



Leading Through Innovation

SOLID CARBIDE

GENERAL CARBIDE DRILLS

UNIVERSELLE VHM - BOHRER

- For General Purpose, DIN 338 & DIN 6539
- Für allgemeine Anwendungen, DIN 338 & DIN 6539

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS X
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
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

SELECTION GUIDE



SOLID CARBIDE
GENERAL
CARBIDE DRILLS

For General Purpose, DIN 338 & DIN 6539



◎ : Excellent ○ : Good

Recommended cutting conditions : p.A175

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	SURFACE TREATMENT	
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)	Cutting Alloys, PB>1%		110			
	27		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		Ni or Co Based	Annealed	250	25		
	34			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		



D5405 SERIES

CARBIDE DRILLS

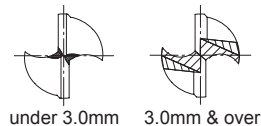
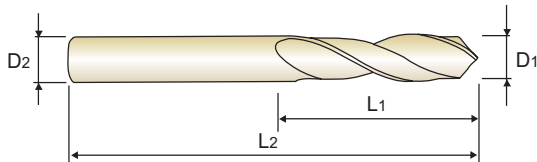
● VOLLHARTMETALL-SPIRALBOHRER
● Forets carbure, série extra-courte
● PUNTE IN METALLO DURO

STUB

EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

►Application : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

►Verwendung : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.



D1=D2

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D5405010	1.0	6	26
D5405011	1.1	7	28
D5405012	1.2	8	30
D5405013	1.3	8	30
D5405014	1.4	9	32
D5405015	1.5	9	32
D5405016	1.6	10	34
D5405017	1.7	10	34
D5405018	1.8	11	36
D5405019	1.9	11	36
D5405020	2.0	12	38
D5405021	2.1	12	38
D5405022	2.2	13	40
D5405023	2.3	13	40
D5405024	2.4	14	43
D5405025	2.5	14	43
D5405026	2.6	14	43
D5405027	2.7	16	46
D5405028	2.8	16	46
D5405029	2.9	16	46
D5405030	3.0	16	46
D5405031	3.1	18	49
D5405032	3.2	18	49
D5405033	3.3	18	49

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) 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																					
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																					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	◎	◎												○					

GENERAL
CARBIDE DRILLS

D5405 SERIES

CARBIDE DRILLS

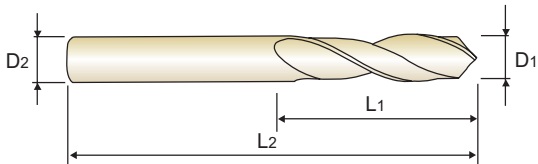
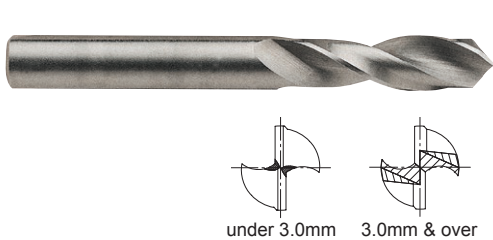
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🇫🇷 Forets carbure, série extra-courte
🇮🇹 PUNTE IN METALLO DURO

STUB

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EXTRA-COURTE
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D1=D2

Unit : mm				Unit : mm			
EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
D5405059	5.9	28	66	D5405083	8.3	37	79
D5405060	6.0	28	66	D5405084	8.4	37	79
D5405061	6.1	31	70	D5405085	8.5	37	79
D5405062	6.2	31	70	D5405086	8.6	40	84
D5405063	6.3	31	70	D5405087	8.7	40	84
D5405064	6.4	31	70	D5405088	8.8	40	84
D5405065	6.5	31	70	D5405090	9.0	40	84
D5405066	6.6	31	70	D5405091	9.1	40	84
D5405067	6.7	31	70	D5405092	9.2	40	84
D5405068	6.8	34	74	D5405093	9.3	40	84
D5405069	6.9	34	74	D5405094	9.4	40	84
D5405070	7.0	34	74	D5405095	9.5	40	84
D5405071	7.1	34	74	D5405097	9.7	43	89
D5405072	7.2	34	74	D5405098	9.8	43	89
D5405074	7.4	34	74	D5405099	9.9	43	89
D5405075	7.5	34	74	D5405100	10.0	43	89
D5405076	7.6	37	79	D5405102	10.2	43	89
D5405077	7.7	37	79	D5405105	10.5	43	89
D5405078	7.8	37	79	D5405110	11.0	47	95
D5405079	7.9	37	79	D5405115	11.5	47	95
D5405080	8.0	37	79	D5405120	12.0	51	102
D5405081	8.1	37	79	D5405130	13.0	51	102
D5405082	8.2	37	79				

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) are available on your request.

◎ : 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		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												
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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GENERAL
CARBIDE DRILLS

D5407 SERIES

CARBIDE DRILLS

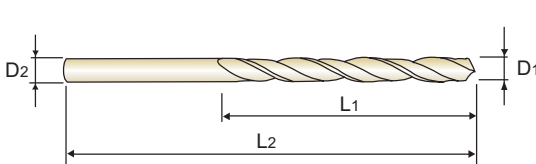
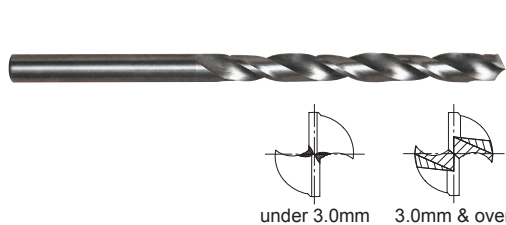
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JOBBER

KURZ
COURTE
CORTA

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D1=D2

Unit : mm				Unit : mm			
EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
D5407010	1.0	12	34	D5407034	3.4	39	70
D5407011	1.1	14	36	D5407035	3.5	39	70
D5407013	1.3	16	38	D5407036	3.6	39	70
D5407014	1.4	18	40	D5407037	3.7	39	70
D5407015	1.5	18	40	D5407038	3.8	43	75
D5407016	1.6	20	43	D5407039	3.9	43	75
D5407017	1.7	20	43	D5407040	4.0	43	75
D5407018	1.8	22	46	D5407041	4.1	43	75
D5407019	1.9	22	46	D5407042	4.2	43	75
D5407020	2.0	24	49	D5407043	4.3	47	80
D5407021	2.1	24	49	D5407044	4.4	47	80
D5407022	2.2	27	53	D5407045	4.5	47	80
D5407023	2.3	27	53	D5407046	4.6	47	80
D5407024	2.4	30	57	D5407047	4.7	47	80
D5407025	2.5	30	57	D5407048	4.8	52	86
D5407026	2.6	30	57	D5407049	4.9	52	86
D5407027	2.7	33	61	D5407050	5.0	52	86
D5407028	2.8	33	61	D5407051	5.1	52	86
D5407029	2.9	33	61	D5407052	5.2	52	86
D5407030	3.0	33	61	D5407053	5.3	52	86
D5407031	3.1	36	65	D5407055	5.5	57	93
D5407033	3.3	36	65	D5407056	5.6	57	93

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) 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		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												
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and CopperAlloys (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			550	630	400	550		
Recommended	◎	◎	◎	◎												○Rm	1050Rm						

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A173



D5407 SERIES

CARBIDE DRILLS

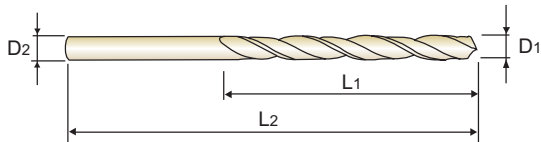
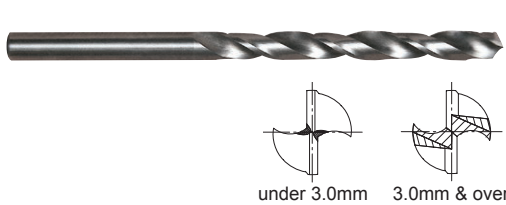
● VOLLHARTMETALL-SPIRALBOHRER
● Forets carbure, série courte
● MPUNTE IN METALLO DURO

JOBBER

KURZ
COURTE
CORTA

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D1=D2

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D5407057	5.7	57	93
D5407058	5.8	57	93
D5407059	5.9	57	93
D5407060	6.0	57	93
D5407061	6.1	63	101
D5407062	6.2	63	101
D5407063	6.3	63	101
D5407064	6.4	63	101
D5407065	6.5	63	101
D5407068	6.8	69	109
D5407070	7.0	69	109
D5407075	7.5	69	109

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D5407080	8.0	75	117
D5407085	8.5	75	117
D5407090	9.0	81	125
D5407095	9.5	81	125
D5407100	10.0	87	133
D5407102	10.2	87	133
D5407105	10.5	87	133
D5407110	11.0	94	142
D5407115	11.5	94	142
D5407120	12.0	101	151
D5407130	13.0	101	151

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) are available on your request.

◎ : 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		20	
HB		125	190	250	270	300		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											200	280	250	350	320			550	630	400	550
Recommended	◎	◎	◎	◎												○	○				

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RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

D5405, D5407 SERIES

GENERAL CARBIDE DRILLS

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

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)		Vc	Parameter	Drill Diameter (mm)							
					1.0	2.0			3.0	4.0	5.0	6.0	8.0	10.0	12.0	13.0
P	1	Non-alloy steel	55	RPM	17510	8750	70	RPM	7430	5570	4460	3710	2790	2230	1860	1710
			FEED		0.02-0.03	0.02-0.04	FEED		0.03-0.05	0.03-0.06	0.04-0.07	0.05-0.08	0.07-0.10	0.08-0.12	0.10-0.14	0.12-0.16
	2		45	RPM	14320	7160	60	RPM	6370	4770	3820	3180	2390	1910	1590	1470
			FEED		0.02-0.03	0.02-0.04	FEED		0.03-0.05	0.03-0.06	0.04-0.07	0.05-0.08	0.07-0.10	0.08-0.12	0.10-0.14	0.12-0.16
	6	Low alloy steel	35	RPM	11140	5570	50	RPM	5310	3980	3180	2650	1990	1590	1330	1220
			FEED		0.02-0.03	0.02-0.04	FEED		0.03-0.05	0.03-0.06	0.04-0.07	0.05-0.08	0.07-0.10	0.08-0.12	0.10-0.14	0.12-0.16
M	12	Stainless steel	15	RPM	4770	2390	25	RPM	2650	1990	1590	1330	990	800	660	610
			FEED		0.01-0.02	0.01-0.03	FEED		0.02-0.04	0.02-0.05	0.03-0.06	0.04-0.07	0.06-0.09	0.07-0.11	0.08-0.12	0.09-0.13
K	15	Grey cast iron	25	RPM	7960	3980	45	RPM	4770	3580	2860	2390	1790	1430	1190	1100
			FEED		0.03-0.04	0.03-0.05	FEED		0.04-0.06	0.04-0.07	0.05-0.08	0.06-0.09	0.09-0.12	0.12-0.16	0.14-0.18	0.16-0.20
N	21	Aluminum-wrought alloy	100	RPM	31830	15920	140	RPM	14850	11140	8910	7430	5570	4460	3710	3430
			FEED		0.04-0.05	0.04-0.06	FEED		0.05-0.07	0.05-0.08	0.06-0.09	0.08-0.11	0.12-0.15	0.15-0.19	0.19-0.23	0.21-0.25
	22		90	RPM	28650	14320	120	RPM	12730	9550	7640	6370	4770	3820	3180	2940
			FEED		0.04-0.05	0.04-0.06	FEED		0.05-0.07	0.05-0.08	0.06-0.09	0.08-0.11	0.12-0.15	0.15-0.19	0.19-0.23	0.21-0.25
	23	Aluminum-cast, alloyed	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310	3980	3180	2650	2450
			FEED		0.04-0.05	0.04-0.06	FEED		0.05-0.07	0.05-0.08	0.06-0.09	0.08-0.11	0.12-0.15	0.15-0.19	0.19-0.23	0.21-0.25
	24		60	RPM	19100	9550	80	RPM	8490	6370	5090	4240	3180	2550	2120	1960
			FEED		0.04-0.05	0.04-0.06	FEED		0.05-0.07	0.05-0.08	0.06-0.09	0.08-0.11	0.12-0.15	0.15-0.19	0.19-0.23	0.21-0.25
S	36	Titanium Alloys	10	RPM	3180	1590	20	RPM	2120	1590	1270	1060	800	640	530	490
			FEED		0.01-0.02	0.01-0.03	FEED		0.02-0.04	0.02-0.05	0.03-0.06	0.04-0.07	0.06-0.09	0.07-0.11	0.08-0.12	0.09-0.13

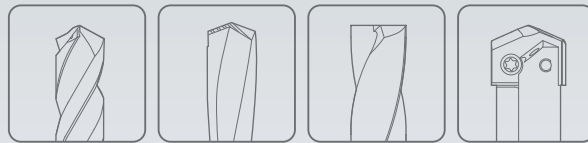
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