

Y/G STRAIGHT SHANK DRILLS

D1100 SERIES

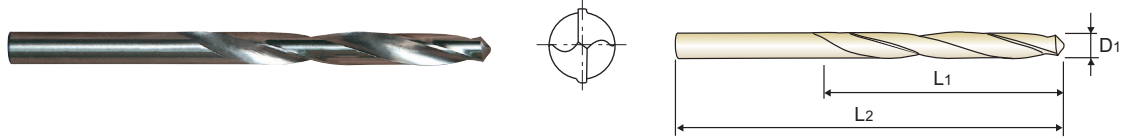
HSS, STRAIGHT SHANK TWIST DRILLS for BRASS/BRONZE JOBBER

- HSS, SPIRALBOHRER für MESSING/BRONZE mit ZYLINDERSCHAFT
- Forets HSS, queue cylindrique pour Laiton/Bronze, série courte
- PUNTE ELICOIDALI, GAMBO CILINDRICO PER OTTONE (HSS)

**KURZ
COURTE
CORTA**

► **Application** : Drilling hard, brittle and short-chip materials. i.e., brass, bronze, phosphor bronze and magnesium alloys.

► **Verwendung** : Zum Bohren von harten und spröden Werkstoffen wie Messing, Magnesium-Legierungen, Bronze, Phosphorbronze.



DIN 338

HSS

15~20°

h8

118°

P.278

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
D1100015	1.5	18	40	D1100041	4.1	43	75
D1100016	1.6	20	43	D1100042	4.2	43	75
D1100017	1.7	20	43	D1100043	4.3	47	80
D1100018	1.8	22	46	D1100044	4.4	47	80
D1100019	1.9	22	46	D1100045	4.5	47	80
D1100020	2.0	24	49	D1100046	4.6	47	80
D1100021	2.1	24	49	D1100047	4.7	47	80
D1100022	2.2	27	53	D1100048	4.8	52	86
D1100023	2.3	27	53	D1100049	4.9	52	86
D1100024	2.4	30	57	D1100050	5.0	52	86
D1100025	2.5	30	57	D1100051	5.1	52	86
D1100026	2.6	30	57	D1100052	5.2	52	86
D1100027	2.7	33	61	D1100053	5.3	52	86
D1100028	2.8	33	61	D1100054	5.4	57	93
D1100029	2.9	33	61	D1100055	5.5	57	93
D1100030	3.0	33	61	D1100056	5.6	57	93
D1100031	3.1	36	65	D1100057	5.7	57	93
D1100032	3.2	36	65	D1100058	5.8	57	93
D1100033	3.3	36	65	D1100059	5.9	57	93
D1100034	3.4	39	70	D1100060	6.0	57	93
D1100035	3.5	39	70	D1100061	6.1	63	101
D1100036	3.6	39	70	D1100062	6.2	63	101
D1100037	3.7	39	70	D1100063	6.3	63	101
D1100038	3.8	43	75	D1100064	6.4	63	101
D1100039	3.9	43	75	D1100065	6.5	63	101
D1100040	4.0	43	75	D1100066	6.6	63	101

► 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		
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	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																					
HRc	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
HB											15	30	25	38	34			55	60	42	55
Recommended									◎	◎											



STRAIGHT SHANK DRILLS

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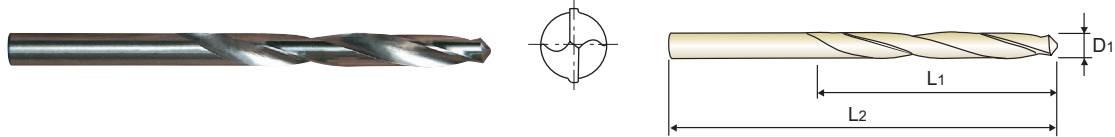
JOBBER

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Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
D1100067	6.7	63	101	D1100087	8.7	81	125
D1100068	6.8	69	109	D1100088	8.8	81	125
D1100069	6.9	69	109	D1100089	8.9	81	125
D1100070	7.0	69	109	D1100090	9.0	81	125
D1100071	7.1	69	109	D1100091	9.1	81	125
D1100072	7.2	69	109	D1100092	9.2	81	125
D1100073	7.3	69	109	D1100093	9.3	81	125
D1100074	7.4	69	109	D1100094	9.4	81	125
D1100075	7.5	69	109	D1100095	9.5	81	125
D1100076	7.6	75	117	D1100096	9.6	87	133
D1100077	7.7	75	117	D1100097	9.7	87	133
D1100078	7.8	75	117	D1100098	9.8	87	133
D1100079	7.9	75	117	D1100099	9.9	87	133
D1100080	8.0	75	117	D1100100	10.0	87	133
D1100081	8.1	75	117	D1100105	10.5	87	133
D1100082	8.2	75	117	D1100110	11.0	94	142
D1100083	8.3	75	117	D1100115	11.5	94	142
D1100084	8.4	75	117	D1100120	12.0	101	151
D1100085	8.5	75	117	D1100125	12.5	101	151
D1100086	8.6	81	125	D1100130	13.0	101	151

◎ : 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	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				
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	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
HB											15	30	25	38	34			55	60	42	55
Recommended									◎	◎											



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

D1100 SERIES

HSS, TWIST DRILLS for BRASS / BRONZE

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

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)							
					2.0	3.0	4.0	5.0	6.0	8.0	10.0	13.0
P	1	Non-alloy steel										
	2											
	3											
	4											
	5											
	6	Low alloy steel										
	7											
	8											
	9											
	10											
	11	High alloyed steel, and tool steel										
M	12	Stainless steel										
	13											
	14											
K	15	Grey cast iron										
	16											
	17	Nodular cast iron										
	18											
	19											
20	Malleable cast iron											
N	21	Aluminum-wrought alloy										
	22											
	23	Aluminum-cast, alloyed										
	24											
	25											
	26											
	27	Copper and Copper Alloys (Bronze / Brass)	45	RPM	7160	4770	3580	2860	2390	1790	1430	1100
	28		FEED	0.05~0.08	0.06~0.10	0.08~0.12	0.10~0.14	0.12~0.16	0.16~0.20	0.19~0.25	0.22~0.32	
	29	Non Metallic Materials	30	RPM	4770	3180	2390	1910	1590	1190	950	730
	30		FEED	0.02~0.05	0.03~0.06	0.04~0.08	0.05~0.09	0.07~0.11	0.09~0.13	0.10~0.16	0.11~0.21	
S	31	Heat Resistant Super Alloys										
	32											
	33											
	34											
	35	Titanium Alloys										
	36											
	37											
H	38	Hardened steel										
	39											
	40	Chilled Cast Iron										
	41	Hardened Cast Iron										

SELECTION GUIDE



SERIES

	D2107	D1107	D2105
STANDARD	DIN1897	DIN1897	DIN338
LENGTH	STUB	STUB	JOBBER
SIZE MIN	D1.0	D1.0	D1.0
SIZE MAX	D31.0	D13.0	D20.0
PAGE	234	238	241
SURFACE TREATMENT	Gold Coloring	Steam Tempered	Gold Coloring

HSS, HSS-E & HSSCo8 STRAIGHT SHANK DRILLS

For General Purpose (Soft & Tough Materials)



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.276

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		Ferritic	130		○	○	○
20	Malleable cast iron	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		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			

