Leading Through Innovation

HSS & HSS-E

PIPE TAP
GASGEWINDEBOHRER

- **Tapping Whitworth Pipe threads**
- **Zum Gewindeschneiden von Whitworth-Rohrgewinden**

SELECTION GUIDE

YG THREADING TOOLS

HSS & HSS-E PIPE TAP

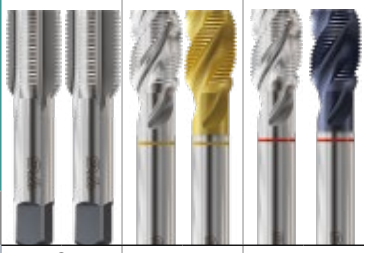
Tapping Whitworth Pipe threads

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.407

HOLE TYPE			Max. 2.0xD Blind/Through Hole	Max. 2.5xD Blind Hole	
TOOL MATERIAL			HSS	HSS-E	
CHAMFER LEAD ACC. TO DIN2197			I/III	C	C
FLUTE TYPE			Straight Flute	Spiral Flute	
SPIRAL FLUTE ANGLE			-	R40	R40
SERIES	G(BSP)	DIN5156/5157	T7709 (p.396)	TC728 (p.397) TD728 (p.397)	TC729 (p.398) TY729 (p.398)
	NPT	DIN2181/5156			
	NPTF	DIN2181/5156			
	BSPT(Rc)	DIN2181/5156			
SURFACE TREATMENT / COATING			Bright	Bright TiN	Bright TiAlN
MODEL			SETS OF TAPS HAND TAP		



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	Examples			
P	1	Non-alloy steel	About 0.15% C	Annealed	125		S15C,C15,1015	○		
	2		About 0.45% C	Annealed	190	13	S45C,C45,1045	○	◎	
	3		About 0.45% C	Quenched & tempered	250	25		○	◎	
	4		About 0.75% C	Annealed	270	28	SK5,Ck75,1080		◎	
	5		About 0.75% C	Quenched & tempered	300	32				
	6	Low alloy steel		Annealed	180	10	SCM440,42CrMo4,410	○	◎	○
	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	SKD,D2			
	11			Quenched & Tempered	325	35	SKH,SUH,M42			
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	SUS420,X40Cr13,420			
	13		Martensitic	Quenched & Tempered	240	23				
	14			Austenitic	180	10	SUS316,316,X5CrNiMo17122			○
K	15	Grey cast iron	Pearlitic / ferritic		180	10		○		
	16		Pearlitic (Martensitic)		260	26		○		
	17	Nodular cast iron	Ferritic		160	3	FCD,GGG,EN-GJS-500-7		◎	
	18		Pearlitic		250	25			◎	
	19	Malleable cast iron	Ferritic		130		FCMW,FCMP,GTS,GJMB350-10			
	20		Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000,AlMg 1,3.3315	○	○	
	22		Curable	Hardened	100		SAE 7050,AlCuMg 1,3.1325	○	○	
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12,G-AlSi12,3.2581	○	○	
	24		≤ 12% Si, Curable	Hardened	90		C4BS,G-AlSi10Mg,3.2381		○	
	25		> 12% Si, Not Curable		130				◎	
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		CuZn36Pb3,2.0375		◎	
	27		CuZn, CuSnZn (Brass)		90		CuZn15,2.0240		○	
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe,2.0590			
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic				CFRP			
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15	X12NiCrSi36-16,1.4864			
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25	Inconel 718,NiCr20TiAl,2.4631			
	34			Cured	350	38	NiCu30Al,2.4375			
	35			Cast	320	34	G-X120Mn12,1.3401			
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys	Hardened	1050 Rm		TiAl6V4,3.7165			
H	38	Hardened steel		Hardened	550	55	SK3			
	39			Hardened	630	60				
	40	Chilled Cast Iron		Cast	400	42				
	41	Hardened Cast Iron		Hardened	550	55				

Max. 2.5xD Blind Hole	Max. 3.0xD Through Hole	Tapered			Tapered		
HSS-E							
C	B	C	C	C	C	C	C
Spiral Flute	Spiral Point	Straight Flute			Spiral Flute		
R40	-	-	-	-	R25	R25	R25
TB514 (p.399) **TC514-HAR** (p.399)	**TC727** (p.400) **TD727** (p.400)						
		TCM01 (p.401) **TDM01** (p.401)			**TBM04** (p.404) **TCM04-HAR** (p.404)		
			TCM02 (p.402) **TDM02** (p.402)			**TBM05** (p.405) **TCM05-HAR** (p.405)	
				TCM03 (p.403) **TDM03** (p.403)			**TBM06** (p.406) **TCM06-HAR** (p.406)
Vap / Hardslick	Bright / TiN	Bright / TiN	Bright / TiN	Bright / TiN	Vap / Hardslick	Vap / Hardslick	Vap / Hardslick

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PRIME TAP PIPE

X-Coated HSS-PM PIPE Taps for CNC Machining

p.107 -108 | p.116 | p.126 | p.131

YG TAP CAST IRON PIPE

TiAlN Coated HSS-PM PIPE Taps for Mass Production

p. 277-281

PIPE TAP

HAND TAP **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

Sets of taps
Gewindebohrer-Satz

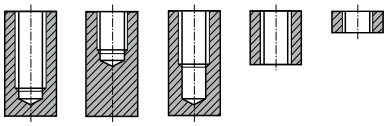
▶ Serial hand tap set in First and Bottoming.
▶ Bottoming tap of set has final internal thread dimensions only.

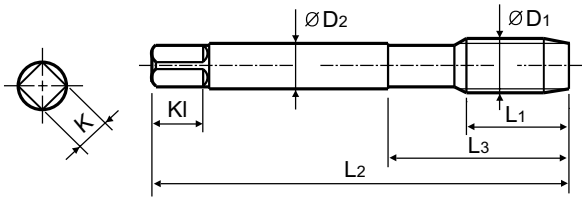
▶ Handgewindebohrersatz mit Vor- und Fertigschneider.
▶ Nur der Fertigschneider kann das gewünschte Gewinde schneiden.

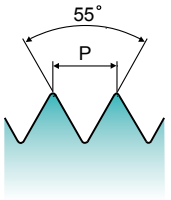
First

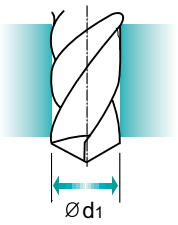
Bottoming

Hole type
2.0×D









Material groups **GS** | HSS | DIN 5157 | 55° | I/III | Bright | p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter 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	63	32	24	27	6	39.5
G1-1/2 -	11	T7709949	40	140	65	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	○	○	○																		

PIPE TAP

Bright TiN

TC728 SERIES
TD728 SERIES

G(BSP) Whitworth pipe threads DIN ISO 228/1

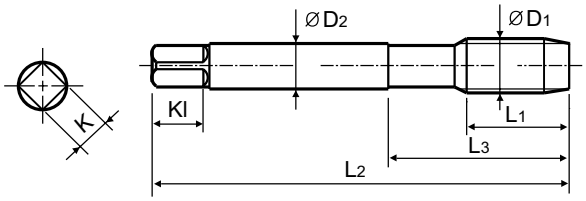
Whitworth Rohrgewinde DIN ISO 228/1
G(BSP) PROFIL 55° DIN ISO 228/1
Filettatura Whitworth per tubi DIN ISO 228/1

Machine taps
Maschinengewindebohrer

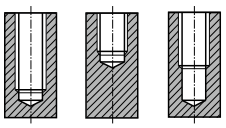
▶ Suitable for tapping blind holes due to special flute geometry and excellent chip evacuation.

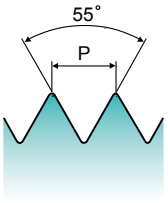
▶ Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

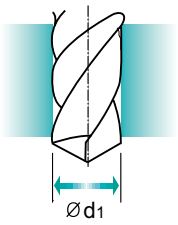
DIN 5156



Hole type
2.5×D







Material groups **GS** | HSS-E | DIN 5156 | 55° | C | R40 | Bright | TiN

p.407

Recommended ToolHolder: Plain Shank — TAPPING ER CHUCK / TAPPING CHUCK / ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
G1/8 -	28	TC728200	TD728200	20	90	36	7	5.5	8	3	8.8
G1/4 -	19	TC728400	TD728400	22	100	40	11	9	12	3	11.8
G3/8 -	19	TC728480	TD728480	22	100	40	12	9	12	3	15.25
G1/2 -	14	TC728560	TD728560	25	125	50	16	12	15	4	19
G3/4 -	14	TC728700	TD728700	28	140	54	20	16	19	4	24.5
G1 -	11	TC728780	TD728780	30	160	60	25	20	23	4	30.75

◎ : 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	○	○	○	○	◎	◎	○														

PIPE TAP

Bright TiN

TC729 SERIES
TY729 SERIES

G(BSP) Whitworth pipe threads DIN ISO 228/1

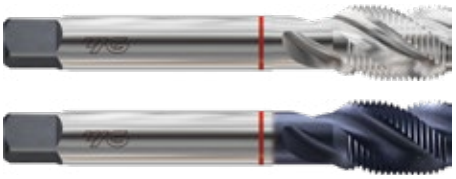
Whitworth Rohrgewinde DIN ISO 228/1
G(BSP) PROFIL 55° DIN ISO 228/1
Filettatura Whitworth per tubi DIN ISO 228/1

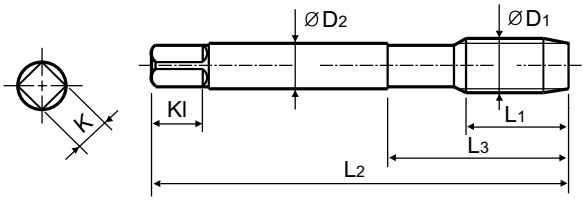
Machine taps
Maschinengewindebohrer

▶ Suitable for tapping blind holes due to special flute geometry and excellent chip evacuation.

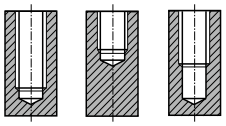
▶ Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

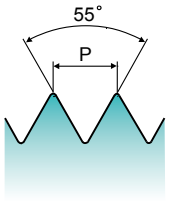
DIN 5156

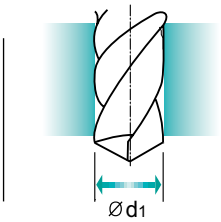




Hole type
2.5×D







Material groups **VG** | HSS-E | DIN 5156 | 55° | C | R40 | Bright | TiAlN

p.407

Recommended ToolHolder: Plain Shank; TAPPING ER CHUCK; TAPPING CHUCK; ONE STEP TAPPING CHUCK

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	TiAlN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
G1/8 -	28	TC729200	TY729200	20	90	36	7	5.5	8	3	8.8
G1/4 -	19	TC729400	TY729400	22	100	40	11	9	12	3	11.8
G3/8 -	19	TC729480	TY729480	22	100	40	12	9	12	3	15.25
G1/2 -	14	TC729560	TY729560	25	125	50	16	12	15	4	19
G3/4 -	14	TC729700	TY729700	28	140	54	20	16	19	4	24.5
G1 -	11	TC729780	TY729780	30	160	60	25	20	23	4	30.75

◎ : 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																					

PIPE TAP

Vap
Hardslick

TB514 SERIES
TC514-HAR 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

Machine taps
Maschinengewindebohrer

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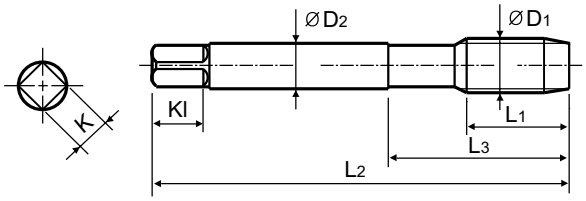
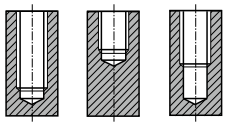
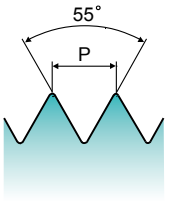
▶ Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

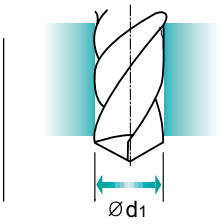
DIN 5156



Hole type
2.5×D







Material groups VA NW | HSS-E | DIN 5156 | 55° | C | R40 | Vap | Hardslick

p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Vap	EDP No. Hardslick	Thread Length L1	Overall Length L2	Neck Length L3	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
G1/8 -	28	TB514200	TC514200HAR	20	90	36	7	5.5	8	3	8.8
G1/4 -	19	TB514400	TC514400HAR	22	100	40	11	9	12	3	11.8
G3/8 -	19	TB514480	TC514480HAR	22	100	40	12	9	12	3	15.25
G1/2 -	14	TB514560	TC514560HAR	25	125	50	16	12	15	4	19
G3/4 -	14	TB514700	TC514700HAR	28	140	54	20	16	19	4	24.5
G1 -	11	TB514780	TC514780HAR	30	160	60	25	20	23	4	30.75

◎ : 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																					

PIPE TAP

Bright / TiN

TC727 SERIES
TD727 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

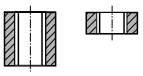
Machine taps
Maschinengewindebohrer

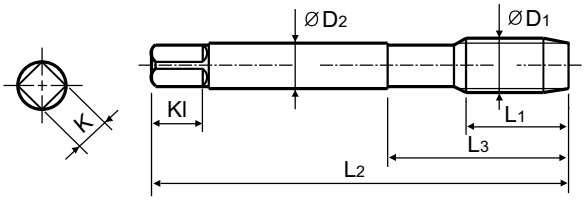
▶ Suitable for tapping through holes due to special flute geometry and excellent chip evacuation.

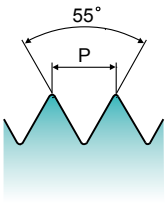
▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

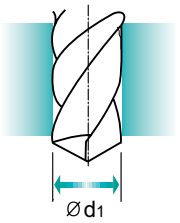
DIN 5156

Hole type
3.0×D









Material groups **GS** | HSS-E | DIN 5156 | 55° | B | Bright | TiN

p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
G1/8 -	28	TC727200	TD727200	20	90	36	7	5.5	8	3	8.8
G1/4 -	19	TC727400	TD727400	22	100	40	11	9	12	3	11.8
G3/8 -	19	TC727480	TD727480	22	100	40	12	9	12	3	15.25
G1/2 -	14	TC727560	TD727560	25	125	50	16	12	15	4	19
G3/4 -	14	TC727700	TD727700	28	140	54	20	16	19	4	24.5
G1 -	11	TC727780	TD727780	30	160	60	25	20	23	4	30.75

◎ : 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	○	○	○	○	◎	◎	○														

PIPE TAP

Bright TCM01 SERIES
TiN TDM01 SERIES

NPT

ANSI/ASME B1.20.1

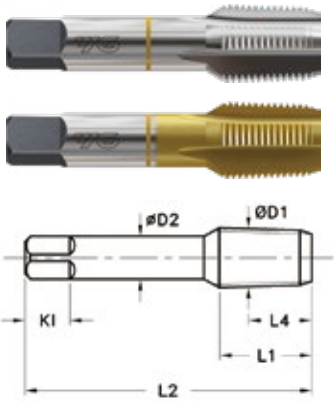
ANSI/ASME B1.20.1
ANSI/ASME B1.20.1
ANSI/ASME B1.20.1

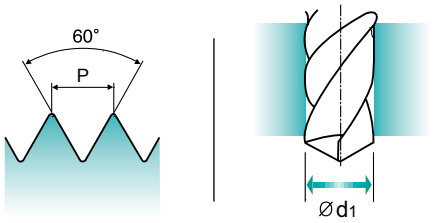
Machine taps
Maschinengewindebohrer

▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 2181





Material groups GS | HSS-E | DIN 2181 | 60° | C | Bright | TiN

p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Projection Length L4	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
NPT1/16	- 27	TCM01020	TDM01020	14	56	12	6	4.9	8	4	6.15
NPT1/8	- 27	TCM01200	TDM01200	14	63	12.05	7	5.5	8	4	8.43
NPT1/4	- 18	TCM01400	TDM01400	21	63	17.45	11	9	12	4	11.13
NPT3/8	- 18	TCM01480	TDM01480	21	70	17.65	12	9	12	4	14.27
NPT1/2	- 14	TCM01560	TDM01560	27	80	22.85	16	12	15	4	17.86
NPT3/4	- 14	TCM01700	TDM01700	27	100	22.95	20	16	19	5	23.01
NPT1	- 11-1/2	TCM01780	TDM01780	32	110	27.4	25	20	23	5	28.98

◎ : 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	○	○	○	○	◎	◎	○														

PIPE TAP

Bright TiN

TCM02 SERIES
TDM02 SERIES

NPTF ANSI B1.20.3

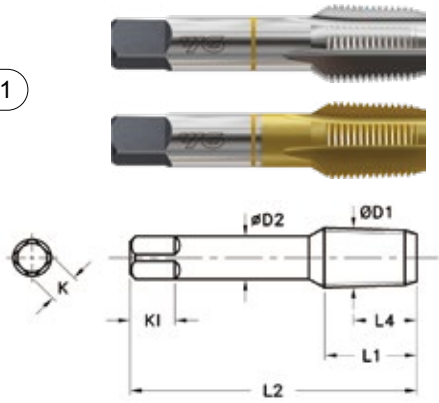
ANSI B1.20.3
ANSI B1.20.3
ANSI B1.20.3

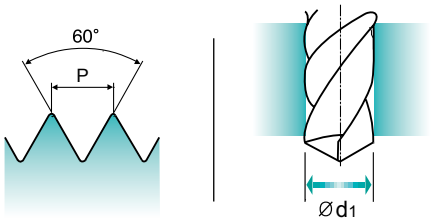
Machine taps
Maschinengewindebohrer

▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 2181





Material groups **GS** | HSS-E | DIN 2181 | 60° | C | Bright | TiN

p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Projection Length L4	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
NPTF1/16	- 27	TCM02020	TDM02020	14	56	12	6	4.9	8	4	6.15
NPTF1/8	- 27	TCM02200	TDM02200	14	63	12.05	7	5.5	8	4	8.43
NPTF1/4	- 18	TCM02400	TDM02400	21	63	17.45	11	9	12	4	11.13
NPTF3/8	- 18	TCM02480	TDM02480	21	70	17.65	12	9	12	4	14.27
NPTF1/2	- 14	TCM02560	TDM02560	27	80	22.85	16	12	15	4	17.86
NPTF3/4	- 14	TCM02700	TDM02700	27	100	22.95	20	16	19	5	23.01
NPTF1	- 11-1/2	TCM02780	TDM02780	32	110	27.4	25	20	23	5	28.98

◎ : 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	○	○	○	○	◎	◎	○														

PIPE TAP

Bright TiN — TCM03 SERIES TDM03 SERIES

BSPT(Rc)

DIN EN10226-2, ISO 7-1

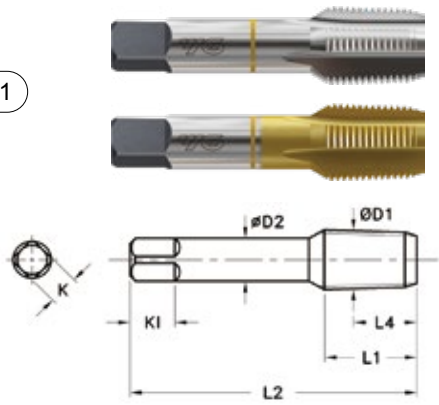
DIN EN10226-2, ISO 7-1
DIN EN10226-2, ISO 7-1
DIN EN10226-2, ISO 7-1

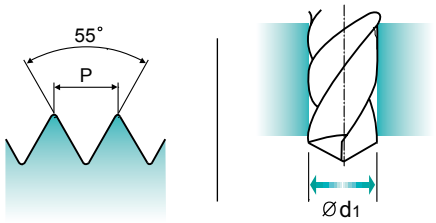
Machine taps
Maschinengewindebohrer

▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 2181





Material groups GS | HSS-E | DIN 2181 | 55° | C | Bright | TiN

p.407

Recommended ToolHolder — Plain Shank: TAPPING ER CHUCK, TAPPING CHUCK, ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Bright	EDP No. TiN	Thread Length L1	Overall Length L2	Projection Length L4	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
Rc1/16 -	28	TCM03020	TDM03020	14	56	10.1	6	4.9	8	4	6.2
Rc1/8 -	28	TCM03200	TDM03200	14	63	10.1	7	5.5	8	4	8.2
Rc1/4 -	19	TCM03400	TDM03400	21	63	15	11	9	12	4	11
Rc3/8 -	19	TCM03480	TDM03480	21	70	15.4	12	9	12	4	14.5
Rc1/2 -	14	TCM03560	TDM03560	27	80	20.5	16	12	15	4	18
Rc3/4 -	14	TCM03700	TDM03700	27	100	21.8	20	16	19	5	23.5
Rc1 -	11	TCM03780	TDM03780	32	110	26	25	20	23	5	29.5

◎ : 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	○	○	○	○	◎	◎	○														

PIPE TAP

Vap
Hardslick
TBM04 SERIES
TCM04-HAR SERIES

NPT

ANSI/ASME B1.20.1

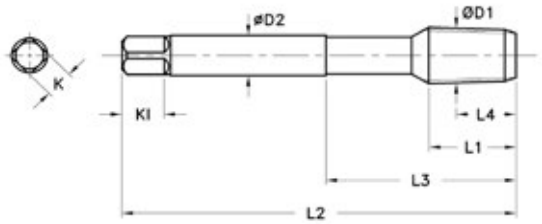
ANSI/ASME B1.20.1
ANSI/ASME B1.20.1
ANSI/ASME B1.20.1

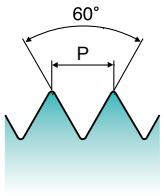
Machine taps
Maschinengewindebohrer

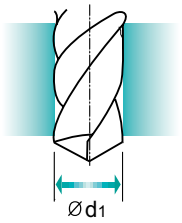
▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 5156







Material groups VA NW | HSS-E | DIN 5156 | 60° | C | R25 | Vap | Hardslick

p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE ØD1	TPI	EDP No. Vap	EDP No. Hardslick	Thread Length L1	Overall Length L2	Neck Length L3	Projection Length L4	Shank Diameter ØD2	Square Size K	Square Length Kl	No. of Flute Z	Tapping Drill Diameter Ød1
NPT1/16	- 27	TBM04020	TCM04020HAR	14	90	45	12	6	4.9	8	3	6.15
NPT1/8	- 27	TBM04200	TCM04200HAR	14	90	45	12.05	7	5.5	8	3	8.43
NPT1/4	- 18	TBM04400	TCM04400HAR	21	100	50	17.45	11	9	12	3	11.13
NPT3/8	- 18	TBM04480	TCM04480HAR	21	110	55	17.65	12	9	12	3	14.27
NPT1/2	- 14	TBM04560	TCM04560HAR	27	125	65	22.85	16	12	15	4	17.86
NPT3/4	- 14	TBM04700	TCM04700HAR	27	140	75	22.95	20	16	19	4	23.01
NPT1	- 11-1/2	TBM04780	TCM04780HAR	32	160	85	27.4	25	20	23	4	28.98

◎ : 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																					

PIPE TAP

Vap
Hardslick

TBM05 SERIES
TCM05-HAR SERIES

NPTF

ANSI B1.20.3

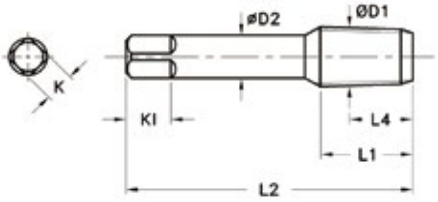
ANSI B1.20.3
ANSI B1.20.3
ANSI B1.20.3

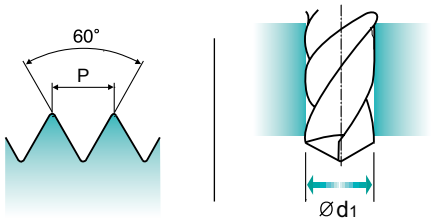
Machine taps
Maschinengewindebohrer

▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 2181





Material groups VA NW | HSS-E | DIN 5156 | 60° | C | R25 | Vap | Hardslick | p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Projection Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Vap	Hardslick	L1	L2	L3	L4	ØD2	K	Kl	Z	Ød1
NPTF1/16	- 27	TBM05020	TCM05020HAR	14	90	45	12	6	4.9	8	3	6.15
NPTF1/8	- 27	TBM05200	TCM05200HAR	14	90	45	12.05	7	5.5	8	3	8.43
NPTF1/4	- 18	TBM05400	TCM05400HAR	21	100	50	17.45	11	9	12	3	11.13
NPTF3/8	- 18	TBM05480	TCM05480HAR	21	110	55	17.65	12	9	12	3	14.27
NPTF1/2	- 14	TBM05560	TCM05560HAR	27	125	65	22.85	16	12	15	4	17.86
NPTF3/4	- 14	TBM05700	TCM05700HAR	27	140	75	22.95	20	16	19	4	23.01
NPTF1	- 11-1/2	TBM05780	TCM05780HAR	32	160	85	27.4	25	20	23	4	28.98

◎ : 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																					

PIPE TAP

Vap
Hardslick
TBM06 SERIES
TCM06-HAR SERIES

BSPT(Rc)

DIN EN10226-2, ISO 7-1

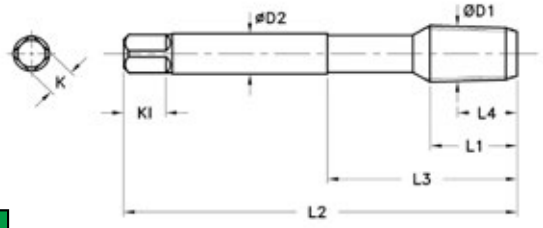
DIN EN10226-2, ISO 7-1
DIN EN10226-2, ISO 7-1
DIN EN10226-2, ISO 7-1

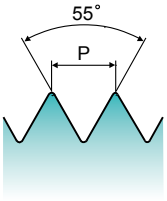
Machine taps
Maschinengewindebohrer

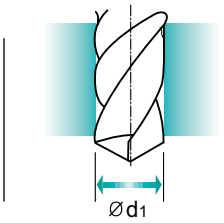
▶ Suitable for tapping tapered holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet für Sacklöcher in höherer Schnittgeschwindigkeit als andere Gewindebohrer dank einer stabilen Bohrergeometrie.

DIN 5156







Material groups VA NW | HSS-E | DIN 5156 | 55° | C | R25 | Vap | Hardslick | p.407

Recommended ToolHolder
Plain Shank
TAPPING ER CHUCK
TAPPING CHUCK
ONE STEP TAPPING CHUCK

Unit : mm

SIZE		TPI	EDP No.		Thread Length	Overall Length	Neck Length	Projection Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1			Vap	Hardslick	L1	L2	L3	L4	ØD2	K	Kl	Z	Ød1
Rc1/16	-	28	TBM06020	TCM06020HAR	14	90	45	10.1	6	4.9	8	3	6.2
Rc1/8	-	28	TBM06200	TCM06200HAR	14	90	45	10.1	7	5.5	8	3	8.2
Rc1/4	-	19	TBM06400	TCM06400HAR	21	100	50	15	11	9	12	3	11
Rc3/8	-	19	TBM06480	TCM06480HAR	21	110	55	15.4	12	9	12	3	14.5
Rc1/2	-	14	TBM06560	TCM06560HAR	27	125	65	20.5	16	12	15	4	18
Rc3/4	-	14	TBM06700	TCM06700HAR	27	140	75	21.8	20	16	19	4	23.5
Rc1	-	11	TBM06780	TCM06780HAR	32	160	85	26	25	20	23	4	29.5

◎ : 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																					

PIPE TAP

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

ISO	VDI 3323	Material Description	HB	HRc	T7709	TC728 TD728	TC729 TY729	TB514 TC514-HAR	TC727 TD727	TCM01 TDM01 TCM02 TDM02 TCM03 TDM03	TBM04 TBM05 TBM06 TCM04-HAR TCM05-HAR TCM06-HAR
					Vc (m/min.)						
P	1	Non-alloy steel	125		15-20			15-20			11-15
	2		190	13	15-20	15-20		15-20	15-20	11-15	11-15
	3		250	25	12-18	12-18			12-18	9-13	
	4		270	28		10-15			10-15	7-11	
	5		300	32							
	6	Low alloy steel	180	10	10-15	10-15	10-15		10-15	7-11	
	7		275	29		10-15	10-15		10-15	7-11	
	8		300	32			6-10				
	9		350	38			3-5				
M	12	Stainless steel	200	15				7-10			5-7
	13		240	23				5-8			4-6
	14		180	10			4-6	4-6			3-4
K	15	Nodular cast iron	180		10-15						
	16		260		5-8						
	17		160	3	10-15	10-15			10-15	10-15	
	18		250	25	5-8	5-8			5-8	5-8	
N	21	Aluminum-wrought alloy	60		10-15	10-15			10-15	10-15	
	22		100		10-15	10-15			10-15	10-15	
	23	Aluminum-cast, alloyed	75		15-20	15-20			15-20	15-20	
	24		90			15-20			15-20	15-20	
	25		130			10-15			10-15	10-15	
	26	Copper and Copper Alloys (Bronze / Brass)	110			25-35			25-35	25-35	
	27		90			8-12			8-12	8-12	

Global Cutting Tool Leader **YG-1**

THREADING