12.5	58	3	●
	06037C15 32 UN	32	-	10	6	3.70	15.0	58	3	●
	06025C10 32 UN	32	6	-	6	2.55	10.5	58	3	●
	0605C19 28 UN	28	-	1/4	6	5.00	19.0	58	3	●
	08066C24 24 UN	24	-	5/16, 3/8	8	6.60	24.0	64	3	●
	0647C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
	0606C23 18 UN	18	5/16	-	6	6.00	23.0	58	3	●

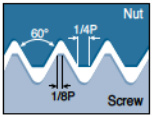
Cutting Condition C116

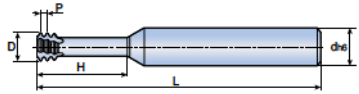
• (1) Specially designed for the production of dental implants

●: Standard item

TMTECSH-UN

Short solid carbide end mills for internal threading of hardened steel (2xD)





- Left-hand tools (CNC code M04)
- Application: General engineering

Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
				d	D	H	L		TT1040
TMTECSH 06014C3 72 UN	72	-	1	6	1.45	3.7	58	3	●
06014C3 64 UN	64	1	2	6	1.40	3.8	58	3	●
06016C4 56 UN	56	2	3	6	1.65	4.4	58	3	●
06019C5 48 UN	48	3	4	6	1.90	5.2	58	3	●
06021C6 40 UN	40	4	-	6	2.10	6.3	58	3	●
06024C7 40 UN	40	5	6	6	2.45	7.0	58	3	●
06033C9 36 UN	36	-	8	6	3.30	9.0	58	3	●
06025C7 32 UN	32	6	-	6	2.55	7.1	58	3	●
06032C9 32 UN	32	8	-	6	3.20	9.5	58	3	●
06037C10 32 UN	32	-	10	6	3.70	10.5	58	3	●
06042C11 28 UN	28	-	12	6	4.20	11.0	58	3	●
0605C14 28 UN	28	-	1/4	6	5.00	14.5	58	3	●
06035C10 24 UN	24	10,12	-	6	3.50	10.6	58	3	●
08066C17 24 UN	24	-	5/16	8	6.60	17.0	64	3	●
06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
0808C25 20 UN	20	-	7/16	8	8.00	25.0	64	3	●
0606C17 18 UN	18	5/16	-	6	6.00	17.0	58	3	●
1212D35 18 UN	18	-	5/8	12	12.0	35.0	84	4	●
08067C22 16 UN	16	3/8	-	8	6.70	22.0	64	3	●
08077C25 14 UN	14	7/16	-	8	7.70	25.0	64	3	●
1092C27 13 UN	13	1/2	-	10	9.20	27.5	73	3	●
12105C37 12 UN	12	9/16	-	12	10.5	31.5	84	3	●
12114C34 11 UN	11	5/8	-	12	11.4	41.5	84	3	●

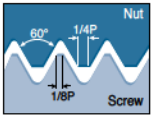
●: Standard item

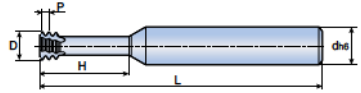
Cutting Condition C116

TMTECSH-UN

TS-THREAD

Short solid carbide end mills for internal threading of hardened steel (3xD)





- Left-hand tools (CNC code M04)
- Application: General engineering

Designation	TPI	UNC	UNF	Dimension (mm)				No. of flutes	Grade
				d	D	H	L		TT1040
TMTECSH 06012C4 80 UN	80	-	0	6	1.15	4.00	58	3	●
06024C9 40 UN	40	5	6	6	2.45	9.60	58	3	●
06032C12 32 UN	32	8	-	6	3.20	12.5	58	3	●
06037C15 32 UN	32	-	10	6	3.70	15.0	58	3	●
0605C19 28 UN	28	-	1/4	6	5.00	19.0	58	3	●
08066C24 24 UN	24	-	5/16	8	6.60	24.0	64	3	●
06047C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
0606C23 18 UN	18	5/16	-	6	6.00	23.0	58	3	●

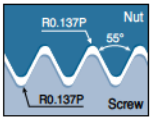
●: Standard item

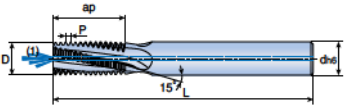
Cutting Condition C116

TMTECB-W / TMTECZ-W / TMTEC-W

TS-THREAD

Solid carbide threading end mills with internal coolant hole





• Application: General engineering, fittings and pipe couplings

Designation		TPI	BSP	Dimension (mm)				No. of flutes	Grade
				d	D	ap	L		TT9030
TMTECB	08078C14 28 W	28	G1/8	8	7.8	14.1	64	3	•
	1010D16 19 W	19	G1/4-3/8	10	10.0	16.7	73	4	•
	1616E26 14 W	14	G1/2-7/8	16	16.0	26.3	105	5	•
	1616D38 11 W	11	G ≥ 1	16	16.0	38.1	105	4	•
	2020E47 11 W	11	G ≥ 1	20	20.0	47.3	105	5	•
TMTECZ	08078C14 28 W	28	G1/8	8	7.8	14.1	64	3	•
	1010D16 19 W	19	G1/4-3/8	10	10.0	16.7	73	4	•
	1616E26 14 W	14	G1/2-7/8	16	16.0	26.3	101	5	•
	1616D38 11 W	11	G ≥ 1	16	16.0	38.1	101	4	•
TMTEC	0606C9 28 W	28	G1/8	6	6	9.5	58	3	•
	0808C14 19 W	19	G1/4-3/8	8	8	14.0	64	3	•
	1212D19 14 W	14	G1/2-7/8	12	12	19.0	84	4	•
	1212D26 14 W	14	G1/2-7/8	12	12	26.3	84	4	•
	1212C24 11 W	11	G1-1 1/2	12	12	24.2	84	3	•
	1616D38 11 W	11	G1-3	16	16	38.1	105	4	•
	2020E47 11 W	11	G > 1	20	20	47.3	105	5	•

Cutting Condition C114-C115

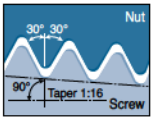
• (1) B type (2) Z type

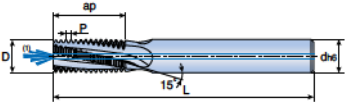
•: Standard item

TMTECB-NPT / TMTECZ-NPT / TMTEC-NPT

TS-THREAD

Solid carbide end mills for internal or external threading





• Application: Steam, gas and water pipes

Designation		TPI	NPT	Dimension (mm)				No. of flutes	Grade
				d	D	ap	L		TT9030
TMTECB	08076C10 27 NPT	27	1/8	8	7.6	10.8	64	3	•
	1010D16 18 NPT	18	1/4-3/8	10	10.0	16.2	73	4	•
	16155D22 14 NPT	14	1/2-3/4	16	15.5	22.7	105	4	•
	2020D29 11.5 NPT	11.5	1-2	20	20.0	29.8	105	4	•
	2020D39 8 NPT	8	≥ 2 1/2	20	20.0	39.7	105	4	•
TMTECZ	08076C10 27 NPT	27	1/8	8	7.6	10.8	64	3	•
	1010D16 18 NPT	18	1/4-3/8	10	10.0	16.2	73	4	•
	16155D22 14 NPT	14	1/2-3/4	16	15.5	22.7	101	4	•
TMTEC	0606C9 27 NPT	27	1/8	6	6	9.9	58	3	•
	0808C14 18 NPT	18	1/4-3/8	8	8	14.8	64	3	•
	1212D20 14 NPT	14	1/2-3/4	12	12	20.9	84	4	•
	1616D27 11.5 NPT	11.5	1-2	16	16	27.6	105	4	•
	2020D39 8 NPT	8	≥ 2 1/2	20	20	39.7	105	4	•

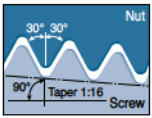
Cutting Condition
C114-C115

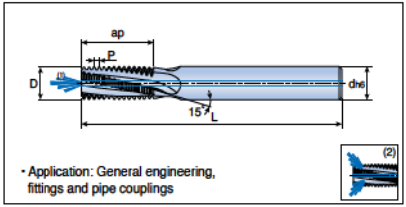
• (1) B type (2) Z type

•: Standard item

TMTECB-NPTF / TMTECZ-NPTF / TMTEC-NPTF TS-THREAD

Solid carbide end mills for internal or external threading





• Application: General engineering, fittings and pipe couplings

Designation		TPI	NPTF	Dimension (mm)				No. of flutes	Grade
				d	D	ap	L		TT9030
TMTECB	08076C10 27 NPTF	27	1/8	8	7.8	10.8	64	3	●
	1010D16 18 NPTF	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22 14 NPTF	14	1/2-3/4	16	15.5	22.7	105	4	●
	2020D29 11.5 NPT	11.5	1-2	20	20.0	29.8	105	4	●
	2020D39 8 NPTF	8	≥ 2 1/2	20	20.0	39.7	105	4	●
TMTECZ	08076C10 27 NPTF	27	1/8	8	7.6	10.8	64	3	●
	1010D16 18 NPTF	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22 14 NPTF	14	1/2-3/4	16	15.5	22.7	101	4	●
TMTEC	0606C9 27 NPTF	27	1/8	6	6	9.9	58	3	●
	0808C14 18 NPTF	18	1/4-3/8	8	8	14.8	64	3	●
	1212D20 14 NPTF	14	1/2-3/4	12	12	20.9	84	4	●
	1616D2 11.5 NPTF	11.5	1-2	16	16	27.6	105	4	●
	2020D39 8 NPTF	8	≥ 2 1/2	20	20	39.7	105	4	●

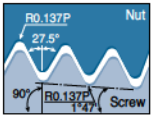
Cutting Condition C114-C115

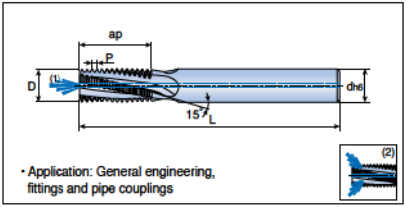
• (1) B type (2) Z type

●: Standard item

TMTECB-BSPT / TMTECZ-BSPT / TMTEC-BSPT TS-THREAD

Solid carbide end mills for internal or external threading





• Application: General engineering, fittings and pipe couplings

Designation		TPI	BSPT	Dimension (mm)				No. of flutes	Grade
				d	D	ap	L		TT9030
TMTECB	08078C14 28 BSPT	28	RC1/8	8	7.8	14.1	64	4	•
	1010D16 19 BSPT	19	RC1/4-3/8	10	10.0	16.7	73	4	•
	1616E26 14 BSPT	14	RC1/2-7/8	16	16.0	26.3	105	4	•
	1616D28 11 BSPT	11	RC1-2	16	16.0	28.9	105	4	•
TMTECZ	08078C14 28 BSPT	28	RC1/8	8	7.8	14.1	64	3	•
	1010D16 19 BSPT	19	RC1/4-3/8	10	10.0	16.7	73	4	•
	1616E26 14 BSPT	14	RC1/2-7/8	16	16.0	26.3	101	5	•
	1616D28 11 BSPT	11	RC1-2	16	16.0	28.9	101	4	•
TMTEC	0606C9 28 BSPT	28	RC1/8	6	6	9.5	58	3	•
	0808C14 19 BSPT	19	RC1/4-3/8	8	8	14.0	64	3	•
	1212D19 14 BSPT	14	RC1/2-7/8	12	12	19.1	84	4	•
	1616D28 11 BSPT	11	RC1-2	16	16	28.9	105	4	•

Cutting Condition C114-C115

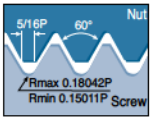
• (1) B type (2) Z type

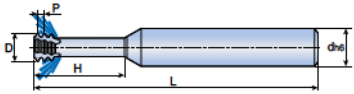
•: Standard item

TMTECS-MJ / TMTECS-UNJ

TS-THREAD

Thread mills for internal MJ and UNJ threads with coolant holes directed to the cutting edges





- For applications requiring high fatigue strength in the aerospace and automotive industries

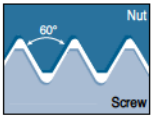
	Designation	Pitch (mm)	TPI	MJ size	UNJC	UNJF	Dimension (mm) d	D	H	L	No. of flutes	Grade TT9030
TMTECS	06032C10 0.7 MJ(T)	0.7	-	MJ4	-	-	6	3.20	10.0	58	3	●
	06039C12 0.8 MJ(T)	0.8	-	MJ5	-	-	6	3.90	12.5	58	3	●
	06048C15 1.0 MJ(T)	1.0	-	MJ6	-	-	6	4.80	15.0	58	3	●
	08061C20 1.25 MJ	1.25	-	MJ8	-	-	8	6.10	20.0	64	3	●
	0808C25 1.5 MJ	1.5	-	MJ10	-	-	8	8.00	25.0	64	3	●
	10092C30 1.75 MJ	1.75	-	MJ12	-	-	10	9.20	30.0	73	3	●
	1010C35 2.0 MJ	2.0	-	MJ14, MJ16	-	-	10	10.00	35.0	73	3	●
TMTECS	06033C10 32 UNJ(T)	-	32	-	8	10	6	3.30	10.5	58	3	●
	08051C16 28 UNJ	-	28	-	-	1/4	8	5.10	16.0	64	3	●
	08067C20 24 UNJ	-	24	-	-	5/16, 3/8	8	6.70	20.0	64	3	●
	06049C16 20 UNJ(T)	-	20	-	1/4	-	6	4.90	16.0	58	3	●
	0808C28 20 UNJ	-	20	-	-	7/16	8	8.00	28.0	64	3	●
	08061C20 18 UNJ	-	18	-	5/16	-	8	6.15	20.0	64	3	●
	08069C24 16 UNJ	-	16	-	3/8	-	8	6.90	24.0	64	3	●
	08079C25 14 UNJ	-	14	-	7/16	-	8	7.90	25.0	64	3	●
	10094C27 13 UNJ	-	13	-	1/2	-	10	9.40	37.5	73	3	●

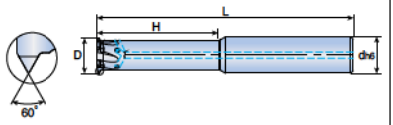
●: Standard item

Cutting Condition C114-C115

TMTECI-60°

Partial profile solid carbide thread mills with coolant holes directed to the cutting edges for internal and external threads





- Application: General engineering

Designation		Pitch		Thread dia.	Dimension (mm)				No. of flutes	Grade
		mm	TPI		d	D	H	L		TT9030
TMTECI	0605D20 A60	Int. 0.5-0.8 Ext. 0.4-0.8	56-28 64-32	Ø ≥ 6	6	5.0	20	58	4	●
	0808D28 A60			Ø ≥ 9	8	8.0	28	64	4	●
	1212E38 A60			Ø ≥ 13	12	12.0	38	84	4	●
	0808D30 A60	Int. 1.0-1.75 Ext. 0.8-1.5	28-14 32-16	Ø ≥ 10	8	8	30	64	4	●
	1010D35 A60			Ø ≥ 12	10	10	35	73	4	●
	1212E39 A60			Ø ≥ 14	12	12	39	84	5	●
	1212E40 A60	Int. 2.3-3.0 Ext. 1.75-2.5	23-8 15-10	Ø ≥ 16	12	12	40	84	5	●
	1614E45 A60			Ø ≥ 18	16	16	45	101	5	●
	1616E50 A60			Ø ≥ 20	16	16	50	101	5	●

●: Standard item

Cutting Condition C114-C115

Tool Designation System

End mills

TMT	S	R	0020	H	14	C	2
1	2	3	4	5	6	7	8

1 TaeguTec mill thread

T	- TaeguTec
M	- Mill
T	- Thread

2 Clamping system

S - Screw clamping

3 Hand of tool

R - Right-hand

4 Cutting diameter

0020 20.0 mm

5 Tool length

F
H
J
K
M
R
S

6 Insert size (ap)

12	12.0 mm
14	14.0 mm
21	21.0 mm
30	30.0 mm
40	40.0 mm

7 Shank type

C	Carbide shank

8 Number of Inserts

2	2 inserts

Cutters

TMT	S	R	0063	C	21	-	5	-	22
1	2	3	4	5	6		7		8

1 TaeguTec mill thread

T	- TaeguTec
M	- Mill
T	- Thread

2 Clamping system

S - Screw clamping

3 Hand of tool

R - Right-hand

4 Cutting diameter

0063 63.0 mm

5 Tool length

C
D
E

6 Insert size (ap)

21	21.0 mm
30	30.0 mm
40	40.0 mm

7 Number of Inserts

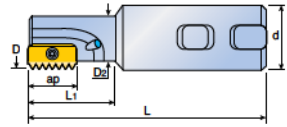
3	3 inserts
4	4 inserts
5	5 inserts

8 Bore diameter

22	22.0 mm
27	27.0 mm
32	32.0 mm

TMTSR

Indexable threading end mills



Designation		Dimension (mm)						Insert
		ap	D	d	D2	L	L1	
TMTSR	0009 H12	12	9.5	20	7.5	85	14	TMT12
	0010 H12(1)	12	9.9	20	7.6	85	16	TMT12
	0012 F14	14	12	20	8.9	75	20	TMT14
	0014 H14	14	14.5	20	11.2	85	25	TMT14
	0017 H14	14	17	20	13.4	85	30	TMT14
	0018 H21(2)	21	18	20	14.4	85	30	TMT21
	0021 H21	21	21	20	16.5	94	40	TMT21
	0025 K21(3)	21	25	20	-	125	-	TMT21
	0029 J30	30	29	25	23.0	110	50	TMT30
	0031 M30(3)	30	31	25	-	150	-	TMT30
	0038 M30(3)	30	38	32	-	150	-	TMT30
	0048 M40	40	48	40	35.0	153	78	TMT40
	0048 R40(3)	40	48	40	-	210	-	TMT40

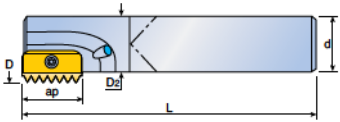
- All end mills are equipped with a bore for internal coolant
- (1) For conical thread inserts: 12-18 NPT, 12-18 NPTF, 12-19 BSPT
- (2) Not suitable for use with the following insert: 21 I 3.5 ISO, 21I 8 UN, 21-11 BSPT, 21-11.5 NPT, 21-11.5 NPTF
- (3) For long reach

Spare parts

Designation	Screw	Torx wrench		
				
TMTSR...12	TS12	TK12		
TMTSR...14	S11	T-8/5		
TMTSR...21	TS21	TK21		
TMTSR...30	TS30	TK40		
TMTSR...40	TS40	TK40		

TMTSR-C

Cylindrical carbide shank



Designation		Dimension (mm)					Insert
		ap	D	d	D2	L	
TMTSR	0010 K12C [1]	12	9.9	8	8	125	TMT12
	0013 H14C	14	13.2	10	10	110	TMT14
	0013 J14C	14	13.2	10	10	150	TMT14
	0015 K14C	14	15.2	12	12	175	TMT14
	0021 K21C	21	21	16	16	130	TMT21
	0021 M21C	21	21	16	16	200	TMT21
	0027 S30C	30	27	20	20	270	TMT30

- [1] Without coolant bore
- For holders with long overhang, reduce the cutting speed and feed rate between 20 to 40% (depending on workpiece material, pitch and overhang)
- All end mills are equipped with bore for internal coolant

Spare parts

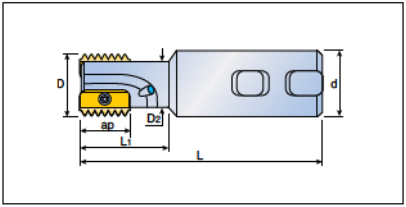
Designation	Screw	Torx wrench		
TMTSR...12C	TS12	TK12		
TMTSR...14C	S11	T-8/5		
TMTSR...21C	TS21	TK21		
TMTSR...30C	TS30	TK40		

Cutting Condition
C101-C108 C113

TMTSR-Double

TS-THREAD

Double insert thread milling end mills



Designation			Dimension (mm)						Insert
			ap	D	d	D2	L	L1	
TMTSR	0020 H14-2	2	14	20	20	16	93	41	TMT14
	0030 J21-2	2	21	30	25	24	108	52	TMT21
	0040 L30-2	2	30	40	32	30	130	70	TMT30
	0050 M40-2	2	40	50	40	38	153	78	TMT40

• All end mills are equipped with a bore for internal coolant

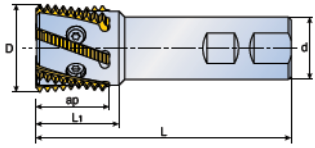
Spare parts

Designation	Screw	Torx wrench		
TMTSR 0020	S11	T-8/5		
TMTSR 0030	TS21	TK21		
TMTSR 0040	TS30	TK40		
TMTSR 0050	TS40	TK40		

C101-C106 | Cutting Condition C113

TMTSRH

End mills with coolant holes for helical threading inserts



Designation			Dimension (mm)					Insert
			ap	D	d	L	L1	
TMTSRH	23-2	2	27	23	25	110	50	TMTH 23
	32-5	5	32	32	32	130	60	TMTH 32
	45-6	6	37	45	32	130	-	TMTH 45

• All end mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx wrench		
TMTSRH 23	TS23	TK21		
TMTSRH 32	TS32	TK22		
TMTSRH 45	TS45	TK40		

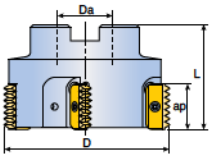
Cutting Condition
C109-C112 C113

TaeguTec

TMTSR-Multi

TS-THREAD

Large diameter thread



Designation			Dimension (mm)				Insert
			ap	D	Da	L	
TMTSR	0063C21-5-22	5	21	63	22	50	TMT21
	0063C30-4-22	4	30	63	22	50	TMT30
	0080D30-4-27	4	30	80	27	55	TMT30
	0100D30-4-32	4	30	100	32	60	TMT30
	0080D40-4-27	4	40	80	27	65	TMT40
	0100E40-4-32	4	40	100	32	70	TMT40

• All shell mills are equipped with a bore for internal coolant

Spare parts

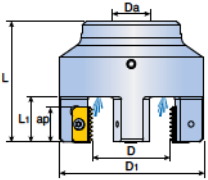
Designation	Screw	Torx wrench		
TMTSR...C21	TS21	TK21		
TMTSR...C30/D30	TS30	TK40		
TMTSR...D40/E40	TS40	TK40		

Cutting Condition

C101-C106 C113

TMTSLE

External multi-tooth threading shell mills



Designation			Dimension (mm)						Insert
			ap	D	Da	D1	L	L1	
TMTSLE	0020D21-3	3	21	20	22	58	65	25	TMT21 E
	0030D21-3	3	21	30	22	68	65	25	TMT21 E
	0045E21-4	4	21	45	27	83	70	25	TMT21 E

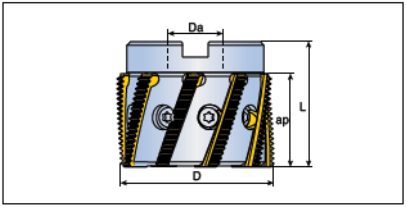
• All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx wrench		
				
TMTSLE	TS21	TK21		

TMTSRH

Helical shell mill for large thread diameters



Designation		Dimension (mm)				Insert
		ap	D	Da	L	
TMTSRH 63-9	9	38	63	22	50	TMTH 63

• All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Torx wrench		
TMTSRH	TS63	TK40		

C109-C112 Cutting Condition C113

Insert Designation System

Thread milling inserts

TMT	30	E	1.5	ISO	TT9030
1	2	3	4	5	6

1 TaeguTec mill thread

T - TaeguTec
M - Mill
T - Thread

2 Insert size (l)

12 12.0 mm
14 14.0 mm
21 21.0 mm
30 30.0 mm
40 40.0 mm

3 Application

E - External
I - Internal
□ - External + internal

4 Thread pitch

0.5 - 6.0 pitch (mm)
32 - 4 TPI

5 Thread standard

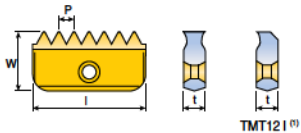
ISO - ISO Metric
UN - American UN
WHIT - Whitworth
NPT - NPT
NPTF - NPTF
BSPT - British BSPT

6 Grades

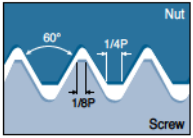
Coated
TT9030

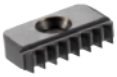
TMT-ISO

Metric



TMT12 I (1)



Insert	Designation	Pitch (mm)	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 I 0.5 ISO(1)	0.5	12	6.3	2.9	●
	TMT12 I 0.75 ISO(1)	0.75	12	6.3	2.9	●
	TMT12 I 1.0 ISO(1)	1.0	12	6.3	2.9	●
	TMT12 I 1.25 ISO(1)	1.25	12	6.3	2.9	●
	TMT12 I 1.5 ISO(1)	1.5	12	6.3	2.9	●
	TMT14 I 0.5 ISO	0.5	14	7.5	3.1	●
	TMT14 E/I 0.75 ISO	0.75	14	7.5	3.1	●
	TMT14 E/I 1.0 ISO	1.0	14	7.5	3.1	●
	TMT14 E/I 1.25 ISO	1.25	14	7.5	3.1	●
	TMT14 E/I 1.5 ISO	1.5	14	7.5	3.1	●
	TMT14 E/I 1.75 ISO	1.75	14	7.5	3.1	●
	TMT14 E/I 2.0 ISO	2.0	14	7.5	3.1	●
	TMT14 E/I 2.5 ISO	2.5	14	7.5	3.1	●
	TMT21 E/I 1.0 ISO	1.0	21	12	4.7	●
	TMT21 E/I 1.5 ISO	1.5	21	12	4.7	●
	TMT21 I 1.75 ISO	1.75	21	12	4.7	●
	TMT21 E/I 2.0 ISO	2.0	21	12	4.7	●
	TMT21 E/I 2.5 ISO	2.5	21	12	4.7	●
	TMT21 E/I 3.0 ISO	3.0	21	12	4.7	●
	TMT21 I 3.5 ISO	3.5	21	12	4.7	●
	TMT30 E/I 1.5 ISO	1.5	30	16	5.5	●
	TMT30 E/I 2.0 ISO	2.0	30	16	5.5	●
	TMT30 E/I 3.0 ISO	3.0	30	16	5.5	●
	TMT30 E/I 3.5 ISO	3.5	30	16	5.5	●
	TMT30 E/I 4.0 ISO	4.0	30	16	5.5	●
	TMT30 I 4.5 ISO	4.5	30	16	5.5	●
	TMT30 I 5.0 ISO	5.0	30	16	5.5	●
	TMT40 E/I 1.5 ISO	1.5	40	20	6.3	●
	TMT40 E/I 2.0 ISO	2.0	40	20	6.3	●
	TMT40 E/I 3.0 ISO	3.0	40	20	6.3	●
	TMT40 I 3.5 ISO	3.5	40	20	6.3	●
	TMT40 E/I 4.0 ISO	4.0	40	20	6.3	●
	TMT40 I 4.5 ISO	4.5	40	20	6.3	●
	TMT40 E/I 5.0 ISO	5.0	40	20	6.3	●
	TMT40 I 5.5 ISO	5.5	40	20	6.3	●
	TMT40 E/I 6.0 ISO	6.0	40	20	6.3	●

TMTSR

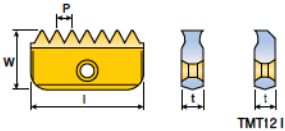
C93-C98

• (1) TMT12 insert with single cutting edge

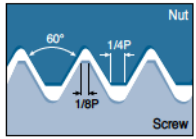
●: Standard item

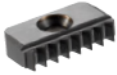
TMT-UN

UN, UNC, UNF, UNEF, UNS



TMT12 I [1]



Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 I 32 UN [1]	32	12	6.3	2.9	●
	TMT12 I 28 UN [1]	28	12	6.3	2.9	●
	TMT12 I 24 UN [1]	24	12	6.3	2.9	●
	TMT12 I 20 UN [1]	20	12	6.3	2.9	●
	TMT12 I 18 UN [1]	18	12	6.3	2.9	●
	TMT12 I 16 UN [1]	16	12	6.3	2.9	●
	TMT14 E/I 32 UN	32	14	7.5	3.1	●
	TMT14 E/I 28 UN	28	14	7.5	3.1	●
	TMT14 I 27 UN	27	14	7.5	3.1	●
	TMT14 E/I 24 UN	24	14	7.5	3.1	●
	TMT14 E/I 20 UN	20	14	7.5	3.1	●
	TMT14 E/I 18 UN	18	14	7.5	3.1	●
	TMT14 E/I 16 UN	16	14	7.5	3.1	●
	TMT14 E/I 14 UN	14	14	7.5	3.1	●
	TMT14 E/I 12 UN	12	14	7.5	3.1	●
	TMT14 I 11 UN	11	14	7.5	3.1	●
	TMT14 I 10 UN	10	14	7.5	3.1	●
	TMT21 E/I 24 UN	24	21	12	4.7	●
	TMT21 E/I 20 UN	20	21	12	4.7	●
	TMT21 E/I 18 UN	18	21	12	4.7	●
	TMT21 E/I 16 UN	16	21	12	4.7	●
	TMT21 E/I 14 UN	14	21	12	4.7	●
	TMT21 E/I 12 UN	12	21	12	4.7	●
	TMT21 E/I 10 UN	10	21	12	4.7	●
	TMT21 I 8 UN	8	21	12	4.7	●
	TMT21 I 7 UN	7	21	12	4.7	●
	TMT30 E/I 20 UN	20	30	16	5.5	●
	TMT30 E/I 18 UN	18	30	16	5.5	●
	TMT30 E/I 16 UN	16	30	16	5.5	●
	TMT30 E/I 14 UN	14	30	16	5.5	●
	TMT30 E/I 12 UN	12	30	16	5.5	●
	TMT30 E/I 10 UN	10	30	16	5.5	●
	TMT30 E/I 8 UN	8	30	16	5.5	●
	TMT30 E/I 6 UN	6	30	16	5.5	●
	TMT30 I 5 UN	5	30	16	5.5	●

TMTSR

C93-C96

● [1] TMT12 insert with single cutting edge

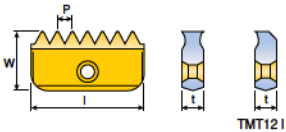
●: Standard item

TaeguTec

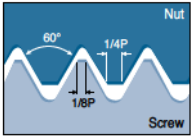
Contents

TMT-UN

UN, UNC, UNF, UNEF, UNS



TMT12 I [1]



Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT40 E/I 16 UN	16	40	20	6.3	●
	TMT40 E/I 14 UN	14	40	20	6.3	●
	TMT40 E/I 12 UN	12	40	20	6.3	●
	TMT40 E/I 10 UN	10	40	20	6.3	●
	TMT40 E/I 8 UN	8	40	20	6.3	●
	TMT40 E/I 6 UN	6	40	20	6.3	●
	TMT40 I 4.5 UN	4.5	40	20	6.3	●
	TMT40 I 4 UN	4	40	20	6.3	●

TMTSR

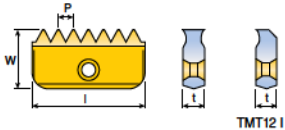
C93-C98

● [1] TMT12 insert with single cutting edge

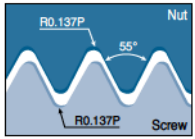
●: Standard item

TMT-W

Whitworth (BSW, BSF, BSP)



TMT12 l (1)



Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 19 W(1)	19	12	6.3	2.9	•
	TMT14 24 W	24	14	7.5	3.1	•
	TMT14 20 W	20	14	7.5	3.1	•
	TMT14 19 W	19	14	7.5	3.1	•
	TMT14 16 W	16	14	7.5	3.1	•
	TMT14 14 W	14	14	7.5	3.1	•
	TMT21 20 W	20	21	12	4.7	•
	TMT21 19 W	19	21	12	4.7	•
	TMT21 16 W	16	21	12	4.7	•
	TMT21 14 W	14	21	12	4.7	•
	TMT21 11 W	11	21	12	4.7	•
	TMT30 16 W	16	30	16	5.5	•
	TMT30 14 W	14	30	16	5.5	•
	TMT30 11 W	11	30	16	5.5	•
	TMT40 11 W	11	40	20	6.3	•
	TMT40 8 W	8	40	20	6.3	•

TMTSR

C93-C96

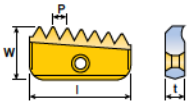
• The same insert for external & internal thread

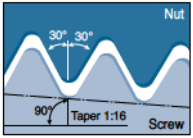
• (1) TMT12 insert with single cutting edge

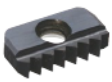
•: Standard item

TMT-NPT

NPT - National pipe taper thread





Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 18 NPT	18	12	6.3	2.9	●
	TMT14 18 NPT	18	14	7.5	3.1	●
	TMT14 14 NPT	14	14	7.5	3.1	●
	TMT21 14 NPT	14	21	12	4.7	●
	TMT21 11.5 NPT	11.5	21	12	4.7	●
	TMT30 11.5 NPT	11.5	30	16	5.5	●
	TMT30 8 NPT	8	30	16	5.5	●
	TMT40 11.5 NPT	11.5	40	20	6.3	●
	TMT40 8 NPT	8	40	20	6.3	●

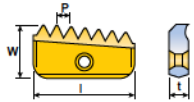
TMTSR
C93-C98

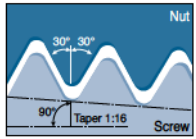
- The same insert for external & internal thread
- Conical pipe thread inserts are single sided

●: Standard item

TMT- NPTF

NPTF - National pipe thread tapered (Dryseal)





Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 18 NPTF	18	12	6.3	2.9	●
	TMT14 18 NPTF	18	14	7.5	3.1	●
	TMT14 14 NPTF	14	14	7.5	3.1	●
	TMT21 14 NPTF	14	21	12	4.7	●
	TMT21 11.5 NPTF	11.5	21	12	4.7	●
	TMT30 11.5 NPTF	11.5	30	16	5.5	●
	TMT30 8 NPTF	8	30	16	5.5	●
	TMT40 11.5 NPTF	11.5	40	20	6.3	●
	TMT40 8 NPTF	8	40	20	6.3	●

TMTSR

C93-C96

- The same insert for external & internal thread
- Conical pipe thread Inserts are single sided

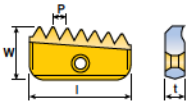
●: Standard item

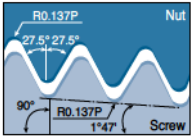
TaeguTec

Contents

TMT-BSPT

BSPT - British standard pipe tapered





Insert	Designation	TPI	Dimension (mm)			Grade
			l	W	t	TT9030
	TMT12 19 BSPT	19	12	6.3	2.9	●
	TMT14 19 BSPT	19	14	7.5	3.1	●
	TMT14 14 BSPT	14	14	7.5	3.1	●
	TMT21 14 BSPT	14	21	12	4.7	●
	TMT21 11 BSPT	11	21	12	4.7	●
	TMT30 11 BSPT	11	30	16	5.5	●
	TMT40 11 BSPT	11	40	20	6.3	●

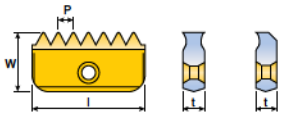
TMTSR
C93-C98

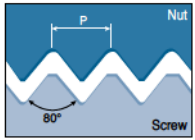
- The same insert for external & internal thread
- Conical pipe thread inserts are single sided

●: Standard item

TMT PG

Electrical connectors (DIN 40430)





Insert	Designation	TPI	Thread size	Dimension (mm)			Grade
				l	W	t	TT9030
	**TMT14 18 PG**	18	PG9, 11, 13.5, 16	14	7.5	3.1	●
	TMT21 18 PG	18	PG16, 21, 29, 36, 42, 48	21	12	4.7	●
	TMT21 16 PG	16	PG21, 29, 36, 42, 48	21	12	4.7	●
	TMT30 16 PG	16	PG36, 42, 48	30	16	5.5	●

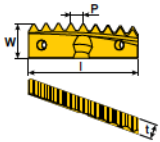
TMTSR • The same insert for external & internal thread

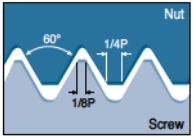
C93-C96

●: Standard item

TMTH-ISO

Helical inserts for ISO metric threads (Internal)





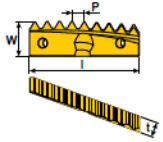
Insert	Designation	Pitch (mm)	Thread size	Dimension (mm) l	W	t	Tool	Grade TT9030
	TMTH 23 I 1.0 ISO	1.0	≥M26	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 1.5 ISO	1.5	≥M27	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 2.0 ISO	2.0	≥M28	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 3.0 ISO	3.0	≥M30	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 I 1.5 ISO	1.5	≥M35	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 2.0 ISO	2.0	≥M36	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 3.0 ISO	3.0	≥M38	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 4.0 ISO	4.0	≥M40	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 I 1.5 ISO	1.5	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 2.0 ISO	2.0	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 3.0 ISO	3.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 4.0 ISO	4.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 I 1.5 ISO	1.5	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 2.0 ISO	2.0	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 3.0 ISO	3.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 4.0 ISO	4.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●

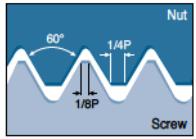
●: Standard item

TMTSRH
C96,C99

TMTH-UN

Helical inserts for UN, UNC, UNF, UNEF, UNS threads (Internal)





Insert	Designation	TPI	Thread size	Dimension (mm)			Tool	Grade
				l	W	t		TT9030
	TMTH 23 I 24 UN	24	≥1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 20 UN	20	≥1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 18 UN	18	≥1 1/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 16 UN	16	≥1 1/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 14 UN	14	≥1 1/8"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 12 UN	12	≥1 1/8"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 8 UN	8	≥1 3/16"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 7 UN	7	≥1 1/4"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 I 20 UN	20	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 18 UN	18	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 16 UN	16	≥1 3/8"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 12 UN	12	≥1 7/16"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 8 UN	8	≥1 1/2"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 6 UN	6	≥1 9/16"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 I 16 UN	16	≥2"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 12 UN	12	≥2"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 8 UN	8	≥2 1/4"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 6 UN	6	≥2 1/4"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 I 16 UN	16	≥2 3/4"	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 12 UN	12	≥2 3/4"	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 8 UN	8	≥3"	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 6 UN	6	≥3"	38	11.9	5.0	TMTSRH 63-9	●

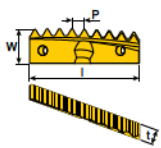
●: Standard item

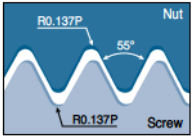
TMTSRH
C96, C99

TMTH-W

TS-THREAD

Helical inserts for whitworth threads, BSW, BSF, BSP (Internal and external)





Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade
			Internal	External	l	W	t		TT9030
	**TMTH 23 11 W**	11	≥G 1"	≥G 1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 W	11	≥G 1 1/8"	≥G 1"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 W	11	≥G 1 3/4"	≥G 1"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 W	11	≥G 2 1/2"	≥G 1"	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH

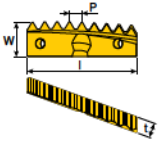
C96,C99

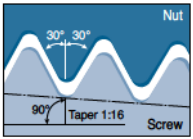
●: Standard Item

TMTH-NPT

TS-THREAD

Helical inserts for NPT threads (Internal and external)





Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade
			Internal	External	l	W	t		TT9030
	**TMTH 23 11.5 NPT**	11.5	1"-2" NPT	1"-2" NPT	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11.5 NPT	11.5	11/14"-2" NPT	1"-2" NPT	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11.5 NPT	11.5	2" NPT	1"-2" NPT	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11.5 NPT	11.5	-	≥1" NPT	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH

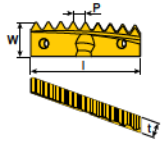
C96,C99

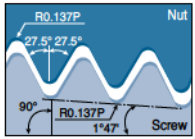
●: Standard item

TMTH-BSPT

TS-THREAD

Helical inserts for BSPT threads (Internal and external)





Insert	Designation	TPI	Thread size		Dimension (mm)			Tool	Grade
			Internal	External	l	W	t		TT9030
	**TMTH 23 11 BSPT**	11	≥G 1"	≥G 1"	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 BSPT	11	≥G 1 1/8"	≥G 1"	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 BSPT	11	≥G 1 3/4"	≥G 1"	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 BSPT	11	≥G 2 1/2"	≥G 1"	38	11.9	5.0	TMTSRH 63-9	●

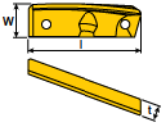
TMTSRH
C96,C99

●: Standard Item

TMTH-F

TS-THREAD

Helical long edge finishing insert



Designation	Dimension (mm)			Tool	Grade
	l	W	t		TT9030
TMTH 23F R0.2	27	8.0	3.5	TMTSRH 23-2	●
TMTH 23F R0.5	27	8.0	3.5	TMTSRH 23-2	●
TMTH 23F R1.0	27	8.0	3.5	TMTSRH 23-2	●
TMTH 32F R0.2	32	9.0	4.0	TMTSRH 32-5	●
TMTH 32F R0.5	32	9.0	4.0	TMTSRH 32-5	●
TMTH 32F R1.0	32	9.0	4.0	TMTSRH 32-5	●
TMTH 45F R0.2	37	11.9	5.0	TMTSRH 45-6	●

TMTSRH
C96,C99

●: Standard item

Recommended Cutting Conditions

TS-THREAD

Indexable insert threading tools

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc(m/min) TT9030
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1	100-200
		0.25-0.25 %C	Annealed	650	190	2	95-190
		0.25-0.25 %C	Quenched and tempered	850	250	3	90-180
		0.55-0.80 %C	Annealed	750	220	4	90-170
		0.55-0.80 %C	Quenched and tempered	1000	300	5	80-150
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	120-170
			Quenched and tempered	930	275	7	115-160
				1000	300	8	105-150
				1200	350	9	140
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	90-170
			Quenched and tempered	1100	325	11	75-145
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	110-170
			Martensitic	820	240	13	100-160
			Austenitic	600	180	14	90-145
K	Gray cast iron (GG)		Ferritic		160	15	65-135
			Pearlitic		250	16	65-110
	Cast iron nodular (GGG)		Ferritic		180	17	65-135
			Pearlitic		260	18	60-100
	Malleable cast iron		Ferritic		130	19	65-135
			Pearlitic		230	20	60-120
N	Aluminum - Wrought alloy		Not cureable		60	21	110-260
			Cured		100	22	110-200
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	145-350
			Cured		90	24	145-275
		>12% Si	High temp.		130	25	95-225
	Copper alloys	>1% Pb	Free cutting		110	26	145-350
			Brass		90	27	145-350
			Electrolitic copper		100	28	145-350
	Non-metallic		Duroplastics, fiber plastics			29	90-370
			Hard rubber			30	80-330
S	High temp. alloys	Fe based	Annealed		200	31	20-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-30
			Cured		350	34	10-20
			Cast		320	35	15-25
	Titanium, Ti alloys			Rm 400		36	30-90
			Alpha+beta alloys cured	Rm 1050		37	20-70
H	Hardened steel		Hardened		55HRC	38	25-60
			Hardened		60HRC	39	20-40
	Chilled cast iron		Cast		400	40	25-60
	Cast iron nodular		Hardened		55HRC	41	20-50

- For more information of material groups, see the Technical Guide "material conversion table".

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

- Feed rate: 0.05 - 0.15 mm/tooth

Recommended Cutting Conditions

Solid carbide threading end mills

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc(m/min) TT9030
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1	100-250
		0.25-0.25 %C	Annealed	650	190	2	80-210
		0.25-0.25 %C	Quenched and tempered	850	250	3	65-170
		0.55-0.80 %C	Annealed	750	220	4	110-180
		0.55-0.80 %C	Quenched and tempered	1000	300	5	95-160
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	90-160
			Quenched and tempered	930	275	7	65-200
				1000	300	8	70-210
				1200	350	9	95-160
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	130-170
			Quenched and tempered	1100	325	11	75-100
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	110-170
			Martensitic	820	240	13	70-155
			Austenitic	600	180	14	85-100
K	Gray cast iron (GG)		Ferritic		160	15	70-150
			Pearlitic		250	16	110-140
	Cast iron nodular (GGG)		Ferritic		180	17	120-160
			Pearlitic		260	18	75-160
	Malleable cast iron		Ferritic		130	19	120-160
			Pearlitic		230	20	110-140
N	Aluminum - Wrought alloy		Not cureable		60	21	160-300
			Cured		100	22	
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	
			Cured		90	24	
		>12% Si	High temp.		130	25	
		>1% Pb	Free cutting		110	26	
	Copper alloys		Brass		90	27	
			Electrolitic copper		100	28	
	Non-metallic		Duroplastics, fiber plastics			29	100-400
			Hard rubber			30	
S	High temp. alloys	Fe based	Annealed		200	31	
			Cured		280	32	
		Ni or Co based	Annealed		250	33	20-80
			Cured		350	34	
			Cast		320	35	
	Titanium, Ti alloys			Rm 400		36	
			Alpha+beta alloys cured	Rm 1050		37	20-80
H	Hardened steel		Hardened		55HRC	38	55-65
			Hardened		60HRC	39	45-55
	Chilled cast iron		Cast		400	40	90-105
	Cast iron nodular		Hardened		55HRC	41	55-65

• For more information of material groups, see the Technical Guide "material conversion table".

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

Solid carbide threading end mills

Feed (mm/tooth) for diameter (mm)											
Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø30
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.21	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.05	0.06	0.07	0.09	0.1	0.11	0.12	0.13	0.15	0.18	0.22	0.25
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05

• For cutters with long cutting flute, reduce feed rate by 40%.

Recommended Cutting Conditions

Short solid carbide thread mills

ISO	Material	Hardness (HRC)	Cutting speed Vc (m/min)	Feed (mm/tooth) for diameter (mm)												
				Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø15
P	Low & medium carbon steels		60-120	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
P	High carbon steels		60-90	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13	0.14	0.14	0.16	0.17	0.18
P	Alloy steels, treated steels		50-80	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
P	Cast steels		70-90	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
M	Stainless steels		60-90	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
K	Cast Iron		40-80	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	Aluminum		80-150	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	Synthetics, duroplastics, thermoplastics		50-200	0.10	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.20	0.20
S	Nickel alloys, titanium alloys.		20-40	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
H	Hardened steel	45-50	60-70	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08				
H		51-55	50-60	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07				
H		56-62	40-50	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06				

• For more information of material groups, see the Technical Guide "material conversion table".

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

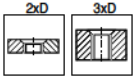
T-TAP

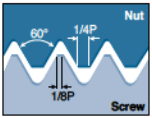
Tapping

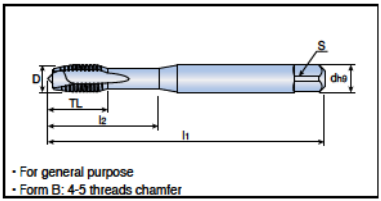
Contents

TPH...52B

Straight flute with spiral point







- For general purpose
- Form B: 4-5 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH452B M2x0.4	TPH452B05 M2x0.4	TPH452B10 M2x0.4	M2	0.4	DIN371
TPH452B M2.5x0.45	TPH452B05 M2.5x0.45	TPH452B10 M2.5x0.45	M2.5	0.45	
TPH452B M3x0.5	TPH452B05 M3x0.5	TPH452B10 M3x0.5	M3	0.5	
TPH452B M4x0.7	TPH452B05 M4x0.7	TPH452B10 M4x0.7	M4	0.7	
TPH452B M5x0.8	TPH452B05 M5x0.8	TPH452B10 M5x0.8	M5	0.8	
TPH452B M6x1.0	TPH452B05 M6x1.0	TPH452B10 M6x1.0	M6	1	
TPH452B M8x1.25	TPH452B05 M8x1.25	TPH452B10 M8x1.25	M8	1.25	
TPH452B M10x1.5	TPH452B05 M10x1.5	TPH452B10 M10x1.5	M10	1.5	
TPH652B M12x1.75	TPH652B05 M12x1.75	TPH652B10 M12x1.75	M12	1.75	DIN376
TPH652B M14x2.0	TPH652B05 M14x2.0	TPH652B10 M14x2.0	M14	2	
TPH652B M16x2.0	TPH652B05 M16x2.0	TPH652B10 M16x2.0	M16	2	
TPH652B M20x2.5	TPH652B05 M20x2.5	TPH652B10 M20x2.5	M20	2.5	

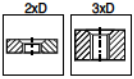
Metric ISO fine thread DIN 13 standard

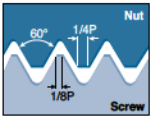
Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH552B MF8x1.0	TPH552B05 MF8x1.0	TPH552B10 MF8x1.0	M8	1	DIN374
TPH552B MF10x1.25	TPH552B05 MF10x1.25	TPH552B10 MF10x1.25	M10	1.25	
TPH552B MF12x1.5	TPH552B05 MF12x1.5	TPH552B10 MF12x1.5	M12	1.5	
TPH552B MF14x1.5	TPH552B05 MF14x1.5	TPH552B10 MF14x1.5	M14	1.5	
TPH552B MF16x1.5	TPH552B05 MF16x1.5	TPH552B10 MF16x1.5	M16	1.5	

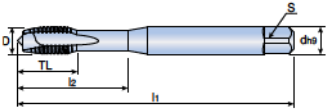
Cutting Condition C1,22

TPH...52B

Straight flute with spiral point







- For general purpose
- Form B: 4-5 threads chamfer

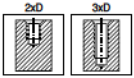
Tolerance	Dimension (mm)					
	l1	TL	l2	d	S	Core hole
ISO 2-6H	45	8	-	2.8	2.1	1.6
	50	9	-	2.8	2.1	2.05
	56	10	18	3.5	2.7	2.5
	63	12	21	4.5	3.4	3.3
	70	14	25	6	4.9	4.2
	80	16	30	6	4.9	5
	90	18	35	8	6.2	6.8
	100	20	39	10	8	8.5
ISO 2-6H	110	22	-	9	7	10.2
	110	24	-	11	9	12
	110	26	-	12	9	14
	140	30	-	16	12	17.5

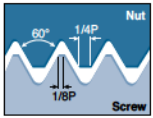
Tolerance	Dimension (mm)					
	l1	TL	l2	d	S	Core hole
ISO 2-6H	90	15	-	6	4.9	7
	100	18	-	7	5.5	8.8
	100	18	-	9	7	10.5
	100	18	-	11	9	12.5
	100	18	-	12	9	14.5

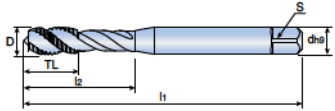
Cutting Condition C1,2,2

TPH...54C

Right hand spiral flute (40˚)







- For general purpose
- Form C: 2-3 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH454C M2x0.4	TPH454C05 M2x0.4	TPH454C10 M2x0.4	M2	0.4	DIN371
TPH454C M2.5x0.45	TPH454C05 M2.5x0.45	TPH454C10 M2.5x0.45	M2.5	0.45	
TPH454C M3x0.5	TPH454C05 M3x0.5	TPH454C10 M3x0.5	M3	0.5	
TPH454C M4x0.7	TPH454C05 M4x0.7	TPH454C10 M4x0.7	M4	0.7	
TPH454C M5x0.8	TPH454C05 M5x0.8	TPH454C10 M5x0.8	M5	0.8	
TPH454C M6x1.0	TPH454C05 M6x1.0	TPH454C10 M6x1.0	M6	1	
TPH454C M8x1.25	TPH454C05 M8x1.25	TPH454C10 M8x1.25	M8	1.25	
TPH454C M10x1.5	TPH454C05 M10x1.5	TPH454C10 M10x1.5	M10	1.5	
TPH654C M12x1.75	TPH654C05 M12x1.75	TPH654C10 M12x1.75	M12	1.75	DIN376
TPH654C M14x2.0	TPH654C05 M14x2.0	TPH654C10 M14x2.0	M14	2	
TPH654C M16x2.0	TPH654C05 M16x2.0	TPH654C10 M16x2.0	M16	2	
TPH654C M20x2.5	TPH654C05 M20x2.5	TPH654C10 M20x2.5	M20	2.5	

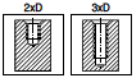
Metric ISO fine thread DIN 13 standard

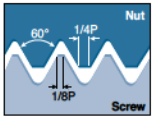
Designation			D	Pitch (mm)	Standard (DIN)
Uncoated	Steam tempered	TiN coated			
TPH554C MF8x1.0	TPH554C05 MF8x1.0	TPH554C10 MF8x1.0	M8	1	DIN374
TPH554C MF10x1.25	TPH554C05 MF10x1.25	TPH554C10 MF10x1.25	M10	1.25	
TPH554C MF12x1.5	TPH554C05 MF12x1.5	TPH554C10 MF12x1.5	M12	1.5	
TPH554C MF14x1.5	TPH554C05 MF14x1.5	TPH554C10 MF14x1.5	M14	1.5	
TPH554C MF16x1.5	TPH554C05 MF16x1.5	TPH554C10 MF16x1.5	M16	1.5	

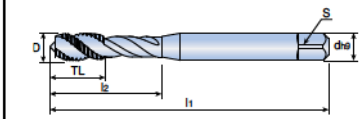
Cutting Condition C1,23

TPH...54C

Right hand spiral flute (40˚)







- For general purpose
- Form C: 2-3 threads chamfer

Tolerance	Dimension (mm)					
	l1	TL	l2	d	S	Core hole
ISO 2-6H	45	6	10	2.8	2.1	1.6
	50	6	12	2.8	2.1	2.05
	56	7	18	3.5	2.7	2.5
	63	8	21	4.5	3.4	3.3
	70	10	25	6	4.9	4.2
	80	12	30	6	4.9	5
	90	15	35	8	6.2	6.8
	100	18	39	10	8	8.5
ISO 2-6H	110	18	-	9	7	10.2
	110	20	-	11	9	12
	110	20	-	12	9	14
	140	25	-	16	12	17.5

Tolerance	Dimension (mm)					
	l1	TL	l2	d	S	Core hole
ISO 2-6H	90	15	-	6	4.9	7
	100	18	–	7	5.5	8.8
	100	18	-	9	7	10.5
	100	18	-	11	9	12.5
	100	18	-	12	9	14.5

Cutting Condition C1,23

Recommended Cutting Conditions

T-TAP

Straight flute with spiral point tap

Cutting speed Vc(m/min)

ISO	Material		Condition	Straight flute with spiral point tap			Lubrication
				Uncoated	Steam tempered	TiN coated	
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	5-25	5-25 *	15-45 *	E/O
		0.25-0.25 %C	Annealed	5-20	5-20 *	10-40 *	E/O
		0.25-0.25 %C	Quenched and tempered	-	2-15 *	5-25 *	E/O
		0.55-0.80 %C	Annealed	5-20	5-20 *	10-40 *	E/O
		0.55-0.80 %C	Quenched and tempered	-	2-15 *	5-25 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	5-25	5-25 *	15-45 *	E/O
			Quenched and tempered	-	2-15 *	5-20 *	E/O
	High alloy steel, cast steel and tool steel		Annealed	5-20	5-20	10-40 *	E/O
			Quenched and tempered	-	-	5-20	O/S
M	Stainless steel and cast steel		Ferritic / martensitic	-	2-10 *	5-20 *	E/O
			Martensitic	-	2-10 *	5-20 *	E/O
			Austenitic	-	2-10 *	5-20 *	E/O
K	Gray cast iron (GG)		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-25	10-40	E/D
	Cast iron nodular (GGG)		Ferritic	8-12	5-20	10-30	E/D
			Pearlitic	8-12	5-15	10-25	E/D
	Malleable cast iron		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
N	Aluminum - wrought alloy		Not cureable	15-25 *	15-25	15-25	E/O
			Cured	15-25 *	15-25	15-25	E/O
	Aluminum-cast, alloyed	<=12% Si	Not cureable	15-20 *	10-20	15-40 *	E/O
			Cured	15-20 *	10-20	15-40 *	E/O
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
			Brass	10-40	10-40	20-60	E/O
			Electrolitic copper	10-15 *	2-10	5-25	E/O
	Non-metallic		Duroplastics, fiber plastics	-	10-20	10-20	D
			Hard rubber	-	10-20	10-20	D
S	High temp. alloys	Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
			Cured	-	-	2-4	S
			Cast	-	-	2-4	S
	Titanium, Ti alloys			-	-	4-6	S
			Alpha+beta alloys cured	-	-	4-6	S

* : Recommended

• For more information of material groups, see the Technical Guide "material conversion table".

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

• **Lubrication** **E:** Emulsion **O:** Cutting oil **S:** Special cutting oil **D:**Dry/air

Recommended Cutting Conditions

40° right hand spiral flute tap

Cutting speed Vc(m/min)

ISO	Material		Condition	40° right hand spiral flute tap			Lubrication
				Uncoated	Steam tempered	TiN coated	
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	5-25	5-25 *	15-45 *	E/O
		0.25-0.25 %C	Annealed	5-20	5-20 *	10-40 *	E/O
		0.25-0.25 %C	Quenched and tempered	-	2-15 *	5-25 *	E/O
		0.55-0.80 %C	Annealed	5-20	5-20 *	10-40 *	E/O
		0.55-0.80 %C	Quenched and tempered	-	2-15 *	5-25 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	5-25	5-25 *	15-45 *	E/O
			Quenched and tempered	-	2-15 *	5-20 *	E/O
	High alloy steel, cast steel and tool steel		Annealed	5-20	5-20	10-40 *	E/O
			Quenched and tempered	-	-	5-20	O/S
M	Stainless steel and cast steel		Ferritic / martensitic	-	2-10 *	5-20 *	E/O
			Martensitic	-	2-10 *	5-20 *	E/O
			Austenitic	-	2-10 *	5-20 *	E/O
K	Gray cast iron (GG)		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
	Cast iron nodular (GGG)		Ferritic	8-12	5-20	10-30	E/D
			Pearlitic	8-12	5-15	10-25	E/D
	Malleable cast iron		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
N	Aluminum - wrought alloy		Not cureable	15-25 *	15-25	15-25	E/O
			Cured	15-25 *	15-25	15-25	E/O
	Aluminum-cast, alloyed	<=12% Si	Not cureable	15-20 *	10-20	15-40 *	E/O
			Cured	15-20 *	10-20	15-40 *	E/O
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
			Brass	10-40	10-40	50-60	E/O
			Electrolitic copper	10-15 *	2-10	5-25	E/O
	Non-metallic		Duroplastics, fiber plastics	-	10-20	10-20	D
			Hard rubber	-	10-20	10-20	D
S	High temp. alloys	Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
			Cured	-	-	2-4	S
			Cast	-	-	2-4	S
	Titanium, Ti alloys			-	-	4-6	S
			Alpha+beta alloys cured	-	-	4-6	S

* : Recommended

- For more information of material groups, see the Technical Guide "material conversion table".

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

- **Lubrication** **E:** Emulsion **O:** Cutting oil **S:** Special cutting oil **D:**Dry/air