



Leading Through Innovation

**SUPER HSS**

**SUPER-GP  
DRILLS**

**SUPER-GP DRILLS**

- All Applications Regardless of Machining Conditions; Good or Poor
- Für alle Anwendungen unabhängig von den Bearbeitungsbedingungen; gut oder schlecht

SELECTION GUIDE



SERIES	<b>DSH105</b>
STANDARD	<b>DIN 338</b>
LENGTH	<b>JOBBER</b>
SIZE MIN	D2.0
SIZE MAX	D13.0
PAGE	<b>A211</b>
SURFACE TREATMENT	Vap

**SUPER HSS  
SUPER-GP DRILLS**

All Applications Regardless of Machining Conditions; Good or Poor



Please visit  
[globalyg1.com/mat](http://globalyg1.com/mat)  
for material search

⊙ : Excellent ○ : Good

Recommended cutting conditions : p.A214



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc		
<b>P</b>	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	○
	<b>M</b>	11		Quenched & Tempered	325	35	○
12		Stainless steel	Ferritic / Martensitic Annealed	200	15	○	
13			Martensitic Quenched & Tempered	240	23	○	
14		Austenitic	180	10	○		
<b>K</b>	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	○		
<b>N</b>	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)	CuZn, CuSnZn (Brass)	90		
	27		CuSn, lead-free copper and electrolytic copper	100			
	28	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic			○	
	29		Rubber, Wood, etc.				
	30						
<b>S</b>	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		
<b>H</b>	36	Titanium Alloys	Pure Titanium	400 Rm		○	
	37		Alpha + Beta Alloys Hardened	1050 Rm			
<b>H</b>	38	Hardened steel	Hardened	550	55		
	39		Hardened	630	60		
	40		Chilled Cast Iron	Cast	400	42	
	41		Hardened Cast Iron	Hardened	550	55	

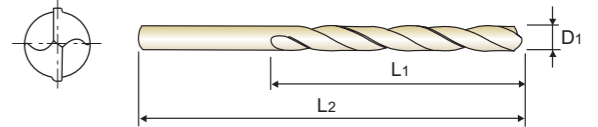


SUPER HSS, SUPER-GP DRILLS (DIN 338)

- SUPER HSS, SUPER-GP DRILLS (DIN 338)
- Forets SUPER-GP Super HSS, queue cylindrique (DIN 338)
- PUNTA SUPER-GP DRILL, IN SUPER-HSS, GAMBO CILINDRICO (DIN 338)

- ▶ Surface treatment: Steam Tempered (Black Oxide Finish)
- ▶ Applications: Excellent tool performance in steels, cast iron, alloy steels and malleable cast iron.
- ▶ Special HSS improves toughness, wear resistance as well as extends dramatically the tool life.
- ▶ All applications regardless of machine condition: Good or Poor.

- ▶ Oberflächenbehandlung: Dampfgehärtet (Schwarze Oxydschicht)
- ▶ Anwendungen: Ausgezeichnete Leistung bei Stählen, Gusseisen, legierten Stählen und Temperguss.
- ▶ Spezial-HSS verbessert Zähigkeit, Verschleißfestigkeit und verlängert drastisch die Standzeit.
- ▶ Alle Anwendungen unabhängig vom Maschinenzustand: Gut oder schlecht.



DIN 338 SUPER HSS 30° h8 118° Vap p.A214

Plain Shank Recommended Toolholder ER COLLET CHUCK

EDP No.	Drill Diameter		Overall Length
	D1	L1	
* DSH105020	2.0	24	49
* DSH105021	2.1	24	49
* DSH105022	2.2	27	53
* DSH105023	2.3	27	53
* DSH105024	2.4	30	57
* DSH105025	2.5	30	57
* DSH105026	2.6	30	57
* DSH105027	2.7	33	61
* DSH105028	2.8	33	61
* DSH105029	2.9	33	61
* DSH105030	3.0	33	61
* DSH105031	3.1	36	65
* DSH105032	3.2	36	65
* DSH105033	3.3	36	65
* DSH105034	3.4	39	70
* DSH105035	3.5	39	70
* DSH105036	3.6	39	70
* DSH105037	3.7	39	70
* DSH105038	3.8	43	75
* DSH105039	3.9	43	75
* DSH105040	4.0	43	75
* DSH105041	4.1	43	75
* DSH105042	4.2	43	75
* DSH105043	4.3	47	80

EDP No.	Drill Diameter		Overall Length
	D1	L1	
* DSH105044	4.4	47	80
* DSH105045	4.5	47	80
* DSH105046	4.6	47	80
* DSH105047	4.7	47	80
* DSH105048	4.8	52	86
* DSH105049	4.9	52	86
* DSH105050	5.0	52	86
* DSH105051	5.1	52	86
* DSH105052	5.2	52	86
* DSH105053	5.3	52	86
* DSH105054	5.4	57	93
* DSH105055	5.5	57	93
* DSH105056	5.6	57	93
* DSH105057	5.7	57	93
* DSH105058	5.8	57	93
* DSH105059	5.9	57	93
* DSH105060	6.0	57	93
* DSH105061	6.1	63	101
* DSH105062	6.2	63	101
* DSH105063	6.3	63	101
* DSH105064	6.4	63	101
* DSH105065	6.5	63	101
* DSH105066	6.6	63	101
* DSH105067	6.7	63	101

\* 10pcs per package  
\*\* 5pcs per package

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ISO	<b>P</b>									<b>M</b>				<b>K</b>						
	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
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	<b>N</b>				<b>S</b>					<b>H</b>												
	Aluminum-wrought alloy	Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	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											15	30	25	38	34			55	60	42	55	
HRc											200	280	250	350	320		400 Rm	1050 Rm	550	630	400	550
HB	60	100	75	90	130	110	90	100														
Recommended	○	○	○						○							○						

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**JOBBER**

**KURZ  
COURTE  
CORTA**

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DIN 338 SUPER HSS 30° h8 118° Vap p.A214

Plain Shank Recommended ToolHolder ER COLLET CHUCK

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
* DSH105069	6.9	69	109	** DSH105093	9.3	81	125
* DSH105070	7.0	69	109	** DSH105094	9.4	81	125
* DSH105071	7.1	69	109	** DSH105095	9.5	81	125
* DSH105072	7.2	69	109	** DSH105096	9.6	87	133
* DSH105073	7.3	69	109	** DSH105097	9.7	87	133
* DSH105074	7.4	69	109	** DSH105098	9.8	87	133
* DSH105075	7.5	69	109	** DSH105099	9.9	87	133
* DSH105076	7.6	75	117	** DSH105100	10.0	87	133
* DSH105077	7.7	75	117	** DSH105101	10.1	87	133
* DSH105078	7.8	75	117	** DSH105102	10.2	87	133
* DSH105079	7.9	75	117	** DSH105103	10.3	87	133
* DSH105080	8.0	75	117	** DSH105104	10.4	87	133
* DSH105081	8.1	75	117	** DSH105105	10.5	87	133
* DSH105082	8.2	75	117	** DSH105106	10.6	87	133
* DSH105083	8.3	75	117	** DSH105107	10.7	94	142
** DSH105084	8.4	75	117	** DSH105108	10.8	94	142
** DSH105085	8.5	75	117	** DSH105109	10.9	94	142
** DSH105086	8.6	81	125	** DSH105110	11.0	94	142
** DSH105087	8.7	81	125	** DSH105111	11.1	94	142
** DSH105088	8.8	81	125	** DSH105112	11.2	94	142
** DSH105089	8.9	81	125	** DSH105113	11.3	94	142
** DSH105090	9.0	81	125	** DSH105114	11.4	94	142
** DSH105091	9.1	81	125	** DSH105115	11.5	94	142

\* 10pcs per package  
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▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO Material Description	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	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 Material Description	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	400 Rm	1050 Rm	550	630	400	550								
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								

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DIN 338 SUPER HSS 30° h8 118° Vap p.A214

Plain Shank Recommended ToolHolder ER COLLET CHUCK

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
** DSH105117	11.7	94	142	** DSH105125	12.5	101	151
** DSH105118	11.8	94	142	** DSH105126	12.6	101	151
** DSH105119	11.9	101	151	** DSH105127	12.7	101	151
** DSH105120	12.0	101	151	** DSH105128	12.8	101	151
** DSH105121	12.1	101	151	** DSH105129	12.9	101	151
** DSH105122	12.2	101	151	** DSH105130	13.0	101	151
** DSH105123	12.3	101	151				

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ISO Material Description	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	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 Material Description	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	400 Rm	1050 Rm	550	630	400	550								
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								

**DSH105** SERIES

**SUPER HSS, SUPER-GP DRILLS (DIN 338)**

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

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)						
					2.0	3.0	4.0	6.0	8.0	10.0	13.0
P	1	Non-alloy steel	30	RPM	4770	3180	2390	1590	1190	950	730
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
			25	RPM	3980	2650	1990	1330	990	800	610
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
	20	RPM	3180	2120	1590	1060	800	640	490		
		FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17		
	20	RPM	3180	2120	1590	1060	800	640	490		
		FEED	0.01-0.02	0.01-0.03	0.02-0.04	0.02-0.05	0.03-0.06	0.03-0.06	0.04-0.10		
	6	Low alloy steel	25	RPM	3980	2650	1990	1330	990	800	610
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
20			RPM	3180	2120	1590	1060	800	640	490	
			FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17	
20	RPM	3180	2120	1590	1060	800	640	490			
	FEED	0.01-0.02	0.01-0.03	0.02-0.04	0.02-0.05	0.03-0.06	0.03-0.06	0.04-0.10			
10	High alloyed steel, and tool steel	15	RPM	2390	1590	1190	800	600	480	370	
			FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17	
M	12	Stainless steel	20	RPM	3180	2120	1590	1060	800	640	490
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
			15	RPM	2390	1590	1190	800	600	480	370
15	13	Stainless steel	15	RPM	2390	1590	1190	800	600	480	370
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
14	Stainless steel	10	RPM	1590	1060	800	530	400	320	240	
			FEED	0.01-0.02	0.01-0.03	0.02-0.04	0.02-0.05	0.03-0.06	0.03-0.06	0.04-0.10	
K	15	Grey cast iron	30	RPM	4770	3180	2390	1590	1190	950	730
				FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17
	25	Grey cast iron	25	RPM	3980	2650	1990	1330	990	800	610
				FEED	0.01-0.02	0.01-0.03	0.02-0.04	0.02-0.05	0.03-0.06	0.03-0.06	0.04-0.10
17	Nodular cast iron	30	RPM	4770	3180	2390	1590	1190	950	730	
			FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17	
19	Malleable cast iron	25	RPM	3980	2650	1990	1330	990	800	610	
			FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.1-0.13	0.11-0.15	0.11-0.17	
N	21	Aluminum-wrought alloy	55	RPM	8750	5840	4380	2920	2190	1750	1350
				FEED	0.03-0.06	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22
	22	Aluminum-wrought alloy	55	RPM	8750	5840	4380	2920	2190	1750	1350
				FEED	0.03-0.06	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22
23	Aluminum-cast, alloyed	40	RPM	6370	4240	3180	2120	1590	1270	980	
			FEED	0.03-0.06	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22	
29	Non Metallic Materials	20	RPM	3180	2120	1590	1060	800	640	490	
			FEED	0.02-0.04	0.03-0.05	0.04-0.06	0.05-0.08	0.10-0.13	0.11-0.15	0.11-0.17	
S	36	Titanium Alloys	10	RPM	1590	1060	800	530	400	320	240
				FEED	0.01-0.03	0.02-0.04	0.03-0.05	0.04-0.07	0.05-0.08	0.05-0.09	0.06-0.10