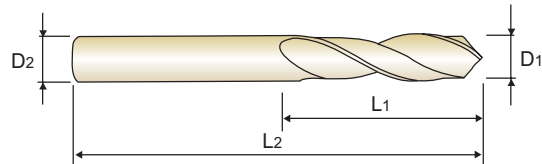
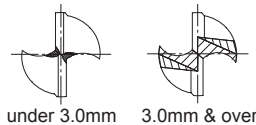


CARBIDE DRILLS **STUB**
VOLLHARTMETALL-SPIRALBOHRER **EXTRA KURZ**
Forets carbure, série extra-courte **EXTRA-COURTE**
PUNTE IN METALLO DURO **EXTRA CORTA**

► **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.



DIN 6539 CARBIDE 30° h6 h7 118° P.167

D₁=D₂

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂		D ₁	L ₁	L ₂
D5405010	1.0	6	26	D5405034	3.4	20	52
D5405011	1.1	7	28	D5405035	3.5	20	52
D5405012	1.2	8	30	D5405036	3.6	20	52
D5405013	1.3	8	30	D5405037	3.7	20	52
D5405014	1.4	9	32	D5405038	3.8	22	55
D5405015	1.5	9	32	D5405039	3.9	22	55
D5405016	1.6	10	34	D5405040	4.0	22	55
D5405017	1.7	10	34	D5405041	4.1	22	55
D5405018	1.8	11	36	D5405042	4.2	22	55
D5405019	1.9	11	36	D5405043	4.3	24	58
D5405020	2.0	12	38	D5405044	4.4	24	58
D5405021	2.1	12	38	D5405045	4.5	24	58
D5405022	2.2	13	40	D5405046	4.6	24	58
D5405023	2.3	13	40	D5405047	4.7	24	58
D5405024	2.4	14	43	D5405048	4.8	26	62
D5405025	2.5	14	43	D5405049	4.9	26	62
D5405026	2.6	14	43	D5405050	5.0	26	62
D5405027	2.7	16	46	D5405051	5.1	26	62
D5405028	2.8	16	46	D5405052	5.2	26	62
D5405029	2.9	16	46	D5405053	5.3	26	62
D5405030	3.0	16	46	D5405054	5.4	28	66
D5405031	3.1	18	49	D5405055	5.5	28	66
D5405032	3.2	18	49	D5405056	5.6	28	66
D5405033	3.3	18	49	D5405057	5.7	28	66

Unit : mm

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) 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	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	◎	◎	◎	◎												○					

CARBIDE DRILLS

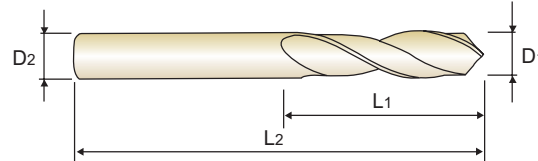
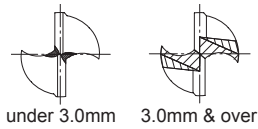
STUB

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

**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.

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DIN 6539
CARBIDE
30°
h6
h7
118°
P.167

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D5405058	5.8	28	66
D5405059	5.9	28	66
D5405060	6.0	28	66
D5405061	6.1	31	70
D5405062	6.2	31	70
D5405063	6.3	31	70
D5405064	6.4	31	70
D5405065	6.5	31	70
D5405066	6.6	31	70
D5405067	6.7	31	70
D5405068	6.8	34	74
D5405069	6.9	34	74
D5405070	7.0	34	74
D5405071	7.1	34	74
D5405072	7.2	34	74
D5405073	7.3	34	74
D5405074	7.4	34	74
D5405075	7.5	34	74
D5405076	7.6	37	79
D5405077	7.7	37	79
D5405078	7.8	37	79
D5405079	7.9	37	79
D5405080	8.0	37	79
D5405081	8.1	37	79
D5405082	8.2	37	79

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D5405083	8.3	37	79
D5405084	8.4	37	79
D5405085	8.5	37	79
D5405086	8.6	40	84
D5405087	8.7	40	84
D5405088	8.8	40	84
D5405089	8.9	40	84
D5405090	9.0	40	84
D5405091	9.1	40	84
D5405092	9.2	40	84
D5405093	9.3	40	84
D5405094	9.4	40	84
D5405095	9.5	40	84
D5405096	9.6	43	89
D5405097	9.7	43	89
D5405098	9.8	43	89
D5405099	9.9	43	89
D5405100	10.0	43	89
D5405102	10.2	43	89
D5405105	10.5	43	89
D5405110	11.0	47	95
D5405115	11.5	47	95
D5405120	12.0	51	102
D5405130	13.0	51	102

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) 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	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	◎	◎	◎	◎												○					



RECOMMENDED CUTTING CONDITIONS
EMPHOHLENE SCHNEIDPARAMETER

D5405, D5407 SERIES

GENERAL CARBIDE DRILLS

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	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
	2			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
	3		45	RPM	14320	7160	60	RPM	6370	4770	3820	3180	2390	1910	1590	1470
	4			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
	5															
	6	Low alloy steel	35	RPM	11140	5570	50	RPM	5310	3980	3180	2650	1990	1590	1330	1220
	7			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
	8															
	9															
	10		High alloyed steel, and tool steel													
	11															
M	12	Stainless steel	15	RPM	4770	2390	25	RPM	2650	1990	1590	1330	990	800	660	610
	13			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
	14															
K	15	Grey cast iron	25	RPM	7960	3980	45	RPM	4770	3580	2860	2390	1790	1430	1190	1100
	16			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
	17	Nodular cast iron														
	18															
	19															
20	Malleable cast iron															
N	21	Aluminum-wrought alloy	100	RPM	31830	15920	140	RPM	14850	11140	8910	7430	5570	4460	3710	3430
	22			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	90	RPM	28650	14320	120	RPM	12730	9550	7640	6370	4770	3820	3180	2940
	24			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
	25		70	RPM	22280	11140	100	RPM	10610	7960	6370	5310	3980	3180	2650	2450
	26			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
	27	Copper and Copper Alloys (Bronze / Brass)	60	RPM	19100	9550	80	RPM	8490	6370	5090	4240	3180	2550	2120	1960
	28			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
	29															
	30	Non Metallic Materials														
S	31	Heat Resistant Super Alloys														
	32															
	33															
	34															
	35															
	36	Titanium Alloys	10	RPM	3180	1590	20	RPM	2120	1590	1270	1060	800	640	530	490
	37			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
H	38	Hardened steel														
	39															
	40	Chilled Cast Iron														
	41	Hardened Cast Iron														

SELECTION GUIDE



SERIES

D5405

D5407

STANDARD

DIN6539

DIN338

LENGTH

STUB

JOBBER

SIZE MIN

D1.0

D1.0

SIZE MAX

D13.0

D13.0

PAGE

163

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SURFACE TREATMENT

Bright

**SOLID CARBIDE
GENERAL
CARBIDE DRILLS**

For General Purpose, DIN338 & DIN6539



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.167

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		