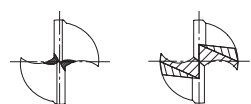


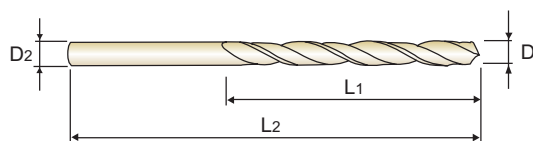
CARBIDE DRILLS**JOBBER**
 **VOLLHARTMETALL-SPIRALBOHRER**
 **Forets carbure, série courte**
 **PUNTE IN METALLO DURO**
KURZ**COURTE****CORTA**

► **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.



under 3.0mm 3.0mm & over

**D₁=D₂**

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D5407010	1.0	12	34
D5407011	1.1	14	36
D5407012	1.2	16	38
D5407013	1.3	16	38
D5407014	1.4	18	40
D5407015	1.5	18	40
D5407016	1.6	20	43
D5407017	1.7	20	43
D5407018	1.8	22	46
D5407019	1.9	22	46
D5407020	2.0	24	49
D5407021	2.1	24	49
D5407022	2.2	27	53
D5407023	2.3	27	53
D5407024	2.4	30	57
D5407025	2.5	30	57
D5407026	2.6	30	57
D5407027	2.7	33	61
D5407028	2.8	33	61
D5407029	2.9	33	61
D5407030	3.0	33	61
D5407031	3.1	36	65

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D5407032	3.2	36	65
D5407033	3.3	36	65
D5407034	3.4	39	70
D5407035	3.5	39	70
D5407036	3.6	39	70
D5407037	3.7	39	70
D5407038	3.8	43	75
D5407039	3.9	43	75
D5407040	4.0	43	75
D5407041	4.1	43	75
D5407042	4.2	43	75
D5407043	4.3	47	80
D5407044	4.4	47	80
D5407045	4.5	47	80
D5407046	4.6	47	80
D5407047	4.7	47	80
D5407048	4.8	52	86
D5407049	4.9	52	86
D5407050	5.0	52	86
D5407051	5.1	52	86
D5407052	5.2	52	86
D5407053	5.3	52	86

► 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						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	◎	◎	◎	◎												○							

CARBIDE DRILLS

 VOLLHARTMETALL-SPIRALBOHRER

 Forets carbure, série courte

 MPUNTE IN METALLO DURO

JOBBER

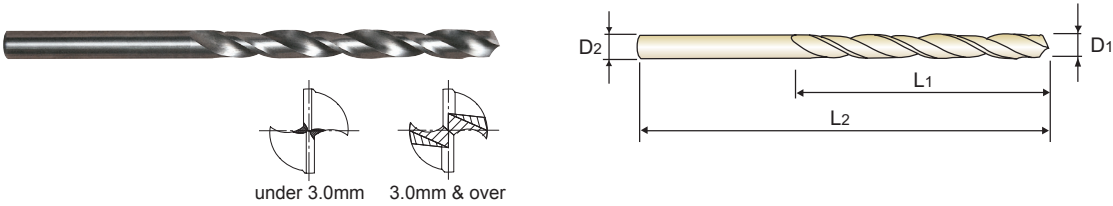
KURZ

COURTE

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 338

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
D5407054	5.4	57	93
D5407055	5.5	57	93
D5407056	5.6	57	93
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

EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂
D5407070	7.0	69	109
D5407075	7.5	69	109
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		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		
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
HRc											15	30	25	38	34			55	60	42
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400
Recommended	◎	◎	◎	◎												○				

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 FEED	17510 0.02-0.03	8750 0.02-0.04	70	RPM FEED	7430 0.03-0.05	5570 0.03-0.06	4460 0.04-0.07	3710 0.05-0.08	2790 0.07-0.10	2230 0.08-0.12	1860 0.10-0.14	1710 0.12-0.16
	2		45	RPM FEED	14320 0.02-0.03	7160 0.02-0.04	60	RPM FEED	6370 0.03-0.05	4770 0.03-0.06	3820 0.04-0.07	3180 0.05-0.08	2390 0.07-0.10	1910 0.08-0.12	1590 0.10-0.14	1470 0.12-0.16
	3															
	4															
	5															
	6	Low alloy steel	35	RPM FEED	11140 0.02-0.03	5570 0.02-0.04	50	RPM FEED	5310 0.03-0.05	3980 0.03-0.06	3180 0.04-0.07	2650 0.05-0.08	1990 0.07-0.10	1590 0.08-0.12	1330 0.10-0.14	1220 0.12-0.16
	7															
	8															
	9															
	10	High alloyed steel, and tool steel														
	11															
M	12	Stainless steel	15	RPM FEED	4770 0.01-0.02	2390 0.01-0.03	25	RPM FEED	2650 0.02-0.04	1990 0.02-0.05	1590 0.03-0.06	1330 0.04-0.07	990 0.06-0.09	800 0.07-0.11	660 0.08-0.12	610 0.09-0.13
	13															
	14															
K	15	Grey cast iron	25	RPM FEED	7960 0.03-0.04	3980 0.03-0.05	45	RPM FEED	4770 0.04-0.06	3580 0.04-0.07	2860 0.05-0.08	2390 0.06-0.09	1790 0.09-0.12	1430 0.12-0.16	1190 0.14-0.18	1100 0.16-0.20
	16															
	17	Nodular cast iron														
	18															
	19	Malleable cast iron														
	20															
N	21	Aluminum- wrought alloy	100	RPM FEED	31830 0.04-0.05	15920 0.04-0.06	140	RPM FEED	14850 0.05-0.07	11140 0.05-0.08	8910 0.06-0.09	7430 0.08-0.11	5570 0.12-0.15	4460 0.15-0.19	3710 0.19-0.23	3430 0.21-0.25
	22		90	RPM FEED	28650 0.04-0.05	14320 0.04-0.06	120	RPM FEED	12730 0.05-0.07	9550 0.05-0.08	7640 0.06-0.09	6370 0.08-0.11	4770 0.12-0.15	3820 0.15-0.19	3180 0.19-0.23	2940 0.21-0.25
	23	Aluminum-cast, alloyed	70	RPM FEED	22280 0.04-0.05	11140 0.04-0.06	100	RPM FEED	10610 0.05-0.07	7960 0.05-0.08	6370 0.06-0.09	5310 0.08-0.11	3980 0.12-0.15	3180 0.15-0.19	2650 0.19-0.23	2450 0.21-0.25
	24		60	RPM FEED	19100 0.04-0.05	9550 0.04-0.06	80	RPM FEED	8490 0.05-0.07	6370 0.05-0.08	5090 0.06-0.09	4240 0.08-0.11	3180 0.12-0.15	2550 0.15-0.19	2120 0.19-0.23	1960 0.21-0.25
	25															
	26	Copper and Copper Alloys (Bronze / Brass)														
	27															
	28															
	29	Non Metallic Materials														
	30															
S	31	Heat Resistant Super Alloys														
	32															
	33															
	34															
	35															
	36	Titanium Alloys	10	RPM FEED	3180 0.01-0.02	1590 0.01-0.03	20	RPM FEED	2120 0.02-0.04	1590 0.02-0.05	1270 0.03-0.06	1060 0.04-0.07	800 0.06-0.09	640 0.07-0.11	530 0.08-0.12	490 0.09-0.13
	37															
H	38	Hardened steel														
	39															
	40	Chilled Cast Iron														
	41	Hardened Cast Iron														

SELECTION GUIDE

HOLEMAKING
TOOLS

SERIES

STANDARD

LENGTH

SIZE MIN

SIZE MAX

PAGE

D5405

DIN6539

STUB

D1.0

D13.0

163

D5407

DIN338

JOBBER

D1.0

D13.0

165

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	Nodular cast iron	Pearlitic (Martensitic)		260	26		
	17		Ferritic		160	3		
	18	Malleable cast iron	Pearlitic		250	25		
	19		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			Annealed	250	25		
	34		Ni or Co Based	Cured	350	38		
	35	Titanium Alloys		Cast	320	34		
	36		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		

