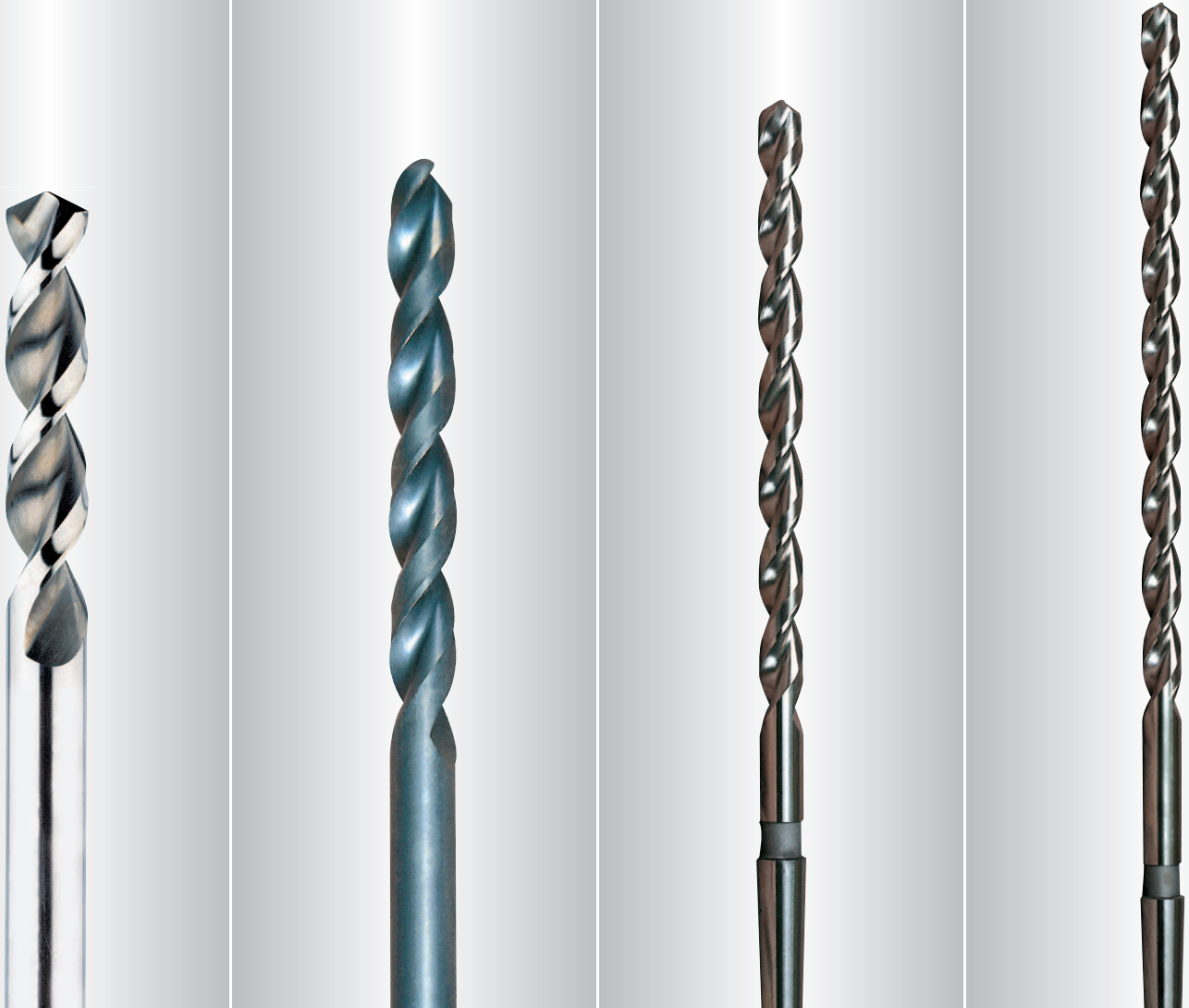


# HSS



Being the best through innovation



# WORM PATTERN DRILLS










## FLACHNUTBOHRER

- Drilling Deep Holes
- Zum Tieflochbohren


# SELECTION GUIDE

## DH100, DH50-WORM PATTERN DRILLS

DH100-For Deep hole drilling in general steels

ITEM	MODEL	DESCRIPTION	SIZE		PAGE	
			MIN	MAX		
<b>DH100 DL510</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM B HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>STUB EXTRA KURZ</i>	D2.0	D20.0	<b>142</b>
<b>DH100 DL508</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM B HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>JOBBER KURZ</i>	D2.0	D16.0	<b>144</b>
<b>DH100 DL509</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM B HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>LONG LANG</i>	D2.0	D12.0	<b>146</b>
<b>DH100 DL505</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>JOBBER KURZ</i>	D2.0	D13.0	<b>148</b>
<b>DH100 DL504</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>LONG LANG</i>	D2.0	D13.0	<b>150</b>
<b>DH100 DL600</b>		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D2.0	D13.0	<b>151</b>
<b>DH100 DL608</b>		HSS-E, TAPER SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT	<i>LONG LANG</i>	D13.0	D30.0	<b>152</b>
<b>DH100 DL609</b>		HSS-E, TAPER SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D13.0	D31.0	<b>153</b>
<b>DH100 DL610</b>		HSS-E, TAPER SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D13.0	D30.0	<b>154</b>

DH50-For Deep hole drilling in aluminum

<b>DH50 DL507</b>		HSS-E, STRAIGHT SHANK DRILLS for ALUMINIUM DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D2.0	D13.0	<b>155</b>
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN						<b>157</b>

# HSS-E WORM PATTERN DRILLS

◎ : Excellent  
○ : Good

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

**DL510** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES *STUB* HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT *EXTRA KURZ*

► **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 1897
HSS-E
42°
h8
130°
P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL510020	2.0	12	38	DL510047	4.7	24	58
DL510021	2.1	12	38	DL510048	4.8	26	62
DL510022	2.2	13	40	DL510049	4.9	26	62
DL510023	2.3	13	40	DL510050	5.0	26	62
DL510024	2.4	14	43	DL510051	5.1	26	62
DL510025	2.5	14	43	DL510052	5.2	26	62
DL510026	2.6	14	43	DL510053	5.3	26	66
DL510027	2.7	16	46	DL510054	5.4	28	66
DL510028	2.8	16	46	DL510055	5.5	28	66
DL510029	2.9	16	46	DL510056	5.6	28	66
DL510030	3.0	16	46	DL510057	5.7	28	66
DL510031	3.1	18	49	DL510058	5.8	28	66
DL510032	3.2	18	49	DL510059	5.9	28	66
DL510033	3.3	18	49	DL510060	6.0	28	66
DL510034	3.4	20	52	DL510061	6.1	31	70
DL510035	3.5	20	52	DL510062	6.2	31	70
DL510036	3.6	20	52	DL510063	6.3	31	70
DL510037	3.7	20	52	DL510064	6.4	31	70
DL510038	3.8	22	55	DL510065	6.5	31	70
DL510039	3.9	22	55	DL510066	6.6	31	70
DL510040	4.0	22	55	DL510067	6.7	31	70
DL510041	4.1	22	55	DL510068	6.8	34	74
DL510042	4.2	22	55	DL510069	6.9	34	74
DL510043	4.3	24	58	DL510070	7.0	34	74
DL510044	4.4	24	58	DL510071	7.1	34	74
DL510045	4.5	24	58	DL510072	7.2	34	74
DL510046	4.6	24	58	DL510073	7.3	34	74

◎ : 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~							
◎	◎				○	○			○		



# WORM PATTERN DRILLS

**DL510** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES *STUB*

*STUB*

## HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT *EXTRA KURZ*

*EXTRA KURZ*

► **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.



### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL510074	7.4	34	74	DL510100	10.0	43	89
DL510075	7.5	34	74	DL510102	10.2	43	89
DL510076	7.6	37	79	DL510105	10.5	43	89
DL510077	7.7	37	79	DL510108	10.8	47	95
DL510078	7.8	37	79	DL510110	11.0	47	95
DL510079	7.9	37	79	DL510112	11.2	47	95
DL510080	8.0	37	79	DL510115	11.5	47	95
DL510081	8.1	37	79	DL510118	11.8	47	95
DL510082	8.2	37	79	DL510120	12.0	51	102
DL510083	8.3	37	79	DL510125	12.5	51	102
DL510084	8.4	37	79	DL510130	13.0	51	102
DL510085	8.5	37	79	DL510135	13.5	54	107
DL510086	8.6	40	84	DL510140	14.0	54	107
DL510087	8.7	40	84	DL510145	14.5	56	111
DL510088	8.8	40	84	DL510150	15.0	56	111
DL510089	8.9	40	84	DL510155	15.5	58	115
DL510090	9.0	40	84	DL510160	16.0	58	115
DL510091	9.1	40	84	DL510165	16.5	60	119
DL510092	9.2	40	84	DL510170	17.0	60	119
DL510093	9.3	40	84	DL510175	17.5	62	123
DL510094	9.4	40	84	DL510180	18.0	62	123
DL510095	9.5	40	84	DL510185	18.5	64	127
DL510096	9.6	43	89	DL510190	19.0	64	127
DL510097	9.7	43	89	DL510195	19.5	66	131
DL510098	9.8	43	89	DL510200	20.0	66	131
DL510099	9.9	43	89				

◎ : 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~							
◎	◎				○	○			○		

# WORM PATTERN DRILLS

**DL508** SERIES

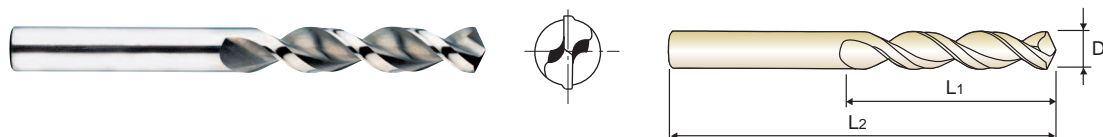
## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**JOBBER**

**KURZ**

► **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 338
HSS-E
42°
h8
130°
P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL508020	2.0	24	49	DL508047	4.7	47	80
DL508021	2.1	24	49	DL508048	4.8	52	86
DL508022	2.2	27	53	DL508049	4.9	52	86
DL508023	2.3	27	53	DL508050	5.0	52	86
DL508024	2.4	30	57	DL508051	5.1	52	86
DL508025	2.5	30	57	DL508052	5.2	52	86
DL508026	2.6	30	57	DL508053	5.3	52	86
DL508027	2.7	33	61	DL508054	5.4	57	93
DL508028	2.8	33	61	DL508055	5.5	57	93
DL508029	2.9	33	61	DL508056	5.6	57	93
DL508030	3.0	33	61	DL508057	5.7	57	93
DL508031	3.1	36	65	DL508058	5.8	57	93
DL508032	3.2	36	65	DL508059	5.9	57	93
DL508033	3.3	36	65	DL508060	6.0	57	93
DL508034	3.4	39	70	DL508061	6.1	63	101
DL508035	3.5	39	70	DL508062	6.2	63	101
DL508036	3.6	39	70	DL508063	6.3	63	101
DL508037	3.7	39	70	DL508064	6.4	63	101
DL508038	3.8	43	75	DL508065	6.5	63	101
DL508039	3.9	43	75	DL508066	6.6	63	101
DL508040	4.0	43	75	DL508067	6.7	63	101
DL508041	4.1	43	75	DL508068	6.8	69	109
DL508042	4.2	43	75	DL508069	6.9	69	109
DL508043	4.3	47	80	DL508070	7.0	69	109
DL508044	4.4	47	80	DL508071	7.1	69	109
DL508045	4.5	47	80	DL508072	7.2	69	109
DL508046	4.6	47	80	DL508073	7.3	69	109

◎ : 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~							
◎	◎				○	○			○		





# WORM PATTERN DRILLS

**DL508** SERIES

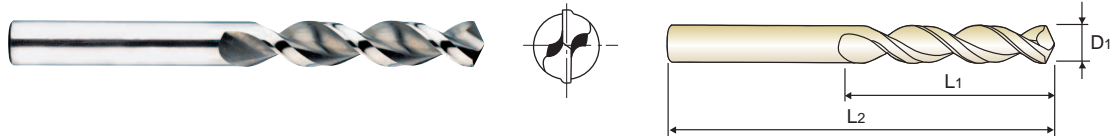
## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**JOBBER**

**KURZ**

► **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 338

HSS-E

42°

h8

130°



P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL508074	7.4	69	109	DL508095	9.5	81	125
DL508075	7.5	69	109	DL508096	9.6	87	133
DL508076	7.6	75	117	DL508097	9.7	87	133
DL508077	7.7	75	117	DL508098	9.8	87	133
DL508078	7.8	75	117	DL508099	9.9	87	133
DL508079	7.9	75	117	DL508100	10.0	87	133
DL508080	8.0	75	117	DL508102	10.2	87	133
DL508081	8.1	75	117	DL508105	10.5	87	133
DL508082	8.2	75	117	DL508110	11.0	94	142
DL508083	8.3	75	117	DL508112	11.2	94	142
DL508084	8.4	75	117	DL508115	11.5	94	142
DL508085	8.5	75	117	DL508120	12.0	101	151
DL508086	8.6	81	125	DL508125	12.5	101	151
DL508087	8.7	81	125	DL508130	13.0	101	151
DL508088	8.8	81	125	DL508135	13.5	108	160
DL508089	8.9	81	125	DL508140	14.0	108	160
DL508090	9.0	81	125	DL508145	14.5	114	169
DL508091	9.1	81	125	DL508150	15.0	114	169
DL508092	9.2	81	125	DL508155	15.5	120	178
DL508093	9.3	81	125	DL508160	16.0	120	178
DL508094	9.4	81	125				

◎ : 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~							
◎	◎				○	○			○		

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

NC-SPOTTING DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

WORM PATTERN DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA

# WORM PATTERN DRILLS

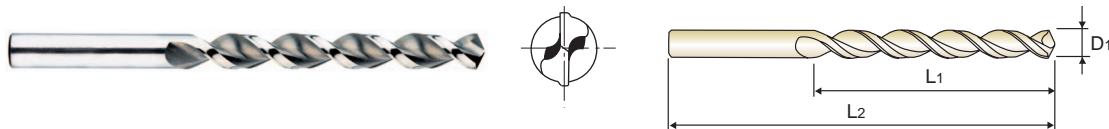
**DL509** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**LONG LANG**

► **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 340
HSS-E
42°
h8
130°
P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL509020	2.0	56	85	DL509047	4.7	82	126
DL509021	2.1	56	85	DL509048	4.8	87	132
DL509022	2.2	59	90	DL509049	4.9	87	132
DL509023	2.3	59	90	DL509050	5.0	87	132
DL509024	2.4	62	95	DL509051	5.1	87	132
DL509025	2.5	62	95	DL509052	5.2	87	132
DL509026	2.6	62	95	DL509053	5.3	87	132
DL509027	2.7	66	100	DL509054	5.4	91	139
DL509028	2.8	66	100	DL509055	5.5	91	139
DL509029	2.9	66	100	DL509056	5.6	91	139
DL509030	3.0	66	100	DL509057	5.7	91	139
DL509031	3.1	69	106	DL509058	5.8	91	139
DL509032	3.2	69	106	DL509059	5.9	91	139
DL509033	3.3	69	106	DL509060	6.0	91	139
DL509034	3.4	73	112	DL509061	6.1	97	148
DL509035	3.5	73	112	DL509062	6.2	97	148
DL509036	3.6	73	112	DL509063	6.3	97	148
DL509037	3.7	73	112	DL509064	6.4	97	148
DL509038	3.8	78	119	DL509065	6.5	97	148
DL509039	3.9	78	119	DL509066	6.6	97	148
DL509040	4.0	78	119	DL509067	6.7	97	148
DL509041	4.1	78	119	DL509068	6.8	102	156
DL509042	4.2	78	119	DL509069	6.9	102	156
DL509043	4.3	82	126	DL509070	7.0	102	156
DL509044	4.4	82	126	DL509071	7.1	102	156
DL509045	4.5	82	126	DL509072	7.2	102	156
DL509046	4.6	82	126	DL509073	7.3	102	156

◎ : 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~							
◎	◎				○	○			○		





# WORM PATTERN DRILLS

**DL509** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**LONG LANG**

► **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 340

HSS-E

42°

h8

130°



P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL509074	7.4	102	156	DL509090	9.0	115	175
DL509075	7.5	102	156	DL509091	9.1	115	175
DL509076	7.6	109	165	DL509092	9.2	115	175
DL509077	7.7	109	165	DL509093	9.3	115	175
DL509078	7.8	109	165	DL509094	9.4	115	175
DL509079	7.9	109	165	DL509095	9.5	115	175
DL509080	8.0	109	165	DL509096	9.6	121	184
DL509081	8.1	109	165	DL509097	9.7	121	184
DL509082	8.2	109	165	DL509098	9.8	121	184
DL509083	8.3	109	165	DL509099	9.9	121	184
DL509084	8.4	109	165	DL509100	10.0	121	184
DL509085	8.5	109	165	DL509102	10.2	121	184
DL509086	8.6	115	175	DL509105	10.5	121	184
DL509087	8.7	115	175	DL509110	11.0	128	195
DL509088	8.8	115	175	DL509115	11.5	128	195
DL509089	8.9	115	175	DL509120	12.0	134	205

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~							
◎	◎				○	○			○		

◎ : Excellent ○ : Good

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

NC-SPOTTING DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

WORM PATTERN DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA

# WORM PATTERN DRILLS

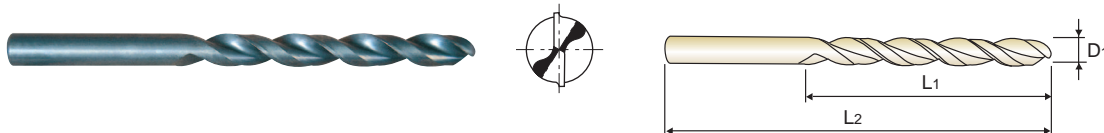
**DL505** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**JOBBER**  
**KURZ**

► **Surface treatment** : Steam Tempered(Black Oxide Finish)  
► **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, special aluminum or magnesium alloys.

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



DIN 338 HSS-E 38° h8 130° P.157

► **DH100**  
worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL505020	2.0	24	49	DL505047	4.7	47	80
DL505021	2.1	24	49	DL505048	4.8	52	86
DL505022	2.2	27	53	DL505049	4.9	52	86
DL505023	2.3	27	53	DL505050	5.0	52	86
DL505024	2.4	30	57	DL505051	5.1	52	86
DL505025	2.5	30	57	DL505052	5.2	52	86
DL505026	2.6	30	57	DL505053	5.3	52	86
DL505027	2.7	33	61	DL505054	5.4	57	93
DL505028	2.8	33	61	DL505055	5.5	57	93
DL505029	2.9	33	61	DL505056	5.6	57	93
DL505030	3.0	33	61	DL505057	5.7	57	93
DL505031	3.1	36	65	DL505058	5.8	57	93
DL505032	3.2	36	65	DL505059	5.9	57	93
DL505033	3.3	36	65	DL505060	6.0	57	93
DL505034	3.4	39	70	DL505061	6.1	63	101
DL505035	3.5	39	70	DL505062	6.2	63	101
DL505036	3.6	39	70	DL505063	6.3	63	101
DL505037	3.7	39	70	DL505064	6.4	63	101
DL505038	3.8	43	75	DL505065	6.5	63	101
DL505039	3.9	43	75	DL505066	6.6	63	101
DL505040	4.0	43	75	DL505067	6.7	63	101
DL505041	4.1	43	75	DL505068	6.8	69	109
DL505042	4.2	43	75	DL505069	6.9	69	109
DL505043	4.3	47	80	DL505070	7.0	69	109
DL505044	4.4	47	80	DL505071	7.1	69	109
DL505045	4.5	47	80	DL505072	7.2	69	109
DL505046	4.6	47	80	DL505073	7.3	69	109

► TiN(DN505), TiCN(DX505) and TiAlN(DT505) are available on your request.

◎ : 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~							
◎	◎				○	○			○		



# WORM PATTERN DRILLS

**DL505** SERIES

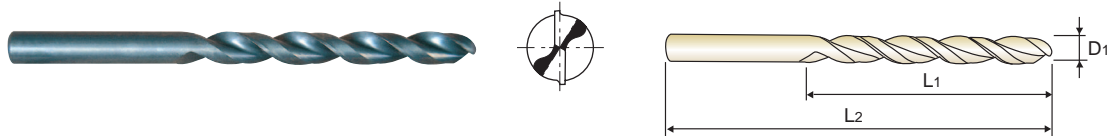
## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**JOBBER**

**KURZ**

- ▶ **Surface treatment** : Steam Tempered(Black Oxide Finish)
- ▶ **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, special aluminum or magnesium alloys.

- ▶ **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
- ▶ **Verwendung** : Zum Bohren von legiertem und unlegiertem stahl, Grauguß, Temperguß, Sphäroguß, Druckguß, Alu-Legierungen kurzspanend, Bronze, Messing zäh, Neusilber.



DIN 338

HSS-E

38°

h8

130°



P.157

### ▶ DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter	Flute Length L1	Overall Length L2
	D1				D1		
DL505074	7.4	69	109	DL505094	9.4	81	125
DL505075	7.5	69	109	DL505095	9.5	81	125
DL505076	7.6	75	117	DL505096	9.6	87	133
DL505077	7.7	75	117	DL505097	9.7	87	133
DL505078	7.8	75	117	DL505098	9.8	87	133
DL505079	7.9	75	117	DL505099	9.9	87	133
DL505080	8.0	75	117	DL505100	10.0	87	133
DL505081	8.1	75	117	DL505101	10.1	87	133
DL505082	8.2	75	117	DL505102	10.2	87	133
DL505083	8.3	75	117	DL505105	10.5	87	133
DL505084	8.4	75	117	DL505108	10.8	94	142
DL505085	8.5	75	117	DL505110	11.0	94	142
DL505086	8.6	81	125	DL505112	11.2	94	142
DL505087	8.7	81	125	DL505115	11.5	94	142
DL505088	8.8	81	125	DL505118	11.8	94	142
DL505089	8.9	81	125	DL505120	12.0	101	151
DL505090	9.0	81	125	DL505122	12.2	101	151
DL505091	9.1	81	125	DL505125	12.5	101	151
DL505092	9.2	81	125	DL505128	12.8	101	151
DL505093	9.3	81	125	DL505130	13.0	101	151

▶ TiN(DN505), TiCN(DX505) and TiAlN(DT505) are available on your request.

◎ : 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~							
◎	◎				○	○			○		

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

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WORM PATTERN DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

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CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA

# WORM PATTERN DRILLS

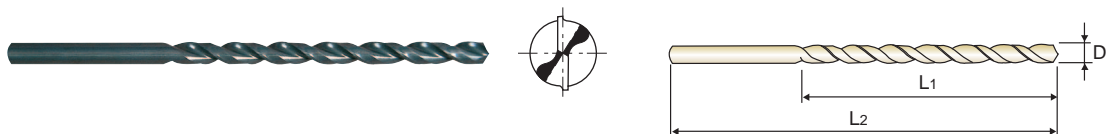
**DL504** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**LONG LANG**

► **Surface treatment** : Steam Tempered(Black Oxide Finish)  
► **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, special aluminum or magnesium alloys.

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



### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL504020	2.0	56	85	DL504052	5.2	87	132
DL504021	2.1	56	85	DL504055	5.5	91	139
DL504022	2.2	59	90	DL504058	5.8	91	139
DL504023	2.3	59	90	DL504060	6.0	91	139
DL504024	2.4	62	95	DL504062	6.2	97	148
DL504025	2.5	62	95	DL504065	6.5	97	148
DL504026	2.6	62	95	DL504068	6.8	102	156
DL504027	2.7	66	100	DL504070	7.0	102	156
DL504028	2.8	66	100	DL504072	7.2	102	156
DL504029	2.9	66	100	DL504075	7.5	102	156
DL504030	3.0	66	100	DL504078	7.8	109	165
DL504031	3.1	69	106	DL504080	8.0	109	165
DL504032	3.2	69	106	DL504082	8.2	109	165
DL504033	3.3	69	106	DL504085	8.5	109	165
DL504034	3.4	73	112	DL504090	9.0	115	175
DL504035	3.5	73	112	DL504095	9.5	115	175
DL504036	3.6	73	112	DL504098	9.8	121	184
DL504037	3.7	73	112	DL504100	10.0	121	184
DL504038	3.8	78	119	DL504105	10.5	121	184
DL504039	3.9	78	119	DL504110	11.0	128	195
DL504040	4.0	78	119	DL504115	11.5	128	195
DL504042	4.2	78	119	DL504120	12.0	134	205
DL504045	4.5	82	126	DL504125	12.5	134	205
DL504048	4.8	87	132	DL504130	13.0	134	205
DL504050	5.0	87	132				

► TiN(DN504), TiCN(DX504) and TiAIN(DT504) are available on your request.

◎ : 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~							
◎	◎				○	○			○		



# WORM PATTERN DRILLS

**DL600** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

**EXTRA LONG**

**ÜBERLANG**

► **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.



### ► **DH100** worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL600020	2.0	85	125	DL600070	7.0	155	225
DL600922	2.25	90	135	DL600972	7.25	155	225
DL600025	2.5	95	140	DL600075	7.5	155	225
DL600927	2.75	100	150	DL600977	7.75	165	240
DL600030	3.0	100	150	DL600080	8.0	165	240
DL600932	3.25	105	155	DL600982	8.25	165	240
DL600035	3.5	115	165	DL600085	8.5	165	240
DL600937	3.75	115	165	DL600987	8.75	175	250
DL600040	4.0	120	175	DL600090	9.0	175	250
DL600942	4.25	120	175	DL600992	9.25	175	250
DL600045	4.5	125	185	DL600095	9.5	175	250
DL600947	4.75	125	185	DL600997	9.75	185	265
DL600050	5.0	135	195	DL600100	10.0	185	265
DL600952	5.25	135	195	DL600105	10.5	185	265
DL600055	5.5	140	205	DL600110	11.0	195	280
DL600957	5.75	140	205	DL600115	11.5	195	280
DL600060	6.0	140	205	DL600120	12.0	205	295
DL600962	6.25	150	215	DL600125	12.5	205	295
DL600065	6.5	150	215	DL600130	13.0	205	295
DL600967	6.75	155	225				

► TiN(DN600), TiCN(DX600) and TiAlN(DT600) are available on your request.

◎ : 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~							
◎	◎				○	○			○		

# WORM PATTERN DRILLS

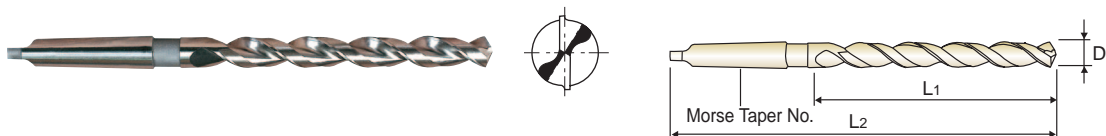
**DL608** SERIES

## HSS-E, MORSE TAPER SHANK TWIST DRILLS for DEEP HOLES HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT

**LONG**  
**LANG**

► **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.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length L1	Overall Length L2	No. of Morse Taper	EDP No.	Drill Diameter	Flute Length L1	Overall Length L2	No. of Morse Taper
	D1					D1			
DL608130	13.0	134	215	1	DL608195	19.5	177	275	2
DL608135	13.5	142	223	1	DL608200	20.0	177	275	2
DL608140	14.0	142	223	1	DL608210	21.0	184	282	2
DL608145	14.5	147	245	2	DL608220	22.0	191	289	2
DL608150	15.0	147	245	2	DL608230	23.0	198	296	2
DL608155	15.5	153	251	2	DL608240	24.0	206	327	3
DL608160	16.0	153	251	2	DL608250	25.0	206	327	3
DL608165	16.5	159	257	2	DL608260	26.0	214	335	3
DL608170	17.0	159	257	2	DL608270	27.0	222	343	3
DL608175	17.5	165	263	2	DL608280	28.0	222	343	3
DL608180	18.0	165	263	2	DL608290	29.0	230	351	3
DL608185	18.5	171	269	2	DL608300	30.0	230	351	3
DL608190	19.0	171	269	2					

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~							
◎	◎				○	○			○		

◎ : Excellent ○ : Good





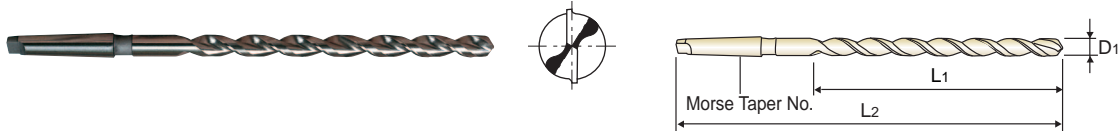
# WORM PATTERN DRILLS

**DL609** SERIES

## HSS-E, MORSE TAPER SHANK TWIST DRILLS for DEEP HOLES *EXTRA LONG* HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT *ÜBERLANG*

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

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



### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length L1	Overall Length		No. of Morse Taper	EDP No.	Drill Diameter	Flute Length L1	Overall Length		No. of Morse Taper
	D1		L2	L2			D1		L2	L2	
DL609130	13.0	205	310	1	DL609220	22.0	270	405	2		
DL609135	13.5	220	325	1	DL609225	22.5	270	405	2		
DL609140	14.0	220	325	1	DL609230	23.0	270	405	2		
DL609145	14.5	220	340	2	DL609235	23.5	270	425	3		
DL609150	15.0	220	340	2	DL609240	24.0	290	440	3		
DL609155	15.5	230	355	2	DL609245	24.5	290	440	3		
DL609160	16.0	230	355	2	DL609250	25.0	290	440	3		
DL609165	16.5	230	355	2	DL609255	25.5	290	440	3		
DL609170	17.0	230	355	2	DL609260	26.0	290	440	3		
DL609175	17.5	245	370	2	DL609265	26.5	290	440	3		
DL609180	18.0	245	370	2	DL609270	27.0	305	460	3		
DL609185	18.5	245	370	2	DL609275	27.5	305	460	3		
DL609190	19.0	245	370	2	DL609280	28.0	305	460	3		
DL609195	19.5	260	385	2	DL609285	28.5	305	460	3		
DL609200	20.0	260	385	2	DL609290	29.0	305	460	3		
DL609205	20.5	260	385	2	DL609295	29.5	305	460	3		
DL609210	21.0	260	385	2	DL609300	30.0	305	460	3		
DL609215	21.5	270	405	2	DL609310	31.0	320	480	3		

◎ : 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~							
◎	◎				○	○			○		

# WORM PATTERN DRILLS

## DL610 SERIES

### HSS-E, MORSE TAPER SHANK TWIST DRILLS for DEEP HOLES EXTRA LONG HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT ÜBERLANG

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

► **Verwendung** : Standardbohrer zum Bohren extrem tiefer Löcher  
Zum Bohren von legiertem und unlegiertem Stahl, Grauguß, Temperguß, Sphäroguß, Druckguß, Alu-Legierungen kurzspanend, Bronze, Messing zäh, Neusilber.



DIN 1870/2
HSS-E
38°
1~3
h8
130°
P.157

### ► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	No. of Morse Taper	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	No. of Morse Taper
DL610130	13.0	260	395	1	DL610220	22.0	345	515	2
DL610135	13.5	275	410	1	DL610225	22.5	345	515	2
DL610140	14.0	275	410	1	DL610230	23.0	345	515	2
DL610145	14.5	275	425	2	DL610235	23.5	345	535	3
DL610150	15.0	275	425	2	DL610240	24.0	365	555	3
DL610155	15.5	295	445	2	DL610245	24.5	365	555	3
DL610160	16.0	295	445	2	DL610250	25.0	365	555	3
DL610165	16.5	295	445	2	DL610255	25.5	365	555	3
DL610170	17.0	295	445	2	DL610260	26.0	365	555	3
DL610175	17.5	310	465	2	DL610265	26.5	365	555	3
DL610180	18.0	310	465	2	DL610270	27.0	385	580	3
DL610185	18.5	310	465	2	DL610275	27.5	385	580	3
DL610190	19.0	310	465	2	DL610280	28.0	385	580	3
DL610195	19.5	325	490	2	DL610285	28.5	385	580	3
DL610200	20.0	325	490	2	DL610290	29.0	385	580	3
DL610205	20.5	325	490	2	DL610295	29.5	385	580	3
DL610210	21.0	325	490	2	DL610300	30.0	385	580	3
DL610215	21.5	345	515	2					

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~							
◎	◎				○	○			○		

◎ : Excellent ○ : Good

### HSS-E, STRAIGHT SHANK TWIST DRILLS for ALUMINUM DEEP HOLES *EXTRA LONG* HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT *ÜBERLANG*

► **Application** : Drilling deep holes in aluminum and its alloys, silumin, zinc, refined copper, wood and other soft synthetic materials.

► **Verwendung** : Zum Bohren von weichen und langspannenden Werkstoffen wie Alu-Legierungen, Zink, Kupfer, Kunststoffe und Holz.



HSS-E
W 38°
h8
118°
P.157

### ► DH50 worm pattern drills

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL507120	2.0	40	75	DL507430	3.0	100	200
DL507121	2.1	40	75	DL507433	3.3	100	200
DL507220	2.0	50	100	DL507435	3.5	100	200
DL507221	2.1	50	100	DL507440	4.0	100	200
DL507225	2.5	50	100	DL507442	4.2	100	200
DL507227	2.7	50	100	DL507445	4.5	100	200
DL507230	3.0	50	100	DL507450	5.0	100	200
DL507233	3.3	50	100	DL507453	5.3	100	200
DL507235	3.5	50	100	DL507455	5.5	100	200
DL507320	2.0	75	150	DL507460	6.0	100	200
DL507321	2.1	75	150	DL507465	6.5	100	200
DL507325	2.5	75	150	DL507468	6.8	100	200
DL507327	2.7	75	150	DL507470	7.0	100	200
DL507330	3.0	75	150	DL507475	7.5	100	200
DL507333	3.3	75	150	DL507480	8.0	100	200
DL507335	3.5	75	150	DL507485	8.5	100	200
DL507340	4.0	75	150	DL507488	8.8	100	200
DL507342	4.2	75	150	DL507490	9.0	100	200
DL507345	4.5	75	150	DL507495	9.5	100	200
DL507350	5.0	75	150	DL507700	10.0	100	200
DL507353	5.3	75	150	DL507540	4.0	150	250
DL507355	5.5	75	150	DL507542	4.2	150	250
DL507360	6.0	75	150	DL507545	4.5	150	250
				DL507550	5.0	150	250
				DL507553	5.3	150	250

◎ : 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~							
◎	◎				○	◎			○		

- CARBIDE
- HSS
- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -INOX
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HARDENED STEELS
- GENERAL CARBIDE DRILLS
- NC-SPOTTING DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- WORM PATTERN DRILLS
- STRAIGHT SHANK DRILLS
- TAPER SHANK DRILLS
- NC-SPOTTING DRILLS
- CENTER DRILLS
- SPADE DRILLS
- TECHNICAL DATA

# WORM PATTERN DRILLS

**DL507** SERIES

## HSS-E, STRAIGHT SHANK TWIST DRILLS for ALUMINUM DEEP HOLES *EXTRA LONG* HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT *ÜBERLANG*

► **Application** : Drilling deep holes in aluminum and its alloys, silumin, zinc, refined copper, wood and other soft synthetic materials.

► **Verwendung** : Zum Bohren von weichen und langspanenden Werkstoffen wie Alu-Legierungen, Zink, Kupfer, Kunststoffe und Holz.



### ► DH50 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
DL507555	5.5	150	250	DL507650	5.0	180	300
DL507560	6.0	150	250	DL507653	5.3	180	300
DL507565	6.5	150	250	DL507655	5.5	180	300
DL507568	6.8	150	250	DL507660	6.0	180	300
DL507570	7.0	150	250	DL507665	6.5	180	300
DL507575	7.5	150	250	DL507668	6.8	180	300
DL507580	8.0	150	250	DL507670	7.0	180	300
DL507585	8.5	150	250	DL507675	7.5	180	300
DL507588	8.8	150	250	DL507680	8.0	180	300
DL507590	9.0	150	250	DL507685	8.5	180	300
DL507595	9.5	150	250	DL507688	8.8	180	300
DL507800	10.0	150	250	DL507690	9.0	180	300
DL507803	10.3	150	250	DL507695	9.5	180	300
DL507805	10.5	150	250	DL507900	10.0	180	300
DL507810	11.0	150	250	DL507903	10.3	180	300
DL507815	11.5	150	250	DL507905	10.5	180	300
DL507820	12.0	150	250	DL507910	11.0	180	300
DL507825	12.5	150	250	DL507915	11.5	180	300
DL507830	13.0	150	250	DL507920	12.0	180	300
				DL507925	12.5	180	300
				DL507930	13.0	180	300

◎ : 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~							
◎	◎				○	◎			○		



# WORM PATTERN DRILLS

## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

HSS-E, DH100 TYPE WORM PATTERN DRILLS, DIN1897, DIN338, DIN340, DIN1869, DIN341, DIN1870  
HSS-E, DH100 TYPE WORM PATTERN SPIRALBOHRER, DIN1897, DIN 338, DIN 340, DIN 1869, DIN 341, DIN 1870

### DL510, DL508, DL509, DL505, DL504, DL600, DL608, DL609, DL610 SERIES

Unit : mm

WORK MATERIAL	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
	HRC15 ~ 30		HRC20 ~ 40					
STRENGTH	700 ~ 1000 N/mm <sup>2</sup>		800 ~ 1200 N/mm <sup>2</sup>					
DIAMETER	N	S	N	S	N	S	N	S
2.0	2630	0.03	2100	0.025	4200	0.06	1680	0.05
2.5	2100	0.04	1680	0.03	3300	0.08	1310	0.06
3.0	1680	0.05	1310	0.04	2630	0.10	1050	0.08
4.0	1310	0.06	1050	0.05	2100	0.13	840	0.10
5.0	1050	0.06	840	0.05	1680	0.13	660	0.10
6.0	840	0.08	660	0.06	1310	0.16	530	0.13
8.0	660	0.10	530	0.08	1050	0.20	420	0.17
10.0	530	0.13	420	0.10	840	0.25	330	0.21
13.0	420	0.13	330	0.10	660	0.25	260	0.21
16.0	330	0.15	260	0.13	530	0.30	210	0.25
20.0	260	0.20	210	0.15	420	0.40	170	0.30
25.0	210	0.25	170	0.20	330	0.50	130	0.50
30.0	170	0.25	130	0.20	260	0.50	110	0.50

N = R.P.M

S = Feed per Revolution (mm/rev.)

## HSS-E, DH50 TYPE WORM PATTERN DRILLS HSS-E, DH50 TYPE WORM PATTERN SPIRALBOHRER

### DL507 SERIES

Unit : mm

WORK MATERIAL	CARBON STEELS ALLOY STEELS		SOFT GREY CAST IRON		ALUMINUM ALLOY	
	HRC15 ~ 30					
STRENGTH	700 ~ 1000 N/mm <sup>2</sup>					
DIAMETER	N	S	N	S	N	S
2.0	2630	0.03	4200	0.06	8700	0.04
2.5	2100	0.04	3300	0.08	6950	0.05
3.0	1680	0.05	2630	0.10	5800	0.06
4.0	1310	0.06	2100	0.13	4300	0.08
5.0	1050	0.06	1680	0.13	3500	0.10
6.0	840	0.08	1310	0.16	2900	0.12
8.0	660	0.10	1050	0.20	2200	0.16
10.0	530	0.13	840	0.25	1750	0.20
13.0	420	0.13	660	0.25	1350	0.26

N = R.P.M

S = Feed per Revolution (mm/rev.)