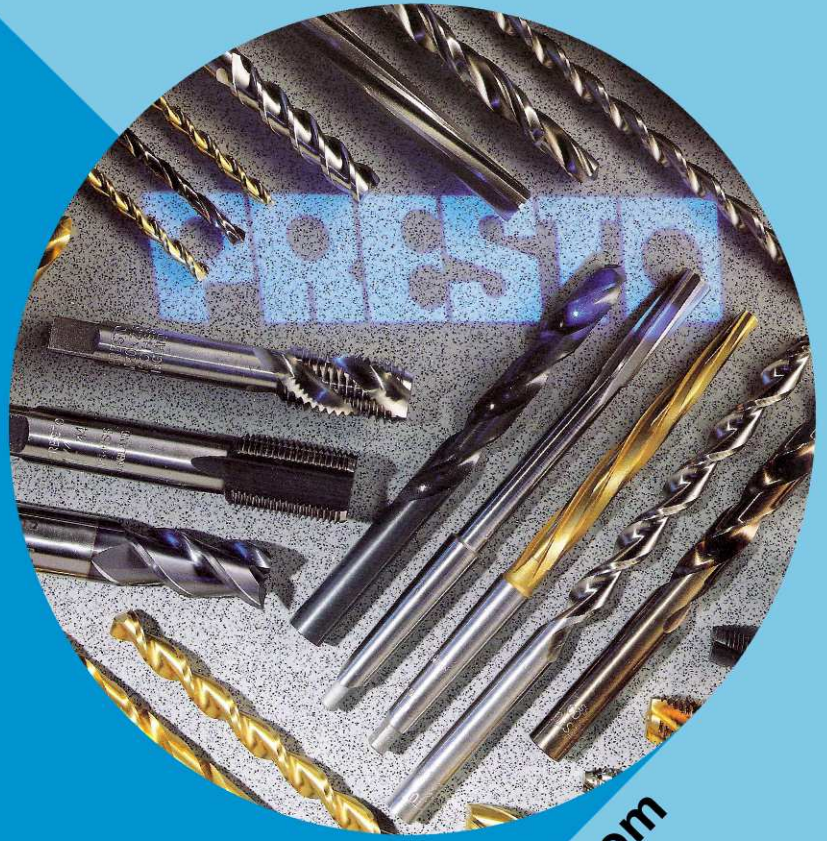


THREADING

<sup>®</sup>**PRESTO**

Catalogue 2008



[www.presto-tools.com](http://www.presto-tools.com)

**International UK Ltd**  
Quality Since 1843

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To view the complete range of H.S.S. & H.S.S. Co Drills, Taps, Reamers, End-Mills and other cutting tools, please see our complete catalogue, or visit our web site at:

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## Taps ISO, Dies & Tooling













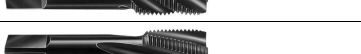
**Metric ISO Coarse Thread M**  
**Metric ISO Fine Thread MF**  
**Unified-Thread UNC**  
**Unified-Thread UNF**  
**Whitworth Thread BSW**  
**Whitworth Thread BSF**  
**Whitworth Pipe Thread G(BSPF)**  
**BA-Thread**  
**American Pipe Thread NPT, NPTF**  
**Dies**  
**Tooling**










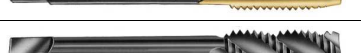









**Taps HSSE-PMC**

*ISO 529 M / MF / UNC / UNF / ISO 2284 G(BSPF)*

	Standard	Type	Material	List-No.	Size	Surface	Page
	ISO 529 M ISO 529 MF	SMN	HSSE-PMC	60052 63052	M3 - M24 MF3 - MF20	P4	9 10
		SMN	HSSE-PMC	60052 63052	M3 - M24 MF3 - MF20	P4	9 10
		SMP	HSSE-PMC	60042 63042	M3 - M24 MF3 - MF20	P1	9 10
		SMQ	HSSE-PMC	60062 63062	M3 - M24 MF3 - MF20	P1	9 10
		SMS	HSSE-PMC	60072 63072	M3 - M24 MF3 - MF20	P1	9 10
	ISO 529 UNC ISO 529 UNF	SMN	HSSE-PMC	60152 60252	UNC No.4 - 1 UNF No.4 - 1	P4	11 12
		SMN	HSSE-PMC	60152 60252	UNC No.4 - 1 UNF No.4 - 1	P4	11 12
		SMP	HSSE-PMC	60142 60242	UNC No.4 - 1 UNF No.4 - 1	P1	11 12
		SMQ	HSSE-PMC	60162 60262	UNC No.4 - 1 UNF No.4 - 1	P1	11 12
		SMS	HSSE-PMC	60172 60272	UNC No.4 - 1 UNF No.4 - 1	P1	11 12
	ISO 2284 G(BSPF)	SMP	HSSE-PMC	60642	G 1/8 - G 3/4	P1	13
		SMQ	HSSE-PMC	60662	G 1/8 - G 3/4	P1	13
		SMS	HSSE-PMC	60672	G 1/8 - G 3/4	P1	13

**Taps HSS**

*ISO 529 M / MF / UNC / UNF / BSW / BSF / BA*



	Standard	Type	Material	List-No.	Size	Surface	Page
	ISO 529 M ISO 529 MF	STF	HSS	60000 60080	M1 - M60 MF3 - MF40	P0	14 16
		STF	HSS	60005 60085	M3 - M16 MF3 - MF16	P5	14 16
		STF LH	HSS	60030	M3 - M24	P0	14
		SpPt	HSS	60010 62810	M1 - M30 MF4 - MF22	P1	15 16
		SpPt	HSS	60015	M3 - M16	P5	15
		SpFl	HSS	60020 62820	M2 - M30 MF4 - MF22	P0	15 16
		SpFl	HSS	60027	M2 - M30	P1	15
		SpFl	HSS	60025	M3 - M16	P5	15
	ISO 529 UNC ISO 529 UNF	STF	HSS	60100 60200	UNC No.1 - 2 UNF No.0 - 1 1/2	P0	18 19
		SpPt	HSS	60110 60210	UNC No.1 - 1 UNF No.4 - 1	P1	18 19
		SpFl	HSS	60120 60220	UNC No.4 - 1 UNF No.10 - 1	P0	18 19
	ISO 529 BSW ISO 529 BSF	STF	HSS	60300 60400	BSW 1/16 - 2 1/2 BSF 3/16 - 2 1/2	P0	20 21
		SpPt	HSS	60310 60410	BSW 1/8 - 1 BSF 3/16 - 1	P1	20 21
		SpFl	HSS	60320 60420	BSW 1/8 - 1 BSF 3/16 - 1	P0	20 21
	ISO 529 BA	STF	HSS	60500	BA 14-0	P0	22

P0-Bright • P1-Steem Tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

Drilling

**Taps HSS**














*BA*

	Standard	Type	Material	List-No.	Size	Surface	Page
	ISO 529 BA	SpPt	HSS	60510	BA 10-0	P1	22
		SpPt	HSS	60520	BA 6-0	P0	22

Reaming

**Taps / Fluteless Taps HSS**

*M, MF, UNC, UNF, G, Rc, NPT, NPTF, BA*

	Standard	Type	Material	List-No.	Size	Surface	Page
	ISO 2283 M	STF	HSS	61000	M3 - M24	P0	23
	ISO 2283 UNC ISO 2283 UNF	STF	HSS	61100	UNC 1/4 - 3/4	P0	24
				61180	UNF 1/4 - 3/4		25
	ISO 2284 G(BSPF)	STF	HSS	60600	G 1/8 - 2 1/2	P0	26
		SpPt	HSS	60610	G 1/8 - 3/4	P1	26
		SpPt	HSS	60620	G 1/8 - 3/4	P0	26
	ISO 2284 Rc(BSPT)	TP	HSS	60680	Rc 1/8 - 2	P0	27
	ANSI 94.9 NPT ANSI 94.9 NPTF	TP	HSS	60750	NPT 1/16 - 2	P0	28
				60760	NPTF 1/8 - 1 1/4		29
	ANSI 94.9 NPT	TP-Az	HSS	60790	NPT 1/16 - 2	P0	28
	ISO 529 M	Form	HSS	69000	M2 - M12	P0	29
	ISO 529 UNC	Form	HSS	69010	UNC No.2 - 1/2	P0	30
	ISO 529 BSW	Form	HSS	69030	BSW 1/4 - 3/8	P0	30
	ISO 529 G(BSPF)	Form	HSS	69060	G 1/8 - 1/2	P0	31
	ISO 529 BA	Form	HSS	69050	BA 10 - 0	P0	31

Threading



Milling

Miscellaneous

Solid Carbide


**Dies HSS**

*M / MF / UNC / UNF / BSW / BSF / G(BSPF) / BA*



	Standard	Type	Material	List-No.	Size	Surface	Page
	Circular Solid Dies/Gun Nose DIN 223	M	HSS	64000	M3 - M24 MF5 - MF30	P0	32
		MF		64010			
	Circular Split Dies, Adjustable BS 1127	M	HSS	64100	M1 - M39 MF3 - MF32	P0	33
		MF		64110			34
		UNC	HSS	64120	UNC No.1 - 1 1/2 UNF No.0 - 1 1/2	P0	35
		UNF		64130			
		BSW		HSS			64140
BSF	64150						
G(BSPF)	HSS	64160	G 1/8 - 2	P0	37		
BA	HSS	64170	BA 16 - 0	P0	37		

**Hexagon Dienuts HSS**


*M / MF / UNC / UNF / BSW / BSF / G(BSPF) / NPT*

	Standard	Type	Material	List-No.	Size	Surface	Page
	BS 1127	M	HSS	64400	M3 - M42 MF3 - MF42	P0	28
		MF		64410			
		UNC	HSS	64420	UNC No.8 - 2 UNF No.8 - 1 1/2	P0	39
		UNF		64430			
		BSW		HSS			
BSF	64450						
G(BSPF)	HSS	64460	G 1/8 - 1 1/2	P0	41		
NPT	HSS	64490	NPT 1/8 - 2	P0	41		

**Tooling**

	Standard	Type	Material	List-No.	Size	Surface	Page
	Tapwrench Ratchet	T-Type		69833	M 3 - M 12		42
		Adjustable		69823 69403			
	Diestock	Split		69403	13/16 - 4		42
		Solid		69413			

**Combination Sets Taps and Dies**

	No. of Tools	Range	Unit	List-No	Page
	12	M2 - M6	1	6960037	43
	31	M6 - M24	1	6960042	43
	23	UNC 1/4 - UNC 1	1	6960023	43
	23	UNF 1/4 - UNF 1	1	6960026	43

P0-Bright • P1-Steam Tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

# Application Recommendations for Taps ISO

## ISO Tap Selection Chart

### Application

- Excellent
- ⊙ Suitable

### COATINGS AVAILABLE

- P0 Bright Finish
- P1 Steam Tempered Blue
- P4 Nitrided + Blue
- P5 TiN Titanium Nitride
- P6 TiCN




Main	Material	ISO, DIN, BS EN	BS and ANSI	N/mm <sup>2</sup>	HB	Hand Taps	Straight Flute							
Group	Material Group													
Steel	1.1 Magnetic soft	95MnPb28;S133;St37: RFe80	BS590 230M07Pb;En1A leaded	<400	120	●	●	●	●	●				
	1.2 structural	35S20 St37-2 St50	BS4360-50C 55C En3A En8 En32	<750	220	●	●	●	●	●				
	1.3 Plain Carbon Steel	C10;14NiCr14;18CrNi8;16MnCr5	080M46;080A62;En9En43	<850	250	●	●	●	●	●				
	1.4 Low Alloy Engineering	C35; C45; C60	708M40; En16; 534A99;En31; 4140	<850	250	●	●	●	●	●				
	1.5 Alloy Steel	110WCrV5; S6-5-2 GS-34CrMo4	EN24T; En25T M2; M42; 4340;D2	<1000	300	⊙								⊙
	1.6 Alloy Steel Heat treated	X210Cr12; 55NiCrMoV6; 32CrMo12	826M40; 830M31; S95; En25w	<1200	350	⊙								⊙
Stainless Steel	2.1 Austenitic	X5CrNi18.10;X6CrNiMoTi17.12.2	316; 304; 321 En58J	<850	250	⊙	⊙	●						⊙
	2.2 Ferritic	XcrCrAl13; X6CrTi;X1CrMoNb18.2	303; S33: En56 303	<1000	300	●	⊙	⊙						⊙
	2.3 Duplex	X8CrNiMo2.7.5		<1000	300	⊙		⊙						
	2.4 Martensitic	X20Cr13; G-X10CrMo13; X105CrMo17	420S29			⊙								
Cast Iron	3.1 Soft Grey Iron	GG10...GG40 Meehanite GF-20	Bs1452 Grade 350 / 400	<500	140	●	●	●	●	●				⊙
	3.2 Grey and heat treated Irons	GG20 ...GG40 GTS GTW	Black/Whiteheart Malleable iron	<850	250	⊙	⊙	⊙	●	●				⊙
	3.3 Spheroidal Graphite	GGG-25...GGG-70	Bs2789Grade699;Bs6681 GradeP70	<750	220	⊙	⊙	⊙	●	●				⊙
Titanium	4.1 Pure Titanium	Ti99.5;Ti99.2		<700	200	⊙		⊙						
	4.2 Titanium Alloy	TiCu2; TiAl6V4; TiAl6Zr5		<1000	300									
Nickel	5.1 Pure Nickel	Ni99CSi; Monel400; Hastelloy; Inconell600		<850	250	⊙		⊙						
	5.2 Nickel Alloys	Nimonic 80/90; Inconell780; NimocastPk24		<1200	350									
Copper & Brasses	6.1 Pure Copper	E-Cu57; Se-Cu; CuMn3	Bs2874-C101,c103, c106	<350	100	●		●						⊙
	6.2 Short chip Brass	CuZn40; CuZn39Pb2(Ms58) CuZn40Mn1Pb	Bs2874 -Cz122;CZ128	<700	200	●		●						●
	6.3 Long Chipping Brass	CuZn20; CuZn37; CuSn6	Bs2874 CZ108, CZ106	<700	200	●		●						⊙
	6.4 High strength bronze	Ampco18; Ampco20...26	AB1 type	<1350	400	⊙		⊙	⊙					
Aluminium	7.1 Aluminium	Al99.9;9Mg05	1050A; 6082; LM0; LM1B	<350	100	●	⊙	●						⊙
	7.2 Aluminium Cast Si<0.5	AlMg3	LM5; LM10; LM12;LM16;	<500	140	●	⊙	●						⊙
	7.3 Aluminium Cast Si =0.5 - 10%	G-AISI8Cu4	LM2; LM4; LM18; LM21;	>400	120	●	⊙	⊙						⊙
	7.4 Aluminium Cast Si>10%	G-AISI10NMg	LM6; LM13; LM20; LM28...30	>400	120	●	⊙	⊙						⊙
Plastics	Thermo Plastics	Ultramat; Merkalo; Polystrol; Degola												
	Thermo setting Plastics	akalite, Pertiax; Ferrozell; Alkbanit				⊙		⊙	●					
	Reinforced Plastics	FK; GFK; AFK	Kevlar Printed circuit board			⊙		⊙						

Application Recommendations for Taps ISO


BN P1		BN P5		SMP P1		R40N P0		R40N P1		R40N P5		SMQ P1		SMS P1		Fluteless P0		Taper Pipe		Pipe Interrupted							
Spiral Point or Gun Nosed				Spiral Flute								Fluteless		Taper Pipe													
●	●			●	●	●								●	●												
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Drilling

Through & Blind Hole Tapping


Type	Description	
STF		Straight flute full size taps used as machine taps or sets of 3 as hand taps sets for tapping in free cutting Steel up to 800N/mm <sup>2</sup> . The perfect form thread is generated by a combination of effective pitch diameter, major diameter and chamfer length.


Reaming

Type	Description	
SMN		Straight flute Machine tap with short chamfer. The unique geometry with surface treatment is especially suitable for vertical tapping in grey cast iron material.


Type	Description	
SMS		Machine tap with 15° slow right hand helix for use in high tensile Steel over 900 N/mm <sup>2</sup> .


Threading

Type	Description	
SpPt		Spiral point Machine tap with straight flutes for working in steel up to 750 N/mm <sup>2</sup> . Swarf is forced forward in the direction of the cut.


Type	Description	
SMP		Spiral point Machine tap with a surface treatment for tough steels with elasticity > 30%. The unique geometry helps to avoid pick up and resists work hardening tendencies in materials such as Stainless Steel.


Milling

Type	Description	
SpFI		Machine tap with 40°-spiral flute. Short chamfer permits work on steel up to 750 N/mm <sup>2</sup> . And Aluminum alloys with more than 0.5% Si.


Type	Description	
SMQ		Machine taps with 40° spiral flutes. A special cutting geometry, together with a surface finish, makes this tap very suitable for tough and work hardening materials such as stainless steel and heat resistant steels up to 850N/mm <sup>2</sup> .

Miscellaneous

Type	Description	
TP		Tapered 1:16 Straight Flute Machine Tap with short chamfer (2-3 threads) for through and blind holes in free cutting materials up to 850 N/mm <sup>2</sup> .

Type	Description	
TPAz		Similar to TP tap but with interrupted thread. Tapered 1:16 Straight Flute Machine Tap with short chamfer (2-3 threads) for through and blind holes in Stainless steel and other work hardening materials.

Solid Carbide

Type	Description	
Form		Fluteless tap with a 2-4 thread lead. For roll tapping in materials with an elasticity of over 10% up to 900 N/mm <sup>2</sup> . Special attention is required to obtain the correct core hole size.

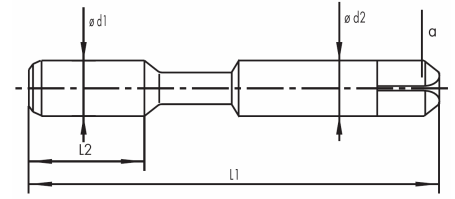






**Short Machine Taps ISO 529, HSSE-PMC**  
*Unified Fine Thread UNF, ISO 263, ASME-B1.1*

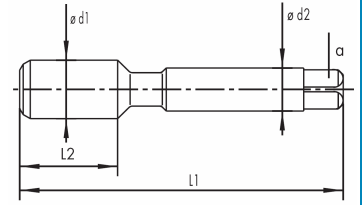
**UNF**



List-No.	60252	60252	60242	60262	60272		
<b>TH = Through Hole</b> <b>BH = Blind Hole</b>							
<b>Product Group</b>	11	11	11	11	11		
<b>Type</b>	SMN	SMN	SMP	SMQ	SMS		
<b>Type of Hole</b>	TH / BH	TH	TH	BH	TH / BH		
<b>Length of Chamfer Lead (Thread)</b>	1.5 - 2	4 - 5	4 - 5	1.5 - 2	2 - 3		
<b>Tolerance</b>	2B	2B	2B	2B	2B		
<b>Surface</b>	P4	P4	P1	P1	P1		
<b>Size</b>	<b>TPI</b>	<b>l1</b> <b>mm</b>	<b>l2*max</b> <b>mm</b>	<b>d2</b> <b>mm</b>	<b>a</b> <b>mm</b>	<b>Availability</b>	<b>Availability</b>
No.4	48	48	16	3.15	2.5	•	•
No.6	40	50	19	3.55	2.8	•	•
No.10	32	58	20.5	5.0	4.0	•	•
1/4	28	66	24.5	6.3	5.0	•	•
5/16	24	72	22	8.0	6.3	•	•
3/8	24	80	24	10.0	8.0	•	•
7/16	20	85	25	8.0	6.3	•	•
1/2	20	89	29	9.0	7.1	•	•
9/16	18	95	30	11.2	9.0	•	•
5/8	18	102	32	12.5	10.0	•	•
3/4	16	112	37	14.0	11.2	•	•
7/8	14	118	38	16.0	12.5	•	•
1	12	130	45	18.0	14.0	•	•
l2* = l2 approx. 10xP by SMQ							

**Short Machine Taps ISO 2284, HSSE-PMC**  
 Whitworth-Pipe Thread G(BSPF), DIN ISO 228

**BSPF "G"**



List-No.

60642

60662

60672

TH = Through Hole  
 BH = Blind Hole



Product Group

11

11

11

Type

SMP

SMQ

SMS

Type of Hole

TH

BH

TH / BH

Length of Chamfer Lead (Thread)

4 - 5

2 - 3

2 - 3

Tolerance

Normal

Normal

Normal

Surface

P1

P1

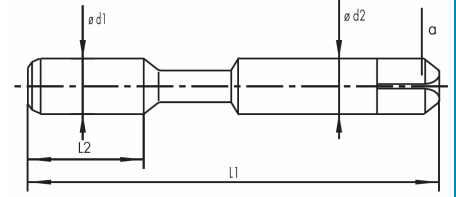
P1

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability
1/8	28	59	15	8.0	6.3	•	•	•
1/4	19	67	19	10.0	8.0	•	•	•
3/8	19	75	21	12.5	10.0	•	•	•
1/2	14	87	19	16.0	12.5	•	•	•
3/4	14	96	28	20.0	16.0	•	•	•

l2\* = l2 approx. 10xP by SMQ

Short Machine Taps ISO 529, HSS  
Metric ISO-Coarse Thread, ISO 965

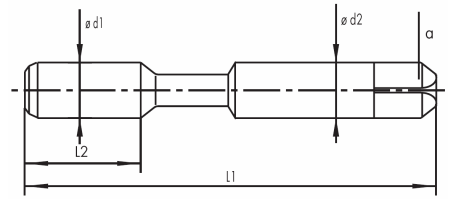
METRIC



List-No.	60000	60000	60000	60000	60005	60005	60030
<b>TH = Through Hole</b> <b>BH = Blind Hole</b>							
	10	10	10	10	10	10	10
Product Group	10	10	10	10	10	10	10
Type	SET	STF Taper	STF Second	STF Bottom	STF Second	STF Bottom	STF Bottom Left Hand
Type of Hole		TH	TH	TH / BH	TH / BH	TH	TH / BH
Length of Chamfer Lead (Thread)		8 - 10	4 - 5	1.5 - 2.5	1.5 - 2.5	4 - 5	1.5 - 2.5
Tolerance	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
Surface	P0	P0	P0	P0	P5	P5	P0
Metric Size	P	l1	l2*max	d2	a	Availability	Availability
	mm	mm	mm	mm	mm	Availability	Availability
M 1	0.25	38.5	5.5	2.5	2.0	*	*
M 1.2	0.25	38.5	5.5	2.5	2.0	*	*
M 1.4	0.3	40	7	2.5	2.0	*	*
M 1.6	0.35	41	8	2.5	2.0	*	*
M 2	0.4	41	8	2.5	2.0	*	*
M 2.5	0.45	44.5	9.5	2.8	2.24	*	*
M 3	0.5	48	16	3.15	2.5	*	*
M 3.5	0.6	50	19	3.55	2.8	*	*
M 4	0.7	53	13	4.0	3.15	*	*
M 4.5	0.75	53	13	4.5	3.55	*	*
M 5	0.8	58	16	5.0	4.0	*	*
M 6	1	66	19	6.3	5.0	*	*
M 7	1	66	19	7.1	5.6	*	*
M 8	1.25	72	22	8.0	6.3	*	*
M 9	1.25	72	22	9.0	7.1	*	*
M 10	1.5	80	24	10.0	8.0	*	*
M 11	1.5	85	25	8.0	6.3	*	*
M 12	1.75	89	29	9.0	7.1	*	*
M 14	2	95	30	11.2	9.0	*	*
M 16	2	102	32	12.5	10.0	*	*
M 18	2.5	112	37	14.0	11.2	*	*
M 20	2.5	112	37	14.0	11.2	*	*
M 22	2.5	118	38	16.0	12.5	*	*
M 24	3	130	45	18.0	14.0	*	*
M 27	3	135	45	20.0	16.0	*	*
M 30	3.5	138	48	20.0	16.0	*	*
M 33	3.5	151	51	22.4	18.0	*	*
M 36	4	162	57	25.0	20.0	*	*
M 39	4	170	60	28.0	22.4	*	*
M 42	4.5	170	60	28.0	22.4	*	*
M 45	4.5	187	67	31.5	25.0	*	*
M 48	5	187	67	31.5	25.0	*	*
M 52	5	200	70	35.5	28.0	*	*
M 56	5.5	200	70	35.5	28.0	*	*
M 60	5.5	221	76	40.0	31.5	*	*
* - available on request							

**Short Machine Taps ISO 529, HSS**  
Metric ISO-Coarse Thread, ISO 965

**METRIC**

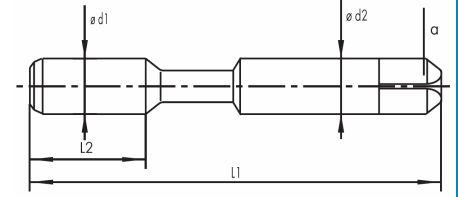










List-No.	60010	60015	60020	60027	60025		
<p><b>TH = Through Hole</b> <b>BH = Blind Hole</b></p>							
<b>Product Group</b>	10	10	10	10	10		
<b>Type</b>	SpPt	SpPt	SpFI	SpFI	SpFI		
<b>Type of Hole</b>	TH	TH	BH	BH	BH		
<b>Length of Chamfer Lead (Thread)</b>	4 - 5	4 - 5	1.5 - 2.5	1.5 - 2.5	1.5 - 2.5		
<b>Tolerance</b>	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H		
<b>Surface</b>	P1	P5	P0	P1	P5		
<b>Metric Size</b>	<b>P</b> mm	<b>l1</b> mm	<b>l2*max</b> mm	<b>d2</b> mm	<b>a</b> mm	Availability	Availability
M 1	0.25	38.5	5.5	2.5	2.0	•	
M 1.2	0.25	38.5	5.5	2.5	2.0	•	
M 1.4	0.3	40	7	2.5	2.0	•	
M 1.6	0.35	41	8	2.5	2.0	•	
M 2	0.4	41	8	2.5	2.0	•	•
M 2.5	0.45	44.5	9.5	2.8	2.24	•	•
M 3	0.5	48	16	3.15	2.5	•	•
M 3.5	0.6	50	19	3.55	2.8	•	•
M 4	0.7	53	13	4.0	3.15	•	•
M 5	0.8	58	16	5.0	4.0	•	•
M 6	1.0	66	19	6.3	5.0	•	•
M 7	1.0	66	19	7.1	5.6	•	•
M 8	1.25	72	22	8.0	6.3	•	•
M 10	1.5	80	24	10.0	8.0	•	•
M 12	1.75	89	29	9.0	7.1	•	•
M 14	2.0	95	30	11.2	9.0	•	•
M 16	2.0	102	32	12.5	10.0	•	•
M 18	2.5	112	37	14.0	11.2	•	*
M 20	2.5	112	37	14.0	11.2	•	*
M 22	2.5	118	38	16.0	12.5	•	*
M 24	3.0	130	45	18.0	14.0	•	*
M 27	3.0	135	45	20.0	16.0	•	*
M 30	3.5	138	48	20.0	16.0	•	*
* - available on request							

Drilling  
Reaming  
Threading  
Milling  
Miscellaneous  
Solid Carbide

**Short Machine Taps ISO 529, HSS**  
Metric ISO-Fine Thread, ISO 965

Mf



List-No.	60080	60080	60080	60080	60085	62810	62820
 <b>TH = Through Hole</b> <b>BH = Blind Hole</b>							
<b>Product Group</b>	10	10	10	10	10	10	10
<b>Type</b>	SET	STF Taper	STF Second	STF Bottom	STF Bottom	StPt	SpFI
<b>Type of Hole</b>		TH	TH	TH / BH	TH / BH	TH	BH
<b>Length of Chamfer Lead (Thread)</b>		8 - 10	4 - 5	1.5 - 2.5	1.5 - 2.5	4 - 5	1.5 - 2.5
<b>Tolerance</b>	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H	ISO2/6H
<b>Surface</b>	P0	P0	P0	P0	P5	P1	P0
<b>Metric Size</b>	<b>P</b> mm	<b>l1</b> mm	<b>l2*max</b> mm	<b>d2</b> mm	<b>a</b> mm	<b>Availability</b>	<b>Availability</b>
M 3	0.35	48	16	3.15	2.5	*	*
M 3.5	0.35	50	19	3.55	2.8	*	*
M 4	0.5	53	13	4.0	3.15	*	*
M 4.5	0.5	53	13	4.5	3.55	*	*
M 5	0.5	58	16	5.0	4.0	*	*
M 5	0.75	58	16	5.0	4.0	*	*
M 6	0.75	66	19	6.3	5.0	*	*
M 7	0.75	66	19	7.1	5.6	*	*
M 8	0.75	72	22	8.0	6.3	*	*
M 8	1.0	72	22	8.0	6.3	*	*
M 9	1.0	72	22	9.0	7.1	*	*
M 10	0.75	80	24	10.0	8.0	*	*
M 10	1.0	80	24	10.0	8.0	*	*
M 10	1.25	80	24	10.0	8.0	*	*
M 12	1.0	89	29	9.0	7.1	*	*
M 12	1.25	89	29	9.0	7.1	*	*
M 12	1.5	89	29	9.0	7.1	*	*
M 14	1.0	95	30	11.2	9.0	*	*
M 14	1.25	95	30	11.2	9.0	*	*
M 14	1.5	95	30	11.2	9.0	*	*
M 16	1.0	102	32	12.5	10.0	*	*
M 16	1.5	102	32	12.5	10.0	*	*
M 18	1.0	112	37	14.0	11.2	*	*
M 18	1.5	112	37	14.0	11.2	*	*
M 18	2.0	112	37	14.0	11.2	*	*
M 20	1.0	112	37	14.0	11.2	*	*
M 20	1.5	112	37	14.0	11.2	*	*
M 20	2.0	112	37	14.0	11.2	*	*
M 22	1.5	118	38	16.0	12.5	*	*
M 22	2.0	118	38	16.0	12.5	*	*
M 24	1.5	130	45	18.0	14.0	*	*
M 24	2.0	130	45	18.0	14.0	*	*
M 25	1.5	130	45	18.0	14.0	*	*
M 27	1.5	127	37	20.0	16.0	*	*
M 27	2.0	127	37	20.0	16.0	*	*
M 30	1.5	127	37	20.0	16.0	*	*
M 30	2.0	127	37	20.0	16.0	*	*
M 32	1.5	137	37	22.4	18.0	*	*

P0-Bright • P1-Steam Tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

Drilling

Reaming

Threading

Milling

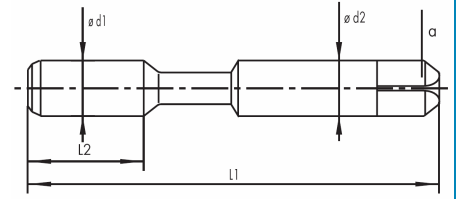
Miscellaneous

Solid Carbide



**Short Machine Taps ISO 529, HSS**  
*Unified Coarse Thread UNC ASME-B1.1, ISO 263*

**UNC**

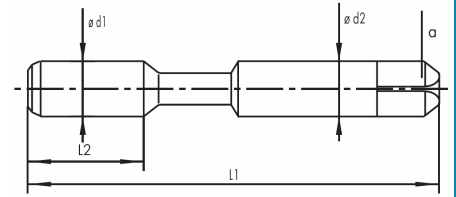


List-No.	60100	60100	60100	60100	60110	60120																																																																																																																																																																																																																																																																																																																								
<p><b>TH = Through Hole</b>  <b>BH = Blind Hole</b></p>																																																																																																																																																																																																																																																																																																																														
<b>Product Group</b>	10	10	10	10	10	10																																																																																																																																																																																																																																																																																																																								
<b>Type</b>	SET	STF Taper	STF Second	STF Bottom	StPt	SpFl																																																																																																																																																																																																																																																																																																																								
<b>Type of Hole</b>		TH	TH	TH / BH	TH	BH																																																																																																																																																																																																																																																																																																																								
<b>Length of Chamfer Lead (Thread)</b>		8 - 10	4 - 5	1.5 - 2.5	4 - 5	1.5 - 2.5																																																																																																																																																																																																																																																																																																																								
<b>Tolerance</b>	2B	2B	2B	2B	2B	2B																																																																																																																																																																																																																																																																																																																								
<b>Surface</b>	P0	P0	P0	P0	P1	P0																																																																																																																																																																																																																																																																																																																								
<table border="1"> <thead> <tr> <th>Size</th> <th>TPI</th> <th>l1 mm</th> <th>l2*max mm</th> <th>d2 mm</th> <th>a mm</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> </tr> </thead> <tbody> <tr><td>No.1</td><td>64</td><td>41</td><td>8</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td></td></tr> <tr><td>No.2</td><td>56</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td></td></tr> <tr><td>No.3</td><td>48</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td></td></tr> <tr><td>No.4</td><td>40</td><td>48</td><td>16</td><td>3.15</td><td>2.5</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>No.5</td><td>40</td><td>48</td><td>16</td><td>3.15</td><td>2.5</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>No.6</td><td>32</td><td>50</td><td>19</td><td>3.55</td><td>2.8</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>No.8</td><td>32</td><td>53</td><td>13</td><td>4.5</td><td>3.55</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>No.10</td><td>24</td><td>58</td><td>16</td><td>5.0</td><td>4.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>No.12</td><td>24</td><td>62</td><td>17</td><td>5.6</td><td>4.5</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1/4</td><td>20</td><td>66</td><td>19</td><td>6.3</td><td>5.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>5/16</td><td>18</td><td>72</td><td>22</td><td>8.0</td><td>6.3</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>3/8</td><td>16</td><td>80</td><td>24</td><td>10.0</td><td>8.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>7/16</td><td>14</td><td>85</td><td>25</td><td>8.0</td><td>6.3</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1/2</td><td>13</td><td>89</td><td>29</td><td>9.0</td><td>7.1</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>9/16</td><td>12</td><td>95</td><td>30</td><td>11.2</td><td>9.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>5/8</td><td>11</td><td>102</td><td>32</td><td>12.5</td><td>10.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>3/4</td><td>10</td><td>112</td><td>37</td><td>14.0</td><td>11.2</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>7/8</td><td>9</td><td>118</td><td>38</td><td>16.0</td><td>12.5</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1</td><td>8</td><td>130</td><td>45</td><td>18.0</td><td>14.0</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1 1/8</td><td>7</td><td>138</td><td>48</td><td>20.0</td><td>16.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1 1/4</td><td>7</td><td>151</td><td>51</td><td>22.4</td><td>18.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1 3/8</td><td>6</td><td>162</td><td>57</td><td>25.0</td><td>20.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1 1/2</td><td>6</td><td>170</td><td>60</td><td>28.0</td><td>22.4</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>1 3/4</td><td>5</td><td>187</td><td>67</td><td>31.5</td><td>25.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> <tr><td>2</td><td>4.5</td><td>200</td><td>70</td><td>35.5</td><td>28.0</td><td>*</td><td>*</td><td>•</td><td>•</td><td>•</td><td>•</td></tr> </tbody> </table>	Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability	No.1	64	41	8	2.5	2.0	*	*	•	•	•		No.2	56	44.5	9.5	2.8	2.24	*	*	•	•	•		No.3	48	44.5	9.5	2.8	2.24	*	*	•	•	•		No.4	40	48	16	3.15	2.5	•	•	•	•	•	•	No.5	40	48	16	3.15	2.5	•	•	•	•	•	•	No.6	32	50	19	3.55	2.8	•	•	•	•	•	•	No.8	32	53	13	4.5	3.55	•	•	•	•	•	•	No.10	24	58	16	5.0	4.0	•	•	•	•	•	•	No.12	24	62	17	5.6	4.5	•	•	•	•	•	•	1/4	20	66	19	6.3	5.0	•	•	•	•	•	•	5/16	18	72	22	8.0	6.3	•	•	•	•	•	•	3/8	16	80	24	10.0	8.0	•	•	•	•	•	•	7/16	14	85	25	8.0	6.3	•	•	•	•	•	•	1/2	13	89	29	9.0	7.1	•	•	•	•	•	•	9/16	12	95	30	11.2	9.0	•	•	•	•	•	•	5/8	11	102	32	12.5	10.0	•	•	•	•	•	•	3/4	10	112	37	14.0	11.2	•	•	•	•	•	•	7/8	9	118	38	16.0	12.5	•	•	•	•	•	•	1	8	130	45	18.0	14.0	•	•	•	•	•	•	1 1/8	7	138	48	20.0	16.0	*	*	•	•	•	•	1 1/4	7	151	51	22.4	18.0	*	*	•	•	•	•	1 3/8	6	162	57	25.0	20.0	*	*	•	•	•	•	1 1/2	6	170	60	28.0	22.4	*	*	•	•	•	•	1 3/4	5	187	67	31.5	25.0	*	*	•	•	•	•	2	4.5	200	70	35.5	28.0	*	*	•	•	•	•						
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability																																																																																																																																																																																																																																																																																																																			
No.1	64	41	8	2.5	2.0	*	*	•	•	•																																																																																																																																																																																																																																																																																																																				
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No.3	48	44.5	9.5	2.8	2.24	*	*	•	•	•																																																																																																																																																																																																																																																																																																																				
No.4	40	48	16	3.15	2.5	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
No.5	40	48	16	3.15	2.5	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
No.6	32	50	19	3.55	2.8	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
No.8	32	53	13	4.5	3.55	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
No.10	24	58	16	5.0	4.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
No.12	24	62	17	5.6	4.5	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1/4	20	66	19	6.3	5.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
5/16	18	72	22	8.0	6.3	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
3/8	16	80	24	10.0	8.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
7/16	14	85	25	8.0	6.3	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1/2	13	89	29	9.0	7.1	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
9/16	12	95	30	11.2	9.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
5/8	11	102	32	12.5	10.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
3/4	10	112	37	14.0	11.2	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
7/8	9	118	38	16.0	12.5	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1	8	130	45	18.0	14.0	•	•	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1 1/8	7	138	48	20.0	16.0	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1 1/4	7	151	51	22.4	18.0	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1 3/8	6	162	57	25.0	20.0	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1 1/2	6	170	60	28.0	22.4	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
1 3/4	5	187	67	31.5	25.0	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
2	4.5	200	70	35.5	28.0	*	*	•	•	•	•																																																																																																																																																																																																																																																																																																																			
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**Short Machine Taps ISO 529, HSS**  
Whitworth-Thread BSW, BS84

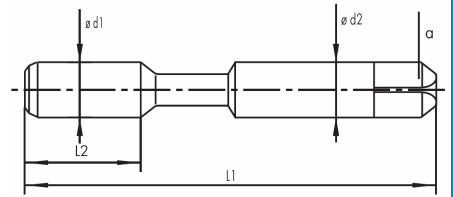
**WHIT**









List-No.	60300	60300	60300	60300	60310	60320																																																																																																																																																																																																																																																																																																												
<p><b>TH = Through Hole</b> <b>BH = Blind Hole</b></p>																																																																																																																																																																																																																																																																																																																		
<b>Product Group</b>	10	10	10	10	10	10																																																																																																																																																																																																																																																																																																												
<b>Type</b>	SET	STF Taper	STF Second	STF Bottom	StPt	SpFl																																																																																																																																																																																																																																																																																																												
<b>Type of Hole</b>		TH	TH	TH / BH	TH	BH																																																																																																																																																																																																																																																																																																												
<b>Length of Chamfer Lead (Thread)</b>		8 - 10	4 - 5	1.5 - 2.5	4 - 5	1.5 - 2.5																																																																																																																																																																																																																																																																																																												
<b>Tolerance</b>	CL2	CL2	CL2	CL2	CL2	CL2																																																																																																																																																																																																																																																																																																												
<b>Surface</b>	P0	P0	P0	P0	P1	P0																																																																																																																																																																																																																																																																																																												
<table border="1"> <thead> <tr> <th>Size</th> <th>TPI</th> <th>l1 mm</th> <th>l2*max mm</th> <th>d2 mm</th> <th>a mm</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> </tr> </thead> <tbody> <tr><td>1/16</td><td>60</td><td>41</td><td>8</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td></td><td></td></tr> <tr><td>3/32</td><td>48</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>.</td><td>.</td><td></td><td></td></tr> <tr><td>1/8</td><td>40</td><td>48</td><td>16</td><td>3.15</td><td>2.5</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>5/32</td><td>32</td><td>53</td><td>13</td><td>4.0</td><td>3.15</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>3/16</td><td>24</td><td>58</td><td>16</td><td>5.0</td><td>4.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>7/32</td><td>24</td><td>62</td><td>17</td><td>5.6</td><td>4.5</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1/4</td><td>20</td><td>66</td><td>19</td><td>6.3</td><td>5.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>5/16</td><td>18</td><td>72</td><td>22</td><td>8.0</td><td>6.3</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>3/8</td><td>16</td><td>80</td><td>24</td><td>10.0</td><td>8.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>7/16</td><td>14</td><td>85</td><td>25</td><td>8.0</td><td>6.3</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1/2</td><td>12</td><td>89</td><td>29</td><td>9.0</td><td>7.1</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>9/16</td><td>12</td><td>95</td><td>30</td><td>11.2</td><td>9.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>5/8</td><td>11</td><td>102</td><td>32</td><td>12.5</td><td>10.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>3/4</td><td>10</td><td>112</td><td>37</td><td>14.0</td><td>11.2</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>7/8</td><td>9</td><td>118</td><td>38</td><td>16.0</td><td>12.5</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1</td><td>8</td><td>130</td><td>45</td><td>18.0</td><td>14.0</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1 1/8</td><td>7</td><td>138</td><td>48</td><td>20.0</td><td>16.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1 1/4</td><td>7</td><td>151</td><td>51</td><td>22.4</td><td>18.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1 3/8</td><td>6</td><td>162</td><td>57</td><td>25.0</td><td>20.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1 1/2</td><td>6</td><td>170</td><td>60</td><td>28.0</td><td>22.4</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>1 3/4</td><td>5</td><td>187</td><td>67</td><td>31.5</td><td>25.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>2</td><td>4.5</td><td>200</td><td>70</td><td>35.5</td><td>28.0</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>2 1/4</td><td>4</td><td>221</td><td>76</td><td>40.0</td><td>31.5</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> <tr><td>2 1/2</td><td>4</td><td>224</td><td>79</td><td>40.0</td><td>31.5</td><td>*</td><td>*</td><td>.</td><td>.</td><td>.</td><td>.</td></tr> </tbody> </table>	Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability	1/16	60	41	8	2.5	2.0	*	*	.	.			3/32	48	44.5	9.5	2.8	2.24	*	*	.	.			1/8	40	48	16	3.15	2.5	.	.	.	.	.	.	5/32	32	53	13	4.0	3.15	.	.	.	.	.	.	3/16	24	58	16	5.0	4.0	.	.	.	.	.	.	7/32	24	62	17	5.6	4.5	.	.	.	.	.	.	1/4	20	66	19	6.3	5.0	.	.	.	.	.	.	5/16	18	72	22	8.0	6.3	.	.	.	.	.	.	3/8	16	80	24	10.0	8.0	.	.	.	.	.	.	7/16	14	85	25	8.0	6.3	.	.	.	.	.	.	1/2	12	89	29	9.0	7.1	.	.	.	.	.	.	9/16	12	95	30	11.2	9.0	.	.	.	.	.	.	5/8	11	102	32	12.5	10.0	.	.	.	.	.	.	3/4	10	112	37	14.0	11.2	.	.	.	.	.	.	7/8	9	118	38	16.0	12.5	.	.	.	.	.	.	1	8	130	45	18.0	14.0	.	.	.	.	.	.	1 1/8	7	138	48	20.0	16.0	*	*	.	.	.	.	1 1/4	7	151	51	22.4	18.0	*	*	.	.	.	.	1 3/8	6	162	57	25.0	20.0	*	*	.	.	.	.	1 1/2	6	170	60	28.0	22.4	*	*	.	.	.	.	1 3/4	5	187	67	31.5	25.0	*	*	.	.	.	.	2	4.5	200	70	35.5	28.0	*	*	.	.	.	.	2 1/4	4	221	76	40.0	31.5	*	*	.	.	.	.	2 1/2	4	224	79	40.0	31.5	*	*	.	.	.	.						
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability																																																																																																																																																																																																																																																																																																							
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5/16	18	72	22	8.0	6.3	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
3/8	16	80	24	10.0	8.0	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
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1/2	12	89	29	9.0	7.1	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
9/16	12	95	30	11.2	9.0	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
5/8	11	102	32	12.5	10.0	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
3/4	10	112	37	14.0	11.2	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
7/8	9	118	38	16.0	12.5	.	.	.	.	.	.																																																																																																																																																																																																																																																																																																							
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1 1/8	7	138	48	20.0	16.0	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
1 1/4	7	151	51	22.4	18.0	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
1 3/8	6	162	57	25.0	20.0	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
1 1/2	6	170	60	28.0	22.4	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
1 3/4	5	187	67	31.5	25.0	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
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2 1/4	4	221	76	40.0	31.5	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
2 1/2	4	224	79	40.0	31.5	*	*	.	.	.	.																																																																																																																																																																																																																																																																																																							
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**Short Machine Taps ISO 529, HSS**  
Whitworth-Fine Thread BSF, BS84

**BSF**



List-No.	60400	60400	60400	60400	60410	60420
<p>TH = Through Hole BH = Blind Hole</p>      						
Product Group	10	10	10	10	10	10
Type	SET	STF Taper	STF Second	STF Bottom	StPt	SpFl
Type of Hole		TH	TH	TH / BH	TH	BH
Length of Chamfer Lead (Thread)		8 - 10	4 - 5	1.5 - 2.5	4 - 5	1.5 - 2.5
Tolerance	CL2	CL2	CL2	CL2	CL2	CL2
Surface	P0	P0	P0	P0	P1	P0
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
3/16	32	58	16	5.0	4.0	•
1/4	26	66	19	6.3	5.0	•
5/16	22	72	22	8.0	6.3	•
3/8	20	80	24	10.0	8.0	•
7/16	18	85	25	8.0	6.3	•
1/2	16	89	29	9.0	7.1	•
9/16	16	95	30	11.2	9.0	•
5/8	14	102	32	12.5	10.0	•
3/4	12	112	37	14.0	11.2	•
7/8	11	118	38	16.0	12.5	•
1	10	130	45	18.0	14.0	•
1 1/8	9	138	48	20.0	16.0	*
1 1/4	9	151	51	22.4	18.0	*
1 3/8	8	162	57	25.0	20.0	*
1 1/2	8	170	60	28.0	22.4	*
1 3/4	7	187	67	31.5	25.0	*
2	7	200	70	35.5	28.0	*
2 1/4	6	221	76	40.0	31.5	*
2 1/2	6	224	79	40.0	31.5	*
* - available on request						

Drilling

Reaming

Threading

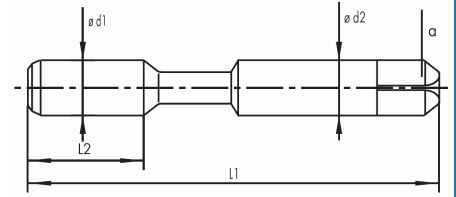
Milling

Miscellaneous

Solid Carbide

Short Machine Taps ISO 529, HSS  
BA-Thread, BS 93

BA



List-No.	60500	60500	60500	60500	60510	60520																																																																																																																																																																								
<p>TH = Through Hole BH = Blind Hole</p>																																																																																																																																																																														
Product Group	10	10	10	10	10	10																																																																																																																																																																								
Type	SET	STF Taper	STF Second	STF Bottom	StPt	SpFl																																																																																																																																																																								
Type of Hole		TH	TH	TH / BH	TH	BH																																																																																																																																																																								
Length of Chamfer Lead (Thread)		8 - 10	4 - 5	1.5 - 2.5	4 - 5	1.5 - 2.5																																																																																																																																																																								
Tolerance	CL2	CL2	CL2	CL2	CL2	CL2																																																																																																																																																																								
Surface	P0	P0	P0	P0	P1	P0																																																																																																																																																																								
<table border="1"> <thead> <tr> <th>Size</th> <th>TPI</th> <th>l1 mm</th> <th>l2*max mm</th> <th>d2 mm</th> <th>a mm</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> <th>Availability</th> </tr> </thead> <tbody> <tr><td>14</td><td>110.4</td><td>38.5</td><td>5.5</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td><td></td></tr> <tr><td>12</td><td>90.9</td><td>40</td><td>7</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td><td></td></tr> <tr><td>10</td><td>72.6</td><td>41</td><td>8</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td></tr> <tr><td>9</td><td>65.1</td><td>41</td><td>8</td><td>2.5</td><td>2.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td></tr> <tr><td>8</td><td>59.1</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>7</td><td>52.9</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>6</td><td>47.9</td><td>44.5</td><td>9.5</td><td>2.8</td><td>2.24</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>5</td><td>43.0</td><td>48</td><td>16</td><td>3.15</td><td>2.5</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>4</td><td>38.5</td><td>50</td><td>19</td><td>3.55</td><td>2.8</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>3</td><td>34.8</td><td>53</td><td>13</td><td>4.5</td><td>3.55</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>2</td><td>31.4</td><td>58</td><td>16</td><td>5.0</td><td>4.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>1</td><td>28.2</td><td>62</td><td>17</td><td>5.6</td><td>4.5</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> <tr><td>0</td><td>25.4</td><td>66</td><td>19</td><td>6.3</td><td>5.0</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td></tr> </tbody> </table>	Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability	14	110.4	38.5	5.5	2.5	2.0	*	*	*	*			12	90.9	40	7	2.5	2.0	*	*	*	*			10	72.6	41	8	2.5	2.0	*	*	*	*	*		9	65.1	41	8	2.5	2.0	*	*	*	*	*		8	59.1	44.5	9.5	2.8	2.24	*	*	*	*	*	*	7	52.9	44.5	9.5	2.8	2.24	*	*	*	*	*	*	6	47.9	44.5	9.5	2.8	2.24	*	*	*	*	*	*	5	43.0	48	16	3.15	2.5	*	*	*	*	*	*	4	38.5	50	19	3.55	2.8	*	*	*	*	*	*	3	34.8	53	13	4.5	3.55	*	*	*	*	*	*	2	31.4	58	16	5.0	4.0	*	*	*	*	*	*	1	28.2	62	17	5.6	4.5	*	*	*	*	*	*	0	25.4	66	19	6.3	5.0	*	*	*	*	*	*						
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability	Availability																																																																																																																																																																			
14	110.4	38.5	5.5	2.5	2.0	*	*	*	*																																																																																																																																																																					
12	90.9	40	7	2.5	2.0	*	*	*	*																																																																																																																																																																					
10	72.6	41	8	2.5	2.0	*	*	*	*	*																																																																																																																																																																				
9	65.1	41	8	2.5	2.0	*	*	*	*	*																																																																																																																																																																				
8	59.1	44.5	9.5	2.8	2.24	*	*	*	*	*	*																																																																																																																																																																			
7	52.9	44.5	9.5	2.8	2.24	*	*	*	*	*	*																																																																																																																																																																			
6	47.9	44.5	9.5	2.8	2.24	*	*	*	*	*	*																																																																																																																																																																			
5	43.0	48	16	3.15	2.5	*	*	*	*	*	*																																																																																																																																																																			
4	38.5	50	19	3.55	2.8	*	*	*	*	*	*																																																																																																																																																																			
3	34.8	53	13	4.5	3.55	*	*	*	*	*	*																																																																																																																																																																			
2	31.4	58	16	5.0	4.0	*	*	*	*	*	*																																																																																																																																																																			
1	28.2	62	17	5.6	4.5	*	*	*	*	*	*																																																																																																																																																																			
0	25.4	66	19	6.3	5.0	*	*	*	*	*	*																																																																																																																																																																			
* - available on request																																																																																																																																																																														





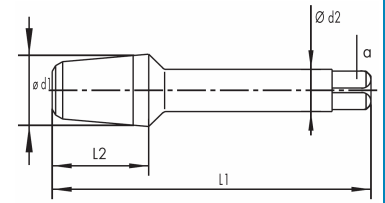




**Short Machine Taps ISO 2283, HSS**

*Tapered Whitworth-Pipe Thread Rc(BSPT) ISO 7 / BS 21*

**BSPF (Rc)**



List-No.

**60680    60680    60680    60680**

TH = Through Hole  
BH = Blind Hole



Product Group

**11    11    11    11**

Type

**SET    STF Taper    STF Second    STF Bottom**

Type of Hole

**TH    TH / BH    TH / BH**

Length of Chamfer Lead (Thread)

**8 - 10    4 - 5    1.5 - 2.5**

Tolerance

**Normal    Normal    Normal    Normal**

Surface

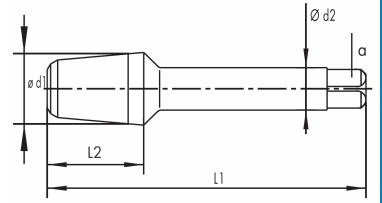
**P0    P0    P0    P0**

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability
1/8	28	59	15	8.0	6.3	•	•	•	•
1/4	19	67	19	10.0	8.0	•	•	•	•
3/8	19	75	21	12.5	10.0	•	•	•	•
1/2	14	87	26	16.0	12.5	•	•	•	•
3/4	14	96	28	20.0	16.0	*	*	•	•
1	11	109	33	25.0	20.0	*	*	•	•
1 1/4	11	119	36	31.5	25.0	*	*	•	•
1 1/2	11	125	37	35.5	28.0	*	*	•	•
2	11	140	41	40.0	31.5	*	*	•	•

\* - available on request

**Short Machine Taps ANSI 94.9, HSS**  
*Tapered Dryseal Pipe Thread NPT, ANSI-B1.20.1*

**NPT**



List-No.	60750	60750	60750	60750	60790
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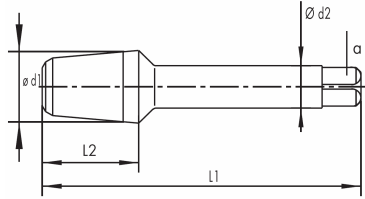
TH = Through Hole  
 BH = Blind Hole

Product Group	11	11	11	11	11
Type	SET	TP Taper	TP Second	TP Bottom	TPAz Bottom
Type of Hole		TH	TH / BH	TH / BH	TH / BH
Length of Chamfer Lead (Thread)		8 - 10	4 - 5	1.5 - 2.5	1.5 - 2.5
Tolerance	Normal	Normal	Normal	Normal	Normal
Surface	P0	P0	P0	P0	P0

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability	Availability	Availability	Availability	Availability
1/16	27	2 1/8	11/16	0.312	0.234	•	•	•	•	•
1/8	27	2 1/8	3/4	0.437	0.328	•	•	•	•	•
1/4	18	2 7/16	1 1/16	0.562	0.421	•	•	•	•	•
3/8	18	2 9/16	1 1/16	0.700	0.531	•	•	•	•	•
1/2	14	3 1/8	1 3/8	0.687	0.515	•	•	•	•	•
3/4	14	3 1/4	1 3/8	0.906	0.679	•	•	•	•	•
1	11.5	3 3/4	1 3/4	1.125	0.843	•	•	•	•	•
1 1/4	11.5	4	1 3/4	1.312	0.984	*	*	•	•	•
1 1/2	11.5	4 1/4	1 3/4	1.500	1.125	*	*	•	•	•
2	11.5	4 1/2	1 3/4	1.875	1.406	*	*	•	•	•

\* - available on request

**Short Machine Taps ANSI 94.9, HSS**  
*Tapered Dryseal Pipe Thread NPTF ANSI-B1.20.3* **NPTF**



List-No. **60760**

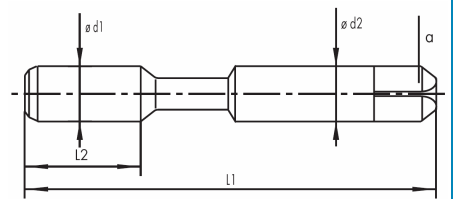
TH = Through Hole  
 BH = Blind Hole



Product Group	11					
Type	TP Bottom					
Type of Hole	BH / TH					
Length of Chamfer Lead (Thread)	1.5 - 2.5					
Tolerance	Normal					
Surface	P0					

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
1/8	27	2 1/8	3/4	0.437	0.328	•
1/4	18	2 7/16	1 1/16	0.562	0.421	•
3/8	18	2 9/16	1 1/16	0.700	0.531	•
1/2	14	3 1/8	1 3/8	0.687	0.515	•
3/4	14	3 1/4	1 3/8	0.906	0.679	•
1	11.5	3 3/4	1 3/4	1.125	0.843	•
1 1/4	11.5	4	1 3/4	1.312	0.984	•

**Short Machine Taps ISO 529, HSS**  
*Metric ISO Coarse Thread ISO 965* **M**



List-No. **69000**

TH = Through Hole  
 BH = Blind Hole

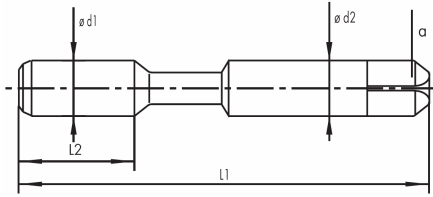


Product Group	11					
Type	Form					
Type of Hole	TH / BH					
Length of Chamfer Lead (Thread)	3					
Tolerance	Normal					
Surface	6HX					

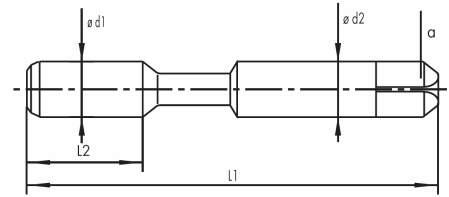
Size	P mm	l1 mm	l2*max mm	d2 mm	a mm	Availability
M2	0.4	41	8	2.5	2.0	•
M2.5	0.45	44.5	9.5	2.8	2.24	•
M 3	0.5	48	16	3.15	2.5	•
M 3.5	0.6	50	19	3.55	2.8	•
M 4	0.7	53	13	4.0	3.15	•
M 5	0.8	58	16	5.0	4.0	•
M 6	1.0	66	19	6.3	5.0	•
M 8	1.25	72	22	8.0	6.3	•
M 10	1.5	80	24	10.0	8.0	•
M 12	1.75	89	29	9.0	7.1	•

Drilling

**Short Fluteless Taps ISO 529, HSS**  
 Unified Coarse Thread UNC ASME-B1.1, ISO 263 **UNC**



**Short Fluteless Taps ISO 529, HSS**  
 Whitworth Thread BSW, BS84 **BSW**



Reaming

**List-No. 69010**

TH = Through Hole  
 BH = Blind Hole

**List-No. 69030**

TH = Through Hole  
 BH = Blind Hole

Threading

Product Group	11
Type	Form
Type of Hole	TH / BH
Length of Chamfer Lead (Thread)	3
Tolerance	2BX
Surface	P0

Product Group	11
Type	Form
Type of Hole	TH / BH
Length of Chamfer Lead (Thread)	3
Tolerance	CL2X
Surface	P0

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
No.2	56	44.5	9.5	2.8	2.24	•
No.4	40	48	16	3.15	2.5	•
No.5	40	48	16	3.15	2.5	•
No.6	32	50	19	3.55	2.8	•
No.8	32	53	13	4.5	3.55	•
No.10	24	58	16	5.0	4.0	•
1/4	20	66	19	6.3	5.0	•
5/16	18	72	22	8.0	6.3	•
3/8	16	80	24	10.0	8.0	•
1/2	13	89	29	9.0	7.1	•

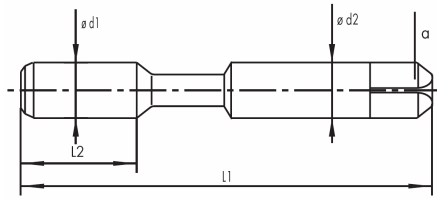
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
1/4	20	66	19	6.3	5.0	•
5/16	18	72	22	8.0	6.3	•
3/8	16	80	24	10.0	8.0	•

Milling

Miscellaneous

Solid Carbide

**Short Fluteless Taps ISO 529, HSS**  
Whitworth-Pipe Thread G(BSPF) DIN ISO 228 **BSPF“G”**



List-No. **69060**

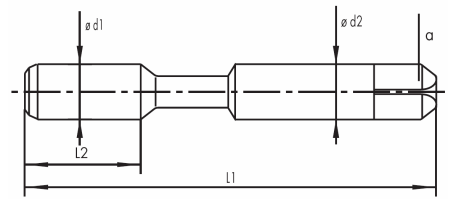
TH = Through Hole  
BH = Blind Hole



Product Group	<b>11</b>					
Type	<b>Form</b>					
Type of Hole	<b>TH / BH</b>					
Length of Chamfer Lead (Thread)	<b>3</b>					
Tolerance	<b>X</b>					
Surface	<b>P0</b>					

Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
1/8	28	59	15	8.0	6.3	•
1/4	19	67	19	10.0	8.0	•
3/8	19	75	21	12.5	10.0	•
1/2	14	87	26	16.0	12.5	•

**Short Fluteless Taps ISO 529, HSS**  
BA Thread, BS93 **BA**



List-No. **69050**

TH = Through Hole  
BH = Blind Hole



Product Group	<b>11</b>					
Type	<b>Form</b>					
Type of Hole	<b>TH / BH</b>					
Length of Chamfer Lead (Thread)	<b>3</b>					
Tolerance	<b>CL2X</b>					
Surface	<b>P0</b>					

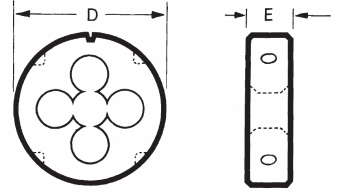
Size	TPI	l1 mm	l2*max mm	d2 mm	a mm	Availability
10	72.6	41	8	2.5	2.0	•
8	59.1	44.5	9.5	2.8	2.24	•
6	47.9	44.5	9.5	2.8	2.24	•
5	43.0	48	16	3.15	2.5	•
4	38.5	50	19	3.55	2.8	•
2	31.4	58	16	5.0	4.0	•
0	25.4	66	19	6.3	5.0	•





**Circular Split Dies BS 1127(1950), HSS**  
*Metric ISO Fine Thread, ISO 965*

Mf



List-No. **64110**



Product Group **13**

Type **Adjustable**

Length of Chamfer Lead (Thread) **1.5**

Tolerance **6g**

Surface **P0**

Metric Size	P mm	D ins	E ins	Availability
M 3	0.35	13/16	1/4	•
M 4	0.5	13/16	1/4	•
M 4.5	0.5	13/16	1/4	•
M 5	0.5	13/16	1/4	•
M 6	0.75	13/16	1/4	•
M 7	0.75	1	3/8	•
M 8	0.75	1	3/8	•
M 8	1.0	1	3/8	•
M 9	1.0	1	3/8	•
M 10	0.75	1	3/8	•
M 10	1.0	1	3/8	•
M 10	1.25	1	3/8	•
M 12	1.0	1 5/16	7/16	•
M 12	1.25	1 5/16	7/16	•
M 12	1.5	1 5/16	7/16	•
M 14	1.25	1 5/16	7/16	•
M 14	1.25	1 1/2	1/2	•
M 14	1.5	1 1/2	1/2	•
M 16	1.0	1 1/2	1/2	•
M 16	1.5	1 1/2	1/2	•
M 18	1.5	1 1/2	1/2	•
M 20	1.0	1 1/2	1/2	•
M 20	2.0	1 1/2	1/2	•
M 20	1.5	2	5/8	•
M 22	1.5	2	5/8	•
M 24	1.5	2	5/8	•
M 24	2.0	2	5/8	•
M 25	1.5	2	5/8	•
M 27	2.0	3	7/8	•
M 30	2.0	3	7/8	•
M 32	1.5	3	7/8	•

Drilling

Reaming

Threading

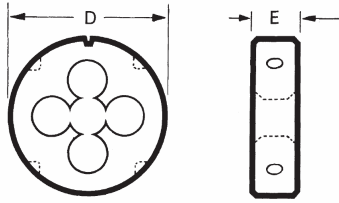
Milling

Miscellaneous

Solid Carbide

**Circular Split Dies BS 1127(1950), HSS**

*Unified Coarse Thread UNC, ASME-B1.1, ISO263* **UNC**



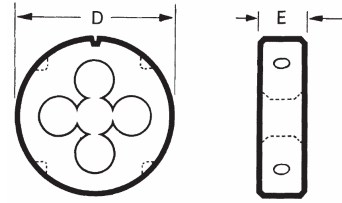
**List-No. 64120**



<b>Product Group</b>	<b>13</b>
<b>Type</b>	<b>Adjustable</b>
<b>Length of Chamfer Lead (Thread)</b>	<b>1.5</b>
<b>Tolerance</b>	<b>2A</b>
<b>Surface</b>	<b>P0</b>

Size	TPI	D ins	E ins	Availability
No.1	64	13/16	1/4	•
No.2	56	13/16	1/4	•
No.3	48	13/16	1/4	•
No.4	40	13/16	1/4	•
No.5	40	13/16	1/4	•
No.6	32	13/16	1/4	•
No.8	32	13/16	1/4	•
No.10	24	13/16	1/4	•
No.12	24	13/16	1/4	•
1/4	20	13/16	1/4	•
1/4	20	1	3/8	•
5/16	18	1	3/8	•
3/8	16	1	3/8	•
1/4	20	1 5/16	7/16	•
5/16	18	1 5/16	7/16	•
3/8	16	1 5/16	7/16	•
7/16	14	1 5/16	7/16	•
1/2	13	1 5/16	7/16	•
9/16	12	1 5/16	7/16	•
3/8	16	1 1/2	1/2	•
7/16	14	1 1/2	1/2	•
1/2	13	1 1/2	1/2	•
9/16	12	1 1/2	1/2	•
5/8	11	1 1/2	1/2	•
3/4	10	1 1/2	1/2	•
1/2	13	2	5/8	•
9/16	12	2	5/8	•
5/8	11	2	5/8	•
3/4	10	2	5/8	•
7/8	9	2	5/8	•
1	8	2	5/8	•
1	8	3	7/8	•
1 1/8	7	3	7/8	•
1 1/4	7	3	7/8	•
1 3/8	6	3	7/8	•
1 1/2	6	3	7/8	•

*Unified Fine Thread UNF, ASME-B1.1, ISO 263* **UNF**



**List-No. 64130**



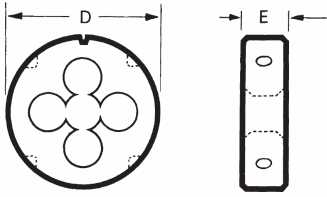
<b>Product Group</b>	<b>13</b>
<b>Type</b>	<b>Adjustable</b>
<b>Length of Chamfer Lead (Thread)</b>	<b>1.5</b>
<b>Tolerance</b>	<b>2A</b>
<b>Surface</b>	<b>P0</b>

Size	TPI	D ins	E ins	Availability
No.0	80	13/16	1/4	•
No.1	72	13/16	1/4	•
No.2	64	13/16	1/4	•
No.3	56	13/16	1/4	•
No.4	48	13/16	1/4	•
No.5	44	13/16	1/4	•
No.6	40	13/16	1/4	•
No.8	36	13/16	1/4	•
No.10	32	13/16	1/4	•
No.12	28	13/16	1/4	•
1/4	28	13/16	1/4	•
1/4	28	1	3/8	•
5/16	24	1	3/8	•
3/8	24	1	3/8	•
1/4	28	1 5/16	7/16	•
5/16	24	1 5/16	7/16	•
3/8	24	1 5/16	7/16	•
7/16	20	1 5/16	7/16	•
1/2	20	1 5/16	7/16	•
9/16	18	1 5/16	7/16	•
3/8	24	1 1/2	1/2	•
7/16	20	1 1/2	1/2	•
1/2	20	1 1/2	1/2	•
9/16	18	1 1/2	1/2	•
5/8	18	1 1/2	1/2	•
3/4	16	1 1/2	1/2	•
1/2	20	2	5/8	•
9/16	18	2	5/8	•
5/8	18	2	5/8	•
3/4	16	2	5/8	•
7/8	14	2	5/8	•
1	12	2	5/8	•
1	12	3	7/8	•
1 1/8	12	3	7/8	•
1 1/4	12	3	7/8	•
1 3/8	12	3	7/8	•
1 1/2	12	3	7/8	•

**Circular Split Dies BS 1127(1950), HSS**

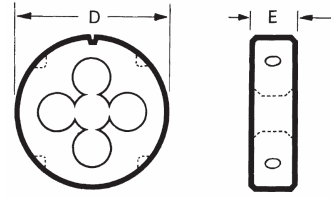
*Whitworth-Thread BSW, BS84*

**BSW**



*Whitworth-Fine Thread BSF, BS84*

**BSF**



**List-No.**

**64140**



**List-No.**

**64150**



**Product Group**

**13**

**Type**

**Adjustable**

**Length of Chamfer Lead (Thread)**

**1.5**

**Tolerance**

**Normal**

**Surface**

**P0**

Size	TPI	D ins	E ins	Availability
1/16	60	13/16	1/4	•
3/32	48	13/16	1/4	•
1/8	40	13/16	1/4	•
5/32	32	13/16	1/4	•
3/16	24	13/16	1/4	•
7/32	24	13/16	1/4	•
1/4	20	13/16	1/4	•
3/16	24	1	3/8	•
1/4	20	1	3/8	•
5/16	18	1	3/8	•
3/8	16	1	3/8	•
1/4	20	1 5/16	7/16	•
5/16	18	1 5/16	7/16	•
3/8	16	1 5/16	7/16	•
7/16	14	1 5/16	7/16	•
1/2	12	1 5/16	7/16	•
9/16	12	1 5/16	7/16	•
1/4	20	1 1/2	1/2	•
5/16	18	1 1/2	1/2	•
3/8	16	1 1/2	1/2	•
7/16	14	1 1/2	1/2	•
1/2	12	1 1/2	1/2	•
9/16	12	1 1/2	1/2	•
5/8	11	1 1/2	1/2	•
3/4	10	1 1/2	1/2	•
1/2	12	2	5/8	•
9/16	12	2	5/8	•
5/8	11	2	5/8	•
11/16	11	2	5/8	•
3/4	10	2	5/8	•
7/8	9	2	5/8	•
1	8	2	5/8	•
1	8	3	7/8	•
1 1/8	7	3	7/8	•
1 1/4	7	3	7/8	•
1 3/8	6	3	7/8	•
1 1/2	6	3	7/8	•

**Product Group**

**13**

**Type**

**Adjustable**

**Length of Chamfer Lead (Thread)**

**1.5**

**Tolerance**

**Normal**

**Surface**

**P0**

Size	TPI	D ins	E ins	Availability
3/16	32	13/16	1/4	•
1/4	26	13/16	1/4	•
3/16	32	1	3/8	•
1/4	26	1	3/8	•
5/16	22	1	3/8	•
3/8	20	1	3/8	•
1/4	26	1 5/16	7/16	•
5/16	22	1 5/16	7/16	•
3/8	20	1 5/16	7/16	•
7/16	18	1 5/16	7/16	•
1/2	16	1 5/16	7/16	•
9/16	16	1 5/16	7/16	•
5/16	22	1 1/2	1/2	•
3/8	20	1 1/2	1/2	•
7/16	18	1 1/2	1/2	•
1/2	16	1 1/2	1/2	•
9/16	16	1 1/2	1/2	•
5/8	14	1 1/2	1/2	•
3/4	12	1 1/2	1/2	•
1/2	16	2	5/8	•
9/16	16	2	5/8	•
5/8	14	2	5/8	•
3/4	12	2	5/8	•
7/8	11	2	5/8	•
1	10	2	5/8	•
1	10	3	7/8	•
1 1/8	9	3	7/8	•
1 1/4	9	3	7/8	•
1 3/8	8	3	7/8	•
1 1/2	8	3	7/8	•

Drilling

Reaming

Threading

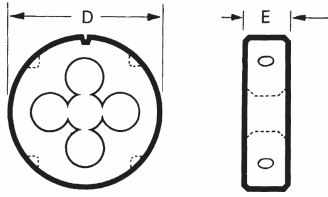
Milling

Miscellaneous

Solid Carbide

**Circular Split Dies BS 1127(1950), HSS**

Whitworth-Pipe Thread G(BSPF), DIN ISO 228 "G" BSPF



List-No. **64160**



Product Group **13**

Type **Adjustable**

Length of Chamfer Lead (Thread) **1.5**

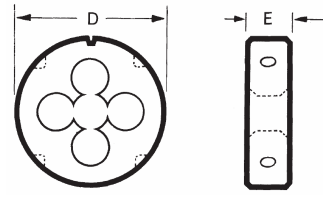
Tolerance **B**

Surface **P0**

Size	TPI	D ins	E ins	Availability
1/8	28	1	3/8	•
1/8	28	1 5/16	7/16	•
1/4	19	1 5/16	7/16	•
1/8	28	1 1/2	1/2	•
1/4	19	1 1/2	1/2	•
3/8	19	1 1/2	1/2	•
1/4	19	2	5/8	•
3/8	19	2	5/8	•
1/2	14	2	5/8	•
5/8	14	2	5/8	•
3/4	14	2	5/8	•
1/2	14	2 1/4	11/16	•
3/4	14	2 1/4	11/16	•
7/8	14	2 1/4	11/16	•
1	11	2 1/4	11/16	•
3/4	14	3	7/8	•
7/8	14	3	7/8	•
1	11	3	7/8	•
1 1/4	11	3	7/8	•
1	11	4	1	•
1 1/4	11	4	1	•
1 1/2	11	4	1	•
1 3/4	11	4	1	•
2	11	4	1	•

BA-Thread, BS 93

**BA**



List-No. **64170**



Product Group **13**

Type **Adjustable**

Length of Chamfer Lead (Thread) **1.5**

Tolerance **Normal**

Surface **P0**

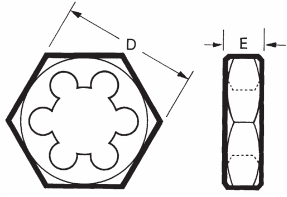
Size	TPI	D ins	E ins	Availability
16	133.7	13/16	1/4	•
15	120.9	13/16	1/4	•
14	110.4	13/16	1/4	•
13	101.6	13/16	1/4	•
12	90.9	13/16	1/4	•
10	72.6	13/16	1/4	•
9	65.1	13/16	1/4	•
8	59.1	13/16	1/4	•
7	52.9	13/16	1/4	•
6	47.9	13/16	1/4	•
5	43.0	13/16	1/4	•
4	38.5	13/16	1/4	•
3	34.8	13/16	1/4	•
2	31.4	13/16	1/4	•
1	28.2	13/16	1/4	•
0	25.4	13/16	1/4	•
2	31.4	1	3/8	•
1	28.2	1	3/8	•
0	25.4	1	3/8	•

Drilling

**Hexagon Dienuts BS 1127(1950), HSS**

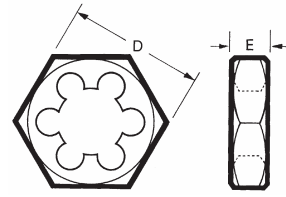
Metric ISO Coarse Thread, ISO 965

**M**



Metric ISO Fine Thread, ISO 965

**Mf**



Reaming

List-No.

**64400**



List-No.

**64410**



Threading

Product Group

**13**

Type

Length of Chamfer Lead (Thread)

**1.5**

Tolerance

**6g**

Surface

**P0**

Metric Size	P mm	D ins	E ins	Availability
M 3	0.5	19	5	•
M 4	0.7	19	5	•
M 5	0.8	19	5	•
M 6	1	19	7	•
M 7	1	22	9	•
M 8	1.25	22	9	•
M 9	1.25	22	9	•
M 10	1.5	27	11	•
M 11	1.5	27	11	•
M 12	1.75	36	14	•
M 14	2	36	14	•
M 16	2	41	18	•
M 18	2.5	41	18	•
M 20	2.5	41	18	•
M 22	2.5	50	22	•
M 24	3	50	22	•
M 27	3	60	25	•
M 30	3.5	60	25	•
M 33	3.5	60	25	•
M 36	4	60	25	•
M 42	4.5	70	30	•

Product Group

**13**

Type

Length of Chamfer Lead (Thread)

**1.5**

Tolerance

**6g**

Surface

**P0**

Metric Size	P mm	D ins	E ins	Availability
M 3	0.35	19	5	•
M 4	0.5	19	5	•
M 5	0.5	19	5	•
M 6	0.75	19	7	•
M 7	0.75	22	9	•
M 8	1.0	22	9	•
M 10	1.0	27	11	•
M 10	1.25	27	11	•
M 12	1.25	36	10	•
M 12	1.5	36	10	•
M 14	1.25	36	10	•
M 14	1.5	36	10	•
M 16	1.5	41	14	•
M 18	1.5	41	14	•
M 20	1.5	41	14	•
M 22	1.5	50	16	•
M 24	1.5	50	16	•
M 24	2.0	50	16	•
M 25	1.5	50	16	•
M 30	2.0	60	18	•
M 32	1.5	60	18	•
M 40	1.5	70	20	•
M 42	1.5	70	20	•

Milling

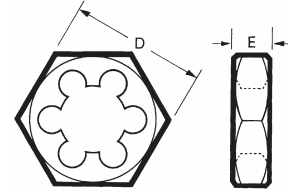
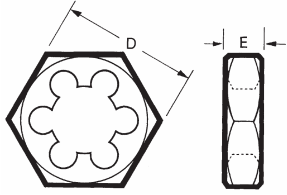
Miscellaneous

Solid Carbide

**Hexagon Dienuts BS 1127(1950), HSS**

Unified Coarse Thread UNC, ASME-B1.1, ISO 263 **UNC**

Unified Fine Thread UNF, ASME-B1.1, ISO 263 **UNF**



**List-No. 64420**

**List-No. 64430**



**Product Group 13**

**Product Group 13**

**Type**

**Type**

**Length of Chamfer Lead (Thread) 1.5**

**Length of Chamfer Lead (Thread) 1.5**

**Tolerance 2A**

**Tolerance 2A**

**Surface P0**

**Surface P0**

Size	TPI	D ins	E ins	Availability
No.8	32	19	7	•
No.10	24	19	7	•
No.12	24	19	7	•
1/4	20	19	7	•
5/16	18	22	9	•
3/8	16	27	11	•
7/16	14	27	11	•
1/2	13	36	14	•
9/16	12	36	14	•
5/8	11	41	18	•
3/4	10	41	18	•
7/8	9	50	22	•
1	8	50	22	•
1 1/8	7	60	25	•
1 1/4	7	60	25	•
1 3/8	6	60	25	•
1 1/2	6	70	30	•
1 3/4	5	80	30	•
2	4.5	85	36	•

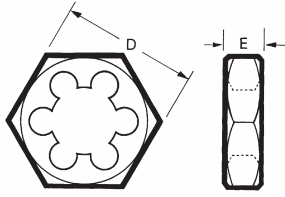
Size	TPI	D ins	E ins	Availability
No.8	36	19	7	•
No.10	32	19	7	•
No.12	28	19	7	•
1/4	28	19	7	•
5/16	24	22	9	•
3/8	24	27	11	•
7/16	20	27	11	•
1/2	20	36	10	•
9/16	18	36	10	•
5/8	18	41	14	•
3/4	16	41	14	•
7/8	14	50	16	•
1	12	50	16	•
1 1/8	12	60	18	•
1 1/4	12	60	18	•
1 3/8	12	60	18	•
1 1/2	12	70	20	•

Drilling

**Hexagon Dienuts BS 1127(1950), HSS**

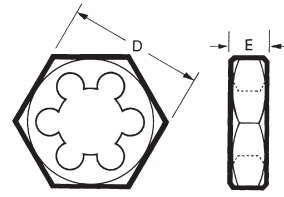
*Whitworth-Thread BSW, BS84*

**BSW**



*Whitworth-Fine Thread BSF, BS84*

**BSF**



Reaming

**List-No.**

**64440**



**List-No.**

**64450**



Threading

**Product Group**

**13**

**Type**

**Length of Chamfer Lead (Thread)**

**1.5**

**Tolerance**

**Normal**

**Surface**

**P0**

Size	TPI	D ins	E ins	Availability
1/8	40	19	5	•
3/16	24	19	7	•
1/4	20	19	7	•
5/16	18	22	9	•
3/8	16	27	11	•
7/16	14	27	11	•
1/2	12	36	14	•
9/16	12	36	14	•
5/8	11	41	18	•
3/4	10	41	18	•
7/8	9	50	22	•
1	8	50	22	•
1 1/8	7	60	25	•
1 1/4	7	60	25	•
1 3/8	6	60	25	•
1 1/2	6	70	30	•
1 3/4	5	80	30	•
2	4.5	85	36	•

**Product Group**

**13**

**Type**

**Length of Chamfer Lead (Thread)**

**1.5**

**Tolerance**

**Normal**

**Surface**

**P0**

Size	TPI	D ins	E ins	Availability
3/16	32	19	7	•
1/4	26	19	7	•
5/16	22	22	9	•
3/8	20	27	11	•
7/16	18	27	11	•
1/2	16	36	10	•
9/16	16	36	10	•
5/8	14	41	14	•
3/4	12	41	14	•
7/8	11	50	16	•
1	10	50	16	•
1 1/8	9	60	25	•
1 1/4	9	60	25	•
1 3/8	8	60	25	•
1 1/2	8	70	30	•
1 5/8	8	70	30	•
1 3/4	7	80	30	•

Milling

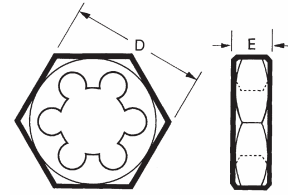
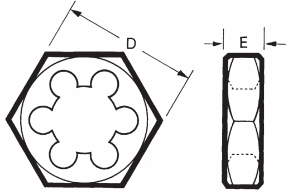
Miscellaneous

Solid Carbide

**Hexagon Dienuts BS 1127(1950), HSS**

Whitworth-Pipe Thread G(BSPF), DIN ISO 228 **BSP**

American Pipe Thread NPT **NPT**



List-No. **64460**

List-No. **64490**



Product Group **13**

Product Group **13**

Type

Type

Length of Chamfer Lead (Thread) **1.5**

Length of Chamfer Lead (Thread) **1.5**

Tolerance **B**

Tolerance **Normal**

Surface **P0**

Surface **P0**

Size	TPI	D ins	E ins	Availability
1/8	28	27	11	•
1/4	19	36	14	•
3/8	19	41	14	•
1/2	14	41	14	•
3/4	14	50	22	•
1	11	60	25	•
1 1/4	11	70	25	•
1 1/2	11	85	28	•

Size	TPI	D ins	E ins	Availability
1/8	27	27	11	•
1/4	18	36	14	•
3/8	18	41	15	•
1/2	14	50	19	•
3/4	14	60	20	•
1	11.5	60	25	•
1 1/4	11.5	85	26	•
1 1/2	11.5	85	26	•
2	11.5	100	31	•

Drilling

**Tooling**

**Tapwrench Ratchet, T-Type**

List-No.	69833			
Product Group	15			
No.	Capacity for Hand		Overall Length	Available
	Metric Size	Size	ins	
06 - 521	M 2 - M 6	1/8 - 1/4	3 1/4	•
06 - 522	M 6 - M 12	1/4 - 1/2	4 1/4	•



Reaming

**Tapwrench Ratchet, Adjustable**

List-No.	69823			
Product Group	15			
Symbol	Capacity for Hand		Overall Length	Available
	Metric Size	Size	ins	
X	M 2 - M 6	1/16 - 1/4	4 1/8	•
Y	M 3 - M 12	1/8 - 1/2	6 1/2	•



Threading

**Tapwrench, Adjustable**



List-No.	69843					
Product Group	15					
Size-No.	Capacity for Hand Taps		Capacity Hand Reamers		Overall Length	Available
	Metric Size	Size	mm	ins	ins	
101	M 3 - M 12	1/8 - 1/2	4.75 - 10.6	3/16 - 13/32	10 1/2	•
102	M 6 - M 20	1/4 - 3/4	4.75 - 15.0	3/16 - 9/16	15	•
103	M 12 - M 27	3/8 - 1	7.75 - 21.2	5/16 - 13/16	19 3/4	•
104	M 20 - M 42	3/4 - 1 1/2	15.0 - 33.5	5/8 - 1 3/16	31 1/2	•
105	M 27 - M 52	1 - 2	30.0 - 42.5	1 3/16 - 1 5/8	43	•
106	M 39 - M 60	1 1/2 - 2 1/2	26.5 - 53.0	1 1/16 - 2	52 1/2	•
107	M 27 - M 60	1 - 2 1/2	30.0 - 53.0	1 3/16 - 2	52 1/8	•

Milling

**Circular Diestocks for Circular Split Dies BS 1127**

List-No.	69403		
Product Group	15		
Nominal Dia.	Overall Length		Available
	ins	ins	
13/16	6 1/2		•
1	8 7/8		•
1 5/16	11		•
1 1/2	14 1/4		•
2	19 1/8		•
2 1/4	23		•
3	30		•
4	56		•



Miscellaneous





**Circular Diestocks for Circular Solid Dies DIN 223**

List-No.	69413		
Product Group	15		
Nominal Dia.	Thickness	Length	Available
	mm	mm	
20	5	165	•
20	7	165	•
25	9	215	•
30	11	280	•
38	10	365	•
38	14	365	•
45	14	480	•
45	18	480	•
55	16	590	•
55	22	590	•



Solid Carbide

**Combination Sets Taps and Dies**

List-No.	No. of Drills	Range	Increments	Unit		Availability	Product Group
6960037	12	M2 - M6		1		•	49
6960042	31	M2 - M24		1		•	49
6960023	23	UNC 1/4 - UNC 1		1		•	49
6960026	23	UNC 1/4 - UNC 1		1		•	49

Drilling

Reaming

Threading

Milling

Miscellaneous

Solid Carbide

Drilling

Reaming

Threading

Milling

Miscellaneous

Solid Carbide