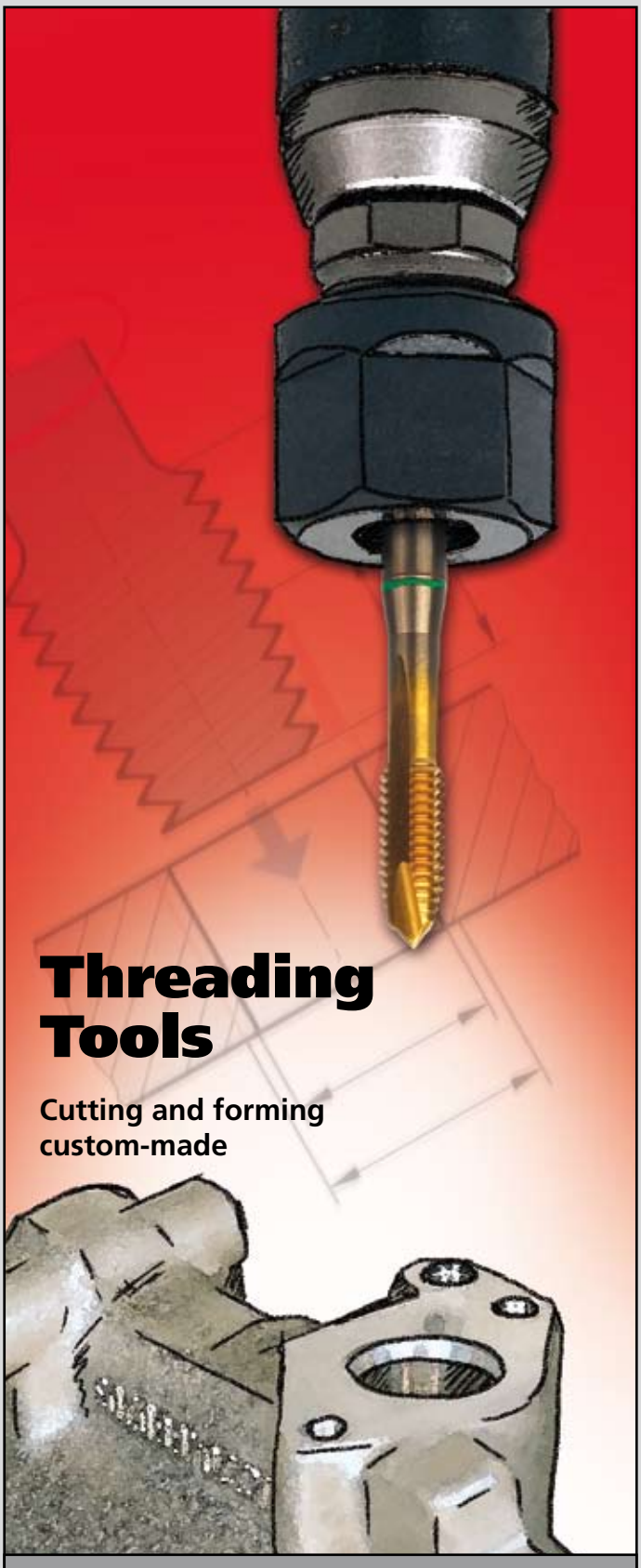
STOCK



Threading Tools

Cutting and forming custom-made

Chip – by Chip – to the Top

Our Threading Tool Range

STOCK threading tools are together with STOCK drills, reamers and milling cutters the most important types of tools in our range of precision cutting tools. The variety of design, together with different thread forms, manufactured in diverse tolerances according to DIN standard or special made, offers a large choice for solving threading problems.

The quality of the drilled hole in respect of correct size, roundness, straightness and surface roughness has an eminent influence on the produced thread. To be on the safe side, it is recommended to use STOCK drills for better results.
Order your free copy of our main catalog or get in touch with us for more information or recommendations.

STOCK- Threading Tools

Machine Taps
Thread Forming Taps
Hand Taps
Circular Dies

STOCK- Cutting Material

HSS-E
HSS-E-PM
Solid Carbide

STOCK- Thread Standards

Metric, Metric Fine
UNC, UNF
BSW, G
PG, NPT

STOCK- Standard Types

PRODUKTIV

Type N, Type W
Machine taps with straight flutes and spiral point for machine tapping of through holes
Type H, Type HD
alike, but made out of HSS-E-PM

INTENSIV

Type N, Type W
Machine taps with spiral flutes 15°, 40°, 45° for machine tapping of blind holes
Type H, Type HD
alike, but made out of HSS-E-PM

MASSIV

Type N
Spiral point taps for machine tapping of through holes in sheet metal, punched or drilled

DURATIV

Type N
Cold forming taps, with and without lubrication flutes

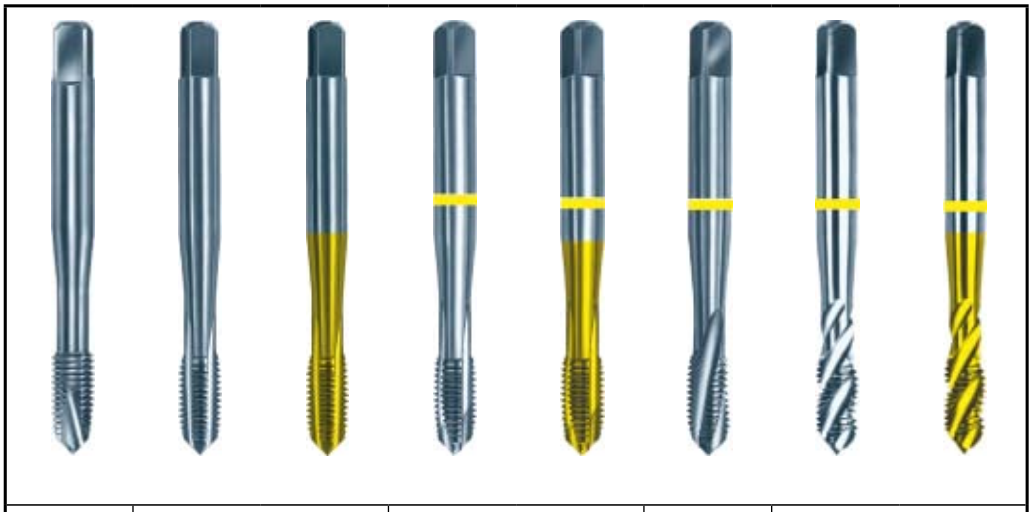
STOCK- Solutions

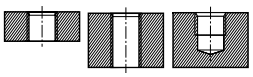
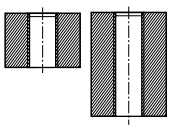
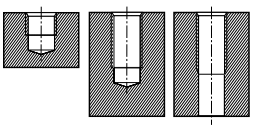
We manufacture special threading tools, like taps, cold forming taps or thread milling cutters, with or without coolant through supply, also for dry machining, minimal lubrication and for threads into hardened material. For best results the tools are bright finish, steam tempered, nitrided or coated with e.g. TiN, TiCN, TiAlN or/and MoS_2 for better lubrication.

STOCK- Coloured band indication

- General steels up to 800 N/mm²
- High tens. mat. up to 800-1200 N/mm²
- Stainless and acid-resisting steel
- Universal applications
- Aluminium and Al-alloys
- Cast materials

Application recommendations for taps



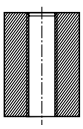
Material examples			for gen. steels ≤ 800 MPa and non-ferrous metals	for gen. steels ≤ 800 MPa, e. g.: structural steels free-cutting steels case hardened steels heat-treatable steels		for gen. steels ≤ 800 MPa, e. g.: structural steels free-cutting steels case hardened steels heat-treatable steels		for gen. steels ≤ 800 MPa and non-ferrous metals	for gen. steels ≤ 800 MPa, e. g.: structural steels free-cutting steels case hardened steels heat-treatable steels	
Hole type									
Tool material			HSS-E						
Type			Massiv N	Produktiv N				Intensiv N	
Form			B	C		B		C	
Surface finish			bright	bright	TiN	bright	TiN	bright	bright	TiN
v_c m/min			≤ **15**	≤ **15**	≤ **20**	≤ **15**	≤ **20**	≤ **15**	≤ **15**	≤ **20**
Thread type	Dimensions to DIN 2184-1	Tolerance zone	**Order no./Ø-range**							
M	**DIN 371**	**ISO 2 6H**	73126 M2 - M10	73185 M2 - M10	63185 M4 - M10	73133 M2 - M10	63133 M3 - M10	73221 M2 - M10	73146 M2 - M10	63146 M3 - M10
		ISO 3 6G				73132 M2 - M10			73145 M3 - M10	
	DIN 376	**ISO 2 6H**		73191 M3 - M22		73138 M3 - M24	63138 M12 - M20	73227 M3 - M22	73148 M3 - M30	63148 M12 - M20
MF	**DIN 374**	**ISO 2 6H**		73237 M3x0.35 - M24x1.5		73250 M4x0.50 - M24x2	63250 M8x1 - M20x1.5		73173 M3x0.35 - M24x2	63173 M8x1 - M20x1.5

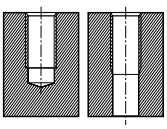
Designation of the symbols for the hole types

 = through hole, short

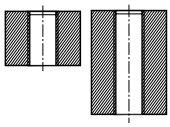
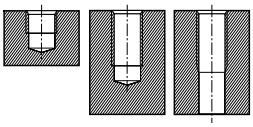
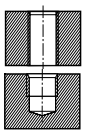
 = through hole 1 x D

 = blind hole 1 x D

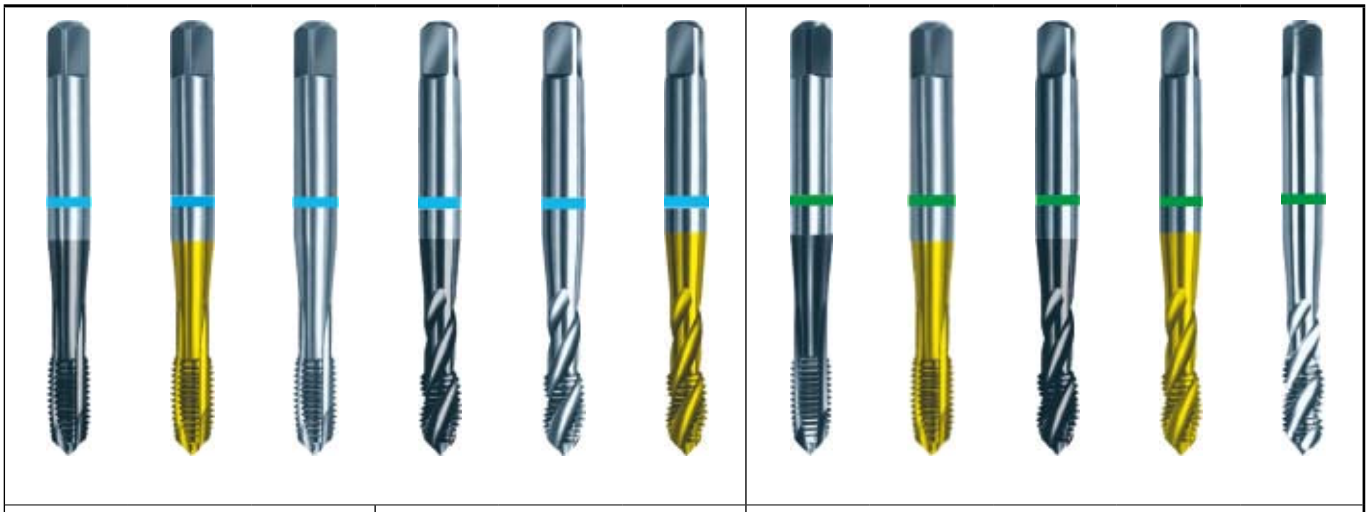
 = through hole 2 x D

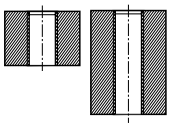
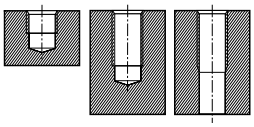
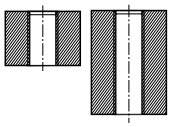
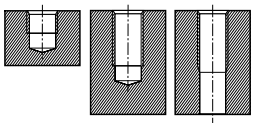
 = blind hole 2 x D

Application recommendations for taps

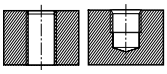
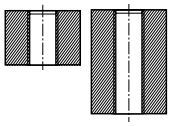
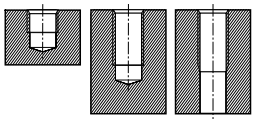
Material examples	for high tensile steels ≥ 800…1000 MPa, e.g. : heat-treatable steels alloyed cold work tool steels high speed tool steels			for high tensile steels ≥ 800…1000 MPa, e.g. : heat-treatable steels alloyed cold work tool steels high speed tool steels			
Hole type							
Tool material	HSS-E	HSS-E-PM		HSS-E		HSS-E-PM	Solid carbide
Type	Produktiv H			Intensiv H			H
Form	B			C			D
Surface finish	nitrided	bright	TiN	bright	TiN	bright	TiCN
v_c m/min	≤ **15**	≤ **15**	≤ **20**	≤ **15**	≤ **20**	≤ **15**	≤ **2**

Thread type	Dimensions to DIN 2184-1	Tolerance zone	Order no./Ø-range						
M	**DIN 371**	**ISO 2 6H**	73642 M2 - M10	73640 M3 - M10	63641 M3 - M10	73661 M3 - M10	63674 M3 - M10	73619 M3 - M10	
	DIN 376	**ISO 2 6H**	73645 M12 - M20		63643 M12 - M20	73664 M12 - M20	63675 M12 - M20		
	Stock std.	**ISO 2 6H**							63010 M3 - M12
MF	**DIN 374**	**ISO 2 6H**	73646 M3x0.35 - M22x1.5						
UNC	**DIN ~ 371**	**2B**							
	DIN ~ 376	**2B**							
UNF	**DIN ~ 374**	**2B**							
G	**DIN 5156**	**–**							



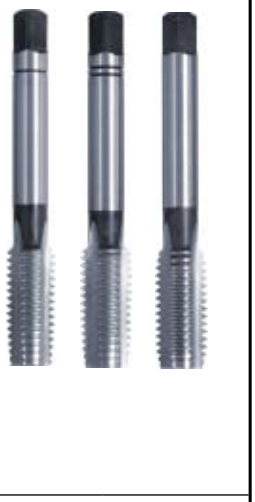
for acid- and stainless resistant steels e. g. : sulphured stainless steels austenitic stainless steels martensitic stainless steels ferritic stainless steels			for acid- and stainless resistant steels e. g. : sulphured stainless steels austenitic stainless steels martensitic stainless steels ferritic stainless steels			for universal applications in materials <1000 MPa, e. g. : structural steels, free-cutting steels case hardened steels, heat-treatable steels nitriding steels spheroidal graphite cast iron				
										
HSS-E		HSS-E-PM	HSS-E	HSS-E-PM		HSS-E				
Produktiv HD			Intensiv HD			Produktiv N		Intensiv N		
B			C			B		C		E
steam temp.	TiN	bright	steam temp.	bright	TiN	steam temp.	TiN	steam temp.	TiN	bright
≤ **15**	≤ **20**	≤ **15**	≤ **15**	≤ **15**	≤ **20**	≤ **15**	≤ **20**	≤ **15**	≤ **20**	≤ **15**
Order no./Ø-range										
73176 M3 - M10	63176 M3 - M10	73641 M3 - M10	73660 M3 - M10	73662 M3 - M10	63662 M3 - M10	73033 M3 - M10	63033 M3 - M10	73046 M3 - M10	63046 M3 - M10	73047 M4 - M10
73177 M12 - M20	63177 M12 - M16	73643 M12 - M20	73659 M12 - M20	73665 M12 - M22	63665 M12 - M16	73038 M12 - M16		73048 M12 - M20	63048 M12 - M20	
73178 M5x0.5 - M20x1.5			73180 M8x1 - M20x1.5			73183 M6x0.75 - M20x1.5		73187 M6x0.75 - M20x1.5		
73297 No.4-40 - 3/8- 16			73304 No.4-40 - 3/8- 16			73308 No.4-40 - 3/8- 16		73322 No.4-40 - 3/8- 16		
73298 1/2-13 - 1-8			73305 1/2-13 - 3/4-10			73309 1/2-13 - 3/4-10		73323 1/2-13 - 3/4-10		
73299 No.10-32 - 5/8-18			73306 No.10-32 - 5/8-18			73310 No.10-32 - 5/8-18		73324 No.10-32 - 5/8-18		
73300 G1/8 - G1			73288 G1/8 - G1			73321 G1/8 - G1		73325 G1/8 - G1		

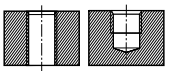
Application recommendations for taps

Material examples	for cast materials, e. g.: grey cast iron malleable cast iron spheroidal graphite cast iron cast iron		for Al and Al-alloys, e. g.: pure aluminium-alloys Al wrought alloys Al-alloys ≤ 10% Si Al-alloys > 10% Si		for Al and Al-alloys non-ferrous metals plastics	
Hole type						
Tool material	HSS-E		HSS-E		Solid carbide	
Type	G		Produktiv W	Intensiv W	Intensiv N	
Form	C		B	C		
Surface finish	nitrided	TiAlN	bright	bright	bright	
v_c m/min	≤ **20**	≤ **30**	≤ **15**	≤ **15**	≤ **15**	

Thread type	Dimensions to DIN 2184-1	Tolerance zone	Order no./Ø-range				
M	**DIN 371**	**ISO 2 6H**			73131 M2 - M10	73156 M2 - M10	73012 M3 - M10
		6HX	73201 M3 - M10	63201 M3 - M10			
	DIN 376	**ISO 2 6H**			73189 M12 - M16	73136 M12 - M20	
		6HX	73211 M12 - M22				
MF	**DIN 374**	**6HX**	73194 M8x1 - M20x1.5				
UNC	**DIN ~ 371**	**2B**	73326 No.8-32 - 3/8-16				
	DIN ~ 376	**2B**	73327 1/2-13 - 1-8				
G	**DIN 5156**	–	73345 G1/8 - G3/4				

Application recommendations for hand taps, short machine- and special taps



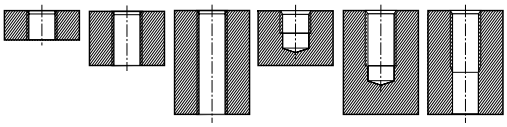
Material examples	for gen. steels ≤ 800 MPa, e. g.: struct. steels, free-cutting steels case hard. steels, heat-treat. steels The sets 73531 and 73532 are also suitable for high tensile, acid- and stainless resist. steels
Hole type	
Tool material	HSS
Type	N
Form	–
Surface finish	bright
v_c m/min	–

Thread type	Dimensions to DIN 2184-2	Tolerance zone	Order no./Ø-range	
M	**DIN 352**	**ISO 2 6H**	73531 (set) RH: F 73101 S 73102 B 73103 M1 - M18	73532 (set) LH: F 73105 S 73106 B 73107 M4 - M20
MF	**DIN 2181**	**ISO 2 6H**	73521 (set): F 73110 / B 73111 M4x0.35 - M20x1.5	
UNC	**~DIN 352**	**2B**	73535 (set): F 73301 / S 73302 / B 73303 No.4-40 - 3/4-10	
UNF	**~DIN 2181**	**2B**	73523 (set): F 73319 / B 73320 1/4-28 - 1-12	
BSW	**~DIN 352**	–	73534 (set): F 73311 / S 73312 / B 73313 W1/8 - W3/4	
G	**DIN 5157**	–	73522 (set): F 73315 / B 73316 G1/8 - G1/2	
Pg	**DIN 40432**	–		

Material examples	for general steels ≤ 800 MPa, e. g.: structural steels free-cutting steels case hard. steels heat-treat. steels			
Hole type				
Tool material	HSS-E			
Type	N			
Form	B	C	combinat.	–
Surface finish	bright	bright	bright	bright
v_c m/min	≤ **15**	≤ **15**	≤ **15**	≤ **15**

Thread type	Dimensions to DIN 2184-2	Tolerance zone	Order no./Ø-range			
M	**DIN 357**	**ISO 2 6H**				73243 M3 - M30
	Stock std.	**ISO 2 6H**			73248 M3 - M12	
MF	**DIN 2181**	**ISO 2 6H**				
UNC	**~DIN 352**	**2B**				
UNF	**~DIN 2181**	**2B**				
BSW	**~DIN 352**	–				
Pg	**DIN 40432**	–	73296 Pg7 - PG16			
NPT		–		73295 1/6 - 1		

Application recommendations for cold forming taps



Material examples			for general steels ≥ 800…1000 MPa, stainless and acid resistant steels, universal applications in materials < 1000 MPa and Al and Al-alloys				
Tool material			HSS-E				Solid carbide
Type			Durativ				
Form			C without oil grooves		C with oil grooves		
Surface finish			bright	TiN	bright	TiN	TiN
v_c m/min			**4-50**	**4-50**	**4-50**	**4-50**	**4-50**
Thread type	Dimensions to DIN 2174	Tolerance zone	**Order no./Ø-range**				
M	~ **DIN 371**	**6HX**	73121 M2 - M10	63121 M2 - M10	73120 M3 - M10	63120 M3 - M10	63013 M3 - M10
		6GX	73700 M2 - M10				
	~ **DIN 376**	**6HX**		63123 M12 - M20	73122 M12 - M16	63122 M12 - M16	
MF	~ **DIN 374**	**6HX**		63701 M8x1 - M16x1.5		63703 M8x1 - M16x1.5	

Problems - Possible causes - Solutions

1 Thread produced is too large	incorrect tap, tap geometry not suitable for the application	apply correct tap for the material to be machined
	tapping hole size too small	observe tapping hole size table. Note different tapping hole size diameters for cold forming taps.
	alignment error of tapping hole size or position	- check for correct tool clamping - apply floating tap holder - check drill size dia.
	machine spindle axially restricted	- use mechanical feed - apply tension/compression tap chuck
	cold welding at the flank of the tap	- apply new tap - apply coated tap - optimise lubrication
	lead of tap unsatisfactory due to insufficient thread depth	- tap with forced feed - apply tap with modified lead
	cutting speed too high	- reduce cutting speed - improve lubrication
	lubrication or coolant supply insufficient	ensure sufficient and suitable coolant supply and check concentration
	tolerance specification on tap does not correspond to specifications on drawing and/or thread gauge	apply correct tap for required tolerances
2 Thread produced is too small	tolerance specification on tap does not correspond to specifications on drawing and/or thread gauge	apply correct tap for required tolerance
	incorrect tap	apply correct tap for the material to be machined
	tap does not cut accurately (thread plug gauge)	avoid strong axial forces during the cutting process
	machine spindle is axially too rigid	apply tension/compression chuck
3 Thread surface not according to requirements	cutting edge geometry not suitable for the application	apply “correct” tap for the material to be machined
	cutting speed too high	- reduce cutting speed - optimise lubrication
	insufficient coolant (concentration and supply)	ensure suitable coolant and sufficient volume
	chip jam	apply suitable tap type
	tapping hole size too small	observe tapping hole size dia. specifications to DIN 336 or respective standards. Observe table for cold forming taps
	built-up edge	apply coated tap
	cold welding	improve coolant supply
4 Tool life insufficient	surface hardening of tapping hole size	- check drill (cutting edge) for wear - heat or surface treatment following thread production
	reasons listed under: “thread surface not according to requirements“	solutions listed under: “thread surface not according to requirements“
	chip jam	apply correct tap
5 Tool breakage during advance or return	tapping hole size too small	observe tapping hole size dia. acc. to DIN 336 or respective standards
	teeth of chamfer lead overloaded	- longer chamfer lead (blind or through hole) - increase no. of teeth of chamfer lead by increasing no. of flutes - apply tap sets
	tap hits bottom of tapping hole size	- check hole depth - apply tension/compression tap chuck
	postional or angle error of tapping hole size	- correct chamfer angle of tapping hole size - ensure correct tool clamping - check drill size dia.
	cutting edge geometry not suitable for the application	apply suitable tap for the individual application

Tapping hole size dia for thread cutting tools

Std. ISO metric threads DIN 336

nom.-Ø	pitch P	tapping hole size Ø	core diameter of int. thread	
	mm	mm	min. mm	max. mm
M 1	0.25	**0.75**	0.729	-
M 1.1	0.25	**0.85**	0.829	-
M 1.2	0.25	**0.95**	0.929	-
M 1.4	0.30	**1.10**	1.075	-
M 1.6	0.35	**1.25**	1.221	1.321
M 1.8	0.35	**1.45**	1.421	1.521
M 2	0.40	**1.60**	1.567	1.679
M 2.2	0.45	**1.75**	1.713	1.838
M 2.5	0.45	**2.05**	2.013	2.138
M 3	0.50	**2.50**	2.459	2.599
M 3.5	0.60	**2.90**	2.850	3.010
M 4	0.70	**3.30**	3.242	3.422
M 4.5	0.75	**3.70**	3.688	3.878
M 5	0.80	**4.20**	4.134	4.334
M 6	1.00	**5.00**	4.917	5.153
M 7	1.00	**6.00**	5.917	6.153
M 8	1.25	**6.80**	6.647	6.912
M 9	1.25	**7.80**	7.647	7.912
M 10	1.50	**8.50**	8.376	8.676
M 11	1.50	**9.50**	9.376	9.676
M 12	1.75	**10.20**	10.106	10.441
M 14	2.00	**12.00**	11.835	12.210
M 16	2.00	**14.00**	13.835	14.210
M 18	2.50	**15.50**	15.294	15.744
M 20	2.50	**17.50**	17.294	17.744
M 22	2.50	**19.50**	19.294	19.744
M 24	3.00	**21.00**	20.752	21.252
M 27	3.00	**24.00**	23.752	24.252
M 30	3.50	**26.50**	26.211	26.771
M 33	3.50	**29.50**	29.211	29.771
M 36	4.00	**32.00**	31.670	32.270
M 39	4.00	**35.00**	34.670	35.270
M 42	4.50	**37.50**	37.129	37.799
M 45	4.50	**40.50**	40.129	40.799
M 48	5.00	**43.00**	42.587	43.297
M 52	5.00	**47.00**	46.587	47.287
M 56	5.50	**50.50**	50.046	50.796

Std. ISO metric fine threads DIN 336

nom.-Ø x pitch P	tapping hole size Ø	core diameter of int. thread	
mm	mm	min. mm	max. mm
M 2.5 x 0.35	**2.15**	2.121	2.221
M 3 x 0.35	**2.65**	2.621	2.721
M 3.5 x 0.35	**3.15**	3.121	3.221
M 4.0 x 0.50	**3.50**	3.459	3.599
M 4.5 x 0.50	**4.00**	3.959	4.099
M 5.0 x 0.50	**4.50**	4.459	4.599
M 5.5 x 0.50	**5.00**	4.959	5.099
M 6.0 x 0.75	**5.20**	5.188	5.378
M 7.0 x 0.75	**6.20**	6.188	6.378
M 8.0 x 0.50	**7.50**	7.459	7.599
M 8.0 x 0.75	**7.20**	7.188	7.378
M 8.0 x 1.00	**7.00**	6.917	7.153
M 9.0 x 0.75	**8.20**	8.188	8.378
M 9.0 x 1.00	**8.00**	7.917	8.153
M 10 x 0.75	**9.20**	9.188	9.378
M 10 x 1.00	**9.00**	8.917	9.153
M 10 x 1.25	**8.80**	8.647	8.912
M 11 x 0.75	**10.20**	10.188	10.378
M 11 x 1.00	**10.00**	9.917	10.153
M 12 x 1.00	**11.00**	10.917	11.153
M 12 x 1.25	**10.80**	10.647	10.912
M 12 x 1.50	**10.50**	10.376	10.676
M 14 x 1.00	**13.00**	12.917	13.153
M 14 x 1.25	**12.80**	12.647	12.912
M 14 x 1.50	**12.50**	12.376	12.676
M 15 x 1.00	**14.00**	13.917	14.153
M 15 x 1.50	**13.50**	13.376	13.676
M 16 x 1.00	**15.00**	14.197	15.153
M 16 x 1.25	**14.75**	14.647	14.912
M 16 x 1.50	**14.50**	14.376	14.676
M 17 x 1.00	**16.00**	15.917	16.153
M 17 x 1.50	**15.50**	15.376	15.676
M 18 x 1.00	**17.00**	16.917	17.153
M 18 x 1.50	**16.50**	16.376	16.676
M 18 x 2.00	**16.00**	15.835	16.210
M 20 x 1.00	**19.00**	18.917	19.153
M 20 x 1.50	**18.50**	18.376	18.676
M 20 x 2.00	**18.00**	17.835	18.210
M 22 x 1.00	**21.00**	20.917	21.153
M 22 x 1.50	**20.50**	20.376	20.676
M 22 x 2.00	**20.00**	19.835	20.210
M 24 x 1.00	**23.00**	22.917	23.153
M 24 x 1.50	**22.50**	22.376	22.676
M 24 x 2.00	**22.00**	21.835	22.210
M 25 x 1.00	**24.00**	23.917	24.153
M 25 x 1.50	**23.50**	23.376	23.676
M 25 x 2.00	**23.00**	23.835	23.210
M 27 x 1.00	**26.00**	25.917	26.153
M 27 x 1.50	**25.50**	25.376	25.676
M 27 x 2.00	**25.00**	24.835	25.210
M 28 x 1.00	**27.00**	26.917	27.153
M 28 x 1.50	**26.50**	26.376	26.676
M 28 x 2.00	**26.00**	25.853	26.210
M 30 x 1.00	**29.00**	28.917	29.153
M 30 x 1.50	**28.35**	26.376	28.676
M 30 x 2.00	**28.00**	27.835	28.210
M 30 x 3.00	**27.00**	26.752	27.252
M 32 x 1.50	**30.50**	30.376	30.676
M 32 x 2.00	**30.00**	29.835	30.210
M 33 x 1.50	**31.50**	31.376	31.676
M 33 x 2.00	**31.00**	30.835	31.210
M 33 x 3.00	**30.00**	29.752	30.252
M 35 x 1.50	**33.50**	33.376	33.676
M 36 x 1.50	**34.50**	34.376	34.676

UNC threads DIN 336 (ISO 5864)

size	threads per inch	tapping hole size Ø	core diameter of int. thread	
		mm	min. mm	max. mm
No. 1	64	**1.50**	1.425	1.582
No. 2	56	**1.85**	1.694	1.872
No. 3	48	**2.10**	1.941	2.146
No. 4	40	**2.35**	2.385	2.156
No. 5	40	**2.65**	2.697	2.487
No. 6	32	**2.85**	2.642	2.896
No. 8	32	**3.50**	3.302	3.531
No.10	24	**3.90**	3.683	3.962
No.12	24	**4.50**	4.343	4.597
1/4	20	**5.10**	4.976	5.268
5/16	18	**6.60**	6.411	6.734
3/8	16	**8.00**	7.805	8.164
7/16	14	**9.40**	9.149	9.550
1/2	13	**10.80**	10.584	11.013
9/16	12	**12.20**	11.996	12.456
5/8	11	**13.50**	13.376	13.868
3/4	10	**16.50**	16.299	16.833
7/8	9	**19.50**	19.169	19.748
1	8	**22.25**	21.963	22.598
1 1/8	7	**25.00**	24.648	25.349
1 1/4	7	**28.00**	27.823	28.524
1 3/8	6	**30.75**	30.343	21.120
1 1/2	6	**34.00**	33.518	34.295
1 3/4	5	**39.50**	38.951	39.814
2	4.5	**45.00**	44.689	45.598

Tapping hole size diameter tolerance zone for thread forming (to DIN 13, section 50) *

Due to the tensile strength it is not necessary to adhere to the tapping hole size diameter tolerance class 6H; tolerance class 7H satisfies the requirement that the flank coverage of external and internal threads should not fall below 0.32 x P.
In addition, formed threads generally possess a higher tensile strength in comparison to cut threads thanks to an uninterrupted grain flow and subsequent work hardening.

Recommended hole size dia* for cold forming taps

Std. ISO metric threads

nom.-Ø	pitch	tapping hole size Ø	core-Ø 7H of int. thread	
mm		mm	min	max
M 1	0.25	**0.88**	-	-
M 1.1	0.25	**0.98**	-	-
M 1.2	0.25	**1.08**	-	-
M 1.4	0.30	**1.25**	-	-
M 1.6	0.35	**1.45**	-	-
M 1.7	0.35	**1.55**	-	-
M 1.8	0.35	**1.65**	-	-
M 2.0	0.40	**1.80**	-	-
M 2.2	0.45	**2.00**	-	-
M 2.3	0.40	**2.10**	-	-
M 2.5	0.45	**2.30**	-	-
M 2.6	0.45	**2.40**	-	-
M 3.0	0.50	**2.80**	2.459	2.639
M 3.5	0.60	**3.25**	2.850	3.050
M 4.0	0.70	**3.70**	3.242	3.466
M 4.5	0.75	**4.15**	3.688	3.924
M 5.0	0.80	**4.65**	4.134	4.384
M 6.0	1.00	**5.55**	4.917	5.217
M 7.0	1.00	**6.55**	5.917	6.217
M 8.0	1.25	**7.40**	6.647	6.982
M 9.0	1.25	**8.40**	7.647	7.982
M 10	1.50	**9.25**	8.376	8.751
M 11	1.50	**10.25**	9.376	9.751
M 12	1.75	**11.20**	10.106	10.531
M 14	2.00	**13.10**	11.835	12.310
M 16	2.00	**15.10**	13.835	14.310
M 18	2.50	**16.90**	15.294	15.854
M 20	2.50	**18.90**	17.294	17.854

Std. ISO metric fine threads

nom.-Ø x	pitch	tapping hole size Ø	core-Ø 7H of int. thread	
mm		mm	min	max
M 5 x	0.50	**4.75**	4.459	4.639
M 5.5 x	0.50	**5.25**	4.959	5.139
M 6 x	0.75	**5.65**	5.188	5.424
M 7 x	0.75	**6.65**	6.188	6.424
M 8 x	0.75	**7.65**	7.188	7.424
M 8 x	1.00	**7.55**	6.917	7.217
M 9 x	0.75	**8.65**	8.188	8.424
M 9 x	1.00	**8.55**	7.917	8.217
M 10 x	0.75	**9.65**	9.188	9.424
M 10 x	1.00	**9.55**	8.917	9.217
M 10 x	1.25	**9.40**	8.647	8.982
M 11 x	0.75	**10.65**	10.188	10.424
M 11 x	1.00	**10.55**	9.917	10.217
M 12 x	1.00	**11.55**	10.917	11.217
M 12 x	1.25	**11.40**	10.647	10.982
M 12 x	1.50	**11.30**	10.376	10.751
M 14 x	1.00	**13.55**	12.917	13.217
M 14 x	1.25	**13.40**	12.647	12.982
M 14 x	1.50	**13.30**	12.376	12.751
M 15 x	1.00	**14.55**	13.917	14.217
M 15 x	1.50	**14.30**	13.376	13.751
M 16 x	1.00	**15.55**	14.917	15.217
M 16 x	1.50	**15.30**	14.376	14.751
M 17 x	1.00	**16.55**	15.917	16.217
M 17 x	1.50	**16.30**	15.376	15.751
M 18 x	1.00	**17.55**	16.917	17.217
M 18 x	1.50	**17.30**	16.376	16.751
M 18 x	2.00	**17.10**	15.835	16.310
M 20 x	1.00	**19.55**	18.917	19.217
M 22 x	1.50	**21.30**	20.376	20.751
M 24 x	1.50	**23.30**	22.376	22.751

UNF threads DIN 336 (ISO 5864)

size	threads per inch	tapping hole size Ø mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
No. 1-	72	**1.55**	1.473	1.613
No. 2-	64	**1.90**	1.755	1.913
No. 3-	56	**2.15**	2.024	2.197
No. 4-	48	**2.40**	2.271	2.459
No. 5-	44	**2.70**	2.550	2.741
No. 6-	40	**2.95**	2.819	3.023
No. 8-	36	**3.50**	3.404	3.607
No. 10-	32	**4.10**	3.962	4.166
No. 12-	28	**4.70**	4.496	4.724
1/4 -	28	**5.50**	5.367	5.580
15/16 -	24	**6.90**	6.792	7.038
3/8 -	24	**8.50**	8.379	8.626
7/16 -	20	**9.90**	9.739	10.030
1/2 -	20	**11.50**	11.326	11.618
9/16 -	18	**12.90**	12.761	13.084
5/8 -	18	**14.50**	14.348	14.671
3/4 -	16	**17.50**	17.330	17.689
7/8 -	14	**20.40**	20.262	20.663
1 -	12	**23.25**	23.109	23.569
1 1/8 -	12	**26.50**	26.284	26.744
1 1/4 -	12	**29.50**	29.459	29.919
1 3/4 -	12	**32.75**	32.634	33.094
1 1/2 -	12	**36.00**	35.809	36.269

BSW-(Whitworth) threads

nom.- Ø inch	threads per inch	tapping hole size Ø mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
W 1/8	40	**2.50**	–	–
W 5/32	32	**3.20**	–	–
W 3/16	24	**3.60**	–	–
W 1/4	20	**5.10**	4.744	5.224
W 5/16	18	**6.50**	6.151	6.661
W 3/8	16	**7.90**	7.512	8.052
W 7/16	14	**9.20**	8.809	9.379
W 1/2	12	**10.50**	10.015	10.610
W 5/8	11	**13.50**	12.948	13.598
W 3/4	10	**16.25**	15.831	16.538
W 7/8	9	**19.25**	18.647	19.411
W 1	8	**22.00**	21.375	22.185
W 1 1/8	7	**24.50**	23.976	24.879
W 1 1/4	7	**27.75**	27.151	28.054
W 1 3/8	6	**30.50**	29.558	30.555
W 1 1/2	6	**33.50**	32.733	33.730
W 1 5/8	5	**35.50**	34.834	35.921
W 1 3/4	5	**39.00**	38.009	39.096
W 2	4.5	**44.50**	43.643	44.823

(Whitworth-) BSP threads (to DIN-ISO 228) DIN 336

size inch	threads per inch	tapping hole size Ø mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
G 1/16	28	**6.80**	6.561	6.843
G 1/8	28	**8.80**	8.566	8.848
G 1/4	19	**11.80**	11.445	11.890
G 3/8	19	**15.25**	15.395	14.950
G 1/2	14	**19.00**	18.631	19.172
G 5/8	14	**21.00**	20.587	21.128
G 3/4	14	**24.50**	24.117	24.658
G 7/8	14	**28.25**	27.877	28.418
G 1	11	**30.75**	30.291	30.931
G 1 1/8	11	**35.50**	34.939	35.579
G 1 1/4	11	**39.50**	38.952	39.592
G 1 1/2	11	**45.25**	44.845	45.485
G 1 3/4	11	**51.00**	50.788	51.428
G 2	11	**57.00**	56.656	57.296

Steel armoured conduit threads to DIN 40430

size	threads per inch	tapping hole size Ø mm	core diameter of int. thread min. mm	core diameter of int. thread max. mm
Pg 7	20	**11.40**	11.280	11.430
Pg 9	18	**14.00**	13.860	14.010
Pg 11	18	**17.30**	17.260	17.410
Pg 13.5	18	**19.00**	19.060	19.210
Pg 16	18	**21.30**	21.160	21.310
Pg 21	16	**26.90**	26.780	27.030
Pg 29	16	**35.50**	35.480	35.730
Pg 36	16	**45.50**	45.480	45.730
Pg 42	16	**52.50**	52.480	52.730
Pg 48	16	**57.80**	57.780	58.030

NPT American tapered pipe thread 1:16

size	threads per inch	Ø tapp. hole size conical	cutting depth ET mm	drill. depth BT (min) mm
1/16	- 27	6.39	9.29	10.7
1/8	- 27	8.74	9.32	10.8
1/4	- 18	11.36	13.52	15.6
3/8	- 18	14.80	13.83	16.0
1/2	- 14	18.32	18.07	20.8
3/4	- 14	23.67	18.55	21.3
1	- 11.5	29.69	22.29	25.6
1 1/4	- 11.5	38.45	22.80	26.1
1 1/2	- 11.5	44.52	22.80	26.1
2	- 11.5	56.56	23.20	26.5
2 1/2	- 8	67.62	31.57	36.3
3	- 8	83.52	33.74	38.5

UNC threads

size	UNC-size threads per inch	tapping hole size Ø mm
No. 5	- 40	**2.90**
No. 6	- 32	**3.15**
No. 8	- 32	**3.80**
No. 10	- 24	**4.35**
No. 12	- 24	**5.00**
1/4	- 20	**5.75**
5/16	- 18	**7.30**
3/8	- 16	**8.80**
7/16	- 14	**10.30**
1/2	- 13	**11.80**
9/16	- 12	**13.30**
5/8	- 11	**14.80**
3/4	- 10	**17.90**
7/8	- 9	**20.95**
1	- 8	**24.00**

UNF threads

size	UNF-size threads per inch	tapping hole size Ø mm
No. 4	- 48	**2.60**
No. 5	- 44	**2.90**
No. 6	- 40	**3.20**
No. 8	- 36	**3.85**
No. 10	- 32	**4.45**
No. 12	- 28	**5.10**
1/4	- 28	**5.95**
5/16	- 24	**7.45**
3/8	- 24	**9.00**
7/16	- 20	**10.50**
1/2	- 20	**12.10**
9/16	- 18	**13.65**
5/8	- 18	**15.25**
3/4	- 16	**18.30**
7/8	- 14	**21.30**
1	- 12	**24.45**

BSW-(Whitworth) threads

nom.- Ø inch	threads per inch	tapping hole size Ø mm
W 1/4	20	**5.65**
W 5/16	18	**7.15**
W 3/8	16	**8.65**
W 7/16	14	**10.10**
W 1/2	12	**11.50**
W 5/8	11	**14.55**
W 3/4	10	**17.60**
W 7/8	9	**19.25**

(Whitworth-) BSP threads (to DIN-ISO 228) DIN 336

size inch	threads per inch	tapping hole size Ø mm
G 1/16	28	**7.30**
G 1/8	28	**9.20**
G 1/4	19	**12.40**
G 3/8	19	**15.90**
G 1/2	14	**19.90**
G 5/8	14	**21.90**
G 3/4	14	**25.40**
G 1	11	**32.00**
G 1 1/4	11	**40.70**

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