



STRAIGHT SHANK DRILLS

DL608 SERIES

HSS-E, MORSE TAPER SHANK TWIST DRILLS for DEEP HOLES

LONG

● HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT

LANG

● Forets HSS-E, queue cône morse pour perçage profond, série longue

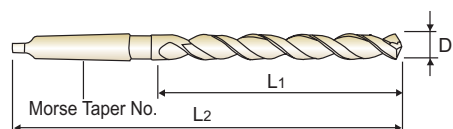
LONGUE

● PUNTE IN HSS - E, ATTACCO CONO MORSE PER FORI NON - STOP

LUNGA

► **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, special aluminum or magnesium alloys.

► **Verwendung** : Zum Bohren von legiertem und unlegiertem stahl, Grauguß, Temperguß, Sphäroguß, Druckguß, Alu-Legierungen kurzspanend, Bronze, Messing zäh, Neusilber.

DIN
341

HSS-E

38°

1~3

h8

130°



P.280-281

► **DH100**
worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	No. of Morse Taper
DL608130	13.0	134	215	1
DL608135	13.5	142	223	1
DL608140	14.0	142	223	1
DL608145	14.5	147	245	2
DL608150	15.0	147	245	2
DL608155	15.5	153	251	2
DL608160	16.0	153	251	2
DL608165	16.5	159	257	2
DL608170	17.0	159	257	2
DL608175	17.5	165	263	2
DL608180	18.0	165	263	2
DL608185	18.5	171	269	2
DL608190	19.0	171	269	2

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	No. of Morse Taper
DL608195	19.5	177	275	2
DL608200	20.0	177	275	2
DL608210	21.0	184	282	2
DL608220	22.0	191	289	2
DL608230	23.0	198	296	2
DL608240	24.0	206	327	3
DL608250	25.0	206	327	3
DL608260	26.0	214	335	3
DL608270	27.0	222	343	3
DL608280	28.0	222	343	3
DL608290	29.0	230	351	3
DL608300	30.0	230	351	3

◎ : 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	60	100		75	90	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																						

◎ : Excellent ○ : Good

STRAIGHT
SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

DL510, DL508, DL509,
DL505, DL504, DL608 SERIES

HSS-E, DH100 WORM
PATTERN DRILLS

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

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)				
					2.0	3.0	4.0	6.0	8.0
P	1	Non-alloy steel	30	RPM FEED	4770 0.02~0.04	3180 0.03~0.05	2390 0.04~0.06	1590 0.05~0.08	1190 0.10~0.13
	2		25	RPM FEED	3980 0.02~0.04	2650 0.03~0.05	1990 0.04~0.06	1330 0.05~0.08	990 0.10~0.13
	3		20	RPM FEED	3180 0.02~0.04	2120 0.03~0.05	1590 0.04~0.06	1060 0.05~0.08	800 0.10~0.13
	4		20	RPM FEED	3180 0.01~0.02	2120 0.01~0.03	1590 0.02~0.04	1060 0.02~0.05	800 0.03~0.06
	5								
	6	Low alloy steel	25	RPM FEED	3980 0.02~0.04	2650 0.03~0.05	1990 0.04~0.06	1330 0.05~0.08	990 0.10~0.13
	7		20	RPM FEED	3180 0.02~0.04	2120 0.03~0.05	1590 0.04~0.06	1060 0.05~0.08	800 0.10~0.13
	8		20	RPM FEED	3180 0.01~0.02	2120 0.01~0.03	1590 0.02~0.04	1060 0.02~0.05	800 0.03~0.06
	9								
	10	High alloyed steel, and tool steel	15	RPM FEED	2390 0.02~0.04	1590 0.03~0.05	1190 0.04~0.06	800 0.05~0.08	600 0.10~0.13
	11								
M	12	Stainless steel							
	13								
	14								
K	15	Grey cast iron	30	RPM FEED	4770 0.02~0.04	3180 0.03~0.05	2390 0.04~0.06	1590 0.05~0.08	1190 0.10~0.13
	16		25	RPM FEED	3980 0.01~0.02	2650 0.01~0.03	1990 0.02~0.04	1330 0.02~0.05	990 0.03~0.06
	17	Nodular cast iron	30	RPM FEED	4770 0.02~0.04	3180 0.03~0.05	2390 0.04~0.06	1590 0.05~0.08	1190 0.10~0.13
	18		20	RPM FEED	3180 0.01~0.02	2120 0.01~0.03	1590 0.02~0.04	1060 0.02~0.05	800 0.03~0.06
	19	Malleable cast iron	25	RPM FEED	3980 0.02~0.04	2650 0.03~0.05	1990 0.04~0.06	1330 0.05~0.08	990 0.10~0.13
	20		20	RPM FEED	3180 0.01~0.02	2120 0.01~0.03	1590 0.02~0.04	1060 0.02~0.05	800 0.03~0.06
N	21	Aluminum- wrought alloy							
	22								
	23	Aluminum-cast, alloyed							
	24								
	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	Titanium Alloys							
	36								
	37								
H	38	Hardened steel							
	39								
	40	Chilled Cast Iron							
	41	Hardened Cast Iron							

**STRAIGHT
SHANK DRILLS**
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

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

VDI 3323	Parameter	Drill Diameter (mm)					
		10.0	13.0	16.0	18.0	20.0	30.0
1	RPM	950	730	600	530	480	320
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
2	RPM	800	610	500	440	400	270
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
3	RPM	640	490	400	350	320	210
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
4	RPM	640	490	400	350	320	210
	FEED	0.03~0.06	0.04~0.10	0.06~0.12	0.08~0.14	0.10~0.16	0.12~0.18
5							
6	RPM	800	610	500	440	400	270
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.2	0.19~0.25	0.22~0.28
7	RPM	640	490	400	350	320	210
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.2	0.19~0.25	0.22~0.28
8	RPM	640	490	400	350	320	210
	FEED	0.03~0.06	0.04~0.10	0.06~0.12	0.08~0.14	0.10~0.16	0.12~0.18
9							
10	RPM	480	370	300	270	240	160
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
11							
12							
13							
14							
15	RPM	950	730	600	530	480	320
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
16	RPM	800	610	500	440	400	270
	FEED	0.03~0.06	0.04~0.10	0.06~0.12	0.08~0.14	0.10~0.16	0.12~0.18
17	RPM	950	730	600	530	480	320
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
18	RPM	640	490	400	350	320	210
	FEED	0.03~0.06	0.04~0.10	0.06~0.12	0.08~0.14	0.10~0.16	0.12~0.18
19	RPM	800	610	500	440	400	270
	FEED	0.11~0.15	0.11~0.17	0.12~0.18	0.14~0.20	0.19~0.25	0.22~0.28
20	RPM	640	490	400	350	320	210
	FEED	0.03~0.06	0.04~0.10	0.06~0.12	0.08~0.14	0.10~0.16	0.12~0.18
21							
22							
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41							

SELECTION GUIDE



SERIES

DH100
DL510

DH100
DL508

DH100
DL509

STANDARD

DIN1897

DIN338

DIN340

LENGTH

STUB

JOBBER

LONG

SIZE MIN

D2.0

D2.0

D2.0

SIZE MAX

D20.0

D16.0

D12.0

PAGE

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SURFACE TREATMENT

Bright

HSS-E
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	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		Duroplastic, Fiber Reinforced Plastic						
	30	Non Metallic Materials	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			

i-ONE
DRILLSi-DREAM
DRILLS

DREAM DRILLS -GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

DREAM
DRILLS
-CFRP

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

COUNTERBORES

TECHNICAL DATA