



CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES

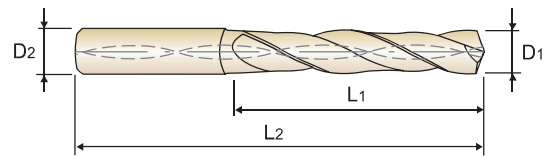
SHORT

- VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
- Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série courte
- PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)

KURZ
COURTE
CORTA

- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
- ▶ Point R-thinning achieves superior centering and chip curling
- ▶ TiAlN coating for better surface finishes and longer tool life

- ▶ Spezielle Nutenform und Geometrie für die Bearbeitung von rostfreiem Stahl
- ▶ Hervorragende Spanabfuhr durch bessere Oberflächenbehandlung
- ▶ Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung
- ▶ TiAlN-Beschichtung für bessere Oberflächengüte der Bohrung und längere Standzeit



P.129-130

3 x D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH451030	3.0	6	20	62
DH451031	3.1	6	20	62
DH451032	3.2	6	20	62
DH451033	3.3	6	20	62
DH451034	3.4	6	20	62
DH451035	3.5	6	20	62
DH451036	3.6	6	20	62
DH451037	3.7	6	20	62
DH451038	3.8	6	24	66
DH451039	3.9	6	24	66
DH451040	4.0	6	24	66
DH451041	4.1	6	24	66
DH451042	4.2	6	24	66
DH451043	4.3	6	24	66
DH451044	4.4	6	24	66
DH451045	4.5	6	24	66
DH451046	4.6	6	24	66
DH451047	4.7	6	24	66
DH451048	4.8	6	28	66
DH451049	4.9	6	28	66

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH451050	5.0	6	28	66
DH451051	5.1	6	28	66
DH451052	5.2	6	28	66
DH451053	5.3	6	28	66
DH451054	5.4	6	28	66
DH451055	5.5	6	28	66
DH451056	5.6	6	28	66
DH451057	5.7	6	28	66
DH451058	5.8	6	28	66
DH451059	5.9	6	28	66
DH451060	6.0	6	28	66
DH451061	6.1	8	34	79
DH451062	6.2	8	34	79
DH451063	6.3	8	34	79
DH451064	6.4	8	34	79
DH451065	6.5	8	34	79
DH451066	6.6	8	34	79
DH451067	6.7	8	34	79
DH451068	6.8	8	34	79
DH451069	6.9	8	34	79

Unit : mm

▶ Other shank types 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	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VDI 3323	13	25	28	32	300	10	29	32	38	15	15	15	23	10	10	26	3	25		21
HRC	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	200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	◎	◎	○	○	○																						

◎ : Excellent ○ : Good



CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES

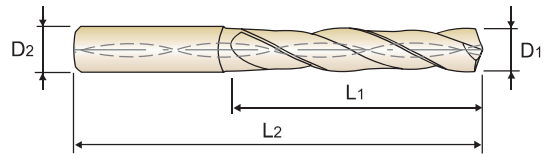
SHORT

- **VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL**
- **Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série courte**
- **PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)**

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- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
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- ▶ Spezielle Nutenform und Geometrie für die Bearbeitung von rostfreiem Stahl
- ▶ Hervorragende Spanabfuhr durch bessere Oberflächenbehandlung
- ▶ Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung
- ▶ TiAIN-Beschichtung für bessere Oberflächengüte der Bohrung und längere Standzeit



P.129-130

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH451070	7.0	8	34	79
DH451071	7.1	8	41	79
DH451072	7.2	8	41	79
DH451073	7.3	8	41	79
DH451074	7.4	8	41	79
DH451075	7.5	8	41	79
DH451076	7.6	8	41	79
DH451077	7.7	8	41	79
DH451078	7.8	8	41	79
DH451079	7.9	8	41	79
DH451080	8.0	8	41	79
DH451081	8.1	10	47	89
DH451082	8.2	10	47	89
DH451083	8.3	10	47	89
DH451084	8.4	10	47	89
DH451085	8.5	10	47	89
DH451086	8.6	10	47	89
DH451087	8.7	10	47	89
DH451088	8.8	10	47	89
DH451089	8.9	10	47	89

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH451090	9.0	10	47	89
DH451091	9.1	10	47	89
DH451092	9.2	10	47	89
DH451093	9.3	10	47	89
DH451094	9.4	10	47	89
DH451095	9.5	10	47	89
DH451096	9.6	10	47	89
DH451097	9.7	10	47	89
DH451098	9.8	10	47	89
DH451099	9.9	10	47	89
DH451100	10.0	10	47	89
DH451101	10.1	12	55	102
DH451102	10.2	12	55	102
DH451103	10.3	12	55	102
DH451104	10.4	12	55	102
DH451105	10.5	12	55	102
DH451106	10.6	12	55	102
DH451107	10.7	12	55	102
DH451108	10.8	12	55	102
DH451109	10.9	12	55	102

▶ Other shank types 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
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
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎



CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES

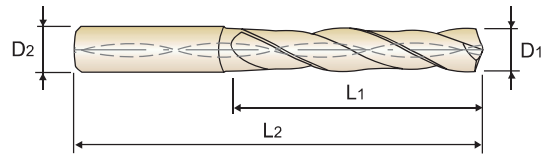
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P.129-130

3 x D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH451110	11.0	12	55	102
DH451111	11.1	12	55	102
DH451112	11.2	12	55	102
DH451113	11.3	12	55	102
DH451114	11.4	12	55	102
DH451115	11.5	12	55	102
DH451116	11.6	12	55	102
DH451117	11.7	12	55	102
DH451118	11.8	12	55	102
DH451119	11.9	12	55	102
DH451120	12.0	12	55	102
DH451125	12.5	14	60	107
DH451130	13.0	14	60	107
DH451135	13.5	14	60	107

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH451140	14.0	14	60	107
DH451145	14.5	16	65	115
DH451150	15.0	16	65	115
DH451155	15.5	16	65	115
DH451160	16.0	16	65	115
DH451165	16.5	18	73	123
DH451170	17.0	18	73	123
DH451175	17.5	18	73	123
DH451180	18.0	18	73	123
DH451185	18.5	20	79	131
DH451190	19.0	20	79	131
DH451195	19.5	20	79	131
DH451200	20.0	20	79	131

▶ Other shank types 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	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			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	◎	◎	○	○	○												○				

DH451, DH452, DH453 SERIES with COOLANT HOLES

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

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)		Vc (m/min)	Parameter	Drill Diameter (mm)					
					1.0	2.0			3.0	4.0	5.0	6.0		
P	1	Non-alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310		
	2			FEED	0.02-0.04	0.04-0.06		FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20		
	3			RPM	22280	11140		RPM	10610	7960	6370	5310		
	4			FEED	0.02-0.04	0.04-0.06		FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20		
	5													
	6	Low alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310		
	7			FEED	0.02-0.04	0.04-0.06		FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20		
	8			RPM	15920	7960		70	RPM	7430	5570	4460	3710	
	9			FEED	0.02-0.04	0.04-0.06		FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20		
	10													
	11	High alloyed steel, and tool steel												
M	12	Stainless steel	40	RPM	12730	6370	50	RPM	5310	3980	3180	2650		
	13			FEED	0.02-0.04	0.02-0.04		FEED	0.03-0.05	0.05-0.09	0.07-0.11	0.09-0.13		
	14			RPM	7960	3980		40	RPM	4240	3180	2550	2120	
K	15	Grey cast iron												
	16													
	17	Nodular cast iron												
	18													
	19	Malleable cast iron												
20														
N	21	Aluminum-wrought alloy	130	RPM	41380	20690	180	RPM	19100	14320	11460	9550		
	22			FEED	0.04-0.10	0.08-0.14		FEED	0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28		
	23	Aluminum-cast, alloyed		RPM	35010	17510		160	RPM	16980	12730	10190	8490	
	24			FEED	0.04-0.10	0.08-0.14			FEED	0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	25			RPM	35010	17510			160	RPM	16980	12730	10190	8490
	26			FEED	0.04-0.10	0.08-0.14			FEED	0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	27	Copper and Copper Alloys (Bronze / Brass)		RPM	28650	14320		130	RPM	13790	10350	8280	6900	
	28			FEED	0.04-0.08	0.06-0.10			FEED	0.12-0.18	0.16-0.22	0.17-0.23	0.19-0.25	
	29	Non Metallic Materials												
	30													
S	31	Heat Resistant Super Alloys												
	32													
	33													
	34													
	35													
	36		Titanium Alloys											
	37			25	RPM	7960	3980	40	RPM	4240	3180	2550	2120	
H	38	Hardened steel												
	39													
	40	Chilled Cast Iron												
	41	Hardened Cast Iron												

► Recommend to reduce the feed rate as following ► NEXT PAGE
Feed 100% : DH451(3xD), DH452(5xD) **Feed 85%** : DH453(8xD)

DH451, DH452, DH453 SERIES with **COOLANT HOLES**

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

i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -CFRP
DREAM DRILLS -MQL
DREAM DRILLS for HIGH HARDENED STEELS
GENERAL CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
SUPER-GP DRILLS
STRAIGHT SHANK DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
CENTER DRILLS
SPADE DRILLS
REAMERS
COUNTER SINKS
COUNTER BORES
TECHNICAL DATA

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)							
					8.0	10.0	12.0	14.0	16.0	18.0	20.0	
P	1	Non-alloy steel	100	RPM	3980	3180	2650	2270	1990	1770	1590	
	2			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38	
	3			RPM	3980	3180	2650	2270	1990	1770	1590	
	4			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38	
	5											
	6	Low alloy steel	100	RPM	3980	3180	2650	2270	1990	1770	1590	
	7			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38	
	8			RPM	2790	2230	1860	1590	1390	1240	1110	
	9			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38	
	10											
	11	High alloyed steel, and tool steel										
M	12	Stainless steel	50	RPM	1990	1590	1330	1140	990	880	800	
	13			FEED	0.09-0.13	0.10-0.15	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19	0.15-0.20	
	14			RPM	1590	1270	1060	910	800	710	640	
K	15	Grey cast iron	60	FEED	0.09-0.13	0.10-0.15	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19	0.15-0.20	
	16			RPM	2390	1910	1590	1360	1190	1060	950	
	17	Nodular cast iron		FEED	0.10-0.14	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19	0.15-0.20	0.16-0.21	
	18											
	19			Malleable cast iron								
20												
N	21	Aluminum-wrought alloy	180	RPM	7160	5730	4770	4090	3580	3180	2860	
	22			FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45	
	23	Aluminum-cast, alloyed		RPM	7160	5730	4770	4090	3580	3180	2860	
	24			FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45	
	25			RPM	6370	5090	4240	3640	3180	2830	2550	
	26			FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45	
	27	Copper and Copper Alloys (Bronze / Brass)		RPM	6370	5090	4240	3640	3180	2830	2550	
	28			FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45	
	29	Non Metallic Materials		RPM	5170	4140	3450	2960	2590	2300	2070	
	30			FEED	0.22-0.28	0.24-0.30	0.24-0.30	0.25-0.35	0.25-0.35	0.28-0.38	0.30-0.40	
S	31	Heat Resistant Super Alloys										
	32											
	33											
	34											
	35											
	36	Titanium Alloys	40	RPM	1590	1270	1060	910	800	710	640	
37	FEED			0.08-0.12	0.09-0.14	0.10-0.15	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19		
H	38	Hardened steel										
	39											
	40			Chilled Cast Iron								
	41				Hardened Cast Iron							

► Recommend to reduce the feed rate as following
Feed 100% : DH451(3xD), DH452(5xD) **Feed 85%** : DH453(8xD)