

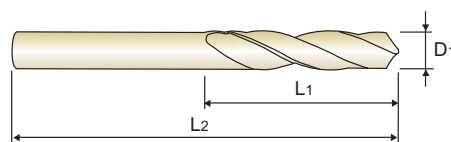
HSS, STRAIGHT SHANK TWIST DRILLS

HSS, SPIRALBOHRER mit ZYLINDERSCHAFT

STUB
EXTRA KURZ

- **Surface treatment:** Steam Tempered(Black Oxide Finish)
Bright Finish under 2mm
- **Application** : Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes.

- **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
Helle Beschaffenheit unter 2 mm
- **Verwendung** : Sonderbohrer zum Einsatz auf Automaten und Revolverdrehbänken.
Geeignet für den Einsatz in Handbohrmaschinen zum Bohren von dünnwandigem Material.


DIN
1897

HSS

N
20~30°

h8

118°



P.188

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1107010	1.0	6	26	D1107036	3.6	20	52
D1107011	1.1	7	28	D1107037	3.7	20	52
D1107012	1.2	8	30	D1107937	3.75	20	52
D1107912	1.25	8	30	D1107038	3.8	22	55
D1107013	1.3	8	30	D1107039	3.9	22	55
D1107014	1.4	9	32	D1107040	4.0	22	55
D1107015	1.5	9	32	D1107041	4.1	22	55
D1107016	1.6	9	34	D1107042	4.2	22	55
D1107017	1.7	10	34	D1107942	4.25	22	55
D1107917	1.75	11	36	D1107043	4.3	24	58
D1107018	1.8	11	36	D1107044	4.4	24	58
D1107019	1.9	11	36	D1107045	4.5	24	58
D1107020	2.0	12	38	D1107046	4.6	24	58
D1107021	2.1	12	38	D1107047	4.7	24	58
D1107022	2.2	13	40	D1107947	4.75	24	58
D1107922	2.25	13	40	D1107048	4.8	26	62
D1107023	2.3	13	40	D1107049	4.9	26	62
D1107024	2.4	14	43	D1107050	5.0	26	62
D1107025	2.5	14	43	D1107051	5.1	26	62
D1107026	2.6	14	43	D1107052	5.2	26	62
D1107027	2.7	16	46	D1107952	5.25	26	62
D1107927	2.75	16	46	D1107053	5.3	26	62
D1107028	2.8	16	46	D1107054	5.4	28	66
D1107029	2.9	16	46	D1107055	5.5	28	66
D1107030	3.0	16	46	D1107056	5.6	28	66
D1107031	3.1	18	49	D1107057	5.7	28	66
D1107032	3.2	18	49	D1107957	5.75	28	66
D1107932	3.25	18	49	D1107058	5.8	28	66
D1107033	3.3	18	49	D1107059	5.9	28	66
D1107034	3.4	20	52	D1107060	6.0	28	66
D1107035	3.5	20	52	D1107061	6.1	31	70

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○	○	○		



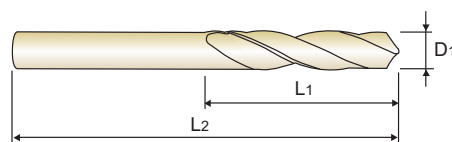
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Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
D1107062	6.2	31	70	D1107087	8.7	40	84
D1107962	6.25	31	70	D1107987	8.75	40	84
D1107063	6.3	31	70	D1107088	8.8	40	84
D1107064	6.4	31	70	D1107089	8.9	40	84
D1107065	6.5	31	70	D1107090	9.0	40	84
D1107066	6.6	31	70	D1107091	9.1	40	84
D1107067	6.7	31	70	D1107092	9.2	40	84
D1107967	6.75	34	74	D1107992	9.25	40	84
D1107068	6.8	34	74	D1107093	9.3	40	84
D1107069	6.9	34	74	D1107094	9.4	40	84
D1107070	7.0	34	74	D1107095	9.5	40	84
D1107071	7.1	34	74	D1107096	9.6	43	89
D1107072	7.2	34	74	D1107097	9.7	43	89
D1107972	7.25	34	74	D1107997	9.75	43	89
D1107073	7.3	34	74	D1107098	9.8	43	89
D1107074	7.4	34	74	D1107099	9.9	43	89
D1107075	7.5	34	74	D1107100	10.0	43	89
D1107076	7.6	37	79	D1107802	10.25	43	89
D1107077	7.7	37	79	D1107105	10.5	43	89
D1107977	7.75	37	79	D1107807	10.75	47	95
D1107078	7.8	37	79	D1107110	11.0	47	95
D1107079	7.9	37	79	D1107812	11.25	47	95
D1107080	8.0	37	79	D1107115	11.5	47	95
D1107081	8.1	37	79	D1107817	11.75	47	95
D1107082	8.2	37	79	D1107120	12.0	51	102
D1107982	8.25	37	79	D1107822	12.25	51	102
D1107083	8.3	37	79	D1107125	12.5	51	102
D1107084	8.4	37	79	D1107827	12.75	51	102
D1107085	8.5	37	79	D1107130	13.0	51	102
D1107086	8.6	40	84				

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○	○	○		



HSS & HSS 8% COBALT DRILLS, DIN1897, DIN338, DIN340, DIN1869 HSS & HSSCo8 SPIRALBOHRER, DIN 1897, DIN 338, DIN 340, DIN 1869

D1107, D2107, D1105, D1125, D2105, DL105, D2104, D1121 SERIES

Unit : mm

WORK MATERIAL	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		STAINLESS STEELS		TITANIUM ALLOYS	
HARDNESS			~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38		HRC23			
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		830 N/mm ²		410 N/mm ²	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S	N	S
2.5	3380	0.025	2550	0.025	1900	0.015	2380	0.020	1400	0.015	2550	0.025	1400	0.020
3	2700	0.050	2000	0.050	1500	0.025	1880	0.050	1100	0.020	2000	0.050	1100	0.025
5	1700	0.063	1280	0.063	960	0.038	1190	0.063	700	0.025	1280	0.063	700	0.038
8	1050	0.130	780	0.130	590	0.076	730	0.130	430	0.038	780	0.130	430	0.076
11	750	0.150	560	0.150	425	0.076	520	0.180	310	0.050	560	0.150	430	0.076
19	440	0.230	330	0.230	255	0.130	300	0.230	180	0.050	330	0.230	180	0.130
31	260	0.280	195	0.280	145	0.180	180	0.180	107	0.076	195	0.280	107	0.180

WORK MATERIAL	TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS	
HARDNESS			~ HRC21									
STRENGTH	~ 270 N/mm ²		~ 800 N/mm ²									
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S
2.5	3180	0.042	2250	0.025	6400	0.038	8600	0.038	6400	0.038	3380	0.025
3	2500	0.050	2000	0.050	5000	0.063	6800	0.063	5000	0.063	2700	0.050
5	1590	0.063	1280	0.063	3200	0.076	4300	0.076	3200	0.076	1700	0.063
8	970	0.130	780	0.130	2000	0.180	2600	0.180	2000	0.180	1050	0.130
11	700	0.180	560	0.150	1400	0.200	1900	0.200	1400	0.200	750	0.150
19	440	0.230	330	0.230	820	0.300	1100	0.300	820	0.300	440	0.230
31	240	0.300	195	0.280	490	0.380	660	0.380	490	0.380	260	0.280

N = R.P.M
S = Feed per Revolution (mm/rev.)

HSS-E, TWIST DRILLS for HEAVY DUTY, DIN338 HSS-E, SPIRALBOHRER für HOHELEISTUNGEN, DIN 338

DL109 SERIES

Unit : mm

WORK MATERIAL	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		STAINLESS STEELS		CAST IRON	
HARDNESS			~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38		HRC23		HRC21	
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		830 N/mm ²		800 N/mm ²	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S	N	S
2	5000	0.03	3750	0.03	2850	0.02	3500	0.02	2070	0.02	5000	0.03	5000	0.03
3	3750	0.04	2810	0.04	2150	0.02	2625	0.04	1560	0.02	3750	0.04	3750	0.04
4	2500	0.06	1870	0.06	1450	0.03	1750	0.06	1050	0.02	2500	0.06	2500	0.06
5	2085	0.07	1560	0.07	1205	0.04	1460	0.07	870	0.03	2085	0.07	2085	0.07
6	1670	0.08	1250	0.08	960	0.05	1170	0.09	690	0.03	1670	0.08	1670	0.08
7	1460	0.10	1095	0.10	840	0.06	1025	0.11	605	0.03	1460	0.10	1460	0.10
8	1250	0.13	940	0.13	720	0.08	880	0.13	520	0.04	1250	0.13	1250	0.13
9	1125	0.14	845	0.14	645	0.08	790	0.15	465	0.04	1125	0.14	1125	0.14
10	1000	0.14	750	0.14	570	0.08	700	0.16	410	0.05	1000	0.14	1000	0.14
11	925	0.15	685	0.15	525	0.08	640	0.18	380	0.05	925	0.15	925	0.15
12	850	0.16	620	0.16	480	0.08	580	0.19	350	0.05	850	0.16	850	0.16
13	785	0.17	575	0.17	445	0.09	540	0.20	325	0.05	785	0.17	785	0.17

N = R.P.M
S = Feed per Revolution (mm/rev.)