



Leading Through Innovation



HSS Co8 & HSS-E

HPD STRAIGHT SHANK DRILLS

HPD BOHRER

- High Precision Drilling for General Steels & Stainless Steels
- Hochpräzises Bohren für allgemeine Stähle und rostfreie Stähle

SELECTION GUIDE



SERIES	D4541	D4542	DJ543	DJ544
LENGTH	STUB	JOBBER	STUB	JOBBER
SIZE MIN	D2.0	D2.0	D2.0	D2.0
SIZE MAX	D13.0	D32.0	D13.0	D20.0
PAGE	A173	A177	A183	A186

SURFACE TREATMENT

TiN

HSS Co8 & 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.A189



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)	CuZn, CuSnZn (Brass)	90					○
	27	Non Metallic Materials	Cutting Alloys, PB>1%	110						○
	28		CuSn, lead-free copper and electrolytic copper	100						
	29		Duroplastic, Fiber Reinforced Plastic							
	30	Rubber, Wood, etc.								
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15					
	32		Fe Based Cured	280	30					
	33		Fe Based Annealed	250	25					
	34		Ni or Co Based Cured	350	38					
	35	Ni or Co Based Cast	320	34						
	36	Titanium Alloys	Pure Titanium	400 Rm						
H	37	Hardened Cast Iron	Alpha + Beta Alloys Hardened	1050 Rm						
	38		Hardened	550	55					
	39		Hardened	630	60					
	40		Cast	400	42					
	41		Hardened	550	55					



D4541 SERIES

HSS Co8, HPD TWIST DRILLS for STEELS

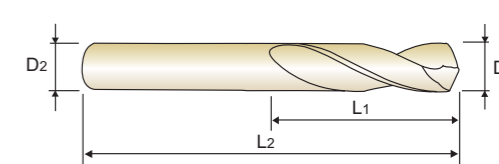
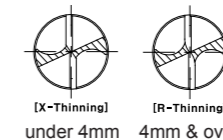
- PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
- Forets HPD HSSCo Premium pour Aciers, série extra-courte
- PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

STUB

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.



D1=D2



Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2	TiN	D1	L1	L2
D4541020	2.00	12	44	D4541031	3.10	18	50
D4541920	2.05	12	44	D4541931	3.15	18	50
D4541021	2.10	12	44	D4541032	3.20	18	50
D4541921	2.15	13	45	D4541932	3.25	18	50
D4541022	2.20	13	45	D4541033	3.30	18	50
D4541922	2.25	13	45	D4541933	3.35	18	50
D4541023	2.30	13	45	D4541034	3.40	20	52
D4541923	2.35	13	45	D4541934	3.45	20	52
D4541024	2.40	14	46	D4541035	3.50	20	52
D4541924	2.45	14	46	D4541935	3.55	20	52
D4541025	2.50	14	46	D4541036	3.60	20	52
D4541925	2.55	14	46	D4541936	3.65	20	52
D4541026	2.60	14	46	D4541037	3.70	20	52
D4541926	2.65	14	46	D4541937	3.75	20	52
D4541027	2.70	16	48	D4541038	3.80	22	54
D4541927	2.75	16	48	D4541938	3.85	22	54
D4541028	2.80	16	48	D4541039	3.90	22	54
D4541928	2.85	16	48	D4541939	3.95	22	54
D4541029	2.90	16	48	D4541040	4.00	22	54
D4541929	2.95	16	48	D4541940	4.05	22	66
D4541030	3.00	16	48	D4541041	4.10	22	66
D4541930	3.05	18	50	D4541941	4.15	22	66

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

NEXT PAGE

◎ : 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																				
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	3	25	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																					
HB	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	550	630	400	550
Recommended																					

HSS Co8, HPD TWIST DRILLS for STEELS

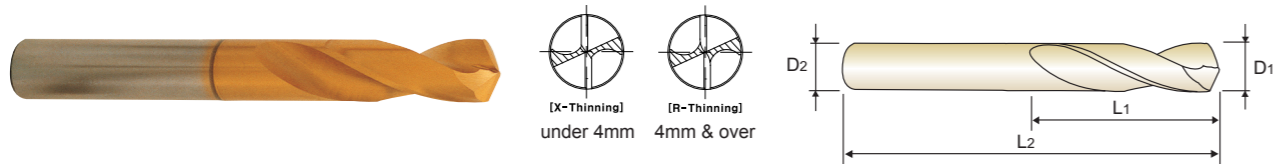
STUB

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D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2	TiN	D1	L1	L2
D4541042	4.20	22	66	D4541053	5.30	26	70
D4541942	4.25	22	66	D4541953	5.35	28	72
D4541043	4.30	24	68	D4541054	5.40	28	72
D4541943	4.35	24	68	D4541954	5.45	28	72
D4541044	4.40	24	68	D4541055	5.50	28	72
D4541944	4.45	24	68	D4541955	5.55	28	72
D4541045	4.50	24	68	D4541056	5.60	28	72
D4541945	4.55	24	68	D4541956	5.65	28	72
D4541046	4.60	24	68	D4541057	5.70	28	72
D4541946	4.65	24	68	D4541957	5.75	28	72
D4541047	4.70	24	68	D4541058	5.80	28	72
D4541947	4.75	24	68	D4541958	5.85	28	72
D4541048	4.80	26	70	D4541059	5.90	28	72
D4541948	4.85	26	70	D4541959	5.95	28	72
D4541049	4.90	26	70	D4541060	6.00	28	72
D4541949	4.95	26	70	D4541061	6.10	31	75
D4541050	5.00	26	70	D4541062	6.20	31	75
D4541950	5.05	26	70	D4541063	6.30	31	75
D4541051	5.10	26	70	D4541064	6.40	31	75
D4541951	5.15	26	70	D4541065	6.50	31	75
D4541052	5.20	26	70	D4541965	6.55	31	75
D4541952	5.25	26	70	D4541066	6.60	31	75

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

► NEXT PAGE

◎ : 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	30	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		
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
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HRc	15	30	25	38	34	15	30	25	38	34	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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

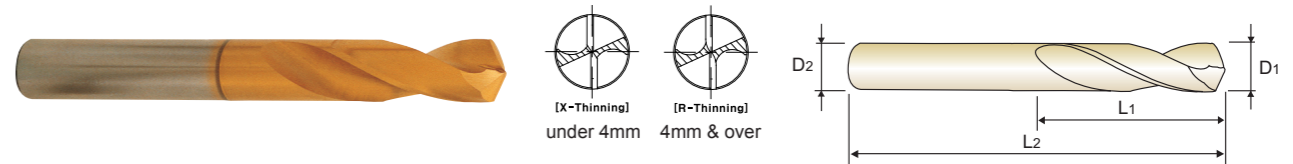
STUB

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D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2	TiN	D1	L1	L2
D4541966	6.65	31	75	D4541084	8.40	37	87
D4541067	6.70	31	75	D4541085	8.50	37	87
D4541068	6.80	34	78	D4541985	8.55	40	90
D4541069	6.90	34	78	D4541086	8.60	40	90
D4541070	7.00	34	78	D4541986	8.65	40	90
D4541071	7.10	34	78	D4541087	8.70	40	90
D4541072	7.20	34	78	D4541088	8.80	40	90
D4541073	7.30	34	78	D4541089	8.90	40	90
D4541973	7.35	34	78	D4541090	9.00	40	90
D4541074	7.40	34	78	D4541091	9.10	40	90
D4541075	7.50	34	78	D4541092	9.20	40	90
D4541975	7.55	37	81	D4541992	9.25	40	90
D4541076	7.60	37	81	D4541093	9.30	40	90
D4541976	7.65	37	81	D4541993	9.35	40	90
D4541077	7.70	37	81	D4541094	9.40	40	90
D4541078	7.80	37	81	D4541994	9.45	40	90
D4541079	7.90	37	81	D4541095	9.50	40	90
D4541080	8.00	37	81	D4541995	9.55	43	93
D4541081	8.10	37	87	D4541096	9.60	43	93
D4541082	8.20	37	87	D4541996	9.65	43	93
D4541083	8.30	37	87	D4541097	9.70	43	93
D4541983	8.35	37	87	D4541098	9.80	43	93

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► NEXT PAGE

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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
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HRc	13	25	28	32	30	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		
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
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HRc	15	30	25	38	34	15	30	25	38	34	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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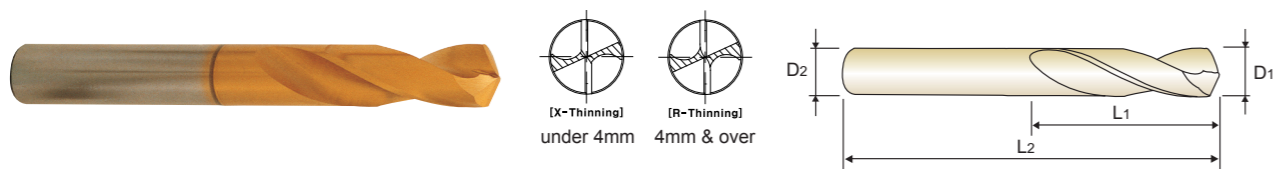
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D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
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
D4541113	11.30	47	104

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
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

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◎ : 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	
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
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

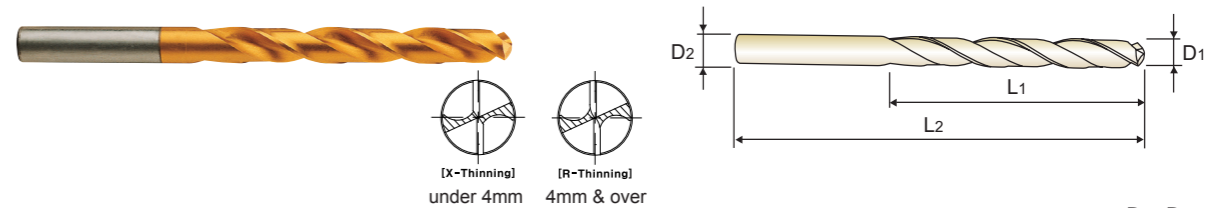
JOBBER

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

KURZ
COURTE
CORTA

Application : Designed for high speed non-step 4D~5D drilling. Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
Advantage : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity.

Anwendung : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
Vorteile : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



D1=D2

up to 13mm over 13mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4542020	2.00	24	56
D4542920	2.05	24	56
D4542021	2.10	24	56
D4542921	2.15	27	59
D4542022	2.20	27	59
D4542922	2.25	27	59
D4542023	2.30	27	59
D4542923	2.35	27	59
D4542024	2.40	30	62
D4542924	2.45	30	62
D4542025	2.50	30	62
D4542925	2.55	30	62
D4542026	2.60	30	62
D4542926	2.65	30	62
D4542027	2.70	33	65
D4542927	2.75	33	65
D4542028	2.80	33	65
D4542928	2.85	33	65
D4542029	2.90	33	65
D4542929	2.95	33	65
D4542030	3.00	33	65
D4542930	3.05	36	68

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4542031	3.10	36	68
D4542931	3.15	36	68
D4542032	3.20	36	68
D4542932	3.25	36	68
D4542033	3.30	36	68
D4542933	3.35	36	68
D4542034	3.40	39	71
D4542934	3.45	39	71
D4542035	3.50	39	71
D4542935	3.55	39	71
D4542036	3.60	39	71
D4542936	3.65	39	71
D4542037	3.70	39	71
D4542937	3.75	39	71
D4542038	3.80	43	75
D4542938	3.85	43	75
D4542039	3.90	43	75
D4542939	3.95	43	75
D4542040	4.00	43	75
D4542940	4.05	43	87
D4542041	4.10	43	87
D4542941	4.15	43	87

TiCN(D7542), TiAlN(DQ542) are available on your request.

NEXT PAGE

◎ : 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	
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
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

JOBBER

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

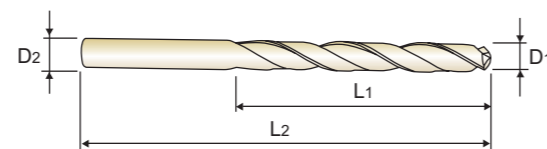
KURZ
COURTE
CORTA

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HSS Co8 30° h7 h6 h8 130° TiN p.A189

up to 13mm over 13mm



D1=D2

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542042	4.20	43	87
D4542942	4.25	43	87
D4542043	4.30	47	91
D4542943	4.35	47	91
D4542044	4.40	47	91
D4542944	4.45	47	91
D4542045	4.50	47	91
D4542945	4.55	47	91
D4542046	4.60	47	91
D4542946	4.65	47	91
D4542047	4.70	47	91
D4542947	4.75	47	91
D4542048	4.80	52	96
D4542948	4.85	52	96
D4542049	4.90	52	96
D4542949	4.95	52	96
D4542050	5.00	52	96
D4542950	5.05	52	96
D4542051	5.10	52	96
D4542951	5.15	52	96
D4542052	5.20	52	96
D4542952	5.25	52	96

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542053	5.30	52	96
D4542953	5.35	57	101
D4542054	5.40	57	101
D4542954	5.45	57	101
D4542055	5.50	57	101
D4542955	5.55	57	101
D4542056	5.60	57	101
D4542956	5.65	57	101
D4542057	5.70	57	101
D4542957	5.75	57	101
D4542058	5.80	57	101
D4542958	5.85	57	101
D4542059	5.90	57	101
D4542959	5.95	57	101
D4542060	6.00	57	101
D4542960	6.05	63	107
D4542061	6.10	63	107
D4542961	6.15	63	107
D4542062	6.20	63	107
D4542962	6.25	63	107
D4542063	6.30	63	107
D4542963	6.35	63	107

TiCN(D7542), TiAlN(DQ542) are available on your request.

▶ NEXT PAGE

◎ : 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	15	30	25	38	34	15	30	25	38	34	400Rm	1050Rm	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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

JOBBER

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- Forets HPD HSSCo Premium pour Aciers, série courte
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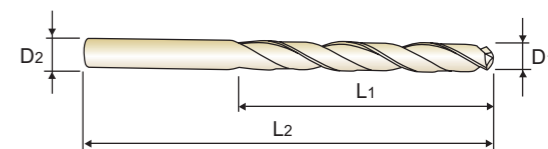
KURZ
COURTE
CORTA

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HSS Co8 30° h7 h6 h8 130° TiN p.A189

up to 13mm over 13mm



D1=D2

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542064	6.40	63	107
D4542964	6.45	63	107
D4542065	6.50	63	107
D4542965	6.55	63	107
D4542066	6.60	63	107
D4542966	6.65	63	107
D4542067	6.70	63	107
D4542967	6.75	69	113
D4542068	6.80	69	113
D4542968	6.85	69	113
D4542069	6.90	69	113
D4542969	6.95	69	113
D4542070	7.00	69	113
D4542970	7.05	69	113
D4542071	7.10	69	113
D4542971	7.15	69	113
D4542072	7.20	69	113
D4542972	7.25	69	113
D4542073	7.30	69	113
D4542973	7.35	69	113
D4542074	7.40	69	113
D4542974	7.45	69	113

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542075	7.50	69	113
D4542975	7.55	75	119
D4542076	7.60	75	119
D4542976	7.65	75	119
D4542077	7.70	75	119
D4542977	7.75	75	119
D4542078	7.80	75	119
D4542978	7.85	75	119
D4542079	7.90	75	119
D4542979	7.95	75	119
D4542080	8.00	75	119
D4542980	8.05	75	125
D4542081	8.10	75	125
D4542981	8.15	75	125
D4542082	8.20	75	125
D4542982	8.25	75	125
D4542083	8.30	75	125
D4542983	8.35	75	125
D4542084	8.40	75	125
D4542984	8.45	75	125
D4542085	8.50	75	125
D4542985	8.55	81	131

TiCN(D7542), TiAlN(DQ542) are available on your request.

▶ NEXT PAGE

◎ : 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	15	30	25	38	34	15	30	25	38	34	400Rm	1050Rm	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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

JOBBER

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

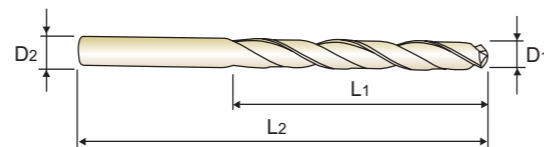
**KURZ
COURTE
CORTA**

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HSS Co8 30° h7 h6 h8 130° TiN p.A189



D1=D2

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Unit : mm			
				TiN	D1	L1	L2
D4542086	8.60	81	131				
D4542986	8.65	81	131				
D4542087	8.70	81	131				
D4542987	8.75	81	131				
D4542088	8.80	81	131				
D4542988	8.85	81	131				
D4542089	8.90	81	131				
D4542989	8.95	81	131				
D4542090	9.00	81	131				
D4542990	9.05	81	131				
D4542091	9.10	81	131				
D4542991	9.15	81	131				
D4542092	9.20	81	131				
D4542992	9.25	81	131				
D4542093	9.30	81	131				
D4542993	9.35	81	131				
D4542094	9.40	81	131				
D4542994	9.45	81	131				
D4542095	9.50	81	131				
D4542995	9.55	87	137				
D4542096	9.60	87	137				
D4542996	9.65	87	137				

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Unit : mm			
				TiN	D1	L1	L2
D4542097	9.70	87	137				
D4542997	9.75	87	137				
D4542098	9.80	87	137				
D4542998	9.85	87	137				
D4542099	9.90	87	137				
D4542999	9.95	87	137				
D4542100	10.00	87	137				
D4542800	10.05	87	144				
D4542101	10.10	87	144				
D4542801	10.15	87	144				
D4542102	10.20	87	144				
D4542802	10.25	87	144				
D4542103	10.30	87	144				
D4542803	10.35	87	144				
D4542104	10.40	87	144				
D4542804	10.45	87	144				
D4542105	10.50	87	144				
D4542805	10.55	87	144				
D4542106	10.60	87	144				
D4542806	10.65	94	151				
D4542107	10.70	94	151				
D4542807	10.75	94	151				

TiCN(D7542), TiAlN(DQ542) are available on your request.

▶ NEXT PAGE

◎ : 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	30	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
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
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HRc	15	30	25	38	34	15	30	25	38	34	15	30	25	38	34	400Rm	1050Rm	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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

JOBBER

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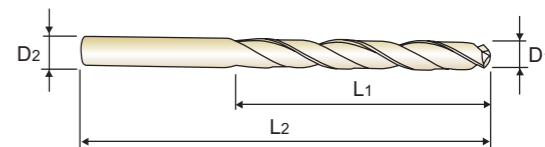
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HSS Co8 30° h7 h6 h8 130° TiN p.A189



D1=D2

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Unit : mm			
				TiN	D1	L1	L2
D4542108	10.80	94	151				
D4542808	10.85	94	151				
D4542109	10.90	94	151				
D4542809	10.95	94	151				
D4542110	11.00	94	151				
D4542810	11.05	94	151				
D4542111	11.10	94	151				
D4542811	11.15	94	151				
D4542112	11.20	94	151				
D4542812	11.25	94	151				
D4542113	11.30	94	151				
D4542813	11.35	94	151				
D4542114	11.40	94	151				
D4542814	11.45	94	151				
D4542115	11.50	94	151				
D4542815	11.55	94	151				
D4542116	11.60	94	151				
D4542816	11.65	94	151				
D4542117	11.70	94	151				
D4542817	11.75	94	151				
D4542118	11.80	94	151				
D4542818	11.85	101	158				

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	Unit : mm			
				TiN	D1	L1	L2
D4542119	11.90	101	158				
D4542819	11.95	101	158				
D4542120	12.00	101	158				
D4542121	12.10	101	158				
D4542122	12.20	101	158				
D4542123	12.30	101	158				
D4542124	12.40	101	158				
D4542125	12.50	101	158				
D4542126	12.60	101	158				
D4542127	12.70	101	158				
D4542128	12.80	101	158				
D4542129	12.90	101	158				
D4542130	13.00	101	158				
D4542135	13.50	90	150				
D4542140	14.00	90	150				
D4542141	14.10	95	155				
D4542145	14.50	95	155				
D4542150	15.00	95	161				
D4542155	15.50	100	166				
D4542156	15.60	100	166				
D4542160	16.00	100	166				
D4542165	16.50	106	172				

TiCN(D7542), TiAlN(DQ542) are available on your request.

▶ NEXT PAGE

◎ : 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	30	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
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	15	30	25	38	34	15	30	25	38	34	15	30	25	38	34	400Rm	1050Rm	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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

HSS Co8, HPD TWIST DRILLS for STEELS

JOBBER

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

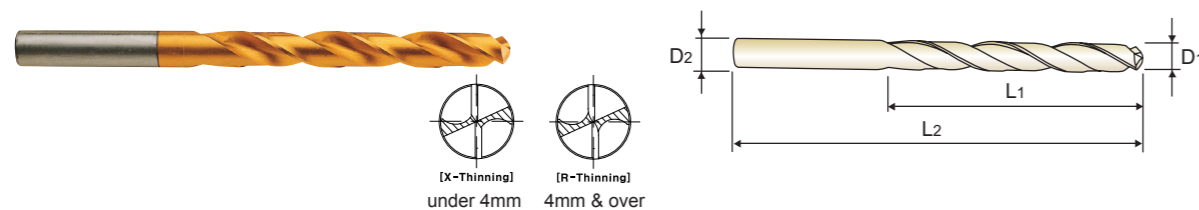
- KURZ
- COURTE
- CORTA

Application : Designed for high speed non-step 4D~5D drilling. Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.

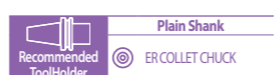
Advantage : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity.

Anwendung : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.

Vorteile : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



HSS Co8 30° h7 h6 h8 130° TiN p.A189



D1=D2

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542170	17.00	106	172
D4542175	17.50	112	178
D4542176	17.60	112	178
D4542180	18.00	112	178
D4542185	18.50	118	184
D4542190	19.00	118	194
D4542195	19.50	125	201
D4542196	19.60	125	201
D4542200	20.00	125	201
D4542205	20.50	128	204
D4542210	21.00	128	204
D4542211	21.10	128	204
D4542215	21.50	132	208
D4542220	22.00	132	208
D4542225	22.50	136	212

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D4542230	23.00	136	212
D4542235	23.50	136	212
D4542240	24.00	140	220
D4542245	24.50	140	220
D4542250	25.00	140	220
D4542255	25.50	145	225
D4542260	26.00	145	225
D4542265	26.50	145	225
D4542270	27.00	150	230
D4542280	28.00	150	230
D4542290	29.00	155	235
D4542300	30.00	155	235
D4542310	31.00	160	240
D4542320	32.00	165	245

TiCN(D7542), TiAlN(DQ542) are available on your request.

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	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	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	15	30	25	38	34	400Rm	1050Rm	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	⊙	⊙	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

STUB

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série extra-courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

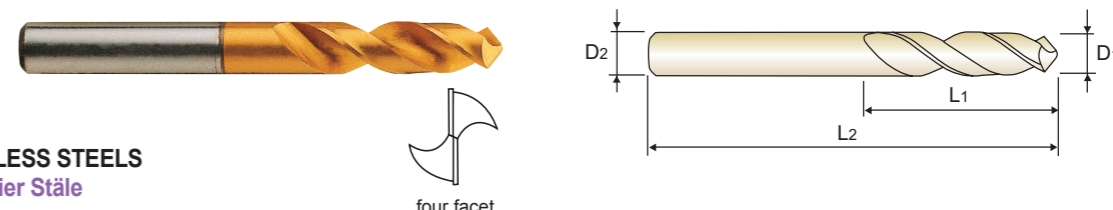
- EXTRA KURZ
- EXTRA-COURTE
- EXTRA CORTA

Application : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

Advantage : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling. Wide flute and stub length-increasing chip removal and reducing vibration and deflection. High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity.

Anwendung : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.

Vorteile : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



for STAINLESS STEELS für rostfreier Stäle

HSS-E 38° h7 h8 130° 120° TiN p.A189



D1=D2

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DJ543020	2.00	12	44
DJ543021	2.10	12	44
DJ543022	2.20	13	45
DJ543023	2.30	13	45
DJ543024	2.40	14	46
DJ543025	2.50	14	46
DJ543026	2.60	14	46
DJ543027	2.70	16	48
DJ543028	2.80	16	48
DJ543029	2.90	16	48
DJ543030	3.00	16	48
DJ543031	3.10	18	50
DJ543032	3.20	18	50
DJ543033	3.30	18	50
DJ543034	3.40	20	52
DJ543035	3.50	20	52
DJ543036	3.60	20	52
DJ543037	3.70	20	52
DJ543038	3.80	22	54
DJ543039	3.90	22	54
DJ543040	4.00	22	54
DJ543041	4.10	22	66

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DJ543042	4.20	22	66
DJ543043	4.30	24	68
DJ543044	4.40	24	68
DJ543045	4.50	24	68
DJ543046	4.60	24	68
DJ543047	4.70	24	68
DJ543048	4.80	26	70
DJ543049	4.90	26	70
DJ543050	5.00	26	70
DJ543051	5.10	26	70
DJ543052	5.20	26	70
DJ543053	5.30	26	70
DJ543054	5.40	28	72
DJ543055	5.50	28	72
DJ543056	5.60	28	72
DJ543057	5.70	28	72
DJ543058	5.80	28	72
DJ543059	5.90	28	72
DJ543060	6.00	28	72
DJ543061	6.10	31	75
DJ543062	6.20	31	75
DJ543063	6.30	31	75

TiCN(DW543), TiAlN(DY543) 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	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	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	15	30	25	38	34	400Rm	1050Rm	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	⊙	⊙	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

STUB

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série extra-courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

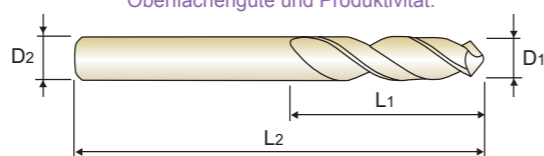
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.

► **Vorteile** : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



four facet

D1=D2



p.A189



up to 4mm over 4mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
DJ543064	6.40	31	75	DJ543086	8.60	40	90
DJ543065	6.50	31	75	DJ543087	8.70	40	90
DJ543066	6.60	31	75	DJ543088	8.80	40	90
DJ543067	6.70	31	75	DJ543089	8.90	40	90
DJ543068	6.80	34	78	DJ543090	9.00	40	90
DJ543069	6.90	34	78	DJ543091	9.10	40	90
DJ543070	7.00	34	78	DJ543092	9.20	40	90
DJ543071	7.10	34	78	DJ543093	9.30	40	90
DJ543072	7.20	34	78	DJ543094	9.40	40	90
DJ543073	7.30	34	78	DJ543095	9.50	40	90
DJ543074	7.40	34	78	DJ543096	9.60	43	93
DJ543075	7.50	34	78	DJ543097	9.70	43	93
DJ543076	7.60	37	81	DJ543098	9.80	43	93
DJ543077	7.70	37	81	DJ543099	9.90	43	93
DJ543078	7.80	37	81	DJ543100	10.00	43	93
DJ543079	7.90	37	81	DJ543101	10.10	43	100
DJ543080	8.00	37	81	DJ543102	10.20	43	100
DJ543081	8.10	37	87	DJ543103	10.30	43	100
DJ543082	8.20	37	87	DJ543104	10.40	43	100
DJ543083	8.30	37	87	DJ543105	10.50	43	100
DJ543084	8.40	37	87	DJ543106	10.60	43	100
DJ543085	8.50	37	87	DJ543107	10.70	47	104

► TiCN(DW543), TiAlN(DY543) are available on your request.

► NEXT PAGE

◎ : 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	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										
	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	60	100	75	90	130	110	90	100			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	◎	◎				○															

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

STUB

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série extra-courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

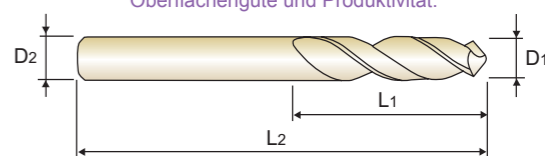
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.

► **Vorteile** : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



four facet

D1=D2



p.A189



up to 4mm over 4mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
DJ543108	10.80	47	104	DJ543120	12.00	51	108
DJ543109	10.90	47	104	DJ543121	12.10	51	108
DJ543110	11.00	47	104	DJ543122	12.20	51	108
DJ543111	11.10	47	104	DJ543123	12.30	51	108
DJ543112	11.20	47	104	DJ543124	12.40	51	108
DJ543113	11.30	47	104	DJ543125	12.50	51	108
DJ543114	11.40	47	104	DJ543126	12.60	51	108
DJ543115	11.50	47	104	DJ543127	12.70	51	108
DJ543116	11.60	47	104	DJ543128	12.80	51	108
DJ543117	11.70	47	104	DJ543129	12.90	51	108
DJ543118	11.80	47	104	DJ543130	13.00	51	108
DJ543119	11.90	51	108				

► TiCN(DW543), TiAlN(DY543) are 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	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										
	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	60	100	75	90	130	110	90	100			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	◎	◎				○															

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

JOBBER

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

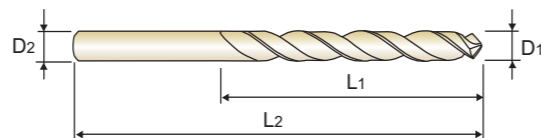
- KURZ
- COURTE
- CORTA

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► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.

► **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



for STAINLESS STEELS
für rostfreier Stäle

up to 13mm over 13mm



up to 4mm over 4mm

p.A189



D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
DJ544020	2.00	24	56	DJ544042	4.20	43	87
DJ544021	2.10	24	56	DJ544043	4.30	47	91
DJ544022	2.20	27	59	DJ544044	4.40	47	91
DJ544023	2.30	27	59	DJ544045	4.50	47	91
DJ544024	2.40	30	62	DJ544046	4.60	47	91
DJ544025	2.50	30	62	DJ544047	4.70	47	91
DJ544026	2.60	30	62	DJ544048	4.80	52	96
DJ544027	2.70	33	65	DJ544049	4.90	52	96
DJ544028	2.80	33	65	DJ544050	5.00	52	96
DJ544029	2.90	33	65	DJ544051	5.10	52	96
DJ544030	3.00	33	65	DJ544052	5.20	52	96
DJ544031	3.10	36	68	DJ544053	5.30	52	96
DJ544032	3.20	36	68	DJ544054	5.40	57	101
DJ544033	3.30	36	68	DJ544055	5.50	57	101
DJ544034	3.40	39	71	DJ544056	5.60	57	101
DJ544035	3.50	39	71	DJ544057	5.70	57	101
DJ544036	3.60	39	71	DJ544058	5.80	57	101
DJ544037	3.70	39	71	DJ544059	5.90	57	101
DJ544038	3.80	43	75	DJ544060	6.00	57	101
DJ544039	3.90	43	75	DJ544061	6.10	63	107
DJ544040	4.00	43	75	DJ544062	6.20	63	107
DJ544041	4.10	43	87	DJ544063	6.30	63	107

► TiCN(DW544), TiAlN(DY544) are available on your request.

► NEXT PAGE

◎ : 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	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							
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	15	30	25	38	34	15	30	25	38	34	55	60	42	55	55	60	42	55	55	55	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	◎	◎				◎																

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

JOBBER

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

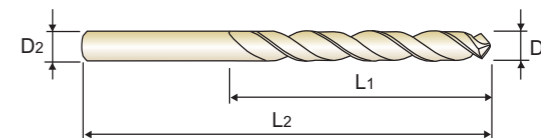
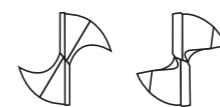
- KURZ
- COURTE
- CORTA

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for STAINLESS STEELS
für rostfreier Stäle

up to 13mm over 13mm



up to 4mm over 4mm

p.A189



D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
DJ544064	6.40	63	107	DJ544086	8.60	81	131
DJ544065	6.50	63	107	DJ544087	8.70	81	131
DJ544066	6.60	63	107	DJ544088	8.80	81	131
DJ544067	6.70	63	107	DJ544089	8.90	81	131
DJ544068	6.80	69	113	DJ544090	9.00	81	131
DJ544069	6.90	69	113	DJ544091	9.10	81	131
DJ544070	7.00	69	113	DJ544092	9.20	81	131
DJ544071	7.10	69	113	DJ544093	9.30	81	131
DJ544072	7.20	69	113	DJ544094	9.40	81	131
DJ544073	7.30	69	113	DJ544095	9.50	81	131
DJ544074	7.40	69	113	DJ544096	9.60	87	137
DJ544075	7.50	69	113	DJ544097	9.70	87	137
DJ544076	7.60	75	119	DJ544098	9.80	87	137
DJ544077	7.70	75	119	DJ544099	9.90	87	137
DJ544078	7.80	75	119	DJ544100	10.00	87	137
DJ544079	7.90	75	119	DJ544101	10.10	87	144
DJ544080	8.00	75	119	DJ544102	10.20	87	144
DJ544081	8.10	75	125	DJ544103	10.30	87	144
DJ544082	8.20	75	125	DJ544104	10.40	87	144
DJ544083	8.30	75	125	DJ544105	10.50	87	144
DJ544084	8.40	75	125	DJ544106	10.60	87	144
DJ544085	8.50	75	125	DJ544107	10.70	94	151

► TiCN(DW544), TiAlN(DY544) are available on your request.

► NEXT PAGE

◎ : 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	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	◎									◎	◎	◎									

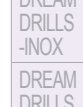
ISO	N					S					H											
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron							
Material Description	21	22	23	24	25	26	27	28	29	30	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	15	30	25	38	34	15	30	25	38	34	55	60	42	55	55	60	42	55	55	55	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	◎	◎				◎																

JOBBER

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für rostfreier Stäle

up to 13mm over 13mm



up to 4mm over 4mm

p.A189



D1=D2

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DJ544066	6.60	63	107	DJ544088	8.80	81	131
DJ544067	6.70	63	107	DJ544089	8.90	81	131
DJ544068	6.80	69	113	DJ544090	9.00	81	131
DJ544069	6.90	69	113	DJ544091	9.10	81	131
DJ544070	7.00	69	113	DJ544092	9.20	81	131
DJ544071	7.10	69	113	DJ544093	9.30	81	131

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

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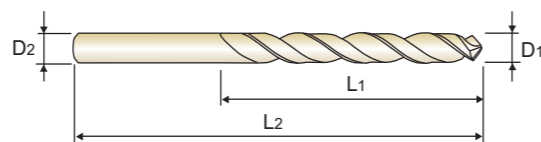
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for STAINLESS STEELS für rostfreier Stäle

up to 13mm over 13mm



p.A189



D1=D2

up to 4mm over 4mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
DJ544108	10.80	94	151
DJ544109	10.90	94	151
DJ544110	11.00	94	151
DJ544111	11.10	94	151
DJ544112	11.20	94	151
DJ544113	11.30	94	151
DJ544114	11.40	94	151
DJ544115	11.50	94	151
DJ544116	11.60	94	151
DJ544117	11.70	94	151
DJ544118	11.80	94	151
DJ544119	11.90	101	158
DJ544120	12.00	101	158
DJ544121	12.10	101	158
DJ544122	12.20	101	158
DJ544123	12.30	101	158
DJ544124	12.40	101	158
DJ544125	12.50	101	158
DJ544126	12.60	101	158
DJ544127	12.70	101	158
DJ544128	12.80	101	158
DJ544129	12.90	101	158

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
DJ544130	13.00	101	158
DJ544135	13.50	106	166
DJ544140	14.00	106	166
DJ544141	14.10	109	169
DJ544145	14.50	109	169
DJ544150	15.00	109	169
DJ544155	15.50	112	172
DJ544156	15.60	112	172
DJ544160	16.00	112	172
DJ544165	16.50	115	181
DJ544170	17.00	115	181
DJ544175	17.50	118	184
DJ544176	17.60	118	184
DJ544180	18.00	118	184
DJ544185	18.50	122	188
DJ544190	19.00	122	188
DJ544195	19.50	125	191
DJ544196	19.60	125	191
DJ544200	20.00	125	191

TiCN(DW544), TiAIN(DY544) are 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	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	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	
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	◎	◎				○																	

D4541, D4542 SERIES

HPD DRILLS for STEELS

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

ISO	VDI 3323	Material Description	Vc	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			
			25	RPM	3980	2650	1990	1590	1330	990	800	660		
	2	Non-alloy steel	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			
			30	RPM	4770	3180	2390	1910	1590	1190	950	800		
3	Low alloy steel	30	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				
		25	RPM	3980	2650	1990	1590	1330	990	800	660			
6	Low alloy steel	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				
		15	RPM	2390	1590	1190	950	800	600	480	400			
10	High alloyed steel, and tool steel	40	RPM	6370	4240	3180	2550	2120	1590	1270	1060			
		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				
		40	RPM	6370	4240	3180	2550	2120	1590	1270	1060			
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			

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)									
					14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0
P	1	Non-alloy steel	35	RPM	800	700	620	560	510	460	430	400	370	350
			FEED	0.25-0.35	0.28-0.38	0.34-0.44	0.35-0.45	0.40-0.50	0.44-0.54	0.48-0.58	0.52-0.62	0.56-0.66	0.60-0.70	
			25	RPM	570	500	440	400	360	330	310	280	270	250
	2	Non-alloy steel	25	RPM	570	500	440	400	360	330	310	280	270	250
			FEED	0.25-0.35	0.28-0.38	0.34-0.44	0.35-0.45	0.40-0.50	0.44-0.54	0.48-0.58	0.52-0.62	0.56-0.66	0.60-0.70	
			30	RPM	680	600	530	480	430	400	370	340	320	300
6	Low alloy steel	30	RPM	680	600	530	480	430	400	370	340	320	300	
		FEED	0.25-0.35	0.28-0.38	0.34-0.44	0.35-0.45	0.40-0.50	0.44-0.54	0.48-0.58	0.52-0.62	0.56-0.66	0.60-0.70		
		25	RPM	570	500	440	400	360	330	310	280	270	250	
7	Low alloy steel	25	RPM	570	500	440	400	360	330	310	280	270	250	
		FEED	0.25-0.35	0.28-0.38	0.34-0.44	0.35-0.45	0.40-0.50	0.44-0.54	0.48-0.58	0.52-0.62	0.56-0.66	0.60-0.70		
		15	RPM	340	300	270	240	220	200	180	170	160	150	
10	High alloyed steel, and tool steel	40	RPM	910	800	710	640	580	530	490	450	420	400	
		FEED	0.25-0.35	0.28-0.38	0.34-0.44	0.35-0.45	0.40-0.50	0.44-0.54	0.48-0.58	0.52-0.62	0.56-0.66	0.60-0.70		
		40	RPM	910	800	710	640	580	530	490	450	420	400	
K	15	Grey cast iron	40	RPM	910	800	710	640	580	530	490	450	420	400
			FEED	0.32-0.42	0.35-0.45	0.42-0.52	0.44-0.54	0.50-0.60	0.54-0.64	0.59-0.69	0.64-0.74	0.69-0.79	0.74-0.84	

Please decrease the feed rate (15~20%) in D4542 SERIES HPD drills.
Den Vorschub in der D4542 Gruppe HPD Bohrer bitte verringern.

DJ543, DJ544 SERIES

HPD-SUS DRILLS for STAINLESS STEELS

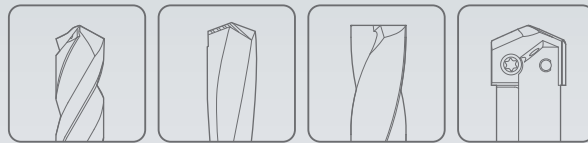
Vc = m/min.
RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)				
					2.0	3.0	4.0	5.0	6.0
P	1	Non-alloy steel	35	RPM	5570	3710	2790	2230	1860
			FEED	0.04-0.10	0.07-0.13	0.09-0.15	0.12-0.18	0.13-0.19	
M	12	Stainless steel	20	RPM	3180	2120	1590	1270	1060
			FEED	0.03-0.07	0.05-0.09	0.06-0.12	0.09-0.15	0.12-0.18	
			18	RPM	2860	1910	1430	1150	950
	13	Stainless steel	18	RPM	2860	1910	1430	1150	950
			FEED	0.03-0.07	0.05-0.09	0.06-0.12	0.09-0.15	0.12-0.18	
			15	RPM	2390	1590	1190	950	800
14	Stainless steel	15	RPM	2390	1590	1190	950	800	
		FEED	0.02-0.05	0.03-0.07	0.04-0.10	0.06-0.12	0.07-0.13		
		90	RPM	14320	9550	7160	5730	4770	
N	21	Aluminum-wrought alloy	90	RPM	14320	9550	7160	5730	4770
			FEED	0.05-0.12	0.10-0.18	0.12-0.22	0.15-0.25	0.17-0.27	
			90	RPM	14320	9550	7160	5730	4770
22	Aluminum-wrought alloy	90	RPM	14320	9550	7160	5730	4770	
		FEED	0.05-0.12	0.10-0.18	0.12-0.22	0.15-0.25	0.17-0.27		
		35	RPM	5570	3710	2790	2230	1860	
26	Copper and Copper Alloys (Bronze / Brass)	35	RPM	5570	3710	2790	2230	1860	
		FEED	0.03-0.06	0.05-0.09	0.05-0.11	0.08-0.14	0.11-0.17		

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)						
					8.0	10.0	12.0	14.0	16.0	18.0	20.0
P	1	Non-alloy steel	35	RPM	13						



Global Cutting Tool Leader **YG-1**



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