



Leading Through Innovation

**SOLID CARBIDE & HSS-E**

# **YG TAP CAST IRON**

## **HSS YG Gewindebohrer Guss**

- For Cast Iron or Similar Work Materials
- Für Gusseisen oder ähnliche Werkstoffe



SELECTION GUIDE



SOLID CARBIDE & HSS-E YG TAP CAST IRON

For Cast Iron or Similar Work Materials

Please visit globalyg1.com/mat for material search

© : Excellent ○ : Good

Recommended cutting conditions : p.B205

Table with columns: ISO, VDI 3323, Material Description, Composition / Structure / Heat Treatment, HB, HRc, and various surface treatment options (Bright, Nitride, TiN, TiCN, TiAlN).

Table with columns: HOLE TYPE, TOOL MATERIAL (CARBIDE, HSS-E), CHAMFER LEAD ACC. TO DIN2197, FLUTE TYPE, SPIRAL FLUTE ANGLE, and SERIES (M, MF, UNC, UNF, BSW, G(BSP), EG-M, EG-UNC, EG-UNF).

YG TAP CAST IRON

T0993 SERIES

ISO metric coarse threads DIN 13
Metrisches ISO-Gewinde DIN 13
ISO MÉTRIQUE DIN13
ISO Metrico passo grosso DIN 13
Machine taps Maschinengewindebohrer

Carbide tap can increase tool life longer than HSS taps due to higher hardness. Suitable for cast iron and high silicon aluminiums.
Der VHM-Gewindebohrer kann die Lebensdauer gegenüber HSS-Gewindebohrern erhöhen dank der größeren Härte. Geeignet für Guss und Aluminium mit hohem Siliziumanteil

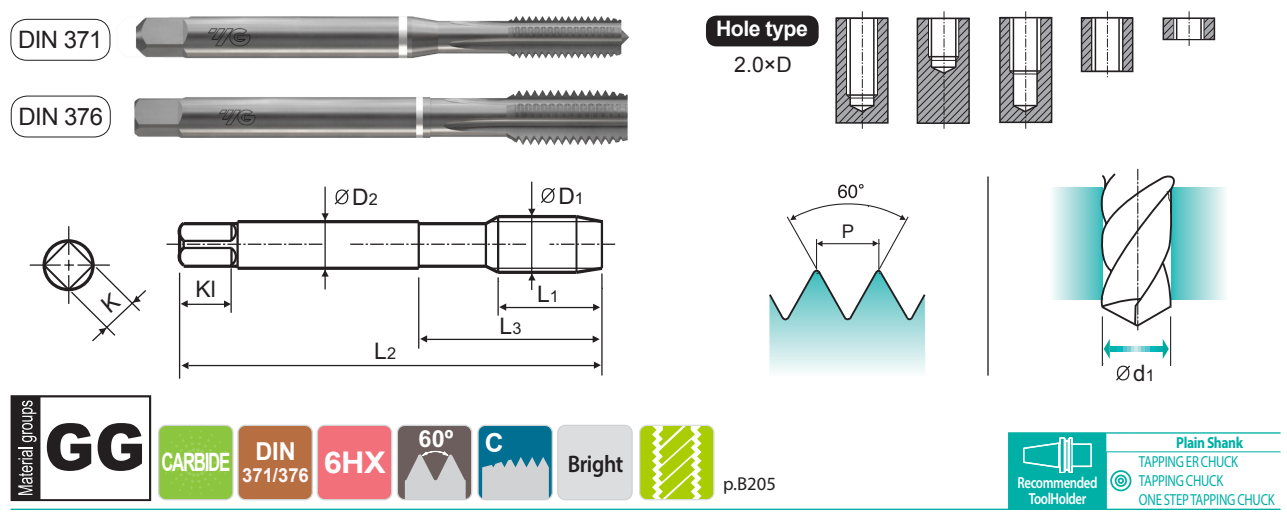


Table with columns: SIZE, Pitch, EDP No., Thread Length, Overall Length, Neck Length, Shank Diameter, Square Size, Square Length, No. of Flute, Tapping Drill Diameter. Lists various sizes from M3 x 0.5 to M20 x 2.5.

DIN 371(M2~M10) and DIN 376(M11~M20)

Material groups table with columns: ISO, Material Description, and various material categories (Non-alloy steel, Low alloy steel, High alloyed steel, Stainless steel, Grey cast iron, Nodular cast iron, Malleable cast iron, Aluminum-wrought alloy, Aluminum-cast, alloyed, Copper and Copper Alloys, Non Metallic Materials, Heat Resistant Super Alloys, Titanium Alloys, Hardened steel, Chilled Cast Iron, Hardened Cast Iron).





TI821 SERIES

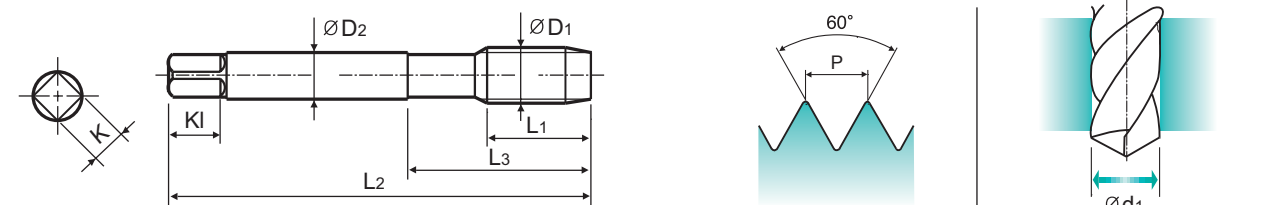
ISO metric coarse threads DIN 13

- Metrisches ISO-Gewinde DIN 13
- ISO MÉTRIQUE DIN13
- ISO Metrico passo grosso DIN 13

Machine taps  
Maschinengewindebohrer

Suitable for tapping cast iron or similar work materials.

Geeignet zum Gewindeschneiden von Guss oder ähnlichen Werkstoffen



Material groups: **GG**, HSS-E, DIN 371/376, 6HX, 60°, C, TiCN, p.B205

Plain Shank TAPPING ER CHUCK TAPPING CHUCK ONE STEP TAPPING CHUCK

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	TiCN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 × 0.4		TI821136	8	45	13	2.8	2.1	5	3	1.6
M2.2 × 0.45		TI821156	8	45	13	2.8	2.1	5	3	1.75
*M2.3 × 0.4		TI821196	8	45	13	2.8	2.1	5	3	1.9
M2.5 × 0.45		TI821176	9	50	15	2.8	2.1	5	3	2.05
*M2.6 × 0.45		TI821496	9	50	15	2.8	2.1	5	3	2.1
M3 × 0.5		TI821206	11	56	18	3.5	2.7	6	3	2.5
M3.5 × 0.6		TI821226	12	56	20	4	3	6	3	2.9
M4 × 0.7		TI821246	13	63	21	4.5	3.4	6	3	3.3
M4.5 × 0.75		TI821266	14	70	25	6	4.9	8	3	3.7
M5 × 0.8		TI821286	15	70	25	6	4.9	8	4	4.2
M6 × 1.0		TI821316	17	80	30	6	4.9	8	4	5
M7 × 1.0		TI821346	17	80	30	7	5.5	8	4	6
M8 × 1.25		TI821366	20	90	35	8	6.2	9	4	6.8
M9 × 1.25		TI821396	20	90	35	9	7	10	4	7.8
M10 × 1.5		TI821426	22	100	39	10	8	11	4	8.5
M11 × 1.5		TI821466	22	100	40	8	6.2	9	4	9.5
M12 × 1.75		TI821506	24	110	44	9	7	10	4	10.2
M14 × 2.0		TI821546	26	110	44	11	9	12	4	12
M16 × 2.0		TI821606	27	110	44	12	9	12	4	14
M18 × 2.5		TI821656	30	125	50	14	11	14	4	15.5
M20 × 2.5		TI821706	32	140	54	16	12	15	4	17.5
M22 × 2.5		TI821746	32	140	54	18	14.5	17	4	19.5
M24 × 3.0		TI821786	34	160	60	18	14.5	17	4	21
M27 × 3.0		TI821866	36	160	60	20	16	19	4	24
M30 × 3.5		TI821946	40	180	70	22	18	21	4	26.5

DIN 371(M2~M10) and DIN 376(M11~M30)

\* DIN profile not ISO

⊙ : Excellent ○ : Good

ISO Material Description	P										M				K					
	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	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended										⊙	⊙				⊙	⊙	⊙	⊙	○	○

ISO Material Description	N										S						H						
	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	15	30	25	38	34	55	60	42	55	55	60	42	55	60	42	55		
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550		
Recommended											⊙												



TY821 SERIES

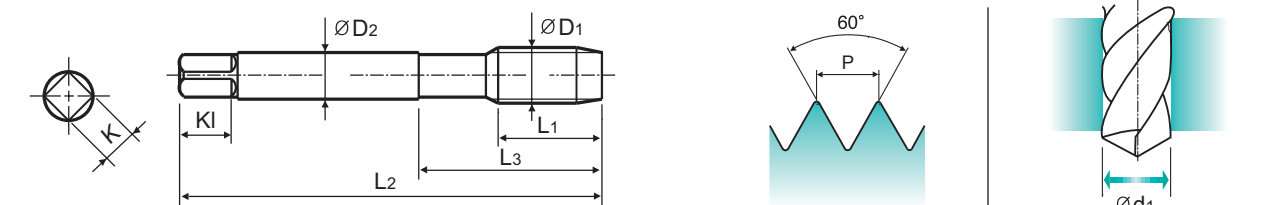
ISO metric coarse threads DIN 13

- Metrisches ISO-Gewinde DIN 13
- ISO MÉTRIQUE DIN13
- ISO Metrico passo grosso DIN 13

Machine taps  
Maschinengewindebohrer

Suitable for tapping cast iron or similar work materials.

Geeignet zum Gewindeschneiden von Guss oder ähnlichen Werkstoffen



Material groups: **GG**, HSS-E, DIN 371/376, 6HX, 60°, C, TiAIN, p.B205

Plain Shank TAPPING ER CHUCK TAPPING CHUCK ONE STEP TAPPING CHUCK

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	TiAIN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M2 × 0.4		TY821136	8	45	13	2.8	2.1	5	3	1.6
M2.2 × 0.45		TY821156	8	45	13	2.8	2.1	5	3	1.75
*M2.3 × 0.4		TY821196	8	45	13	2.8	2.1	5	3	1.9
M2.5 × 0.45		TY821176	9	50	15	2.8	2.1	5	3	2.05
*M2.6 × 0.45		TY821496	9	50	15	2.8	2.1	5	3	2.1
M3 × 0.5		TY821206	11	56	18	3.5	2.7	6	3	2.5
M3.5 × 0.6		TY821226	12	56	20	4	3	6	3	2.9
M4 × 0.7		TY821246	13	63	21	4.5	3.4	6	3	3.3
M4.5 × 0.75		TY821266	14	70	25	6	4.9	8	3	3.7
M5 × 0.8		TY821286	15	70	25	6	4.9	8	4	4.2
M6 × 1.0		TY821316	17	80	30	6	4.9	8	4	5
M7 × 1.0		TY821346	17	80	30	7	5.5	8	4	6
M8 × 1.25		TY821366	20	90	35	8	6.2	9	4	6.8
M9 × 1.25		TY821396	20	90	35	9	7	10	4	7.8
M10 × 1.5		TY821426	22	100	39	10	8	11	4	8.5
M11 × 1.5		TY821466	22	100	40	8	6.2	9	4	9.5
M12 × 1.75		TY821506	24	110	44	9	7	10	4	10.2
M14 × 2.0		TY821546	26	110	44	11	9	12	4	12
M16 × 2.0		TY821606	27	110	44	12	9	12	4	14
M18 × 2.5		TY821656	30	125	50	14	11	14	4	15.5
M20 × 2.5		TY821706	32	140	54	16	12	15	4	17.5
M22 × 2.5		TY821746	32	140	54	18	14.5	17	4	19.5
M24 × 3.0		TY821786	34	160	60	18	14.5	17	4	21
M27 × 3.0		TY821866	36	160	60	20	16	19	4	24
M30 × 3.5		TY821946	40	180	70	22	18	21	4	26.5

DIN 371(M2~M10) and DIN 376(M11~M30)

\* DIN profile not ISO

⊙ : Excellent ○ : Good

ISO Material Description	P										M				K					
	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	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended										⊙	⊙				⊙	⊙	⊙	⊙	○	○

ISO Material Description	N										S						H						
	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	15	30	25	38	34	55	60	42	55	55	60	42	55	60	42	55		
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550		
Recommended											⊙												



# YG TAP CAST IRON

## TE403 SERIES

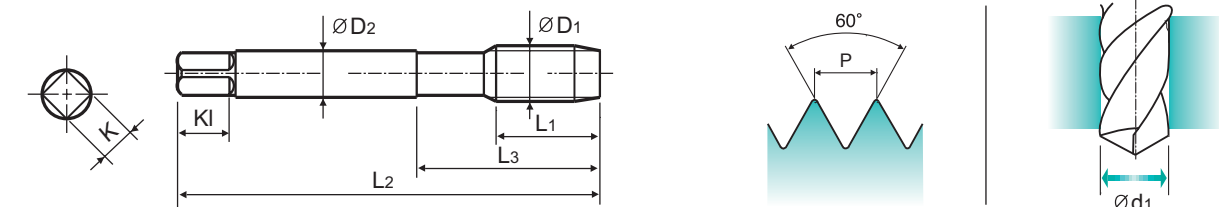
### MF ISO metric fine threads DIN 13

- Metrisches ISO-Feingewinde DIN 13
- ISO MÉTRIQUE PAS FINS DIN13
- ISO Metrico passo fine DIN 13

Machine taps  
Maschinengewindebohrer

► Suitable for tapping cast iron or similar work materials due to nitriding.

► Geeignet zum Gewindeschneiden von Guss oder ähnlichen Werkstoffen dank der Nitrierung



Material groups: **GG** HSS-E DIN 374 6HX 60° C Nitride p.B205

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

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Ni	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M4	× 0.5	TE403256	10	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	TE403296	11	70	25	3.5	2.7	6	4	4.5
M6	× 0.75	TE403326	13	80	30	4.5	3.4	6	4	5.2
M6	× 0.5	TE403336	13	80	30	4.5	3.4	6	4	5.5
M7	× 0.75	TE403356	14	80	30	5.5	4.3	7	4	6.2
M8	× 1.0	TE403376	17	90	36	6	4.9	8	4	7
M8	× 0.75	TE403386	14	80	30	6	4.9	8	4	7.2
M10	× 1.25	TE403436	22	100	40	7	5.5	8	4	8.8
M10	× 1.0	TE403446	18	90	36	7	5.5	8	4	9
M10	× 0.75	TE403456	18	90	36	7	5.5	8	4	9.2
M12	× 1.5	TE403516	22	100	40	9	7	10	4	10.5
M12	× 1.25	TE403526	22	100	40	9	7	10	4	10.8
M12	× 1.0	TE403536	18	100	40	9	7	10	4	11
M14	× 1.5	TE403556	22	100	40	11	9	12	4	12.5
M14	× 1.25	TE403566	22	100	40	11	9	12	4	12.8
M16	× 1.5	TE403616	22	100	40	12	9	12	4	14.5
M18	× 1.5	TE403676	25	110	44	14	11	14	4	16.5
M20	× 1.5	TE403726	25	125	50	16	12	15	4	18.5
M22	× 1.5	TE403766	25	125	50	18	14.5	17	4	20.5
M24	× 1.5	TE403806	27	140	54	18	14.5	17	4	22.5

◎ : Excellent ○ : Good

ISO Material Description	P										M				K					
	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	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

ISO Material Description	N					S					H										
	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	400Rm	1050Rm	550	630	400	550
Recommended																					○

# YG TAP CAST IRON

## TE434 SERIES

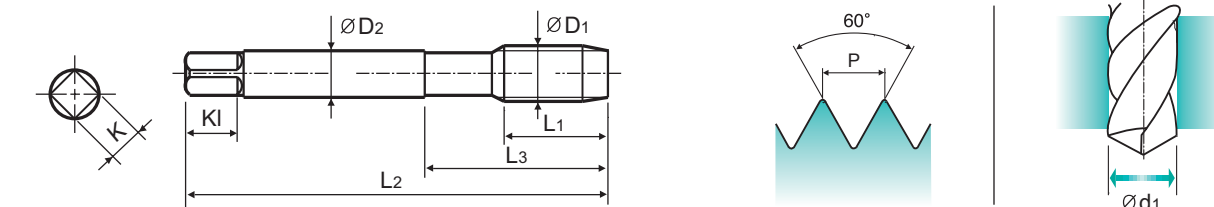
### UNC Unified coarse threads

- Unified Grobgewinde
- UNC
- Unificato passo grosso

Machine taps  
Maschinengewindebohrer

► Suitable for tapping cast iron or similar work materials due to nitriding.

► Geeignet zum Gewindeschneiden von Guss oder ähnlichen Werkstoffen dank der Nitrierung



Material groups: **GG** HSS-E DIN 371/376 2BX 60° C Nitride p.B205

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		Ni	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4	- 40UNC	TE434162	11	56	18	3.5	2.7	6	3	2.3
#5	- 40UNC	TE434202	11	56	18	3.5	2.7	6	3	2.6
#6	- 32UNC	TE434242	12	56	20	4	3	6	3	2.85
#8	- 32UNC	TE434282	13	63	21	4.5	3.4	6	3	3.5
#10	- 24UNC	TE434322	15	70	25	6	4.9	8	3	3.9
#12	- 24UNC	TE434362	16	80	30	6	4.9	8	3	4.5
1/4	- 20UNC	TE434402	17	80	30	7	5.5	8	4	5.2
5/16	- 18UNC	TE434442	20	90	35	8	6.2	9	4	6.6
3/8	- 16UNC	TE434482	22	100	39	9	7	10	4	8
7/16	- 14UNC	TE434522	22	100	40	8	6.2	9	4	9.4
1/2	- 13UNC	TE434562	25	110	44	9	7	10	4	10.75
9/16	- 12UNC	TE434602	26	110	44	11	9	12	4	12.25
5/8	- 11UNC	TE434642	27	110	44	12	9	12	4	13.5
3/4	- 10UNC	TE434702	30	125	50	14	11	14	4	16.5
7/8	- 9UNC	TE434742	32	140	54	18	14.5	17	4	19.5
1	- 8UNC	TE434782	36	160	60	20	16	17	4	22.25
1-1/8	- 7UNC	TE434822	40	180	70	22	18	21	4	25

► DIN 371(#4~3/8) and DIN 376(7/16~1-1/8)

◎ : Excellent ○ : Good

ISO Material Description	P										M				K					
	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	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended															◎	◎	◎	◎	○	○

ISO Material Description	N					S					H										
	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	400Rm	1050Rm	550	630	400	550
Recommended																					○



TE454 SERIES

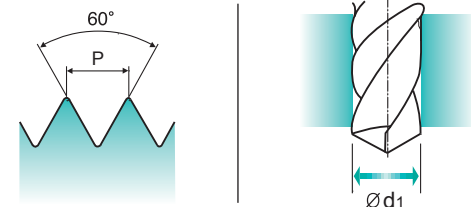
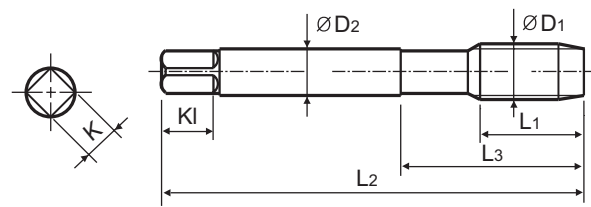
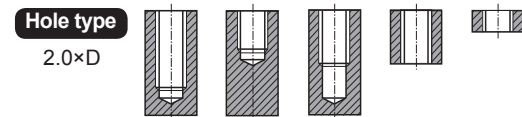
# UNF Unified fine threads

● Unified Feingewinde  
● UNF  
● Unificato passo fine

Machine taps  
Maschinengewindebohrer

► Suitable for tapping cast iron or similar work materials due to nitriding.

► Geeignet zum Gewindeschneiden von Guss oder ähnlichen Werkstoffen dank der Nitrierung



Material groups: **GG** HSS-E DIN 371/374 2BX 60° C Nitride p.B205

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		Ni	L1	L2	L3	ØD2	K	Kl	Z	Ød1
#4 - 48UNF		TE454182	11	56	18	3.5	2.7	6	3	2.4
#5 - 44UNF		TE454222	11	56	18	3.5	2.7	6	3	2.7
#6 - 40UNF		TE454262	12	56	20	4	3	6	3	3
#8 - 36UNF		TE454302	13	63	21	4.5	3.4	6	3	3.5
#10 - 32UNF		TE454342	15	70	25	6	4.9	8	3	4.1
#12 - 28UNF		TE454382	16	80	30	6	4.9	8	4	4.7
1/4 - 28UNF		TE454422	17	80	30	7	5.5	8	4	5.5
5/16 - 24UNF		TE454462	17	90	35	8	6.2	9	4	6.9
3/8 - 24UNF		TE454502	18	100	39	9	7	10	4	8.5
7/16 - 20UNF		TE454542	22	100	40	8	6.2	9	4	9.9
1/2 - 20UNF		TE454582	22	100	40	9	7	10	4	11.5
9/16 - 18UNF		TE454622	22	100	40	11	9	12	4	12.9
5/8 - 18UNF		TE454662	22	100	40	12	9	12	4	14.5
3/4 - 16UNF		TE454722	25	110	44	14	11	14	4	17.5
7/8 - 14UNF		TE454762	26	125	50	18	14.5	17	4	20.5
1 - 12UNF		TE454802	28	140	54	18	14.5	17	4	23.25
1-1/8 - 12UNF		TE454842	30	150	60	22	18	21	4	26.5

► DIN 371(#4~3/8) and DIN 374(7/16~1-1/8)

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VDI 3323																				
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	130	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										
	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				
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323																					
HRc	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HB	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
Recommended																					

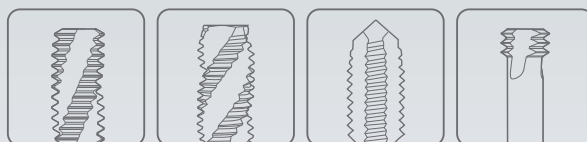


## RECOMMENDED CUTTING CONDITIONS EMPHOHLENE SCHNEIDKONDITIONEN

ISO	VDI 3323	Material Description	HB	HRc	T0993	TE821 TE403 TE434 TE454	TD821	TI821	TY821
					Vc (m/min.)				
K	15	Grey cast iron	180	10	10-15	10-15	15-20	15-20	15-20
	16		260	26	5-8	5-8	8-11	8-11	8-11
	17	Nodular cast iron	160	3	10-15	10-15	15-20	15-20	15-20
	18		250	25	5-8	5-8	8-11	8-11	8-11
	19		Malleable cast iron	130		10-15	10-15	15-20	15-20
20	230	21		5-8	5-8	8-11	8-11	8-11	
N	23	Aluminum-cast, alloyed	75		15-20				
	25		130		10-15				
	27	Copper and Copper Alloys (Bronze / Brass)	90			8-12	12-16	12-16	12-16
H	40	Chilled Cast Iron	400	42	3-5				



Global Cutting Tool Leader **YG-1**



# THREADING