PIPE TAPS

T7709 SERIES

G(BSP)

Whitworth Pipe threads DIN ISO 228/1

Whitworth Rohrgewinde DIN ISO 228/1
G(BSP) PROFIL 55° DIN ISO 228/1
Filettatura Whitworth per tubi DIN ISO 228/1

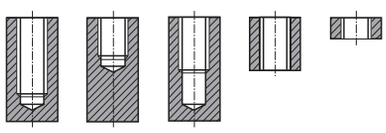
- Serial hand tap set in First and Bottoming.
- Bottoming tap of set has final internal thread dimensions only.

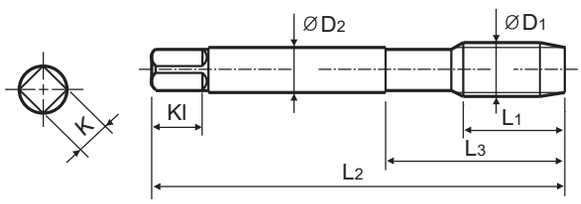
- Handgewindebohrersatz mit Vor- und Fertigschneider.
- Nur der Fertigschneider kann das gewünschte Gewinde schneiden.

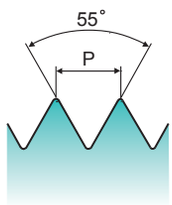
First

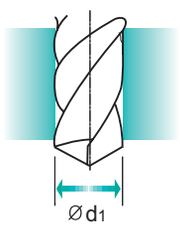
Bottoming

Hole type
2.0×D









Material groups **GS** | HSS | DIN 5157 | 55° | I /III | Bright

Sets of taps
Gewindebohrer-Satz

Unit : mm

SIZE	TPI	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	L1	L2	L3	ØD2	K	Kl	Z	Ød1
G1/16	- 28	T7709029	22	56	26	6	4.9	8	3	6.8
G1/8	- 28	T7709209	20	63	27	7	5.5	8	4	8.8
G1/4	- 19	T7709409	22	70	32	11	9	12	4	11.8
G3/8	- 19	T7709489	22	70	32	12	9	12	4	15.25
G1/2	- 14	T7709569	22	80	35	16	12	15	4	19
G3/4	- 14	T7709709	22	90	40	20	16	19	4	24.5
G1	- 11	T7709789	25	100	45	25	20	23	6	30.75
G1-1/4	- 11	T7709869	40	125	77	32	24	27	6	39.5
G1-1/2	- 11	T7709949	40	140	85	36	29	32	6	45.2

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	○	○			○									○	○				

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○																		

SURFACE TREATMENT AND COATING

The applied High Speed Steels holds a grant of good wear resistance and toughness. Therefore YG-1 normally delivers taps with bright and unfinished surface. For certain materials, various surface treatments provide higher advantage in machining.

STEAM TEMPERED - Vap

Steam Tempered is a Fe3O4-oxyd-coating which reduces friction between the tool and workpiece, also preventing cold welding.

NITRIDING - NI

Recommend surface treatment for machining materials that affect wear abrasion, such as grey cast iron, alu-alloys with high Si-percentages (more than 10%).

Below are the various surface treatments for excellent finish surfaces suitable for many applications. The surface treatments are produced and developed within the company.

TiN-COATING

TiN-coating yields a hardness of approx. 2,300 HV and also a heat resistant up to approx. 600°C. The current coating is an excellent all-round coating for normal applications.
Colour : Golden Coefficient of friction against steel : 0.4

TiCN-COATING

TiCN takes place of TiN when the conditions require the coating to have a different hardness and toughness.
The TiCN brings advantages for machining very difficult steels or cutting interrupted bores.
The TiCN-coating has a hardness of approx. 3,000 HV, but is heat resistance only holds up to approx. 400°C, meaning that the TiCN needs an excellent cooling system for a long service life.
Colour : Blue-Grey Coefficient of friction against steel : 0.4

TiAlN-COATING

A special coating for machining abrasive materials such as grey cast iron, alu-alloys with silicon, fiber reinforced plastics, etc., or machining at high temperatures with insufficient cooling, or at high speeds ≥ 600m/min. TiAlN has a hardness of approx. 3,000 HV and is heat resistant up to approx. 800°C.
Colour : Violet-Grey Coefficient of friction against steel : 0.4

Hardslick-COATING

Hardslick combines the advantages of an extremely hard, thermally stable TiAlN-coating with the sliding and lubricating properties of an outer WC/C(Tungsten carbide/carbon)-coating in a novel way. The Hardslick coating has a hardness of approx. 3,000 HV and is temperature-resistant up to approx. 800°C.
Colour : Violet-Grey Coefficient of friction against steel : 0.2

SELECTION GUIDE

YG THREADING TOOLS

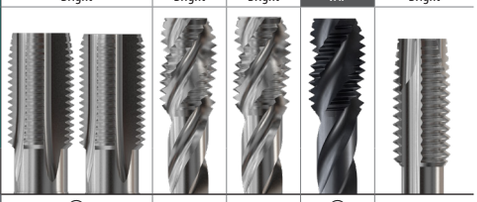
HSS & HSS-E PIPE TAPS

Tapping Whitworth Pipe threads

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.306

			HOLE TYPE	Max. 2.0xD Blind/Through Hole	Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole
			TOOL MATERIAL	HSS	HSS-E		
			CHAMFER LEAD ACC. TO DIN2197	I/III	C		B
			FLUTE TYPE	Straight Flute	Spiral Flute		Spiral Point
			SPIRAL FLUTE ANGLE	-	R40	R40	R40	-
SERIES	M	DIN371/376						
		DIN352						
		DIN357/LONG						
	MF	DIN374						
		DIN2181						
	UNC	DIN371/376						
		DIN351						
	UNF	DIN371/374						
		DIN2181						
	BSW	DIN2182/2183						
		DIN351						
	G(BSP)	DIN5156/5157		T7709 (P.301)	TC728 (P.302)	TC729 (P.303)	TB514 (P.304)	TC727 (P.305)
	EG-M	DIN371/376						
	EG-UNC	DIN371/376						
	EG-UNF	DIN371/374						
			SURFACE TREATMENT	Bright	Bright	Bright	VAP	Bright
			MODEL					

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc					
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○			◎	
	2		About 0.45% C	Annealed	190	13	○	◎		◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	◎			◎
	4		About 0.75% C	Annealed	270	28		◎			◎
	5		About 0.75% C	Quenched & Tempered	300	32					
	6	Low alloy steel		Annealed	180	10	○	◎	○		◎
	7			Quenched & Tempered	275	29		◎	○		◎
	8			Quenched & Tempered	300	32			◎		
	9			Quenched & Tempered	350	38			◎		
	10	High alloyed steel, and tool steel		Annealed	200	15					
	11			Quenched & Tempered	325	35					
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15				◎	
	13		Martensitic	Quenched & Tempered	240	23				◎	
	14		Austenitic		180	10			○	◎	
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○				
	16		Pearlitic (Martensitic)		260	26	○				
	17	Nodular cast iron	Ferritic		160	3		◎			◎
	18		Pearlitic		250	25		◎			◎
	19	Malleable cast iron	Ferritic		130						
	20		Pearlitic		230	21					
N	21	Aluminum-wrought alloy	Not Curable		60		○	○			○
	22		Curable	Hardened	100		○	○			○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	○			○
	24		≤ 12% Si, Curable	Hardened	90			○			○
	25		> 12% Si, Not Curable		130			◎			◎
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			◎			◎
	27		CuZn, CuSnZn (Brass)		90			○			○
	28		CuSn, lead-free copper and electrolytic copper		100						
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								
	30		Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					
	32			Cured	280	30					
	33		Ni or Co Based	Annealed	250	25					
	34			Cured	350	38					
	35			Cast	320	34					
	36	Titanium Alloys	Pure Titanium		400 Rm						
	37		Alpha + Beta Alloys	Hardened	1050 Rm						
H	38	Hardened steel		Hardened	550	55					
	39			Hardened	630	60					
	40	Chilled Cast Iron		Cast	400	42					
	41	Hardened Cast Iron		Hardened	550	55					