

**CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES** **SHORT**

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



DIN 6537
CARBIDE
30°
h6
m7
140°
20 bar

P.129-130

**3 × 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	
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
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	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙

⊙ : Excellent ○ : Good



**CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES**

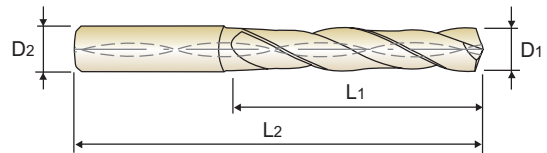
**SHORT**

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- **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**

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DIN 6537
CARBIDE
30°
h6
m7
140°
20 bar

P.129-130

3 x D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	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
TiAlN	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						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc	13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25				
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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DIN 6537
CARBIDE
30°
h6
m7
140°
20 bar

P.129-130

3 × 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	
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	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
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											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	◎	◎	○	○	○												○				



RECOMMENDED CUTTING CONDITIONS  
EMPHOHLENE SCHNEIDPARAMETER

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		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	High alloyed steel, and tool steel											
	11												
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		RPM	4240	3180	2550	2120	
K	15	Grey cast iron	25	FEED	0.02-0.04	0.02-0.04	40	FEED	0.03-0.05	0.05-0.09	0.07-0.11	0.09-0.13	
	16			RPM	14320	7160		RPM	6370	4770	3820	3180	
	17	Nodular cast iron	60	FEED	0.02-0.04	0.02-0.04	60	FEED	0.04-0.06	0.06-0.10	0.08-0.12	0.10-0.14	
	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	110	RPM	41380	20690	180	RPM	19100	14320	11460	9550	
	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		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)	110	RPM	35010	17510	160	RPM	16980	12730	10190	8490	
	28			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	
	29	Non Metallic Materials	90	RPM	28650	14320	130	RPM	13790	10350	8280	6900	
	30			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	
S	31	Heat Resistant Super Alloys											
	32												
	33												
	34												
	35	Titanium Alloys	25	RPM	7960	3980	40	RPM	4240	3180	2550	2120	
	36			FEED	0.01-0.03	0.01-0.03		FEED	0.02-0.04	0.04-0.08	0.06-0.10	0.08-0.12	
	37												
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)



**RECOMMENDED CUTTING CONDITIONS**  
**EMPFOHLENE SCHNEIDPARAMETER**

**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)						
					8.0	10.0	12.0	14.0	16.0	18.0	20.0
<b>P</b>	1	Non-alloy steel									
	2		100	RPM	3980	3180	2650	2270	1990	1770	1590
	3		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	
	4		100	RPM	3980	3180	2650	2270	1990	1770	1590
	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		70	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	High alloyed steel, and tool steel									
	11										
<b>M</b>	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		40	RPM	1590	1270	1060	910	800	710	640
<b>K</b>	15	Grey cast iron	60	RPM	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		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	
	17	Nodular cast iron									
	18										
	19	Malleable cast iron									
	20										
<b>N</b>	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	160	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		160	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)	130	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									
	30										
<b>S</b>	31	Heat Resistant Super Alloys									
	32										
	33										
	34										
	35	Titanium Alloys									
	36										
	37		40	RPM	1590	1270	1060	910	800	710	640
<b>H</b>	38	Hardened steel									
	39										
	40	Hardened Cast Iron									
	41										

► Recommend to reduce the feed rate as following

**Feed 100%** : DH451(3xD), DH452(5xD) **Feed 85%** : DH453(8xD)

SELECTION GUIDE



SERIES

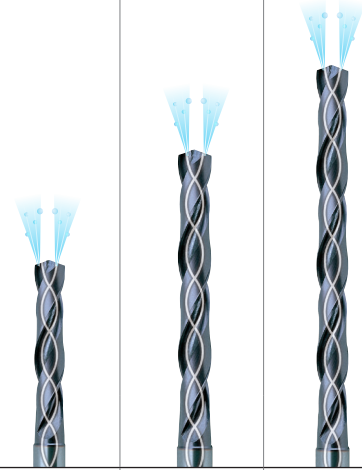
	DH451	DH452	DH453
DRILLING DEPTH	3XD	5XD	8XD
LENGTH	SHORT	LONG	EXTRA LONG
SIZE MIN	D3.0	D1.0	D3.0
SIZE MAX	D20.0	D20.0	D14.0
PAGE	121	124	127

SURFACE TREATMENT

TiAIN

# SOLID CARBIDE DREAM DRILLS INOX

For Tough Materials like Stainless Steels, Nickel Alloys and Titanium



Please visit [globalyg1.com/mat](http://globalyg1.com/mat) for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.129

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