STRAIGHT SHANK DRILLS

D1100 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS for BRASS/BRONZE

JOBBER

HSS, SPIRALBOHRER für MESSING/BRONZE mit ZYLINDERSCHAFT — *KURZ*

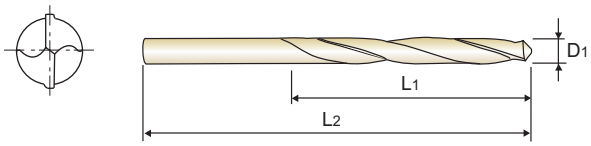
Forets HSS, queue cylindrique pour Laiton/Bronze, série courte — *COURTE*

PUNTE ELICOIDALI, GAMBO CILINDRICO PER OTTONE (HSS) — *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 | N 15~20° | h8 | 118° | Bright

p.A263

Recommended ToolHolder — Plain Shank / ER COLLET CHUCK

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100015	1.5	18	40
D1100016	1.6	20	43
D1100017	1.7	20	43
D1100018	1.8	22	46
D1100019	1.9	22	46
D1100020	2.0	24	49
D1100021	2.1	24	49
D1100022	2.2	27	53
D1100023	2.3	27	53
D1100024	2.4	30	57
D1100025	2.5	30	57
D1100026	2.6	30	57
D1100027	2.7	33	61
D1100028	2.8	33	61
D1100029	2.9	33	61
D1100030	3.0	33	61
D1100031	3.1	36	65
D1100032	3.2	36	65
D1100033	3.3	36	65
D1100034	3.4	39	70
D1100035	3.5	39	70
D1100036	3.6	39	70
D1100037	3.7	39	70
D1100038	3.8	43	75
D1100039	3.9	43	75
D1100040	4.0	43	75

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100041	4.1	43	75
D1100042	4.2	43	75
D1100043	4.3	47	80
D1100044	4.4	47	80
D1100045	4.5	47	80
D1100046	4.6	47	80
D1100047	4.7	47	80
D1100048	4.8	52	86
D1100049	4.9	52	86
D1100050	5.0	52	86
D1100051	5.1	52	86
D1100052	5.2	52	86
D1100053	5.3	52	86
D1100054	5.4	57	93
D1100055	5.5	57	93
D1100056	5.6	57	93
D1100057	5.7	57	93
D1100058	5.8	57	93
D1100059	5.9	57	93
D1100060	6.0	57	93
D1100061	6.1	63	101
D1100062	6.2	63	101
D1100063	6.3	63	101
D1100064	6.4	63	101
D1100065	6.5	63	101
D1100066	6.6	63	101

▶ 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	400 Rm	1050 Rm	550	630	400	550
Recommended							◎	◎													

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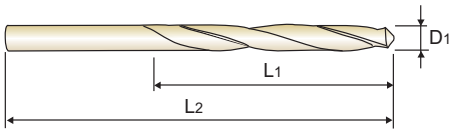

DIN 338 | HSS | N 15~20° | h8 | 118° | Bright

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Recommended ToolHolder — Plain Shank / ER COLLET CHUCK

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100067	6.7	63	101
D1100068	6.8	69	109
D1100069	6.9	69	109
D1100070	7.0	69	109
D1100071	7.1	69	109
D1100072	7.2	69	109
D1100073	7.3	69	109
D1100074	7.4	69	109
D1100075	7.5	69	109
D1100076	7.6	75	117
D1100077	7.7	75	117
D1100078	7.8	75	117
D1100079	7.9	75	117
D1100080	8.0	75	117
D1100081	8.1	75	117
D1100082	8.2	75	117
D1100083	8.3	75	117
D1100084	8.4	75	117
D1100085	8.5	75	117
D1100086	8.6	81	125

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100087	8.7	81	125
D1100088	8.8	81	125
D1100089	8.9	81	125
D1100090	9.0	81	125
D1100091	9.1	81	125
D1100092	9.2	81	125
D1100093	9.3	81	125
D1100094	9.4	81	125
D1100095	9.5	81	125
D1100096	9.6	87	133
D1100097	9.7	87	133
D1100098	9.8	87	133
D1100099	9.9	87	133
D1100100	10.0	87	133
D1100105	10.5	87	133
D1100110	11.0	94	142
D1100115	11.5	94	142
D1100120	12.0	101	151
D1100125	12.5	101	151
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	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	400 Rm	1050 Rm	550	630	400	550
Recommended							◎	◎													

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YG-1 CO., LTD.

STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

D1100 SERIES — HSS, TWIST DRILLS for BRASS / BRONZE

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

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)								
					1.5	2.0	3.0	4.0	5.0	6.0	8.0	10.0	13.0
N	27	Copper and Copper Alloys (Bronze / Brass)	45	RPM	9550	7160	4770	3580	2860	2390	1790	1430	1100
				FEED	0.03-0.06	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
	28		30	RPM	6370	4770	3180	2390	1910	1590	1190	950	730
				FEED	0.01-0.03	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

D1106 SERIES — HSS, TWIST DRILLS for ALUMINUM

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

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)								
					1.5	2.0	3.0	4.0	5.0	6.0	8.0	10.0	13.0
N	21	Aluminum-wrought alloy	50	RPM	10610	7960	5310	3980	3180	2650	1990	1590	1220
				FEED	0.03-0.06	0.05-0.08	0.06-0.10	0.08-0.12	0.10-0.14	0.14-0.18	0.14-0.20	0.19-0.25	0.25-0.35
	22		50	RPM	10610	7960	5310	3980	3180	2650	1990	1590	1220
				FEED	0.03-0.06	0.05-0.08	0.06-0.10	0.08-0.12	0.10-0.14	0.14-0.18	0.14-0.20	0.19-0.25	0.25-0.35
	23	Aluminum-cast, alloyed	40	RPM	8490	6370	4240	3180	2550	2120	1590	1270	980
				FEED	0.03-0.06	0.05-0.08	0.06-0.10	0.08-0.12	0.10-0.14	0.14-0.18	0.14-0.20	0.19-0.25	0.25-0.35
	24		30	RPM	6370	4770	3180	2390	1910	1590	1190	950	730
				FEED	0.01-0.04	0.03-0.06	0.03-0.07	0.04-0.08	0.05-0.09	0.04-0.10	0.06-0.12	0.10-0.16	0.12-0.22