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

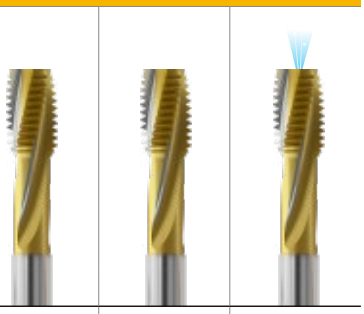
YG THREADING TOOLS

HSS-E YG TAP CHIP BREAKER

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.225

HOLE TYPE						Max. 2.0xD Blind Hole		
TOOL MATERIAL						HSS-E		
CHAMFER LEAD ACC. TO DIN2197						C	E	C
FLUTE TYPE						Spiral Flute		
SPIRAL FLUTE ANGLE						R15		
SERIES	M	DIN371/376				TDE24 (p.219)	TDE26 (p.221)	TDE28 (p.223)
	MF	DIN374				TDE25 (p.220)	TDE27 (p.222)	TDE29 (p.224)
SURFACE TREATMENT						TiN		
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			

YG TAP CHIP BREAKER

TDE24 SERIES

M ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

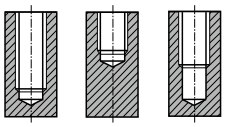
- Solving the productivity problem caused by long chips.
- Particularly suitable for machining non-alloy steel, low alloy steel, high alloy steel, and tool steel

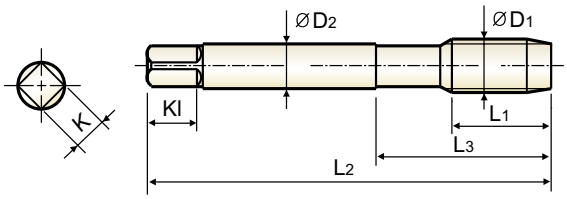
- Lösung des durch lange Späne verursachten Produktivitätsproblems
- Besonders geeignet für die Bearbeitung von unlegiertem Stahl, niedriglegiertem Stahl, hochlegiertem Stahl und Werkzeugstahl

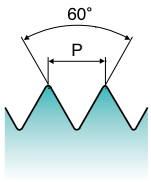
DIN 371

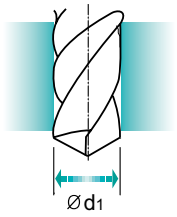
DIN 376

Hole type
2.0×D









Material groups **VG** | HSS-E | DIN 371/376 | 6H | 60° | C | R15° | TiN

p.225

Recommended ToolHolder — Plain Shank — SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
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	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	400Rm	1050Rm	550	630	400	550
Recommended																					

YG TAP CHIP BREAKER

TDE25 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

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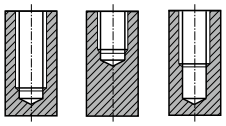
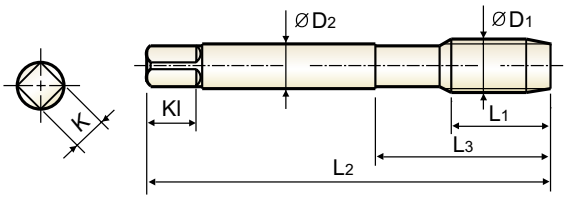
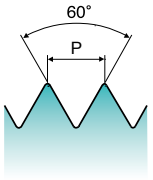
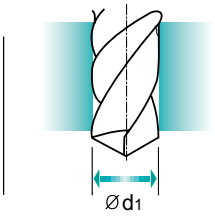
DIN 374

Hole type
2.0×D









Material groups | VG | HSS-E | DIN 374 | 6H | 60° | C | R15° | TiN

p.225

Recommended ToolHolder: Plain Shank, SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M8	× 1.0	TDE25376R	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TDE25436R	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	TDE25446R	10	90	36	7	5.5	8	3	9.0
M12	× 1.5	TDE25516R	15	100	40	9	7.0	10	3	10.5
M12	× 1.25	TDE25526R	15	100	40	9	7.0	10	3	10.8
M14	× 1.5	TDE25556R	15	100	40	11	9.0	12	3	12.5
M16	× 1.5	TDE25616R	15	100	40	12	9.0	12	3	14.5
M18	× 1.5	TDE25676R	17	110	44	14	11.0	14	4	16.5
M20	× 1.5	TDE25726R	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 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	400Rm	1050Rm	550	630	400	550
Recommended																					

YG TAP CHIP BREAKER

TDE26 SERIES

M ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

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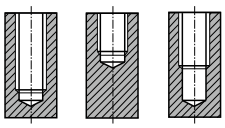
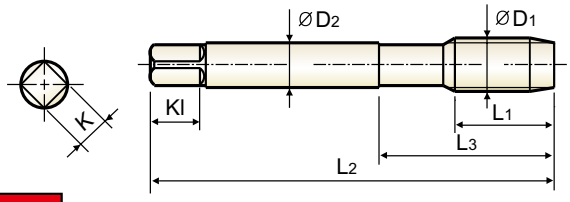
DIN 371

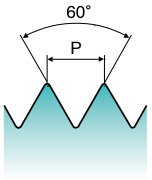
DIN 376

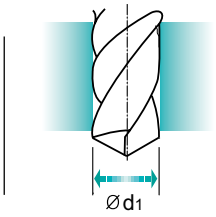
Short Chamfer

Hole type
2.0×D









Material groups **VG** | HSS-E | DIN 371/376 | 6H | 60° | E | R15° | TiN

p.225

Recommended ToolHolder — Plain Shank — SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M4	× 0.7	TDE26246R	7	63	21	4.5	3.4	6	3	3.3
M5	× 0.8	TDE26286R	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	TDE26316R	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TDE26366R	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TDE26426R	15	100	39	10	8.0	11	3	8.5
M12	× 1.75	TDE26506R	18	110	44	9	7.0	10	3	10.3
M14	× 2.0	TDE26546R	20	110	44	11	9.0	12	3	12.0
M16	× 2.0	TDE26606R	20	110	44	12	9.0	12	3	14.0
M18	× 2.5	TDE26656R	25	125	50	14	11.0	14	4	15.5
M20	× 2.5	TDE26706R	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	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	400Rm	1050Rm	550	630	400	550
Recommended																					

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

Machine taps
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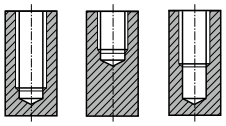
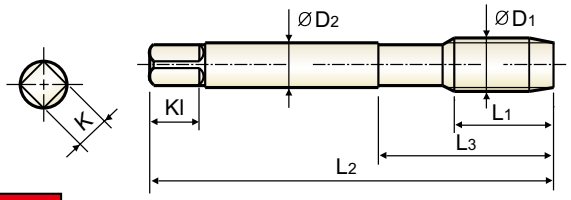
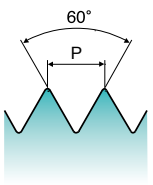
DIN 374

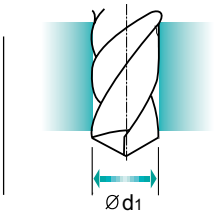
Short Chamfer

Hole type
2.0×D









Material groups **VG** | HSS-E | DIN 374 | 6H | 60° | E | R15° | TiN

p.225

Recommended ToolHolder: Plain Shank / SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
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 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	400Rm	1050Rm	550	630	400	550
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

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

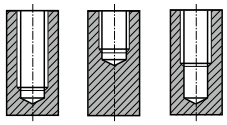
- Lösung des durch lange Späne verursachten Produktivitätsproblems
- Besonders geeignet für die Bearbeitung von unlegiertem Stahl, niedriglegiertem Stahl, hochlegiertem Stahl und Werkzeugstahl

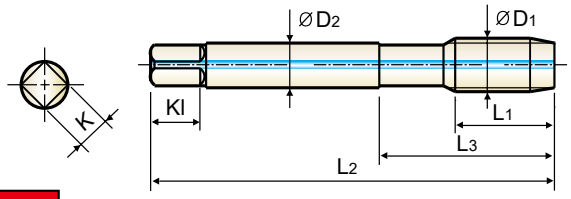
DIN 371

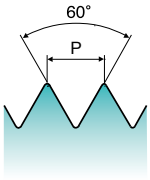
DIN 376

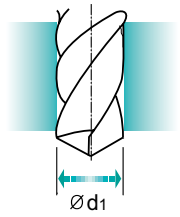
with Internal Coolant

Hole type
2.0×D









Material groups **VG** | HSS-E | DIN 371/376 | 6H | 60° | C | R15° | TiN

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Recommended ToolHolder | Plain Shank | SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
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 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	400Rm	1050Rm	550	630	400	550
Recommended																					

YG TAP CHIP BREAKER

TDE29 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

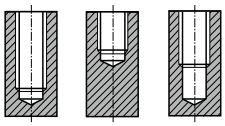
- Solving the productivity problem caused by long chips.
- Particularly suitable for machining non-alloy steel, low alloy steel, high alloy steel, and tool steel

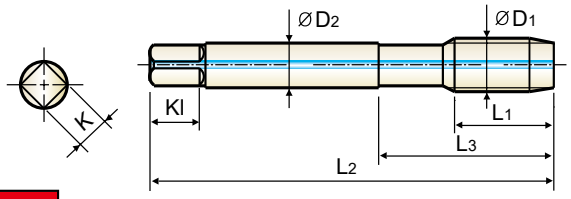
- Lösung des durch lange Späne verursachten Produktivitätsproblems
- Besonders geeignet für die Bearbeitung von unlegiertem Stahl, niedriglegiertem Stahl, hochlegiertem Stahl und Werkzeugstahl

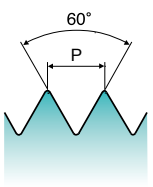
DIN 374

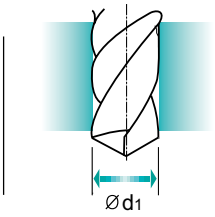
with Internal Coolant

Hole type
2.0×D









Material groups **VG** | HSS-E | DIN 374 | 6H | 60° | C | R15° | TiN

p.225

Recommended ToolHolder: Plain Shank / SYNCHRO 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	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M8	× 1.0	TDE29376R	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TDE29436R	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	TDE29446R	10	90	36	7	5.5	8	3	9.0
M12	× 1.5	TDE29516R	15	100	40	9	7.0	10	3	10.5
M12	× 1.25	TDE29526R	15	100	40	9	7.0	10	3	10.8
M14	× 1.5	TDE29556R	15	100	40	11	9.0	12	3	12.5
M16	× 1.5	TDE29616R	15	100	40	12	9.0	12	3	14.5
M18	× 1.5	TDE29676R	17	110	44	14	11.0	14	4	16.5
M20	× 1.5	TDE29726R	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 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	400Rm	1050Rm	550	630	400	550
Recommended																					

YG TAP CHIP BREAKER

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

					TDE24, TDE25, TDE26, TDE27, TDE28, TDE29
ISO	VDI 3323	Material Description	HB	HRc	Vc (m/min.)
P	1	Non-alloy steel	125		7-12
	2		190	13	7-12
	3		250	25	4-8
	6	Low alloy steel	180	10	7-12
	7		275	29	7-12
	8		300	32	4-8
	9		350	38	4-8
	10	High alloyed steel, and tool steel	200	15	6-9
	11		325	35	4-8

Global Cutting Tool Leader **YG-1**

THREADING