

HSSCo8, HPD TWIST DRILLS for STEELS

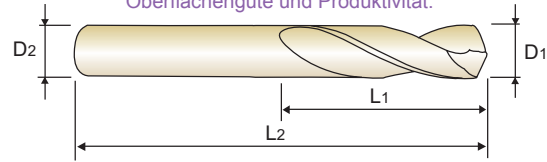
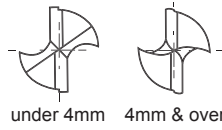
STUB

- PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
- Forets HPD HSSCo Premium pour Aciers, série extra-courte
- PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

**EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA**

- **Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- **Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- **Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



HSS Co8
25°
h7
h8
130°
P.198-199

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4541020	2.00	12	44
D4541920	2.05	12	44
D4541021	2.10	12	44
D4541921	2.15	13	45
D4541022	2.20	13	45
D4541922	2.25	13	45
D4541023	2.30	13	45
D4541923	2.35	13	45
D4541024	2.40	14	46
D4541924	2.45	14	46
D4541025	2.50	14	46
D4541925	2.55	14	46
D4541026	2.60	14	46
D4541926	2.65	14	46
D4541027	2.70	16	48
D4541927	2.75	16	48
D4541028	2.80	16	48
D4541928	2.85	16	48
D4541029	2.90	16	48
D4541929	2.95	16	48
D4541030	3.00	16	48
D4541930	3.05	18	50

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4541031	3.10	18	50
D4541931	3.15	18	50
D4541032	3.20	18	50
D4541932	3.25	18	50
D4541033	3.30	18	50
D4541933	3.35	18	50
D4541034	3.40	20	52
D4541934	3.45	20	52
D4541035	3.50	20	52
D4541935	3.55	20	52
D4541036	3.60	20	52
D4541936	3.65	20	52
D4541037	3.70	20	52
D4541937	3.75	20	52
D4541038	3.80	22	54
D4541938	3.85	22	54
D4541039	3.90	22	54
D4541939	3.95	22	54
D4541040	4.00	22	54
D4541940	4.05	22	66
D4541041	4.10	22	66
D4541941	4.15	22	66

► TiCN(D7541), TiAlN(DQ541) are available on your request.

► NEXT PAGE




◎ : 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	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				
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																						

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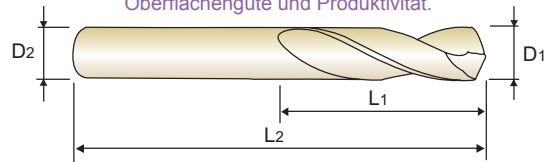
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under 4mm 4mm & over










D1=D2

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
TiN			
D4541042	4.20	22	66
D4541942	4.25	22	66
D4541043	4.30	24	68
D4541943	4.35	24	68
D4541044	4.40	24	68
D4541944	4.45	24	68
D4541045	4.50	24	68
D4541945	4.55	24	68
D4541046	4.60	24	68
D4541946	4.65	24	68
D4541047	4.70	24	68
D4541947	4.75	24	68
D4541048	4.80	26	70
D4541948	4.85	26	70
D4541049	4.90	26	70
D4541949	4.95	26	70
D4541050	5.00	26	70
D4541950	5.05	26	70
D4541051	5.10	26	70
D4541951	5.15	26	70
D4541052	5.20	26	70
D4541952	5.25	26	70

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
TiN			
D4541053	5.30	26	70
D4541953	5.35	28	72
D4541054	5.40	28	72
D4541954	5.45	28	72
D4541055	5.50	28	72
D4541955	5.55	28	72
D4541056	5.60	28	72
D4541956	5.65	28	72
D4541057	5.70	28	72
D4541957	5.75	28	72
D4541058	5.80	28	72
D4541958	5.85	28	72
D4541059	5.90	28	72
D4541959	5.95	28	72
D4541060	6.00	28	72
D4541061	6.10	31	75
D4541062	6.20	31	75
D4541063	6.30	31	75
D4541064	6.40	31	75
D4541065	6.50	31	75
D4541965	6.55	31	75
D4541066	6.60	31	75

Unit : mm

► TiCN(D7541), TiAlN(DQ541) are available on your request.

► NEXT PAGE

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	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				
	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											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																					

◎ : Excellent ○ : Good



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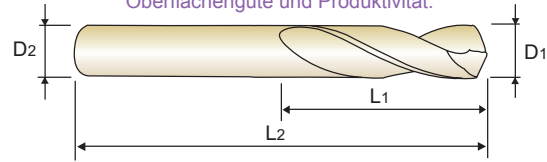
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under 4mm 4mm & over



HSS Co8
25°
h7
h8
130°
P.198-199

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4541966	6.65	31	75
D4541067	6.70	31	75
D4541068	6.80	34	78
D4541069	6.90	34	78
D4541070	7.00	34	78
D4541071	7.10	34	78
D4541072	7.20	34	78
D4541073	7.30	34	78
D4541973	7.35	34	78
D4541074	7.40	34	78
D4541075	7.50	34	78
D4541975	7.55	37	81
D4541076	7.60	37	81
D4541976	7.65	37	81
D4541077	7.70	37	81
D4541078	7.80	37	81
D4541079	7.90	37	81
D4541080	8.00	37	81
D4541081	8.10	37	87
D4541082	8.20	37	87
D4541083	8.30	37	87
D4541983	8.35	37	87

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4541084	8.40	37	87
D4541085	8.50	37	87
D4541985	8.55	40	90
D4541086	8.60	40	90
D4541986	8.65	40	90
D4541087	8.70	40	90
D4541088	8.80	40	90
D4541089	8.90	40	90
D4541090	9.00	40	90
D4541091	9.10	40	90
D4541092	9.20	40	90
D4541992	9.25	40	90
D4541093	9.30	40	90
D4541993	9.35	40	90
D4541094	9.40	40	90
D4541994	9.45	40	90
D4541095	9.50	40	90
D4541995	9.55	43	93
D4541096	9.60	43	93
D4541996	9.65	43	93
D4541097	9.70	43	93
D4541098	9.80	43	93

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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	
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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				
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																						

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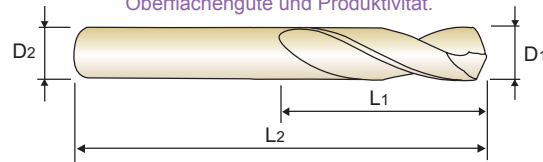
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under 4mm 4mm & over



D₁=D₂

HSS Co8

25°

h7

h8

130°

P.198-199

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D4541099	9.90	43	93
D4541999	9.95	43	93
D4541100	10.00	43	93
D4541101	10.10	43	100
D4541102	10.20	43	100
D4541802	10.25	43	100
D4541103	10.30	43	100
D4541803	10.35	43	100
D4541104	10.40	43	100
D4541105	10.50	43	100
D4541805	10.55	43	100
D4541106	10.60	43	100
D4541806	10.65	47	104
D4541107	10.70	47	104
D4541108	10.80	47	104
D4541109	10.90	47	104
D4541809	10.95	47	104
D4541110	11.00	47	104
D4541111	11.10	47	104
D4541112	11.20	47	104
D4541812	11.25	47	104

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D4541113	11.30	47	104
D4541813	11.35	47	104
D4541114	11.40	47	104
D4541115	11.50	47	104
D4541815	11.55	47	104
D4541116	11.60	47	104
D4541117	11.70	47	104
D4541118	11.80	47	104
D4541119	11.90	51	108
D4541120	12.00	51	108
D4541121	12.10	51	108
D4541122	12.20	51	108
D4541123	12.30	51	108
D4541124	12.40	51	108
D4541125	12.50	51	108
D4541126	12.60	51	108
D4541127	12.70	51	108
D4541128	12.80	51	108
D4541129	12.90	51	108
D4541130	13.00	51	108

Unit : mm

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	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
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											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																					

◎ : Excellent ○ : Good



D4541, D4542 SERIES

HPD DRILLS for STEELS

RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)							
					2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0
P	1	Non-alloy steel	35	RPM	5570	3710	2790	2230	1860	1390	1110	930
				FEED	0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32
	2		25	RPM	3980	2650	1990	1590	1330	990	800	660
				FEED	0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32
	3		25	RPM	3980	2650	1990	1590	1330	990	800	660
		FEED		0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32	
	4											
	5											
	6	Low alloy steel	30	RPM	4770	3180	2390	1910	1590	1190	950	800
				FEED	0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32
	7		25	RPM	3980	2650	1990	1590	1330	990	800	660
	FEED			0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32	
8												
9												
10	High alloyed steel, and tool steel	15	RPM	2390	1590	1190	950	800	600	480	400	
			FEED	0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	0.18-0.24	0.20-0.30	0.22-0.32	
11												
M	12	Stainless steel										
	13											
	14											
K	15	Grey cast iron	40	RPM	6370	4240	3180	2550	2120	1590	1270	1060
				FEED	0.06-0.12	0.09-0.15	0.12-0.18	0.15-0.21	0.16-0.22	0.22-0.28	0.26-0.36	0.28-0.38
	16											
	17	Nodular cast iron										
	18											
19	Malleable cast iron											
20												
N	21	Aluminum-wrought alloy										
	22											
	23	Aluminum-cast, alloyed										
	24											
	25											
	26											
	27	Copper and Copper Alloys (Bronze / Brass)										
	28											
	29	Non Metallic Materials										
	30											
S	31	Heat Resistant Super Alloys										
	32											
	33											
	34											
	35	Titanium Alloys										
	36											
	37											
H	38	Hardened steel		Please decrease the feed rate (15~20%) in D4542 SERIES HPD drills. Den Vorschub in der D4542 Gruppe HPD Bohrer bitte verringern.								
	39											
	40	Chilled Cast Iron										
	41	Hardened Cast Iron										

SELECTION GUIDE



SERIES

D4541

D4542

TOOL MATERIAL

HSSCo8

LENGTH

STUB

JOBBER

SIZE MIN

D2.0

D2.0

SIZE MAX

D13.0

D32.0

PAGE

182

186

SURFACE TREATMENT

TiN

HSSCo8 & HSS-E HPD STRAIGHT SHANK DRILLS

High Precision Drilling for General Steels & Stainless Steels



Please visit
globalyg1.com/mat
for material search

© : Excellent ○ : Good

Recommended cutting conditions : P.198



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	Low alloy steel	About 0.75% C Quenched & Tempered	300	32			
	6		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)	CuZn, CuSnZn (Brass)	90			
	27	Non Metallic Materials	CuSn, lead-free copper and electrolytic copper	100				
	28		Duroplastic, Fiber Reinforced Plastic					
	29		Rubber, Wood, etc.					
	30							
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15			
	32		Cured	280	30			
	33		Annealed	250	25			
	34		Cured	350	38			
	35	Ni or Co Based 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			