



Leading Through Innovation

HSS-PM

SYNCHRO TAP

Synchro Gewindebohrer

- For High Speed Tapping on Rigid CNC Machine
- Für Hochgeschwindigkeits-Gewindebohren auf starren CNC-Maschinen

SELECTION GUIDE



HSS-PM SYNCHRO TAP

For High Speed Tapping on Rigid CNC Machine

Please visit globalyg1.com/mat for material search. Recommended cutting conditions : p.B74

Table with columns: ISO, VDI 3323, Material Description, Composition / Structure / Heat Treatment, HB, HRc, and a grid of material compatibility icons.

Table with columns: HOLE TYPE, TOOL MATERIAL, CHAMFER LEAD ACC. TO DIN2197, FLUTE TYPE, SPIRAL FLUTE ANGLE, SERIES, and MODEL. Includes icons for Max. 2.5xD Blind Hole and Max. 3.0xD Through Hole.

Large table with columns for HSS-PM series (C, E, B, C, C, C) and rows for various hole types and materials. Includes icons for Max. 2.0xD Blind/Through Hole, Max. 3.0xD Blind/Through Hole, Max. 3.0xD Blind/Through Hole, Max. 2.5xD Blind Hole, Max. 3.0xD Through Hole, Max. 2.0xD Blind Hole, Max. 2.0xD Through Hole, and Max. 3.0xD Blind/Through Hole.

Y/G SYNCHRO TAP

TTS31 SERIES

M ISO Metric Coarse Threads DIN 13

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

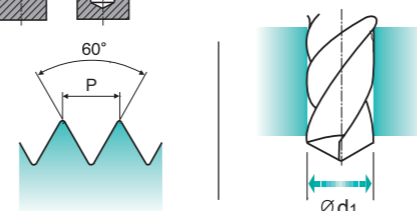
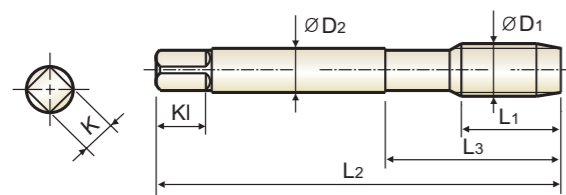
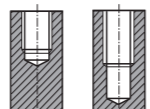
Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
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- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Hole type
2.5xD



Material groups: **GS** HSS PM DIN 371/376 6HX 60° C R45 TiN p.B74



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	K1	Z	Ød1
M3	× 0.5	TTS31206	6	56	18	3.5	2.7	6	3	2.5
M4	× 0.7	TTS31246	7	63	21	4.5	3.4	6	3	3.3
M5	× 0.8	TTS31286	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	TTS31316	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TTS31366	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TTS31426	15	100	39	10	8	11	3	8.5
M12	× 1.75	TTS31506	18	110	44	9	7	10	3	10.2
M14	× 2.0	TTS31546	20	110	44	11	9	12	3	12.0
M16	× 2.0	TTS31606	20	110	44	12	9	12	3	14.0
M18	× 2.5	TTS31656	25	125	50	14	11	14	4	15.5
M20	× 2.5	TTS31706	25	140	54	16	12	15	4	17.5

- DIN 371 (M3-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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		
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	38	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										
	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	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	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS32 SERIES

MF ISO Metric Fine Threads DIN 13

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

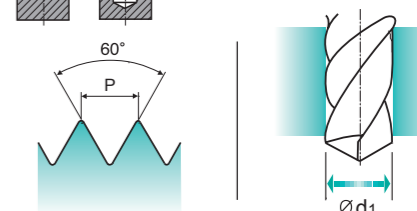
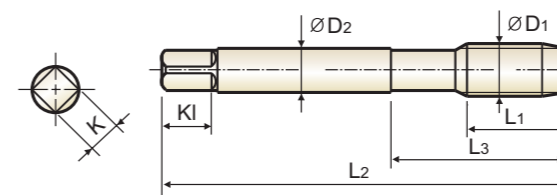
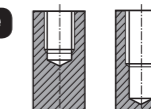
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Hole type
2.5xD



Material groups: **GS** HSS PM DIN 374 6HX 60° C R45 TiN p.B74



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	K1	Z	Ød1
M8	× 1.0	TTS32376	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TTS32436	13	100	40	7	5.5	8	3	8.75
M10	× 1.0	TTS32446	10	90	40	7	5.5	8	3	9.0
M12	× 1.25	TTS32526	13	100	40	9	7	10	3	10.75
M12	× 1.5	TTS32516	15	100	40	9	7	10	3	10.5
M14	× 1.5	TTS32556	15	100	40	11	9	12	3	12.5
M16	× 1.5	TTS32616	15	100	40	12	9	12	3	14.5
M18	× 1.5	TTS32676	17	110	44	14	11	14	4	16.5
M20	× 1.5	TTS32726	17	125	50	16	12	15	4	18.5

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© : 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		
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	38	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										
	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	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	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS33 SERIES

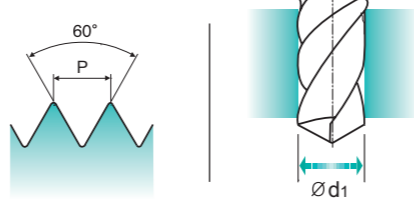
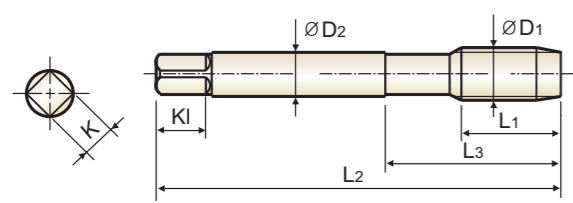
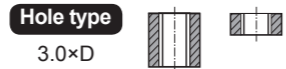
M ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

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- Hoch präzise Gewinde



Material groups: **GS** HSS PM DIN 371/376 6HX 60° B TiN p.B74

Recommended ToolHolder: SYNCHROTAPPING CHUCK Plain Shank

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	KI	Z	Ød1
M3	× 0.5	TTS33206	5	56	18	3.5	2.7	6	3	2.5
M4	× 0.7	TTS33246	7	63	21	4.5	3.4	6	3	3.3
M5	× 0.8	TTS33286	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	TTS33316	10	80	30	6	4.9	8	3	5
M8	× 1.25	TTS33366	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TTS33426	15	100	39	10	8	11	3	8.5
M12	× 1.75	TTS33506	18	110	44	9	7	10	4	10.2
M14	× 2.0	TTS33546	20	110	44	11	9	12	4	12
M16	× 2.0	TTS33606	20	110	44	12	9	12	4	14
M18	× 2.5	TTS33656	25	125	50	14	11	14	4	15.5
M20	× 2.5	TTS33706	25	140	54	16	12	15	4	17.5

- DIN 371 (M3-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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	
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	38	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					
	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	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	550	630	400	550	
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	

Y/G SYNCHRO TAP

TTS34 SERIES

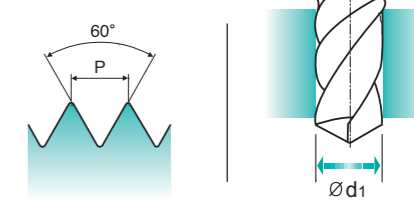
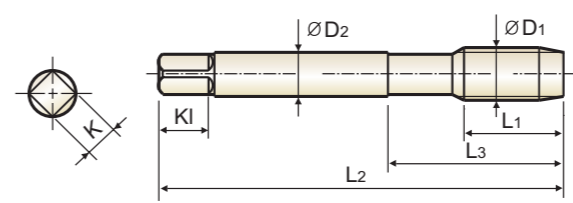
MF ISO Metric Fine Threads DIN 13

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- Hoch präzise Gewinde



Material groups: **GS** HSS PM DIN 374 6HX 60° B TiN p.B74

Recommended ToolHolder: SYNCHROTAPPING CHUCK Plain Shank

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	KI	Z	Ød1
M8	× 1.0	TTS34376	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TTS34436	13	100	40	7	5.5	8	3	8.75
M10	× 1.0	TTS34446	10	90	40	7	5.5	8	3	9.0
M12	× 1.5	TTS34516	15	100	40	9	7	10	4	10.5
M12	× 1.25	TTS34526	13	100	40	9	7	10	4	10.75
M14	× 1.5	TTS34556	15	100	40	11	9	12	4	12.5
M16	× 1.5	TTS34616	15	100	40	12	9	12	4	14.5
M18	× 1.5	TTS34676	17	110	44	14	11	14	4	16.5
M20	× 1.5	TTS34726	17	125	50	16	12	15	4	18.5

- Coating (TiAlN) is available on your request.

© : 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	
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	38	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					
	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			
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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	550	630	400	550	
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	

Y/G SYNCHRO TAP

TKS35 SERIES

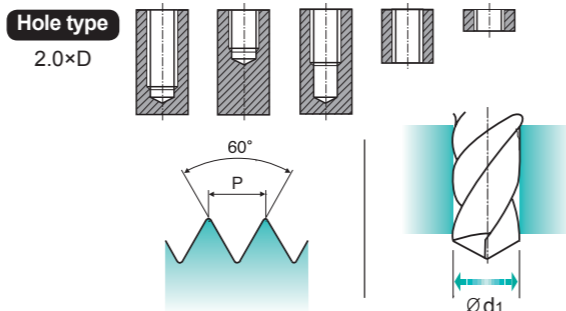
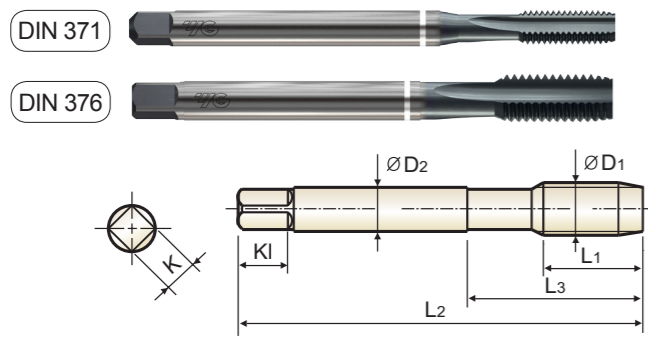
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Recommended ToolHolder: Plain Shank SYNCHRO TAPPING CHUCK

Unit : mm

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M3	× 0.5	TKS35206	5	56	18	3.5	2.7	6	3	2.5
M4	× 0.7	TKS35246	7	63	21	4.5	3.4	6	3	3.3
M5	× 0.8	TKS35286	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	TKS35316	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TKS35366	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TKS35426	15	100	39	10	8	11	4	8.5
M12	× 1.75	TKS35506	18	110	44	9	7	10	4	10.2
M14	× 2.0	TKS35546	20	110	44	11	9	12	4	12.0
M16	× 2.0	TKS35606	20	110	44	12	9	12	4	14.0
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HRc	13	25	28	32	38	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					
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

Y/G SYNCHRO TAP

TKS36 SERIES

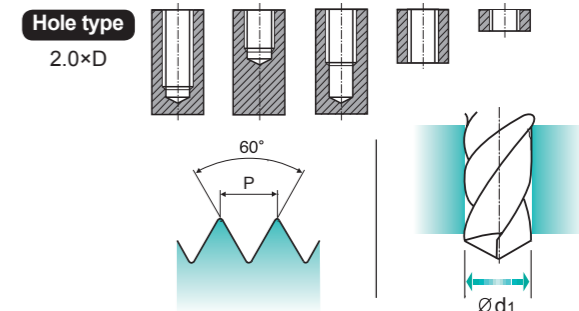
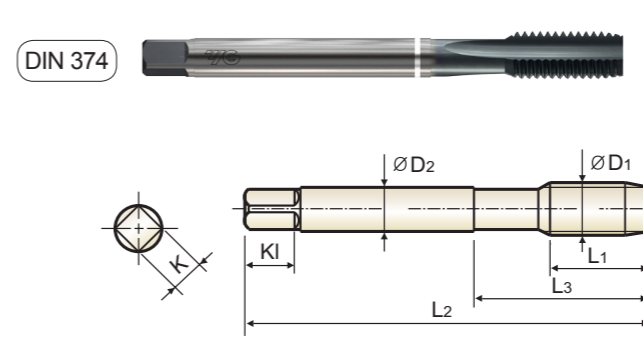
MF ISO Metric Fine Threads DIN 13

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

Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
- For high-speed synchro tapping, synchro holder for increasing tool life and thread quality is recommended
- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Material groups: **GG** HSS PM DIN 374 6HX 60° C TiCN p.B74

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	TiCN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M8	× 1.0	TKS36376	10	90	36	6	4.9	8	3	7.0
M10	× 1.25	TKS36436	13	100	40	7	5.5	8	4	8.75
M10	× 1.0	TKS36446	10	90	40	7	5.5	8	4	9.0
M12	× 1.25	TKS36526	13	100	40	9	7	10	4	10.75
M12	× 1.5	TKS36516	15	100	40	9	7	10	4	10.5
M14	× 1.5	TKS36556	15	100	40	11	9	12	4	12.5
M16	× 1.5	TKS36616	15	100	40	12	9	12	4	14.5
M18	× 1.5	TKS36676	17	110	44	14	11	14	4	16.5
M20	× 1.5	TKS36726	17	125	50	16	12	15	4	18.5

- Coating (TiAlN) is available on your request.

© : 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	
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	38	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					
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

Y/G SYNCHRO TAP

TTS37 SERIES

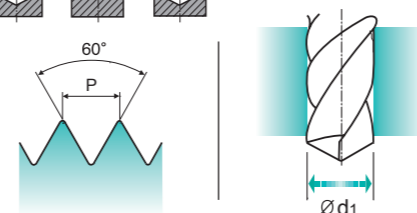
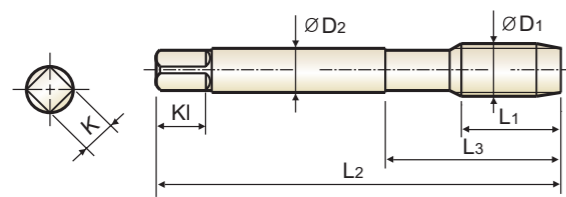
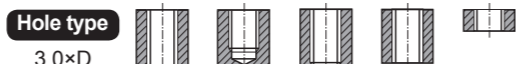
M ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
- For high-speed synchro tapping, synchro holder for increasing tool life and thread quality is recommended
- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Material groups: **GV** HSS PM DIN 371/376 6HX 60° C TiN p.B74



Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	Number of Oil Groove	Tapping Drill Diameter
ØD1	P	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
M3	× 0.5	TTS37206	5	56	18	3.5	2.7	6	5	2.8
M4	× 0.7	TTS37246	7	63	21	4.5	3.4	6	5	3.7
M5	× 0.8	TTS37286	8	70	25	6	4.9	8	5	4.65
M6	× 1.0	TTS37316	10	80	30	6	4.9	8	5	5.55
M8	× 1.25	TTS37366	13	90	35	8	6.2	9	6	7.4
M10	× 1.5	TTS37426	15	100	39	10	8	11	6	9.3
M12	× 1.75	TTS37506	18	110	44	9	7	10	6	11.2
M14	× 2.0	TTS37546	20	110	44	11	9	12	8	13.0
M16	× 2.0	TTS37606	20	110	44	12	9	12	8	15.0
M18	× 2.5	TTS37656	25	125	50	14	11	14	8	16.8
M20	× 2.5	TTS37706	25	140	54	16	12	15	8	18.8

- DIN 371 (M3-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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		
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	38	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										
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS38 SERIES

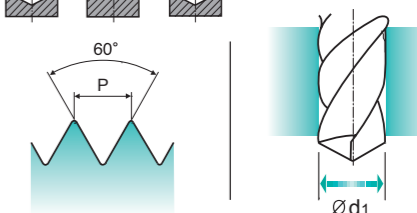
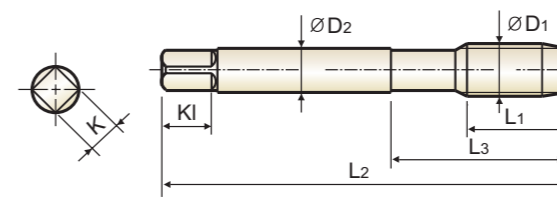
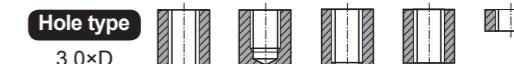
MF ISO Metric Fine Threads DIN 13

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

Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
- For high-speed synchro tapping, synchro holder for increasing tool life and thread quality is recommended
- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Material groups: **GV** HSS PM DIN 374 6HX 60° C TiN p.B74



Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	Number of Oil Groove	Tapping Drill Diameter
ØD1	P	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
M8	× 1.0	TTS38376	10	90	36	6	4.9	8	6	7.5
M10	× 1.25	TTS38436	13	100	40	7	5.5	8	6	9.4
M10	× 1.0	TTS38446	10	90	40	7	5.5	8	6	9.5
M12	× 1.25	TTS38526	13	100	40	9	7	10	6	11.4
M12	× 1.5	TTS38516	15	100	40	9	7	10	6	11.25
M14	× 1.5	TTS38556	15	100	40	11	9	12	8	13.25
M16	× 1.5	TTS38616	15	100	40	12	9	12	8	15.25
M18	× 1.5	TTS38676	17	110	44	14	11	14	8	17.25
M20	× 1.5	TTS38726	17	125	50	16	12	15	8	19.25

- Coating (TiAlN) is available on your request.

© : 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		
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	38	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										
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS39 SERIES

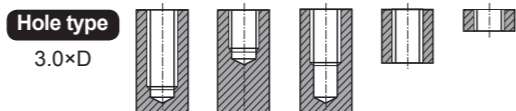
M ISO Metric Coarse Threads DIN 13

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

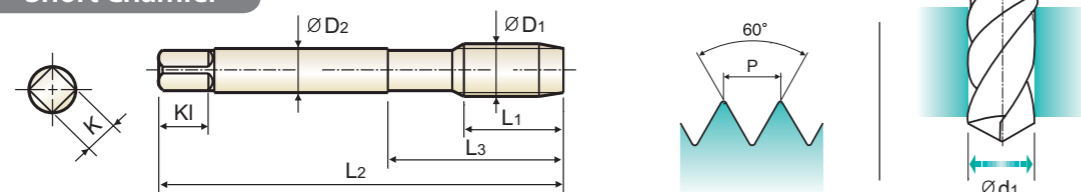
Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
- For high-speed synchro tapping, synchro holder for increasing tool life and thread quality is recommended
- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Short Chamfer



Material groups: **GV** HSS PM DIN 371/376 6HX 60° E TiN p.B74

Recommended ToolHolder: SYNCHRO TAPPING CHUCK Plain Shank

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	Number of Oil Groove	Tapping Drill Diameter
ØD1	P	TiN	L1	L2	L3	ØD2	K	Kl	Z	Ød1
M3	× 0.5	TTS39206	5	56	18	3.5	2.7	6	5	2.8
M4	× 0.7	TTS39246	7	63	21	4	3.4	6	5	3.7
M5	× 0.8	TTS39286	8	70	25	6	4.9	8	5	4.65
M6	× 1.0	TTS39316	10	80	30	6	4.9	8	5	5.55
M8	× 1.25	TTS39366	13	90	35	8	6.2	9	6	7.4
M10	× 1.5	TTS39426	15	100	39	10	8	11	6	9.3
M12	× 1.75	TTS39506	18	110	44	9	7	10	6	11.2
M14	× 2.0	TTS39546	20	110	44	11	9	12	8	13.0
M16	× 2.0	TTS39606	20	110	44	12	9	12	8	15.0
M18	× 2.5	TTS39656	25	125	50	14	11	14	8	16.8
M20	× 2.5	TTS39706	25	140	54	16	12	15	8	18.8

- DIN 371 (M3-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

◎ : 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		
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	38	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										
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS41-IC SERIES

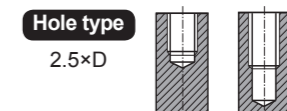
M ISO Metric Coarse Threads DIN 13

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

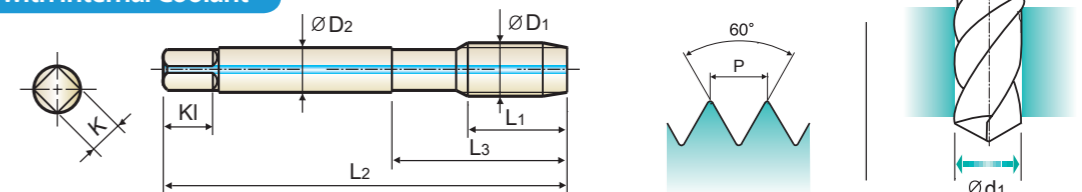
Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
- For high-speed synchro tapping, synchro holder for increasing tool life and thread quality is recommended
- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



with Internal Coolant



Material groups: **GS** HSS PM DIN 371/376 6HX 60° C R45° TiN p.B74

Recommended ToolHolder: SYNCHRO TAPPING CHUCK Plain Shank

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
M6	× 1.0	TTS41316IC	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TTS41366IC	13	90	35	8	6.2	9	3	6.8
M10	× 1.25	TTS41426IC	15	100	39	10	8	11	3	8.5
M12	× 1.75	TTS41506IC	18	110	44	9	7	10	3	10.2
M14	× 2.0	TTS41546IC	20	110	52	11	9	12	3	12.0
M16	× 2.0	TTS41606IC	20	110	52	12	9	12	3	14.0
M18	× 2.5	TTS41656IC	25	125	66	14	11	14	4	15.5
M20	× 2.5	TTS41706IC	25	140	72	16	12	15	4	17.5

- DIN 371 (M3-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

◎ : 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		
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	38	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										
	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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TTS42-RCP SERIES

M ISO Metric Coarse Threads DIN 13

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

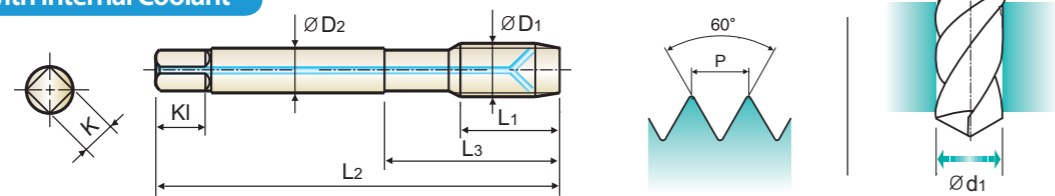
Machine taps
Maschinengewindebohrer

- Coated HSS-PM (Powder Metallurgy) Taps for high-speed tapping on rigid CNC machines or equivalent machines
- Up to 3 times faster in tapping compared to conventional taps
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- High precision threads

- Beschichtete HSS-PM-Gewindebohrer zum Hochgeschwindigkeitsgewindebohren auf starren CNC-Maschinen oder gleichwertige Maschinen
- Bis zu dreimal schnelleres Gewindeschneiden als bei herkömmlichen Gewindebohrern
- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrohalters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



with Internal Coolant



Material groups: **GS** HSS PM DIN 371/376 6HX 60° B TiN p.B74



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	KI	Z	Ød1
M6	× 1.0	TTS42316RCP	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TTS42366RCP	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TTS42426RCP	15	100	39	10	8	11	3	8.5
M12	× 1.75	TTS42506RCP	18	110	44	9	7	10	4	10.2
M14	× 2.0	TTS42546RCP	20	110	52	11	9	12	4	12.0
M16	× 2.0	TTS42606RCP	20	110	52	12	9	12	4	14.0
M18	× 2.5	TTS42656RCP	25	125	66	14	11	14	4	15.5
M20	× 2.5	TTS42706RCP	25	140	72	16	12	15	4	17.5

- DIN 371 (M6-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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		
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	38	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										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials		Heat Resistant Super 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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SYNCHRO TAP

TKS43-IC SERIES

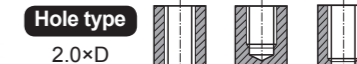
M ISO Metric Coarse Threads DIN 13

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

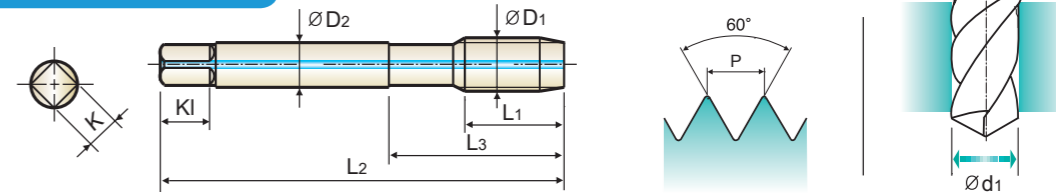
Machine taps
Maschinengewindebohrer

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- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrohalters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



with Internal Coolant



Material groups: **GG** HSS PM DIN 371/376 6HX 60° C TiCN p.B74



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	KI	Z	Ød1
M6	× 1.0	TKS43316IC	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TKS43366IC	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TKS43426IC	15	100	39	10	8	11	4	8.5
M12	× 1.75	TKS43506IC	18	110	44	9	7	10	4	10.2
M14	× 2.0	TKS43546IC	20	110	52	11	9	12	4	12.0
M16	× 2.0	TKS43606IC	20	110	52	12	9	12	4	14.0
M18	× 2.5	TKS43656IC	25	125	66	14	11	14	4	15.5
M20	× 2.5	TKS43706IC	25	140	72	16	12	15	4	17.5

- DIN 371 (M6-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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		
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	38	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										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials		Heat Resistant Super 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	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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

YAG SYNCHRO TAP

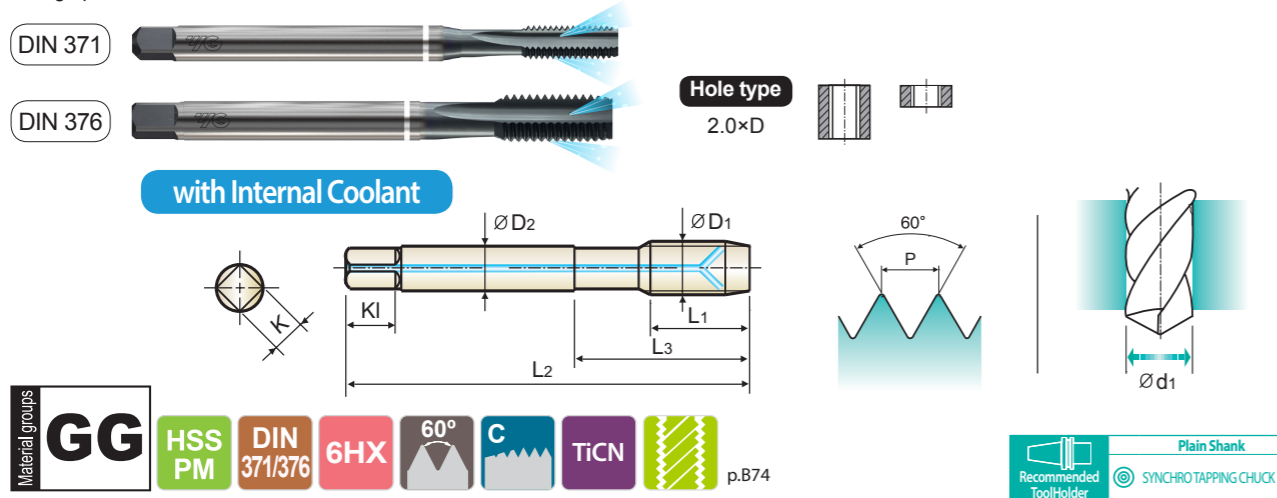
TKS44-RCP SERIES

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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- High precision threads



Material groups: **GG** HSS PM DIN 371/376 6HX 60° C TiCN p.B74

Plain Shank
Recommended ToolHolder 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	TiCN	L1	L2	L3	ØD2	K	KI	Z	Ød1
M6	× 1.0	TKS44316RCP	10	80	30	6	4.9	8	3	5.0
M8	× 1.25	TKS44366RCP	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	TKS44426RCP	15	100	39	10	8	11	4	8.5
M12	× 1.75	TKS44506RCP	18	110	44	9	7	10	4	10.2
M14	× 2.0	TKS44546RCP	20	110	52	11	9	12	4	12.0
M16	× 2.0	TKS44606RCP	20	110	52	12	9	12	4	14.0
M18	× 2.5	TKS44656RCP	25	125	66	14	11	14	4	15.5
M20	× 2.5	TKS44706RCP	25	140	72	16	12	15	4	17.5

- DIN 371 (M6-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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	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	38	10	29	32	38	45	15	23	10	18	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	240	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	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○	○	○																

YAG SYNCHRO TAP

TTS45-RCP SERIES

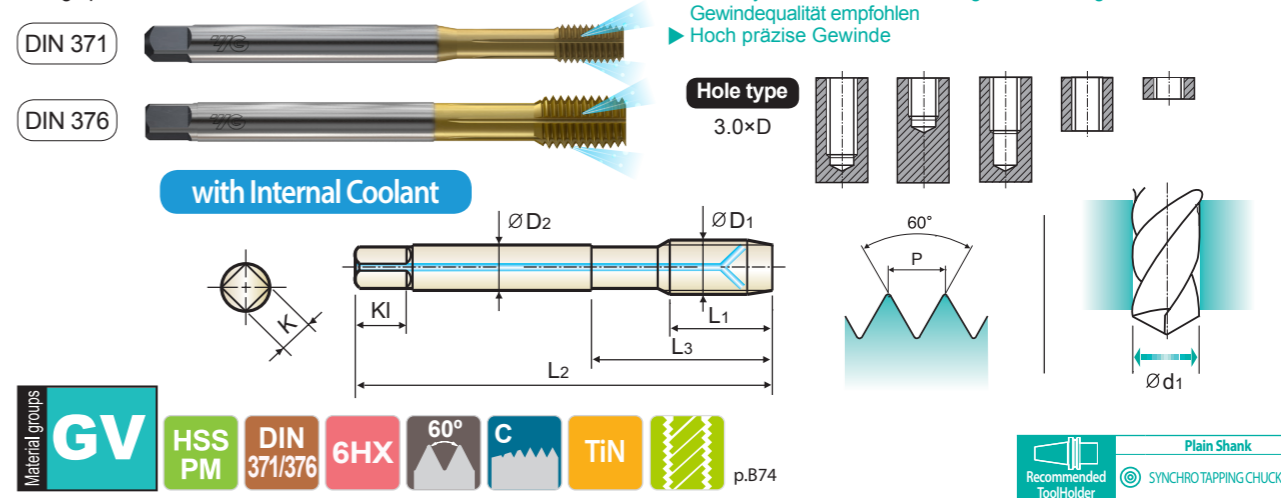
M ISO Metric Coarse Threads DIN 13

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

Machine taps
Maschinengewindebohrer

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- Beim Hochgeschwindigkeits-Gewindebohren wird die Verwendung eines Synchrofutters zur Erhöhung der Werkzeugstandzeit und der Gewindequalität empfohlen
- Hoch präzise Gewinde



Material groups: **GV** HSS PM DIN 371/376 6HX 60° C TiN p.B74

Plain Shank
Recommended ToolHolder SYNCHRO TAPPING CHUCK

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	Number of Oil Groove	Tapping Drill Diameter
ØD1	P	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
M5	× 0.8	TTS45286RCP	8	70	25	6	4.9	8	5	4.65
M6	× 1.0	TTS45316RCP	10	80	30	6	4.9	8	5	5.55
M8	× 1.25	TTS45366RCP	13	90	35	8	6.2	9	6	7.4
M10	× 1.5	TTS45426RCP	15	100	39	10	8	11	6	9.3
M12	× 1.75	TTS45506RCP	18	110	44	9	7	10	6	11.2
M14	× 2.0	TTS45546RCP	20	110	52	11	9	12	8	13.0
M16	× 2.0	TTS45606RCP	20	110	52	12	9	12	8	15.0
M18	× 2.5	TTS45656RCP	25	125	66	14	11	14	8	16.8
M20	× 2.5	TTS45706RCP	25	140	72	16	12	15	8	18.8

- DIN 371 (M5-M10) and DIN 376 (M12-M20)
- Coating (TiAlN) is available on your request.

© : 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	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	38	10	29	32	38	45	15	23	10	18	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	240	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	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
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			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	○																



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

TECHNICAL
DATA

					TTS31,TTS32	TTS33,TTS34	TKS35,TKS36	TTS37,TTS38	TTS39	
ISO	VDI 3323	Material Description	HB	HRC	Vc (m/min.)					
P	1	Non-alloy steel	125		41-46	41-46	41-46	41-46	30-35	
	2		190	13	41-46	41-46	41-46	41-46	41-46	
	3		250	25	35-40	35-40	35-40	35-40	35-40	
	4		270	28	28-33	28-33	28-33	28-33	28-33	
	5		300	32						
	6	Low alloy steel	180	10	28-33	28-33	28-33	28-33	28-33	
	7		275	29	28-33	28-33	28-33	28-33	28-33	
M	12	Stainless steel	200	15	18-23	18-23		18-23	18-23	
	13		240	23	13-18	13-18		13-18	13-18	
	14		180	10	10-14	10-14		10-14	10-14	
K	15	Grey cast iron	180	10	28-33	28-33	28-33			
	16		260	26			28-33			
	17	Nodular cast iron	160	3	28-33	28-33	28-33			
	18		250	25			28-33			
	19	Malleable cast iron	130				28-33			
	20		230	21			28-33			
N	21	Aluminum-wrought alloy	60					28-33	28-33	
	22		100				28-33	28-33		
	23	Aluminum-cast, alloyed	75		41-46	41-46	30-35	41-46	41-46	
	24		90		41-46	41-46	30-35	41-46	41-46	
	25		130		30-35	30-35	30-35	30-35	30-35	
	26		Copper and Copper Alloys (Bronze / Brass)	110		45-50	45-50			
	27			90						
	28			100		25-30	25-30		25-30	25-30

					TTS41-IC	TTS42-RCP	TKS43-IC	TKS44-RCP	TTS45-RCP	
ISO	VDI 3323	Material Description	HB	HRC	Vc (m/min.)					
P	1	Non-alloy steel	125		41-57	41-57	41-57	41-57	41-57	
	2		190	13	41-57	41-57	41-57	41-57	41-57	
	3		250	25	35-50	35-50	35-50	35-50	35-50	
	4		270	28	28-41	28-41	28-41	28-41	28-41	
	5		300	32						
	6	Low alloy steel	180	10	28-41	28-41	28-41	28-41	28-41	
	7		275	29	28-41	28-41	28-41	28-41	28-41	
M	12	Stainless steel	200	15	18-28	18-28			18-28	
	13		240	23	13-22	13-22			13-22	
	14		180	10	10-17	10-17			10-17	
K	15	Grey cast iron	180	10	28-41	28-41	28-41	28-41		
	16		260	26			28-41	28-41		
	17	Nodular cast iron	160	3	28-41	28-41	28-41	28-41		
	18		250	25			28-41	28-41		
	19	Malleable cast iron	130				28-41	28-41		
	20		230	21			28-41	28-41		
N	21	Aluminum-wrought alloy	60						28-41	
	22		100					28-41		
	23	Aluminum-cast, alloyed	75		41-57	41-57	30-43	30-43	41-57	
	24		90		41-57	41-57	30-43	30-43	41-57	
	25		130		30-43	30-43	30-43	30-43	30-43	
	26		Copper and Copper Alloys (Bronze / Brass)	110		45-62	45-62			
	27			90						
	28			100		25-37	25-37		25-37	