



Leading Through Innovation

HSS-E

YG TAP CHIP BREAKER

YG Gewindebohrer Chip Breaker

- TiN Coated Tap with Chip Breaker for Steel Materials
- TiN-beschichteter Gewindebohrer mit Spanbrecher für Stahlwerkstoffe

SELECTION GUIDE



HSS-E
YG TAP
CHIP BREAKER

Please visit globalyg1.com/mat for material search

© : Excellent ○ : Good

Recommended cutting conditions : p.B169

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			Annealed	250	25			
	34		Ni or Co Based	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			

YG TAP
CHIP BREAKER

TDE24 SERIES

ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

- Solving the productivity problem caused by long chips.
Particularly suitable for machining non-alloy steel, low alloy steel, high alloy steel, and tool steel
- Lösung des durch lange Späne verursachten Produktivitätsproblems
Besonders geeignet für die Bearbeitung von unlegiertem Stahl, niedriglegiertem Stahl, hochlegiertem Stahl und Werkzeugstahl

DIN 371

DIN 376

Hole type 2.0xD

60°

P

Ø D₂

Ø D₁

KI

L₁

L₂

L₃

Ø d₁

VG

HSS-E

DIN 371/376

6H

60°

C

R15°

TiN

p.B169

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD ₁	P	TiN	L ₁	L ₂	L ₃	ØD ₂	K	KI	Z	Ød ₁
M4 × 0.7		TDE24246R	7	63	21	4.5	3.4	6	3	3.3
M5 × 0.8		TDE24286R	8	70	25	6	4.9	8	3	4.2
M6 × 1.0		TDE24316R	10	80	30	6	4.9	8	3	5.0
M8 × 1.25		TDE24366R	13	90	35	8	6.2	9	3	6.8
M10 × 1.5		TDE24426R	15	100	39	10	8.0	11	3	8.5
M12 × 1.75		TDE24506R	18	110	44	9	7.0	10	3	10.3
M14 × 2.0		TDE24546R	20	110	44	11	9.0	12	3	12.0
M16 × 2.0		TDE24606R	20	110	44	12	9.0	12	3	14.0
M18 × 2.5		TDE24656R	25	125	50	14	11.0	14	4	15.5
M20 × 2.5		TDE24706R	25	140	54	16	12.0	15	4	17.5

DIN 371(M4-M10) and DIN 376(M12-M20)

																				◎ : 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	180	29	32	38	15	35	15	23	10	15	26	3	25		21			
HB		125	190	250	270	300		275	300	350	200	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	400Rm	1050Rm	550	630	400	550		
Recommended																							

CARBIDE

HSS

THREAD MILL

SYNCHRO TAP

PRIME TAP

COMBO TAP

YG TAP STEEL

YG TAP CHIP BREAKER

YG TAP INOX

YG TAP CAST IRON

YG TAP HARDENED STEEL

YG TAP Ti Ni

YG TAP ALU

YG TAP FORMING

YG TAP GENERAL

PIPE TAP

STI TAP

NUT TAP

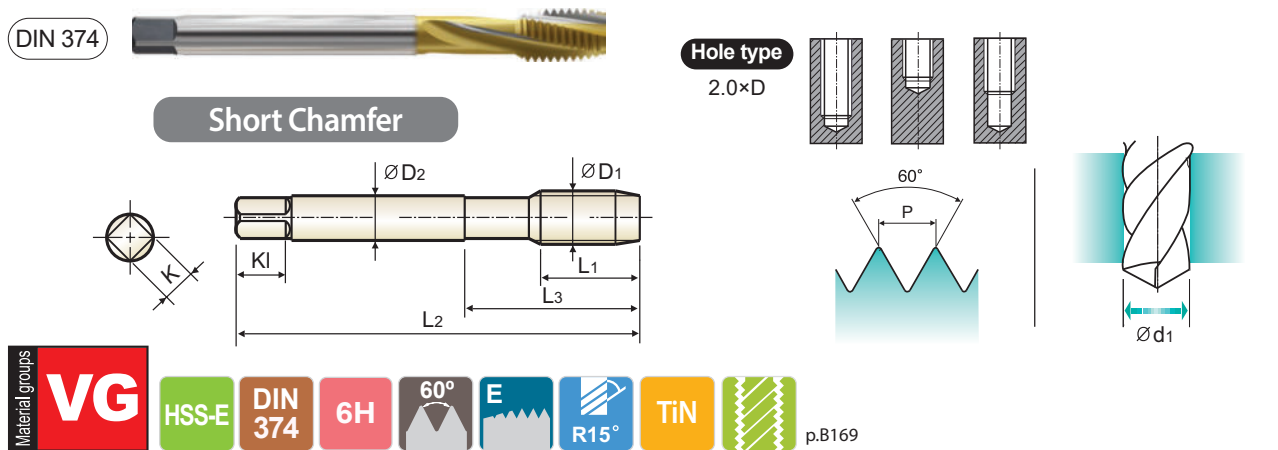
**YG TAP
CHIP BREAKER**

TDE27 SERIES

MF **ISO Metric Fine Threads DIN 13**
Metrisches ISO-Feingewinde DIN 13
ISO MÉTRIQUE PAS FINS DIN13
ISO Metrico passo fine DIN 13

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Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD ₁	P	TiN	L ₁	L ₂	L ₃	ØD ₂	K	KI	Z	Ød ₁
M8	× 1.0	TDE27376R	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TDE27436R	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	TDE27446R	10	90	36	7	5.5	8	3	9.0
M12	× 1.5	TDE27516R	15	100	40	9	7.0	10	3	10.5
M12	× 1.25	TDE27526R	15	100	40	9	7.0	10	3	10.8
M14	× 1.5	TDE27556R	15	100	40	11	9.0	12	3	12.5
M16	× 1.5	TDE27616R	15	100	40	12	9.0	12	3	14.5
M18	× 1.5	TDE27676R	17	110	44	14	11.0	14	4	16.5
M20	× 1.5	TDE27726R	17	125	50	16	12.0	15	4	18.5

◎ : Excellent ○ : Good

ISO	P										M					K				
Material Description	Non-alloy steel					Low alloy steel					High alloy steel, and tool steel					Stainless steel				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	125	13	25	28	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	N										S					H				
Material Description	Aluminum-wrought alloy					Aluminum-cast, alloyed					Copper and Copper Alloys (Bronze / Brass)					Non Metallic Materials				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRc	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400
Recommended																				

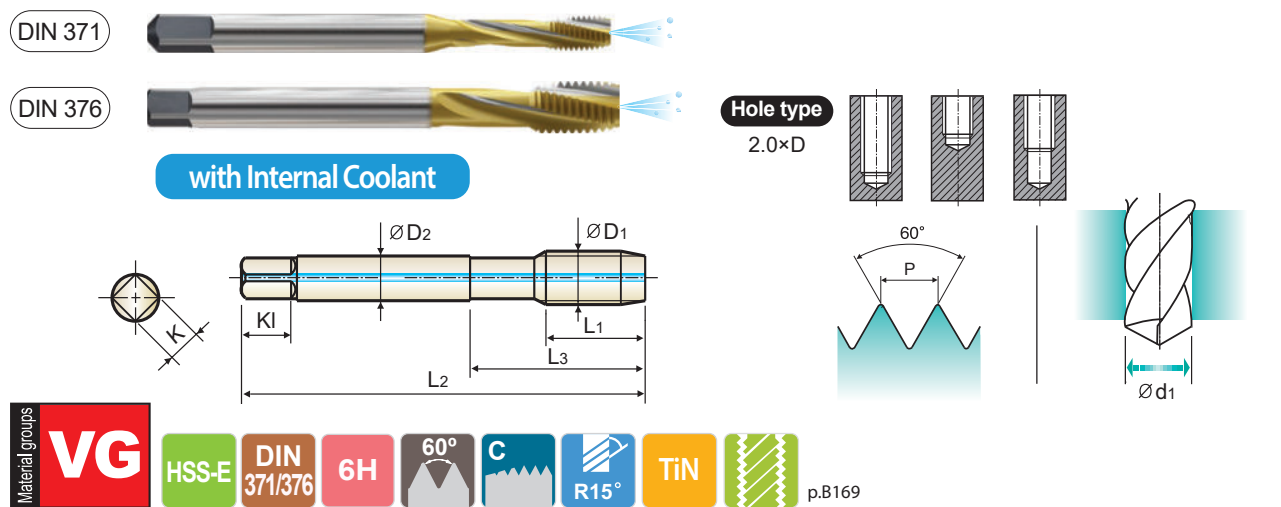
**YG TAP
CHIP BREAKER**

TDE28 SERIES

M **ISO Metric Coarse Threads DIN 13**
Metrisches ISO-Gewinde DIN 13
ISO MÉTRIQUE DIN13
ISO Metrico passo grosso DIN 13

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Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD ₁	P	TiN	L ₁	L ₂	L ₃	ØD ₂	K	KI	Z	Ød ₁
M6	× 1.0	TDE28316R	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TDE28366R	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TDE28426R	15	100	39	10	8.0	11	3	8.5
M12	× 1.75	TDE28506R	18	110	44	9	7.0	10	3	10.3
M14	× 2.0	TDE28546R	20	110	44	11	9.0	12	3	12.0
M16	× 2.0	TDE28606R	20	110	44	12	9.0	12	3	14.0
M18	× 2.5	TDE28656R	25	125	50	14	11.0	14	4	15.5
M20	× 2.5	TDE28706R	25	140	54	16	12.0	15	4	17.5

► DIN 371(M6-M10) and DIN 376(M12-M20)

◎ : Excellent ○ : Good

ISO	P										M					K				
Material Description	Non-alloy steel					Low alloy steel					High alloy steel, and tool steel					Stainless steel				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	125	13	25	28	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	N										S					H				
Material Description	Aluminum-wrought alloy					Aluminum-cast, alloyed					Copper and Copper Alloys (Bronze / Brass)					Non Metallic Materials				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRc	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400
Recommended																				

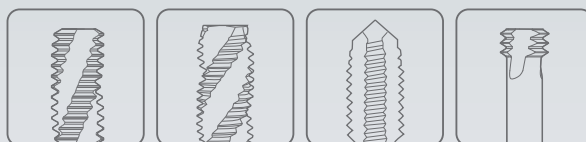
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

B168 phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions **YG-1 CO., LTD.**

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THREADING