

DRILLING TOOLS

i-ONE DRILLS, CARBIDE INSERT

i-DREAM DRILLS, CARBIDE INSERT

SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes)

SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)

SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without Coolant Holes)

SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes)

SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)

SOLID CARBIDE DREAM DRILLS - CFRP (without Coolant Holes)

SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (without Coolant Holes)

GENERAL SOLID CARBIDE DRILLS (JOBBER & STUB LENGTH)

HSS-PM MULTI-1 DRILLS

PREMIUM HSS HPD STRAIGHT SHANK DRILLS

HSS GOLD-P DRILLS

SUPER HSS SUPER-GP DRILLS

HSS STRAIGHT SHANK DRILLS

HSS MORSE TAPER SHANK DRILLS

SOLID CARBIDE & HSS (8% Cobalt) NC-SPOTTING DRILLS

SOLID CARBIDE & HSS CENTER DRILLS

CARBIDE & HSS-PM SPADE DRILLS

TECHNICAL DATA

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DRILLING TOOLS

CARBIDE INSERT DRILLS

SOLID CARBIDE DRILLS

HSS DRILLS

CARBIDE & HSS DRILLS

TECHNICAL DATA

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i-ONE DRILLS For Carbon Steels, Alloy Steels and Cast Iron	i-ONE DRILLS
i-DREAM DRILLS For General Steels and for Stainless Steels	i-DREAM DRILLS
SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes) For General Purpose HRc30 to HRc50	DREAM DRILLS -GENERAL
SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes) For Carbon Steels, Alloy Steels (up to HRc35) and Cast Iron	DREAM DRILLS -HIGH FEED
SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without Coolant Holes) For holes on various angled surfaces	DREAM DRILLS -FLAT BOTTOM
SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes) For Tough Materials - Stainless Steels, Nickel Alloys and Titanium up to HRc35	DREAM DRILLS -INOX
SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes) For Drilling Aluminum and Aluminum Alloys	DREAM DRILLS -ALU
SOLID CARBIDE DREAM DRILLS - CFRP (without Coolant Holes) For Composite Materials including CFRP and GFRP	DREAM DRILLS -CFRP
SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes) Minimum Quantity Lubrication Drilling Deep Holes (10 × D ~ 30 × D)	DREAM DRILLS -MQL
SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (without Coolant Holes) For High Hardened Steels HRc50 to HRc70	DREAM DRILLS for HIGH HARDENED STEELS
GENERAL SOLID CARBIDE DRILLS (JOBBER & STUB LENGTH) For General Purpose DIN338 and DIN6539	GENERAL CARBIDE DRILLS
HSS-PM MULTI-1 DRILLS For Multi Purpose Particularly for Stainless Steels and Titanium	MULTI-1 DRILLS
PREMIUM HSS HPD STRAIGHT SHANK DRILLS For General Steels and Stainless Steels	HPD DRILLS
HSS GOLD-P DRILLS Gold-P Coating (HSS & HSS-E)	GOLD-P DRILLS
SUPER HSS SUPER-GP DRILLS All applications regardless of machine condition: Good or Poor	SUPER-GP DRILLS
HSS STRAIGHT SHANK DRILLS For General Purpose (HSS & HSS-E & 8% Cobalt)	STRAIGHT SHANK DRILLS
HSS MORSE TAPER SHANK DRILLS For General Purpose (HSS & HSS-E & 8% Cobalt)	TAPER SHANK DRILLS
SOLID CARBIDE & HSS(8% Cobalt) NC SPOTTING DRILLS Centering and Chamfering of Holes	NC-SPOTTING DRILLS
SOLID CARBIDE & HSS CENTER DRILLS For General Purpose	CENTER DRILLS
CARBIDE & HSS-PM SPADE DRILLS For General Machines and Drilling Large Diameters Longer Tool Life and High Productivity	SPADE DRILLS
TECHNICAL DATA	TECHNICAL DATA

DRILLING TOOLS **APPLICATION TABLE**

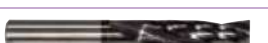
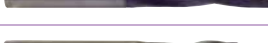
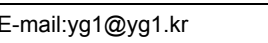
	ITEM	MODEL	DESCRIPTION	SIZE		PAGE
				MIN	MAX	
i-One Drills	Y * 1H		Insert for General Purpose	Ø10.0 (#S10)	Ø33.73 (#S32)	50~59
i-Dream Drills	Y * 1A		Insert for General Purpose	Ø12.0 (#A)	Ø31.75 (#J)	68~73
	Y * 2C		Insert for Stainless Steels	Ø12.0 (#A)	Ø31.75 (#J)	68~73
Spade Drills	S14** (SM4**)		HSS M4 Insert	Ø17.86 (#1)	Ø114.3 (#8)	292~297 318~320
	S11** (SM1**)		Super HSS T15 Insert	Ø9.5 (#Y)	Ø65.09 (#4)	298~302 321~324
	S15** (SM5**)		Premium HSS M48 Insert	Ø9.5 (#Y)	Ø35 (#2)	303~305 325~327
	S16** (SM6**)		Carbide K10 Insert	Ø9.5 (#Y)	Ø35 (#2)	306~308 328~330
	S17 (SM7**)		Carbide K20 Insert	Ø9.5 (#Y)	Ø47.63 (#3)	309~312 331~334
	S18** (SM8**)		Carbide P40 Insert	Ø9.5 (#Y)	Ø47.63 (#3)	312~315 335~338
	S21**		Super HSS T15 Insert (Flat Bottom)	Ø9.5 (#Y)	Ø35 (#2)	339~341

◎ : Excellent ○ : Good

Non-alloy Steels, Free Machining Steels	P										M	K		N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloy	
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
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DRILLING TOOLS **APPLICATION TABLE**

	ITEM	MODEL	LENGTH / TYPE	SIZE		PAGE
				MIN	MAX	
SOLID CARBIDE DREAM DRILLS - GENERAL (with/without coolant holes)	DH404		STUB (3xD)	D3.0	D20.0	82
	DH423		SHORT (3xD)	D3.0	D20.0	84
	DH424		LONG (5xD)	D1.0	D20.0	86
	DH406		SHORT (3xD)	D3.0	D20.0	89
	DH408		LONG (5xD)	D1.0	D20.0	91
	DH421		EXTRA LONG (8xD)	D3.0	D14.0	94
SOLID CARBIDE DREAM DRILLS - HIGH FEED (with coolant holes)	DGR493		SHORT (3xD)	D5.0	D20.0	100
	DGR495		LONG (5xD)	D5.0	D20.0	102
SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without coolant holes)	DPP447		2xD	D3.0	D20.0	108
SOLID CARBIDE DREAM DRILLS - INOX (with coolant holes)	DH451		SHORT (3xD)	D3.0	D20.0	116
	DH452		LONG (5xD)	D1.0	D20.0	119
	DH453		EXTRA LONG (8xD)	D3.0	D14.0	122
SOLID CARBIDE DREAM DRILLS - ALU (with coolant holes)	D5432		SHORT (3xD)	D3.0	D20.0	128
	D5433		LONG (5xD)	D3.0	D20.0	130
	D5434		EXTRA LONG (8xD)	D3.0	D14.0	132
SOLID CARBIDE DREAM DRILLS - CFRP	DI473		-	D2.5	D12.0	138
SOLID CARBIDE DREAM DRILLS - MQL TYPE (with coolant holes)	DH510		EXTRA LONG (10xD)	D3.0	D14.0	142
	DH515		EXTRA LONG (15xD)	D3.0	D12.0	143
	DH520		EXTRA LONG (20xD)	D3.0	D12.0	143
	DHM10		EXTRA LONG (10xD)	D3.0	D14.0	144
	DHM15		EXTRA LONG (15xD)	D3.0	D12.0	144
	DHM20		EXTRA LONG (20xD)	D3.0	D12.0	144
	DHM25		EXTRA LONG (25xD)	D3.0	D10.0	145
	DHM30		EXTRA LONG (30xD)	D3.0	D8.0	145
SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS	DH500		-	D2.6	D14.0	150
GENERAL SOLID CARBIDE DRILLS	D5405		JOBBER	D1.0	D13.0	156
	D5407		STUB	D1.0	D13.0	158
HSS-PM MULTI-1 DRILLS	CDRA03		STUB	D1.0	D13.0	164
	CDRA04		JOBBER	D2.0	D13.0	166

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
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DRILLING TOOLS **APPLICATION TABLE**

	ITEM	MODEL	LENGTH	SIZE		PAGE
				MIN	MAX	
PREMILIM HSS HPD STRAIGHT SHANK DRILLS	D4541		STUB	D2.0	D13.0	172
	D4542		JOBBER	D2.0	D32.0	176
	DJ543		STUB	D2.0	D13.0	181
	DJ544		JOBBER	D2.0	D20.0	183
HSS GOLD-P DRILLS	D1GP125		JOBBER	D1.0	D13.0	190
	D1GP165		JOBBER	D1.6	D13.0	192
	DLGP195		JOBBER	D1.0	D13.0	194
	DLGP506		JOBBER	D2.0	D13.0	196
SUPER HSS SUPER-GP DRILLS	DSH105		JOBBER	D2.0	D13.0	204
HSS STRAIGHT SHANK DRILLS	D2107		STUB	D1.0	D31.0	212
	D1107		STUB	D1.0	D13.0	215
	D2105		JOBBER	D1.0	D20.0	217
	DL105		JOBBER	D1.0	D20.0	220
	D1105		JOBBER	D0.3	D20.0	223
	D1125		JOBBER	D2.0	D20.0	227
	D2104		LONG	D2.0	D12.0	230
	D1121		EXTRA LONG	D2.0	D13.0	232
	DL109		JOBBER	D1.5	D13.0	233
	D1100		JOBBER	D1.5	D13.0	234
	D1106		JOBBER	D1.5	D13.0	236
	DL510		STUB	D2.0	D20.0	238
	DL508		JOBBER	D2.0	D16.0	240
	DL509		LONG	D2.0	D12.0	242
	DL505		JOBBER	D2.0	D13.0	244
	DL504		LONG	D2.0	D13.0	246
	DT600 DT692 DT693		EXTRA LONG	D2.0 D3.0 D4.0	D10.5 D10.2 D10.0	247
	DL608		LONG	D13.0	D30.0	248
	DL507		EXTRA LONG	D2.0	D13.0	249

◎ : Excellent ○ : Good

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Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~								
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DRILLING TOOLS **APPLICATION TABLE**

	ITEM	MODEL	LENGTH / TYPE	SIZE		PAGE
				MIN	MAX	
HSS MORSE TAPER SHANK DRILLS	DL205		JOBBER	D13.0	D30.0	258
	D1205		JOBBER	D5.0	D60.0	259
	D1206		LONG	D13.0	D30.0	262
	D1209		EXTRA LONG	D13.0	D50.0	263
	D1210		EXTRA LONG	D13.0	D50.0	264
SOLID CARBIDE & HSS NC-SPOTTING DRILLS	D5306 D5307		-	D6.0	D20.0	270
	D5320		-	D3.0	D20.0	271
	D2306 D2321		-	D3.0	D20.0	272
	D2307 D2322		-	D3.0 D6.0	D20.0 D12.0	273
	D2320 D2323		-	D3.0 D6.0	D20.0 D12.0	274
SOLID CARBIDE & HSS CENTER DRILLS	D5303		Form A	D1.0	D6.3	280
	DV303		Form A	D0.5	D6.3	281
	DV333		Form A	D1.6	D6.3	281
	DV334		Form A	D1.0	D5.0	282
	D1303		Form A	D0.5	D10.0	283
	D1343		Form A	D0.5	D8.0	283
	D1313		Form B	D1.0	D6.3	284
	D1353		Form B	D2.0	D6.3	284
	D1363		Form R	D0.5	D8.0	285
	D1373		Form R	D0.8	D5.0	285
	DV383		Form R	D1.6	D6.3	286

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
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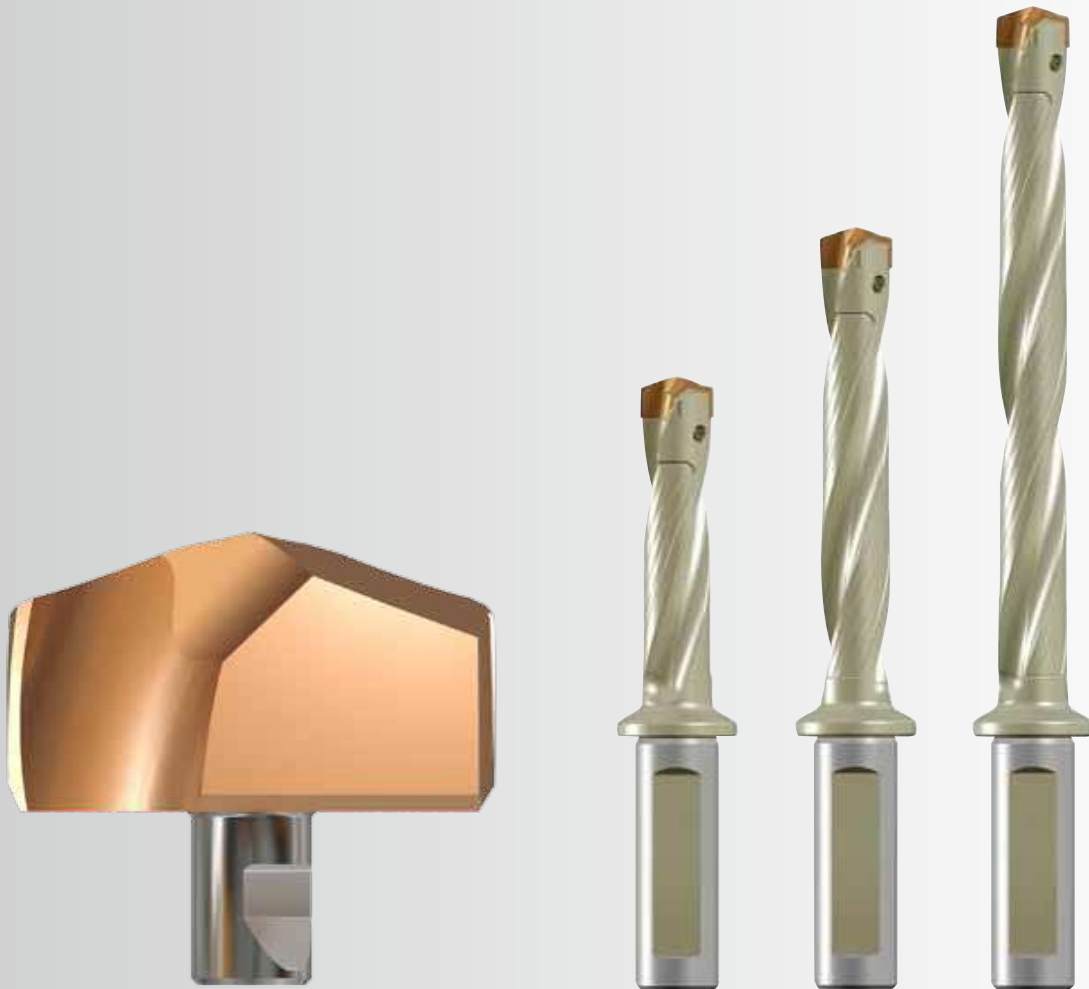
Global Cutting Tool Leader **YG-1**





CARBIDE INSERT

Leading Through Innovation



i-ONE DRILLS

i-One Drills

- Micro Grain Carbide Inserts and Premium Tool Steel Holders
High Performance Indexable Drilling Tools
- Feinstkorn Hartmetall Bohrplatte und Premium Werkzeugstahl Halter
Hochleistungsfähiger Wendeplattenbohrer Werkzeug

SELECTION GUIDE

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Comparison with Split Point Drill, Spade Drill & Dream Drill



i-ONE DRILLS, CARBIDE INSERT

◎ : Excellent ○ : Good

Non- alloyed Steels, Free Machining Steels	P										M	K		N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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i-ONE DRILL INSERTS & HOLDERS**GERMANY i-ONE DRILL EINSÄTZE UND HALTER****FRANCE PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL****ITALY INSERTI & PORTAININSERTI i-ONE DRILL****- Applications**

► For carbon steels, alloy steels and cast iron.

► Holder length: 3xD, 5xD, 8xD

- Benefits

► Secure and quick clamping system.

► High performance with cost efficiency.

► Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

► Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

► Halterlänge: 3xD, 5xD, 8xD

- Vorteile

► Sicheres und schnelles Spannsystem.

► Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

► Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S10 Ø10.00 to Ø11.91	Y101H1000	0.3937		10.00	3xD 5xD 8xD	ZD10003016 ZD10005016 ZD10008016	16	48	23	31.5	103.0	TX1011P5
	Y101H1010	0.3976		10.10						52.5	123.0	
	Y101H1020	0.4016		10.20						84.0	153.0	
	Y101H1030	0.4055		10.30	3xD 5xD 8xD	ZD10503016 ZD10505016 ZD10508016	16	48	23	33.0	104.0	
	Y101H1032	0.4063	13/32	10.32						55.0	125.0	
	Y101H1040	0.4094		10.40						88.0	156.5	
	Y101H1050	0.4134		10.50	3xD 5xD 8xD	ZD11003016 ZD11005016 ZD11008016	16	48	23	34.5	105.0	
	Y101H1060	0.4173		10.60						57.5	127.0	
	Y101H1070	0.4213		10.70						92.0	160.0	
	Y101H1072	0.4219	27/64	10.72	3xD 5xD 8xD	ZD11503016 ZD11505016 ZD11508016	16	48	23	36.0	106.0	
	Y101H1080	0.4252		10.80						60.0	129.0	
	Y101H1090	0.4291		10.90						96.0	163.5	
	Y101H1100	0.4331		11.00	3xD 5xD 8xD	ZD11503016 ZD11505016 ZD11508016	16	48	23	36.0	106.0	
	Y101H1110	0.4370		11.10						60.0	129.0	
	Y101H1111	0.4375	7/16	11.11						96.0	163.5	
	Y101H1120	0.4409		11.20	3xD 5xD 8xD	ZD11503016 ZD11505016 ZD11508016	16	48	23	36.0	106.0	
	Y101H1130	0.4449		11.30						60.0	129.0	
	Y101H1140	0.4488		11.40						96.0	163.5	
	Y101H1150	0.4528		11.50	3xD 5xD 8xD	ZD11503016 ZD11505016 ZD11508016	16	48	23	36.0	106.0	
	Y101H1151	0.4531	29/64	11.51						60.0	129.0	
	Y101H1160	0.4567		11.60						96.0	163.5	
	Y101H1170	0.4606		11.70	3xD 5xD 8xD	ZD11503016 ZD11505016 ZD11508016	16	48	23	36.0	106.0	
	Y101H1180	0.4646		11.80						60.0	129.0	
	Y101H1190	0.4685		11.90						96.0	163.5	
	Y101H1191	0.4688	15/32	11.91								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
		~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎		

i-ONE DRILL INSERTS & HOLDERS

i-ONE DRILL EINSÄTZE UND HALTER
PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
INSERTI & PORTAINSERTI i-ONE DRILL

- Applications

- For carbon steels, alloy steels and cast iron.
- Holder length: 3xD, 5xD, 8xD

- Benefits

- Secure and quick clamping system.
- High performance with cost efficiency.
- Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

- Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
- Halterlänge: 3xD, 5xD, 8xD

- Vorteile

- Sicheres und schnelles Spannsystem.
- Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.
- Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S12 Ø12.00 to Ø13.90	Y121H1200	0.4724		12.00	3xD	ZD12003016	16	48	23	37.5	109.8	TX1213P5
	Y121H1210	0.4764		12.10								
	Y121H1220	0.4803		12.20								
	Y121H1230	0.4844	31/64	12.30								
	Y121H1240	0.4882		12.40	3xD	ZD12503016	16	48	23	39.0	110.8	
	Y121H1260	0.4961		12.60								
	Y121H1270	0.5000	1/2	12.70								
	Y121H1280	0.5039		12.80								
	Y121H1290	0.5079		12.90	5xD	ZD12505016	16	48	23	65.0	135.8	
	Y121H1300	0.5118		13.00								
	Y121H1310	0.5156	33/64	13.10								
	Y121H1320	0.5197		13.20								
	Y121H1330	0.5236		13.30	8xD	ZD12508016	16	48	23	104.0	173.3	
	Y121H1340	0.5276		13.40								
	Y121H1349	0.5313	17/32	13.49								
	Y121H1350	0.5315		13.50								
	Y121H1360	0.5354		13.60	3xD	ZD13503016	16	48	23	42.0	113.8	
	Y121H1370	0.5394		13.70								
	Y121H1380	0.5433		13.80								
	Y121H1389	0.5469	35/64	13.89								
Y121H1390	0.5472		13.90	5xD	ZD13505016				70.0	140.8		
				8xD	ZD13508016				112.0	181.3		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K			N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
		~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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i-ONE DRILLS

i-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

TECHNICAL DATA

i-ONE DRILL INSERTS & HOLDERS
GERMANY i-ONE DRILL EINSÄTZE UND HALTER
FRANCE PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
ITALY INSERTI & PORTAINSERI i-ONE DRILL
- Applications

▶ For carbon steels, alloy steels and cast iron.

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▶ Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

▶ Halterlänge: 3xD, 5xD, 8xD

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▶ Sicheres und schnelles Spannsystem.

▶ Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

▶ Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S14 Ø14.00 to Ø15.90	Y141H1400	0.5512		14.00	3xD 5xD 8xD	ZD14003016 ZD14005016 ZD14008016	16	48	23	43.5	116.3	TX1415P7
	Y141H1410	0.5551		14.10						72.5	144.3	
	Y141H1420	0.5591		14.20						116.0	186.3	
	Y141H1429	0.5625	9/16	14.29	3xD 5xD 8xD	ZD14503016 ZD14505016 ZD14508016	16	48	23	45.0	118.3	
	Y141H1430	0.5630		14.30						75.0	147.3	
	Y141H1440	0.5669		14.40						120.0	190.8	
	Y141H1450	0.5709		14.50	3xD 5xD 8xD	ZD15003016 ZD15005016 ZD15008016	16	48	23	46.5	120.3	
	Y141H1460	0.5748		14.60						77.5	150.3	
	Y141H1468	0.5781	37/64	14.68						124.0	195.3	
	Y141H1470	0.5787		14.70	3xD 5xD 8xD	ZD15503016 ZD15505016 ZD15508016	16	48	23	48.0	121.3	
	Y141H1480	0.5827		14.80						80.0	152.3	
	Y141H1490	0.5866		14.90						128.0	198.8	
	Y141H1500	0.5906		15.00	3xD 5xD 8xD	ZD15503016 ZD15505016 ZD15508016	16	48	23	48.0	121.3	
	Y141H1508	0.5938	19/32	15.08						80.0	152.3	
	Y141H1510	0.5945		15.10						128.0	198.8	
	Y141H1520	0.5984		15.20	3xD 5xD 8xD	ZD15503016 ZD15505016 ZD15508016	16	48	23	48.0	121.3	
	Y141H1530	0.6024		15.30						80.0	152.3	
	Y141H1540	0.6063		15.40						128.0	198.8	
	Y141H1548	0.6094	39/64	15.48	3xD 5xD 8xD	ZD15503016 ZD15505016 ZD15508016	16	48	23	48.0	121.3	
	Y141H1550	0.6102		15.50						80.0	152.3	
	Y141H1560	0.6142		15.60						128.0	198.8	
	Y141H1570	0.6181		15.70	3xD 5xD 8xD	ZD15503016 ZD15505016 ZD15508016	16	48	23	48.0	121.3	
	Y141H1580	0.6220		15.80						80.0	152.3	
	Y141H1588	0.6250	5/8	15.88						128.0	198.8	
	Y141H1590	0.6260		15.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K			N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
		~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎			

i-ONE DRILL INSERTS & HOLDERS

i-ONE DRILL EINSÄTZE UND HALTER
PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
INSERTI & PORTAINSERTI i-ONE DRILL

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- For carbon steels, alloy steels and cast iron.
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Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S16 Ø16.00 to Ø17.90	Y161H1600	0.6299		16.00	3xD	ZD16003020	20	50	25	51.0	127.0	TX1617P7
	Y161H1609	0.6335		16.09								
	Y161H1610	0.6339		16.10								
	Y161H1620	0.6378		16.20								
	Y161H1627	0.6406	41/64	16.27								
	Y161H1630	0.6417		16.30								
	Y161H1640	0.6457		16.40								
	Y161H1650	0.6496		16.50								
	Y161H1660	0.6535		16.60	5xD	ZD16005020	20	50	25	85.0	160.0	
	Y161H1667	0.6563	21/32	16.67								
	Y161H1670	0.6575		16.70								
	Y161H1680	0.6614		16.80								
	Y161H1690	0.6654		16.90								
	Y161H1700	0.6693		17.00								
	Y161H1707	0.6719	43/64	17.07								
	Y161H1710	0.6732		17.10								
	Y161H1720	0.6772		17.20	8xD	ZD17008020	20	50	25	144.0	217.5	
	Y161H1730	0.6811		17.30								
	Y161H1740	0.6850		17.40								
	Y161H1746	0.6875	11/16	17.46								
	Y161H1750	0.6890		17.50								
	Y161H1760	0.6929		17.60								
	Y161H1770	0.6969		17.70								
	Y161H1780	0.7008		17.80								
	Y161H1786	0.7031	45/64	17.86								
	Y161H1790	0.7047		17.90								

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◎ : Excellent ○ : Good

	P											M	K			N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
		~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎			

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GERMANY i-ONE DRILL EINSÄTZE UND HALTER
FRANCE PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
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Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S18 Ø18.00 to Ø19.90	Y181H1800	0.7087		18.00	3xD 5xD 8xD	ZD18003025 ZD18005025 ZD18008025	25	56	32	57.0 95.0 152.0	141.3 178.3 233.8	TX1819P9
	Y181H1810	0.7126		18.10								
	Y181H1820	0.7165		18.20								
	Y181H1826	0.7188	23/32	18.26								
	Y181H1830	0.7205		18.30								
	Y181H1840	0.7244		18.40								
	Y181H1850	0.7283		18.50								
	Y181H1860	0.7323		18.60								
	Y181H1865	0.7344	47/64	18.65								
	Y181H1870	0.7362		18.70								
	Y181H1880	0.7402		18.80								
	Y181H1890	0.7441		18.90								
	Y181H1900	0.7480		19.00	3xD 5xD 8xD	ZD19003025 ZD19005025 ZD19008025	25	56	32	60.0 100.0 160.0	145.3 184.3 242.8	
	Y181H1905	0.7500	3/4	19.05								
	Y181H1910	0.7520		19.10								
	Y181H1920	0.7559		19.20								
	Y181H1927	0.7587		19.27								
	Y181H1930	0.7598		19.30								
	Y181H1940	0.7638		19.40								
	Y181H1945	0.7656	49/64	19.45								
	Y181H1950	0.7677		19.50								
	Y181H1960	0.7717		19.60								
	Y181H1970	0.7756		19.70								
	Y181H1980	0.7795		19.80								
	Y181H1984	0.7813	25/32	19.84								
	Y181H1990	0.7835		19.90								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P												M	K			N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys		
		~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110	
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎				

i-ONE DRILL INSERTS & HOLDERS

i-ONE DRILL EINSÄTZE UND HALTER
PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
INSERTI & PORTAINSERTI i-ONE DRILL

- Applications

- For carbon steels, alloy steels and cast iron.
- Holder length: 3xD, 5xD, 8xD

- Benefits

- Secure and quick clamping system.
- High performance with cost efficiency.
- Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

- Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
- Halterlänge: 3xD, 5xD, 8xD

- Vorteile

- Sicheres und schnelles Spannsystem.
- Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.
- Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S20 Ø20.00 to Ø21.90	Y201H2000	0.7874		20.00	3xD 5xD 8xD	ZD20003025 ZD20005025 ZD20008025	25	56	32	63.0 105.0 168.0	147.5 188.5 250.0	TX2021P9
	Y201H2010	0.7913		20.10								
	Y201H2020	0.7953		20.20								
	Y201H2024	0.7969	51/64	20.24								
	Y201H2030	0.7992		20.30								
	Y201H2040	0.8031		20.40								
	Y201H2050	0.8071		20.50								
	Y201H2060	0.8110		20.60								
	Y201H2064	0.8125	13/16	20.64								
	Y201H2070	0.8150		20.70								
	Y201H2080	0.8189		20.80								
	Y201H2090	0.8228		20.90								
	Y201H2100	0.8268		21.00	3xD 5xD 8xD	ZD21003025 ZD21005025 ZD21008025	25	56	32	66.0 110.0 176.0	150.5 193.5 258.0	
	Y201H2103	0.8281	53/64	21.03								
	Y201H2110	0.8307		21.10								
	Y201H2120	0.8346		21.20								
	Y201H2130	0.8386		21.30								
	Y201H2140	0.8425		21.40								
	Y201H2143	0.8438	27/32	21.43								
	Y201H2150	0.8465		21.50								
	Y201H2160	0.8504		21.60								
	Y201H2170	0.8543		21.70								
	Y201H2180	0.8583		21.80								
	Y201H2183	0.8594	55/64	21.83								
	Y201H2190	0.8622		21.90								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good																
	P											M	K		N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
		~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎		

i-ONE DRILL INSERTS & HOLDERS
GERMANY i-ONE DRILL EINSÄTZE UND HALTER
FRANCE PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
ITALY INSERTI & PORTAINSERI i-ONE DRILL
- Applications

▶ For carbon steels, alloy steels and cast iron.

▶ Holder length: 3xD, 5xD, 8xD

- Benefits

▶ Secure and quick clamping system.

▶ High performance with cost efficiency.

▶ Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

▶ Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

▶ Halterlänge: 3xD, 5xD, 8xD

- Vorteile

▶ Sicheres und schnelles Spannsystem.

▶ Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

▶ Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S22 Ø22.00 to Ø23.90	Y221H2200	0.8661		22.00	3xD 5xD 8xD	ZD22003025 ZD22005025 ZD22008025	25	56	32	69.0 115.0 184.0	153.4 198.4 265.9	TX2223P9
	Y221H2210	0.8701		22.10								
	Y221H2220	0.8740		22.20								
	Y221H2223	0.8750	7/8	22.23								
	Y221H2230	0.8780		22.30								
	Y221H2240	0.8819		22.40								
	Y221H2250	0.8858		22.50								
	Y221H2260	0.8898		22.60								
	Y221H2262	0.8906	57/64	22.62								
	Y221H2270	0.8937		22.70								
	Y221H2280	0.8976		22.80								
	Y221H2290	0.9016		22.90								
	Y221H2300	0.9055		23.00	3xD 5xD 8xD	ZD23003025 ZD23005025 ZD23008025	25	56	32	72.0 120.0 192.0	157.4 204.4 274.9	
	Y221H2302	0.9063	29/32	23.02								
	Y221H2310	0.9094		23.10								
	Y221H2320	0.9134		23.20								
	Y221H2330	0.9173		23.30								
	Y221H2340	0.9213		23.40								
	Y221H2342	0.9219	59/64	23.42								
	Y221H2350	0.9252		23.50								
	Y221H2360	0.9291		23.60								
	Y221H2370	0.9331		23.70								
	Y221H2380	0.9370		23.80								
	Y221H2381	0.9375	15/16	23.81								
	Y221H2390	0.9409		23.90								

▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P										M	K	N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc37 (~HB350)	~HRc37 (~HB350)	~HRc24 (~HB250)	~HRc24 (~HB250)	~HRc13 (~HB200)	~HRc13 (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	~HRc19 (~HB220)	~HRc8 (~HB180)	~HB110
Y101H	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		

i-ONE DRILL INSERTS & HOLDERS

i-ONE DRILL EINSÄTZE UND HALTER
PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
INSERTI & PORTAINSERTI i-ONE DRILL

- Applications

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- Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
- Halterlänge: 3xD, 5xD, 8xD

- Vorteile

- Sicheres und schnelles Spannsystem.
- Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.
- Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S24 Ø24.00 to Ø25.90	Y241H2400	0.9449		24.00	3xD 5xD 8xD	ZD24003032 ZD24005032 ZD24008032	32	60	37	75.0 125.0 200.0	165.8 214.8 288.3	TX2425P10
	Y241H2410	0.9488		24.10								
	Y241H2420	0.9528		24.20								
	Y241H2421	0.9531	61/64	24.21								
	Y241H2430	0.9567		24.30								
	Y241H2440	0.9606		24.40								
	Y241H2450	0.9646		24.50								
	Y241H2460	0.9685		24.60								
	Y241H2461	0.9688	31/32	24.61								
	Y241H2470	0.9724		24.70								
	Y241H2480	0.9764		24.80								
	Y241H2490	0.9803		24.90								
	Y241H2500	0.9844	63/64	25.00	3xD 5xD 8xD	ZD25003032 ZD25005032 ZD25008032	32	60	37	78.0 130.0 208.0	170.8 221.8 298.3	
	Y241H2510	0.9882		25.10								
	Y241H2520	0.9921		25.20								
	Y241H2530	0.9961		25.30								
	Y241H2540	1.0000	1	25.40								
	Y241H2550	1.0039		25.50								
	Y241H2560	1.0079		25.60								
	Y241H2567	1.0106		25.67								
	Y241H2570	1.0118		25.70								
	Y241H2580	1.0156	1*1/64	25.80								
	Y241H2590	1.0197		25.90								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
		~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)
Y101H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎		

i-ONE DRILLS

i-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

TECHNICAL DATA

i-ONE DRILL INSERTS & HOLDERS

 **i-ONE DRILL EINSÄTZE UND HALTER**
 **PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL**
 **INSERTI & PORTAINSERI i-ONE DRILL**

- Applications

- For carbon steels, alloy steels and cast iron.
- Holder length: 3xD, 5xD, 8xD

- Benefits

- Secure and quick clamping system.
- High performance with cost efficiency.
- Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

- Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
- Halterlänge: 3xD, 5xD, 8xD

- Vorteile

- Sicheres und schnelles Spannsystem.
- Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.
- Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S26 Ø26.00 to Ø27.78	Y261H2600	1.0236		26.00								TX2627P10
	Y261H2619	1.0313	1*1/32	26.19	3xD	ZD26003032				81.0	172.2	
	Y261H2650	1.0433		26.50	5xD	ZD26005032	32	60	37	135.0	225.2	
	Y261H2659	1.0469	1*3/64	26.59	8xD	ZD26008032				216.0	304.7	
	Y261H2699	1.0625	1*1/16	26.99								
	Y261H2700	1.0630		27.00	3xD	ZD27003032				84.0	175.2	
	Y261H2738	1.0781	1*5/64	27.38	5xD	ZD27005032	32	60	37	140.0	230.2	
	Y261H2750	1.0827		27.50	8xD	ZD27008032				224.0	312.7	
	Y261H2778	1.0938	1*3/32	27.78								
S28 Ø28.00 to Ø29.77	Y281H2800	1.1024		28.00								TX2830P10
	Y281H2818	1.1094	1*7/64	28.18	3xD	ZD28003032				87.0	179.2	
	Y281H2850	1.1220		28.50	5xD	ZD28005032	32	60	37	145.0	236.2	
	Y281H2858	1.1250	1*1/8	28.58	8xD	ZD28008032				232.0	321.7	
	Y281H2897	1.1406	1*9/64	28.97								
	Y281H2900	1.1417		29.00	3xD	ZD29003032				90.0	183.2	
	Y281H2937	1.1563	1*5/32	29.37	5xD	ZD29005032	32	60	37	150.0	242.2	
	Y281H2950	1.1614		29.50	8xD	ZD29008032				240.0	330.7	
	Y281H2977	1.1719	1*11/64	29.77								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
		~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (~HB275~)	~HRC28 (~HB275)	HRC28~ (~HB275~)	~HRC37 (~HB350)	HRC37~ (~HB350~)	~HRC24 (~HB250)	HRC24~ (~HB250~)	~HRC13 (~HB200)	HRC13~ (~HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (~HB220~)	~HRC8 (~HB180)
Y261H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎		
Y281H	◎	◎	◎	◎	◎	◎	○	◎	◎	◎	◎		◎	◎		

i-ONE DRILL INSERTS & HOLDERS
■ i-ONE DRILL EINSÄTZE UND HALTER
■ PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
■ INSERTI & PORTAINSERTI i-ONE DRILL
- Applications

▶ For carbon steels, alloy steels and cast iron.

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- Benefits

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- Anwendungen

▶ Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

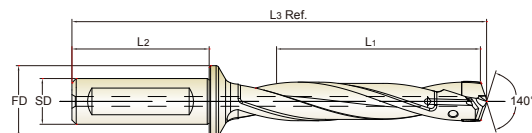
▶ Halterlänge: 3xD, 5xD, 8xD

- Vorteile

▶ Sicheres und schnelles Spannsystem.

▶ Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

▶ Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Length	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	 Clamping Screw
(mm)	H-Coating	h7					SD	L2	FD	L1	L3 Ref.	
		dec.	frac.	mm								
S30 Ø30.00 to Ø31.75	Y301H3000	1.1811		30.00								TX3031P15
	Y301H3016	1.1875	1*3/16	30.16	3xD	ZD30003032				93.0	187.0	
	Y301H3050	1.2008		30.50	5xD	ZD30005032	32	60	37	155.0	248.0	
	Y301H3056	1.2031	1*13/64	30.56	8xD	ZD30008032				248.0	339.5	
	Y301H3096	1.2188	1*7/32	30.96								
	Y301H3100	1.2205		31.00	3xD	ZD31003032				96.0	191.0	
	Y301H3135	1.2344	1*15/64	31.35	5xD	ZD31005032	32	60	37	160.0	254.0	
	Y301H3150	1.2402		31.50	8xD	ZD31008032				256.0	348.5	
Y301H3175	1.2500	1*1/4	31.75									
S32 Ø32.00 to Ø33.73	Y321H3200	1.2598		32.00								TX3233P15
	Y321H3215	1.2656	1*17/64	32.15	3xD	ZD32003032				99.0	197.2	
	Y321H3250	1.2795		32.50	5xD	ZD32005032	32	60	37	165.0	262.2	
	Y321H3254	1.2813	1*9/32	32.54	8xD	ZD32008032				264.0	359.7	
	Y321H3294	1.2969	1*19/64	32.94								
	Y321H3300	1.2992		33.00	3xD	ZD33003032				102.0	201.2	
	Y321H3334	1.3125	1*5/16	33.34	5xD	ZD33005032	32	60	37	170.0	268.2	
	Y321H3350	1.3189		33.50	8xD	ZD33008032				272.0	368.7	
Y321H3373	1.3281	1*21/64	33.73									

▶ Other diameters of insert and shank types of holder are available upon request.

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i-ONE DRILLS

i-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

TECHNICAL DATA



METRIC

ISO	Material Werkstück		Tensile Strength	Hardness		Cutting Speed	Feed [mm/rev]					
			[N/mm ²]	HB	HRC	Vc [M/min]	Ø10.00 ~Ø11.99	Ø12.09 ~Ø14.99	Ø15.00 ~Ø17.99	Ø18.00 ~Ø21.99	Ø22.00 ~Ø26.9	Ø27.00 ~Ø33.99
P	Non-alloyed steel Cast steel Free-machining steel	9SMn28, 9SMnPb28, 10SPb20 etc	~ 500	100 ~ 150		100~126	0.14~0.24	0.18~0.31	0.23~0.39	0.30~0.44	0.37~0.57	0.41~0.61
			500 ~ 850	150 ~ 250	~ 24	84~110	0.12~0.21	0.15~0.26	0.23~0.39	0.30~0.44	0.37~0.57	0.41~0.61
	Low-alloyed steel Cast steel (<5%) Carbon steel	C15, C22, 20Mn5, Ck45, C45 etc	~ 450	85 ~ 125		95~121	0.12~0.22	0.15~0.28	0.22~0.36	0.28~0.43	0.34~0.52	0.37~0.55
			450 ~ 755	125 ~ 225	~ 19	74~95	0.11~0.18	0.13~0.22	0.19~0.31	0.24~0.35	0.33~0.51	0.36~0.54
			755 ~ 900	225 ~ 265	19 ~ 27	63~84	0.11~0.18	0.13~0.22	0.19~0.31	0.24~0.35	0.33~0.51	0.36~0.54
			900 ~ 1200	265 ~ 350	27 ~ 37	58~74	0.09~0.14	0.11~0.18	0.17~0.28	0.23~0.33	0.28~0.42	0.32~0.47
	Alloyed steel	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	~ 600	125 ~ 175	~ 7	84~105	0.12~0.21	0.15~0.26	0.19~0.31	0.24~0.35	0.33~0.51	0.37~0.55
			600 ~ 800	175 ~ 235	7 ~ 22	74~95	0.11~0.18	0.13~0.22	0.19~0.31	0.24~0.35	0.33~0.51	0.37~0.55
			800 ~ 950	235 ~ 280	22 ~ 29	63~84	0.11~0.18	0.13~0.22	0.17~0.28	0.24~0.35	0.33~0.51	0.37~0.55
			950 ~ 1110	280 ~ 330	29 ~ 35	58~74	0.09~0.14	0.11~0.18	0.14~0.23	0.23~0.33	0.28~0.42	0.32~0.47
			1110 ~ 1230	330 ~ 360	35 ~ 39	47~63	0.07~0.11	0.09~0.13	0.14~0.23	0.23~0.33	0.28~0.42	0.32~0.47
	High-alloyed steel	36CrNiMo4, 41CrAlMo7 etc	600 ~ 1020	225 ~ 300	19 ~ 32	47~63	0.11~0.18	0.13~0.22	0.17~0.28	0.23~0.33	0.22~0.34	0.26~0.39
			1020 ~ 1200	300 ~ 355	32 ~ 38	42~58	0.09~0.14	0.11~0.18	0.12~0.20	0.23~0.33	0.22~0.34	0.26~0.39
			1200 ~ 1330	355 ~ 390	38 ~ 42	42~53	0.07~0.11	0.09~0.13	0.10~0.15	0.20~0.29	0.21~0.32	0.25~0.37
	Structural steel	St33, St37-2, St44-2, St52, St60 etc	350 ~ 500	100 ~ 150		89~121	0.12~0.21	0.15~0.26	0.23~0.39	0.30~0.43	0.32~0.48	0.35~0.52
			500 ~ 850	150 ~ 250	~ 24	68~84	0.11~0.18	0.13~0.22	0.22~0.36	0.24~0.35	0.28~0.42	0.32~0.47
			850 ~ 1200	250 ~ 355	24 ~ 38	53~68	0.09~0.14	0.11~0.18	0.19~0.31	0.23~0.33	0.23~0.35	0.29~0.42
	Tool steel	102Cr6, 105WCr6, C75W etc	500 ~ 705	150 ~ 210	~ 16	53~68	0.09~0.14	0.11~0.18	0.14~0.23	0.20~0.29	0.22~0.34	0.26~0.39
			705 ~ 950	210 ~ 280	16 ~ 29	42~53	0.09~0.14	0.11~0.18	0.14~0.23	0.20~0.29	0.22~0.34	0.26~0.39
K	Grey cast iron	Pearlitic, Ferritic	500 ~ 700	150 ~ 210	~ 16	105~131	0.13~0.23	0.17~0.29	0.22~0.41	0.30~0.46	0.40~0.56	0.44~0.61
		Pearlitic	700 ~ 850	210 ~ 250	16 ~ 24	79~100	0.10~0.18	0.12~0.22	0.18~0.32	0.22~0.33	0.28~0.39	0.32~0.44
	Cast iron nodular	Ferritic	540	165	4	100~126	0.11~0.20	0.14~0.24	0.19~0.34	0.23~0.35	0.31~0.44	0.35~0.48
		Pearlitic	850	250	24	79~100	0.10~0.18	0.12~0.22	0.15~0.29	0.21~0.32	0.28~0.39	0.32~0.44
	Malleable cast iron	Ferritic	450	125		105~131	0.11~0.20	0.14~0.24	0.19~0.34	0.23~0.35	0.31~0.44	0.35~0.48
		Pearlitic	780	230	21	79~100	0.10~0.15	0.12~0.20	0.15~0.29	0.21~0.32	0.28~0.39	0.32~0.44

RPM = revolution per minute (rev/min)
M/min = surface meter per minute (M/min)
DIA. = diameter of drill (mm)
mm/rev = feed rate (mm/rev)

*Formulas :

$$M/min = \frac{(RPM) \cdot \pi \cdot (DIA.)}{1000}$$

$$mm/min = (RPM) \cdot (mm/rev)$$

$$RPM = \frac{(M/min) \cdot 1000}{(\pi) \cdot (DIA.)}$$

- The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 8xD holders.
- For use of 8xD holder, we recommend to use a pilot drill with equal to or larger than 140° point angle (0.5xD ~ 1.5xD).
The use of the centering pre-hole improves hole location, roundness and surface finish.

INCH

ISO	Material Werkstück		Tensile Strength	Hardness		Cutting Speed	Feed [IPR]					
			[MPa]	HB	HRc	Vc [SFM]	Ø13/32 ~Ø15/32	Ø31/64 ~Ø37/64	Ø19/32 ~Ø45/64	Ø23/32 ~Ø55/64	Ø7/8 ~Ø1-1/16	Ø1-3/32 ~Ø1-21/64
P	Non-alloyed steel Cast steel Free-machining steel	1213, 13L13, 1215, 12L14, 1118 etc	~ 500	100 ~ 150		328~414	.006~.010	.007~.012	.009~.015	.012~.018	.014~.022	.017~.024
			500 ~ 850	150 ~ 250	~ 24	275~361	.004~.008	.007~.010	.009~.015	.012~.018	.014~.022	.017~.024
			~ 450	85 ~ 125		310~396	.004~.009	.007~.011	.009~.014	.011~.017	.013~.021	.014~.022
	Low-alloyed steel Cast steel (<5%) Carbon steel	1015, 1020, 1140, 1025, 1035, 1050, 1045, 1055 etc	450 ~ 755	125 ~ 225	~ 19	242~310	.004~.007	.006~.009	.008~.012	.010~.014	.013~.020	.014~.021
			755 ~ 900	225 ~ 265	19 ~ 27	207~275	.004~.007	.006~.009	.008~.012	.010~.014	.013~.020	.014~.021
			900 ~ 1200	265 ~ 350	27 ~ 37	189~242	.003~.006	.004~.007	.007~.011	.009~.013	.011~.017	.012~.019
	Alloyed steel	8620, 4130, 4137, 4140, 6150 etc	~ 600	125 ~ 175	~ 7	275~344	.004~.008	.007~.010	.008~.012	.010~.014	.013~.020	.014~.022
			600 ~ 800	175 ~ 235	7 ~ 22	242~310	.004~.007	.006~.009	.008~.012	.010~.014	.013~.020	.014~.022
			800 ~ 950	235 ~ 280	22 ~ 29	207~275	.004~.007	.006~.009	.007~.011	.010~.014	.013~.020	.014~.022
			950 ~ 1110	280 ~ 330	29 ~ 35	189~242	.003~.006	.004~.007	.006~.009	.009~.013	.011~.017	.012~.019
			1110 ~ 1230	330 ~ 360	35 ~ 39	155~207	.002~.004	.003~.006	.006~.009	.009~.013	.011~.017	.012~.019
	High-alloyed steel	A355, 9840, 4340 etc	600 ~ 1020	225 ~ 300	19 ~ 32	155~207	.004~.007	.006~.009	.007~.011	.009~.013	.009~.013	.010~.015
			1020 ~ 1200	300 ~ 355	32 ~ 38	138~189	.003~.006	.004~.007	.004~.008	.009~.013	.009~.013	.010~.015
	Structural steel	A36, A516, A182 etc	350 ~ 500	100 ~ 150		258~328	.004~.008	.007~.010	.009~.015	.012~.017	.012~.019	.014~.021
			500 ~ 850	150 ~ 250	~ 24	207~258	.004~.007	.006~.009	.009~.014	.010~.014	.011~.017	.012~.019
			850 ~ 1200	250 ~ 355	24 ~ 38	172~224	.003~.006	.004~.007	.008~.012	.009~.013	.009~.014	.011~.017
	Tool steel	H13, H21, A2, S1 etc	500 ~ 705	150 ~ 210	~ 16	172~224	.003~.006	.004~.007	.006~.009	.008~.011	.009~.013	.010~.015
			705 ~ 950	210 ~ 280	16 ~ 29	138~172	.003~.006	.004~.007	.006~.009	.008~.011	.009~.013	.010~.015
K	Grey cast iron	Pearlitic, Ferritic	500 ~ 700	150 ~ 210	~ 16	362~452	.006~.009	.007~.011	.009~.017	.012~.019	.015~.022	.018~.024
		Pearlitic	700 ~ 850	210 ~ 250	16 ~ 24	273~345	.004~.007	.004~.009	.007~.012	.009~.013	.011~.015	.012~.018
	Cast iron nodular	Ferritic	540	165	4	345~435	.004~.008	.006~.010	.008~.013	.009~.014	.012~.018	.014~.019
		Pearlitic	850	250	24	273~345	.004~.007	.004~.009	.007~.011	.008~.012	.011~.015	.012~.018
	Malleable cast iron	Ferritic	450	125		362~452	.004~.008	.006~.010	.008~.013	.009~.014	.012~.018	.014~.019
		Pearlitic	780	230	21	273~345	.004~.007	.004~.008	.007~.011	.008~.012	.011~.015	.012~.018

*Formulas:

RPM = revolution per minute (rev/min)
SFM = surface feet per minute (ft/min)
DIA. = diameter of drill (inch)
IPR = feed rate (inch/rev)
IPM = inch per minute penetration rate

$$\begin{aligned} \text{SFM} &= \frac{(\text{RPM}) \cdot \pi \cdot (\text{DIA.})}{12} \\ \text{IPM} &= (\text{RPM}) \cdot (\text{IPR}) \\ \text{RPM} &= \frac{(\text{SFM}) \cdot 12}{(\pi) \cdot (\text{DIA.})} \end{aligned}$$

- The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 8xD holders.
- For use of 8xD holder, we recommend to use a pilot drill with equal to or larger than 140° point angle (0.5xD ~ 1.5xD).
The use of the centering pre-hole improves hole location, roundness and surface finish.

i-ONE
DRILLS

i-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

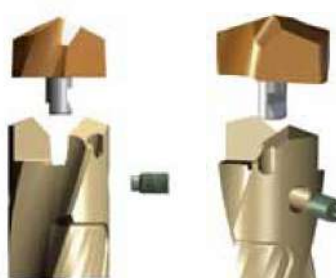
SPADE
DRILLS

TECHNICAL
DATA

ASSEMBLY OF i-ONE DRILLS
MONTAGE DES i-ONE DRILLS

Make sure to clean the insert and insert seat.

Schneideinsatz und Haltersitz sorgfältig reinigen.

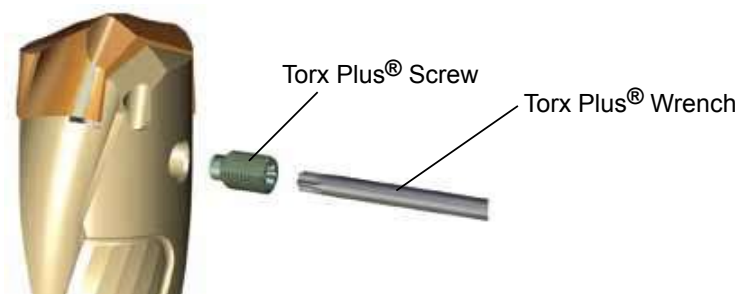


Slide the drill insert into the slot of the holder and press down the insert to touch the bottom of the slot.

Schneideinsatz in den Haltersitz einführen und den Schneideinsatz fest auf den Grund des Haltersitzes pressen.

After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

Wenn der Schneideinsatz fest auf den Grund des Haltersitzes gepresst ist, die Schraube fest anziehen und dabei Spezialfett verwenden.



WRENCH TYPE	PRODUCT NO.	SERIES (INSERT SIZE)	TORX PLUS®	TORQUE (N·m)
	TWFP05	S10~S12 (10.00 ~ 13.90)	5 IP	0.6
	TWDP07	S14~S16 (14.00 ~ 17.90)	7 IP	1.0
	TWDP09	S18~S22 (18.00 ~ 23.90)	9 IP	1.5
	TWDP10	S24~S28 (24.00 ~ 29.77)	10 IP	2.2
	TWDP15	S30~S32 (30.00 ~ 33.73)	15 IP	3.2

Use the Torx Plus wrench

Benutzen Sie den Winkeldreher oder T - Schlüsse

► Need to use appropriate wrenches and screws as indicated.

Unbedingt die angegebenen Schrauben und Dreher verwenden.

► It's important to tighten up the screw properly.

Es ist wichtig, die Schraube korrekt und fest anzuziehen.

CAUTION-NOT RECOMMENDABLE APPLICATION
ACHTUNG - NICHT EMPFOHLENE ANWENDUNG



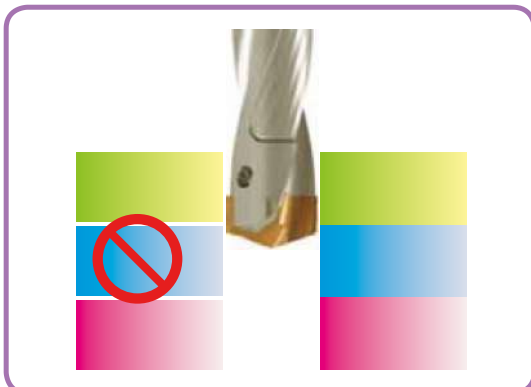
Intersecting cross hole is bigger than the drill insert's Margin Length.

Der Haltersitz ist größer als die Breite des Schneideinsatzes.



Material with slanting entrance and exit over 7 degree. (If drilling 7 degree or under slanting surface, reduce the feed about 30-50%)

Werkstücke mit schrägem Anschnitt oder Austritt von über 7°. (Zum Bohren von bis zu 7° Schräge den Vorschub um ca. 30-50% reduzieren).

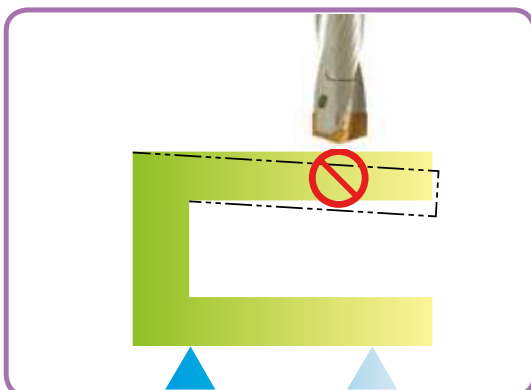


For drilling stacked plates, minimize the space between the plates.

Beim Bohren von Blechpaketen den Abstand der Bleche minimieren.

The space stacked plates can cause insert breakage or poor chip control.

Freiraum in Blechpaketen kann den Bruch des Schneideinsatzes oder schlechte Entspannung verursachen.



The material needs to be fixtured securely before drilling.

Das Werkstück muss fest und sicher aufgespannt sein

i-ONE
DRILLS

i-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

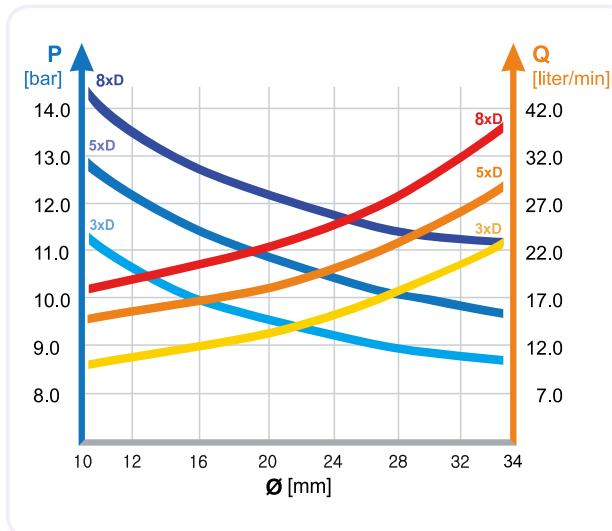
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

TECHNICAL
DATA

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING
EMPFOHLENE KÜHLMITTELDRUCK UND - MENGE BEIM VERTIKALEN BOHREN

- Recommended emulsion mix is 6 - 8%.
Empfohlene Emulsionsmischung 6 - 8%.
- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
Beim Bohren in rostfreie und hochfeste Stähle werden 10% empfohlen.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
Beim horizontalen Bohren können Kühlmitteldruck und -menge um 30% gemindert werden.
- Dry drilling is possible for 1-2xD drilling. But not recommended.
Trocken Bohren ist möglich bei 1-2xD. Aber nicht empfohlen.

TROUBLE SHOOTING
PROBLEMLÖSUNGEN

- 1) Heavy flank wear / Fast flank wear**
- Reduce cutting speed
 - Increase feed



- 2) Chipping on cutting edge**
- Reduce feed
 - Check the rigidity of spindle and chuck
 - Rigid clamping of workpiece



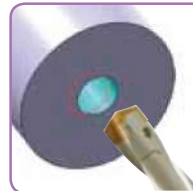
- 3) Build up on cutting edge**
- Increase cutting speed
 - Use a coated insert



- 4) Chipping or break down on outer corner**
- Reduce feed
 - Rigid clamping of workpiece



- 5) Wear of land margin**
- Rigid clamping of workpiece
 - Reduce cutting speed
 - Increase coolant flow



- 6) Unsatisfactory positioning of the hole**
- Rigid clamping of workpiece
 - Reduce feed during entrance or exit



- 7) Scratching on holder**
- Rigid clamping of workpiece
 - Reduce feed
 - Increase coolant flow



- 8) Unsatisfactory surface finish**
- Rigid clamping of workpiece
 - Increase coolant flow and pressure



Leading Through Innovation

CARBIDE INSERT



i - DREAM DRILLS

i-Dream Drill

- Available for General Steels and for Stainless Steels
- Lieferbar für normale und rostfreie Stähle

SELECTION GUIDE

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Comparison with Split Point Drill, Spade Drill & Dream Drill



Normal Split Point Drill



Spade Drill



Dream Drill



i-Dream Drill

i-DREAM DRILLS, CARBIDE INSERT

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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i-DREAM DRILL INSERTS & HOLDERS

 **i-DREAM DRILL EINSÄTZE UND HALTER**
 **PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX**
 **INSERTI & PORTAINSERITI i-DREAM DRILL**
- Features of i-Dream Drill Inserts-**Merkmale des i-Dream Drill Einsätze**

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante

- Soft cutting action / Weicher Schnitt

- Minimize cutting forces / Minimaler Schneidendruck

- Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-**- Merkmale des i-Dream Drill Halters-**

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



P.74-75

Series Range (mm)	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth		Overall Length	Screw No.
	General (TiAlN)	INOX (TiCN)	dec.	frac.	mm					L1	L3 Ref.		
A Ø12.00 to Ø13.99	YA1A1200	YA2C1200	.4724		12.00	ZH12003020	20	50	25	3D	36	112.4	TX1213TO8
	YA1A1210	YA2C1210	.4764		12.10	ZH12005020				5D	60	136.4	
	YA1A1220	YA2C1220	.4803		12.20	ZH12007020				7D	84	160.4	
	YA1A1230	YA2C1230	.4844	31/64	12.30								
	YA1A1250	YA2C1250	.4921		12.50		20	50	25	3D	37.5	113.4	TX1213TO8
	YA1A1260	YA2C1260	.4961		12.60	ZH12503020				5D	62.5	138.4	
	YA1A1270	YA2C1270	.5000	1/2	12.70	ZH12505020				7D	87.5	163.4	
	YA1A1280	YA2C1280	.5039		12.80	ZH12507020							
	YA1A1290	YA2C1290	.5079		12.90		20	50	25	3D	39	115.4	TX1314TO8
	YA1A1300	YA2C1300	.5118		13.00	ZH13003020				5D	65	141.4	
	YA1A1310	YA2C1310	.5156	33/64	13.10	ZH13005020				7D	91	167.4	
	YA1A1320	YA2C1320	.5197		13.20	ZH13007020							
	YA1A1349	YA2C1349	.5312	17/32	13.49		20	50	25	3D	40.5	116.4	TX1314TO8
	YA1A1350	YA2C1350	.5315		13.50	ZH13503020				5D	67.5	143.4	
YA1A1360	YA2C1360	.5354		13.60	ZH13505020	7D				94.5	170.4		
YA1A1370	YA2C1370	.5394		13.70	ZH13507020								
YA1A1380	YA2C1380	.5433		13.80	ZH13507020								
YA1A1389	YA2C1389	.5469	35/64	13.89									
B Ø14.00 to Ø15.99	YB1A1400	YB2C1400	.5512		14.00		20	50	25				TX1415TO8
	YB1A1410	YB2C1410	.5551		14.10	ZH14003020							
	YB1A1420	YB2C1420	.5591		14.20	ZH14005020							
	YB1A1429	YB2C1429	.5625	9/16	14.29	ZH14007020							
	YB1A1430	YB2C1430	.5630		14.30								
	YB1A1440	YB2C1440	.5669		14.40								

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○		◎			○	○

i-DREAM DRILL INSERTS & HOLDERS

 **i-DREAM DRILL EINSÄTZE UND HALTER**

 **PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX**

 **INSERTI & PORTAINSERTI i-DREAM DRILL**

- Features of i-Dream Drill Inserts-

- Merkmale des i-Dream Drill Einsätze

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante

- Soft cutting action / Weicher Schnitt

- Minimize cutting forces / Minimaler Schneidendruck

- Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-

- Merkmale des i-Dream Drill Halter-

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



Series Range	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	Screw No.	
	General (TiAlN)	INOX (TiCN)	h7							L1	L3 Ref.			
			dec.	frac.	mm									
B Ø14.00 to Ø15.99	YB1A1450	YB2C1450	.5709		14.50	ZH14503020	20	50	25	3D	43.5	120.9	TX1415TO8	
	YB1A1460	YB2C1460	.5748		14.60	ZH14505020				5D	72.5	149.9		
	YB1A1468	YB2C1468	.5781	37/64	14.68	ZH14507020				7D	101.5	178.9		
	YB1A1480	YB2C1480	.5827		14.80									
	YB1A1500	YB2C1500	.5906		15.00		20	50	25					
	YB1A1508	YB2C1508	.5938	19/32	15.08	ZH15003020				3D	45	122.9		
	YB1A1510	YB2C1510	.5945		15.10	ZH15005020				5D	75	152.9		
	YB1A1520	YB2C1520	.5984		15.20	ZH15007020				7D	105	182.9		
	YB1A1530	YB2C1530	.6024		15.30		20	50	25				TX1516TO8	
	YB1A1548	YB2C1548	.6094	39/64	15.48									
	YB1A1550	YB2C1550	.6102		15.50	ZH15503020				3D	46.5	123.9		
	YB1A1560	YB2C1560	.6142		15.60	ZH15505020				5D	77.5	154.9		
	YB1A1570	YB2C1570	.6181		15.70	ZH15507020	7D	108.5	185.9					
	YB1A1580	YB2C1580	.6220		15.80									
YB1A1587	YB2C1587	.6250	5/8	15.87										
C Ø16.00 to Ø17.99	YC1A1600	YC2C1600	.6299		16.00		20	50	25	3D	48	125.0	TX1617TO8	
	YC1A1609	YC2C1609	.6335		16.09	ZH16003020				5D	80	157.0		
	YC1A1620	YC2C1620	.6378		16.20	ZH16005020				7D	112	189.0		
	YC1A1627	YC2C1627	.6406	41/64	16.27	ZH16007020								
	YC1A1630	YC2C1630	.6417		16.30		20	50	25					
	YC1A1650	YC2C1650	.6496		16.50	ZH16503020				3D	49.5	127.0		
	YC1A1667	YC2C1667	.6562	21/32	16.67	ZH16505020				5D	82.5	160.0		
	YC1A1680	YC2C1680	.6614		16.80	ZH16507020				7D	115.5	193.0		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○		◎			○	○

i-DREAM DRILL INSERTS & HOLDERS

 **i-DREAM DRILL EINSÄTZE UND HALTER**
 **PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX**
 **INSERTI & PORTAINSERTI i-DREAM DRILL**
- Features of i-Dream Drill Inserts-**- Merkmale des i-Dream Drill Einsätze**

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante
 ► Soft cutting action / Weicher Schnitt
 ► Minimize cutting forces / Minimaler Schneidendruck
 ► Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-**- Merkmale des i-Dream Drill Halters-**

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



P.74-75

Series Range	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	Screw No.
	General (TiAlN)	INOX (TiCN)	h7							L3 Ref.			
			dec.	frac.	mm						L1		
(mm)							SD	L2	FD				
C Ø16.00 to Ø17.99	YC1A1700	YC2C1700	.6693		17.00	ZH17003020				3D	51	128.0	TX1718TO8
	YC1A1707	YC2C1707	.6719	43/64	17.07	ZH17005020	20	50	25	5D	85	162.0	
	YC1A1746	YC2C1746	.6875	11/16	17.46	ZH17007020				7D	119	196.0	
	YC1A1750	YC2C1750	.6890		17.50	ZH17503020				3D	52.5	130.0	
	YC1A1780	YC2C1780	.7008		17.80	ZH17505020	20	50	25	5D	87.5	165.0	
	YC1A1786	YC2C1786	.7031	45/64	17.86	ZH17507020				7D	122.5	200.0	
D Ø18.00 to Ø19.99	YD1A1800	YD2C1800	.7087		18.00	ZH18003025				3D	54	140.3	TX1819T15
	YD1A1826	YD2C1826	.7188	23/32	18.26	ZH18005025	25	56	32	5D	90	176.3	
						ZH18007025				7D	126	212.3	
						ZH18503025				3D	55.5	141.3	
	YD1A1865	YD2C1865	.7344	47/64	18.65	ZH18505025	25	56	32	5D	92.5	178.3	TX1920T15
	YD1A1880	YD2C1880	.7402		18.80	ZH18507025				7D	129.5	215.3	
	YD1A1900	YD2C1900	.7480		19.00	ZH19003025				3D	57	144.3	
	YD1A1905	YD2C1905	.7500	3/4	19.05	ZH19005025	25	56	32	5D	95	182.3	
	YD1A1927	YD2C1927	.7587		19.27	ZH19007025				7D	133	220.3	
	YD1A1945	YD2C1945	.7656	49/64	19.45								
	YD1A1950	YD2C1950	.7677		19.50	ZH19503025				3D	58.5	145.3	
	YD1A1980	YD2C1980	.7795		19.80	ZH19505025	25	56	32	5D	97.5	184.3	
YD1A1984	YD2C1984	.7812	25/32	19.84	ZH19507025				7D	136.5	223.3		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P										M	K			N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron			Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○		◎			○	○

i-DREAM DRILL INSERTS & HOLDERS
■ i-DREAM DRILL EINSÄTZE UND HALTER
■ PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX
■ INSERTI & PORTAINSERTI i-DREAM DRILL
- Features of i-Dream Drill Inserts-
- Merkmale des i-Dream Drill Einsätze

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante
 ► Soft cutting action / Weicher Schnitt
 ► Minimize cutting forces / Minimaler Schneiddruck
 ► Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-
- Merkmale des i-Dream Drill Halter-

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



Series Range (mm)	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	Screw No.
	General (TiAlN)	INOX (TiCN)	h7				SD	L2	FD	L1	L3 Ref.		
			dec.	frac.	mm								
E Ø20.00 to Ø21.99	YE1A2000	YE2C2000	.7874		20.00	ZH20003025				3D	60	145.5	TX2021T20
	YE1A2024	YE2C2024	.7969	51/64	20.24	ZH20005025	25	56	32	5D	100	185.5	
	YE1A2050	YE2C2050	.8071		20.50	ZH20007025				7D	140	225.5	
	YE1A2064	YE2C2064	.8125	13/16	20.64	ZH20503025				3D	61.5	147.5	
	YE1A2070	YE2C2070	.8150		20.70	ZH20505025	25	56	32	5D	102.5	188.5	TX2122T20
	YE1A2100	YE2C2100	.8268		21.00	ZH20507025				7D	143.5	229.5	
	YE1A2103	YE2C2103	.8281	53/64	21.03	ZH21003025	25	56	32	3D	63	149.5	
	YE1A2143	YE2C2143	.8438	27/32	21.43	ZH21005025				5D	105	191.5	
	YE1A2150	YE2C2150	.8465		21.50	ZH21007025				7D	147	233.5	
	YE1A2170	YE2C2170	.8543		21.70	ZH21503025				3D	64.5	150.5	
YE1A2183	YE2C2183	.8594		21.83	ZH21505025	25	56	32	5D	107.5	193.5	TX2223T20	
					ZH21507025				7D	150.5	236.5		
F Ø22.00 to Ø23.99	YF1A2200	YF2C2200	.8661		22.00	ZH22003025	25	56	32	3D	66	152.4	TX2223T20
	YF1A2223	YF2C2223	.8750	7/8	22.23	ZH22005025				5D	110	196.4	
	YF1A2250	YF2C2250	.8858		22.50	ZH22007025				7D	154	240.4	
	YF1A2262	YF2C2262	.8906	57/64	22.62	ZH22503025				3D	67.5	153.4	
	YF1A2270	YF2C2270	.8937		22.70	ZH22505025	25	56	32	5D	112.5	198.4	TX2324T20
	YF1A2270	YF2C2270	.8937		22.70	ZH22507025				7D	157.5	243.4	
	YF1A2300	YF2C2300	.9055		23.00	ZH23003025				3D	69	155.4	
	YF1A2302	YF2C2302	.9062	29/32	23.02	ZH23005025	25	56	32	5D	115	201.4	
	YF1A2342	YF2C2342	.9219	59/64	23.42	ZH23007025				7D	161	247.4	
	YF1A2350	YF2C2350	.9252		23.50	ZH23503025				3D	70.5	157.4	
YF1A2370	YF2C2370	.9331		23.70	ZH23505025	25	56	32	5D	117.5	204.4	TX2324T20	
YF1A2381	YF2C2381	.9375	15/16	23.81	ZH23507025				7D	164.5	251.4		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P										M	K			N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○		◎			○	○

i-DREAM DRILL INSERTS & HOLDERS**DE i-DREAM DRILL EINSÄTZE UND HALTER****FR PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX****IT INSERTI & PORTAINSERI i-DREAM DRILL****- Features of i-Dream Drill Inserts-****- Merkmale des i-Dream Drill Einsätze**

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante

- Soft cutting action / Weicher Schnitt

- Minimize cutting forces / Minimaler Schneidendruck

- Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-**- Merkmale des i-Dream Drill Halters-**

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



Series Range (mm)	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth		Overall Length	Screw No.
	General (TiAlN)	INOX (TiCN)	dec.	frac.	mm					L1	L3 Ref.		
G Ø24.00 to Ø25.99	YG1A2400	YG2C2400	.9449		24.00	ZH24003032	32	60	37	3D	72	164.8	TX2425T20
	YG1A2421	YG2C2421	.9531	61/64	24.21	ZH24005032				5D	120	212.8	
						ZH24007032				7D	168	260.8	
	YG1A2450	YG2C2450	.9646		24.50	ZH24503032	3D	73.5	165.8				
	YG1A2461	YG2C2461	.9688	31/32	24.61	ZH24505032	32	60	37	5D	122.5	214.8	
	YG1A2470	YG2C2470	.9724		24.70	ZH24507032				7D	171.5	263.8	
	YG1A2500	YG2C2500	.9843	63/64	25.00	ZH25003032	32	60	37	3D	75	167.8	TX2526T20
	YG1A2540	YG2C2540	1.0000	1	25.40	ZH25005032				5D	125	217.8	
						ZH25007032				7D	175	267.8	
	YG1A2550	YG2C2550	1.0039		25.50	ZH25503032	32	60	37	3D	76.5	170.8	
YG1A2567	YG2C2567	1.0106		25.67	ZH25505032	5D				127.5	221.8		
YG1A2570	YG2C2570	1.0118		25.70	ZH25507032	7D				178.5	272.8		
YG1A2580	YG2C2580	1.0156	1 * 1/64	25.80									
H Ø26.00 to Ø27.99	YH1A2600	YH2C2600	1.0236		26.00	ZH26003032	32	60	37	3D	78	171.2	TX2627T25
	YH1A2619	YH2C2619	1.0312	1 * 1/32	26.19	ZH26005032				5D	130	223.2	
						ZH26007032				7D	182	275.2	
	YH1A2650	YH2C2650	1.0433		26.50	ZH26503032	3D	79.5	172.2				
	YH1A2659	YH2C2659	1.0469	1 * 3/64	26.59	ZH26505032	32	60	37	5D	132.5	225.2	
	YH1A2699	YH2C2699	1.0625	1 * 1/16	26.99	ZH26507032				7D	185.5	278.2	
	YH1A2700	YH2C2700	1.0630		27.00	ZH27003032	32	60	37	3D	81	174.2	TX2728T25
						ZH27005032				5D	135	228.2	
						ZH27007032				7D	189	282.2	
	YH1A2750	YH2C2750	1.0827		27.50	ZH27503032	32	60	37	3D	82.5	175.2	
YH1A2778	YH2C2778	1.0938	1 * 3/32	27.78	ZH27505032	5D				137.5	230.2		
					ZH27507032	7D				192.5	285.2		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P											M	K		N	
	Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○		◎			○	○

i-DREAM DRILL INSERTS & HOLDERS

■ i-DREAM DRILL EINSÄTZE UND HALTER

■ PLAQUETTES ET PORTE-PLAQUETTE i-DREAM DRILL - USAGE GÉNÉRAL / INOX

■ INSERTI & PORTAINSERTI i-DREAM DRILL

- Features of i-Dream Drill Inserts-

- Merkmale des i-Dream Drill Einsätze

- Secure and accurate seating resulting in accurate repeatability and concentricity.

Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

i-Dream Drill General / i-Dream Drill allgemeinen

- For most steels materials / In den meisten Stahlsorten

i-Dream Drill INOX / i-Dream Drill INOX

- For tough, ductile materials and stainless steels

Für zähe, verformbare Werkstoffe und rostfreie Stähle.

- Light, sharp cutting edge / Scharfe Schneidkante
- Soft cutting action / Weicher Schnitt
- Minimize cutting forces / Minimaler Schneiddruck
- Reduce built-up edge / Reduzierte Gratbildung

- Features of i-Dream Drill Holders-

- Merkmale des i-Dream Drill Halter-

- Special Alloy Steels maintain its hardness and toughness under high temperatures.

Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.

- Innovative surface treatment improves wear resistance and reduces corrosion.

Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.

- High Performance flute design allows maximum chip evacuation and minimum interference.

Optimierte Nutenform für maximale Spanabfuhr.



Series Range (mm)	Insert EDP No.		Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	Screw No.
	General (TiAlN)	INOX (TiCN)	h7				SD	L2	FD	L1	L3 Ref.		
			dec.	frac.	mm								
I Ø28.00 to Ø29.99	YI1A2800	YI2C2800	1.1024		28.00	ZH28003032	32	60	37	3D	84	178.2	TX2829T25
	YI1A2818	YI2C2818	1.1094	1 * 7/64	28.18	ZH28005032				5D	140	234.2	
						ZH28007032				7D	196	290.2	
	YI1A2850	YI2C2850	1.1220		28.50	ZH28503032	32	60	37	3D	85.5	179.2	
	YI1A2858	YI2C2858	1.1250	1 * 1/8	28.58	ZH28505032				5D	142.5	236.2	
						ZH28507032				7D	199.5	293.2	
	YI1A2900	YI2C2900	1.1417		29.00	ZH29003032	32	60	37	3D	87	182.2	TX2930T25
	YI1A2937	YI2C2937	1.1562	1 * 5/32	29.37	ZH29005032				5D	145	240.2	
					ZH29007032	7D				203	298.2		
YI1A2950	YI2C2950	1.1614		29.50	ZH29503032	32	60	37	3D	88.5	183.2	TX2930T25	
YI1A2977	YI2C2977	1.1719	1 * 11/64	29.77	ZH29505032				5D	147.5	242.2		
					ZH29507032				7D	206.5	301.2		
J Ø30.00 to Ø31.99	YJ1A3000	YJ2C3000	1.1811		30.00	ZH30003032	32	60	37	3D	90		186.0
	YJ1A3016	YJ2C3016	1.1875	1 * 3/16	30.16	ZH30005032				5D	150	246.0	
						ZH30007032				7D	210	306.0	
	YJ1A3050	YJ2C3050	1.2008		30.50	ZH30503032				3D	91.5	187.0	
	YJ1A3056	YJ2C3056	1.2031	1 * 13/64	30.56	ZH30505032	32	60	37	5D	152.5	248.0	TX3132T25
	YJ1A3096	YJ2C3096	1.2188	1 * 7/32	30.96	ZH30507032				7D	213.5	309.0	
						ZH31003032				3D	93	188.0	
	YJ1A3100	YJ2C3100	1.2205		31.00	ZH31005032	32	60	37	5D	155	250.0	
						ZH31007032				7D	217	312.0	
YJ1A3150	YJ2C3150	1.2402		31.50	ZH31503032	3D				94.5	191.0		
YJ1A3175	YJ2C3175	1.2500	1 * 1/4	31.75	ZH31505032	32	60	37	5D	157.5	254.0	TX3132T25	
					ZH31507032				7D	220.5	317.0		

► Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

	P										M	K			N	
	Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron			Aluminum	Copper Alloys
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○		○				○		○	◎				○	○

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

METRIC

ISO	Material		Tensile Strength	Hardness		Cutting Speed	Feed [mm/rev]				
			[N/mm²]	HB	HRc	Vc [M/min]	Ø12.00 ~Ø14.99	Ø15.00 ~Ø17.99	Ø18.00 ~Ø21.99	Ø22.00 ~Ø26.99	Ø27.00 ~Ø31.99
P	Non-alloyed steels, Cast steels Free-machining steels	9SMn28, 9SMnPb28, 10SPb20 etc	~500	100~150		95~120	0.16~0.28	0.21~0.35	0.27~0.40	0.34~0.52	0.37~0.55
			500~850	150~250	~24	80~105	0.14~0.24	0.21~0.35	0.27~0.40	0.34~0.52	0.37~0.55
			~450	85~125		90~115	0.14~0.25	0.20~0.33	0.25~0.39	0.31~0.47	0.34~0.50
	Low-alloyed steels, Cast steels (<5%) Carbon steels	C15, C22, 20Mn5, Ck45, C45 etc	450~755	125~225	~19	70~90	0.12~0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.33~0.49
			755~900	225~265	19~27	60~80	0.12~0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.33~0.49
			900~1200	265~350	27~37	55~70	0.10~0.16	0.15~0.25	0.21~0.30	0.25~0.38	0.29~0.43
	Alloyed steels	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	~600	125~175	~7	80~100	0.14~0.24	0.17~0.28	0.22~0.32	0.30~0.46	0.34~0.50
			600~800	175~235	7~22	70~90	0.12~0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.34~0.50
			800~950	235~280	22~29	60~80	0.12~0.20	0.15~0.25	0.22~0.32	0.30~0.46	0.34~0.50
			950~1110	280~330	29~35	55~70	0.10~0.16	0.13~0.21	0.21~0.30	0.25~0.38	0.29~0.43
			1110~1230	330~360	35~39	45~60	0.08~0.12	0.13~0.21	0.21~0.30	0.25~0.38	0.29~0.43
	High-alloyed steels	36CrNiMo4, 41CrAlMo7 etc	600~1020	225~300	19~32	45~60	0.12~0.20	0.15~0.25	0.21~0.30	0.20~0.31	0.24~0.35
			1020~1200	300~355	32~38	40~55	0.10~0.16	0.11~0.18	0.21~0.30	0.20~0.31	0.24~0.35
			1200~1330	355~390	38~42	40~50	0.08~0.12	0.09~0.14	0.18~0.26	0.19~0.29	0.23~0.34
	Structural steels	St33, St37-2, St44-2, St52, St60 etc	350~500	100~150	75~95		0.14~0.24	0.21~0.35	0.27~0.39	0.29~0.44	0.32~0.47
			500~850	150~250	~24	60~75	0.12~0.20	0.20~0.33	0.22~0.32	0.25~0.38	0.29~0.43
			850~1200	250~355	24~38	50~65	0.10~0.16	0.17~0.28	0.21~0.30	0.21~0.32	0.26~0.38
	Tool steels	102Cr6, 105WCr6, C75W etc	500~705	150~210	~16	50~65	0.10~0.16	0.13~0.21	0.18~0.26	0.20~0.31	0.24~0.35
			705~950	210~280	16~29	40~50	0.10~0.16	0.13~0.21	0.18~0.26	0.20~0.31	0.24~0.35
M	Stainless steels	Austenitic and Austenitic/ferritic	450~610	135~185	~9	45~60	0.10~0.16	0.12~0.18	0.14~0.20	0.15~0.26	0.18~0.28
			610~930	185~275	9~28	30~45	0.08~0.14	0.09~0.15	0.10~0.16	0.12~0.20	0.14~0.22
K	Grey cast iron	Pearlitic, Ferritic Pearlitic	500~700	150~210	~16	100~125	0.15~0.26	0.20~0.37	0.27~0.42	0.36~0.51	0.40~0.55
			700~850	210~250	16~24	75~95	0.11~0.20	0.16~0.29	0.20~0.30	0.25~0.35	0.29~0.40
	Cast iron nodular	Ferritic Pearlitic	540	165	4	95~120	0.13~0.22	0.17~0.31	0.21~0.32	0.28~0.40	0.32~0.44
			850	250	24	75~95	0.11~0.20	0.14~0.26	0.19~0.29	0.25~0.35	0.29~0.40
	Malleable cast iron	Ferritic Pearlitic	450	125		100~125	0.13~0.22	0.17~0.31	0.21~0.32	0.28~0.40	0.32~0.44
780			230	21	75~95	0.11~0.18	0.14~0.26	0.19~0.29	0.25~0.35	0.29~0.40	
N	Aluminum alloys (Wrought)	not heat treatable hardened		65		250~330	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55	0.50~0.60
				150		200~250	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55	0.50~0.60
	Aluminum alloys (Cast)	≤12% Si, not heat treatable ≤12% Si, hardened >12% Si, not heat treatable		75		200~50	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55
				90		150~220	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55
				130		100~200	0.20~0.30	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50
	Copper alloys	Free machining (Pb>1%) Brass Electrolitic copper		110		115~145	0.16~0.28	0.23~0.36	0.29~0.36	0.37~0.45	0.41~0.48
				90		145~185	0.17~0.29	0.24~0.37	0.30~0.38	0.38~0.46	0.42~0.49
				100		95~120	0.06~0.09	0.09~0.13	0.11~0.13	0.15~0.18	0.19~0.22
	Non ferrous material	Duroplastics Fiber plastics Hard rubber									

RPM = revolution per minute (rev/min)
M/min = surface meter per minute (M/min)
DIA. = diameter of drill (mm)
mm/rev = feed rate (mm/rev)

*Formulas :

$$M/min = \frac{(RPM) \cdot \pi \cdot (DIA.)}{1000}$$

$$mm/min = (RPM) \cdot (mm/rev)$$

$$RPM = \frac{(M/min) \cdot 1000}{(\pi) \cdot (DIA.)}$$

- The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
- For use of 7xD holder, we recommend to use a pilot drill with equal to or larger than 140° point angle (0.5xD ~ 1.5xD).
The use of the centering pre-hole improves hole location, roundness and surface finish.



INCH

ISO	Material		Tensile Strength	Hardness		Cutting Speed	Feed [IPR]				
							Ø31/64 ~Ø37/64	Ø19/32 ~Ø45/64	Ø23/32 ~Ø55/64	Ø7/8 ~Ø1-1/16	Ø1-3/32 ~Ø1-1/4
P	Non-alloyed steels, Cast steels Free-machining steels	1213, 13L13, 1215, 12L14, 1118 etc	~500	100~150		312~394	.006~.011	.008~.014	.011~.016	.013~.020	.015~.022
			500~850	150~250	~24	262~344	.006~.009	.008~.014	.011~.016	.013~.020	.015~.022
	Low-alloyed steels, Cast steels (<5%) Carbon steels	1015, 1020, 1140, 1025, 1035, 1050, 1045, 1055 etc	~450	85~125		295~377	.006~.010	.008~.013	.010~.015	.012~.019	.013~.020
			450~755	125~225	~19	230~295	.005~.008	.007~.011	.009~.013	.012~.018	.013~.019
			755~900	225~265	19~27	197~262	.005~.008	.007~.011	.009~.013	.012~.018	.013~.019
			900~1200	265~350	27~37	180~230	.004~.006	.006~.010	.008~.012	.010~.015	.011~.017
	Alloyed steels	8620, 4130, 4137, 4140, 6150 etc	~600	125~175	~7	262~328	.006~.009	.007~.011	.009~.013	.012~.018	.013~.020
			600~800	175~235	7~22	230~295	.005~.008	.007~.011	.009~.013	.012~.018	.013~.020
			800~950	235~280	22~29	197~262	.005~.008	.006~.010	.009~.013	.012~.018	.013~.020
			950~1110	280~330	29~35	180~230	.004~.006	.005~.008	.008~.012	.010~.015	.011~.017
			1110~1230	330~360	35~39	148~197	.003~.005	.005~.008	.008~.012	.010~.015	.011~.017
			600~1020	225~300	19~32	148~197	.005~.008	.006~.010	.008~.012	.008~.012	.009~.014
	High-alloyed steels	A355, 9840, 4340 etc	1020~1200	300~355	32~38	131~180	.004~.006	.004~.007	.008~.012	.008~.012	.009~.014
			1200~1330	355~390	38~42	131~164	.003~.005	.004~.006	.007~.010	.007~.011	.009~.013
	Structural steels	A36, A516, A182 etc	350~500	100~150		246~312	.006~.009	.008~.014	.011~.015	.011~.017	.013~.019
			500~850	150~250	~24	197~246	.005~.008	.008~.013	.009~.013	.010~.015	.011~.017
	Tool steels	H13, H21, A2, S1 etc	850~1200	250~355	24~38	164~213	.004~.006	.007~.011	.008~.012	.008~.013	.010~.015
			500~705	150~210	~16	164~213	.004~.006	.005~.008	.007~.010	.008~.012	.009~.014
M	Stainless steels	Austenitic and Austenitic/ferritic	705~950	210~280	16~29	131~164	.004~.006	.005~.008	.007~.010	.008~.012	.009~.014
			450~610	135~185	~9	145~197	.004~.006	.005~.007	.006~.008	.006~.011	.007~.011
K	Grey cast iron	Pearlitic, Ferritic	610~930	185~275	9~28	89~145	.003~.005	.004~.006	.004~.006	.005~.008	.006~.009
			500~700	150~210	~16	328~410	.006~.010	.008~.015	.011~.017	.014~.020	.016~.022
	Cast iron nodular	Ferritic	700~850	210~250	16~24	246~312	.004~.008	.006~.011	.008~.012	.010~.014	.011~.016
			540	165	4	312~394	.005~.009	.007~.012	.008~.013	.011~.016	.013~.017
	Malleable cast iron	Pearlitic	850	250	24	246~312	.004~.008	.006~.010	.007~.011	.010~.014	.011~.016
			450	125		328~410	.005~.009	.007~.012	.008~.013	.011~.016	.013~.017
N	Aluminum alloys (Wrought)	not heat treatable		65		820~1083	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217	.0197~.0236
		hardened		150		656~820	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217	.0197~.0236
	Aluminum alloys (Cast)	≤12% Si, not heat treatable		75		656~820	.0098~.0138	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217
		≤12% Si, hardened		90		492~722	.0098~.0138	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217
		>12% Si, not heat treatable		130		328~656	.0079~.0118	.0098~.0138	.0118~.0157	.0138~.0177	.0157~.0197
	Copper alloys	Free machining (Pb>1%)		110		377~476	.006~.011	.009~.014	.011~.014	.015~.018	.016~.019
		Brass		90		476~607	.007~.011	.009~.015	.012~.015	.015~.018	.017~.019
		Electrolitic copper		100		312~394	.002~.004	.004~.005	.004~.005	.006~.007	.007~.009
	Non ferrous material	Duroplastics									
		Fiber plastics Hard rubber									

*Formulas:

RPM = revolution per minute (rev/min)
SFM = surface feet per minute (ft/min)
DIA. = diameter of drill (inch)
IPR = feed rate (inch/rev)
IPM = inch per minute penetration rate

$$\begin{aligned} \text{SFM} &= \frac{(\text{RPM}) \cdot \pi \cdot (\text{DIA.})}{12} \\ \text{IPM} &= (\text{RPM}) \cdot (\text{IPR}) \\ \text{RPM} &= \frac{(\text{SFM}) \cdot 12}{(\pi) \cdot (\text{DIA.})} \end{aligned}$$

- The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
- For use of 7xD holder, we recommend to use a pilot drill with equal to or larger than 140° point angle (0.5xD ~ 1.5xD).
The use of the centering pre-hole improves hole location, roundness and surface finish.

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA

ASSEMBLY OF i-DREAM DRILLS
MONTAGE DES i-DREAM DRILLS

Make sure to clean the insert and insert seat.

Schneideinsatz und Haltersitz
sorgfältig reinigen.



Slide the drill insert into the slot of the holder and press down the insert to touch the bottom of the slot.
Schneideinsatz in den Haltersitz einführen und den Schneideinsatz fest auf den Grund des Haltersitzes pressen.



After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

Wenn der Schneideinsatz fest auf den Grund des Haltersitzes gepresst ist, die Schraube fest anziehen und dabei Spezialfett verwenden.

WRENCH TYPE	PRODUCT No.	T-HANDLE No.	SERIES (SIZE)
 WING TYPE	TWWT08	—	A (Ø 12.00~Ø 13.99)
			B (Ø 14.00~Ø 15.99)
			C (Ø 16.00~Ø 17.99)
 TORX BIT TYPE	TWBT15	 TWH600	D (Ø 18.00~Ø 19.99)
	TWBT20		E, F, G (Ø 20.00~Ø 25.99)
	TWBT25		H, I, J (Ø 26.00~Ø 31.99)

Use the wing type or T-type wrench.

Benutzen Sie den Winkeldreher oder T - Schlüsse

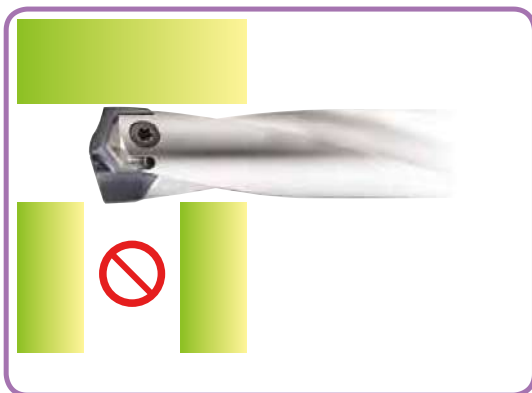
► Need to use appropriate wrenches and screws as indicated.

Unbedingt die angegebenen Schrauben und Dreher verwenden.

► It's important to tighten up the screw properly.

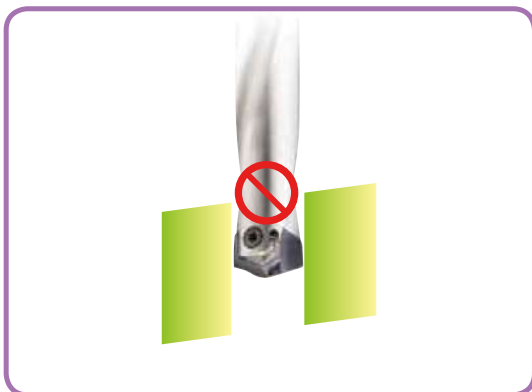
Es ist wichtig, die Schraube korrekt und fest anzuziehen.

CAUTION-NOT RECOMMENDABLE APPLICATION
ACHTUNG - NICHT EMPFOHLENE ANWENDUNG



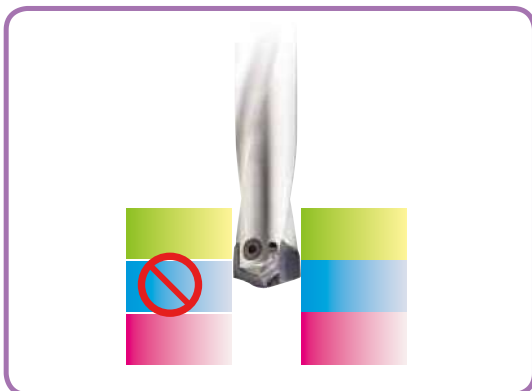
Intersecting cross hole is bigger than the drill insert's Margin Length.

Der Haltersitz ist größer als die Breite des Schneideinsatzes.



Material with slanting entrance and exit over 7 degree. (If drilling 7 degree or under slanting surface, reduce the feed about 30-50%)

Werkstücke mit schrägem Anschnitt oder Austritt von über 7°. (Zum Bohren von bis zu 7° Schräge den Vorschub um ca. 30-50% reduzieren).

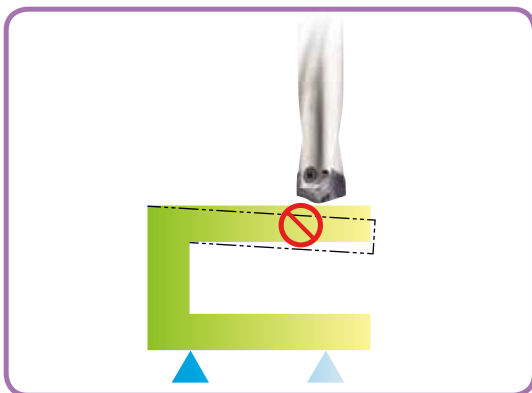


For drilling stacked plates, minimize the space between the plates.

Beim Bohren von Blechpaketen den Abstand der Bleche minimieren.

The space stacked plates can cause insert breakage or poor chip control.

Freiraum in Blechpaketen kann den Bruch des Schneideinsatzes oder schlechte Entspannung verursachen.



The material needs to be fixtured securely before drilling.

Das Werkstück muss fest und sicher aufgespannt sein

i-ONE
DRILLS

i-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

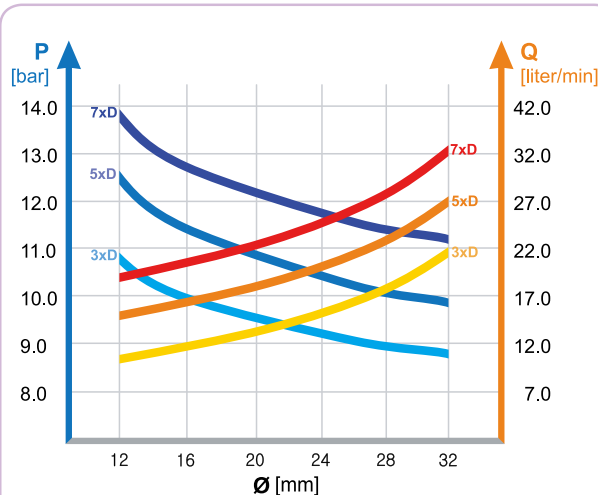
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

TECHNICAL
DATA

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING
EMPFOHLENE KÜHLMITTELDRUCK UND - MENGE BEIM VERTIKALEN BOHREN

- Recommended emulsion mix is 6 - 8%.
Empfohlene Emulsionsmischung 6 - 8 %.
- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
Beim Bohren in rostfreie und hochfeste Stähle werden 10% empfohlen.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
Beim horizontalen Bohren können Kühlmitteldruck und -menge um 30% gemindert werden.
- Dry drilling is possible for 1-2xD drilling. But not recommended.
Trocken Bohren ist möglich bei 1-2xD. Aber nicht empfohlen.

TROUBLE SHOOTING
PROBLEMLÖSUNGEN

- 1) Heavy flank wear / Fast flank wear**
- Reduce cutting speed
 - Increase feed



- 2) Chipping on cutting edge**
- Reduce feed
 - Check the rigidity of spindle and chuck
 - Rigid clamping of workpiece



- 3) Build up on cutting edge**
- Increase cutting speed
 - Use a coated insert



- 4) Chipping or break down on outer corner**
- Reduce feed
 - Rigid clamping of workpiece



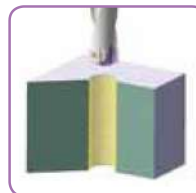
- 5) Wear of land margin**
- Rigid clamping of workpiece
 - Reduce cutting speed
 - Increase coolant flow



- 6) Unsatisfactory positioning of the hole**
- Rigid clamping of workpiece
 - Reduce feed during entrance or exit



- 7) Scratching on holder**
- Rigid clamping of workpiece
 - Reduce feed
 - Increase coolant flow



- 8) Unsatisfactory surface finish**
- Rigid clamping of workpiece
 - Increase coolant flow and pressure

CARBIDE



Leading Through Innovation



DREAM DRILLS -GENERAL

DREAM DRILLS - UNIVERSAL

- WITH & WITHOUT COOLANT HOLES
General Purpose usually HRc30 to HRc50
- Mit und ohne Kühlkanäle
Für allgemeinen Einsatz von HRc30 bis HRc50

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes)

General Purpose usually HRC30 to HRC50

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3XD DH404		CARBIDE, DREAM DRILLS VOLLHARTMETALL DREAM SPIRALBOHRER <i>STUB EXTRA KURZ</i>	D3.0	D20.0	82
3XD DH423		CARBIDE, DREAM DRILLS VOLLHARTMETALL DREAM SPIRALBOHRER <i>SHORT KURZ</i>	D3.0	D20.0	84
5XD DH424		CARBIDE, DREAM DRILLS VOLLHARTMETALL DREAM SPIRALBOHRER <i>LONG LANG</i>	D1.0	D20.0	86
3XD DH406		CARBIDE, DREAM DRILLS with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL <i>SHORT KURZ</i>	D3.0	D20.0	89
5XD DH408		CARBIDE, DREAM DRILLS with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL <i>LONG LANG</i>	D1.0	D20.0	91
8XD DH421		CARBIDE, DREAM DRILLS with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL <i>EXTRA LONG ÜBERLANG</i>	D3.0	D14.0	94
Recommended cutting conditions EMPFOHLENE SCHNEIDKONDITIONEN					96

SOLID CARBIDE DREAM DRILLS-GENERAL

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					
◎	◎	◎			○	○					
◎	◎	◎			○	○					
◎	◎	◎			○	○					
◎	◎	◎			○	○					
◎	◎	◎			○	○					

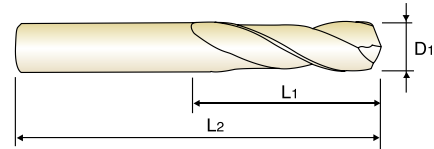

CARBIDE, DREAM DRILLS
STUB
VOILLHARTMETALL DREAM SPIRALBOHRER
EXTRA KURZ
Forets DREAM DRILLS carbure, série extra-courte
EXTRA-COURTE
PUNTE ELICOIDALI IN MD - DREAM DRILLS
EXTRA CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Self centering
- center drilling is not required.
Excellent positioning
- bush is not necessary.
Special Design
- reaming is not required.
- good chip removal
- powerful drilling

► **Vorteile** : Selbst zentrierend
- Zentrierbohrung wird nicht benötigt.
Exzellente Positionierbarkeit
- Keine Führungsbuchse notwendig.
Spezielles Design
- Räumen ist nicht notwendig
- Gute Spanabfuhr
- Leistungsfähiges Bohren


**DIN
6539**
MG
30°
h6
h7
140°

P.96

D1=D2
3 × D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2	TiAIN	D1	L1	L2
DH404030	3.0	16	46	DH404057	5.7	28	66
DH404031	3.1	18	49	DH404058	5.8	28	66
DH404032	3.2	18	49	DH404059	5.9	28	66
DH404033	3.3	18	49	DH404060	6.0	28	66
DH404034	3.4	20	52	DH404061	6.1	31	70
DH404035	3.5	20	52	DH404062	6.2	31	70
DH404036	3.6	20	52	DH404063	6.3	31	70
DH404037	3.7	20	52	DH404064	6.4	31	70
DH404038	3.8	22	55	DH404065	6.5	31	70
DH404039	3.9	22	55	DH404066	6.6	31	70
DH404040	4.0	22	55	DH404067	6.7	31	70
DH404041	4.1	22	55	DH404068	6.8	34	74
DH404042	4.2	22	55	DH404069	6.9	34	74
DH404043	4.3	24	58	DH404070	7.0	34	74
DH404044	4.4	24	58	DH404071	7.1	34	74
DH404045	4.5	24	58	DH404072	7.2	34	74
DH404046	4.6	24	58	DH404073	7.3	34	74
DH404047	4.7	24	58	DH404074	7.4	34	74
DH404048	4.8	26	62	DH404075	7.5	34	74
DH404049	4.9	26	62	DH404076	7.6	37	79
DH404050	5.0	26	62	DH404077	7.7	37	79
DH404051	5.1	26	62	DH404078	7.8	37	79
DH404052	5.2	26	62	DH404079	7.9	37	79
DH404053	5.3	26	62	DH404080	8.0	37	79
DH404054	5.4	28	66	DH404081	8.1	37	79
DH404055	5.5	28	66	DH404082	8.2	37	79
DH404056	5.6	28	66	DH404083	8.3	37	79

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	◎			○	○					

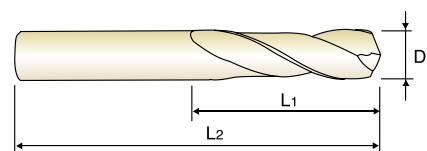
CARBIDE, DREAM DRILLS
STUB
■ VOLLHARTMETALL DREAM SPIRALBOHRER
EXTRA KURZ
■ Forets DREAM DRILLS carbure, série extra-courte
EXTRA-COURTE
■ PUNTE ELICOIDALI IN MD - DREAM DRILLS
EXTRA CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Self centering
 - center drilling is not required.
 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

► **Vorteile** : Selbst zentrierend
 - Zentrierbohrung wird nicht benötigt.
 Exzellente Positionierbarkeit
 - Keine Führungsbuchse notwendig.
 Spezielles Design
 - Räumen ist nicht notwendig
 - Gute Spanabfuhr
 - Leistungsfähiges Bohren


DIN 6539
MG
30°
h6
h7
140°


P.96

D₁=D₂
3 × D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D ₁	L ₁	L ₂
DH404084	8.4	37	79
DH404085	8.5	37	79
DH404086	8.6	40	84
DH404087	8.7	40	84
DH404088	8.8	40	84
DH404089	8.9	40	84
DH404090	9.0	40	84
DH404091	9.1	40	84
DH404092	9.2	40	84
DH404093	9.3	40	84
DH404094	9.4	40	84
DH404095	9.5	40	84
DH404096	9.6	43	89
DH404097	9.7	43	89
DH404098	9.8	43	89
DH404099	9.9	43	89
DH404100	10.0	43	89
DH404102	10.2	43	89
DH404105	10.5	43	89

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D ₁	L ₁	L ₂
DH404110	11.0	47	95
DH404115	11.5	47	95
DH404120	12.0	51	102
DH404130	13.0	51	102
DH404135	13.5	54	107
DH404140	14.0	54	107
DH404145	14.5	56	111
DH404150	15.0	56	111
DH404155	15.5	58	115
DH404160	16.0	58	115
DH404165	16.5	60	119
DH404170	17.0	60	119
DH404175	17.5	62	123
DH404180	18.0	62	123
DH404185	18.5	64	127
DH404190	19.0	64	127
DH404195	19.5	66	131
DH404200	20.0	66	131

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					

i-ONE DRILLS

i-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

TECHNICAL DATA

CARBIDE, DREAM DRILLS
 **VOLLHARTMETALL DREAM SPIRALBOHRER**
 **Forets DREAM DRILLS carbure, série courte**
 **PUNTE ELICOIDALI IN MD - DREAM DRILLS**
SHORT**KURZ****COURTE****CORTA**

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

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Excellent positioning

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Special Design

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► **Vorteile** : Selbst zentrierend

- Zentrierbohrung wird nicht benötigt.

Exzellente Positionierbarkeit

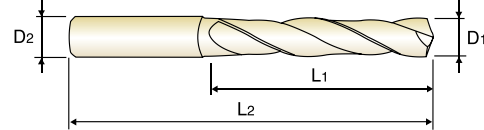
-Keine Führungsbuchse notwendig.

Spezielles Design

-Räumen ist nicht notwendig

-Gute Spanabfuhr

-Leistungsfähiges Bohren



DIN 6537

MG

30°

h6

m7

140°

P.96

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TAIIN	D1	D2	L1	L2	TAIIN	D1	D2	L1	L2
DH423030	3.0	6	20	62	DH423059	5.9	6	28	66
DH423031	3.1	6	20	62	DH423060	6.0	6	28	66
DH423032	3.2	6	20	62	DH423061	6.1	8	34	79
DH423033	3.3	6	20	62	DH423062	6.2	8	34	79
DH423034	3.4	6	20	62	DH423063	6.3	8	34	79
DH423035	3.5	6	20	62	DH423064	6.4	8	34	79
DH423036	3.6	6	20	62	DH423065	6.5	8	34	79
DH423037	3.7	6	20	62	DH423066	6.6	8	34	79
DH423038	3.8	6	24	66	DH423067	6.7	8	34	79
DH423039	3.9	6	24	66	DH423068	6.8	8	34	79
DH423040	4.0	6	24	66	DH423069	6.9	8	34	79
DH423041	4.1	6	24	66	DH423070	7.0	8	34	79
DH423042	4.2	6	24	66	DH423071	7.1	8	41	79
DH423043	4.3	6	24	66	DH423072	7.2	8	41	79
DH423044	4.4	6	24	66	DH423073	7.3	8	41	79
DH423045	4.5	6	24	66	DH423074	7.4	8	41	79
DH423046	4.6	6	24	66	DH423075	7.5	8	41	79
DH423047	4.7	6	24	66	DH423076	7.6	8	41	79
DH423048	4.8	6	28	66	DH423077	7.7	8	41	79
DH423049	4.9	6	28	66	DH423078	7.8	8	41	79
DH423050	5.0	6	28	66	DH423079	7.9	8	41	79
DH423051	5.1	6	28	66	DH423080	8.0	8	41	79
DH423052	5.2	6	28	66	DH423081	8.1	10	47	89
DH423053	5.3	6	28	66	DH423082	8.2	10	47	89
DH423054	5.4	6	28	66	DH423083	8.3	10	47	89
DH423055	5.5	6	28	66	DH423084	8.4	10	47	89
DH423056	5.6	6	28	66	DH423085	8.5	10	47	89
DH423057	5.7	6	28	66	DH423086	8.6	10	47	89
DH423058	5.8	6	28	66	DH423087	8.7	10	47	89

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					

CARBIDE, DREAM DRILLS

 **VOLLHARTMETALL DREAM SPIRALBOHRER**
 **Forets DREAM DRILLS carbure, série courte**
 **PUNTE ELICOIDALI IN MD - DREAM DRILLS**

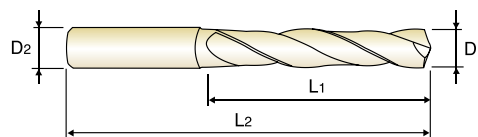
SHORT
**KURZ
COURTE
CORTA**

► Application : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► Advantage : Self centering
 - center drilling is not required.
 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

► Verwendung : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► Vorteile : Selbst zentrierend
 - Zentrierbohrung wird nicht benötigt.
 Exzellente Positionierbarkeit
 -Keine Führungsbuchse notwendig.
 Spezielles Design
 -Räumen ist nicht notwendig
 -Gute Spanabfuhr
 -Leistungsfähiges Bohren


**DIN
6537**
MG

30°

h6

m7

140°

P.96
3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH423088	8.8	10	47	89
DH423089	8.9	10	47	89
DH423090	9.0	10	47	89
DH423091	9.1	10	47	89
DH423092	9.2	10	47	89
DH423093	9.3	10	47	89
DH423094	9.4	10	47	89
DH423095	9.5	10	47	89
DH423096	9.6	10	47	89
DH423097	9.7	10	47	89
DH423098	9.8	10	47	89
DH423099	9.9	10	47	89
DH423100	10.0	10	47	89
DH423101	10.1	12	55	102
DH423102	10.2	12	55	102
DH423103	10.3	12	55	102
DH423104	10.4	12	55	102
DH423105	10.5	12	55	102
DH423106	10.6	12	55	102
DH423107	10.7	12	55	102
DH423108	10.8	12	55	102
DH423109	10.9	12	55	102
DH423110	11.0	12	55	102
DH423111	11.1	12	55	102
DH423112	11.2	12	55	102
DH423113	11.3	12	55	102
DH423114	11.4	12	55	102
DH423115	11.5	12	55	102
DH423116	11.6	12	55	102

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH423117	11.7	12	55	102
DH423118	11.8	12	55	102
DH423119	11.9	12	55	102
DH423120	12.0	12	55	102
DH423123	12.3	14	60	107
DH423125	12.5	14	60	107
DH423128	12.8	14	60	107
DH423130	13.0	14	60	107
DH423135	13.5	14	60	107
DH423138	13.8	14	60	107
DH423140	14.0	14	60	107
DH423145	14.5	16	65	115
DH423148	14.8	16	65	115
DH423150	15.0	16	65	115
DH423155	15.5	16	65	115
DH423158	15.8	16	65	115
DH423160	16.0	16	65	115
DH423165	16.5	18	73	123
DH423168	16.8	18	73	123
DH423170	17.0	18	73	123
DH423175	17.5	18	73	123
DH423178	17.8	18	73	123
DH423180	18.0	18	73	123
DH423185	18.5	20	79	131
DH423190	19.0	20	79	131
DH423195	19.5	20	79	131
DH423198	19.8	20	79	131
DH423200	20.0	20	79	131

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA


CARBIDE, DREAM DRILLS
VOILLHARTMETALL DREAM SPIRALBOHRER
Forets DREAM DRILLS carbure, série longue
PUNTE ELICOIDALI IN MD - DREAM DRILLS
LONG
LANG
LONGUE
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Self centering

- center drilling is not required.

Excellent positioning

- bush is not necessary.

Special Design

- reaming is not required.

- good chip removal

- powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen

► **Vorteile** : Selbst zentrierend

- Zentrierbohrung wird nicht benötigt.

Exzellente Positionierbarkeit

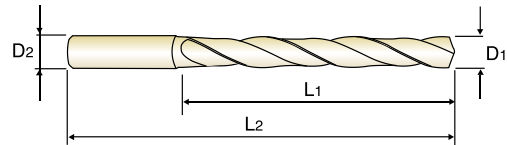
- Keine Führungsbuchse notwendig.

Spezielles Design

- Räumen ist nicht notwendig

- Gute Spanabfuhr

- Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°

P.96

5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH424010	1.0	3	8	55	DH424036	3.6	6	28	66
DH424011	1.1	3	12	55	DH424037	3.7	6	28	66
DH424012	1.2	3	12	55	DH424038	3.8	6	36	74
DH424013	1.3	3	12	55	DH424039	3.9	6	36	74
DH424014	1.4	3	12	55	DH424040	4.0	6	36	74
DH424015	1.5	3	16	55	DH424041	4.1	6	36	74
DH424016	1.6	3	16	55	DH424042	4.2	6	36	74
DH424017	1.7	3	16	55	DH424043	4.3	6	36	74
DH424018	1.8	3	16	55	DH424044	4.4	6	36	74
DH424019	1.9	3	16	55	DH424045	4.5	6	36	74
DH424020	2.0	4	21	57	DH424046	4.6	6	36	74
DH424021	2.1	4	21	57	DH424047	4.7	6	36	74
DH424022	2.2	4	21	57	DH424048	4.8	6	44	82
DH424023	2.3	4	21	57	DH424049	4.9	6	44	82
DH424024	2.4	4	21	57	DH424050	5.0	6	44	82
DH424025	2.5	4	21	57	DH424051	5.1	6	44	82
DH424026	2.6	4	21	57	DH424052	5.2	6	44	82
DH424027	2.7	4	21	57	DH424053	5.3	6	44	82
DH424028	2.8	4	21	57	DH424054	5.4	6	44	82
DH424029	2.9	4	21	57	DH424055	5.5	6	44	82
DH424030	3.0	6	28	66	DH424056	5.6	6	44	82
DH424031	3.1	6	28	66	DH424057	5.7	6	44	82
DH424032	3.2	6	28	66	DH424058	5.8	6	44	82
DH424033	3.3	6	28	66	DH424059	5.9	6	44	82
DH424034	3.4	6	28	66	DH424060	6.0	6	44	82
DH424035	3.5	6	28	66	DH424061	6.1	8	53	91

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					

CARBIDE, DREAM DRILLS

 **VOLLHARTMETALL DREAM SPIRALBOHRER**
 **Forets DREAM DRILLS carbure, série longue**
 **PUNTE ELICOIDALI IN MD - DREAM DRILLS**

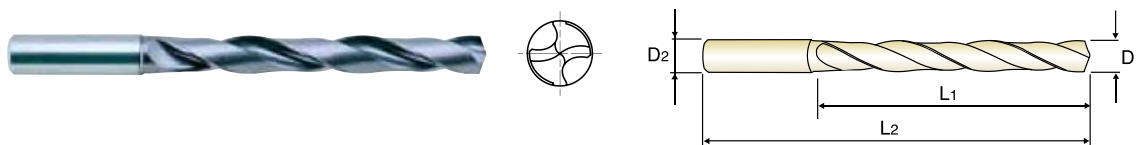
LONG
LANG
LONGUE
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Self centering
 - center drilling is not required.
 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen

► **Vorteile** : Selbst zentrierend
 - Zentrierbohrung wird nicht benötigt.
 Exzellente Positionierbarkeit
 - Keine Führungsbuchse notwendig.
 Spezielles Design
 - Räumen ist nicht notwendig
 - Gute Spanabfuhr
 - Leistungsfähiges Bohren



DIN 6537

MG

30°

h6

m7

140°

P.96

5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424062	6.2	8	53	91
DH424063	6.3	8	53	91
DH424064	6.4	8	53	91
DH424065	6.5	8	53	91
DH424066	6.6	8	53	91
DH424067	6.7	8	53	91
DH424068	6.8	8	53	91
DH424069	6.9	8	53	91
DH424070	7.0	8	53	91
DH424071	7.1	8	53	91
DH424072	7.2	8	53	91
DH424073	7.3	8	53	91
DH424074	7.4	8	53	91
DH424075	7.5	8	53	91
DH424076	7.6	8	53	91
DH424077	7.7	8	53	91
DH424078	7.8	8	53	91
DH424079	7.9	8	53	91
DH424080	8.0	8	53	91
DH424081	8.1	10	61	103
DH424082	8.2	10	61	103
DH424083	8.3	10	61	103
DH424084	8.4	10	61	103
DH424085	8.5	10	61	103
DH424086	8.6	10	61	103
DH424087	8.7	10	61	103

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424088	8.8	10	61	103
DH424089	8.9	10	61	103
DH424090	9.0	10	61	103
DH424091	9.1	10	61	103
DH424092	9.2	10	61	103
DH424093	9.3	10	61	103
DH424094	9.4	10	61	103
DH424095	9.5	10	61	103
DH424096	9.6	10	61	103
DH424097	9.7	10	61	103
DH424098	9.8	10	61	103
DH424099	9.9	10	61	103
DH424100	10.0	10	61	103
DH424101	10.1	12	71	118
DH424102	10.2	12	71	118
DH424103	10.3	12	71	118
DH424104	10.4	12	71	118
DH424105	10.5	12	71	118
DH424106	10.6	12	71	118
DH424107	10.7	12	71	118
DH424108	10.8	12	71	118
DH424109	10.9	12	71	118
DH424110	11.0	12	71	118
DH424111	11.1	12	71	118
DH424112	11.2	12	71	118
DH424113	11.3	12	71	118

► Other shank types are available on your request.

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○					

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA


CARBIDE, DREAM DRILLS
VOILLHARTMETALL DREAM SPIRALBOHRER
Forets DREAM DRILLS carbure, série longue
PUNTE ELICOIDALI IN MD - DREAM DRILLS
LONG
LANG
LONGUE
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Self centering

- center drilling is not required.

Excellent positioning

- bush is not necessary.

Special Design

- reaming is not required.

- good chip removal

- powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen

► **Vorteile** : Selbst zentrierend

- Zentrierbohrung wird nicht benötigt.

Exzellente Positionierbarkeit

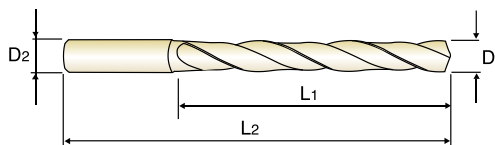
- Keine Führungsbuchse notwendig.

Spezielles Design

- Räumen ist nicht notwendig

- Gute Spanabfuhr

- Leistungsfähiges Bohren


**DIN
6537**
MG
30°
h6
m7
140°
P.96
5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424114	11.4	12	71	118
DH424115	11.5	12	71	118
DH424116	11.6	12	71	118
DH424117	11.7	12	71	118
DH424118	11.8	12	71	118
DH424119	11.9	12	71	118
DH424120	12.0	12	71	118
DH424125	12.5	14	77	124
DH424130	13.0	14	77	124
DH424135	13.5	14	77	124
DH424140	14.0	14	77	124
DH424145	14.5	16	83	133

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424150	15.0	16	83	133
DH424155	15.5	16	83	133
DH424160	16.0	16	83	133
DH424165	16.5	18	93	143
DH424170	17.0	18	93	143
DH424175	17.5	18	93	143
DH424180	18.0	18	93	143
DH424185	18.5	20	101	153
DH424190	19.0	20	101	153
DH424195	19.5	20	101	153
DH424200	20.0	20	101	153

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	◎			○	○					

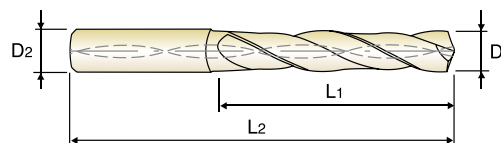
CARBIDE, DREAM DRILLS with COOLANT HOLES
SHORT
VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
KURZ
Forets DREAM DRILLS carbure, avec arrosage central, série courte
COURTE
PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Self centering
- center drilling is not required.
Excellent positioning
- bush is not necessary.
Special Design
- reaming is not required.
- good chip removal
- powerful drilling

► **Vorteile** : Selbst zentrierend
- Zentrierbohrung wird nicht benötigt.
Exzellente Positionierbarkeit
- Keine Führungsbuchse notwendig.
Spezielles Design
- Räumen ist nicht notwendig
- Gute Spanabfuhr
- Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar


P.96

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH406030	3.0	6	20	62
DH406031	3.1	6	20	62
DH406032	3.2	6	20	62
DH406033	3.3	6	20	62
DH406034	3.4	6	20	62
DH406035	3.5	6	20	62
DH406036	3.6	6	20	62
DH406037	3.7	6	20	62
DH406038	3.8	6	24	66
DH406039	3.9	6	24	66
DH406040	4.0	6	24	66
DH406041	4.1	6	24	66
DH406042	4.2	6	24	66
DH406043	4.3	6	24	66
DH406044	4.4	6	24	66
DH406045	4.5	6	24	66
DH406046	4.6	6	24	66
DH406047	4.7	6	24	66
DH406048	4.8	6	28	66
DH406049	4.9	6	28	66
DH406050	5.0	6	28	66
DH406051	5.1	6	28	66
DH406052	5.2	6	28	66
DH406053	5.3	6	28	66
DH406054	5.4	6	28	66
DH406055	5.5	6	28	66
DH406056	5.6	6	28	66

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH406057	5.7	6	28	66
DH406058	5.8	6	28	66
DH406059	5.9	6	28	66
DH406060	6.0	6	28	66
DH406061	6.1	8	34	79
DH406062	6.2	8	34	79
DH406063	6.3	8	34	79
DH406064	6.4	8	34	79
DH406065	6.5	8	34	79
DH406066	6.6	8	34	79
DH406067	6.7	8	34	79
DH406068	6.8	8	34	79
DH406069	6.9	8	34	79
DH406070	7.0	8	34	79
DH406071	7.1	8	41	79
DH406072	7.2	8	41	79
DH406073	7.3	8	41	79
DH406074	7.4	8	41	79
DH406075	7.5	8	41	79
DH406076	7.6	8	41	79
DH406077	7.7	8	41	79
DH406078	7.8	8	41	79
DH406079	7.9	8	41	79
DH406080	8.0	8	41	79
DH406081	8.1	10	47	89
DH406082	8.2	10	47	89
DH406083	8.3	10	47	89

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					

i-ONE DRILLS

i-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

TECHNICAL DATA

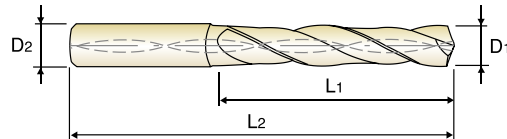

CARBIDE, DREAM DRILLS with COOLANT HOLES
SHORT
🇩🇪 VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
KURZ
🇫🇷 Forets DREAM DRILLS carbure, avec arrosage central, série courte
COURTE
🇮🇹 PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Self centering
- center drilling is not required.
Excellent positioning
- bush is not necessary.
Special Design
- reaming is not required.
- good chip removal
- powerful drilling

► **Vorteile** : Selbst zentrierend
- Zentrierbohrung wird nicht benötigt.
Exzellente Positionierbarkeit
- Keine Führungsbuchse notwendig.
Spezielles Design
- Räumen ist nicht notwendig
- Gute Spanabfuhr
- Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar

P.96

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH406084	8.4	10	47	89	DH406111	11.1	12	55	102
DH406085	8.5	10	47	89	DH406112	11.2	12	55	102
DH406086	8.6	10	47	89	DH406113	11.3	12	55	102
DH406087	8.7	10	47	89	DH406114	11.4	12	55	102
DH406088	8.8	10	47	89	DH406115	11.5	12	55	102
DH406089	8.9	10	47	89	DH406116	11.6	12	55	102
DH406090	9.0	10	47	89	DH406117	11.7	12	55	102
DH406091	9.1	10	47	89	DH406118	11.8	12	55	102
DH406092	9.2	10	47	89	DH406119	11.9	12	55	102
DH406093	9.3	10	47	89	DH406120	12.0	12	55	102
DH406094	9.4	10	47	89	DH406125	12.5	14	60	107
DH406095	9.5	10	47	89	DH406130	13.0	14	60	107
DH406096	9.6	10	47	89	DH406135	13.5	14	60	107
DH406097	9.7	10	47	89	DH406140	14.0	14	60	107
DH406098	9.8	10	47	89	DH406145	14.5	16	65	115
DH406099	9.9	10	47	89	DH406150	15.0	16	65	115
DH406100	10.0	10	47	89	DH406155	15.5	16	65	115
DH406101	10.1	12	55	102	DH406160	16.0	16	65	115
DH406102	10.2	12	55	102	DH406165	16.5	18	73	123
DH406103	10.3	12	55	102	DH406170	17.0	18	73	123
DH406104	10.4	12	55	102	DH406175	17.5	18	73	123
DH406105	10.5	12	55	102	DH406180	18.0	18	73	123
DH406106	10.6	12	55	102	DH406185	18.5	20	79	131
DH406107	10.7	12	55	102	DH406190	19.0	20	79	131
DH406108	10.8	12	55	102	DH406195	19.5	20	79	131
DH406109	10.9	12	55	102	DH406200	20.0	20	79	131
DH406110	11.0	12	55	102					

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	◎			○	○					

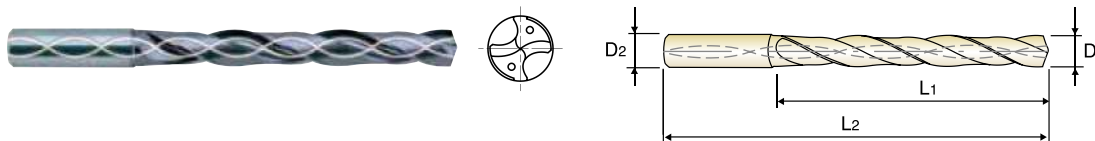
CARBIDE, DREAM DRILLS with COOLANT HOLES
LONG
VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
LANG
Forets DREAM DRILLS carbure, avec arrosage central, série longue
LONGUE
PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Self centering
 - center drilling is not required.
 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

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► **Vorteile** : Selbst zentrierend
 - Zentrierbohrung wird nicht benötigt.
 Exzellente Positionierbarkeit
 - Keine Führungsbuchse notwendig.
 Spezielles Design
 - Räumen ist nicht notwendig
 - Gute Spanabfuhr
 - Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar
P.96
5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408010	1.0	3	8	55
DH408011	1.1	3	12	55
DH408012	1.2	3	12	55
DH408013	1.3	3	12	55
DH408014	1.4	3	12	55
DH408015	1.5	3	16	55
DH408016	1.6	3	16	55
DH408017	1.7	3	16	55
DH408018	1.8	3	16	55
DH408019	1.9	3	16	55
DH408020	2.0	4	21	57
DH408021	2.1	4	21	57
DH408022	2.2	4	21	57
DH408023	2.3	4	21	57
DH408024	2.4	4	21	57
DH408025	2.5	4	21	57
DH408026	2.6	4	21	57
DH408027	2.7	4	21	57
DH408028	2.8	4	21	57
DH408029	2.9	4	21	57
DH408030	3.0	6	28	66
DH408031	3.1	6	28	66
DH408032	3.2	6	28	66
DH408033	3.3	6	28	66
DH408034	3.4	6	28	66
DH408035	3.5	6	28	66

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408036	3.6	6	28	66
DH408037	3.7	6	28	66
DH408038	3.8	6	36	74
DH408039	3.9	6	36	74
DH408040	4.0	6	36	74
DH408041	4.1	6	36	74
DH408042	4.2	6	36	74
DH408043	4.3	6	36	74
DH408044	4.4	6	36	74
DH408045	4.5	6	36	74
DH408046	4.6	6	36	74
DH408047	4.7	6	36	74
DH408048	4.8	6	44	82
DH408049	4.9	6	44	82
DH408050	5.0	6	44	82
DH408051	5.1	6	44	82
DH408052	5.2	6	44	82
DH408053	5.3	6	44	82
DH408054	5.4	6	44	82
DH408055	5.5	6	44	82
DH408056	5.6	6	44	82
DH408057	5.7	6	44	82
DH408058	5.8	6	44	82
DH408059	5.9	6	44	82
DH408060	6.0	6	44	82
DH408061	6.1	8	53	91

► Other shank types are available on your request.

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○					

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA

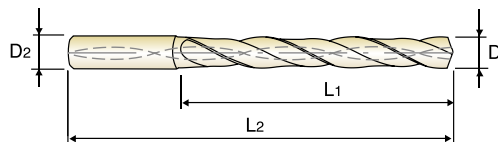

CARBIDE, DREAM DRILLS with COOLANT HOLES
VOILLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
Forets DREAM DRILLS carbure, avec arrosage central, série longue
PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
LONG
LANG
LONGUE
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Self centering
 - center drilling is not required.
 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart- und Temperguß, Nicht-eisen Leichtmetallen, abrasiven Kunststoffen.

► **Vorteile** : Selbst zentrierend
 - Zentrierbohrung wird nicht benötigt.
 Exzellente Positionierbarkeit
 - Keine Führungsbuchse notwendig.
 Spezielles Design
 - Räumen ist nicht notwendig
 - Gute Spanabfuhr
 - Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar
P.96
5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH408062	6.2	8	53	91	DH408088	8.8	10	61	103
DH408063	6.3	8	53	91	DH408089	8.9	10	61	103
DH408064	6.4	8	53	91	DH408090	9.0	10	61	103
DH408065	6.5	8	53	91	DH408091	9.1	10	61	103
DH408066	6.6	8	53	91	DH408092	9.2	10	61	103
DH408067	6.7	8	53	91	DH408093	9.3	10	61	103
DH408068	6.8	8	53	91	DH408094	9.4	10	61	103
DH408069	6.9	8	53	91	DH408095	9.5	10	61	103
DH408070	7.0	8	53	91	DH408096	9.6	10	61	103
DH408071	7.1	8	53	91	DH408097	9.7	10	61	103
DH408072	7.2	8	53	91	DH408098	9.8	10	61	103
DH408073	7.3	8	53	91	DH408099	9.9	10	61	103
DH408074	7.4	8	53	91	DH408100	10.0	10	61	103
DH408075	7.5	8	53	91	DH408101	10.1	12	71	118
DH408076	7.6	8	53	91	DH408102	10.2	12	71	118
DH408077	7.7	8	53	91	DH408103	10.3	12	71	118
DH408078	7.8	8	53	91	DH408104	10.4	12	71	118
DH408079	7.9	8	53	91	DH408105	10.5	12	71	118
DH408080	8.0	8	53	91	DH408106	10.6	12	71	118
DH408081	8.1	10	61	103	DH408107	10.7	12	71	118
DH408082	8.2	10	61	103	DH408108	10.8	12	71	118
DH408083	8.3	10	61	103	DH408109	10.9	12	71	118
DH408084	8.4	10	61	103	DH408110	11.0	12	71	118
DH408085	8.5	10	61	103	DH408111	11.1	12	71	118
DH408086	8.6	10	61	103	DH408112	11.2	12	71	118
DH408087	8.7	10	61	103	DH408113	11.3	12	71	118

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	◎			○	○					

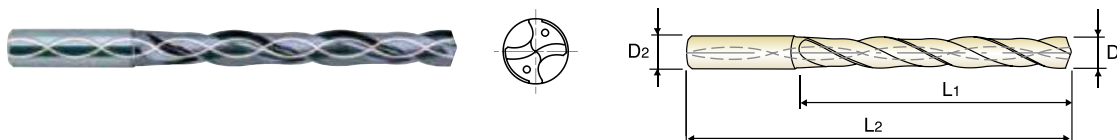
CARBIDE, DREAM DRILLS with COOLANT HOLES
LONG
■ VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
LANG
■ Forets DREAM DRILLS carbure, avec arrosage central, série longue
LONGUE
■ PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart- und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Self centering
- center drilling is not required.
Excellent positioning
- bush is not necessary.
Special Design
- reaming is not required.
- good chip removal
- powerful drilling

► **Vorteile** : Selbst zentrierend
- Zentrierbohrung wird nicht benötigt.
Exzellente Positionierbarkeit
- Keine Führungsbuchse notwendig.
Spezielles Design
- Räumen ist nicht notwendig
- Gute Spanabfuhr
- Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar
P.96
5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408114	11.4	12	71	118
DH408115	11.5	12	71	118
DH408116	11.6	12	71	118
DH408117	11.7	12	71	118
DH408118	11.8	12	71	118
DH408119	11.9	12	71	118
DH408120	12.0	12	71	118
DH408125	12.5	14	77	124
DH408130	13.0	14	77	124
DH408135	13.5	14	77	124
DH408140	14.0	14	77	124
DH408145	14.5	16	83	133

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408150	15.0	16	83	133
DH408155	15.5	16	83	133
DH408160	16.0	16	83	133
DH408165	16.5	18	93	143
DH408170	17.0	18	93	143
DH408175	17.5	18	93	143
DH408180	18.0	18	93	143
DH408185	18.5	20	101	153
DH408190	19.0	20	101	153
DH408195	19.5	20	101	153
DH408200	20.0	20	101	153

► Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
○	○	○			○	○					

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA

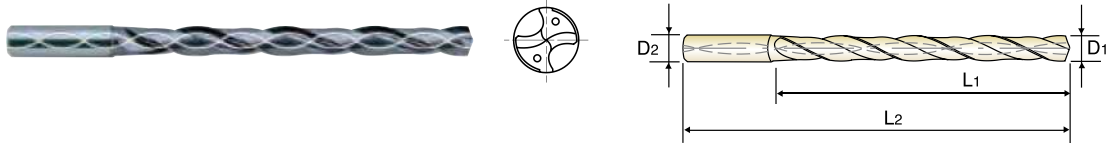
CARBIDE, DREAM DRILLS with COOLANT HOLES**EXTRA LONG**
 **VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL**
ÜBERLANG
 **Forets DREAM DRILLS carbure, avec arrosage central, série extra-longue**
EXTRA-LONGUE
 **PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)**
EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

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Exzellente Positionierbarkeit
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- Räumen ist nicht notwendig
- Gute Spanabfuhr
- Leistungsfähiges Bohren

**8 × D**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH421030	3.0	6	34	72	DH421055	5.5	6	57	95
DH421031	3.1	6	34	72	DH421056	5.6	6	57	95
DH421032	3.2	6	34	72	DH421057	5.7	6	57	95
DH421033	3.3	6	34	72	DH421058	5.8	6	57	95
DH421034	3.4	6	34	72	DH421059	5.9	6	57	95
DH421035	3.5	6	34	72	DH421060	6.0	6	57	95
DH421036	3.6	6	34	72	DH421061	6.1	8	76	114
DH421037	3.7	6	34	72	DH421062	6.2	8	76	114
DH421038	3.8	6	43	81	DH421063	6.3	8	76	114
DH421039	3.9	6	43	81	DH421064	6.4	8	76	114
DH421040	4.0	6	43	81	DH421065	6.5	8	76	114
DH421041	4.1	6	43	81	DH421066	6.6	8	76	114
DH421042	4.2	6	43	81	DH421067	6.7	8	76	114
DH421043	4.3	6	43	81	DH421068	6.8	8	76	114
DH421044	4.4	6	43	81	DH421069	6.9	8	76	114
DH421045	4.5	6	43	81	DH421070	7.0	8	76	114
DH421046	4.6	6	43	81	DH421071	7.1	8	76	114
DH421047	4.7	6	43	81	DH421072	7.2	8	76	114
DH421048	4.8	6	57	95	DH421073	7.3	8	76	114
DH421049	4.9	6	57	95	DH421074	7.4	8	76	114
DH421050	5.0	6	57	95	DH421075	7.5	8	76	114
DH421051	5.1	6	57	95	DH421076	7.6	8	76	114
DH421052	5.2	6	57	95	DH421077	7.7	8	76	114
DH421053	5.3	6	57	95	DH421078	7.8	8	76	114
DH421054	5.4	6	57	95	DH421079	7.9	8	76	114

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	◎			○	○					

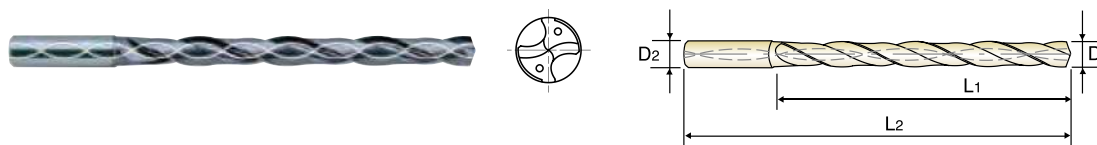
CARBIDE, DREAM DRILLS with COOLANT HOLES
■ VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL
■ Forets DREAM DRILLS carbure, avec arrosage central, série extra-longue
■ PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)
EXTRA LONG
ÜBERLANG
EXTRA-LONGUE
EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

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 Excellent positioning
 - bush is not necessary.
 Special Design
 - reaming is not required.
 - good chip removal
 - powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

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 - Zentrierbohrung wird nicht benötigt.
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 - Keine Führungsbuchse notwendig.
 Spezielles Design
 - Räumen ist nicht notwendig
 - Gute Spanabfuhr
 - Leistungsfähiges Bohren


DIN 6537
MG
30°
h6
m7
140°
20 bar
P.96
8 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH421080	8.0	8	76	114
DH421081	8.1	10	95	142
DH421082	8.2	10	95	142
DH421083	8.3	10	95	142
DH421084	8.4	10	95	142
DH421085	8.5	10	95	142
DH421086	8.6	10	95	142
DH421087	8.7	10	95	142
DH421088	8.8	10	95	142
DH421089	8.9	10	95	142
DH421090	9.0	10	95	142
DH421091	9.1	10	95	142
DH421092	9.2	10	95	142
DH421093	9.3	10	95	142
DH421094	9.4	10	95	142
DH421095	9.5	10	95	142
DH421096	9.6	10	95	142
DH421097	9.7	10	95	142
DH421098	9.8	10	95	142
DH421099	9.9	10	95	142
DH421100	10.0	10	95	142
DH421101	10.1	12	114	162
DH421102	10.2	12	114	162

► Other shank types are available on your request.

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH421103	10.3	12	114	162
DH421104	10.4	12	114	162
DH421105	10.5	12	114	162
DH421106	10.6	12	114	162
DH421107	10.7	12	114	162
DH421108	10.8	12	114	162
DH421109	10.9	12	114	162
DH421110	11.0	12	114	162
DH421111	11.1	12	114	162
DH421112	11.2	12	114	162
DH421113	11.3	12	114	162
DH421114	11.4	12	114	162
DH421115	11.5	12	114	162
DH421116	11.6	12	114	162
DH421117	11.7	12	114	162
DH421118	11.8	12	114	162
DH421119	11.9	12	114	162
DH421120	12.0	12	114	162
DH421125	12.5	14	133	178
DH421130	13.0	14	133	178
DH421135	13.5	14	133	178
DH421140	14.0	14	133	178

Unit : mm

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○					

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA


**CARBIDE, DREAM DRILLS, TiAIN COATED
VOLLHARTMETALL DREAM BOHRER, TiAIN-BESCHICHTET**
DH404, DH423, DH424 SERIES

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm ²			< 1000 N/mm ²			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ Ø2.9 : 40 ~ 80 m/min Ø3.0 ~ : 100 m/min			Ø1.0 ~ Ø2.9 : 35 ~ 70 m/min Ø3.0 ~ : 75 m/min			Ø1.0 ~ Ø2.9 : 60 ~ 130 m/min Ø3.0 ~ : 100 m/min			Ø1.0 ~ Ø2.9 : 40 ~ 90 m/min Ø3.0 ~ : 80 m/min		
DRILLING DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
1.0	13000	0.03	0.05	11250	0.03	0.05	21300	0.03	0.05	14200	0.03	0.05
2.0	13000	0.05	0.07	11250	0.05	0.07	21300	0.05	0.07	14200	0.05	0.07
3.0	10500	0.06	0.12	7890	0.06	0.12	10500	0.06	0.12	8410	0.06	0.12
4.0	7920	0.08	0.16	5920	0.08	0.16	7920	0.08	0.16	6310	0.08	0.16
5.0	6310	0.10	0.20	4740	0.10	0.20	6310	0.10	0.20	5050	0.10	0.20
6.0	5270	0.12	0.24	3950	0.12	0.24	5270	0.12	0.24	4220	0.12	0.24
7.0	4510	0.14	0.26	3400	0.14	0.26	4510	0.14	0.26	3610	0.14	0.26
8.0	3950	0.16	0.28	2970	0.16	0.28	3950	0.16	0.28	3160	0.16	0.28
9.0	3510	0.18	0.30	2640	0.18	0.30	3510	0.18	0.30	2820	0.18	0.30
10.0	3160	0.20	0.30	2370	0.20	0.30	3160	0.20	0.30	2530	0.20	0.30
11.0	2880	0.20	0.30	2160	0.20	0.30	2880	0.20	0.30	2310	0.20	0.30
12.0	2640	0.21	0.30	1980	0.21	0.30	2640	0.21	0.30	2120	0.21	0.30
13.0	2430	0.21	0.33	1830	0.21	0.33	2430	0.21	0.33	1950	0.21	0.33
14.0	2260	0.22	0.35	1710	0.22	0.35	2260	0.22	0.35	1810	0.22	0.35
16.0	1980	0.25	0.36	1490	0.25	0.36	1980	0.25	0.36	1590	0.25	0.36
18.0	1760	0.28	0.38	1330	0.28	0.38	1760	0.28	0.38	1420	0.28	0.38
20.0	1590	0.30	0.40	1180	0.30	0.40	1590	0.30	0.40	1270	0.30	0.40

► Recommend to reduce the feed rate as following

Feed 100% : DH404(3 × D), DH423(3 × D) **Feed 85%** : DH424(5 × D)

RPM = rev./min.

FEED = mm/rev.

**CARBIDE, DREAM DRILLS with COOLANT HOLES DIN6537, TiAIN COATED
VOLLHARTMETALL DREAM BOHRER mit KÜHLKANAL DIN6537, TiAIN-BESCHICHTET**
DH406, DH408, DH421 SERIES

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm ²			< 1000 N/mm ²			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ Ø2.9 : 50 ~ 100 m/min Ø3.0 ~ : 110 m/min			Ø1.0 ~ Ø2.9 : 40 ~ 90 m/min Ø3.0 ~ : 83 m/min			Ø1.0 ~ Ø2.9 : 80 ~ 160 m/min Ø3.0 ~ : 110 m/min			Ø1.0 ~ Ø2.9 : 50 ~ 100 m/min Ø3.0 ~ : 88 m/min		
DRILLING DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
1.0	16250	0.04	0.06	14800	0.04	0.06	26600	0.04	0.06	17300	0.04	0.06
2.0	16250	0.06	0.08	14800	0.06	0.08	26600	0.06	0.08	17300	0.06	0.08
3.0	11660	0.06	0.12	8760	0.06	0.12	11660	0.06	0.12	9340	0.06	0.12
4.0	8800	0.08	0.16	6570	0.08	0.16	8800	0.08	0.16	7010	0.08	0.16
5.0	7010	0.10	0.20	5260	0.10	0.20	7010	0.10	0.20	5610	0.10	0.20
6.0	5850	0.12	0.24	4380	0.12	0.24	5850	0.12	0.24	4680	0.12	0.24
7.0	5010	0.14	0.26	3770	0.14	0.26	5010	0.14	0.26	4010	0.14	0.26
8.0	4380	0.16	0.28	2390	0.16	0.28	4380	0.16	0.28	3510	0.16	0.28
9.0	3900	0.18	0.30	2930	0.18	0.30	3900	0.18	0.30	3130	0.18	0.30
10.0	3510	0.20	0.30	2630	0.20	0.30	3510	0.20	0.30	2810	0.20	0.30
11.0	3190	0.20	0.30	2400	0.20	0.30	3190	0.20	0.30	2560	0.20	0.30
12.0	2930	0.21	0.30	2200	0.21	0.30	2930	0.21	0.30	2350	0.21	0.30
13.0	2700	0.21	0.33	2030	0.21	0.33	2700	0.21	0.33	2160	0.21	0.33
14.0	2510	0.22	0.35	1890	0.22	0.35	2510	0.22	0.35	2010	0.22	0.35
16.0	2190	0.25	0.36	1650	0.25	0.36	2190	0.25	0.36	1760	0.25	0.36
18.0	1950	0.28	0.38	1470	0.28	0.38	1950	0.28	0.38	1570	0.28	0.38
20.0	1760	0.30	0.40	1310	0.30	0.40	1760	0.30	0.40	1410	0.30	0.40

► Recommend to reduce the feed rate as following

Feed 100% : DH406(3 × D) **Feed 85%** : DH408(5 × D) **Feed 70%** : DH421(8 × D)

RPM = rev./min.

FEED = mm/rev.

CARBIDE



Leading Through Innovation



DREAM DRILLS - HIGH FEED

DREAM DRILL - HIGH FEED

WITH COOLANT HOLES

- for Carbon Steels, Alloy Steels (up to HRc35) and Cast Iron

Mit Kühlkanäle

- Für Kohlenstoffstähle, Legiertem Stahl (bis HRc35) und Gusseisen

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)

Carbon Steels, Alloy Steels (up to HRc35) and Cast Iron

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3 X D DGR493		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES <i>SHORT</i> HARTMETALL DREAM SPIRALBOHRER - HIGH FEED mit KÜHLKANAL <i>KURZ</i>	D5.0	D20.0	100
5 X D DGR495		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES <i>LONG</i> HARTMETALL DREAM SPIRALBOHRER - HIGH FEED mit KÜHLKANAL <i>LANG</i>	D5.0	D20.0	102
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					104

SOLID CARBIDE DREAM DRILLS - HIGH FEED

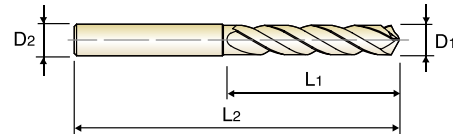
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				◎					
◎	◎	○				◎					

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES **SHORT****DEUTSCH** DREAM DRILLS HIGH FEED mit KÜHLKANAL**FRANZÖSISCH** Forets DREAM DRILLS carbure Grande Avance avec arrosage central, série courte**ITALIENISCH** PUNTE DREAM DRILL HIGH FEED (con i fori di refrigerazione)**KURZ
COURTE
CORTA**

- Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
 ► Advantage : - Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
 - Multi-Layer coating delivers much better productivity and reliability.
 - Self-Centering

- Anwendung: Kohlenstoffstähle, legierte Stähle (~ HRC35), Gusseisen.
 ► Vorteile: - Steigerung der Produktivität durch 1,5- bis 2-mal höhere Vorschubgeschwindigkeit als 2 schneidige Bohrer.
 - Eine Multi-Layer-Beschichtung ergibt eine höhere Produktivität und Zuverlässigkeit.
 - Selbstzentrierend.

**DIN
6537****MG****30°****h6****m7****140°****20 bar****P.104****3 × D**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR493050	5.00	6	28	66	DGR493078	7.80	8	41	79
DGR493051	5.10	6	28	66	DGR493079	7.90	8	41	79
DGR493052	5.20	6	28	66	DGR493080	8.00	8	41	79
DGR493053	5.30	6	28	66	DGR493081	8.10	10	47	89
DGR493054	5.40	6	28	66	DGR493082	8.20	10	47	89
DGR493055	5.50	6	28	66	DGR493083	8.30	10	47	89
DGR493056	5.60	6	28	66	DGR493084	8.40	10	47	89
DGR493057	5.70	6	28	66	DGR493085	8.50	10	47	89
DGR493058	5.80	6	28	66	DGR493086	8.60	10	47	89
DGR493059	5.90	6	28	66	DGR493087	8.70	10	47	89
DGR493060	6.00	6	28	66	DGR493088	8.80	10	47	89
DGR493061	6.10	8	34	79	DGR493089	8.90	10	47	89
DGR493062	6.20	8	34	79	DGR493090	9.00	10	47	89
DGR493063	6.30	8	34	79	DGR493091	9.10	10	47	89
DGR493064	6.40	8	34	79	DGR493092	9.20	10	47	89
DGR493065	6.50	8	34	79	DGR493093	9.30	10	47	89
DGR493066	6.60	8	34	79	DGR493094	9.40	10	47	89
DGR493067	6.70	8	34	79	DGR493095	9.50	10	47	89
DGR493068	6.80	8	34	79	DGR493096	9.60	10	47	89
DGR493069	6.90	8	34	79	DGR493097	9.70	10	47	89
DGR493070	7.00	8	34	79	DGR493098	9.80	10	47	89
DGR493071	7.10	8	41	79	DGR493099	9.90	10	47	89
DGR493072	7.20	8	41	79	DGR493100	10.00	10	47	89
DGR493073	7.30	8	41	79	DGR493101	10.10	12	55	102
DGR493074	7.40	8	41	79	DGR493102	10.20	12	55	102
DGR493075	7.50	8	41	79	DGR493103	10.30	12	55	102
DGR493076	7.60	8	41	79	DGR493104	10.40	12	55	102
DGR493077	7.70	8	41	79	DGR493105	10.50	12	55	102

► Other shank types are available on your request.

► NEXT PAGE

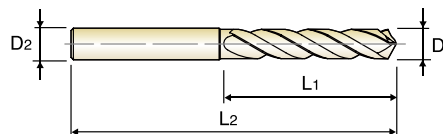
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								
◎	◎	○			◎						

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES **SHORT**
DREAM DRILLS HIGH FEED mit KÜHLKANAL
Forets DREAM DRILLS carbure Grande Avance avec arrosage central, série courte
PUNTE DREAM DRILL HIGH FEED (con i fori di refrigerazione)
KURZ
COURTE
CORTA

- Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
 ► Advantage : - Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
 - Multi-Layer coating delivers much better productivity and reliability.
 - Self-Centering

- Anwendung: Kohlenstoffstähle, legierte Stähle (~ HRC35), Gusseisen.
 ► Vorteile: - Steigerung der Produktivität durch 1,5- bis 2-mal höhere Vorschubgeschwindigkeit als 2 schneidige Bohrer.
 - Eine Multi-Layer-Beschichtung ergibt eine höhere Produktivität und Zuverlässigkeit.
 - Selbstzentrierend.


**DIN
6537**
MG
30°
h6
m7
140°
20 bar

P.104

3 × D

					Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR493106	10.60	12	55	102	DGR493130	13.00	14	60	107
DGR493107	10.70	12	55	102	DGR493135	13.50	14	60	107
DGR493108	10.80	12	55	102	DGR493140	14.00	14	60	107
DGR493109	10.90	12	55	102	DGR493145	14.50	16	65	115
DGR493110	11.00	12	55	102	DGR493150	15.00	16	65	115
DGR493111	11.10	12	55	102	DGR493155	15.50	16	65	115
DGR493112	11.20	12	55	102	DGR493160	16.00	16	65	115
DGR493113	11.30	12	55	102	DGR493165	16.50	18	73	123
DGR493114	11.40	12	55	102	DGR493170	17.00	18	73	123
DGR493115	11.50	12	55	102	DGR493175	17.50	18	73	123
DGR493116	11.60	12	55	102	DGR493180	18.00	18	73	123
DGR493117	11.70	12	55	102	DGR493185	18.50	20	79	131
DGR493118	11.80	12	55	102	DGR493190	19.00	20	79	131
DGR493119	11.90	12	55	102	DGR493195	19.50	20	79	131
DGR493120	12.00	12	55	102	DGR493200	20.00	20	79	131
DGR493125	12.50	14	60	107					

► Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○				○					

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

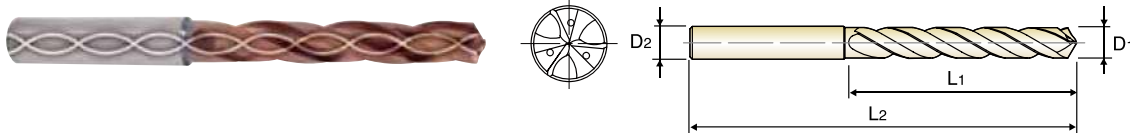
 SPADE
DRILLS

 TECHNICAL
DATA

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES**LONG****DREAM DRILLS HIGH FEED MIT KÜHLKANAL****KURZ****Forets DREAM DRILLS carbure Grande Avance avec arrosage central, série longue****LONGUE****PUNTE DREAM DRILL HIGH FEED (con i fori di refrigerazione)****LUNGA**

- Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
 ► Advantage : - Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
 - Multi-Layer coating delivers much better productivity and reliability.
 - Self-Centering

- Anwendung: Kohlenstoffstähle, legierte Stähle (~ HRC35), Gusseisen.
 ► Vorteile: - Steigerung der Produktivität durch 1,5- bis 2-mal höhere Vorschubgeschwindigkeit als 2 schneidige Bohrer.
 - Eine Multi-Layer-Beschichtung ergibt eine höhere Produktivität und Zuverlässigkeit.
 - Selbstzentrierend.

**DIN
6537****MG****30°****h6****m7****140°****20 bar****P.104****5 × D**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR495050	5.00	6	44	82	DGR495078	7.80	8	53	91
DGR495051	5.10	6	44	82	DGR495079	7.90	8	53	91
DGR495052	5.20	6	44	82	DGR495080	8.00	8	53	91
DGR495053	5.30	6	44	82	DGR495081	8.10	10	61	103
DGR495054	5.40	6	44	82	DGR495082	8.20	10	61	103
DGR495055	5.50	6	44	82	DGR495083	8.30	10	61	103
DGR495056	5.60	6	44	82	DGR495084	8.40	10	61	103
DGR495057	5.70	6	44	82	DGR495085	8.50	10	61	103
DGR495058	5.80	6	44	82	DGR495086	8.60	10	61	103
DGR495059	5.90	6	44	82	DGR495087	8.70	10	61	103
DGR495060	6.00	6	44	82	DGR495088	8.80	10	61	103
DGR495061	6.10	8	53	91	DGR495089	8.90	10	61	103
DGR495062	6.20	8	53	91	DGR495090	9.00	10	61	103
DGR495063	6.30	8	53	91	DGR495091	9.10	10	61	103
DGR495064	6.40	8	53	91	DGR495092	9.20	10	61	103
DGR495065	6.50	8	53	91	DGR495093	9.30	10	61	103
DGR495066	6.60	8	53	91	DGR495094	9.40	10	61	103
DGR495067	6.70	8	53	91	DGR495095	9.50	10	61	103
DGR495068	6.80	8	53	91	DGR495096	9.60	10	61	103
DGR495069	6.90	8	53	91	DGR495097	9.70	10	61	103
DGR495070	7.00	8	53	91	DGR495098	9.80	10	61	103
DGR495071	7.10	8	53	91	DGR495099	9.90	10	61	103
DGR495072	7.20	8	53	91	DGR495100	10.00	10	61	103
DGR495073	7.30	8	53	91	DGR495101	10.10	12	71	118
DGR495074	7.40	8	53	91	DGR495102	10.20	12	71	118
DGR495075	7.50	8	53	91	DGR495103	10.30	12	71	118
DGR495076	7.60	8	53	91	DGR495104	10.40	12	71	118
DGR495077	7.70	8	53	91	DGR495105	10.50	12	71	118

► Other shank types are available on your request.

► NEXT PAGE

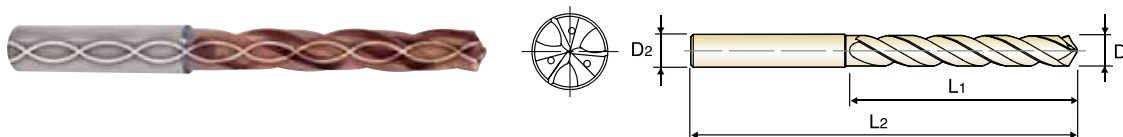
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				◎					

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES
LONG
DREAM DRILLS HIGH FEED MIT KÜHLKANAL
KURZ
Forets DREAM DRILLS carbure Grande Avance avec arrosage central, série longue
LONGUE
PUNTE DREAM DRILL HIGH FEED (con i fori di refrigerazione)
LUNGA

- Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
 ► Advantage : - Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
 - Multi-Layer coating delivers much better productivity and reliability.
 - Self-Centering

- Anwendung: Kohlenstoffstähle, legierte Stähle (~ HRC35), Gusseisen.
 ► Vorteile: - Steigerung der Produktivität durch 1,5- bis 2-mal höhere Vorschubgeschwindigkeit als 2 schneidige Bohrer.
 - Eine Multi-Layer-Beschichtung ergibt eine höhere Produktivität und Zuverlässigkeit.
 - Selbstzentrierend.


DIN 6537
MG
30°
h6
m7
140°
20 bar


P.104

5 × D

					Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR495106	10.60	12	71	118	DGR495130	13.00	14	77	124
DGR495107	10.70	12	71	118	DGR495135	13.50	14	77	124
DGR495108	10.80	12	71	118	DGR495140	14.00	14	77	124
DGR495109	10.90	12	71	118	DGR495145	14.50	16	83	133
DGR495110	11.00	12	71	118	DGR495150	15.00	16	83	133
DGR495111	11.10	12	71	118	DGR495155	15.50	16	83	133
DGR495112	11.20	12	71	118	DGR495160	16.00	16	83	133
DGR495113	11.30	12	71	118	DGR495165	16.50	18	93	143
DGR495114	11.40	12	71	118	DGR495170	17.00	18	93	143
DGR495115	11.50	12	71	118	DGR495175	17.50	18	93	143
DGR495116	11.60	12	71	118	DGR495180	18.00	18	93	143
DGR495117	11.70	12	71	118	DGR495185	18.50	20	101	153
DGR495118	11.80	12	71	118	DGR495190	19.00	20	101	153
DGR495119	11.90	12	71	118	DGR495195	19.50	20	101	153
DGR495120	12.00	12	71	118	DGR495200	20.00	20	101	153
DGR495125	12.50	14	77	124					

► Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○				○					

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA


SOLID CARBIDE DREAM DRILLS - HIGH FEED with COOLANT HOLES
DREAM DRILLS HIGH FEED mit KÜHLKANAL
DGR493, DGR495 SERIES

WORK MATERIAL	P						K					
	CARBON STEELS ALLOY STEELS			ALLOY STEELS			CAST IRON			DUCTILE CAST IRON		
HARDNESS	~ HRc 20			HRc 20 ~ 35			-			-		
DRILLING SPEED	100 m/min			75 m/min			100 m/min			80 m/min		
DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
5.0	6370	0.200	0.250	4780	0.200	0.250	6370	0.230	0.300	5100	0.200	0.250
6.0	5310	0.240	0.300	3980	0.240	0.300	5310	0.270	0.360	4250	0.240	0.300
7.0	4550	0.280	0.350	3420	0.280	0.350	4550	0.320	0.420	3640	0.280	0.350
8.0	3980	0.320	0.400	2990	0.320	0.400	3980	0.360	0.480	3190	0.320	0.400
9.0	3540	0.360	0.450	2660	0.360	0.450	3540	0.410	0.540	2840	0.360	0.450
10.0	3190	0.400	0.500	2390	0.400	0.500	3190	0.450	0.600	2550	0.400	0.500
12.0	2660	0.480	0.600	2000	0.480	0.540	2660	0.540	0.720	2130	0.480	0.600
14.0	2280	0.560	0.700	1710	0.560	0.630	2280	0.630	0.840	1820	0.560	0.700
16.0	1990	0.560	0.720	1500	0.560	0.640	1990	0.640	0.800	1600	0.560	0.720
18.0	1770	0.630	0.810	1330	0.630	0.720	1770	0.720	0.900	1420	0.630	0.810
20.0	1600	0.700	0.880	1190	0.680	0.810	1600	0.800	0.980	1280	0.700	0.900

 RPM = rev./min.
 FEED = mm/rev.
i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

CARBIDE



Leading Through Innovation



DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS-FLACHBOHRER

- For holes on various angled surfaces.
- 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- Für Bohrungen an schrägen Oberflächen.
- 180° Stirnwinkel ermöglicht das Bohren in flachen, schrägen und gekrümmten Flächen.

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM

- For holes on various angled surface
- 180 degree point angle enables drilling of flat, inclined and curved surfaces.

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
2 X D DPP447		CARBIDE, DREAM DRILLS - FLAT BOTTOM VHM, DREAM DRILLS - FLACHBOHRER	D3.0	D20.0	108
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			111

For Angled surface, two operations are required by traditional usage.

1st operation (End mill)

Counter boring to make flat surface and guide hole



2nd operation (Drill)

Drilling to required depth of hole



For Angled surface, only one operation can be drilled by Dream Drill Flat Bottom

One operation (Dream Drill Flat Bottom)

One Drill does it all
without using both an end mill and a drill



SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM

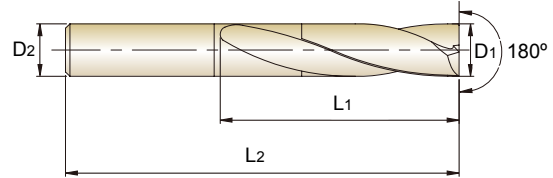
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HRC20	HRC20~30	HRC30~40	HRC40~50	HRC50~							
◎	◎	◎	○		○	◎	○	○			


CARBIDE, DREAM DRILLS - FLAT BOTTOM
🇩🇪 VHM, DREAM DRILLS - FLACHBOHRER
🇫🇷 DREAM DRILLS - FOND PLAT, FORET CARBURE MONOBLOC
🇮🇹 PUNTE IN MD DREAM DRILLS, TESTA PIANA

- ▶ For holes on various angled surfaces.
- ▶ 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- ▶ Optimized flute shape for excellent chip evacuation.
- ▶ High strength cutting edge to improve tool life and versatility drilling.
- ▶ For through holes, minimized burrs at entrance and exit when drilling thin plate.

- ▶ Für Bohrungen an schrägen Oberflächen.
- ▶ 180° Stirnwinkel ermöglicht das Bohren in flachen, schrägen und gekrümmten Flächen.
- ▶ Optimierte Nutform für hervorragende Spanabfuhr.
- ▶ Hochfeste Schneidkanten zur Verbesserung der Werkzeugstandzeiten und Vielseitigkeitsbohrungen.
- ▶ Für Durchgangslöcher, minimiert die Gratbildung am Ein- und Austritt beim Bohren dünner Bleche.


 $2 \times D$

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2	X-Coating	D1	D2	L1	L2
DPP447030	3.0	6	16	50	DPP447056	5.6	6	24	60
DPP447031	3.1	6	16	50	DPP447057	5.7	6	26	60
DPP447032	3.2	6	16	50	DPP447058	5.8	6	26	60
DPP447033	3.3	6	16	50	DPP447059	5.9	6	26	60
DPP447034	3.4	6	18	50	DPP447060	6.0	6	26	60
DPP447035	3.5	6	18	50	DPP447061	6.1	8	28	70
DPP447036	3.6	6	18	50	DPP447062	6.2	8	28	70
DPP447037	3.7	6	18	50	DPP447063	6.3	8	28	70
DPP447038	3.8	6	18	50	DPP447064	6.4	8	30	70
DPP447039	3.9	6	18	50	DPP447065	6.5	8	30	70
DPP447040	4.0	6	18	50	DPP447066	6.6	8	30	70
DPP447041	4.1	6	20	60	DPP447067	6.7	8	30	70
DPP447042	4.2	6	20	60	DPP447068	6.8	8	30	70
DPP447043	4.3	6	20	60	DPP447069	6.9	8	30	70
DPP447044	4.4	6	20	60	DPP447070	7.0	8	30	70
DPP447045	4.5	6	22	60	DPP447071	7.1	8	34	70
DPP447046	4.6	6	22	60	DPP447072	7.2	8	34	70
DPP447047	4.7	6	22	60	DPP447073	7.3	8	34	70
DPP447048	4.8	6	22	60	DPP447074	7.4	8	34	70
DPP447049	4.9	6	22	60	DPP447075	7.5	8	34	70
DPP447050	5.0	6	22	60	DPP447076	7.6	8	34	70
DPP447051	5.1	6	24	60	DPP447077	7.7	8	34	70
DPP447052	5.2	6	24	60	DPP447078	7.8	8	34	70
DPP447053	5.3	6	24	60	DPP447079	7.9	8	34	70
DPP447054	5.4	6	24	60	DPP447080	8.0	8	34	70
DPP447055	5.5	6	24	60	DPP447081	8.1	10	38	80

▶ Other diameters and shank types are available upon request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HRC20	HRC20~30	HRC30~40	HRC40~50	HRc50~								
◎	◎	◎	○		○	◎	○	○				



DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE
HSS

CARBIDE, DREAM DRILLS - FLAT BOTTOM

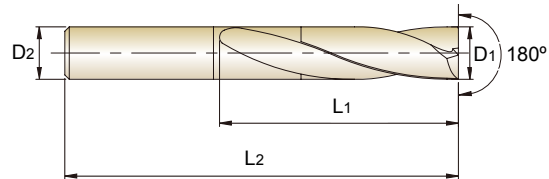
VHM, DREAM DRILLS - FLACHBOHRER

DREAM DRILLS - FOND PLAT, FORET CARBURE MONOBLOC

PUNTE IN MD DREAM DRILLS, TESTA PIANA

- For holes on various angled surfaces.
- 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- Optimized flute shape for excellent chip evacuation.
- High strength cutting edge to improve tool life and versatility drilling.
- For through holes, minimized burrs at entrance and exit when drilling thin plate.

- Für Bohrungen an schrägen Oberflächen.
- 180° Stirnwinkel ermöglicht das Bohren in flachen, schrägen und gekrümmten Flächen.
- Optimierte Nutform für hervorragende Spanabfuhr.
- Hochfeste Schneidkanten zur Verbesserung der Werkzeugstandzeiten und Vielseitigkeitsbohrungen.
- Für Durchgangslöcher, minimiert die Gratbildung am Ein- und Austritt beim Bohren dünner Bleche.


MG


P.111

2 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447082	8.2	10	38	80
DPP447083	8.3	10	38	80
DPP447084	8.4	10	38	80
DPP447085	8.5	10	38	80
DPP447086	8.6	10	38	80
DPP447087	8.7	10	40	80
DPP447088	8.8	10	40	80
DPP447089	8.9	10	40	80
DPP447090	9.0	10	40	80
DPP447091	9.1	10	42	80
DPP447092	9.2	10	42	80
DPP447093	9.3	10	42	80
DPP447094	9.4	10	42	80
DPP447095	9.5	10	42	80
DPP447096	9.6	10	42	80
DPP447097	9.7	10	45	80
DPP447098	9.8	10	45	80
DPP447099	9.9	10	45	80
DPP447100	10.0	10	45	80
DPP447102	10.2	12	46	90
DPP447105	10.5	12	48	90
DPP447108	10.8	12	48	90

► Other diameters and shank types are available upon request.

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447110	11.0	12	48	90
DPP447115	11.5	12	50	90
DPP447118	11.8	12	52	90
DPP447119	11.9	12	52	90
DPP447120	12.0	12	52	90
DPP447125	12.5	14	54	100
DPP447130	13.0	14	56	100
DPP447135	13.5	14	58	100
DPP447140	14.0	14	58	100
DPP447145	14.5	16	62	105
DPP447150	15.0	16	62	105
DPP447155	15.5	16	64	115
DPP447160	16.0	16	64	115
DPP447165	16.5	18	70	125
DPP447170	17.0	18	70	125
DPP447175	17.5	18	70	125
DPP447180	18.0	18	70	125
DPP447185	18.5	20	75	135
DPP447190	19.0	20	75	135
DPP447195	19.5	20	75	145
DPP447200	20.0	20	75	145

Unit : mm

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HRc20	HRc20~30	HRc30~40	HRc40~50	HRc50~							
○	○	○	○		○	○	○	○			

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

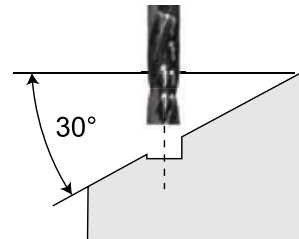
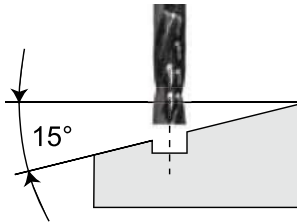
TECHNICAL
DATA


**CARBIDE, DREAM DRILLS - FLAT BOTTOM
VHM, DREAM DRILLS - FLACHBOHRER**
DPP447 SERIES

WORK MATERIAL	P								M		K		N	
	STRUCTURAL STEELS		CARBON STEELS ALLOY STEELS		PREHARDENED STEELS		HARDEND STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM	
HARDNESS			<HB225		HRC30 ~ 40		HRC40 ~ 50		~ 200 HB					
DRILLING SPEED	80 m/min		70 m/min		38 m/min		25 m/min		30 m/min		68 m/min		165 m/min	
DRILLING DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3.0	8350	0.05	7250	0.05	3890	0.05	2790	0.03	3180	0.02	7250	0.04	17850	0.06
4.0	6250	0.07	5410	0.07	2940	0.06	2100	0.04	2380	0.03	5410	0.06	13130	0.08
5.0	5040	0.08	4360	0.08	2310	0.08	1680	0.05	1910	0.04	4360	0.07	10500	0.10
6.0	4200	0.10	3630	0.10	1890	0.09	1370	0.06	1590	0.05	3630	0.09	8930	0.12
8.0	3150	0.14	2730	0.13	1470	0.12	1050	0.08	1190	0.06	2730	0.12	6670	0.16
10.0	2520	0.17	2160	0.17	1160	0.15	840	0.10	955	0.08	2160	0.15	5360	0.20
12.0	2100	0.21	1790	0.21	1000	0.18	690	0.12	796	0.10	1790	0.18	4470	0.24
16.0	1580	0.28	1370	0.28	740	0.24	530	0.16	597	0.12	1370	0.24	3360	0.32
20.0	1260	0.35	1110	0.34	580	0.31	420	0.20	477	0.15	1110	0.30	2680	0.40

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

Surface Angle	Cutting Conditions	
	RPM	FEED
0° ~ 15°	100%	100%
15° ~ 30°	100%	50%
30° ~	70%	30%

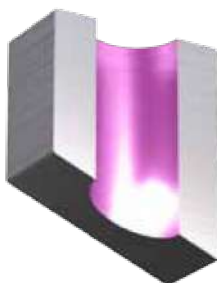


- ▶ The cutting conditions are for 2xD.
- ▶ The rigid and precise machine and holder are required.
- ▶ The recommended depth of hole is measured from the highest point of the hole on drilling in inclined and angled surfaces.
- ▶ The recommended cutting conditions are those for drilling on flat and horizontal surfaces.
- ▶ Please adjust feed rate according to the above surface angle when drilling on an inclined surface.
 - The recommended feed rate 50% or lower, in case of 15°~30° of the incline angle.
 - The recommended feed rate 30% or lower and RPM 70%, in case of 30° ~ of the incline angle.
- ▶ Please decrease cutting speed as material hardness increases.
- ▶ Only use drilling tool. Side milling, traversing, helical milling are not usable.

VARIETY OF DRILLING
Arten von Bohrungen



Inclined Entry



Inclined Exit



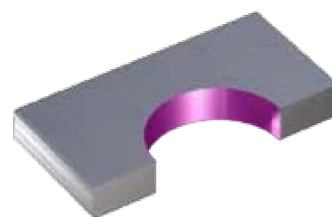
Counter Boring



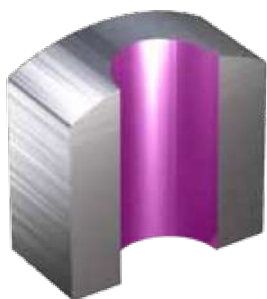
Guide Drilling



Cross Drilling



Thin Plate



Curved Surface



Chained Hole



Blind Hole for Threading

i-ONE
DRILLS

i-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

TECHNICAL
DATA



Global Cutting Tool Leader **YG-1**



CARBIDE



Leading Through Innovation



DREAM DRILLS -INOX

DREAM DRILLS - INOX

- WITH COOLANT HOLES
Tough Materials like Stainless Steels, Nickel Alloys and Titanium
- Mit Kühlkanälen
Für zähe Werkstoffe, wie rostfreier Stahl, Nickellegierungen und Titan

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes)

Tough Materials like Stainless Steels, Nickel Alloys and Titanium

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3XD DH451		CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES HARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL <i>SHORT KURZ</i>	D3.0	D20.0	116
5XD DH452		CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL <i>LONG LANG</i>	D1.0	D20.0	119
8XD DH453		CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL <i>EXTRA LONG ÜBERLANG</i>	D3.0	D14.0	122
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					124

SOLID CARBIDE DREAM DRILLS-INOX

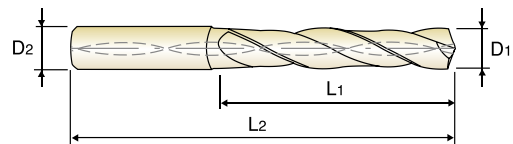
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○
◎	◎	○			◎		○				○
◎	◎	○			◎		○				○


CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES
SHORT
🇩🇪 VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
KURZ
🇫🇷 Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série courte
COURTE
🇮🇹 PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)
CORTA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes superior centering and chip curling.
- Applied TiAlN coating achieves the better surface finish of materials to be cut and the longer tool life.

- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.



P.124

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH451030	3.0	6	20	62	DH451050	5.0	6	28	66
DH451031	3.1	6	20	62	DH451051	5.1	6	28	66
DH451032	3.2	6	20	62	DH451052	5.2	6	28	66
DH451033	3.3	6	20	62	DH451053	5.3	6	28	66
DH451034	3.4	6	20	62	DH451054	5.4	6	28	66
DH451035	3.5	6	20	62	DH451055	5.5	6	28	66
DH451036	3.6	6	20	62	DH451056	5.6	6	28	66
DH451037	3.7	6	20	62	DH451057	5.7	6	28	66
DH451038	3.8	6	24	66	DH451058	5.8	6	28	66
DH451039	3.9	6	24	66	DH451059	5.9	6	28	66
DH451040	4.0	6	24	66	DH451060	6.0	6	28	66
DH451041	4.1	6	24	66	DH451061	6.1	8	34	79
DH451042	4.2	6	24	66	DH451062	6.2	8	34	79
DH451043	4.3	6	24	66	DH451063	6.3	8	34	79
DH451044	4.4	6	24	66	DH451064	6.4	8	34	79
DH451045	4.5	6	24	66	DH451065	6.5	8	34	79
DH451046	4.6	6	24	66	DH451066	6.6	8	34	79
DH451047	4.7	6	24	66	DH451067	6.7	8	34	79
DH451048	4.8	6	28	66	DH451068	6.8	8	34	79
DH451049	4.9	6	28	66	DH451069	6.9	8	34	79

► Other shank types are available on your request.

► NEXT PAGE

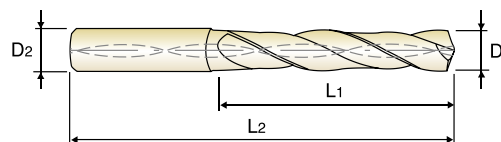
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			◎		○				○

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES
SHORT
VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
KURZ
Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série courte
COURTE
PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)
CORTA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes superior centering and chip curling.
- Applied TiAlN coating achieves the better surface finish of materials to be cut and the longer tool life.

- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.


DIN 6537
MG
30°
h6
m7
140°
20 bar


P.124

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH451070	7.0	8	34	79
DH451071	7.1	8	41	79
DH451072	7.2	8	41	79
DH451073	7.3	8	41	79
DH451074	7.4	8	41	79
DH451075	7.5	8	41	79
DH451076	7.6	8	41	79
DH451077	7.7	8	41	79
DH451078	7.8	8	41	79
DH451079	7.9	8	41	79
DH451080	8.0	8	41	79
DH451081	8.1	10	47	89
DH451082	8.2	10	47	89
DH451083	8.3	10	47	89
DH451084	8.4	10	47	89
DH451085	8.5	10	47	89
DH451086	8.6	10	47	89
DH451087	8.7	10	47	89
DH451088	8.8	10	47	89
DH451089	8.9	10	47	89

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH451090	9.0	10	47	89
DH451091	9.1	10	47	89
DH451092	9.2	10	47	89
DH451093	9.3	10	47	89
DH451094	9.4	10	47	89
DH451095	9.5	10	47	89
DH451096	9.6	10	47	89
DH451097	9.7	10	47	89
DH451098	9.8	10	47	89
DH451099	9.9	10	47	89
DH451100	10.0	10	47	89
DH451101	10.1	12	55	102
DH451102	10.2	12	55	102
DH451103	10.3	12	55	102
DH451104	10.4	12	55	102
DH451105	10.5	12	55	102
DH451106	10.6	12	55	102
DH451107	10.7	12	55	102
DH451108	10.8	12	55	102
DH451109	10.9	12	55	102

► Other shank types are available on your request.

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○		○				○

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

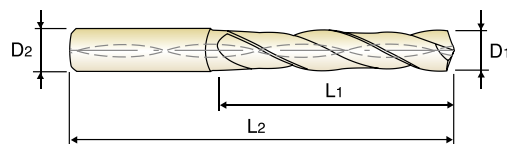
SPADE DRILLS

TECHNICAL DATA

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES**SHORT**
 **VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL**
KURZ
 **Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série courte**
COURTE
 **PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)**
CORTA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes superior centering and chip curling.
- Applied TiAlN coating achieves the better surface finish of materials to be cut and the longer tool life.

- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.

**DIN
6537****MG**
 **30°**
 **h6**
 **m7**
 **140°**
 **20 bar**


P.124

3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH451110	11.0	12	55	102	DH451140	14.0	14	60	107
DH451111	11.1	12	55	102	DH451145	14.5	16	65	115
DH451112	11.2	12	55	102	DH451150	15.0	16	65	115
DH451113	11.3	12	55	102	DH451155	15.5	16	65	115
DH451114	11.4	12	55	102	DH451160	16.0	16	65	115
DH451115	11.5	12	55	102	DH451165	16.5	18	73	123
DH451116	11.6	12	55	102	DH451170	17.0	18	73	123
DH451117	11.7	12	55	102	DH451175	17.5	18	73	123
DH451118	11.8	12	55	102	DH451180	18.0	18	73	123
DH451119	11.9	12	55	102	DH451185	18.5	20	79	131
DH451120	12.0	12	55	102	DH451190	19.0	20	79	131
DH451125	12.5	14	60	107	DH451195	19.5	20	79	131
DH451130	13.0	14	60	107	DH451200	20.0	20	79	131
DH451135	13.5	14	60	107					

► Other shank types are available on your request.

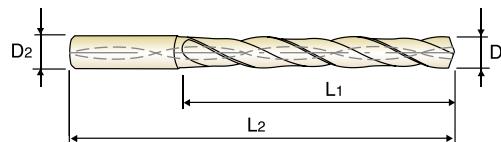
◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~								
◎	◎	○			◎		○				○	

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES
LONG
■ VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
LANG
■ Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série longue
LONGUE
■ PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)
LUNGA

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
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- ▶ Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- ▶ Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- ▶ Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- ▶ Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.


DIN 6537
MG
30°
h6
m7
140°
20 bar


P.124

5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452010	1.0	3	8	55
DH452011	1.1	3	12	55
DH452012	1.2	3	12	55
DH452013	1.3	3	12	55
DH452014	1.4	3	12	55
DH452015	1.5	3	16	55
DH452016	1.6	3	16	55
DH452017	1.7	3	16	55
DH452018	1.8	3	16	55
DH452019	1.9	3	16	55
DH452020	2.0	4	21	57
DH452021	2.1	4	21	57
DH452022	2.2	4	21	57
DH452023	2.3	4	21	57
DH452024	2.4	4	21	57
DH452025	2.5	4	21	57
DH452026	2.6	4	21	57
DH452027	2.7	4	21	57
DH452028	2.8	4	21	57
DH452029	2.9	4	21	57
DH452030	3.0	6	28	66
DH452031	3.1	6	28	66
DH452032	3.2	6	28	66
DH452033	3.3	6	28	66
DH452034	3.4	6	28	66

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452035	3.5	6	28	66
DH452036	3.6	6	28	66
DH452037	3.7	6	28	66
DH452038	3.8	6	36	74
DH452039	3.9	6	36	74
DH452040	4.0	6	36	74
DH452041	4.1	6	36	74
DH452042	4.2	6	36	74
DH452043	4.3	6	36	74
DH452044	4.4	6	36	74
DH452045	4.5	6	36	74
DH452046	4.6	6	36	74
DH452047	4.7	6	36	74
DH452048	4.8	6	44	82
DH452049	4.9	6	44	82
DH452050	5.0	6	44	82
DH452051	5.1	6	44	82
DH452052	5.2	6	44	82
DH452053	5.3	6	44	82
DH452054	5.4	6	44	82
DH452055	5.5	6	44	82
DH452056	5.6	6	44	82
DH452057	5.7	6	44	82
DH452058	5.8	6	44	82
DH452059	5.9	6	44	82

▶ Other shank types are available on your request.

▶ NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○		○				○

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

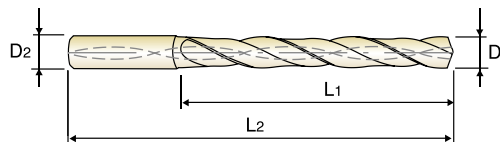
SPADE DRILLS

TECHNICAL DATA

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES**LONG**
 **VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL**
LANG
 **Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série longue**
LONGUE
 **PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)**
LUNGA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes superior centering and chip curling.
- Applied TiAlN coating achieves the better surface finish of materials to be cut and the longer tool life.

- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.

**DIN
6537****MG**
 **30°**
h6**m7****140°****20 bar**


P.124

5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH452060	6.0	6	44	82	DH452085	8.5	10	61	103
DH452061	6.1	8	53	91	DH452086	8.6	10	61	103
DH452062	6.2	8	53	91	DH452087	8.7	10	61	103
DH452063	6.3	8	53	91	DH452088	8.8	10	61	103
DH452064	6.4	8	53	91	DH452089	8.9	10	61	103
DH452065	6.5	8	53	91	DH452090	9.0	10	61	103
DH452066	6.6	8	53	91	DH452091	9.1	10	61	103
DH452067	6.7	8	53	91	DH452092	9.2	10	61	103
DH452068	6.8	8	53	91	DH452093	9.3	10	61	103
DH452069	6.9	8	53	91	DH452094	9.4	10	61	103
DH452070	7.0	8	53	91	DH452095	9.5	10	61	103
DH452071	7.1	8	53	91	DH452096	9.6	10	61	103
DH452072	7.2	8	53	91	DH452097	9.7	10	61	103
DH452073	7.3	8	53	91	DH452098	9.8	10	61	103
DH452074	7.4	8	53	91	DH452099	9.9	10	61	103
DH452075	7.5	8	53	91	DH452100	10.0	10	61	103
DH452076	7.6	8	53	91	DH452101	10.1	12	71	118
DH452077	7.7	8	53	91	DH452102	10.2	12	71	118
DH452078	7.8	8	53	91	DH452103	10.3	12	71	118
DH452079	7.9	8	53	91	DH452104	10.4	12	71	118
DH452080	8.0	8	53	91	DH452105	10.5	12	71	118
DH452081	8.1	10	61	103	DH452106	10.6	12	71	118
DH452082	8.2	10	61	103	DH452107	10.7	12	71	118
DH452083	8.3	10	61	103	DH452108	10.8	12	71	118
DH452084	8.4	10	61	103	DH452109	10.9	12	71	118

► Other shank types are available on your request.

► NEXT PAGE

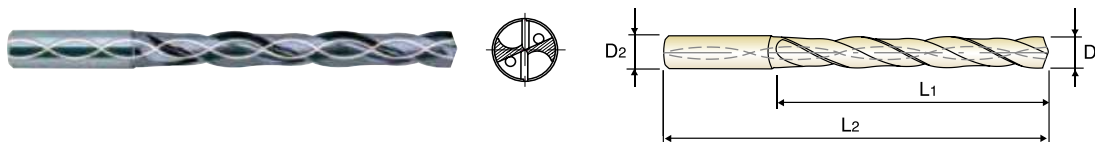
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES
LONG
■ VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
LANG
■ Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série longue
LONGUE
■ PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)
LUNGA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
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- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.


5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452110	11.0	12	71	118
DH452111	11.1	12	71	118
DH452112	11.2	12	71	118
DH452113	11.3	12	71	118
DH452114	11.4	12	71	118
DH452115	11.5	12	71	118
DH452116	11.6	12	71	118
DH452117	11.7	12	71	118
DH452118	11.8	12	71	118
DH452119	11.9	12	71	118
DH452120	12.0	12	71	118
DH452125	12.5	14	77	124
DH452130	13.0	14	77	124
DH452135	13.5	14	77	124

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452140	14.0	14	77	124
DH452145	14.5	16	83	133
DH452150	15.0	16	83	133
DH452155	15.5	16	83	133
DH452160	16.0	16	83	133
DH452165	16.5	18	93	143
DH452170	17.0	18	93	143
DH452175	17.5	18	93	143
DH452180	18.0	18	93	143
DH452185	18.5	20	101	153
DH452190	19.0	20	101	153
DH452195	19.5	20	101	153
DH452200	20.0	20	101	153

► Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○		○				○

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

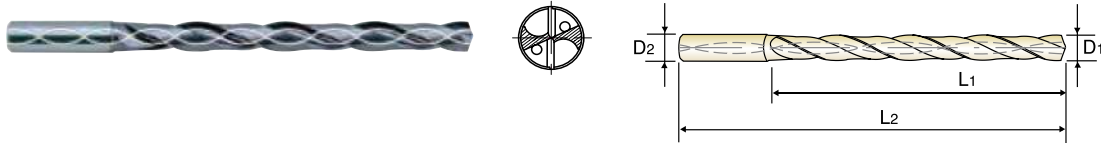
SPADE DRILLS

TECHNICAL DATA

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES**EXTRA LONG**
 **VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL**
ÜBERLANG
 **Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série extra-longue**
EXTRA-LONGUE
 **PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)**
EXTRA LUNGA

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
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- ▶ Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- ▶ Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- ▶ Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.



P.124

8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH453030	3.0	6	34	72	DH453057	5.7	6	57	95
DH453031	3.1	6	34	72	DH453058	5.8	6	57	95
DH453032	3.2	6	34	72	DH453059	5.9	6	57	95
DH453033	3.3	6	34	72	DH453060	6.0	6	57	95
DH453034	3.4	6	34	72	DH453061	6.1	8	76	114
DH453035	3.5	6	34	72	DH453062	6.2	8	76	114
DH453036	3.6	6	34	72	DH453063	6.3	8	76	114
DH453037	3.7	6	34	72	DH453064	6.4	8	76	114
DH453038	3.8	6	43	81	DH453065	6.5	8	76	114
DH453039	3.9	6	43	81	DH453066	6.6	8	76	114
DH453040	4.0	6	43	81	DH453067	6.7	8	76	114
DH453041	4.1	6	43	81	DH453068	6.8	8	76	114
DH453042	4.2	6	43	81	DH453069	6.9	8	76	114
DH453043	4.3	6	43	81	DH453070	7.0	8	76	114
DH453044	4.4	6	43	81	DH453071	7.1	8	76	114
DH453045	4.5	6	43	81	DH453072	7.2	8	76	114
DH453046	4.6	6	43	81	DH453073	7.3	8	76	114
DH453047	4.7	6	43	81	DH453074	7.4	8	76	114
DH453048	4.8	6	57	95	DH453075	7.5	8	76	114
DH453049	4.9	6	57	95	DH453076	7.6	8	76	114
DH453050	5.0	6	57	95	DH453077	7.7	8	76	114
DH453051	5.1	6	57	95	DH453078	7.8	8	76	114
DH453052	5.2	6	57	95	DH453079	7.9	8	76	114
DH453053	5.3	6	57	95	DH453080	8.0	8	76	114
DH453054	5.4	6	57	95	DH453081	8.1	10	95	142
DH453055	5.5	6	57	95	DH453082	8.2	10	95	142
DH453056	5.6	6	57	95	DH453083	8.3	10	95	142

▶ Other shank types are available on your request.

▶ NEXT PAGE

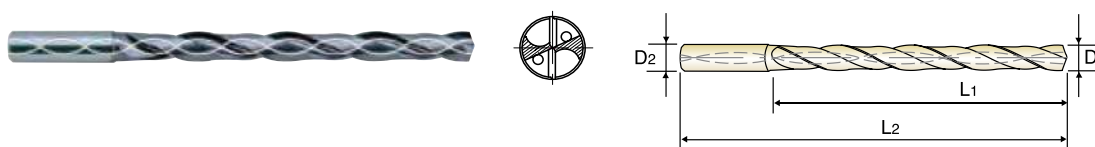
◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP		Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~								
◎	◎	○			◎		○					○

CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES
EXTRA LONG
■ VOLLHARTMETALL DREAM SPIRALBOHRER - INOX mit KÜHLKANAL
ÜBERLANG
■ Forets DREAM DRILLS carbure pour INOX, avec arrosage central, série extra-longue
EXTRA-LONGUE
■ PUNTE ELICOIDALI IN MD, DREAM DRILLS - INOX (con fori di refrigerazione)
EXTRA LUNGA

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes superior centering and chip curling.
- Applied TiAlN coating achieves the better surface finish of materials to be cut and the longer tool life.

- Der Bohrer hat eine besondere Nutenform, die sich besonders zur Bearbeitung von rostfreiem Stahl eignet.
- Ausgezeichnete Entspannung wegen der besseren Oberflächenqualität.
- Vorzügliche Zentrierung und Spanbruch durch die R-Ausspitzung.
- Modifizierte TiAlN-Beschichtung verbessert die Oberflächengüte der Bohrung und verlängert die Lebensdauer der Bohrung.


DIN 6537
MG
30°
h6
m7
140°
20 bar


P.124

8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH453084	8.4	10	95	142	DH453105	10.5	12	114	162
DH453085	8.5	10	95	142	DH453106	10.6	12	114	162
DH453086	8.6	10	95	142	DH453107	10.7	12	114	162
DH453087	8.7	10	95	142	DH453108	10.8	12	114	162
DH453088	8.8	10	95	142	DH453109	10.9	12	114	162
DH453089	8.9	10	95	142	DH453110	11.0	12	114	162
DH453090	9.0	10	95	142	DH453111	11.1	12	114	162
DH453091	9.1	10	95	142	DH453112	11.2	12	114	162
DH453092	9.2	10	95	142	DH453113	11.3	12	114	162
DH453093	9.3	10	95	142	DH453114	11.4	12	114	162
DH453094	9.4	10	95	142	DH453115	11.5	12	114	162
DH453095	9.5	10	95	142	DH453116	11.6	12	114	162
DH453096	9.6	10	95	142	DH453117	11.7	12	114	162
DH453097	9.7	10	95	142	DH453118	11.8	12	114	162
DH453098	9.8	10	95	142	DH453119	11.9	12	114	162
DH453099	9.9	10	95	142	DH453120	12.0	12	114	162
DH453100	10.0	10	95	142	DH453125	12.5	14	133	178
DH453101	10.1	12	114	162	DH453130	13.0	14	133	178
DH453102	10.2	12	114	162	DH453135	13.5	14	133	178
DH453103	10.3	12	114	162	DH453140	14.0	14	133	178
DH453104	10.4	12	114	162					

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○

i-ONE DRILLS

i-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

TECHNICAL DATA


CARBIDE, DREAM DRILLS - INOX with COOLANT HOLES, TiAIN COATED
VOLLHARTMETALL DREAM BOHRER - INOX mit KÜHLKANAL, TiAIN-BESCHICHTET
DH451, DH452, DH453 SERIES

WORK MATERIAL	P		M				N						S	
	CARBON STEELS ALLOY STEELS		STAINLESS STEELS		STAINLESS STEELS		ALUMINUM		ALUMINUM		NON FERROUS		TITANIUM Ti ALLOYS	
STRENGTH			< 800 N/mm ²		> 800 N/mm ²		< 10% Si		> 10% Si					
DRILLING SPEED	105 ~ 125 m/min		60 ~ 70 m/min		35 ~ 45 m/min		200 ~ 220 m/min		155 ~ 175 m/min		105 ~ 125 m/min		40 ~ 50 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1.0	26000	0.02	12000	0.02	6200	0.02	48000	0.04	38000	0.03	38000	0.02	8100	0.01
1.5	18000	0.03	9000	0.03	5400	0.02	43000	0.05	32000	0.04	25500	0.03	7500	0.01
2.5	10800	0.05	7000	0.04	4200	0.03	25500	0.08	19500	0.06	15500	0.05	4500	0.02
3.0	13000	0.04	7400	0.04	4700	0.02	23000	0.12	18500	0.10	16000	0.08	5300	0.03
4.0	10000	0.05	5600	0.05	3600	0.03	17500	0.18	13900	0.15	11900	0.10	4000	0.04
5.0	8000	0.05	4400	0.05	2800	0.03	14000	0.20	11000	0.18	9500	0.12	3200	0.05
6.0	6600	0.06	3700	0.06	2400	0.04	11700	0.25	9300	0.25	8000	0.15	2650	0.06
8.0	5000	0.08	2800	0.08	1800	0.06	8800	0.30	7000	0.30	6000	0.18	2000	0.07
10.0	4000	0.10	2200	0.10	1400	0.08	7000	0.40	5600	0.35	4800	0.22	1600	0.08
12.0	3300	0.12	1900	0.12	1200	0.10	5800	0.50	4600	0.40	4000	0.26	1300	0.10
14.0	2800	0.15	1600	0.15	1000	0.12	5000	0.60	4000	0.50	3400	0.30	1100	0.12
16.0	2500	0.20	1400	0.20	900	0.15	4380	0.80	3500	0.60	3000	0.40	1000	0.14
18.0	2200	0.22	1250	0.22	800	0.17	3900	1.00	3100	0.70	2650	0.45	900	0.16
20.0	2000	0.24	1120	0.24	720	0.19	3500	1.20	2800	0.80	2400	0.50	800	0.18

► Recommend to reduce the feed rate as following

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

Feed 100% : DH451(3xD), DH452(5xD)

Feed 85% : DH453(8xD)

CARBIDE



Leading Through Innovation



DREAM DRILLS -ALU

DREAM DRILLS - ALU

- with Coolant Holes
For Drilling Aluminum & Aluminum Alloys
- Mit Kühlkanälen
Zum Bohren von Aluminium und Aluminium-Legierungen

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)

For Drilling Aluminum & Aluminum Alloys

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3XD D5432		CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES <i>SHORT</i> VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL <i>KURZ</i>	D3.0	D20.0	128
5XD D5433		CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES <i>LONG</i> VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL <i>LANG</i>	D3.0	D20.0	130
8XD D5434		CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES <i>EXTRA LONG</i> VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL <i>ÜBERLANG</i>	D3.0	D14.0	132
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					134

SOLID CARBIDE DREAM DRILLS-ALU

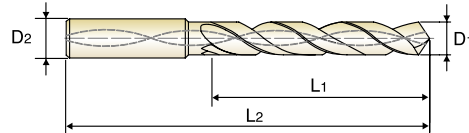
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
							◎				
							◎				
							◎				

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES**SHORT****KURZ****COURTE****CORTA**
 **VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL**
 **Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série courte**
 **PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (con fori di refrigerazione)**

- Good chip treatment due to flute geometry & chip space
► Better finish & built-up edge preventive

- Bessere Entspannung durch eine angepasste Spannutt-Geometrie & großem Span-Volumen
► Verbesserte Schliffgüte & Schneidkanten-Präparation



P.134

3 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5432030	3.0	6	20	62	D5432057	5.7	6	28	66
D5432031	3.1	6	20	62	D5432058	5.8	6	28	66
D5432032	3.2	6	20	62	D5432059	5.9	6	28	66
D5432033	3.3	6	20	62	D5432060	6.0	6	28	66
D5432034	3.4	6	20	62	D5432061	6.1	8	34	79
D5432035	3.5	6	20	62	D5432062	6.2	8	34	79
D5432036	3.6	6	20	62	D5432063	6.3	8	34	79
D5432037	3.7	6	20	62	D5432064	6.4	8	34	79
D5432038	3.8	6	24	66	D5432065	6.5	8	34	79
D5432039	3.9	6	24	66	D5432066	6.6	8	34	79
D5432040	4.0	6	24	66	D5432067	6.7	8	34	79
D5432041	4.1	6	24	66	D5432068	6.8	8	34	79
D5432042	4.2	6	24	66	D5432069	6.9	8	34	79
D5432043	4.3	6	24	66	D5432070	7.0	8	34	79
D5432044	4.4	6	24	66	D5432071	7.1	8	41	79
D5432045	4.5	6	24	66	D5432072	7.2	8	41	79
D5432046	4.6	6	24	66	D5432073	7.3	8	41	79
D5432047	4.7	6	24	66	D5432074	7.4	8	41	79
D5432048	4.8	6	28	66	D5432075	7.5	8	41	79
D5432049	4.9	6	28	66	D5432076	7.6	8	41	79
D5432050	5.0	6	28	66	D5432077	7.7	8	41	79
D5432051	5.1	6	28	66	D5432078	7.8	8	41	79
D5432052	5.2	6	28	66	D5432079	7.9	8	41	79
D5432053	5.3	6	28	66	D5432080	8.0	8	41	79
D5432054	5.4	6	28	66	D5432081	8.1	10	47	89
D5432055	5.5	6	28	66	D5432082	8.2	10	47	89
D5432056	5.6	6	28	66	D5432083	8.3	10	47	89

- DLC coating is available on your request.
► Other shank types are available on your request.

► NEXT PAGE

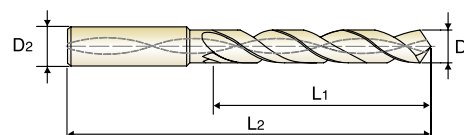
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES
SHORT
■ VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL
KURZ
■ Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série courte
COURTE
■ PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (con fori di refrigerazione)
CORTA

- Good chip treatment due to flute geometry & chip space
- Better finish & built-up edge preventive

- Bessere Entspannung durch eine angepasste Spannuten-Geometrie & großem Span-Volumen
- Verbesserte Schlißgüte & Schneidkanten-Präparation


DIN 6537
MG
30°
h6
m7
118°
20 bar


P.134

3 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5432084	8.4	10	47	89	D5432111	11.1	12	55	102
D5432085	8.5	10	47	89	D5432112	11.2	12	55	102
D5432086	8.6	10	47	89	D5432113	11.3	12	55	102
D5432087	8.7	10	47	89	D5432114	11.4	12	55	102
D5432088	8.8	10	47	89	D5432115	11.5	12	55	102
D5432089	8.9	10	47	89	D5432116	11.6	12	55	102
D5432090	9.0	10	47	89	D5432117	11.7	12	55	102
D5432091	9.1	10	47	89	D5432118	11.8	12	55	102
D5432092	9.2	10	47	89	D5432119	11.9	12	55	102
D5432093	9.3	10	47	89	D5432120	12.0	12	55	102
D5432094	9.4	10	47	89	D5432125	12.5	14	60	107
D5432095	9.5	10	47	89	D5432130	13.0	14	60	107
D5432096	9.6	10	47	89	D5432135	13.5	14	60	107
D5432097	9.7	10	47	89	D5432140	14.0	14	60	107
D5432098	9.8	10	47	89	D5432145	14.5	16	65	115
D5432099	9.9	10	47	89	D5432150	15.0	16	65	115
D5432100	10.0	10	47	89	D5432155	15.5	16	65	115
D5432101	10.1	12	55	102	D5432160	16.0	16	65	115
D5432102	10.2	12	55	102	D5432165	16.5	18	73	123
D5432103	10.3	12	55	102	D5432170	17.0	18	73	123
D5432104	10.4	12	55	102	D5432175	17.5	18	73	123
D5432105	10.5	12	55	102	D5432180	18.0	18	73	123
D5432106	10.6	12	55	102	D5432185	18.5	20	79	131
D5432107	10.7	12	55	102	D5432190	19.0	20	79	131
D5432108	10.8	12	55	102	D5432195	19.5	20	79	131
D5432109	10.9	12	55	102	D5432200	20.0	20	79	131
D5432110	11.0	12	55	102					

- DLC coating is available on your request.
- Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
							◎				

i-ONE DRILLS

i-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

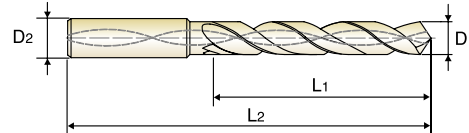
SPADE DRILLS

TECHNICAL DATA

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES**LONG**
 **VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL**
LANG
 **Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série longue**
LONGUE
 **PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (CON FORI DI REFRIGERAZIONE)**
LUNGA

- Good chip treatment due to flute geometry & chip space
► Better finish & built-up edge preventive

- Bessere Entspannung durch eine angepasste Spannut-Geometrie & großem Span-Volumen
► Verbesserte Schliffgüte & Schneidkanten-Präparation

**DIN
6537****MG**
 **30°**
 **h6**
 **m7**
 **118°**
 **20 bar**


P.134

5 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5433030	3.0	6	28	66	D5433057	5.7	6	44	82
D5433031	3.1	6	28	66	D5433058	5.8	6	44	82
D5433032	3.2	6	28	66	D5433059	5.9	6	44	82
D5433033	3.3	6	28	66	D5433060	6.0	6	44	82
D5433034	3.4	6	28	66	D5433061	6.1	8	53	91
D5433035	3.5	6	28	66	D5433062	6.2	8	53	91
D5433036	3.6	6	28	66	D5433063	6.3	8	53	91
D5433037	3.7	6	28	66	D5433064	6.4	8	53	91
D5433038	3.8	6	36	74	D5433065	6.5	8	53	91
D5433039	3.9	6	36	74	D5433066	6.6	8	53	91
D5433040	4.0	6	36	74	D5433067	6.7	8	53	91
D5433041	4.1	6	36	74	D5433068	6.8	8	53	91
D5433042	4.2	6	36	74	D5433069	6.9	8	53	91
D5433043	4.3	6	36	74	D5433070	7.0	8	53	91
D5433044	4.4	6	36	74	D5433071	7.1	8	53	91
D5433045	4.5	6	36	74	D5433072	7.2	8	53	91
D5433046	4.6	6	36	74	D5433073	7.3	8	53	91
D5433047	4.7	6	36	74	D5433074	7.4	8	53	91
D5433048	4.8	6	44	82	D5433075	7.5	8	53	91
D5433049	4.9	6	44	82	D5433076	7.6	8	53	91
D5433050	5.0	6	44	82	D5433077	7.7	8	53	91
D5433051	5.1	6	44	82	D5433078	7.8	8	53	91
D5433052	5.2	6	44	82	D5433079	7.9	8	53	91
D5433053	5.3	6	44	82	D5433080	8.0	8	53	91
D5433054	5.4	6	44	82	D5433081	8.1	10	61	103
D5433055	5.5	6	44	82	D5433082	8.2	10	61	103
D5433056	5.6	6	44	82	D5433083	8.3	10	61	103

- DLC coating is available on your request.
► Other shank types are available on your request.

► NEXT PAGE

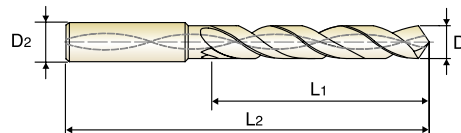
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES
LONG
■ VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL
LANG
■ Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série longue
LONGUE
■ PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (CON FORI DI REFRIGERAZIONE)
LUNGA

- Good chip treatment due to flute geometry & chip space
- Better finish & built-up edge preventive

- Bessere Entspannung durch eine angepasste Spannuten-Geometrie & großem Span-Volumen
- Verbesserte Schliffgüte & Schneidkanten-Präparation


DIN 6537
MG
30°
h6
m7
118°
20 bar
P.134
5 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5433084	8.4	10	61	103	D5433111	11.1	12	71	118
D5433085	8.5	10	61	103	D5433112	11.2	12	71	118
D5433086	8.6	10	61	103	D5433113	11.3	12	71	118
D5433087	8.7	10	61	103	D5433114	11.4	12	71	118
D5433088	8.8	10	61	103	D5433115	11.5	12	71	118
D5433089	8.9	10	61	103	D5433116	11.6	12	71	118
D5433090	9.0	10	61	103	D5433117	11.7	12	71	118
D5433091	9.1	10	61	103	D5433118	11.8	12	71	118
D5433092	9.2	10	61	103	D5433119	11.9	12	71	118
D5433093	9.3	10	61	103	D5433120	12.0	12	71	118
D5433094	9.4	10	61	103	D5433125	12.5	14	77	124
D5433095	9.5	10	61	103	D5433130	13.0	14	77	124
D5433096	9.6	10	61	103	D5433135	13.5	14	77	124
D5433097	9.7	10	61	103	D5433140	14.0	14	77	124
D5433098	9.8	10	61	103	D5433145	14.5	16	83	133
D5433099	9.9	10	61	103	D5433150	15.0	16	83	133
D5433100	10.0	10	61	103	D5433155	15.5	16	83	133
D5433101	10.1	12	71	118	D5433160	16.0	16	83	133
D5433102	10.2	12	71	118	D5433165	16.5	18	93	143
D5433103	10.3	12	71	118	D5433170	17.0	18	93	143
D5433104	10.4	12	71	118	D5433175	17.5	18	93	143
D5433105	10.5	12	71	118	D5433180	18.0	18	93	143
D5433106	10.6	12	71	118	D5433185	18.5	20	101	153
D5433107	10.7	12	71	118	D5433190	19.0	20	101	153
D5433108	10.8	12	71	118	D5433195	19.5	20	101	153
D5433109	10.9	12	71	118	D5433200	20.0	20	101	153
D5433110	11.0	12	71	118					

► DLC coating is available on your request.

► Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
							◎				

i-ONE DRILLS

i-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

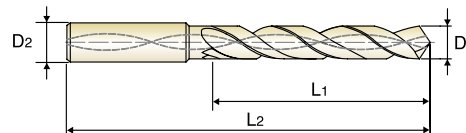
SPADE DRILLS

TECHNICAL DATA


CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES
EXTRA LONG
✓ VOLLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL
ÜBERLANG
✓ Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série extra-longue
EXTRA-LONGUE
✓ PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (con fori di refrigerazione)
EXTRA LUNGA

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge preventive

- ▶ Bessere Entspannung durch eine angepasste Spannut-Geometrie & großem Span-Volumen
- ▶ Verbesserte Schlifffüte & Schneidkanten-Präparation


DIN
6537
MG
30°
h6
m7
118°
20 bar

P.134

8 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5434030	3.0	6	34	72	D5434057	5.7	6	57	95
D5434031	3.1	6	34	72	D5434058	5.8	6	57	95
D5434032	3.2	6	34	72	D5434059	5.9	6	57	95
D5434033	3.3	6	34	72	D5434060	6.0	6	57	95
D5434034	3.4	6	34	72	D5434061	6.1	8	76	114
D5434035	3.5	6	34	72	D5434062	6.2	8	76	114
D5434036	3.6	6	34	72	D5434063	6.3	8	76	114
D5434037	3.7	6	34	72	D5434064	6.4	8	76	114
D5434038	3.8	6	43	81	D5434065	6.5	8	76	114
D5434039	3.9	6	43	81	D5434066	6.6	8	76	114
D5434040	4.0	6	43	81	D5434067	6.7	8	76	114
D5434041	4.1	6	43	81	D5434068	6.8	8	76	114
D5434042	4.2	6	43	81	D5434069	6.9	8	76	114
D5434043	4.3	6	43	81	D5434070	7.0	8	76	114
D5434044	4.4	6	43	81	D5434071	7.1	8	76	114
D5434045	4.5	6	43	81	D5434072	7.2	8	76	114
D5434046	4.6	6	43	81	D5434073	7.3	8	76	114
D5434047	4.7	6	43	81	D5434074	7.4	8	76	114
D5434048	4.8	6	57	95	D5434075	7.5	8	76	114
D5434049	4.9	6	57	95	D5434076	7.6	8	76	114
D5434050	5.0	6	57	95	D5434077	7.7	8	76	114
D5434051	5.1	6	57	95	D5434078	7.8	8	76	114
D5434052	5.2	6	57	95	D5434079	7.9	8	76	114
D5434053	5.3	6	57	95	D5434080	8.0	8	76	114
D5434054	5.4	6	57	95	D5434081	8.1	10	95	142
D5434055	5.5	6	57	95	D5434082	8.2	10	95	142
D5434056	5.6	6	57	95	D5434083	8.3	10	95	142

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

▶ NEXT PAGE

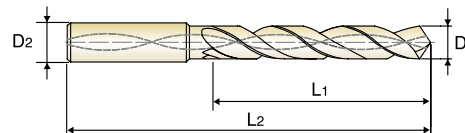
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55								
						◎					

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES
EXTRA LONG
VOILLHARTMETALL DREAM SPIRALBOHRER - ALU mit KÜHLKANAL
ÜBERLANG
Forets DREAM DRILLS carbure pour ALU, avec arrosage central, série extra-longue
EXTRA-LONGUE
PUNTE ELICOIDALI IN MD, DREAM DRILLS - ALU (con fori di refrigerazione)
EXTRA LUNGA

- Good chip treatment due to flute geometry & chip space
- Better finish & built-up edge preventive

- Bessere Entspannung durch eine angepasste Spannutt-Geometrie & großem Span-Volumen
- Verbesserte Schliffgüte & Schneidkanten-Präparation


DIN 6537
MG
30°
h6
m7
118°
20 bar


P.134

8 × D

Unit : mm

EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Shank Diameter D2	Flute Length L1	Overall Length L2
D5434084	8.4	10	95	142	D5434105	10.5	12	114	162
D5434085	8.5	10	95	142	D5434106	10.6	12	114	162
D5434086	8.6	10	95	142	D5434107	10.7	12	114	162
D5434087	8.7	10	95	142	D5434108	10.8	12	114	162
D5434088	8.8	10	95	142	D5434109	10.9	12	114	162
D5434089	8.9	10	95	142	D5434110	11.0	12	114	162
D5434090	9.0	10	95	142	D5434111	11.1	12	114	162
D5434091	9.1	10	95	142	D5434112	11.2	12	114	162
D5434092	9.2	10	95	142	D5434113	11.3	12	114	162
D5434093	9.3	10	95	142	D5434114	11.4	12	114	162
D5434094	9.4	10	95	142	D5434115	11.5	12	114	162
D5434095	9.5	10	95	142	D5434116	11.6	12	114	162
D5434096	9.6	10	95	142	D5434117	11.7	12	114	162
D5434097	9.7	10	95	142	D5434118	11.8	12	114	162
D5434098	9.8	10	95	142	D5434119	11.9	12	114	162
D5434099	9.9	10	95	142	D5434120	12.0	12	114	162
D5434100	10.0	10	95	142	D5434125	12.5	14	133	178
D5434101	10.1	12	114	162	D5434130	13.0	14	133	178
D5434102	10.2	12	114	162	D5434135	13.5	14	133	178
D5434103	10.3	12	114	162	D5434140	14.0	14	133	178
D5434104	10.4	12	114	162					

- DLC coating is available on your request.
- Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
							◎				

i-ONE DRILLS

i-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

TECHNICAL DATA


CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES
VOLLHARTMETALL DREAM BOHRER - ALU mit KÜHLKANAL
D5432, D5433, D5434 SERIES

WORK MATERIAL	N					
	ALUMINIUM ALLOY CASTING ALUMINIUM DIE CASTING			WROUGHT ALUMINIUM ALLOYS		
DIAMETER	RPM	SPEED	FEED	RPM	SPEED	FEED
3.0 ~ 6.0	8,000~15,000	80~150	0.2~0.5	8,000~15,000	80~150	0.15~0.3
~10.0	6,000~10,500	100~200	0.3~1.0	6,000~10,500	100~200	0.2~0.4
~14.0	4,500~5,800	150~250	0.3~1.0	4,500~5,800	150~250	0.2~0.4
~20.0	3,200~4,600	150~200	0.3~1.0	3,200~4,600	150~200	0.2~0.4

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

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

CARBIDE



Leading Through Innovation



DREAM DRILLS -CFRP

DREAM DRILLS – CFK

- For composite materials including CFRP, GFRP
- Für Verbund Materialien einschl. CFK und GFK

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - CFRP

For composite materials including CFRP, GFRP

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
DI473		CARBIDE, DREAM DRILLS - CFRP VOLLHARTMETALL DREAM SPIRALBOHRER - CFK	D2.5	D12.0	138

SOLID CARBIDE DREAM DRILLS-CFRP

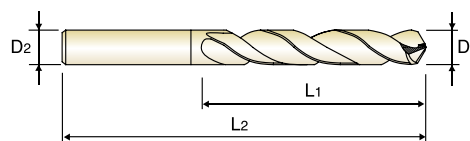
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRC55~							
										◎	


CARBIDE, DREAM DRILLS - CFRP
GERMANY VOLLHARTMETALL DREAM SPIRALBOHRER - CFK
FRANCE Forets DREAM DRILLS carbure - CFRP
ITALY PUNTE ELICOIDALI IN MD, DREAM DRILLS - CFRP

- ▶ Special Point Type improve hole quality for Composite Material
-> Minimized Burr and Delamination at Entry / Exit Hole.
- ▶ Outstanding Performance
- ▶ Long Tool Life and Increased product by Diamond Coating.

- ▶ Spezielle Spitzegeometrie zur Verbesserung der Bohrungsqualität bei Composite-Materialien
-> Minimiert die Grat-Bildung beim Bohrungs Ein- und Austritt
- ▶ Überzeugende Schnittdaten
- ▶ Lange Standzeiten und erhöhte Produktivität durch Diamant-Beschichtung


DIN 6537
MG
30°
h6
m7
118°

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
DIAMOND COATED	D1	D2	L1	L2
DI473025	2.5	6	24	66
DI473030	3.0	6	28	66
DI473040	4.0	6	36	74
DI473050	5.0	6	44	82
DI473060	6.0	6	44	82
DI473080	8.0	8	53	91
DI473090	9.0	10	61	103
DI473100	10.0	10	61	103
DI473110	11.0	12	71	118
DI473120	12.0	12	71	118

CUTTING CONDITIONS

WORK MATERIAL	N		
	CFRP		
DIAMETER	SPEED	RPM	FEED
2.5	100 ~ 150	12,700 ~ 19,000	0.03 ~ 0.07
3.0		10,600 ~ 15,900	
4.0		8,000 ~ 11,900	
5.0		6,370 ~ 9,500	
6.0		5,300 ~ 8,000	
8.0		4,000 ~ 6,000	
9.0		3,500 ~ 5,300	
10.0		3,200 ~ 4,700	
11.0		2,900 ~ 4,300	
12.0		2,700 ~ 3,900	

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

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
									◎		

CARBIDE



Leading Through Innovation



DREAM DRILLS -MQL TYPE

DREAM DRILLS - MQL TYPE

- WITH COOLANT HOLES
Minimum Quantity Lubrication. Drilling Deep Holes, $10 \times D \sim 30 \times D$
- Mit Kühlkanälen
Minimalmengenschmierung. Tiefloch $10 \times D$, $15 \times D$, $20 \times D$, $25 \times D$ und $30 \times D$

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)

Minimum Quantity Lubrication. Drilling Deep Holes, 10 × D ~ 30 × D

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
10XD DH510		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL	D3.0	D14.0	142
15XD DH515		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL	D3.0	D12.0	143
20XD DH520		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL	D3.0	D12.0	143
10XD DHM10		CARBIDE, DREAM DRILLS MQL TYPE END MILL SHANK with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in geradzahliger Schaftausführung	D3.0	D14.0	144
15XD DHM15		CARBIDE, DREAM DRILLS MQL TYPE END MILL SHANK with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG	D3.0	D12.0	144
20XD DHM20		CARBIDE, DREAM DRILLS MQL TYPE END MILL SHANK with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG	D3.0	D12.0	144
25XD DHM25		CARBIDE, DREAM DRILLS MQL TYPE END MILL SHANK with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG	D3.0	D10.0	145
30XD DHM30		CARBIDE, DREAM DRILLS MQL TYPE END MILL SHANK with COOLANT HOLES <i>EXTRA LONG ÜBERLANG</i> VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG	D3.0	D8.0	145
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					146

SOLID CARBIDE DREAM DRILLS-MQL TYPE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					
◎	◎	○				○					



DREAM DRILLS -MQL TYPE

DH510 SERIES

CARBIDE, DREAM DRILLS MQL TYPE WITH COOLANT HOLES

EXTRA LONG
GERMANY VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG

GERMANY ÜBERLANG

FRANCE Forets DREAM DRILLS carbure Type MQL avec arrosage central, série extra-longue

FRANCE EXTRA-LONGUE

ITALY PUNTE ELICOIDALI IN MD, DREAM DRILLS MQL (con fori di refrigerazione)

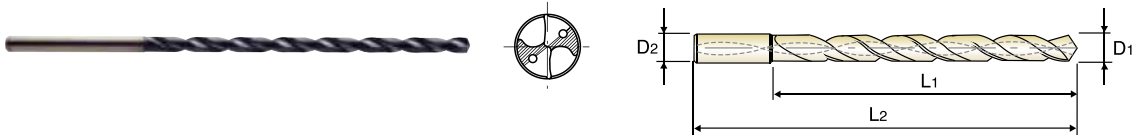
ITALY EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Hart-und Temperguß, Nichteisen Leichtmetallen.

► **Advantage** : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication). Excellent positioning
- Bush is not necessary.
Special design
- Good chip removal
Powerful drilling

► **Vorteile** : Bohren bis zu 10 x D ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend
- Keine vorherige Zentrierung notwendig
Kein Verlaufen
- Keine Bohrbuchse notwendig
Spezielle Bohrergeometrie
- Gute Spanabfuhr
Hochleistungsbohren



10 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH510030	3.0	3	39	90	DH510080	8.0	8	104	161
DH510033	3.3	4	46	97	DH510085	8.5	9	111	169
DH510035	3.5	4	46	97	DH510090	9.0	9	117	175
DH510040	4.0	4	52	103	DH510095	9.5	10	124	182
DH510042	4.2	5	59	112	DH510100	10.0	10	130	188
DH510045	4.5	5	59	112	DH510105	10.5	11	137	201
DH510050	5.0	5	65	118	DH510110	11.0	11	143	207
DH510055	5.5	6	72	127	DH510115	11.5	12	150	215
DH510060	6.0	6	78	133	DH510120	12.0	12	156	221
DH510065	6.5	7	85	141	DH510125	12.5	13	163	229
DH510068	6.8	7	91	147	DH510130	13.0	13	169	235
DH510070	7.0	7	91	147	DH510135	13.5	14	176	243
DH510075	7.5	8	98	155	DH510140	14.0	14	182	249

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								
◎	◎	○			○						

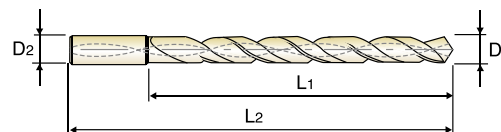
CARBIDE, DREAM DRILLS MQL TYPE WITH COOLANT HOLES
EXTRA LONG
GERMANY VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG
ÜBERLANG
FRANCE Forets DREAM DRILLS carbure Type MQL avec arrosage central, série extra-longue
EXTRA-LONGUE
ITALY PUNTE ELICOIDALI IN MD, DREAM DRILLS MQL (con fori di refrigerazione)
EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Non step drilling up to 15 times (20 times) of drill diameter.
Available for processing MQL (Minimum Quantity Lubrication).
Excellent positioning
- Bush is not necessary.
Special design
- Good chip removal
Powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Vorteile** : Bohren bis zu 15 x D (20 x D) ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend
- Keine vorherige Zentrierung notwendig
Kein Verlaufen
- Keine Bohrbuchse notwendig
Spezielle Bohrergeometrie
- Gute Spanabfuhr
Hochleistungsbohren


15 × D
(DH515)

20 × D
(DH520)

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH515030	3.0	3	54	105
DH515035	3.5	4	63	114
DH515040	4.0	4	72	123
DH515045	4.5	5	81	134
DH515050	5.0	5	90	143
DH515055	5.5	6	99	154
DH515060	6.0	6	108	163
DH515070	7.0	7	126	182
DH515080	8.0	8	144	201
DH515090	9.0	9	162	220
DH515100	10.0	10	180	238
DH515110	11.0	11	198	262
DH515120	12.0	12	216	281

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH520030	3.0	3	69	120
DH520035	3.5	4	81	132
DH520040	4.0	4	92	143
DH520045	4.5	5	104	157
DH520050	5.0	5	115	168
DH520055	5.5	6	127	182
DH520060	6.0	6	138	193
DH520070	7.0	7	161	217
DH520080	8.0	8	184	241
DH520090	9.0	9	207	265
DH520100	10.0	10	230	288
DH520120	12.0	12	276	341

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○				○					

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA

CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK WITH COOLANT HOLE

EXTRA LONG

 VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE MIT KÜHLKANAL

ÜBERLANG

 Forets DREAM DRILLS carbure Type MQL avec arrosage central, série extra-longue

EXTRA-LONGUE

 PUNTE MD, DREAM DRILLS MQL GAMBO RINFORZATO (con fori di refrigerazione)

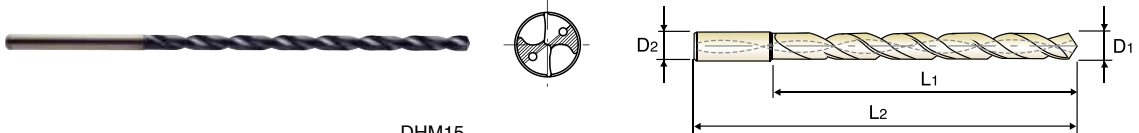
EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Advantage** : Non step drilling up to 15 times (20 times) of drill diameter.
Available for processing MQL (Minimum Quantity Lubrication).
Excellent positioning
- Bush is not necessary.
Special design
- Good chip removal
Powerful drilling

► **Vorteile** : Bohren bis zu 10 x D ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend
- Keine vorherige Zentrierung notwendig
Kein Verlaufen
- Keine Bohrbuchse notwendig
Spezielle Bohrergeometrie
- Gute Spanabfuhr
Hochleistungsbohren

DHM15
DHM10 DHM20

10 × D (DHM10)	15 × D (DHM15)	20 × D (DHM20)
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Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DHM10030	3.0	6	40	80	DHM15030	3.0	6	55	95
DHM10033	3.3	6	47	87	DHM15035	3.5	6	64	104
DHM10035	3.5	6	47	87	DHM15040	4.0	6	73	113
DHM10040	4.0	6	53	93	DHM15045	4.5	6	82	122
DHM10042	4.2	6	60	100	DHM15050	5.0	6	91	131
DHM10045	4.5	6	60	100	DHM15055	5.5	6	100	140
DHM10050	5.0	6	66	106	DHM15060	6.0	6	109	149
DHM10055	5.5	6	73	113	DHM15070	7.0	8	127	167
DHM10060	6.0	6	79	119	DHM15080	8.0	8	145	185
DHM10065	6.5	8	86	126	DHM15090	9.0	10	163	207
DHM10068	6.8	8	92	132	DHM15100	10.0	10	182	226
DHM10070	7.0	8	92	132	DHM15110	11.0	12	200	249
DHM10075	7.5	8	99	139	DHM15120	12.0	12	218	267
DHM10080	8.0	8	105	145					
DHM10085	8.5	10	112	156	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
DHM10090	9.0	10	118	162	TiAIN	D1	D2	L1	L2
DHM10095	9.5	10	126	170	DHM20030	3.0	6	70	110
DHM10100	10.0	10	132	176	DHM20035	3.5	6	82	122
DHM10105	10.5	12	139	188	DHM20040	4.0	6	93	133
DHM10110	11.0	12	145	194	DHM20045	4.5	6	105	145
DHM10115	11.5	12	152	201	DHM20050	5.0	6	116	156
DHM10120	12.0	12	158	207	DHM20055	5.5	6	128	168
DHM10125	12.5	14	165	214	DHM20060	6.0	6	139	179
DHM10130	13.0	14	171	220	DHM20070	7.0	8	162	202
DHM10135	13.5	14	178	227	DHM20080	8.0	8	185	225
DHM10140	14.0	14	184	233	DHM20090	9.0	10	208	252
					DHM20100	10.0	10	232	276
					DHM20110	11.0	12	255	304
					DHM20120	12.0	12	278	327

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	○				○					

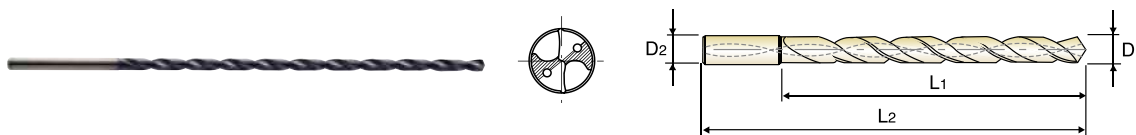
CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK with COOLANT HOLE
EXTRA LONG
VOILLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE MIT KÜHLKANAL
ÜBERLANG
Forets DREAM DRILLS carbure Type MQL avec arrosage central, attachement type fraise, série extra-longue
EXTRA-LONGUE
PUNTE MD, DREAM DRILLS MQL GAMBO RINFORZATO (con fori di refrigerazione)
EXTRA LUNGA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Advantage** : Non step drilling up to 25 times (30 times) of drill diameter.
Available for processing MQL (Minimum Quantity Lubrication).
Excellent positioning
- Bush is not necessary.
Special design
- Good chip removal
Powerful drilling

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.

► **Vorteile** : Bohren bis zu 15 x D (20 x D) ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend
- Keine vorherige Zentrierung notwendig
Kein Verlaufen
- Keine Bohrbuchse notwendig
Spezielle Bohrergeometrie
- Gute Spanabfuhr
Hochleistungsbohren


**25 × D
(DHM25)**
**30 × D
(DHM30)**

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DHM25030	3.0	6.0	85	125
DHM25035	3.5	6.0	99	139
DHM25040	4.0	6.0	113	153
DHM25045	4.5	6.0	127	167
DHM25050	5.0	6.0	141	181
DHM25055	5.5	6.0	155	195
DHM25060	6.0	6.0	169	209
DHM25070	7.0	8.0	197	237
DHM25080	8.0	8.0	225	265
DHM25090	9.0	10.0	253	297
DHM25100	10.0	10.0	282	326

Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DHM30030	3.0	6.0	100	140
DHM30035	3.5	6.0	117	157
DHM30040	4.0	6.0	133	173
DHM30045	4.5	6.0	150	190
DHM30050	5.0	6.0	166	206
DHM30055	5.5	6.0	183	223
DHM30060	6.0	6.0	199	239
DHM30070	7.0	8.0	232	272
DHM30080	8.0	8.0	265	305

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
○	○	○				○					

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



DREAM DRILLS -MQL TYPE

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

**CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK WITH COOLANT HOLE, TiAIN COATED
VOLLHARTMETALL DREAM BOHRER MQL-TYPE, TiAIN-BESCHICHTET**

DH510, DH515, DH520, DHM10, DHM15, DHM20 SERIES

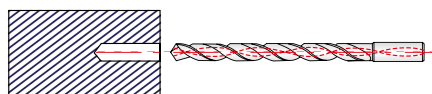
WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm ²		250 ~ 350 N/mm ²		400 ~ 500 N/mm ²	
DRILLING SPEED	63 ~ 125 m/min		63 ~ 125 m/min		60 ~ 80 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	7500	0.06~0.12	7500	0.06~0.12	7500	0.06~0.12
4.0	6400	0.08~0.16	6400	0.08~0.16	5600	0.08~0.16
5.0	5800	0.10~0.20	5800	0.10~0.20	4500	0.10~0.20
6.0	4800	0.12~0.24	4800	0.12~0.24	3800	0.12~0.24
8.0	3600	0.16~0.28	3600	0.16~0.28	2800	0.16~0.28
10.0	2900	0.20~0.35	2900	0.20~0.35	2300	0.20~0.35
12.0	2400	0.24~0.42	2400	0.24~0.42	1900	0.24~0.42
14.0	2050	0.28~0.46	2050	0.28~0.46	1600	0.28~0.46

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

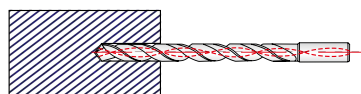
DHM25, DHM30 SERIES

WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm ²		250 ~ 350 N/mm ²		400 ~ 500 N/mm ²	
DRILLING SPEED	50 ~ 110 m/min		50 ~ 110 m/min		40 ~ 70 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	6400	0.06~0.12	6400	0.06~0.12	6400	0.06~0.12
4.0	5500	0.08~0.16	5500	0.08~0.16	4700	0.08~0.16
5.0	4900	0.10~0.20	4900	0.10~0.20	3800	0.10~0.20
6.0	4200	0.12~0.24	4200	0.12~0.24	3200	0.12~0.24
8.0	3000	0.16~0.28	3000	0.16~0.28	2400	0.16~0.28
10.0	2500	0.20~0.35	2500	0.20~0.35	1900	0.20~0.35

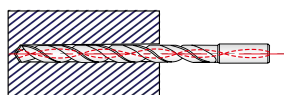
RPM = rev./min.
FEED = mm/rev.



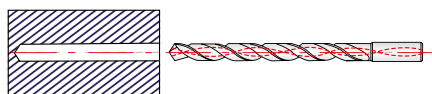
1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.



2. For Main Drilling, proceed with low RPM at Guide Drilling segment.
(RPM 300, FEED 400mm/min)



3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition chart (See above).

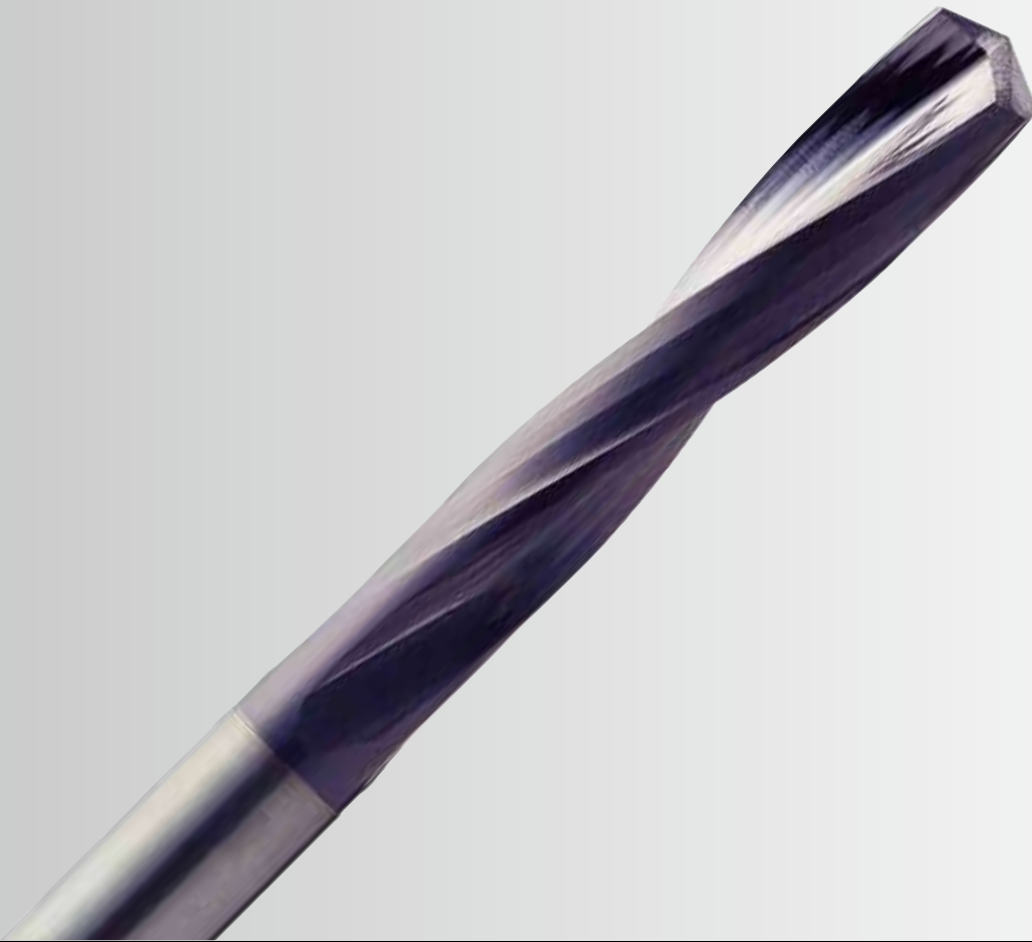


4. After then, proceed main drilling by increasing feed without step drilling.
5. When coming out from Guide Drilling start point after drilling, RPM should be reduced as 300 and feed should be 1000 mm/min.
6. When coming out from Guide Drilling segment to the outside, the feed should be decreased as 50%.

CARBIDE



Leading Through Innovation



DREAM DRILLS

- For HIGH HARDENED STEELS

DREAM DRILLS

- FÜR HOCHGEHÄRTETE STÄHLE

- HIGH HARDENED STEELS, HRc50~HRc70
- HOCHGEHÄRTETE STÄHLE HRc50 TO HRc70

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

High Hardened Steels, HRc50~HRc70

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
DH500		CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS VOLLHARTMETALL DREAM SPIRALBOHRER für HOCHGEHARTETE STAHL	D2.6	D14.0	150
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			151

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
			◎	◎							



DREAM DRILLS for HIGH HARDENED STEELS

DH500 SERIES

CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRc50~HRc70)

VOLLHARTMETALL DREAM SPIRALBOHRER FÜR HOCHGEHARTETE STAHL

Forets DREAM DRILLS carbure pour Aciers Trempés (50 HRc ~ 70 HRc)

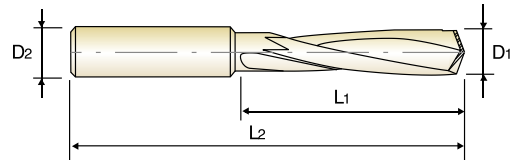
PUNTE ELICOIDALI IN MD, DREAM DRILL - ACCIAI HRC 50 - 70

► **Application** : Drilling for High Hardened Steels[Quenched Steels, Tempered Steels (Under HRc 70)]

► **Advantage** : Special Design
Minimum of cutting load through special thinning
Good chip removal
Powerful Drilling

► **Verwendung** : Hoch gehärtete Stähle (Vergütungsstähle, angelassene Stähle) bis HRc 70

► **Vorteile** : Spezielle Bohrergeometrie
Minimaler Schneidendruck durch besondere Ausspitzung
Gute Spanabfuhr
Hochleistungsbohren



Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH500026	2.6	3	14	44	DH500070	7.0	8	45	85
DH500030	3.0	3	16	46	DH500075	7.5	8	45	85
DH500033	3.3	4	18	48	DH500080	8.0	8	50	98
DH500034	3.4	4	20	50	DH500085	8.5	10	50	98
DH500035	3.5	4	20	50	DH500086	8.6	10	57	105
DH500040	4.0	4	22	52	DH500088	8.8	10	57	105
DH500042	4.2	6	25	65	DH500090	9.0	10	57	105
DH500043	4.3	6	28	68	DH500095	9.5	10	57	105
DH500044	4.4	6	28	68	DH500100	10.0	10	63	111
DH500045	4.5	6	28	68	DH500102	10.2	12	63	111
DH500050	5.0	6	32	72	DH500103	10.3	12	63	111
DH500051	5.1	6	32	72	DH500105	10.5	12	63	111
DH500052	5.2	6	32	72	DH500108	10.8	12	71	119
DH500055	5.5	6	35	75	DH500110	11.0	12	71	119
DH500060	6.0	6	35	75	DH500115	11.5	12	71	119
DH500065	6.5	8	40	80	DH500120	12.0	12	71	119
DH500068	6.8	8	45	85	DH500140	14.0	14	77	125
DH500069	6.9	8	45	85					

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55								
			◎	◎							



DREAM DRILLS for HIGH HARDENED STEELS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

CARBIDE

HSS

CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRc50~HRc70), TiAIN COATED
VOLLHARTMETALL DREAM BOHRER für HOCHGEHÄRTETE STÄHLE, TiAIN-BESCHICHTET

DH500 SERIES

WORK MATERIAL	P		H			
	HARDENED STEELS		HIGH HARDENED STEELS			
HARDNESS	HRc 50~55		HRc 55~60		HRc 60~70	
DRILLING SPEED	14 ~ 22 m/min		10 ~ 16 m/min		8 ~ 13 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	1900	0.04	1330	0.04	1250	0.04
4.0	1430	0.04	1000	0.04	950	0.04
5.0	1150	0.04	800	0.04	750	0.04
6.0	960	0.04	670	0.04	630	0.04
8.0	720	0.04	500	0.04	480	0.04
10.0	570	0.04	400	0.04	380	0.04
12.0	480	0.04	330	0.04	320	0.04
14.0	438	0.04	282	0.04	272	0.04

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

i-ONE
DRILLS

i-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

TECHNICAL
DATA



Global Cutting Tool Leader **YIG-1**



CARBIDE



Leading Through Innovation



GENERAL CARBIDE DRILLS

UNIVERSELLE VHM - BOHRER

- JOBBER & STUB LENGTH
General Purpose, DIN338 & DIN6539
- Kurz & Extra Kurz
Für allgemeinen Einsatz, DIN338 und DIN6539

SELECTION GUIDE

GENERAL SOLID CARBIDE DRILLS

For General materials, Cast steels, Cast iron, Non-ferrous materials

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D5405		CARBIDE DRILLS VOLLHARTMETALL-SPIRALBOHRER <i>STUB EXTRA KURZ</i>	D1.0	D13.0	156
D5407		CARBIDE DRILLS VOLLHARTMETALL-SPIRALBOHRER <i>JOBBER KURZ</i>	D1.0	D13.0	158
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					160

GENERAL SOLID CARBIDE DRILLS

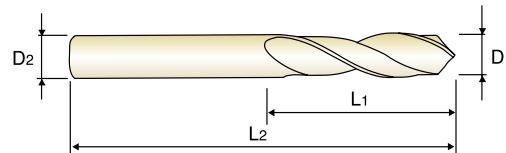
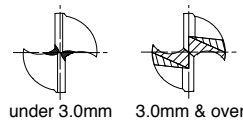
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	○				○	○	○				○
◎	○				○	○	○				○

CARBIDE DRILLS**STUB**
 **VOLLHARTMETALL-SPIRALBOHRER**
 **Forets carbure, série extra-courte**
 **PUNTE IN METALLO DURO**
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart- und Temperguß, Nichtmetalle, Leichtmetallen, abrasiven Kunststoffen.

DIN
6539

MG

33°

h6

h7

118°

P.160

D₁=D₂

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂	EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5405010	1.0	6	26	D5405035	3.5	20	52
D5405011	1.1	7	28	D5405036	3.6	20	52
D5405012	1.2	8	30	D5405037	3.7	20	52
D5405013	1.3	8	30	D5405038	3.8	20	52
D5405014	1.4	9	32	D5405039	3.9	22	55
D5405015	1.5	9	32	D5405040	4.0	22	55
D5405016	1.6	10	34	D5405041	4.1	22	55
D5405017	1.7	10	34	D5405042	4.2	22	55
D5405018	1.8	11	36	D5405043	4.3	24	58
D5405019	1.9	11	36	D5405044	4.4	24	58
D5405020	2.0	12	38	D5405045	4.5	24	58
D5405021	2.1	12	38	D5405046	4.6	24	58
D5405022	2.2	13	40	D5405047	4.7	24	58
D5405023	2.3	13	40	D5405048	4.8	26	62
D5405024	2.4	14	43	D5405049	4.9	26	62
D5405025	2.5	14	43	D5405050	5.0	26	62
D5405026	2.6	14	43	D5405051	5.1	26	62
D5405027	2.7	16	46	D5405052	5.2	26	62
D5405028	2.8	16	46	D5405053	5.3	26	62
D5405029	2.9	16	46	D5405054	5.4	28	66
D5405030	3.0	16	46	D5405055	5.5	28	66
D5405031	3.1	18	49	D5405056	5.6	28	66
D5405032	3.2	18	49	D5405057	5.7	28	66
D5405033	3.3	18	49	D5405058	5.8	28	66
D5405034	3.4	20	52	D5405059	5.9	28	66

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	○				○	○	○				○



GENERAL CARBIDE DRILLS

D5405 SERIES

CARBIDE DRILLS

VOLLHARTMETALL-SPIRALBOHRER

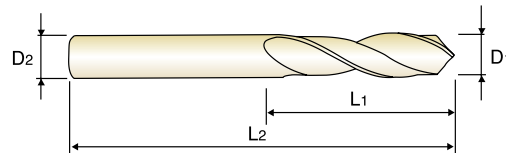
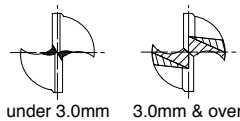
Forets carbure, série extra-courte

PUNTE IN METALLO DURO

STUB
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.


DIN 6539
MG
33°
h6
h7
118°
P.160
D₁=D₂

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5405060	6.0	28	66
D5405061	6.1	31	70
D5405062	6.2	31	70
D5405063	6.3	31	70
D5405064	6.4	31	70
D5405065	6.5	31	70
D5405066	6.6	31	70
D5405067	6.7	31	70
D5405068	6.8	34	74
D5405069	6.9	34	74
D5405070	7.0	34	74
D5405071	7.1	34	74
D5405072	7.2	34	74
D5405073	7.3	34	74
D5405074	7.4	34	74
D5405075	7.5	34	74
D5405076	7.6	37	79
D5405077	7.7	37	79
D5405078	7.8	37	79
D5405079	7.9	37	79
D5405080	8.0	37	79
D5405081	8.1	37	79
D5405082	8.2	37	79
D5405083	8.3	37	79

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5405084	8.4	37	79
D5405085	8.5	37	79
D5405086	8.6	40	84
D5405087	8.7	40	84
D5405088	8.8	40	84
D5405089	8.9	40	84
D5405090	9.0	40	84
D5405091	9.1	40	84
D5405092	9.2	40	84
D5405093	9.3	40	84
D5405094	9.4	40	84
D5405095	9.5	40	84
D5405096	9.6	43	89
D5405097	9.7	43	89
D5405098	9.8	43	89
D5405099	9.9	43	89
D5405100	10.0	43	89
D5405102	10.2	43	89
D5405105	10.5	43	89
D5405110	11.0	47	95
D5405115	11.5	47	95
D5405120	12.0	51	102
D5405130	13.0	51	102

► TiN(D6405), TiCN(DG405) and TiAlN(DH405) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	○				○	○	○				○

◎ : Excellent ○ : Good

CARBIDE
HSS

i-ONE
DRILLS

i-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

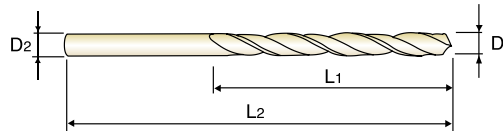
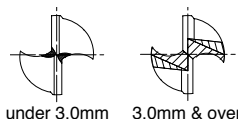
SPADE
DRILLS

TECHNICAL
DATA


CARBIDE DRILLS
GERMANY VOLLHARTMETALL-SPIRALBOHRER
FRANCE Forets carbure, série courte
ITALY PUNTE IN METALLO DURO
JOBBER
KURZ
COURTE
CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.


**DIN
338**
MG
33°
h6
h7
118°


P.160

D₁=D₂

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂	EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5407010	1.0	12	34	D5407032	3.2	36	65
D5407011	1.1	14	36	D5407033	3.3	36	65
D5407012	1.2	16	38	D5407034	3.4	39	70
D5407013	1.3	16	38	D5407035	3.5	39	70
D5407014	1.4	18	40	D5407036	3.6	39	70
D5407015	1.5	18	40	D5407037	3.7	39	70
D5407016	1.6	20	43	D5407038	3.8	43	75
D5407017	1.7	20	43	D5407039	3.9	43	75
D5407018	1.8	22	46	D5407040	4.0	43	75
D5407019	1.9	22	46	D5407041	4.1	43	75
D5407020	2.0	24	49	D5407042	4.2	43	75
D5407021	2.1	24	49	D5407043	4.3	47	80
D5407022	2.2	27	53	D5407044	4.4	47	80
D5407023	2.3	27	53	D5407045	4.5	47	80
D5407024	2.4	30	57	D5407046	4.6	47	80
D5407025	2.5	30	57	D5407047	4.7	47	80
D5407026	2.6	30	57	D5407048	4.8	52	86
D5407027	2.7	33	61	D5407049	4.9	52	86
D5407028	2.8	33	61	D5407050	5.0	52	86
D5407029	2.9	33	61	D5407051	5.1	52	86
D5407030	3.0	33	61	D5407052	5.2	52	86
D5407031	3.1	36	65	D5407053	5.3	52	86

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	○				○	○	○				○



GENERAL CARBIDE DRILLS

D5407 SERIES

CARBIDE
HSS

CARBIDE DRILLS

GERMANY VOLLHARTMETALL-SPIRALBOHRER

FRANCE Forets carbure, série courte

ITALY MPUNTE IN METALLO DURO

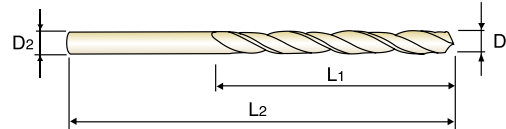
JOBBER
KURZ
COURTE
CORTA

► **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

► **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart-und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.



under 3.0mm 3.0mm & over


DIN
338

MG

33°

h6

h7

118°



P.160

D₁=D₂

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5407054	5.4	57	93
D5407055	5.5	57	93
D5407056	5.6	57	93
D5407057	5.7	57	93
D5407058	5.8	57	93
D5407059	5.9	57	93
D5407060	6.0	57	93
D5407061	6.1	63	101
D5407062	6.2	63	101
D5407063	6.3	63	101
D5407064	6.4	63	101
D5407065	6.5	63	101
D5407068	6.8	69	109

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5407070	7.0	69	109
D5407075	7.5	69	109
D5407080	8.0	75	117
D5407085	8.5	75	117
D5407090	9.0	81	125
D5407095	9.5	81	125
D5407100	10.0	87	133
D5407102	10.2	87	133
D5407105	10.5	87	133
D5407110	11.0	94	142
D5407115	11.5	94	142
D5407120	12.0	101	151
D5407130	13.0	101	151

► TiN(D6407), TiCN(DG407) and TiAlN(DH407) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	○				○	○	○				○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA

CARBIDE DRILLS, DIN6539, DIN338
VOLLHARTMETALL SPIRALBOHRER, DIN 6539, DIN 338
D5405, D5407 SERIES

WORK MATERIAL	P				M		K			
	NON-ALLOY STEELS		ALLOY STEELS		STAINLESS STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
STRENGTH	< 700 N/mm ²		< 1000 N/mm ²				< HB240, GG25		< HB300, GG40	
DRILLING SPEED	30 ~ 80 m/min		30 ~ 60 m/min		20 ~ 45 m/min		50 ~ 110 m/min		30 ~ 80 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1.0	11500	0.03	8600	0.03	6000	0.02	16000	0.04	11500	0.04
2.0	11500	0.04	8600	0.04	6000	0.03	16000	0.05	11500	0.05
3.0	7800	0.05	5750	0.05	4000	0.04	10500	0.06	7600	0.06
4.0	5800	0.06	4300	0.06	3000	0.05	7800	0.07	5700	0.07
5.0	4700	0.07	3450	0.07	2400	0.06	6200	0.08	4550	0.08
6.0	3900	0.08	2850	0.08	2000	0.07	5200	0.09	3800	0.09
7.0	3350	0.09	2450	0.09	1700	0.08	4500	0.10	3250	0.10
8.0	2900	0.10	2150	0.10	1500	0.09	3900	0.12	2850	0.12
9.0	2600	0.11	1900	0.11	1350	0.10	3450	0.14	2550	0.14
10.0	2350	0.12	1700	0.12	1200	0.11	3100	0.16	2300	0.16
11.0	2150	0.13	1600	0.13	1100	0.12	2850	0.18	2100	0.18
12.0	1950	0.14	1450	0.14	1000	0.13	2600	0.20	1900	0.20
13.0	1800	0.16	1350	0.16	950	0.13	2400	0.20	1750	0.20

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

WORK MATERIAL	N				S	
	Al-Si ALLOYS, Si<10%		Al-Si ALLOYS, Si>10%		Ti, Ni ALLOY STEELS	
STRENGTH						
DRILLING SPEED	80 ~ 180 m/min		60 ~ 140 m/min		20 ~ 40 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1.0	27000	0.05	21000	0.05	5900	0.02
2.0	27000	0.06	21000	0.06	5900	0.03
3.0	18000	0.07	14000	0.07	3900	0.04
4.0	13000	0.08	10500	0.08	2950	0.05
5.0	10500	0.09	8500	0.09	2350	0.06
6.0	8800	0.11	7100	0.11	1950	0.07
7.0	7600	0.13	6100	0.13	1700	0.08
8.0	6600	0.15	5350	0.15	1450	0.09
9.0	5900	0.17	4750	0.17	1300	0.10
10.0	5300	0.19	4250	0.19	1200	0.11
11.0	4850	0.21	3900	0.21	1050	0.12
12.0	4450	0.23	3550	0.23	980	0.13
13.0	4100	0.25	3300	0.25	905	0.13

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

HSS



Leading Through Innovation



MULTI-1 DRILLS

MULTI-1 BOHRER

- HSS-PM MULTI-1 DRILLS
Multi Purpose Drilling. Particularly for Stainless Steels, Titanium
- HSS-PM MULTI-1 BOHRER
Mehrzweckbohrer. Besonders für rostfreien Stahl, Titan

SELECTION GUIDE

PREMIUM HSS-PM MULTI-1 DRILLS

Premium HSS-PM Drills for wide range of applications

- Carbon Steels, Alloy Steels, Stainless steels, Titanium etc

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
CDRA03		PREMIUM HSS-PM MULTI-1 DRILLS PREMIUM HSS-PM MULTI-1 SPIRALBOHRER <i>STUB EXTRA KURZ</i>	D1.0	D13.0	164
CDRA04		PREMIUM HSS-PM MULTI-1 DRILLS PREMIUM HSS-PM MULTI-1 SPIRALBOHRER <i>JOBBER KURZ</i>	D2.0	D13.0	166
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					168

HSS-PM MULTI-1 DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				◎
◎	◎	○			○	○	○				◎



PREMIUM HSS-PM MULTI-1 DRILLS

STUB

PREMIUM HSS-PM MULTI-1 BOHRER

Forets MULTI-1 HSS-PM Premium, série extra-courte

PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM

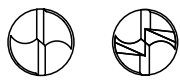
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.

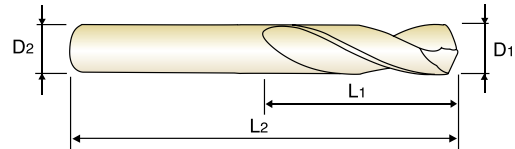
► **Advantage** : Point shape to maximize self-centering.
 Flute design for the best chip evacuation.
 Premium powder materials with excellent toughness.

► **Anwendung** : Baustähle, Kohlenstoffstähle, legierte Stähle, vorgehärtete Stähle, Formstähle, rostfreie Stähle, gehärtete Stähle (HRc 30~45), Gusseisen, Aluminiumlegierungen, Nichteisen Legierungen, Titan.

► **Vorteile** : Maximale Selbstzentrierung durch besonderen Spitzenanschliff
 Bohrergeometrie für optimale Spanabfuhr.
 Premium Pulverstahl mit ausgezeichneter Zähigkeit.



up to 1.4mm over 1.4mm



P.168

up to 1.9mm over 1.9mm

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TAiN	D1	D2	L1	L2	TAiN	D1	D2	L1	L2
CDRA03010	1.0	3	6	38	CDRA03041	4.1	6	22	66
CDRA03011	1.1	3	7	39	CDRA03042	4.2	6	22	66
CDRA03012	1.2	3	8	40	CDRA03043	4.3	6	24	68
CDRA03013	1.3	3	8	40	CDRA03044	4.4	6	24	68
CDRA03014	1.4	3	9	41	CDRA03045	4.5	6	24	68
CDRA03015	1.5	3	9	41	CDRA03046	4.6	6	24	68
CDRA03016	1.6	3	10	42	CDRA03047	4.7	6	24	68
CDRA03017	1.7	3	10	42	CDRA03048	4.8	6	26	70
CDRA03018	1.8	3	11	43	CDRA03049	4.9	6	26	70
CDRA03019	1.9	3	11	43	CDRA03050	5.0	6	26	70
CDRA03020	2.0	3	12	44	CDRA03051	5.1	6	26	70
CDRA03021	2.1	3	12	44	CDRA03052	5.2	6	26	70
CDRA03022	2.2	3	13	45	CDRA03053	5.3	6	26	70
CDRA03023	2.3	3	13	45	CDRA03054	5.4	6	28	72
CDRA03024	2.4	3	14	46	CDRA03055	5.5	6	28	72
CDRA03025	2.5	3	14	46	CDRA03056	5.6	6	28	72
CDRA03026	2.6	3	14	46	CDRA03057	5.7	6	28	72
CDRA03027	2.7	3	16	48	CDRA03058	5.8	6	28	72
CDRA03028	2.8	3	16	48	CDRA03059	5.9	6	28	72
CDRA03029	2.9	3	16	48	CDRA03060	6.0	6	28	72
CDRA03030	3.0	3	16	48	CDRA03061	6.1	8	31	75
CDRA03031	3.1	4	18	50	CDRA03062	6.2	8	31	75
CDRA03032	3.2	4	18	50	CDRA03063	6.3	8	31	75
CDRA03033	3.3	4	18	50	CDRA03064	6.4	8	31	75
CDRA03034	3.4	4	20	52	CDRA03065	6.5	8	31	75
CDRA03035	3.5	4	20	52	CDRA03066	6.6	8	31	75
CDRA03036	3.6	4	20	52	CDRA03067	6.7	8	31	75
CDRA03037	3.7	4	20	52	CDRA03068	6.8	8	34	78
CDRA03038	3.8	4	22	54	CDRA03069	6.9	8	34	78
CDRA03039	3.9	4	22	54	CDRA03070	7.0	8	34	78
CDRA03040	4.0	4	22	54	CDRA03071	7.1	8	34	78

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				◎



MULTI-1 DRILLS

CDRA03 SERIES
CARBIDE
HSS

PREMIUM HSS-PM MULTI-1 DRILLS

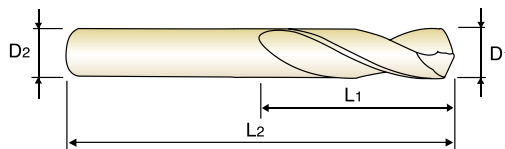
STUB
PREMIUM HSS-PM MULTI-1 BOHRER
EXTRA KURZ
Forets MULTI-1 HSS-PM Premium, série extra-courte
EXTRA-COURTE
PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM
EXTRA CORTA

- **Application** : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.
- **Advantage** : Point shape to maximize self-centering.
Flute design for the best chip evacuation.
Premium powder materials with excellent toughness.

- **Anwendung** : Baustähle, Kohlenstoffstähle, legierte Stähle, vorgehärtete Stähle, Formstähle, rostfreie Stähle, gehärtete Stähle (HRc 30~45), Gusseisen, Aluminiumlegierungen, Nichteisen Legierungen, Titan.
- **Vorteile** : Maximale Selbstzentrierung durch besonderen Spitzenanschliff
Bohrergeometrie für optimale Spanabfuhr.
Premium Pulverstahl mit ausgezeichneter Zähigkeit.



up to 1.4mm over 1.4mm



P.168

up to 1.9mm over 1.9mm

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
CDRA03072	7.2	8	34	78
CDRA03073	7.3	8	34	78
CDRA03074	7.4	8	34	78
CDRA03075	7.5	8	34	78
CDRA03076	7.6	8	37	81
CDRA03077	7.7	8	37	81
CDRA03078	7.8	8	37	81
CDRA03079	7.9	8	37	81
CDRA03080	8.0	8	37	81
CDRA03081	8.1	10	37	87
CDRA03082	8.2	10	37	87
CDRA03083	8.3	10	37	87
CDRA03084	8.4	10	37	87
CDRA03085	8.5	10	37	87
CDRA03086	8.6	10	40	90
CDRA03087	8.7	10	40	90
CDRA03088	8.8	10	40	90
CDRA03089	8.9	10	40	90
CDRA03090	9.0	10	40	90
CDRA03091	9.1	10	40	90
CDRA03092	9.2	10	40	90
CDRA03093	9.3	10	40	90
CDRA03094	9.4	10	40	90
CDRA03095	9.5	10	40	90
CDRA03096	9.6	10	43	93
CDRA03097	9.7	10	43	93
CDRA03098	9.8	10	43	93
CDRA03099	9.9	10	43	93
CDRA03100	10.0	10	43	93
CDRA03101	10.1	12	43	100

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
CDRA03102	10.2	12	43	100
CDRA03103	10.3	12	43	100
CDRA03104	10.4	12	43	100
CDRA03105	10.5	12	43	100
CDRA03106	10.6	12	43	100
CDRA03107	10.7	12	47	104
CDRA03108	10.8	12	47	104
CDRA03109	10.9	12	47	104
CDRA03110	11.0	12	47	104
CDRA03111	11.1	12	47	104
CDRA03112	11.2	12	47	104
CDRA03113	11.3	12	47	104
CDRA03114	11.4	12	47	104
CDRA03115	11.5	12	47	104
CDRA03116	11.6	12	47	104
CDRA03117	11.7	12	47	104
CDRA03118	11.8	12	47	104
CDRA03119	11.9	12	51	108
CDRA03120	12.0	12	51	108
CDRA03121	12.1	12	51	108
CDRA03122	12.2	12	51	108
CDRA03123	12.3	12	51	108
CDRA03124	12.4	12	51	108
CDRA03125	12.5	12	51	108
CDRA03126	12.6	12	51	108
CDRA03127	12.7	12	51	108
CDRA03128	12.8	12	51	108
CDRA03129	12.9	12	51	108
CDRA03130	13.0	12	51	108

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				◎

i-ONE DRILLS

i-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

TECHNICAL DATA



PREMIUM HSS-PM MULTI-1 DRILLS

JOBBER

PREMIUM HSS-PM MULTI-1 BOHRER

Forets MULTI-1 HSS-PM Premium, série courte

PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM

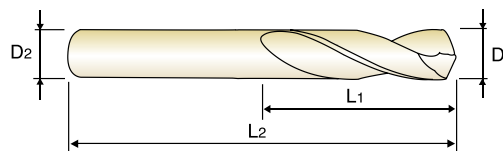
KURZ
COURTE
CORTA

► **Application** : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRC30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.

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Flute design for the best chip evacuation.
Premium powder materials with excellent toughness.

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► **Vorteile** : Maximale Selbstzentrierung durch besonderen Spitzenanschliff
Bohrergeometrie für optimale Spanabfuhr.
Premium Pulverstahl mit ausgezeichneter Zähigkeit.



P.168

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TAIIN	D1	D2	L1	L2	TAIIN	D1	D2	L1	L2
CDRA04020	2.0	3	24	56	CDRA04048	4.8	6	52	94
CDRA04021	2.1	3	24	56	CDRA04049	4.9	6	52	94
CDRA04022	2.2	3	25	56	CDRA04050	5.0	6	52	94
CDRA04023	2.3	3	25	56	CDRA04051	5.1	6	52	94
CDRA04024	2.4	3	30	61	CDRA04052	5.2	6	52	94
CDRA04025	2.5	3	30	61	CDRA04053	5.3	6	52	94
CDRA04026	2.6	3	30	61	CDRA04054	5.4	6	57	99
CDRA04027	2.7	3	33	64	CDRA04055	5.5	6	57	99
CDRA04028	2.8	3	33	64	CDRA04056	5.6	6	57	99
CDRA04029	2.9	3	33	64	CDRA04057	5.7	6	57	99
CDRA04030	3.0	3	33	64	CDRA04058	5.8	6	57	99
CDRA04031	3.1	4	36	68	CDRA04059	5.9	6	57	99
CDRA04032	3.2	4	36	68	CDRA04060	6.0	6	57	99
CDRA04033	3.3	4	36	68	CDRA04061	6.1	8	63	107
CDRA04034	3.4	4	39	71	CDRA04062	6.2	8	63	107
CDRA04035	3.5	4	39	71	CDRA04063	6.3	8	63	107
CDRA04036	3.6	4	39	71	CDRA04064	6.4	8	63	107
CDRA04037	3.7	4	39	71	CDRA04065	6.5	8	63	107
CDRA04038	3.8	4	43	75	CDRA04066	6.6	8	63	107
CDRA04039	3.9	4	43	75	CDRA04067	6.7	8	63	107
CDRA04040	4.0	4	43	75	CDRA04068	6.8	8	69	113
CDRA04041	4.1	6	43	85	CDRA04069	6.9	8	69	113
CDRA04042	4.2	6	43	85	CDRA04070	7.0	8	69	113
CDRA04043	4.3	6	47	89	CDRA04071	7.1	8	69	113
CDRA04044	4.4	6	47	89	CDRA04072	7.2	8	69	113
CDRA04045	4.5	6	47	89	CDRA04073	7.3	8	69	113
CDRA04046	4.6	6	47	89	CDRA04074	7.4	8	69	113
CDRA04047	4.7	6	47	89	CDRA04075	7.5	8	69	113

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				◎



MULTI-1 DRILLS

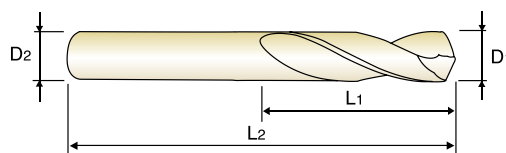
CDRA04 SERIES
CARBIDE
HSS

PREMIUM HSS-PM MULTI-1 DRILLS

PREMIUM HSS-PM MULTI-1 BOHRER
Forets MULTI-1 HSS-PM Premium, série courte
PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM
JOBBER
KURZ
COURTE
CORTA

- Application : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.
- Advantage : Point shape to maximize self-centering.
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- Anwendung : Baustähle, Kohlenstoffstähle, legierte Stähle, vorgehärtete Stähle, Formstähle, rostfreie Stähle, gehärtete Stähle (HRc 30~45), Gusseisen, Aluminiumlegierungen, Nichteisen Legierungen, Titan.
- Vorteile : Maximale Selbstzentrierung durch besonderen Spitzenanschliff
Bohrergeometrie für optimale Spanabfuhr.
Premium Pulverstahl mit ausgezeichneter Zähigkeit.


**PREMIUM
HSS-PM**
30°
h6
h7
135°


P.168

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
CDRA04076	7.6	8	75	119
CDRA04077	7.7	8	75	119
CDRA04078	7.8	8	75	119
CDRA04079	7.9	8	75	119
CDRA04080	8.0	8	75	119
CDRA04081	8.1	10	75	125
CDRA04082	8.2	10	75	125
CDRA04083	8.3	10	75	125
CDRA04084	8.4	10	75	125
CDRA04085	8.5	10	75	125
CDRA04086	8.6	10	81	131
CDRA04087	8.7	10	81	131
CDRA04088	8.8	10	81	131
CDRA04089	8.9	10	81	131
CDRA04090	9.0	10	81	131
CDRA04091	9.1	10	81	131
CDRA04092	9.2	10	81	131
CDRA04093	9.3	10	81	131
CDRA04094	9.4	10	81	131
CDRA04095	9.5	10	81	131
CDRA04096	9.6	10	87	137
CDRA04097	9.7	10	87	137
CDRA04098	9.8	10	87	137
CDRA04099	9.9	10	87	137
CDRA04100	10.0	10	87	137
CDRA04101	10.1	12	87	144
CDRA04102	10.2	12	87	144
CDRA04103	10.3	12	87	144

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
CDRA04104	10.4	12	87	144
CDRA04105	10.5	12	87	144
CDRA04106	10.6	12	87	144
CDRA04107	10.7	12	94	151
CDRA04108	10.8	12	94	151
CDRA04109	10.9	12	94	151
CDRA04110	11.0	12	94	151
CDRA04111	11.1	12	94	151
CDRA04112	11.2	12	94	151
CDRA04113	11.3	12	94	151
CDRA04114	11.4	12	94	151
CDRA04115	11.5	12	94	151
CDRA04116	11.6	12	94	151
CDRA04117	11.7	12	94	151
CDRA04118	11.8	12	94	151
CDRA04119	11.9	12	101	158
CDRA04120	12.0	12	101	158
CDRA04121	12.1	12	101	158
CDRA04122	12.2	12	101	158
CDRA04123	12.3	12	101	158
CDRA04124	12.4	12	101	158
CDRA04125	12.5	12	101	158
CDRA04126	12.6	12	101	158
CDRA04127	12.7	12	101	158
CDRA04128	12.8	12	101	158
CDRA04129	12.9	12	101	158
CDRA04130	13.0	12	101	158

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				◎

i-ONE
DRILLS

i-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

TECHNICAL
DATA

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

PREMIUM HSS-PM MULTI-1 DRILLS, TiAIN COATED

PREMIUM HSS-PM MULTI-1 BOHRER, TiAIN-BESCHICHTET

CDRA03 SERIES

WORK MATERIAL	P						M				K		N		S	
	CARBON STEELS		ALLOY STEELS PRE-HARDENED STEELS		MOLD STEELS, HARDENED STEELS (HRc30~45)		STAINLESS STEELS (SUS304, 200)		STAINLESS STEELS (SUS420, 440)		CAST IRON		ALUMINUM ALLOYS NONFERROUS ALLOYS		TITANIUM ALLOYS NICKEL ALLOYS	
DRILLING SPEED	30 ~ 40 m/min		25 ~ 35 m/min		13 ~ 18 m/min		13 ~ 18 m/min		15 ~ 20 m/min		35 ~ 45 m/min		80 ~ 100 m/min		3 ~ 6 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.0	5800	0.06	4700	0.05	2600	0.04	2600	0.04	3100	0.08	6500	0.08	10500	0.17	800	0.03
3.0	4300	0.12	3500	0.09	1800	0.05	1800	0.05	2100	0.09	4900	0.14	10500	0.27	530	0.05
4.0	3200	0.15	2600	0.13	1300	0.07	1300	0.07	1600	0.11	3600	0.18	8000	0.33	400	0.07
5.0	2600	0.18	2100	0.16	1050	0.09	1050	0.09	1250	0.17	2900	0.21	6500	0.39	320	0.09
6.0	2100	0.20	1700	0.18	900	0.10	900	0.10	1050	0.19	2400	0.25	5200	0.46	260	0.10
8.0	1600	0.24	1300	0.20	650	0.14	650	0.14	800	0.26	1800	0.29	4200	0.51	200	0.13
10.0	1300	0.27	1000	0.24	550	0.17	550	0.17	630	0.33	1500	0.32	3400	0.61	160	0.16
12.0	1100	0.29	850	0.26	450	0.20	450	0.20	530	0.39	1200	0.36	2700	0.73	130	0.19

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

PREMIUM HSS-PM MULTI-1 DRILLS, TiAIN COATED

PREMIUM HSS-PM MULTI-1 BOHRER, TiAIN-BESCHICHTET

CDRA04 SERIES

WORK MATERIAL	P						M				K		N		S	
	CARBON STEELS		ALLOY STEELS PRE-HARDENED STEELS		MOLD STEELS, HARDENED STEELS (HRc30~45)		STAINLESS STEELS (SUS304, 200)		STAINLESS STEELS (SUS420, 440)		CAST IRON		ALUMINUM ALLOYS NONFERROUS ALLOYS		TITANIUM ALLOYS NICKEL ALLOYS	
DRILLING SPEED	30 ~ 40 m/min		25 ~ 35 m/min		13 ~ 18 m/min		13 ~ 18 m/min		15 ~ 20 m/min		35 ~ 45 m/min		80 ~ 100 m/min		3 ~ 6 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.0	5800	0.05	4700	0.04	2600	0.03	2600	0.03	3100	0.07	6500	0.07	10500	0.14	800	0.02
3.0	4300	0.10	3500	0.08	1800	0.04	1800	0.04	2100	0.08	4900	0.12	10500	0.23	530	0.04
4.0	3200	0.13	2600	0.11	1300	0.06	1300	0.06	1600	0.09	3600	0.15	8000	0.28	400	0.05
5.0	2600	0.15	2100	0.14	1050	0.08	1050	0.08	1250	0.14	2900	0.18	6500	0.33	320	0.06
6.0	2100	0.17	1700	0.15	900	0.09	900	0.09	1050	0.16	2400	0.21	5200	0.39	260	0.07
8.0	1600	0.20	1300	0.17	650	0.12	650	0.12	800	0.22	1800	0.25	4200	0.43	200	0.09
10.0	1300	0.23	1000	0.20	550	0.14	550	0.14	630	0.28	1500	0.27	3400	0.52	160	0.11
12.0	1100	0.25	850	0.22	450	0.17	450	0.17	530	0.33	1200	0.31	2700	0.62	130	0.13

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

HSS



Leading Through Innovation



HPD DRILLS

HPD BOHRER

- PREMIUM HSS HPD STRAIGHT SHANK DRILLS
General Steels and Stainless Steels
- PREMIUM-HSS HPD ZYLINDERSCHAFT BOHRER
Für normale und rostfreie Stähle

SELECTION GUIDE

HPD - HIGH PERFORMANCE DRILLS

HPD Drills for High precision drilling in general steels

HPD-SUS Drills for High precision drilling in Stainless steels

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D4541		PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS <i>STUB</i> PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE <i>EXTRA KURZ</i>	D2.0	D13.0	172
D4542		PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS <i>JOBBER</i> PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE <i>KURZ</i>	D2.0	D32.0	176
DJ543		HSS-EX, HPD-SUS DRILLS for STAINLESS STEELS <i>STUB</i> HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE <i>EXTRA KURZ</i>	D2.0	D13.0	181
DJ544		HSS-EX, HPD-SUS DRILLS for STAINLESS STEELS <i>JOBBER</i> HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE <i>KURZ</i>	D2.0	D20.0	183
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					186

PREMIUM HSS HPD STRAIGHT SHANK DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				○
◎	◎	○			○	○	○				○
◎					◎		○	○			○
◎					◎		○	○			○



PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS

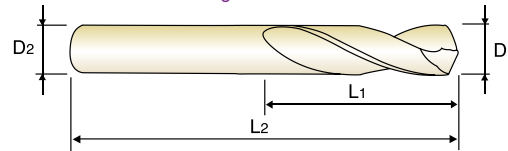
JOBBER
PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
KURZ
Forets HPD HSSCo Premium pour Aciers, série extra-courte
COURTE
PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI
CORTA

- **Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- **Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- **Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over


D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
D4541020	2.0	12	44	D4541032	3.2	18	50
D4541920	2.05	12	44	D4541932	3.25	18	50
D4541021	2.1	12	44	D4541033	3.3	18	50
D4541921	2.15	13	45	D4541933	3.35	18	50
D4541022	2.2	13	45	D4541034	3.4	20	52
D4541922	2.25	13	45	D4541934	3.45	20	52
D4541023	2.3	13	45	D4541035	3.5	20	52
D4541923	2.35	13	45	D4541935	3.55	20	52
D4541024	2.4	14	46	D4541036	3.6	20	52
D4541924	2.45	14	46	D4541936	3.65	20	52
D4541025	2.5	14	46	D4541037	3.7	20	52
D4541925	2.55	14	46	D4541937	3.75	20	52
D4541026	2.6	14	46	D4541038	3.8	22	54
D4541926	2.65	14	46	D4541938	3.85	22	54
D4541027	2.7	16	48	D4541039	3.9	22	54
D4541927	2.75	16	48	D4541939	3.95	22	54
D4541028	2.8	16	48	D4541040	4.0	22	54
D4541928	2.85	16	48	D4541940	4.05	22	66
D4541029	2.9	16	48	D4541041	4.1	22	66
D4541929	2.95	16	48	D4541941	4.15	22	66
D4541030	3.0	16	48	D4541042	4.2	22	66
D4541930	3.05	18	50	D4541942	4.25	22	66
D4541031	3.1	18	50	D4541043	4.3	24	68
D4541931	3.15	18	50	D4541943	4.35	24	68

► TiCN(D7541), TiAlN(DQ541) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~								
◎	◎	○			○	○	○				○	

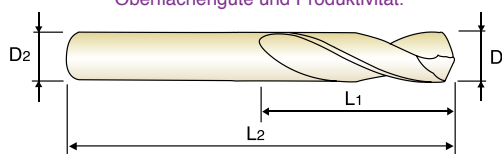
**HPD DRILLS****D4541** SERIES**CARBIDE****HSS****PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS****JOBBER****PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE****KURZ****Forets HPD HSSCo Premium pour Aciers, série extra-courte****COURTE****PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI****CORTA**

- **Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- **Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- **Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over

**PREMIUM HSS-Co****25°****h7****h8****130°**

P.186

D1=D2

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4541044	4.4	24	68
D4541944	4.45	24	68
D4541045	4.5	24	68
D4541945	4.55	24	68
D4541046	4.6	24	68
D4541946	4.65	24	68
D4541047	4.7	24	68
D4541947	4.75	24	68
D4541048	4.8	26	70
D4541948	4.85	26	70
D4541049	4.9	26	70
D4541949	4.95	26	70
D4541050	5.0	26	70
D4541950	5.05	26	70
D4541051	5.1	26	70
D4541951	5.15	26	70
D4541052	5.2	26	70
D4541952	5.25	26	70
D4541053	5.3	26	70
D4541953	5.35	28	72
D4541054	5.4	28	72
D4541954	5.45	28	72
D4541055	5.5	28	72
D4541955	5.55	28	72

► TiCN(D7541), TiAlN(DQ541) are available on your request.

► NEXT PAGE

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4541056	5.6	28	72
D4541956	5.65	28	72
D4541057	5.7	28	72
D4541957	5.75	28	72
D4541058	5.8	28	72
D4541958	5.85	28	72
D4541059	5.9	28	72
D4541959	5.95	28	72
D4541060	6.0	28	72
D4541061	6.1	31	75
D4541062	6.2	31	75
D4541063	6.3	31	75
D4541064	6.4	31	75
D4541065	6.5	31	75
D4541965	6.55	31	75
D4541066	6.6	31	75
D4541966	6.65	31	75
D4541067	6.7	31	75
D4541068	6.8	34	78
D4541069	6.9	34	78
D4541070	7.0	34	78
D4541071	7.1	34	78
D4541072	7.2	34	78
D4541073	7.3	34	78

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				○

i-ONE DRILLS

i-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

TECHNICAL DATA



PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS

STUB

PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE

EXTRA KURZ

Forets HPD HSSCo Premium pour Aciers, série extra-courte

EXTRA-COURTE

PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

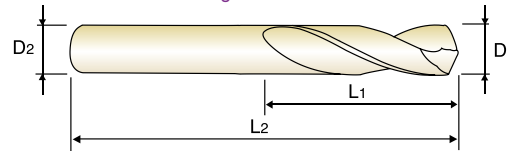
EXTRA CORTA

- **Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- **Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- **Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
D4541973	7.35	34	78	D4541092	9.2	40	90
D4541074	7.4	34	78	D4541992	9.25	40	90
D4541075	7.5	34	78	D4541093	9.3	40	90
D4541975	7.55	37	81	D4541993	9.35	40	90
D4541076	7.6	37	81	D4541094	9.4	40	90
D4541976	7.65	37	81	D4541994	9.45	40	90
D4541077	7.7	37	81	D4541095	9.5	40	90
D4541078	7.8	37	81	D4541995	9.55	43	93
D4541079	7.9	37	81	D4541096	9.6	43	93
D4541080	8.0	37	81	D4541996	9.65	43	93
D4541081	8.1	37	87	D4541097	9.7	43	93
D4541082	8.2	37	87	D4541098	9.8	43	93
D4541083	8.3	37	87	D4541099	9.9	43	93
D4541983	8.35	37	87	D4541999	9.95	43	93
D4541084	8.4	37	87	D4541100	10.0	43	93
D4541085	8.5	37	87	D4541101	10.1	43	100
D4541985	8.55	40	90	D4541102	10.2	43	100
D4541086	8.6	40	90	D4541802	10.25	43	100
D4541986	8.65	40	90	D4541103	10.3	43	100
D4541087	8.7	40	90	D4541803	10.35	43	100
D4541088	8.8	40	90	D4541104	10.4	43	100
D4541089	8.9	40	90	D4541105	10.5	43	100
D4541090	9.0	40	90	D4541805	10.55	43	100
D4541091	9.1	40	90	D4541106	10.6	43	100

► TiCN(D7541), TiAlN(DQ541) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~								
◎	◎	○			○	○	○				○	

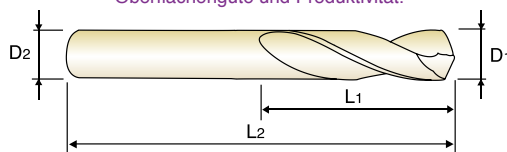
**HPD DRILLS****D4541** SERIES**CARBIDE****HSS****PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS****STUB****PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE****EXTRA KURZ****Forets HPD HSSCo Premium pour Aciers, série extra-courte****EXTRA-COURTE****PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI****EXTRA CORTA**

- **Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- **Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- **Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over

**PREMIUM HSS-Co****25°****h7****h8****130°**

P.186

D1=D2

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4541806	10.65	47	104
D4541107	10.7	47	104
D4541108	10.8	47	104
D4541109	10.9	47	104
D4541809	10.95	47	104
D4541110	11.0	47	104
D4541111	11.1	47	104
D4541112	11.2	47	104
D4541812	11.25	47	104
D4541113	11.3	47	104
D4541813	11.35	47	104
D4541114	11.4	47	104
D4541115	11.5	47	104
D4541815	11.55	47	104
D4541116	11.6	47	104

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D1	L1	L2
D4541117	11.7	47	104
D4541118	11.8	47	104
D4541119	11.9	51	108
D4541120	12.0	51	108
D4541121	12.1	51	108
D4541122	12.2	51	108
D4541123	12.3	51	108
D4541124	12.4	51	108
D4541125	12.5	51	108
D4541126	12.6	51	108
D4541127	12.7	51	108
D4541128	12.8	51	108
D4541129	12.9	51	108
D4541130	13.0	51	108

Unit : mm

► TiCN(D7541), TiAlN(DQ541) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○	○				○

◎ : Excellent ○ : Good

i-ONE DRILLS

i-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

TECHNICAL DATA

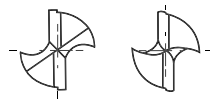


PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS

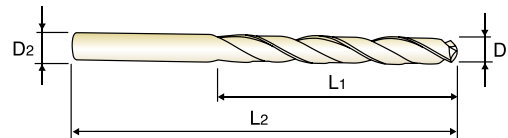
JOBBER
PREMIUM HSS COBALT, HPD SPIRALBOHRER für STÄHLE
KURZ
Forets HPD HSSCo Premium pour Aciers, série courte
COURTE
PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI
CORTA

- **Application** : Designed for high speed non-step 4D~5D drilling.
Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over



up to 13mm over 13mm

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
D4542020	2.0	24	56	D4542932	3.25	36	68
D4542920	2.05	24	56	D4542033	3.3	36	68
D4542021	2.1	24	56	D4542933	3.35	36	68
D4542921	2.15	27	59	D4542034	3.4	39	71
D4542022	2.2	27	59	D4542934	3.45	39	71
D4542922	2.25	27	59	D4542035	3.5	39	71
D4542023	2.3	27	59	D4542935	3.55	39	71
D4542923	2.35	27	59	D4542036	3.6	39	71
D4542024	2.4	30	62	D4542936	3.65	39	71
D4542924	2.45	30	62	D4542037	3.7	39	71
D4542025	2.5	30	62	D4542937	3.75	39	71
D4542925	2.55	30	62	D4542038	3.8	43	75
D4542026	2.6	30	62	D4542938	3.85	43	75
D4542926	2.65	30	62	D4542039	3.9	43	75
D4542027	2.7	33	65	D4542939	3.95	43	75
D4542927	2.75	33	65	D4542040	4.0	43	75
D4542028	2.8	33	65	D4542940	4.05	43	87
D4542928	2.85	33	65	D4542041	4.1	43	87
D4542029	2.9	33	65	D4542941	4.15	43	87
D4542929	2.95	33	65	D4542042	4.2	43	87
D4542030	3.0	33	65	D4542942	4.25	43	87
D4542930	3.05	36	68	D4542043	4.3	47	91
D4542031	3.1	36	68	D4542943	4.35	47	91
D4542931	3.15	36	68	D4542044	4.4	47	91
D4542032	3.2	36	68	D4542944	4.45	47	91

► TiCN(D7542), TiAlN(DQ542) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	○			○	○	○				○

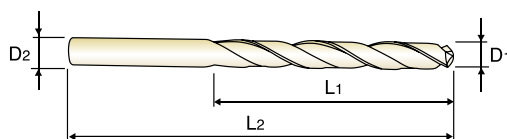
**HPD DRILLS****D4542** SERIES**CARBIDE****HSS****PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS****JOBBER****PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE****KURZ****Forets HPD HSSCo Premium pour Aciers, série courte****COURTE****PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI****CORTA**

- **Application** : Designed for high speed non-step 4D~5D drilling.
Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over

PREMIUM
HSS-Co

30°

h7

h6

h8

130°



P.186

D₁=D₂

up to 13mm over 13mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4542045	4.5	47	91
D4542945	4.55	47	91
D4542046	4.6	47	91
D4542946	4.65	47	91
D4542047	4.7	47	91
D4542947	4.75	47	91
D4542048	4.8	52	96
D4542948	4.85	52	96
D4542049	4.9	52	96
D4542949	4.95	52	96
D4542050	5.0	52	96
D4542950	5.05	52	96
D4542051	5.1	52	96
D4542951	5.15	52	96
D4542052	5.2	52	96
D4542952	5.25	52	96
D4542053	5.3	52	96
D4542953	5.35	57	101
D4542054	5.4	57	101
D4542954	5.45	57	101
D4542055	5.5	57	101
D4542955	5.55	57	101
D4542056	5.6	57	101
D4542956	5.65	57	101
D4542057	5.7	57	101

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4542957	5.75	57	101
D4542058	5.8	57	101
D4542958	5.85	57	101
D4542059	5.9	57	101
D4542959	5.95	57	101
D4542060	6.0	57	101
D4542960	6.05	63	107
D4542061	6.1	63	107
D4542961	6.15	63	107
D4542062	6.2	63	107
D4542962	6.25	63	107
D4542063	6.3	63	107
D4542963	6.35	63	107
D4542064	6.4	63	107
D4542964	6.45	63	107
D4542065	6.5	63	107
D4542965	6.55	63	107
D4542066	6.6	63	107
D4542966	6.65	63	107
D4542067	6.7	63	107
D4542967	6.75	69	113
D4542068	6.8	69	113
D4542968	6.85	69	113
D4542069	6.9	69	113
D4542969	6.95	69	113

► TiCN(D7542), TiAlN(DQ542) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				○

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

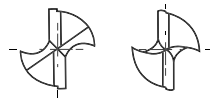


PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS

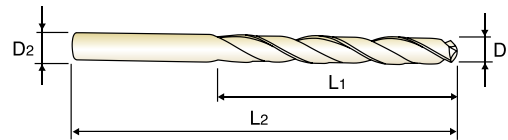
JOBBER
PREMIUM HSS COBALT, HPD SPIRALBOHRER für STÄHLE
KURZ
Forets HPD HSSCo Premium pour Aciers, série courte
COURTE
PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI
CORTA

- **Application** : Designed for high speed non-step 4D~5D drilling.
Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over



P.186

D₁=D₂

up to 13mm over 13mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
D4542070	7.0	69	113	D4542982	8.25	75	125
D4542970	7.05	69	113	D4542083	8.3	75	125
D4542071	7.1	69	113	D4542983	8.35	75	125
D4542971	7.15	69	113	D4542084	8.4	75	125
D4542072	7.2	69	113	D4542984	8.45	75	125
D4542972	7.25	69	113	D4542085	8.5	75	125
D4542073	7.3	69	113	D4542985	8.55	81	131
D4542973	7.35	69	113	D4542086	8.6	81	131
D4542074	7.4	69	113	D4542986	8.65	81	131
D4542974	7.45	69	113	D4542087	8.7	81	131
D4542075	7.5	69	113	D4542987	8.75	81	131
D4542975	7.55	75	119	D4542088	8.8	81	131
D4542076	7.6	75	119	D4542988	8.85	81	131
D4542976	7.65	75	119	D4542089	8.9	81	131
D4542077	7.7	75	119	D4542989	8.95	81	131
D4542977	7.75	75	119	D4542090	9.0	81	131
D4542078	7.8	75	119	D4542990	9.05	81	131
D4542978	7.85	75	119	D4542091	9.1	81	131
D4542079	7.9	75	119	D4542991	9.15	81	131
D4542979	7.95	75	119	D4542092	9.2	81	131
D4542080	8.0	75	119	D4542992	9.25	81	131
D4542980	8.05	75	125	D4542093	9.3	81	131
D4542081	8.1	75	125	D4542993	9.35	81	131
D4542981	8.15	75	125	D4542094	9.4	81	131
D4542082	8.2	75	125	D4542994	9.45	81	131

► TiCN(D7542), TiAlN(DQ542) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	○			○	○	○				○

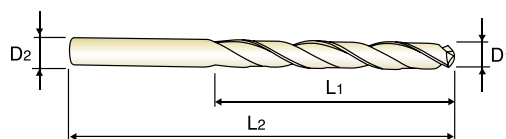
**HPD DRILLS****D4542 SERIES****CARBIDE****HSS****PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS****JOBBER****PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE****KURZ****Forets HPD HSSCo Premium pour Aciers, série courte****COURTE****PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI****CORTA**

- **Application** : Designed for high speed non-step 4D~5D drilling.
Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over

**PREMIUM HSS-Co****30°****h7****h6****h8****130°**

P.186

D₁=D₂

up to 13mm over 13mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4542095	9.5	81	131
D4542995	9.55	87	137
D4542096	9.6	87	137
D4542996	9.65	87	137
D4542097	9.7	87	137
D4542997	9.75	87	137
D4542098	9.8	87	137
D4542998	9.85	87	137
D4542099	9.9	87	137
D4542999	9.95	87	137
D4542100	10.0	87	137
D4542800	10.05	87	144
D4542101	10.1	87	144
D4542801	10.15	87	144
D4542102	10.2	87	144
D4542802	10.25	87	144
D4542103	10.3	87	144
D4542803	10.35	87	144
D4542104	10.4	87	144
D4542804	10.45	87	144
D4542105	10.5	87	144
D4542805	10.55	87	144
D4542106	10.6	87	144
D4542806	10.65	94	151
D4542107	10.7	94	151

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
D4542807	10.75	94	151
D4542108	10.8	94	151
D4542808	10.85	94	151
D4542109	10.9	94	151
D4542809	10.95	94	151
D4542110	11.0	94	151
D4542810	11.05	94	151
D4542111	11.1	94	151
D4542811	11.15	94	151
D4542112	11.2	94	151
D4542812	11.25	94	151
D4542113	11.3	94	151
D4542813	11.35	94	151
D4542114	11.4	94	151
D4542814	11.45	94	151
D4542115	11.5	94	151
D4542815	11.55	94	151
D4542116	11.6	94	151
D4542816	11.65	94	151
D4542117	11.7	94	151
D4542817	11.75	94	151
D4542118	11.8	94	151
D4542818	11.85	101	158
D4542119	11.9	101	158
D4542819	11.95	101	158

► TiCN(D7542), TiAlN(DQ542) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				○

i-ONE DRILLS

i-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

TECHNICAL DATA

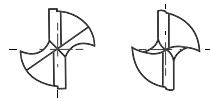


PREMIUM HSS COBALT, HPD TWIST DRILLS for STEELS

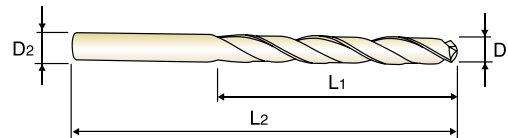
JOBBER
PREMIUM HSS COBALT, HPD SPIRALBOHRER für STÄHLE
KURZ
Forets HPD HSSCo Premium pour Aciers, série courte
COURTE
PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI
CORTA

- **Application** : Designed for high speed non-step 4D~5D drilling.
Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- **Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



under 4mm 4mm & over



up to 13mm over 13mm

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
D4542120	12.0	101	158	D4542190	19.0	118	194
D4542121	12.1	101	158	D4542195	19.5	125	201
D4542122	12.2	101	158	D4542196	19.6	125	201
D4542123	12.3	101	158	D4542200	20.0	125	201
D4542124	12.4	101	158	D4542205	20.5	128	204
D4542125	12.5	101	158	D4542210	21.0	128	204
D4542126	12.6	101	158	D4542211	21.1	128	204
D4542127	12.7	101	158	D4542215	21.5	132	208
D4542128	12.8	101	158	D4542220	22.0	132	208
D4542129	12.9	101	158	D4542225	22.5	136	212
D4542130	13.0	101	158	D4542230	23.0	136	212
D4542135	13.5	90	150	D4542235	23.5	136	212
D4542140	14.0	90	150	D4542240	24.0	140	220
D4542141	14.1	95	155	D4542245	24.5	140	220
D4542145	14.5	95	155	D4542250	25.0	140	220
D4542150	15.0	95	161	D4542255	25.5	145	225
D4542155	15.5	100	166	D4542260	26.0	145	225
D4542156	15.6	100	166	D4542265	26.5	145	225
D4542160	16.0	100	166	D4542270	27.0	150	230
D4542165	16.5	106	172	D4542280	28.0	150	230
D4542170	17.0	106	172	D4542290	29.0	155	235
D4542175	17.5	112	178	D4542300	30.0	155	235
D4542176	17.6	112	178	D4542310	31.0	160	240
D4542180	18.0	112	178	D4542320	32.0	165	245
D4542185	18.5	118	184				

► TiCN(D7542), TiAlN(DQ542) are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~								
◎	◎	○			○	○	○				○	

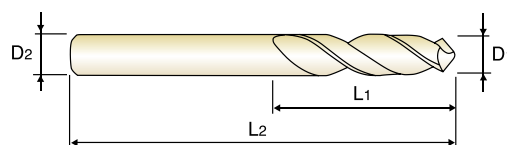
**HPD DRILLS****DJ543** SERIES**CARBIDE****HSS****HSS-EX, HPD-SUS TWIST DRILLS for STAINLESS STEELS****STUB****HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE****EXTRA KURZ****Forets HPD-SUS HSS-EX pour INOX, série extra-courte****EXTRA-COURTE****PUNTE ELICOIDALI HPD-SUS IN HSS-EX, PER ACCIAI INOX****EXTRA CORTA**

- **Application** : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.
- **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.
- **Vorteile** : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-EX-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



four facet

for STAINLESS STEELS
für rostfreier Stäle**HSS EX**

38°

h7

h8

130°

120°



P.186

up to 4mm over 4mm

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ543020	2.0	12	44
DJ543021	2.1	12	44
DJ543022	2.2	13	45
DJ543023	2.3	13	45
DJ543024	2.4	14	46
DJ543025	2.5	14	46
DJ543026	2.6	14	46
DJ543027	2.7	16	48
DJ543028	2.8	16	48
DJ543029	2.9	16	48
DJ543030	3.0	16	48
DJ543031	3.1	18	50
DJ543032	3.2	18	50
DJ543033	3.3	18	50
DJ543034	3.4	20	52
DJ543035	3.5	20	52
DJ543036	3.6	20	52
DJ543037	3.7	20	52
DJ543038	3.8	22	54
DJ543039	3.9	22	54
DJ543040	4.0	22	54
DJ543041	4.1	22	66
DJ543042	4.2	22	66
DJ543043	4.3	24	68
DJ543044	4.4	24	68
DJ543045	4.5	24	68
DJ543046	4.6	24	68
DJ543047	4.7	24	68

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ543048	4.8	26	70
DJ543049	4.9	26	70
DJ543050	5.0	26	70
DJ543051	5.1	26	70
DJ543052	5.2	26	70
DJ543053	5.3	26	70
DJ543054	5.4	28	72
DJ543055	5.5	28	72
DJ543056	5.6	28	72
DJ543057	5.7	28	72
DJ543058	5.8	28	72
DJ543059	5.9	28	72
DJ543060	6.0	28	72
DJ543061	6.1	31	75
DJ543062	6.2	31	75
DJ543063	6.3	31	75
DJ543064	6.4	31	75
DJ543065	6.5	31	75
DJ543066	6.6	31	75
DJ543067	6.7	31	75
DJ543068	6.8	34	78
DJ543069	6.9	34	78
DJ543070	7.0	34	78
DJ543071	7.1	34	78
DJ543072	7.2	34	78
DJ543073	7.3	34	78
DJ543074	7.4	34	78
DJ543075	7.5	34	78

► TiCN(DW543), TiAlN(DY543) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎					◎		○	○			○

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA



HSS-EX, HPD-SUS TWIST DRILLS for STAINLESS STEELS

STUB

HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE

EXTRA KURZ

Forets HPD-SUS HSS-EX pour INOX, série extra-courte

EXTRA-COURTE

PUNTE ELICOIDALI HPD-SUS IN HSS-EX, PER ACCIAI INOX

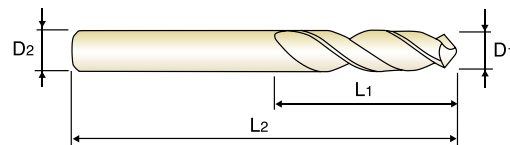
EXTRA CORTA

- **Application** : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.
- **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.
- **Vorteile** : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-EX-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



four facet

for STAINLESS STEELS
für rostfreier Stäle

P.186

up to 4mm over 4mm

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
DJ543076	7.6	37	81	DJ543104	10.4	43	100
DJ543077	7.7	37	81	DJ543105	10.5	43	100
DJ543078	7.8	37	81	DJ543106	10.6	43	100
DJ543079	7.9	37	81	DJ543107	10.7	47	104
DJ543080	8.0	37	81	DJ543108	10.8	47	104
DJ543081	8.1	37	87	DJ543109	10.9	47	104
DJ543082	8.2	37	87	DJ543110	11.0	47	104
DJ543083	8.3	37	87	DJ543111	11.1	47	104
DJ543084	8.4	37	87	DJ543112	11.2	47	104
DJ543085	8.5	37	87	DJ543113	11.3	47	104
DJ543086	8.6	40	90	DJ543114	11.4	47	104
DJ543087	8.7	40	90	DJ543115	11.5	47	104
DJ543088	8.8	40	90	DJ543116	11.6	47	104
DJ543089	8.9	40	90	DJ543117	11.7	47	104
DJ543090	9.0	40	90	DJ543118	11.8	47	104
DJ543091	9.1	40	90	DJ543119	11.9	51	108
DJ543092	9.2	40	90	DJ543120	12.0	51	108
DJ543093	9.3	40	90	DJ543121	12.1	51	108
DJ543094	9.4	40	90	DJ543122	12.2	51	108
DJ543095	9.5	40	90	DJ543123	12.3	51	108
DJ543096	9.6	43	93	DJ543124	12.4	51	108
DJ543097	9.7	43	93	DJ543125	12.5	51	108
DJ543098	9.8	43	93	DJ543126	12.6	51	108
DJ543099	9.9	43	93	DJ543127	12.7	51	108
DJ543100	10.0	43	93	DJ543128	12.8	51	108
DJ543101	10.1	43	100	DJ543129	12.9	51	108
DJ543102	10.2	43	100	DJ543130	13.0	51	108
DJ543103	10.3	43	100				

► TiCN(DW543), TiAlN(DY543) are available on your request.

◎ : Excellent ○ : Good

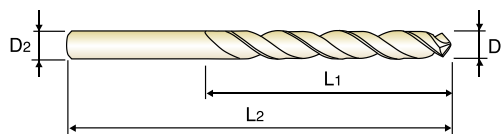
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎					◎		○	○			○

HSS-EX, HPD-SUS TWIST DRILLS for STAINLESS STEELS

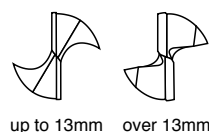
JOBBER
HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
KURZ
Forets HPD-SUS HSS-EX pour INOX, série courte
COURTE
PUNTE ELICOIDALI HPD-SUS IN HSS-EX, PER ACCIAI INOX
CORTA

- **Application** : Designed for 4D~5D drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.
- **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.
- **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-EX-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



for STAINLESS STEELS
für rostfreier Stäle



up to 13mm over 13mm


D₁=D₂

up to 4mm over 4mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ544020	2.0	24	56
DJ544021	2.1	24	56
DJ544022	2.2	27	59
DJ544023	2.3	27	59
DJ544024	2.4	30	62
DJ544025	2.5	30	62
DJ544026	2.6	30	62
DJ544027	2.7	33	65
DJ544028	2.8	33	65
DJ544029	2.9	33	65
DJ544030	3.0	33	65
DJ544031	3.1	36	68
DJ544032	3.2	36	68
DJ544033	3.3	36	68
DJ544034	3.4	39	71
DJ544035	3.5	39	71
DJ544036	3.6	39	71
DJ544037	3.7	39	71
DJ544038	3.8	43	75
DJ544039	3.9	43	75
DJ544040	4.0	43	75
DJ544041	4.1	43	87
DJ544042	4.2	43	87
DJ544043	4.3	47	91

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ544044	4.4	47	91
DJ544045	4.5	47	91
DJ544046	4.6	47	91
DJ544047	4.7	47	91
DJ544048	4.8	52	96
DJ544049	4.9	52	96
DJ544050	5.0	52	96
DJ544051	5.1	52	96
DJ544052	5.2	52	96
DJ544053	5.3	52	96
DJ544054	5.4	57	101
DJ544055	5.5	57	101
DJ544056	5.6	57	101
DJ544057	5.7	57	101
DJ544058	5.8	57	101
DJ544059	5.9	57	101
DJ544060	6.0	57	101
DJ544061	6.1	63	107
DJ544062	6.2	63	107
DJ544063	6.3	63	107
DJ544064	6.4	63	107
DJ544065	6.5	63	107
DJ544066	6.6	63	107
DJ544067	6.7	63	107

► TiCN(DW544), TiAlN(DY544) are available on your request.

► NEXT PAGE

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels			Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
○						○		○	○			○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA



HSS-EX, HPD-SUS TWIST DRILLS for STAINLESS STEELS

JOBBER

HSS-EX, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE

KURZ

Forets HPD-SUS HSS-EX pour INOX, série courte

COURTE

PUNTE ELICOIDALI HPD-SUS IN HSS-EX, PER ACCIAI INOX

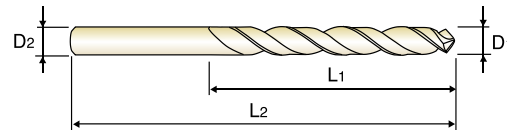
CORTA

- **Application** : Designed for 4D~5D drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.
- **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.
- **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-EX-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



up to 13mm over 13mm

for STAINLESS STEELS
für rostfreier Stäle

P.186

up to 4mm over 4mm

D₁=D₂

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂	TiN	D ₁	L ₁	L ₂
DJ544068	6.8	69	113	DJ544092	9.2	81	131
DJ544069	6.9	69	113	DJ544093	9.3	81	131
DJ544070	7.0	69	113	DJ544094	9.4	81	131
DJ544071	7.1	69	113	DJ544095	9.5	81	131
DJ544072	7.2	69	113	DJ544096	9.6	87	137
DJ544073	7.3	69	113	DJ544097	9.7	87	137
DJ544074	7.4	69	113	DJ544098	9.8	87	137
DJ544075	7.5	69	113	DJ544099	9.9	87	137
DJ544076	7.6	75	119	DJ544100	10.0	87	137
DJ544077	7.7	75	119	DJ544101	10.1	87	144
DJ544078	7.8	75	119	DJ544102	10.2	87	144
DJ544079	7.9	75	119	DJ544103	10.3	87	144
DJ544080	8.0	75	119	DJ544104	10.4	87	144
DJ544081	8.1	75	125	DJ544105	10.5	87	144
DJ544082	8.2	75	125	DJ544106	10.6	87	144
DJ544083	8.3	75	125	DJ544107	10.7	94	151
DJ544084	8.4	75	125	DJ544108	10.8	94	151
DJ544085	8.5	75	125	DJ544109	10.9	94	151
DJ544086	8.6	81	131	DJ544110	11.0	94	151
DJ544087	8.7	81	131	DJ544111	11.1	94	151
DJ544088	8.8	81	131	DJ544112	11.2	94	151
DJ544089	8.9	81	131	DJ544113	11.3	94	151
DJ544090	9.0	81	131	DJ544114	11.4	94	151
DJ544091	9.1	81	131	DJ544115	11.5	94	151

► TiCN(DW544), TiAlN(DY544) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

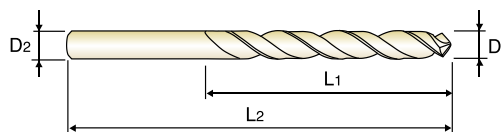
P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~								
◎					◎		○	○			○	

HSS-EX, HPD-SUS TWIST DRILLS for STAINLESS STEELS

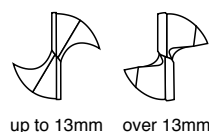
JOBBER
HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
KURZ
Forets HPD-SUS HSS-EX pour INOX, série courte
COURTE
PUNTE ELICOIDALI HPD-SUS IN HSS-EX, PER ACCIAI INOX
CORTA

- **Application** : Designed for 4D~5D drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.
- **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

- **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.
- **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-EX-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



for STAINLESS STEELS
für rostfreier Stäle



up to 13mm over 13mm


D₁=D₂

up to 4mm over 4mm

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ544116	11.6	94	151
DJ544117	11.7	94	151
DJ544118	11.8	94	151
DJ544119	11.9	101	158
DJ544120	12.0	101	158
DJ544121	12.1	101	158
DJ544122	12.2	101	158
DJ544123	12.3	101	158
DJ544124	12.4	101	158
DJ544125	12.5	101	158
DJ544126	12.6	101	158
DJ544127	12.7	101	158
DJ544128	12.8	101	158
DJ544129	12.9	101	158
DJ544130	13.0	101	158
DJ544135	13.5	106	166
DJ544140	14.0	106	166

EDP No.	Drill Diameter	Flute Length	Overall Length
TiN	D ₁	L ₁	L ₂
DJ544141	14.1	109	169
DJ544145	14.5	109	169
DJ544150	15.0	109	169
DJ544155	15.5	112	172
DJ544156	15.6	112	172
DJ544160	16.0	112	172
DJ544165	16.5	115	181
DJ544170	17.0	115	181
DJ544175	17.5	118	184
DJ544176	17.6	118	184
DJ544180	18.0	118	184
DJ544185	18.5	122	188
DJ544190	19.0	122	188
DJ544195	19.5	125	191
DJ544196	19.6	125	191
DJ544200	20.0	125	191

► TiCN(DW544), TiAlN(DY544) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○					○		○	○			○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA



PREMIUM HSS COBALT, HPD TWIST DRILLS, TiN COATED

PREMIUM HSS KOBALT, HPD SPIRALBOHRER, TiN-BESCHICHTET

D4541, D4542 SERIES

Please decrease the feed rate (15~20%) in D4542 SERIES HPD drills.

Den Vorschub in der D4542 Gruppe HPD Bohrer bitte verringern.

WORK MATERIAL	P								K		N	
	CARBON STEELS		ALLOY STEELS (SCM-SNC-SNCM)		TOOL STEELS ALLOY STEELS (SKD11)		TOOL STEELS		CAST IRON		ALUMINUM ALLOYS MAGNESIUM ALLOYS	
	DRILLING SPEED											
	20 ~ 25 m/min		20 ~ 25 m/min		13 ~ 18 m/min		35 ~ 40 m/min		35 ~ 40 m/min		80 ~ 100 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.0	4200	0.08	3600	0.08	1750	0.08	5800	0.11	5800	0.11	10500	0.16
3.0	2900	0.13	2500	0.13	1170	0.13	4000	0.14	4000	0.14	10500	0.25
4.0	2100	0.14	1900	0.14	880	0.14	3000	0.17	3000	0.17	8000	0.30
5.0	1700	0.16	1500	0.16	700	0.16	2400	0.20	2400	0.20	6500	0.36
6.0	1300	0.17	1300	0.17	580	0.17	2100	0.23	2100	0.23	5200	0.42
8.0	1000	0.21	950	0.21	440	0.21	1500	0.26	1500	0.26	4200	0.47
10.0	850	0.25	750	0.25	350	0.25	1100	0.32	1100	0.32	3400	0.56
12.0	700	0.30	650	0.30	290	0.30	1000	0.38	1000	0.38	2700	0.67
14.0	550	0.35	500	0.35	250	0.35	850	0.40	850	0.40	2400	0.72
16.0	520	0.38	470	0.38	220	0.38	750	0.42	750	0.42	2100	0.77
18.0	450	0.44	420	0.44	195	0.44	700	0.45	700	0.45	1900	0.80
20.0	400	0.45	350	0.45	175	0.45	600	0.51	600	0.51	1600	0.87
22.0	370	0.50	340	0.50	160	0.50	550	0.52	550	0.52	1500	0.95
24.0	350	0.54	300	0.54	145	0.54	500	0.58	500	0.58	1400	1.00
26.0	320	0.58	280	0.58	135	0.58	450	0.60	450	0.60	1300	1.05
28.0	300	0.62	260	0.62	125	0.62	420	0.63	420	0.63	1200	1.10
30.0	280	0.66	240	0.66	115	0.66	400	0.74	400	0.74	1100	1.15
32.0	260	0.70	230	0.70	110	0.70	380	0.74	380	0.74	950	1.20

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

HSS-EX, HPD-SUS TWIST DRILLS, TiN COATED

HSS-EX, HPD-SUS SPIRALBOHRER, TiN-BESCHICHTET

DJ543, DJ544 SERIES

Please decrease the feed rate (15~20%) in DJ544 SERIES HPD-SUS drills.

Den Vorschub in der DJ544 Gruppe HPD-SUS Bohrer bitte verringern

WORK MATERIAL	P		M				N			
	MILD STEELS LOW CARBON STEELS		STAINLESS STEELS (SUS304, 200)		STAINLESS STEELS (SUS420, 440)		ALUMINUM & ALUMINIUM ALLOYS		PLASTICS COPPER COPPER ALLOYS	
	DRILLING SPEED									
	30 ~ 40 m/min		13 ~ 18 m/min		70 ~ 90 m/min		30 ~ 35 m/min		80 ~ 100 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.0	6300	0.08	2600	0.03	3100	0.07	11000	0.09	5600	0.06
3.0	4200	0.13	1800	0.04	2100	0.08	7350	0.13	3750	0.08
4.0	3200	0.14	1300	0.06	1600	0.10	7050	0.18	2800	0.10
5.0	2500	0.16	1050	0.08	1250	0.15	5500	0.22	2250	0.13
6.0	2100	0.18	900	0.09	1050	0.18	4600	0.26	1850	0.15
8.0	1550	0.22	650	0.12	800	0.24	3500	0.34	1350	0.20
10.0	1250	0.26	550	0.15	630	0.30	2800	0.40	1100	0.25
12.0	1050	0.32	450	0.18	530	0.36	2300	0.50	950	0.30
14.0	900	0.36	400	0.33	450	0.44	2050	0.55	800	0.33
16.0	790	0.40	350	0.36	390	0.48	1750	0.62	700	0.35
18.0	700	0.45	300	0.39	350	0.50	1600	0.70	620	0.40
20.0	620	0.47	260	0.43	320	0.53	1450	0.75	560	0.40

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

HSS



Leading Through Innovation



GOLD-P DRILLS

GOLD-P BOHRER

- GOLD-P COATING, HSS & HSS-E
- TiN-teilbeschichtete Bohrer, HSS und HSS-E

SELECTION GUIDE

GOLD-P DRILLS (GOLD-P COATED)

Competitive price and same performance as full TiN coating

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D1GP125		HSS STRAIGHT SHANK DRILLS, GOLD-P COATED <i>JOBBER KURZ</i> HSS SPIRALBOHRER, GOLD-P BESCHICHTET	D1.0	D13.0	190
D1GP165		HSS STRAIGHT SHANK DRILLS, GOLD-P COATED <i>JOBBER KURZ</i> HSS SPIRALBOHRER, GOLD-P BESCHICHTET	D1.6	D13.0	192
DLGP195		HSS-E STRAIGHT SHANK DRILLS, GOLD-P COATED <i>JOBBER KURZ</i> HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET	D1.0	D13.0	194
DLGP506		HSS-E DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED <i>JOBBER KURZ</i> HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET	D2.0	D13.0	196
GOLD-P DRILL SETS	1.0mm ~ 10.0mm × 0.5mm STEP SET1(19PCS) 	1.0mm ~ 13.0mm × 0.5mm STEP SET2(25PCS) 	1.0mm ~ 10.5mm × 0.5mm STEP +3.3 +4.2 +6.8 +10.2 SET3(24PCS) 	1.0mm ~ 10.0mm × 0.1mm STEP SET4(91PCS) 	198
	RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN				199

HSS GOLD-P DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎					○	○				



HSS STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

KURZ

COURTE

CORTA

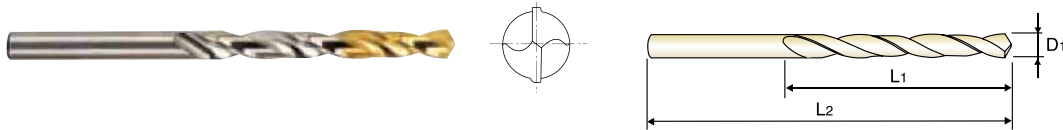
HSS SPIRALBOHRER, GOLD-P BESCHICHTET

Forets GOLD-P HSS queue cylindrique revêtus, série courte

PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

- **Flute Geometry** : Right hand helix
 ► **Point Angle** : 118°, Normal point
 ► **Surface treatment** : Bright body, TiN coating on working area
 ► **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron

- **Nutenform** : Rechtsspirale
 ► **Spitzenwinkel** : 118° Normalanschliff
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1GP125010	1.0	12	34	D1GP125041	4.1	43	75
D1GP125011	1.1	14	36	D1GP125042	4.2	43	75
D1GP125012	1.2	16	38	D1GP125043	4.3	47	80
D1GP125013	1.3	16	38	D1GP125044	4.4	47	80
D1GP125014	1.4	18	40	D1GP125045	4.5	47	80
D1GP125015	1.5	18	40	D1GP125046	4.6	47	80
D1GP125016	1.6	20	43	D1GP125047	4.7	47	80
D1GP125017	1.7	20	43	D1GP125048	4.8	52	86
D1GP125018	1.8	22	46	D1GP125049	4.9	52	86
D1GP125019	1.9	22	46	D1GP125050	5.0	52	86
D1GP125020	2.0	24	49	D1GP125051	5.1	52	86
D1GP125021	2.1	24	49	D1GP125052	5.2	52	86
D1GP125022	2.2	27	53	D1GP125053	5.3	52	86
D1GP125023	2.3	27	53	D1GP125054	5.4	57	93
D1GP125024	2.4	30	57	D1GP125055	5.5	57	93
D1GP125025	2.5	30	57	D1GP125056	5.6	57	93
D1GP125026	2.6	30	57	D1GP125057	5.7	57	93
D1GP125027	2.7	33	61	D1GP125058	5.8	57	93
D1GP125028	2.8	33	61	D1GP125059	5.9	57	93
D1GP125029	2.9	33	61	D1GP125060	6.0	57	93
D1GP125030	3.0	33	61	D1GP125061	6.1	63	101
D1GP125031	3.1	36	65	D1GP125062	6.2	63	101
D1GP125032	3.2	36	65	D1GP125063	6.3	63	101
D1GP125033	3.3	36	65	D1GP125064	6.4	63	101
D1GP125034	3.4	39	70	D1GP125065	6.5	63	101
D1GP125035	3.5	39	70	D1GP125066	6.6	63	101
D1GP125036	3.6	39	70	D1GP125067	6.7	63	101
D1GP125037	3.7	39	70	D1GP125068	6.8	69	109
D1GP125038	3.8	43	75	D1GP125069	6.9	69	109
D1GP125039	3.9	43	75	D1GP125070	7.0	69	109
D1GP125040	4.0	43	75	D1GP125071	7.1	69	109

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎				○		○				○



GOLD-P DRILLS

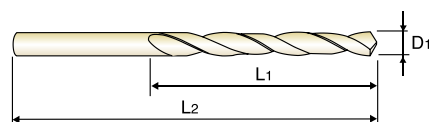
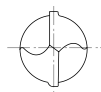
D1GP125 SERIES
CARBIDE
HSS

HSS STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER
HSS SPIRALBOHRER, GOLD-P BESCHICHTET
KURZ
Forets GOLD-P HSS queue cylindrique revêtus, série courte
COURTE
PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 118°, Normal point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron

- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 118° Normalanschliff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss


DIN 338
HSS
N 30°
h8
118°


P.199

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1GP125072	7.2	69	109	D1GP125102	10.2	87	133
D1GP125073	7.3	69	109	D1GP125103	10.3	87	133
D1GP125074	7.4	69	109	D1GP125104	10.4	87	133
D1GP125075	7.5	69	109	D1GP125105	10.5	87	133
D1GP125076	7.6	75	117	D1GP125106	10.6	87	133
D1GP125077	7.7	75	117	D1GP125107	10.7	94	142
D1GP125078	7.8	75	117	D1GP125108	10.8	94	142
D1GP125079	7.9	75	117	D1GP125109	10.9	94	142
D1GP125080	8.0	75	117	D1GP125110	11.0	94	142
D1GP125081	8.1	75	117	D1GP125111	11.1	94	142
D1GP125082	8.2	75	117	D1GP125112	11.2	94	142
D1GP125083	8.3	75	117	D1GP125113	11.3	94	142
D1GP125084	8.4	75	117	D1GP125114	11.4	94	142
D1GP125085	8.5	75	117	D1GP125115	11.5	94	142
D1GP125086	8.6	81	125	D1GP125116	11.6	94	142
D1GP125087	8.7	81	125	D1GP125117	11.7	94	142
D1GP125088	8.8	81	125	D1GP125118	11.8	94	142
D1GP125089	8.9	81	125	D1GP125119	11.9	101	151
D1GP125090	9.0	81	125	D1GP125120	12.0	101	151
D1GP125091	9.1	81	125	D1GP125121	12.1	101	151
D1GP125092	9.2	81	125	D1GP125122	12.2	101	151
D1GP125093	9.3	81	125	D1GP125123	12.3	101	151
D1GP125094	9.4	81	125	D1GP125124	12.4	101	151
D1GP125095	9.5	81	125	D1GP125125	12.5	101	151
D1GP125096	9.6	87	133	D1GP125126	12.6	101	151
D1GP125097	9.7	87	133	D1GP125127	12.7	101	151
D1GP125098	9.8	87	133	D1GP125128	12.8	101	151
D1GP125099	9.9	87	133	D1GP125129	12.9	101	151
D1GP125100	10.0	87	133	D1GP125130	13.0	101	151
D1GP125101	10.1	87	133				

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○		○				○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



HSS STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

HSS SPIRALBOHRER, GOLD-P BESCHICHTET

Forets GOLD-P HSS queue cylindrique revêtus, série courte

PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

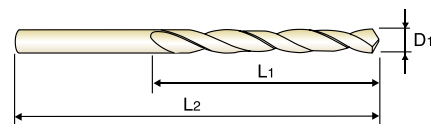
KURZ

COURTE

CORTA

- **Flute Geometry** : Right hand helix
 ► **Point Angle** : 118°, Split point
 ► **Surface treatment** : Bright body, TiN coating on working area
 ► **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron

- **Nutenform** : Rechtsspirale
 ► **Spitzenwinkel** : 118° Kreuzanschliff
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss

DIN
338

HSS

N
30°

h8

118°



P.199

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1GP165016	1.6	20	43	D1GP165046	4.6	47	80
D1GP165017	1.7	20	43	D1GP165047	4.7	47	80
D1GP165018	1.8	22	46	D1GP165048	4.8	52	86
D1GP165019	1.9	22	46	D1GP165049	4.9	52	86
D1GP165020	2.0	24	49	D1GP165050	5.0	52	86
D1GP165021	2.1	24	49	D1GP165051	5.1	52	86
D1GP165022	2.2	27	53	D1GP165052	5.2	52	86
D1GP165023	2.3	27	53	D1GP165053	5.3	52	86
D1GP165024	2.4	30	57	D1GP165054	5.4	57	93
D1GP165025	2.5	30	57	D1GP165055	5.5	57	93
D1GP165026	2.6	30	57	D1GP165056	5.6	57	93
D1GP165027	2.7	33	61	D1GP165057	5.7	57	93
D1GP165028	2.8	33	61	D1GP165058	5.8	57	93
D1GP165029	2.9	33	61	D1GP165059	5.9	57	93
D1GP165030	3.0	33	61	D1GP165060	6.0	57	93
D1GP165031	3.1	36	65	D1GP165061	6.1	63	101
D1GP165032	3.2	36	65	D1GP165062	6.2	63	101
D1GP165033	3.3	36	65	D1GP165063	6.3	63	101
D1GP165034	3.4	39	70	D1GP165064	6.4	63	101
D1GP165035	3.5	39	70	D1GP165065	6.5	63	101
D1GP165036	3.6	39	70	D1GP165066	6.6	63	101
D1GP165037	3.7	39	70	D1GP165067	6.7	63	101
D1GP165038	3.8	43	75	D1GP165068	6.8	69	109
D1GP165039	3.9	43	75	D1GP165069	6.9	69	109
D1GP165040	4.0	43	75	D1GP165070	7.0	69	109
D1GP165041	4.1	43	75	D1GP165071	7.1	69	109
D1GP165042	4.2	43	75	D1GP165072	7.2	69	109
D1GP165043	4.3	47	80	D1GP165073	7.3	69	109
D1GP165044	4.4	47	80	D1GP165074	7.4	69	109
D1GP165045	4.5	47	80	D1GP165075	7.5	69	109

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎				○		○				○



GOLD-P DRILLS

D1GP165 SERIES

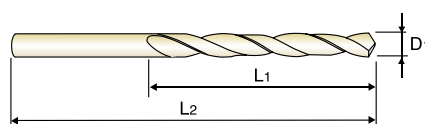
CARBIDE
HSS

HSS STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER
HSS SPIRALBOHRER, GOLD-P BESCHICHTET
KURZ
Forets GOLD-P HSS queue cylindrique revêtus, série courte
COURTE
PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 118°, Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron

- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 118° Kreuzanschliff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss


DIN 338
HSS
N 30°
h8
118°


P.199

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D1GP165076	7.6	75	117
D1GP165077	7.7	75	117
D1GP165078	7.8	75	117
D1GP165079	7.9	75	117
D1GP165080	8.0	75	117
D1GP165081	8.1	75	117
D1GP165082	8.2	75	117
D1GP165083	8.3	75	117
D1GP165084	8.4	75	117
D1GP165085	8.5	75	117
D1GP165086	8.6	81	125
D1GP165087	8.7	81	125
D1GP165088	8.8	81	125
D1GP165089	8.9	81	125
D1GP165090	9.0	81	125
D1GP165091	9.1	81	125
D1GP165092	9.2	81	125
D1GP165093	9.3	81	125
D1GP165094	9.4	81	125
D1GP165095	9.5	81	125
D1GP165096	9.6	87	133
D1GP165097	9.7	87	133
D1GP165098	9.8	87	133
D1GP165099	9.9	87	133
D1GP165100	10.0	87	133
D1GP165101	10.1	87	133
D1GP165102	10.2	87	133
D1GP165103	10.3	87	133

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D1GP165104	10.4	87	133
D1GP165105	10.5	87	133
D1GP165106	10.6	87	133
D1GP165107	10.7	94	142
D1GP165108	10.8	94	142
D1GP165109	10.9	94	142
D1GP165110	11.0	94	142
D1GP165111	11.1	94	142
D1GP165112	11.2	94	142
D1GP165113	11.3	94	142
D1GP165114	11.4	94	142
D1GP165115	11.5	94	142
D1GP165116	11.6	94	142
D1GP165117	11.7	94	142
D1GP165118	11.8	94	142
D1GP165119	11.9	101	151
D1GP165120	12.0	101	151
D1GP165121	12.1	101	151
D1GP165122	12.2	101	151
D1GP165123	12.3	101	151
D1GP165124	12.4	101	151
D1GP165125	12.5	101	151
D1GP165126	12.6	101	151
D1GP165127	12.7	101	151
D1GP165128	12.8	101	151
D1GP165129	12.9	101	151
D1GP165130	13.0	101	151

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○		○				○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA



HSS-E STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET

KURZ

Forets GOLD-P HSS-E queue cylindrique revêtus, série courte

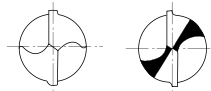
COURTE

PUNTE IN HSS-E, GAMBO CILINDRICO, GOLD-P

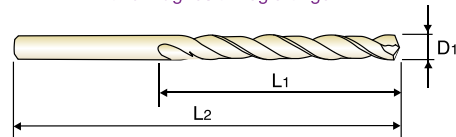
CORTA

- **Flute Geometry** : Right hand helix
 ► **Point Angle** : 135°, under 1.6mm : Normal point
 1.6mm & over : Split point
 ► **Surface treatment**: Bright body, TiN coating on working area
 ► **Application** : Drilling stainless steels, difficult to cut materials
 such as titanium alloys and inconel.

- **Nutenform** : Rechtsspirale
 ► **Spitzenwinkel** : 135°, unter 1.6mm : Normalanschliff
 1.6mm & über : Kreuzanschliff
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Tiefe Bohrungen in unlegierten und legierten
 Stählen, Grauguss, Temperguss, Aluminium-
 und Magnesiumlegierungen



under 1.6mm 1.6mm & over

DIN
338

HSS-E

33°

h8

135°



P.199

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP195010	1.0	12	34	DLGP195041	4.1	43	75
DLGP195011	1.1	14	36	DLGP195042	4.2	43	75
DLGP195012	1.2	16	38	DLGP195043	4.3	47	80
DLGP195013	1.3	16	38	DLGP195044	4.4	47	80
DLGP195014	1.4	18	40	DLGP195045	4.5	47	80
DLGP195015	1.5	18	40	DLGP195046	4.6	47	80
DLGP195016	1.6	20	43	DLGP195047	4.7	47	80
DLGP195017	1.7	20	43	DLGP195048	4.8	52	86
DLGP195018	1.8	22	46	DLGP195049	4.9	52	86
DLGP195019	1.9	22	46	DLGP195050	5.0	52	86
DLGP195020	2.0	24	49	DLGP195051	5.1	52	86
DLGP195021	2.1	24	49	DLGP195052	5.2	52	86
DLGP195022	2.2	27	53	DLGP195053	5.3	52	86
DLGP195023	2.3	27	53	DLGP195054	5.4	57	93
DLGP195024	2.4	30	57	DLGP195055	5.5	57	93
DLGP195025	2.5	30	57	DLGP195056	5.6	57	93
DLGP195026	2.6	30	57	DLGP195057	5.7	57	93
DLGP195027	2.7	33	61	DLGP195058	5.8	57	93
DLGP195028	2.8	33	61	DLGP195059	5.9	57	93
DLGP195029	2.9	33	61	DLGP195060	6.0	57	93
DLGP195030	3.0	33	61	DLGP195061	6.1	63	101
DLGP195031	3.1	36	65	DLGP195062	6.2	63	101
DLGP195032	3.2	36	65	DLGP195063	6.3	63	101
DLGP195033	3.3	36	65	DLGP195064	6.4	63	101
DLGP195034	3.4	39	70	DLGP195065	6.5	63	101
DLGP195035	3.5	39	70	DLGP195066	6.6	63	101
DLGP195036	3.6	39	70	DLGP195067	6.7	63	101
DLGP195037	3.7	39	70	DLGP195068	6.8	69	109
DLGP195038	3.8	43	75	DLGP195069	6.9	69	109
DLGP195039	3.9	43	75	DLGP195070	7.0	69	109
DLGP195040	4.0	43	75	DLGP195071	7.1	69	109

► NEXT PAGE

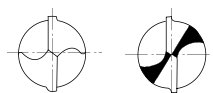
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○		○				○

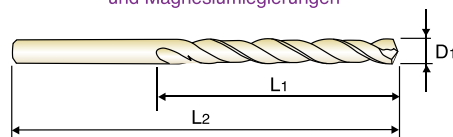
HSS-E STRAIGHT SHANK DRILLS, GOLD-P COATED
JOBBER
HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET
KURZ
Forets GOLD-P HSS-E queue cylindrique revêtus, série courte
COURTE
PUNTE IN HSS-E, GAMBO CILINDRICO, GOLD-P
CORTA

- **Flute Geometry** : Right hand helix
 ► **Point Angle** : 135°, under 1.6mm : Normal point
 1.6mm & over : Split point
 ► **Surface treatment**: Bright body, TiN coating on working area
 ► **Application** : Drilling stainless steels, difficult to cut materials
 such as titanium alloys and inconel.

- **Nutenform** : Rechtsspirale
 ► **Spitzenwinkel** : 135°, unter 1.6mm : Normalanschliff
 1.6mm & über : Kreuzanschliff
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Tiefe Bohrungen in unlegierten und legierten
 Stählen, Grauguss, Temperguss, Aluminium-
 und Magnesiumlegierungen



under 1.6mm 1.6mm & over


**DIN
338**
HSS-E
33°
h8
135°

P.199

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP195072	7.2	69	109	DLGP195102	10.2	87	133
DLGP195073	7.3	69	109	DLGP195103	10.3	87	133
DLGP195074	7.4	69	109	DLGP195104	10.4	87	133
DLGP195075	7.5	69	109	DLGP195105	10.5	87	133
DLGP195076	7.6	75	117	DLGP195106	10.6	87	133
DLGP195077	7.7	75	117	DLGP195107	10.7	94	142
DLGP195078	7.8	75	117	DLGP195108	10.8	94	142
DLGP195079	7.9	75	117	DLGP195109	10.9	94	142
DLGP195080	8.0	75	117	DLGP195110	11.0	94	142
DLGP195081	8.1	75	117	DLGP195111	11.1	94	142
DLGP195082	8.2	75	117	DLGP195112	11.2	94	142
DLGP195083	8.3	75	117	DLGP195113	11.3	94	142
DLGP195084	8.4	75	117	DLGP195114	11.4	94	142
DLGP195085	8.5	75	117	DLGP195115	11.5	94	142
DLGP195086	8.6	81	125	DLGP195116	11.6	94	142
DLGP195087	8.7	81	125	DLGP195117	11.7	94	142
DLGP195088	8.8	81	125	DLGP195118	11.8	94	142
DLGP195089	8.9	81	125	DLGP195119	11.9	101	151
DLGP195090	9.0	81	125	DLGP195120	12.0	101	151
DLGP195091	9.1	81	125	DLGP195121	12.1	101	151
DLGP195092	9.2	81	125	DLGP195122	12.2	101	151
DLGP195093	9.3	81	125	DLGP195123	12.3	101	151
DLGP195094	9.4	81	125	DLGP195124	12.4	101	151
DLGP195095	9.5	81	125	DLGP195125	12.5	101	151
DLGP195096	9.6	87	133	DLGP195126	12.6	101	151
DLGP195097	9.7	87	133	DLGP195127	12.7	101	151
DLGP195098	9.8	87	133	DLGP195128	12.8	101	151
DLGP195099	9.9	87	133	DLGP195129	12.9	101	151
DLGP195100	10.0	87	133	DLGP195130	13.0	101	151
DLGP195101	10.1	87	133				

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○		○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



HSS-E DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED

JOBBER

HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET

KURZ

Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte

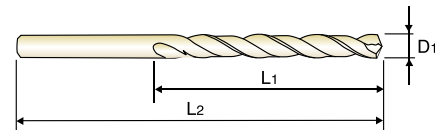
COURTE

PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P

CORTA

- **Flute Geometry** : Right hand, 38° helix, DH100 worm pattern type.
 ► **Point Angle** : 130°, Split point giving higher chip removal.
 ► **Surface treatment** : Bright body, TiN coating on working area.
 ► **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.

- **Nutenform** : 38° Rechtsspirale, DH 100 Flachnut
 ► **Spitzenwinkel** : Durch 130° Kreuzanschliff Gute Spanabfuhr
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP506020	2.0	24	49	DLGP506049	4.9	52	86
DLGP506021	2.1	24	49	DLGP506050	5.0	52	86
DLGP506022	2.2	27	53	DLGP506051	5.1	52	86
DLGP506023	2.3	27	53	DLGP506052	5.2	52	86
DLGP506024	2.4	30	57	DLGP506053	5.3	52	86
DLGP506025	2.5	30	57	DLGP506054	5.4	57	93
DLGP506026	2.6	30	57	DLGP506055	5.5	57	93
DLGP506027	2.7	33	61	DLGP506056	5.6	57	93
DLGP506028	2.8	33	61	DLGP506057	5.7	57	93
DLGP506029	2.9	33	61	DLGP506058	5.8	57	93
DLGP506030	3.0	33	61	DLGP506059	5.9	57	93
DLGP506031	3.1	36	65	DLGP506060	6.0	57	93
DLGP506032	3.2	36	65	DLGP506061	6.1	63	101
DLGP506033	3.3	36	65	DLGP506062	6.2	63	101
DLGP506034	3.4	39	70	DLGP506063	6.3	63	101
DLGP506035	3.5	39	70	DLGP506064	6.4	63	101
DLGP506036	3.6	39	70	DLGP506065	6.5	63	101
DLGP506037	3.7	39	70	DLGP506066	6.6	63	101
DLGP506038	3.8	43	75	DLGP506067	6.7	63	101
DLGP506039	3.9	43	75	DLGP506068	6.8	69	109
DLGP506040	4.0	43	75	DLGP506069	6.9	69	109
DLGP506041	4.1	43	75	DLGP506070	7.0	69	109
DLGP506042	4.2	43	75	DLGP506071	7.1	69	109
DLGP506043	4.3	47	80	DLGP506072	7.2	69	109
DLGP506044	4.4	47	80	DLGP506073	7.3	69	109
DLGP506045	4.5	47	80	DLGP506074	7.4	69	109
DLGP506046	4.6	47	80	DLGP506075	7.5	69	109
DLGP506047	4.7	47	80	DLGP506076	7.6	75	117
DLGP506048	4.8	52	86	DLGP506077	7.7	75	117

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎					○	○				



GOLD-P DRILLS

DLGP506 SERIES
CARBIDE
HSS

HSS-E DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED

JOBBER
Germany HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET

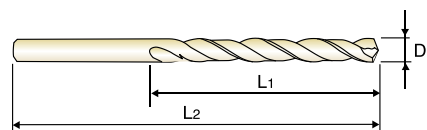
KURZ
France Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte

COURTE
Italy PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P

CORTA

- **Flute Geometry** : Right hand, 38° helix, DH100 worm pattern type.
 ► **Point Angle** : 130°, Split point giving higher chip removal.
 ► **Surface treatment** : Bright body, TiN coating on working area.
 ► **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.

- **Nutenform** : 38° Rechtsspirale, DH 100 Flachnut
 ► **Spitzenwinkel** : Durch 130° Kreuzanschliff Gute Spanabfuhr
 ► **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 ► **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen


DIN 338
HSS-E
33°
h8
130°


P.199

Unit : mm							
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP506078	7.8	75	117	DLGP506105	10.5	87	133
DLGP506079	7.9	75	117	DLGP506106	10.6	87	133
DLGP506080	8.0	75	117	DLGP506107	10.7	94	142
DLGP506081	8.1	75	117	DLGP506108	10.8	94	142
DLGP506082	8.2	75	117	DLGP506109	10.9	94	142
DLGP506083	8.3	75	117	DLGP506110	11.0	94	142
DLGP506084	8.4	75	117	DLGP506111	11.1	94	142
DLGP506085	8.5	75	117	DLGP506112	11.2	94	142
DLGP506086	8.6	81	125	DLGP506113	11.3	94	142
DLGP506087	8.7	81	125	DLGP506114	11.4	94	142
DLGP506088	8.8	81	125	DLGP506115	11.5	94	142
DLGP506089	8.9	81	125	DLGP506116	11.6	94	142
DLGP506090	9.0	81	125	DLGP506117	11.7	94	142
DLGP506091	9.1	81	125	DLGP506118	11.8	94	142
DLGP506092	9.2	81	125	DLGP506119	11.9	101	151
DLGP506093	9.3	81	125	DLGP506120	12.0	101	151
DLGP506094	9.4	81	125	DLGP506121	12.1	101	151
DLGP506095	9.5	81	125	DLGP506122	12.2	101	151
DLGP506096	9.6	87	133	DLGP506123	12.3	101	151
DLGP506097	9.7	87	133	DLGP506124	12.4	101	151
DLGP506098	9.8	87	133	DLGP506125	12.5	101	151
DLGP506099	9.9	87	133	DLGP506126	12.6	101	151
DLGP506100	10.0	87	133	DLGP506127	12.7	101	151
DLGP506101	10.1	87	133	DLGP506128	12.8	101	151
DLGP506102	10.2	87	133	DLGP506129	12.9	101	151
DLGP506103	10.3	87	133	DLGP506130	13.0	101	151
DLGP506104	10.4	87	133				

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○					○	○				

◎ : Excellent ○ : Good

I-ONE DRILLS

I-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

TECHNICAL DATA



GOLD-P COATED DRILL SETS

GOLD-P BESCHICHTET BOHRER SATS

Coffrets de Forets GOLD-P revêtus

SET DI PUNTE GOLD-P



DIN338 DRILL SETS JOBBER LENGTH Gold-P coated Drills

SET NO.	DESCRIPTION	SIZE	Q'TY
D1GP165SET1	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.5mm step	19 pcs
D1GP165SET2	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-13.0x0.5mm step	25 pcs
D1GP165SET3	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.5x0.5mm step +3.3 +4.2 +6.8 +10.2	24 pcs
DLGP195SET1	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.5mm step	19 pcs
DLGP195SET2	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-13.0x0.5mm step	25 pcs
DLGP195SET3	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.5x0.5mm step +3.3 +4.2 +6.8 +10.2	24 pcs
DLGPSET982	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.1mm step	91 pcs

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

GOLD-P COATED DRILLS
GOLD-P BESCHICHTET BOHRER
D1GP125, D1GP165, DLGP195 SERIES

WORK MATERIAL	P						M		N				S	
	CARBON STEELS		CARBON STEELS		ALLOY STEELS		STAINLESS STEELS		ALUMINUM ALLOYS, ZINC ALLOYS		MAGNESIUM ALLOYS		TITANIUM ALLOYS	
HARDNESS			~ HRC23		~ HRC23 ~ 34		HRC23							
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		810 ~ 1110 N/mm ²		~ 830 N/mm ²						~ 410 N/mm ²	
DRILLING SPEED	35 ~ 45 m/min		30 ~ 40 m/min		20 ~ 25 m/min		20 ~ 25 m/min		85 ~ 95 m/min		30 ~ 35 m/min		20 ~ 25 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1.0	14000	0.02	12500	0.02	7700	0.02	7000	0.02	30000	0.02	11500	0.03	8050	0.02
2.0	7000	0.06	6100	0.06	3850	0.06	3500	0.06	15000	0.06	5800	0.09	4050	0.06
3.0	4650	0.10	4100	0.08	2550	0.08	2350	0.08	9900	0.10	3850	0.13	2700	0.08
4.0	3500	0.11	3050	0.11	1950	0.10	1750	0.10	7450	0.11	2900	0.15	2000	0.09
5.0	2800	0.12	2450	0.11	1550	0.10	1400	0.10	5950	0.12	2300	0.17	1600	0.10
6.0	2350	0.14	2050	0.13	1300	0.12	1150	0.12	4950	0.14	1950	0.19	1350	0.12
7.0	2000	0.16	1750	0.15	1100	0.14	1000	0.14	4250	0.16	1650	0.22	1150	0.14
8.0	1750	0.18	1550	0.18	960	0.15	875	0.15	3700	0.18	1450	0.24	1000	0.15
9.0	1550	0.20	1350	0.22	855	0.18	780	0.18	3300	0.20	1280	0.27	895	0.17
10.0	1400	0.21	1250	0.22	770	0.18	700	0.18	3000	0.23	1150	0.29	805	0.18
11.0	1250	0.22	1100	0.22	700	0.18	650	0.18	2700	0.23	1050	0.30	730	0.18
12.0	1150	0.23	1000	0.22	650	0.20	585	0.20	2480	0.23	960	0.31	670	0.20
13.0	1050	0.23	950	0.22	595	0.20	540	0.20	2300	0.23	890	0.31	620	0.20

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

GOLD-P COATED DRILLS for DEEP HOLES
GOLD-P BESCHICHTET BOHRER für TIEFLOCH MIT ZYLINDERSCHAFT
DLGP506 SERIES

WORK MATERIAL	P				K			
	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
HARDNESS	HRC15 ~ 30		HRC20 ~ 40					
STRENGTH	700 ~ 1000 N/mm ²		800 ~ 1200 N/mm ²					
DRILLING SPEED	23 ~ 28 m/min		15 ~ 20 m/min		40 ~ 50 m/min		25 ~ 30 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1.0	8750	0.02	6300	0.02	16000	0.02	9800	0.02
2.0	4400	0.06	3150	0.06	7900	0.07	4900	0.07
3.0	2900	0.08	2100	0.08	5250	0.11	3250	0.11
4.0	2200	0.09	1600	0.09	3950	0.14	2450	0.14
5.0	1750	0.10	1250	0.10	3150	0.14	1950	0.14
6.0	1450	0.12	1050	0.12	2650	0.18	1650	0.18
7.0	1250	0.14	900	0.14	2250	0.20	1400	0.20
8.0	1100	0.15	790	0.15	1950	0.22	1250	0.22
9.0	975	0.17	700	0.17	1750	0.24	1100	0.24
10.0	875	0.18	630	0.18	1600	0.28	980	0.28
11.0	800	0.20	575	0.20	1450	0.28	890	0.28
12.0	730	0.20	525	0.20	1300	0.28	815	0.28
13.0	675	0.20	485	0.20	1200	0.28	755	0.28

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



Global Cutting Tool Leader **YG-1**



HSS



Leading Through Innovation



SUPER-GP DRILLS

SUPER-GP DRILLS

- All applications regardless of machine condition: Good or Poor
- Alle Anwendungen unabhängig vom Zustand der Maschine: gut oder schlecht

SELECTION GUIDE

SUPER-GP DRILLS

All applications regardless of machine condition: Good or Poor

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
DSH105		SUPER HSS, SUPER-GP DRILLS (DIN338) SUPER HSS, SUPER-GP DRILLS (DIN338) <i>JOBBER</i> <i>KURZ</i>	D2.0	D13.0	204
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			206

SUPER HSS SUPER-GP DRILLS

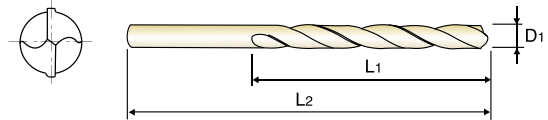
◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
◎	◎				○	○	○					○


SUPER HSS, SUPER-GP DRILLS (DIN338)
JOBBER
KURZ
COURTE
CORTA
GERMANY SUPER HSS, SUPER-GP DRILLS (DIN338)
FRANCE Forets SUPER-GP Super HSS, queue cylindrique (DIN338)
ITALY PUNTA SUPER-GP DRILL, IN SUPER-HSS, GAMBO CILINDRICO (DIN338)

- ▶ 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.



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
* DSH105020	2.0	24	49	* DSH105048	4.8	52	86
* DSH105021	2.1	24	49	* DSH105049	4.9	52	86
* DSH105022	2.2	27	53	* DSH105050	5.0	52	86
* DSH105023	2.3	27	53	* DSH105051	5.1	52	86
* DSH105024	2.4	30	57	* DSH105052	5.2	52	86
* DSH105025	2.5	30	57	* DSH105053	5.3	52	86
* DSH105026	2.6	30	57	* DSH105054	5.4	57	93
* DSH105027	2.7	33	61	* DSH105055	5.5	57	93
* DSH105028	2.8	33	61	* DSH105056	5.6	57	93
* DSH105029	2.9	33	61	* DSH105057	5.7	57	93
* DSH105030	3.0	33	61	* DSH105058	5.8	57	93
* DSH105031	3.1	36	65	* DSH105059	5.9	57	93
* DSH105032	3.2	36	65	* DSH105060	6.0	57	93
* DSH105033	3.3	36	65	* DSH105061	6.1	63	101
* DSH105034	3.4	39	70	* DSH105062	6.2	63	101
* DSH105035	3.5	39	70	* DSH105063	6.3	63	101
* DSH105036	3.6	39	70	* DSH105064	6.4	63	101
* DSH105037	3.7	39	70	* DSH105065	6.5	63	101
* DSH105038	3.8	43	75	* DSH105066	6.6	63	101
* DSH105039	3.9	43	75	* DSH105067	6.7	63	101
* DSH105040	4.0	43	75	* DSH105068	6.8	69	109
* DSH105041	4.1	43	75	* DSH105069	6.9	69	109
* DSH105042	4.2	43	75	* DSH105070	7.0	69	109
* DSH105043	4.3	47	80	* DSH105071	7.1	69	109
* DSH105044	4.4	47	80	* DSH105072	7.2	69	109
* DSH105045	4.5	47	80	* DSH105073	7.3	69	109
* DSH105046	4.6	47	80	* DSH105074	7.4	69	109
* DSH105047	4.7	47	80	* DSH105075	7.5	69	109

* 10pcs per package

** 5pcs per package

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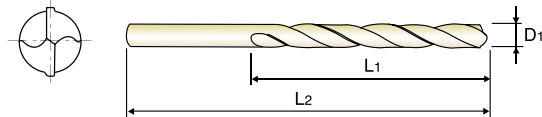
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

SUPER HSS, SUPER-GP DRILLS (DIN338)
 **SUPER HSS, SUPER-GP DRILLS (DIN338)**
 **Forets SUPER-GP Super HSS, queue cylindrique (DIN338)**
 **PUNTA SUPER-GP DRILL, IN SUPER-HSS, GAMBO CILINDRICO (DIN338)**
JOBBER
KURZ
COURTE
CORTA

- ▶ 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.



EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* DSH105076	7.6	75	117
* DSH105077	7.7	75	117
* DSH105078	7.8	75	117
* DSH105079	7.9	75	117
* DSH105080	8.0	75	117
* DSH105081	8.1	75	117
* DSH105082	8.2	75	117
* DSH105083	8.3	75	117
* DSH105084	8.4	75	117
* DSH105085	8.5	75	117
* DSH105086	8.6	81	125
* DSH105087	8.7	81	125
* DSH105088	8.8	81	125
* DSH105089	8.9	81	125
* DSH105090	9.0	81	125
* DSH105091	9.1	81	125
* DSH105092	9.2	81	125
* DSH105093	9.3	81	125
* DSH105094	9.4	81	125
* DSH105095	9.5	81	125
* DSH105096	9.6	87	133
* DSH105097	9.7	87	133
* DSH105098	9.8	87	133
* DSH105099	9.9	87	133
* DSH105100	10.0	87	133
* DSH105101	10.1	87	133
* DSH105102	10.2	87	133
* DSH105103	10.3	87	133

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* * DSH105104	10.4	87	133
* * DSH105105	10.5	87	133
* * DSH105106	10.6	87	133
* * DSH105107	10.7	94	142
* * DSH105108	10.8	94	142
* * DSH105109	10.9	94	142
* * DSH105110	11.0	94	142
* * DSH105111	11.1	94	142
* * DSH105112	11.2	94	142
* * DSH105113	11.3	94	142
* * DSH105114	11.4	94	142
* * DSH105115	11.5	94	142
* * DSH105116	11.6	94	142
* * DSH105117	11.7	94	142
* * DSH105118	11.8	94	142
* * DSH105119	11.9	101	151
* * DSH105120	12.0	101	151
* * DSH105121	12.1	101	151
* * DSH105122	12.2	101	151
* * DSH105123	12.3	101	151
* * DSH105124	12.4	101	151
* * DSH105125	12.5	101	151
* * DSH105126	12.6	101	151
* * DSH105127	12.7	101	151
* * DSH105128	12.8	101	151
* * DSH105129	12.9	101	151
* * DSH105130	13.0	101	151

- * 10pcs per package
- * * 5pcs per package

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA


SUPER HSS, SUPER-GP DRILLS
SUPER HSS, SUPER-GP DRILLS

WORK MATERIAL	P												M	
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS		STAINLESS STEELS	
HARDNESS			~ HRC23		HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38				HRC23	
STRENGTH	~ 570 N/mm²		~ 830 N/mm²		830 ~ 950 N/mm²		830 ~ 1110 N/mm²		1110 ~ 1260 N/mm²		~ 270 N/mm²		830 N/mm²	
DRILLING SPEED	27 ~ 32 m/min		20 ~ 25 m/min		13 ~ 18 m/min		17 ~ 22 m/min		8 ~ 13 m/min		20 ~ 25 m/min		27 ~ 32 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.5	3380	0.025	2550	0.025	1900	0.015	2380	0.020	1400	0.015	3180	0.042	2550	0.025
3.0	2700	0.050	2000	0.050	1500	0.025	1880	0.050	1100	0.020	2500	0.050	2000	0.050
5.0	1700	0.063	1280	0.063	960	0.038	1190	0.063	700	0.025	1590	0.063	1280	0.063
6.0	1350	0.085	1000	0.085	750	0.051	950	0.085	550	0.029	1250	0.085	1000	0.085
8.0	1050	0.130	780	0.130	590	0.076	730	0.130	430	0.038	970	0.130	780	0.130
10.0	850	0.140	640	0.140	480	0.076	600	0.150	350	0.047	780	0.160	600	0.140
11.0	750	0.150	560	0.150	425	0.076	520	0.180	310	0.050	700	0.180	560	0.150
13.0	640	0.160	470	0.160	360	0.083	440	0.186	260	0.050	600	0.186	470	0.160

WORK MATERIAL	K		N								S	
	CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS		TITANIUM ALLOYS	
HARDNESS	~ HRC21										HRC21	
STRENGTH	~ 800 N/mm ²										800 N/mm ²	
DRILLING SPEED	15 ~ 20 m/min		40 ~ 50 m/min		55 ~ 65 m/min		40 ~ 50 m/min		20 ~ 25 m/min		27 ~ 32 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.5	2250	0.025	6400	0.038	8600	0.038	6400	0.038	3380	0.025	1400	0.020
3.0	2000	0.050	5000	0.063	6800	0.063	5000	0.063	2700	0.050	1100	0.025
5.0	1280	0.063	3200	0.076	4300	0.076	3200	0.076	1700	0.063	700	0.038
6.0	1000	0.085	2500	0.111	3400	0.111	2500	0.111	1350	0.085	550	0.051
8.0	780	0.130	2000	0.180	2600	0.180	2000	0.180	1050	0.130	430	0.076
10.0	640	0.140	1600	0.190	2100	0.190	1600	0.190	850	0.140	350	0.076
11.0	560	0.150	1400	0.200	1900	0.200	1400	0.200	750	0.150	300	0.076
13.0	460	0.160	1200	0.213	1600	0.213	1200	0.213	650	0.160	250	0.083

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

HSS



Leading Through Innovation



STRAIGHT SHANK DRILLS

BOHRER MIT ZYLINDERSCHAFT

- General Purpose (HSS & HSS-E & 8% Cobalt)
- Für allgemeinen Einsatz, HSS und HSSE-Co8

SELECTION GUIDE

STRAIGHT SHANK TWIST DRILLS

HSS Drills for soft materials & HSS cobalt Drills for tough materials

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D2107		HSSCO8, STRAIGHT SHANK TWIST DRILLS, FORM C HSSCO8, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>STUB EXTRA KURZ</i>	D1.0	D31.0	212
D1107		HSS, STRAIGHT SHANK TWIST DRILLS HSS, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>STUB EXTRA KURZ</i>	D1.0	D13.0	215
D2105		HSSCO8, STRAIGHT SHANK TWIST DRILLS, FORM C HSSCO8, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D1.0	D20.0	217
DL105		HSS-E, STRAIGHT SHANK TWIST DRILLS, FORM C HSS-E, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D1.0	D20.0	220
D1105		HSS, STRAIGHT SHANK TWIST DRILLS HSS, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D0.3	D20.0	223
D1125		HSS, STRAIGHT SHANK TWIST DRILLS HSS, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D2.0	D20.0	227
D2104		HSSCO8, STRAIGHT SHANK TWIST DRILLS HSSCO8, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>LONG LANG</i>	D2.0	D12.0	230
D1121		HSS, STRAIGHT SHANK TWIST DRILLS HSS, SPIRALBOHRER MIT ZYLINDERSCHAFT <i>EXTRA LONG ÜBERLANG</i>	D2.0	D13.0	232
DL109		HSS-E, STRAIGHT SHANK TWIST DRILLS FOR HEAVY DUTY HSS-E, SPIRALBOHRER FÜR HOHE LEISTUNGEN MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D1.5	D13.0	233
D1100		HSS, STRAIGHT SHANK TWIST DRILLS FOR BRASS/BRONZE HSS, SPIRALBOHRER FÜR MESSING/BRONZE MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D1.5	D13.0	234
D1106		HSS, STRAIGHT SHANK TWIST DRILLS FOR ALUMINUM, FORM C HSS, SPIRALBOHRER FÜR ALUMINIUM MIT ZYLINDERSCHAFT <i>JOBBER KURZ</i>	D1.5	D13.0	236

HSS STRAIGHT SHANK DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○	○	○				○
◎	◎				○	○	○				○
◎	◎				○	○	○				○
◎	◎				◎	○	○				○
◎	◎				○	○	○				○
◎	◎				○	○	○				○
◎	◎				◎	○	○				○
◎	◎				○	○	○				○
◎	◎				○	○	○				○
									◎		
							◎		○		

▶ NEXT PAGE

SELECTION GUIDE

DH100, DH50-WORM PATTERN DRILLS

DH100-For Deep hole drilling in general steels

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
DH100 DL510		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	238
DH100 DL508		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	240
DH100 DL509		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	242
DH100 DL505		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	244
DH100 DL504		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	246
DH100 DT600 DT692 DT693		HSS-E, STRAIGHT SHANK DRILLS for DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D2.0 D3.0 D10.5 D10.2 D4.0 D10.0	247
DH100 DL608		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	248

DH50-For Deep hole drilling in aluminum

DH50 DL507		HSS-E, STRAIGHT SHANK DRILLS for ALUMINUM DEEP HOLES, FORM C HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT	<i>EXTRA LONG ÜBERLANG</i>	D2.0 D13.0	249
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			251

HSS STRAIGHT SHANK DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎					○	○				
◎	◎					○	○				
◎	◎					○	○				
◎	◎					○	○				
◎	◎					○	○				
◎	◎					○	○				
◎	◎					○	○				

◎	○					○	◎				
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STRAIGHT SHANK DRILLS

D2107 SERIES

HSSCo8, STRAIGHT SHANK TWIST DRILLS

STUB
Germany HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT

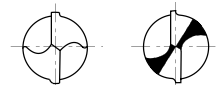
EXTRA KURZ
France Forets HSSCo8, queue cylindrique, Forme C, série extra-courte

EXTRA-COURTE
Italy PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8

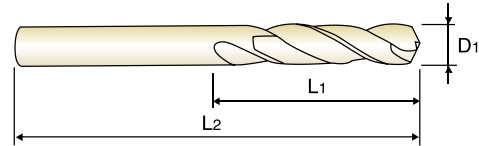
EXTRA CORTA
► Surface treatment: Coloring (Gold color)

► Oberflächenbehandlung: Coloring (Goldfarbe)

► Application: Suitable for drilling thin materials with portable electric drills.

► Verwendung: Sonderbohrer zum Einsatz auf Automaten und Revolverdrehbänken. Geeignet für den Einsatz in Handbohrmaschinen zum Bohren von dünnwandigem Material.


under 1.6mm 1.6mm & over



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2107010	1.0	6	26	D2107034	3.4	20	52
D2107011	1.1	7	28	D2107035	3.5	20	52
D2107012	1.2	8	30	D2107036	3.6	20	52
D2107912	1.25	8	30	D2107037	3.7	20	52
D2107013	1.3	8	30	D2107937	3.75	20	52
D2107014	1.4	9	32	D2107038	3.8	22	55
D2107015	1.5	9	32	D2107039	3.9	22	55
D2107016	1.6	10	34	D2107040	4.0	22	55
D2107017	1.7	10	34	D2107041	4.1	22	55
D2107917	1.75	11	36	D2107042	4.2	22	55
D2107018	1.8	11	36	D2107942	4.25	22	55
D2107019	1.9	11	36	D2107043	4.3	24	58
D2107020	2.0	12	38	D2107044	4.4	24	58
D2107021	2.1	12	38	D2107045	4.5	24	58
D2107022	2.2	13	40	D2107046	4.6	24	58
D2107922	2.25	13	40	D2107946	4.65	24	58
D2107023	2.3	13	40	D2107047	4.7	24	58
D2107024	2.4	14	43	D2107947	4.75	24	58
D2107025	2.5	14	43	D2107048	4.8	26	62
D2107026	2.6	14	43	D2107049	4.9	26	62
D2107027	2.7	16	46	D2107050	5.0	26	62
D2107927	2.75	16	46	D2107051	5.1	26	62
D2107028	2.8	16	46	D2107052	5.2	26	62
D2107029	2.9	16	46	D2107952	5.25	26	62
D2107030	3.0	16	46	D2107053	5.3	26	62
D2107031	3.1	18	49	D2107054	5.4	28	66
D2107032	3.2	18	49	D2107055	5.5	28	66
D2107932	3.25	18	49	D2107955	5.55	28	66
D2107033	3.3	18	49	D2107056	5.6	28	66

► HSS-E(DL107) is available on your request.

► NEXT PAGE

► TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

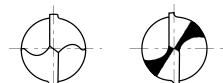
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

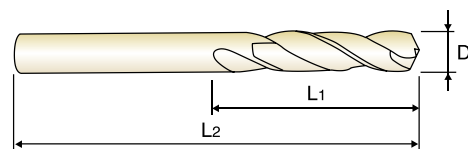
HSSCo8, STRAIGHT SHANK TWIST DRILLS
STUB
 **HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT**
EXTRA KURZ
 **Forets HSSCo8, queue cylindrique, Forme C, série extra-courte**
EXTRA-COURTE
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8**
EXTRA CORTA
► Surface treatment: Coloring (Gold color)

► Application : Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes

► Oberflächenbehandlung : Coloring (Goldfarbe)

► Verwendung : Sonderbohrer zum Einsatz auf Automaten und Revolverdrehbänken. Geeignet für den Einsatz in Handbohrmaschinen zum Bohren von dünnwandigem Material.


under 1.6mm 1.6mm & over


**DIN
1897**
**HSS
Co8**
33°
h8
135°

P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2107057	5.7	28	66	D2107080	8.0	37	79
D2107957	5.75	28	66	D2107081	8.1	37	79
D2107058	5.8	28	66	D2107082	8.2	37	79
D2107059	5.9	28	66	D2107982	8.25	37	79
D2107060	6.0	28	66	D2107083	8.3	37	79
D2107061	6.1	31	70	D2107084	8.4	37	79
D2107062	6.2	31	70	D2107085	8.5	37	79
D2107962	6.25	31	70	D2107086	8.6	40	84
D2107063	6.3	31	70	D2107087	8.7	40	84
D2107064	6.4	31	70	D2107987	8.75	40	84
D2107065	6.5	31	70	D2107088	8.8	40	84
D2107066	6.6	31	70	D2107089	8.9	40	84
D2107067	6.7	31	70	D2107090	9.0	40	84
D2107967	6.75	34	74	D2107091	9.1	40	84
D2107068	6.8	34	74	D2107092	9.2	40	84
D2107069	6.9	34	74	D2107992	9.25	40	84
D2107070	7.0	34	74	D2107093	9.3	40	84
D2107071	7.1	34	74	D2107993	9.35	40	84
D2107072	7.2	34	74	D2107094	9.4	40	84
D2107972	7.25	34	74	D2107095	9.5	40	84
D2107073	7.3	34	74	D2107096	9.6	43	89
D2107074	7.4	34	74	D2107097	9.7	43	89
D2107974	7.45	34	74	D2107997	9.75	43	89
D2107075	7.5	34	74	D2107098	9.8	43	89
D2107076	7.6	37	79	D2107099	9.9	43	89
D2107077	7.7	37	79	D2107100	10.0	43	89
D2107977	7.75	37	79	D2107102	10.2	43	89
D2107078	7.8	37	79	D2107802	10.25	43	89
D2107079	7.9	37	79	D2107105	10.5	43	89

► HSS-E(DL107) is available on your request.
► NEXT PAGE
► TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○	○	○				○

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

D2107 SERIES

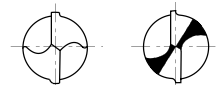
HSSCo8, STRAIGHT SHANK TWIST DRILLS

STUB
HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT
EXTRA KURZ
Forets HSSCo8, queue cylindrique, Forme C, série extra-courte
EXTRA-COURTE
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8
EXTRA CORTA
► Surface treatment: Coloring(Gold color)

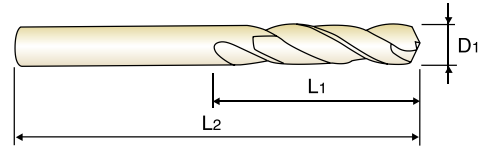
► Application : Suitable for drilling thin materials with portable electric drills.

Special twist drills for automatic and turret lathes

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Sonderbohrer zum Einsatz auf Automaten und Revolverdrehbänken. Geeignet für den Einsatz in Handbohrmaschinen zum Bohren von dünnwandigem Material.


under 1.6mm 1.6mm & over



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2107807	10.75	47	95	D2107872	17.25	62	123
D2107110	11.0	47	95	D2107175	17.5	62	123
D2107812	11.25	47	95	D2107877	17.75	62	123
D2107115	11.5	47	95	D2107180	18.0	62	123
D2107817	11.75	47	95	D2107882	18.25	64	127
D2107118	11.8	47	95	D2107185	18.5	64	127
D2107120	12.0	51	102	D2107887	18.75	64	127
D2107822	12.25	51	102	D2107190	19.0	64	127
D2107125	12.5	51	102	D2107892	19.25	66	131
D2107827	12.75	51	102	D2107195	19.5	66	131
D2107130	13.0	51	102	D2107897	19.75	66	131
D2107832	13.25	54	107	D2107200	20.0	66	131
D2107135	13.5	54	107	D2107205	20.5	68	136
D2107837	13.75	54	107	D2107210	21.0	68	136
D2107138	13.8	54	107	D2107215	21.5	70	141
D2107140	14.0	54	107	D2107220	22.0	70	141
D2107842	14.25	56	111	D2107225	22.5	72	146
D2107145	14.5	56	111	D2107230	23.0	72	146
D2107847	14.75	56	111	D2107235	23.5	72	146
D2107150	15.0	56	111	D2107240	24.0	75	151
D2107852	15.25	58	115	D2107245	24.5	75	151
D2107155	15.5	58	115	D2107250	25.0	75	151
D2107857	15.75	58	115	D2107260	26.0	78	156
D2107160	16.0	58	115	D2107270	27.0	81	162
D2107862	16.25	60	119	D2107280	28.0	81	162
D2107165	16.5	60	119	D2107290	29.0	84	168
D2107867	16.75	60	119	D2107300	30.0	84	168
D2107170	17.0	60	119	D2107310	31.0	87	174

► HSS-E(DL107) is available on your request.

► TiN(D4107), TiCN(D7107) and TiAIN(DQ107) are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

HSS, STRAIGHT SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS, queue cylindrique, série extra-courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS**
STUB
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA
► Surface treatment: Steam Tempered(Black Oxide Finish)

Bright Finish under 2mm

► Application

: Suitable for drilling thin materials with portable electric drills.

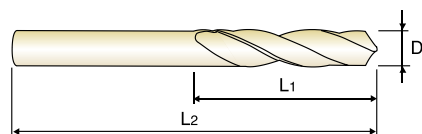
Special twist drills for automatic and turret lathes.

► Oberflächenbehandlung : Steam Homo(Schwarzoxidation)

Helle Beschaffenheit unter 2mm

► 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.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1107010	1.0	6	26
D1107011	1.1	7	28
D1107012	1.2	8	30
D1107912	1.25	8	30
D1107013	1.3	8	30
D1107014	1.4	9	32
D1107015	1.5	9	32
D1107016	1.6	9	34
D1107017	1.7	10	34
D1107917	1.75	11	36
D1107018	1.8	11	36
D1107019	1.9	11	36
D1107020	2.0	12	38
D1107021	2.1	12	38
D1107022	2.2	13	40
D1107922	2.25	13	40
D1107023	2.3	13	40
D1107024	2.4	14	43
D1107025	2.5	14	43
D1107026	2.6	14	43
D1107027	2.7	16	46
D1107927	2.75	16	46
D1107028	2.8	16	46
D1107029	2.9	16	46
D1107030	3.0	16	46
D1107031	3.1	18	49
D1107032	3.2	18	49
D1107932	3.25	18	49
D1107033	3.3	18	49
D1107034	3.4	20	52
D1107035	3.5	20	52

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1107036	3.6	20	52
D1107037	3.7	20	52
D1107937	3.75	20	52
D1107038	3.8	22	55
D1107039	3.9	22	55
D1107040	4.0	22	55
D1107041	4.1	22	55
D1107042	4.2	22	55
D1107942	4.25	22	55
D1107043	4.3	24	58
D1107044	4.4	24	58
D1107045	4.5	24	58
D1107046	4.6	24	58
D1107047	4.7	24	58
D1107947	4.75	24	58
D1107048	4.8	26	62
D1107049	4.9	26	62
D1107050	5.0	26	62
D1107051	5.1	26	62
D1107052	5.2	26	62
D1107952	5.25	26	62
D1107053	5.3	26	62
D1107054	5.4	28	66
D1107055	5.5	28	66
D1107056	5.6	28	66
D1107057	5.7	28	66
D1107957	5.75	28	66
D1107058	5.8	28	66
D1107059	5.9	28	66
D1107060	6.0	28	66
D1107061	6.1	31	70

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○	○	○				○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

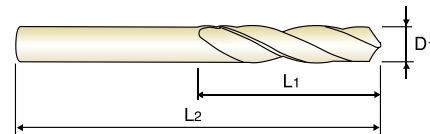
D1107 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS

STUB
HSS, SPIRALBOHRER mit ZYLINDERSCHAFT
EXTRA KURZ
Forets HSS, queue cylindrique, série extra-courte
EXTRA-COURTE
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS
EXTRA CORTA

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

► **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Sonderbohrer zum Einsatz auf Automaten und Revolverdrehbänken.
 Geeignet für den Einsatz in Handbohrmaschinen zum Bohren von dünnwandigem Material.



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length 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				

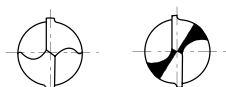
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

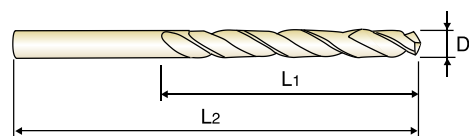
HSSCo8, STRAIGHT SHANK TWIST DRILLS
JOBBER
 **HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT**
KURZ
 **Forets HSSCo8, queue cylindrique, Forme C, série courte**
COURTE
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8**
CORTA
► Surface treatment: Coloring(Gold color)

► Application : Drilling stainless steels and difficult - to - cut materials such as titanium and inconel.

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Zum Bohren von rostfreien und austenitischen Stählen, schwerzerspanbaren Werkstoffen wie Titan und Inconel.


under 1.6mm 1.6mm & over



P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2105010	1.0	12	34	D2105031	3.1	36	65
D2105011	1.1	14	36	D2105032	3.2	36	65
D2105012	1.2	16	38	D2105932	3.25	36	65
D2105912	1.25	16	38	D2105033	3.3	36	65
D2105013	1.3	16	38	D2105034	3.4	39	70
D2105014	1.4	18	40	D2105035	3.5	39	70
D2105015	1.5	18	40	D2105036	3.6	39	70
D2105016	1.6	20	43	D2105037	3.7	39	70
D2105017	1.7	20	43	D2105937	3.75	39	70
D2105917	1.75	22	46	D2105038	3.8	43	75
D2105018	1.8	22	46	D2105039	3.9	43	75
D2105019	1.9	22	46	D2105040	4.0	43	75
D2105020	2.0	24	49	D2105041	4.1	43	75
D2105021	2.1	24	49	D2105042	4.2	43	75
D2105022	2.2	27	53	D2105942	4.25	43	75
D2105922	2.25	27	53	D2105043	4.3	47	80
D2105023	2.3	27	53	D2105044	4.4	47	80
D2105024	2.4	30	57	D2105045	4.5	47	80
D2105025	2.5	30	57	D2105046	4.6	47	80
D2105026	2.6	30	57	D2105047	4.7	47	80
D2105027	2.7	33	61	D2105947	4.75	47	80
D2105927	2.75	33	61	D2105048	4.8	52	86
D2105028	2.8	33	61	D2105049	4.9	52	86
D2105029	2.9	33	61	D2105050	5.0	52	86
D2105030	3.0	33	61	D2105051	5.1	52	86

► TiN(D4105), TiCN(D7105) and TiAlN(DQ105) are available on your request.

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

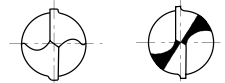
D2105 SERIES

HSSCo8, STRAIGHT SHANK TWIST DRILLS

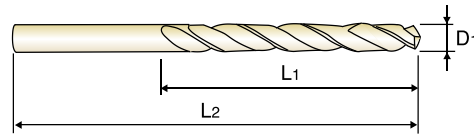
JOBBER
🇩🇪 HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT
KURZ
🇫🇷 Forets HSSCo8, queue cylindrique, Forme C, série courte
COURTE
🇮🇹 PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8
CORTA
► Surface treatment: Coloring (Gold color)

► Oberflächenbehandlung: Coloring (Goldfarbe)

► Application: Drilling stainless steels and difficult-to-cut materials such as titanium and Inconel.

► Verwendung: Zum Bohren von rostfreien und austenitischen Stählen, schwererspanbaren Werkstoffen wie Titan und Inconel.


under 1.6mm 1.6mm & over


DIN 338
HSS Co8
33°
h8
135°


P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2105052	5.2	52	86	D2105972	7.25	69	109
D2105952	5.25	52	86	D2105073	7.3	69	109
D2105053	5.3	52	86	D2105074	7.4	69	109
D2105054	5.4	57	93	D2105075	7.5	69	109
D2105055	5.5	57	93	D2105076	7.6	75	117
D2105056	5.6	57	93	D2105077	7.7	75	117
D2105057	5.7	57	93	D2105977	7.75	75	117
D2105957	5.75	57	93	D2105078	7.8	75	117
D2105058	5.8	57	93	D2105079	7.9	75	117
D2105059	5.9	57	93	D2105080	8.0	75	117
D2105060	6.0	57	93	D2105081	8.1	75	117
D2105061	6.1	63	101	D2105082	8.2	75	117
D2105062	6.2	63	101	D2105982	8.25	75	117
D2105962	6.25	63	101	D2105083	8.3	75	117
D2105063	6.3	63	101	D2105084	8.4	75	117
D2105064	6.4	63	101	D2105085	8.5	75	117
D2105065	6.5	63	101	D2105086	8.6	81	125
D2105066	6.6	63	101	D2105087	8.7	81	125
D2105067	6.7	63	101	D2105987	8.75	81	125
D2105967	6.75	69	109	D2105088	8.8	81	125
D2105068	6.8	69	109	D2105089	8.9	81	125
D2105069	6.9	69	109	D2105090	9.0	81	125
D2105070	7.0	69	109	D2105091	9.1	81	125
D2105071	7.1	69	109	D2105092	9.2	81	125
D2105072	7.2	69	109	D2105992	9.25	81	125

► TiN(D4105), TiCN(D7105) and TiAlN(DQ105) are available on your request.

► NEXT PAGE

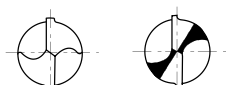
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎				◎	○	○				○

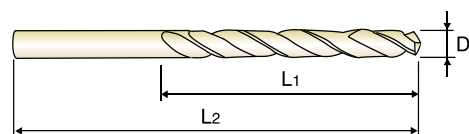
HSSCo8, STRAIGHT SHANK TWIST DRILLS
JOBBER
 **HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSSCo8, queue cylindrique, Forme C, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8**
**KURZ
COURTE
CORTA**
► Surface treatment: Coloring(Gold color)

► Application : Drilling stainless steels and difficult - to - cut materials such as titanium and inconel.

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Zum Bohren von rostfreien und austenitischen. Stählen, schwerzerspanbaren Werkstoffen wie Titan und Inconel.


under 1.6mm 1.6mm & over


**DIN
338**
**HSS
Co8**
 **33°**
 **h8**
 **135°**


P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2105093	9.3	81	125	D2105130	13.0	101	151
D2105094	9.4	81	125	D2105135	13.5	108	160
D2105095	9.5	81	125	D2105140	14.0	108	160
D2105096	9.6	87	133	D2105145	14.5	114	169
D2105097	9.7	87	133	D2105150	15.0	114	169
D2105997	9.75	87	133	D2105155	15.5	120	178
D2105098	9.8	87	133	D2105160	16.0	120	178
D2105099	9.9	87	133	D2105165	16.5	125	184
D2105100	10.0	87	133	D2105170	17.0	125	184
D2105102	10.2	87	133	D2105175	17.5	130	191
D2105105	10.5	87	133	D2105180	18.0	130	191
D2105110	11.0	94	142	D2105185	18.5	135	198
D2105115	11.5	94	142	D2105190	19.0	135	198
D2105120	12.0	101	151	D2105195	19.5	140	205
D2105125	12.5	101	151	D2105200	20.0	140	205

► TiN(D4105), TiCN(D7105) and TiAlN(DQ105) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

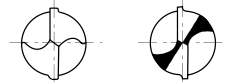
DL105 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS

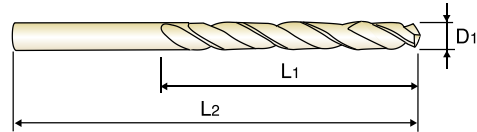
JOBBER
HSS-E, SPIRALBOHRER mit ZYLINDERSCHAFT
KURZ
Forets HSS-E, queue cylindrique, Forme C, série courte
COURTE
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS - E
CORTA
► Surface treatment: Coloring(Gold color)

► Application : Drilling stainless steels and difficult - to - cut materials such as titanium and inconel.

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Zum Bohren von rostfreien und austenitischen. Stählen, schwererspanbaren Werkstoffen wie Titan und Inconel.


under 1.6mm 1.6mm & over


DIN 338
HSS-E
33°
h8
135°


P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL105010	1.0	12	34	DL105031	3.1	36	65
DL105011	1.1	14	36	DL105032	3.2	36	65
DL105012	1.2	16	38	DL105932	3.25	36	65
DL105912	1.25	16	38	DL105033	3.3	36	65
DL105013	1.3	16	38	DL105034	3.4	39	70
DL105014	1.4	18	40	DL105035	3.5	39	70
DL105015	1.5	18	40	DL105036	3.6	39	70
DL105016	1.6	20	43	DL105037	3.7	39	70
DL105017	1.7	20	43	DL105937	3.75	39	70
DL105917	1.75	22	46	DL105038	3.8	43	75
DL105018	1.8	22	46	DL105039	3.9	43	75
DL105019	1.9	22	46	DL105040	4.0	43	75
DL105020	2.0	24	49	DL105041	4.1	43	75
DL105021	2.1	24	49	DL105042	4.2	43	75
DL105022	2.2	27	53	DL105942	4.25	43	75
DL105922	2.25	27	53	DL105043	4.3	47	80
DL105023	2.3	27	53	DL105044	4.4	47	80
DL105024	2.4	30	57	DL105045	4.5	47	80
DL105025	2.5	30	57	DL105046	4.6	47	80
DL105026	2.6	30	57	DL105047	4.7	47	80
DL105027	2.7	33	61	DL105947	4.75	47	80
DL105927	2.75	33	61	DL105048	4.8	52	86
DL105028	2.8	33	61	DL105049	4.9	52	86
DL105029	2.9	33	61	DL105050	5.0	52	86
DL105030	3.0	33	61	DL105051	5.1	52	86

► TiN(DN105), TiCN(DX105) and TiAlN(DT105) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				◎	○	○				○

HSS-E, STRAIGHT SHANK TWIST DRILLS

 **HSS-E, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS-E, queue cylindrique, Forme C, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS - E**

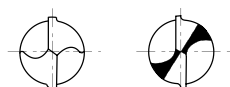
JOBBER
**KURZ
COURTE
CORTA**

► **Surface treatment:** Coloring (Gold color)

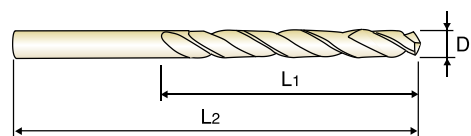
► **Application** : Drilling stainless steels and difficult-to-cut materials such as titanium and inconel.

► **Oberflächenbehandlung** : Coloring (Goldfarbe)

► **Verwendung** : Zum Bohren von rostfreien und austenitischen Stählen, schwerzerspanbaren Werkstoffen wie Titan und Inconel.



under 1.6mm 1.6mm & over


**DIN
338**
HSS-E
33°
h8
135°


P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL105052	5.2	52	86	DL105972	7.25	69	109
DL105952	5.25	52	86	DL105073	7.3	69	109
DL105053	5.3	52	86	DL105074	7.4	69	109
DL105054	5.4	57	93	DL105075	7.5	69	109
DL105055	5.5	57	93	DL105076	7.6	75	117
DL105056	5.6	57	93	DL105077	7.7	75	117
DL105057	5.7	57	93	DL105977	7.75	75	117
DL105957	5.75	57	93	DL105078	7.8	75	117
DL105058	5.8	57	93	DL105079	7.9	75	117
DL105059	5.9	57	93	DL105080	8.0	75	117
DL105060	6.0	57	93	DL105081	8.1	75	117
DL105061	6.1	63	101	DL105082	8.2	75	117
DL105062	6.2	63	101	DL105982	8.25	75	117
DL105962	6.25	63	101	DL105083	8.3	75	117
DL105063	6.3	63	101	DL105084	8.4	75	117
DL105064	6.4	63	101	DL105085	8.5	75	117
DL105065	6.5	63	101	DL105086	8.6	81	125
DL105066	6.6	63	101	DL105087	8.7	81	125
DL105067	6.7	63	101	DL105987	8.75	81	125
DL105967	6.75	69	109	DL105088	8.8	81	125
DL105068	6.8	69	109	DL105089	8.9	81	125
DL105069	6.9	69	109	DL105090	9.0	81	125
DL105070	7.0	69	109	DL105091	9.1	81	125
DL105071	7.1	69	109	DL105092	9.2	81	125
DL105072	7.2	69	109	DL105992	9.25	81	125

► TiN(DN105), TiCN(DX105) and TiAlN(DT105) are available on your request.

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				◎	○	○				○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA

Y/G STRAIGHT SHANK DRILLS

DL105 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS

JOBBER

HSS-E, SPIRALBOHRER mit ZYLINDERSCHAFT

KURZ

Forets HSS-E, queue cylindrique, Forme C, série courte

COURTE

PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS - E

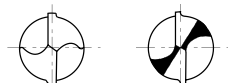
CORTA

► **Surface treatment** : Coloring (Gold color)

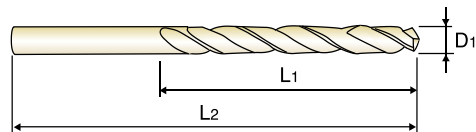
► **Application** : Drilling stainless steels and difficult - to - cut materials such as titanium and inconel.

► **Oberflächenbehandlung** : Coloring (Goldfarbe)

► **Verwendung** : Zum Bohren von rostfreien und austenitischen Stählen, schwerzerspanbaren Werkstoffen wie Titan und Inconel.



under 1.6mm 1.6mm & over



DIN 338 HSS-E 33° h8 135° P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL105093	9.3	81	125	DL105130	13.0	101	151
DL105094	9.4	81	125	DL105135	13.5	108	160
DL105095	9.5	81	125	DL105140	14.0	108	160
DL105096	9.6	87	133	DL105145	14.5	114	169
DL105097	9.7	87	133	DL105150	15.0	114	169
DL105997	9.75	87	133	DL105155	15.5	120	178
DL105098	9.8	87	133	DL105160	16.0	120	178
DL105099	9.9	87	133	DL105165	16.5	125	184
DL105100	10.0	87	133	DL105170	17.0	125	184
DL105102	10.2	87	133	DL105175	17.5	130	191
DL105105	10.5	87	133	DL105180	18.0	130	191
DL105110	11.0	94	142	DL105185	18.5	135	198
DL105115	11.5	94	142	DL105190	19.0	135	198
DL105120	12.0	101	151	DL105195	19.5	140	205
DL105125	12.5	101	151	DL105200	20.0	140	205

► TiN(DN105), TiCN(DX105) and TiAlN(DT105) are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~								
◎	◎				◎	○	○					○

HSS, STRAIGHT SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS, queue cylindrique, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS**
JOBBER
KURZ
COURTE
CORTA
► Surface treatment : Steam Tempered(Black Oxide Finish)

Bright Finish under 2mm

► Application

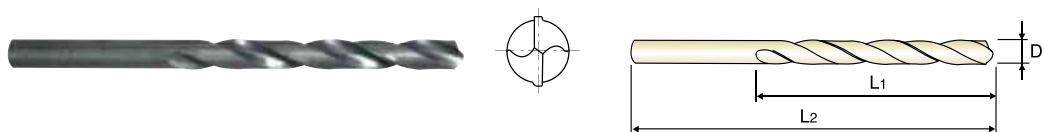
: Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► Oberflächenbehandlung : Steam Homo(Schwarzoxidation)

Helle Beschaffenheit unter 2mm

► Verwendung

: Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphite.


**DIN
338**
HSS
**N
20~30°**
h8
118°

P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1105003	0.3	3	19	D1105921	2.15	27	53
D1105004	0.4	5	20	D1105022	2.2	27	53
D1105005	0.5	6	22	D1105922	2.25	27	53
D1105006	0.6	7	24	D1105023	2.3	27	53
D1105007	0.7	9	28	D1105923	2.35	27	53
D1105008	0.8	10	30	D1105024	2.4	30	57
D1105009	0.9	11	32	D1105924	2.45	30	57
D1105010	1.0	12	34	D1105025	2.5	30	57
D1105910	1.05	12	34	D1105925	2.55	30	57
D1105011	1.1	14	36	D1105026	2.6	30	57
D1105911	1.15	14	36	D1105926	2.65	30	57
D1105012	1.2	16	38	D1105027	2.7	33	61
D1105912	1.25	16	38	D1105927	2.75	33	61
D1105013	1.3	16	38	D1105028	2.8	33	61
D1105913	1.35	18	40	D1105928	2.85	33	61
D1105014	1.4	18	40	D1105029	2.9	33	61
D1105914	1.45	18	40	D1105929	2.95	33	61
D1105015	1.5	18	40	D1105030	3.0	33	61
D1105915	1.55	20	43	D1105930	3.05	36	65
D1105016	1.6	20	43	D1105031	3.1	36	65
D1105916	1.65	20	43	D1105931	3.15	36	65
D1105017	1.7	20	43	D1105032	3.2	36	65
D1105917	1.75	22	46	D1105932	3.25	36	65
D1105018	1.8	22	46	D1105033	3.3	36	65
D1105918	1.85	22	46	D1105933	3.35	36	65
D1105019	1.9	22	46	D1105034	3.4	39	70
D1105919	1.95	24	49	D1105934	3.45	39	70
D1105020	2.0	24	49	D1105035	3.5	39	70
D1105920	2.05	24	49	D1105935	3.55	39	70
D1105021	2.1	24	49	D1105036	3.6	39	70

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○	○	○				○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

D1105 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS

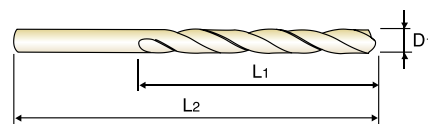
HSS, SPIRALBOHRER mit ZYLINDERSCHAFT
Forets HSS, queue cylindrique, série courte
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS
JOBBER
KURZ
COURTE
CORTA

► **Surface treatment** : Steam Tempered (Black Oxide Finish)
Bright Finish under 2mm

► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► **Oberflächenbehandlung** : Steam Homo (Schwarzoxidation)
Helle Beschaffenheit unter 2mm

► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphite.


DIN 338
HSS
N 20~30°
h8
118°


P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1105936	3.65	39	70	D1105951	5.15	52	86
D1105037	3.7	39	70	D1105052	5.2	52	86
D1105937	3.75	39	70	D1105952	5.25	52	86
D1105038	3.8	43	75	D1105053	5.3	52	86
D1105938	3.85	43	75	D1105953	5.35	57	93
D1105039	3.9	43	75	D1105054	5.4	57	93
D1105939	3.95	43	75	D1105954	5.45	57	93
D1105040	4.0	43	75	D1105055	5.5	57	93
D1105940	4.05	43	75	D1105955	5.55	57	93
D1105041	4.1	43	75	D1105056	5.6	57	93
D1105941	4.15	43	75	D1105956	5.65	57	93
D1105042	4.2	43	75	D1105057	5.7	57	93
D1105942	4.25	43	75	D1105957	5.75	57	93
D1105043	4.3	47	80	D1105058	5.8	57	93
D1105943	4.35	47	80	D1105958	5.85	57	93
D1105044	4.4	47	80	D1105059	5.9	57	93
D1105944	4.45	47	80	D1105959	5.95	57	93
D1105045	4.5	47	80	D1105060	6.0	57	93
D1105945	4.55	47	80	D1105960	6.05	63	101
D1105046	4.6	47	80	D1105061	6.1	63	101
D1105946	4.65	47	80	D1105961	6.15	63	101
D1105047	4.7	47	80	D1105062	6.2	63	101
D1105947	4.75	47	80	D1105962	6.25	63	101
D1105048	4.8	52	86	D1105063	6.3	63	101
D1105948	4.85	52	86	D1105963	6.35	63	101
D1105049	4.9	52	86	D1105064	6.4	63	101
D1105949	4.95	52	86	D1105964	6.45	63	101
D1105050	5.0	52	86	D1105065	6.5	63	101
D1105950	5.05	52	86	D1105965	6.55	63	101
D1105051	5.1	52	86	D1105066	6.6	63	101

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

HSS, STRAIGHT SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS, queue cylindrique, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS**
JOBBER
KURZ
COURTE
CORTA
► Surface treatment : Steam Tempered(Black Oxide Finish)

Bright Finish under 2mm

► Application

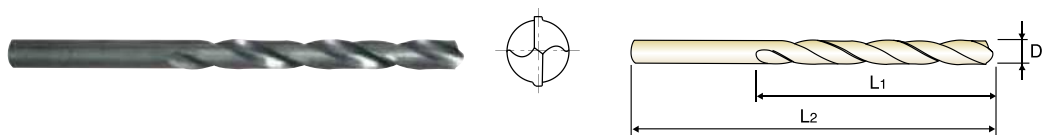
: Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► Oberflächenbehandlung : Steam Homo(Schwarzoxidation)

Helle Beschaffenheit unter 2mm

► Verwendung

: Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphite.


**DIN
338**
HSS
**N
20~30°**
h8
118°

P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1105966	6.65	63	101	D1105982	8.25	75	117
D1105067	6.7	63	101	D1105083	8.3	75	117
D1105967	6.75	69	109	D1105084	8.4	75	117
D1105068	6.8	69	109	D1105085	8.5	75	117
D1105968	6.85	69	109	D1105086	8.6	81	125
D1105069	6.9	69	109	D1105087	8.7	81	125
D1105969	6.95	69	109	D1105987	8.75	81	125
D1105070	7.0	69	109	D1105088	8.8	81	125
D1105970	7.05	69	109	D1105089	8.9	81	125
D1105071	7.1	69	109	D1105090	9.0	81	125
D1105971	7.15	69	109	D1105091	9.1	81	125
D1105072	7.2	69	109	D1105092	9.2	81	125
D1105972	7.25	69	109	D1105992	9.25	81	125
D1105073	7.3	69	109	D1105093	9.3	81	125
D1105973	7.35	69	109	D1105094	9.4	81	125
D1105074	7.4	69	109	D1105095	9.5	81	125
D1105974	7.45	69	109	D1105096	9.6	87	133
D1105075	7.5	69	109	D1105097	9.7	87	133
D1105975	7.55	75	117	D1105997	9.75	87	133
D1105076	7.6	75	117	D1105098	9.8	87	133
D1105976	7.65	75	117	D1105099	9.9	87	133
D1105077	7.7	75	117	D1105100	10.0	87	133
D1105977	7.75	75	117	D1105101	10.1	87	133
D1105078	7.8	75	117	D1105102	10.2	87	133
D1105978	7.85	75	117	D1105802	10.25	87	133
D1105079	7.9	75	117	D1105103	10.3	87	133
D1105979	7.95	75	117	D1105104	10.4	87	133
D1105080	8.0	75	117	D1105105	10.5	87	133
D1105081	8.1	75	117	D1105106	10.6	87	133
D1105082	8.2	75	117	D1105107	10.7	94	142

► NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○	○	○				○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

D1105 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS

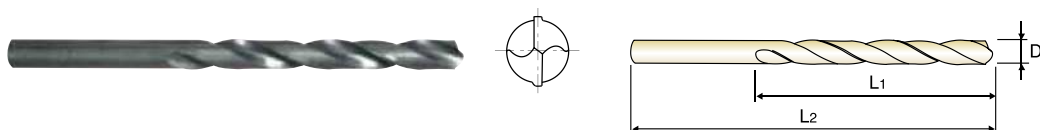
JOBBER
HSS, SPIRALBOHRER mit ZYLINDERSCHAFT
KURZ
Forets HSS, queue cylindrique, série courte
COURTE
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS
CORTA

► **Surface treatment** : Steam Tempered (Black Oxide Finish)
Bright Finish under 2mm

► **Oberflächenbehandlung** : Steam Homo (Schwarzoxidation)
Helle Beschaffenheit unter 2mm

► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphite.



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1105807	10.75	94	142	D1105832	13.25	108	160
D1105108	10.8	94	142	D1105135	13.5	108	160
D1105109	10.9	94	142	D1105837	13.75	108	160
D1105110	11.0	94	142	D1105140	14.0	108	160
D1105111	11.1	94	142	D1105842	14.25	114	169
D1105112	11.2	94	142	D1105145	14.5	114	169
D1105812	11.25	94	142	D1105847	14.75	114	169
D1105113	11.3	94	142	D1105150	15.0	114	169
D1105114	11.4	94	142	D1105852	15.25	120	178
D1105115	11.5	94	142	D1105155	15.5	120	178
D1105116	11.6	94	142	D1105857	15.75	120	178
D1105117	11.7	94	142	D1105160	16.0	120	178
D1105817	11.75	94	142	D1105862	16.25	125	184
D1105118	11.8	94	142	D1105165	16.5	125	184
D1105119	11.9	101	151	D1105867	16.75	125	184
D1105120	12.0	101	151	D1105170	17.0	125	184
D1105121	12.1	101	151	D1105872	17.25	130	191
D1105122	12.2	101	151	D1105175	17.5	130	191
D1105822	12.25	101	151	D1105877	17.75	130	191
D1105123	12.3	101	151	D1105180	18.0	130	191
D1105124	12.4	101	151	D1105882	18.25	135	198
D1105125	12.5	101	151	D1105185	18.5	135	198
D1105126	12.6	101	151	D1105887	18.75	135	198
D1105127	12.7	101	151	D1105190	19.0	135	198
D1105827	12.75	101	151	D1105892	19.25	140	205
D1105128	12.8	101	151	D1105195	19.5	140	205
D1105129	12.9	101	151	D1105897	19.75	140	205
D1105130	13.0	101	151	D1105200	20.0	140	205

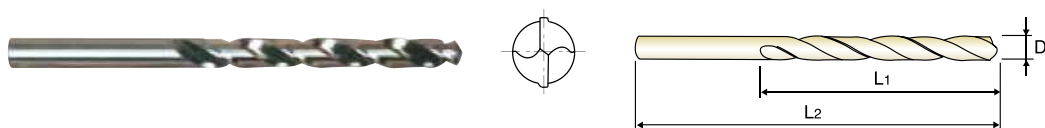
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

HSS, STRAIGHT SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS, queue cylindrique, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS**
JOBBER
KURZ
COURTE
CORTA
► Surface treatment : Bright Finish

► Application : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► Oberflächenbehandlung : Helle Beschaffenheit

► Verwendung : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphite.

**DIN
338**
HSS





P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1125020	2.0	24	49	D1125045	4.5	47	80
D1125021	2.1	24	49	D1125046	4.6	47	80
D1125022	2.2	27	53	D1125047	4.7	47	80
D1125023	2.3	27	53	D1125048	4.8	52	86
D1125024	2.4	30	57	D1125049	4.9	52	86
D1125025	2.5	30	57	D1125050	5.0	52	86
D1125026	2.6	30	57	D1125051	5.1	52	86
D1125027	2.7	33	61	D1125052	5.3	52	86
D1125028	2.8	33	61	D1125053	5.3	52	86
D1125029	2.9	33	61	D1125054	5.4	57	93
D1125030	3.0	33	61	D1125055	5.5	57	93
D1125031	3.1	36	65	D1125056	5.6	57	93
D1125032	3.2	36	65	D1125057	5.7	57	93
D1125033	3.3	36	65	D1125058	5.8	57	93
D1125034	3.4	39	70	D1125059	5.9	57	93
D1125035	3.5	39	70	D1125060	6.0	57	93
D1125036	3.6	39	70	D1125061	6.1	63	101
D1125037	3.7	39	70	D1125062	6.2	63	101
D1125038	3.8	43	75	D1125063	6.3	63	101
D1125039	3.9	43	75	D1125064	6.4	63	101
D1125040	4.0	43	75	D1125065	6.5	63	101
D1125041	4.1	43	75	D1125066	6.6	63	101
D1125042	4.2	43	75	D1125067	6.7	63	101
D1125043	4.3	47	80	D1125068	6.8	69	109
D1125044	4.4	47	80	D1125069	6.9	69	109

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

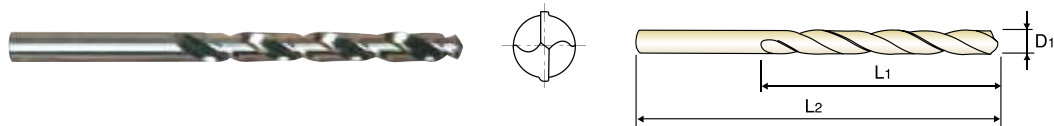
D1125 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS

JOBBER
KURZ
COURTE
CORTA
HSS, SPIRALBOHRER mit ZYLINDERSCHAFT
Forets HSS, queue cylindrique, série courte
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS
► Surface treatment : Bright Finish

► Application : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► Oberflächenbehandlung : Helle Beschaffenheit

► Verwendung : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphite.


Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1125070	7.0	69	109	D1125095	9.5	81	125
D1125071	7.1	69	109	D1125096	9.6	87	133
D1125072	7.2	69	109	D1125097	9.7	87	133
D1125073	7.3	69	109	D1125098	9.8	87	133
D1125074	7.4	69	109	D1125099	9.9	87	133
D1125075	7.5	69	109	D1125100	10.0	87	133
D1125076	7.6	75	117	D1125101	10.1	87	133
D1125077	7.7	75	117	D1125102	10.2	87	133
D1125078	7.8	75	117	D1125103	10.3	87	133
D1125079	7.9	75	117	D1125104	10.4	87	133
D1125080	8.0	75	117	D1125105	10.5	87	133
D1125081	8.1	75	117	D1125106	10.6	87	133
D1125082	8.2	75	117	D1125107	10.7	94	142
D1125083	8.3	75	117	D1125108	10.8	94	142
D1125084	8.4	75	117	D1125109	10.9	94	142
D1125085	8.5	75	117	D1125110	11.0	94	142
D1125086	8.6	81	125	D1125111	11.1	94	142
D1125087	8.7	81	125	D1125112	11.2	94	142
D1125088	8.8	81	125	D1125113	11.3	94	142
D1125089	8.9	81	125	D1125114	11.4	94	142
D1125090	9.0	81	125	D1125115	11.5	94	142
D1125091	9.1	81	125	D1125116	11.6	94	142
D1125092	9.2	81	125	D1125117	11.7	94	142
D1125093	9.3	81	125	D1125118	11.8	94	142
D1125094	9.4	81	125	D1125119	11.9	101	151

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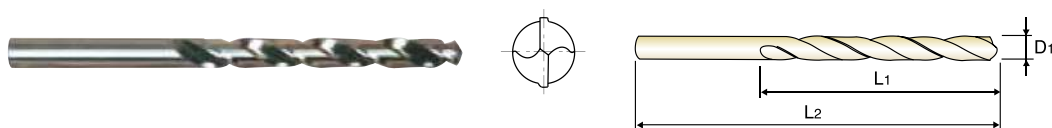
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

HSS, STRAIGHT SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSS, queue cylindrique, série courte**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS**
JOBBER
KURZ
COURTE
CORTA
► Surface treatment : Bright Finish

► Application : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► Oberflächenbehandlung : Helle Beschaffenheit

► Verwendung : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphite.

**DIN
338**
HSS





P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1125120	12.0	101	151	D1125140	14.0	108	160
D1125121	12.1	101	151	D1125145	14.5	114	169
D1125122	12.2	101	151	D1125150	15.0	114	169
D1125123	12.3	101	151	D1125155	15.5	120	178
D1125124	12.4	101	151	D1125160	16.0	120	178
D1125125	12.5	101	151	D1125165	16.5	125	184
D1125126	12.6	101	151	D1125170	17.0	125	184
D1125127	12.7	101	151	D1125175	17.5	130	191
D1125128	12.8	101	151	D1125180	18.0	130	191
D1125129	12.9	101	151	D1125185	18.5	135	198
D1125130	13.0	101	151	D1125190	19.0	135	198
D1125132	13.2	101	151	D1125195	19.5	140	205
D1125133	13.3	108	160	D1125200	20.0	140	205
D1125135	13.5	108	160				

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

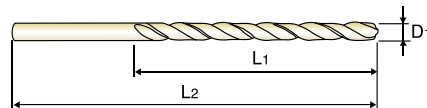
D2104 SERIES

HSSCo8, STRAIGHT SHANK TWIST DRILLS

**LONG
LANG
LONGUE
LUNGA**
🇩🇪 HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT
🇫🇷 Forets HSSCo8, queue cylindrique, série longue
🇮🇹 PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8
► Surface treatment : Coloring(Gold color)

► Application : Drilling deep holes in stainless steels and difficult - to - cut materials such as titanium and inconel.

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Für Bohrarbeiten mit Bohrungen oder an tief liegenden Stellen.
Zum Bohren von rostfreien und austenitischen Stählen, schwererspanbaren Werkstoffen wie Titan und Inconel.

**DIN
340**
**HSS
Co8**
33°
h8
135°


P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2104020	2.0	56	85	D2104047	4.7	82	126
D2104021	2.1	56	85	D2104048	4.8	87	132
D2104022	2.2	59	90	D2104049	4.9	87	132
D2104023	2.3	59	90	D2104050	5.0	87	132
D2104024	2.4	62	95	D2104051	5.1	87	132
D2104025	2.5	62	95	D2104052	5.2	87	132
D2104026	2.6	62	95	D2104053	5.3	87	132
D2104027	2.7	66	100	D2104054	5.4	91	139
D2104028	2.8	66	100	D2104055	5.5	91	139
D2104029	2.9	66	100	D2104056	5.6	91	139
D2104030	3.0	66	100	D2104057	5.7	91	139
D2104031	3.1	69	106	D2104058	5.8	91	139
D2104032	3.2	69	106	D2104059	5.9	91	139
D2104033	3.3	69	106	D2104060	6.0	91	139
D2104034	3.4	73	112	D2104061	6.1	97	148
D2104035	3.5	73	112	D2104062	6.2	97	148
D2104036	3.6	73	112	D2104063	6.3	97	148
D2104037	3.7	73	112	D2104064	6.4	97	148
D2104038	3.8	78	119	D2104065	6.5	97	148
D2104039	3.9	78	119	D2104066	6.6	97	148
D2104040	4.0	78	119	D2104067	6.7	97	148
D2104041	4.1	78	119	D2104068	6.8	102	156
D2104042	4.2	78	119	D2104069	6.9	102	156
D2104043	4.3	82	126	D2104070	7.0	102	156
D2104044	4.4	82	126	D2104071	7.1	102	156
D2104045	4.5	82	126	D2104072	7.2	102	156
D2104046	4.6	82	126	D2104073	7.3	102	156

► HSS-E(DL104) is available on your request.

► TiN(D4104), TiCN(D7104) and TiAlN(DQ104) are available on your request.

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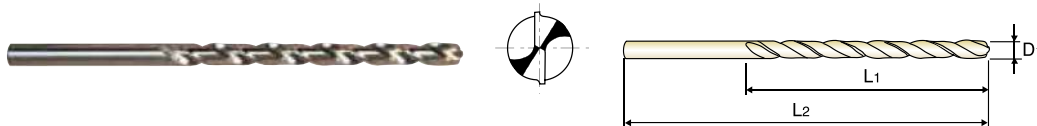
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				◎	○	○				○

HSSCo8, STRAIGHT SHANK TWIST DRILLS
 **HSSCo8, SPIRALBOHRER mit ZYLINDERSCHAFT**
 **Forets HSSCo8, queue cylindrique, série longue**
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, HSSCo8**
LONG
LANG
LONGUE
LUNGA
► Surface treatment : Coloring(Gold color)

► Application : Drilling deep holes in stainless steels and difficult - to - cut materials such as titanium and inconel.

► Oberflächenbehandlung : Coloring(Goldfarbe)

► Verwendung : Für Bohrarbeiten mit Bohrbuchsen oder an tief liegenden Stellen.
Zum Bohren von rostfreien und austenitischen. Stählen, schwerzerspanbaren Werkstoffen wie Titan und Inconel.

**DIN
340**
**HSS
Co8**
33°
h8
135°


P.251

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D2104074	7.4	102	156	D2104092	9.2	115	175
D2104075	7.5	102	156	D2104093	9.3	115	175
D2104076	7.6	109	165	D2104094	9.4	115	175
D2104077	7.7	109	165	D2104095	9.5	115	175
D2104078	7.8	109	165	D2104096	9.6	121	184
D2104079	7.9	109	165	D2104097	9.7	121	184
D2104080	8.0	109	165	D2104098	9.8	121	184
D2104081	8.1	109	165	D2104099	9.9	121	184
D2104082	8.2	109	165	D2104100	10.0	121	184
D2104083	8.3	109	165	D2104102	10.2	121	184
D2104084	8.4	109	165	D2104105	10.5	121	184
D2104085	8.5	109	165	D2104108	10.8	128	195
D2104086	8.6	115	175	D2104110	11.0	128	195
D2104087	8.7	115	175	D2104112	11.2	128	195
D2104088	8.8	115	175	D2104115	11.5	128	195
D2104089	8.9	115	175	D2104118	11.8	128	195
D2104090	9.0	115	175	D2104120	12.0	134	205
D2104091	9.1	115	175				

► HSS-E(DL104) is available on your request.

► TiN(D4104), TiCN(D7104) and TiAlN(DQ104) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

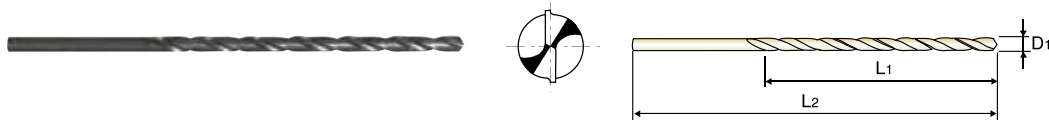
D1121 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS

HSS, SPIRALBOHRER MIT ZYLINDERSCHAFT
Forets HSS, queue cylindrique, série extra-longue
PUNTE ELICOIDALI, GAMBO CILINDRICO, HSS
EXTRA LONG
ÜBERLANG
EXTRA-LONGUE
EXTRA LUNGA

- **Surface treatment** : Steam Tempered (Black Oxide Finish)
 ► **Application** : Designed for drilling deep holes or deeply located holes
 Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

- **Oberflächenbehandlung** : Steam Homo (Schwarzoxidation)
 ► **Verwendung** : Standardbohrer zum Bohren extrem tiefer Löcher, zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphit.


DIN 1869/1
HSS
N 20~30°
h8
118°

P.251

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1121020	2.0	85	125	D1121080	8.0	165	240
D1121025	2.5	95	140	D1121085	8.5	165	240
D1121030	3.0	100	150	D1121090	9.0	175	250
D1121035	3.5	115	165	D1121095	9.5	175	250
D1121040	4.0	120	175	D1121100	10.0	185	265
D1121045	4.5	125	185	D1121105	10.5	185	265
D1121050	5.0	135	195	D1121110	11.0	195	280
D1121055	5.5	140	205	D1121115	11.5	195	280
D1121060	6.0	140	205	D1121120	12.0	205	295
D1121065	6.5	150	215	D1121125	12.5	205	295
D1121070	7.0	155	225	D1121130	13.0	205	295
D1121075	7.5	155	225				

HPD DRILLS

GOLD-P DRILLS

SUPER-GP DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA

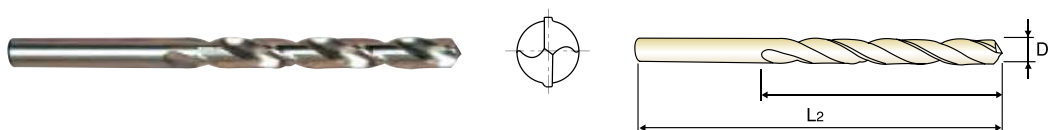
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○				○

HSS-E, STRAIGHT SHANK TWIST DRILLS for HEAVY DUTY
JOBBER
 **HSS-E, SPIRALBOHRER für HOHE LEISTUNGEN mit ZYLINDERSCHAFT**
KURZ
 **Forets HSS-E, queue cylindrique pour matériaux durs, série courte**
COURTE
 **PUNTE ELICOIDALI PER IMPIEGHI GRAVOSI, GAMBO CILINDRICO, HSS - E**
CORTA

► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron and graphite.

► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphit.



				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DL109015	1.5	18	40	DL109967	6.75	69	109
DL109917	1.75	22	46	DL109070	7.0	69	109
DL109020	2.0	24	49	DL109972	7.25	69	109
DL109922	2.25	27	53	DL109075	7.5	69	109
DL109025	2.5	30	57	DL109977	7.75	75	117
DL109927	2.75	33	61	DL109080	8.0	75	117
DL109030	3.0	33	61	DL109982	8.25	75	117
DL109932	3.25	36	65	DL109085	8.5	75	117
DL109035	3.5	39	70	DL109987	8.75	81	125
DL109937	3.75	39	70	DL109090	9.0	81	125
DL109040	4.0	43	75	DL109992	9.25	81	125
DL109942	4.25	43	75	DL109095	9.5	81	125
DL109045	4.5	47	80	DL109997	9.75	87	133
DL109947	4.75	47	80	DL109100	10.0	87	133
DL109050	5.0	52	86	DL109105	10.5	87	133
DL109952	5.25	52	86	DL109110	11.0	94	142
DL109055	5.5	57	93	DL109115	11.5	94	142
DL109957	5.75	57	93	DL109120	12.0	101	151
DL109060	6.0	57	93	DL109125	12.5	101	151
DL109962	6.25	63	101	DL109130	13.0	101	151
DL109065	6.5	63	101				

► TiN(DN109), TiCN(DX109) and TiAlN(DT109) are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○				○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

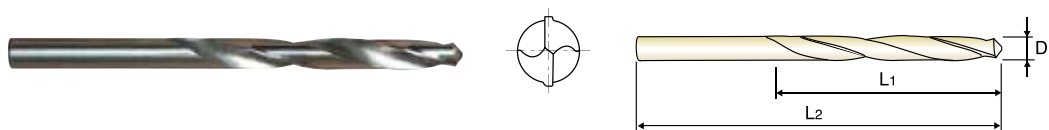
D1100 SERIES

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

P.252

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100015	1.5	18	40	D1100043	4.3	47	80
D1100016	1.6	20	43	D1100044	4.4	47	80
D1100017	1.7	20	43	D1100045	4.5	47	80
D1100018	1.8	22	46	D1100046	4.6	47	80
D1100019	1.9	22	46	D1100047	4.7	47	80
D1100020	2.0	24	49	D1100048	4.8	52	86
D1100021	2.1	24	49	D1100049	4.9	52	86
D1100022	2.2	27	53	D1100050	5.0	52	86
D1100023	2.3	27	53	D1100051	5.1	52	86
D1100024	2.4	30	57	D1100052	5.2	52	86
D1100025	2.5	30	57	D1100053	5.3	52	86
D1100026	2.6	30	57	D1100054	5.4	57	93
D1100027	2.7	33	61	D1100055	5.5	57	93
D1100028	2.8	33	61	D1100056	5.6	57	93
D1100029	2.9	33	61	D1100057	5.7	57	93
D1100030	3.0	33	61	D1100058	5.8	57	93
D1100031	3.1	36	65	D1100059	5.9	57	93
D1100032	3.2	36	65	D1100060	6.0	57	93
D1100033	3.3	36	65	D1100061	6.1	63	101
D1100034	3.4	39	70	D1100062	6.2	63	101
D1100035	3.5	39	70	D1100063	6.3	63	101
D1100036	3.6	39	70	D1100064	6.4	63	101
D1100037	3.7	39	70	D1100065	6.5	63	101
D1100038	3.8	43	75	D1100066	6.6	63	101
D1100039	3.9	43	75	D1100067	6.7	63	101
D1100040	4.0	43	75	D1100068	6.8	69	109
D1100041	4.1	43	75	D1100069	6.9	69	109
D1100042	4.2	43	75	D1100070	7.0	69	109

► NEXT PAGE

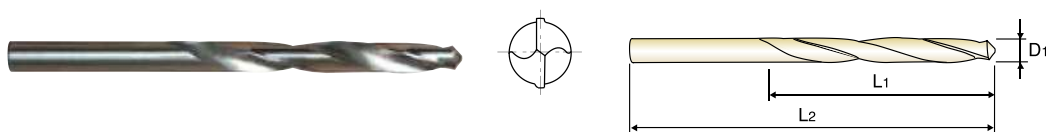
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						◎	

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.



				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1100071	7.1	69	109	D1100089	8.9	81	125
D1100072	7.2	69	109	D1100090	9.0	81	125
D1100073	7.3	69	109	D1100091	9.1	81	125
D1100074	7.4	69	109	D1100092	9.2	81	125
D1100075	7.5	69	109	D1100093	9.3	81	125
D1100076	7.6	75	117	D1100094	9.4	81	125
D1100077	7.7	75	117	D1100095	9.5	81	125
D1100078	7.8	75	117	D1100096	9.6	87	133
D1100079	7.9	75	117	D1100097	9.7	87	133
D1100080	8.0	75	117	D1100098	9.8	87	133
D1100081	8.1	75	117	D1100099	9.9	87	133
D1100082	8.2	75	117	D1100100	10.0	87	133
D1100083	8.3	75	117	D1100105	10.5	87	133
D1100084	8.4	75	117	D1100110	11.0	94	142
D1100085	8.5	75	117	D1100115	11.5	94	142
D1100086	8.6	81	125	D1100120	12.0	101	151
D1100087	8.7	81	125	D1100125	12.5	101	151
D1100088	8.8	81	125	D1100130	13.0	101	151

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP		Titanium
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
									◎			

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

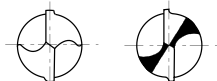
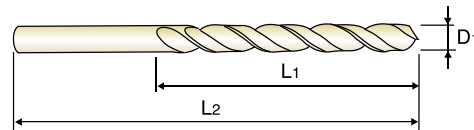
D1106 SERIES

HSS, STRAIGHT SHANK TWIST DRILLS for ALUMINUM

JOBBER
Germany HSS, SPIRALBOHRER für ALUMINIUM mit ZYLINDERSCHAFT
KURZ
France Forets HSS, queue cylindrique pour ALU, Forme C, série courte
COURTE
Italy PUNTE ELICOIDALI, GAMBO CILINDRICO, PER ALLUMINIO (HSS)
CORTA

► **Application** : Drilling hard, brittle and short-chip materials. i.e., brass, bronze, phosphor bronze aluminum and magnesium alloys.

► **Verwendung** : Zum Bohren von harten und spröden Werkstoffen wie Messing, Magnesium-Legierungen, Bronze, Phosphorbronze.



under 1.6mm 1.6mm & over



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1106015	1.5	18	40	D1106043	4.3	47	80
D1106016	1.6	20	43	D1106044	4.4	47	80
D1106017	1.7	20	43	D1106045	4.5	47	80
D1106018	1.8	22	46	D1106046	4.6	47	80
D1106019	1.9	22	46	D1106047	4.7	47	80
D1106020	2.0	24	49	D1106048	4.8	52	86
D1106021	2.1	24	49	D1106049	4.9	52	86
D1106022	2.2	27	53	D1106050	5.0	52	86
D1106023	2.3	27	53	D1106051	5.1	52	86
D1106024	2.4	30	57	D1106052	5.2	52	86
D1106025	2.5	30	57	D1106053	5.3	52	86
D1106026	2.6	30	57	D1106054	5.4	57	93
D1106027	2.7	33	61	D1106055	5.5	57	93
D1106028	2.8	33	61	D1106056	5.6	57	93
D1106029	2.9	33	61	D1106057	5.7	57	93
D1106030	3.0	33	61	D1106058	5.8	57	93
D1106031	3.1	36	65	D1106059	5.9	57	93
D1106032	3.2	36	65	D1106060	6.0	57	93
D1106033	3.3	36	65	D1106061	6.1	63	101
D1106034	3.4	39	70	D1106062	6.2	63	101
D1106035	3.5	39	70	D1106063	6.3	63	101
D1106036	3.6	39	70	D1106064	6.4	63	101
D1106037	3.7	39	70	D1106065	6.5	63	101
D1106038	3.8	43	75	D1106066	6.6	63	101
D1106039	3.9	43	75	D1106067	6.7	63	101
D1106040	4.0	43	75	D1106068	6.8	69	109
D1106041	4.1	43	75	D1106069	6.9	69	109
D1106042	4.2	43	75	D1106070	7.0	69	109

► NEXT PAGE

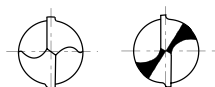
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55								
						◎		○			

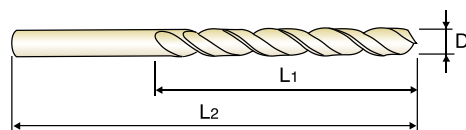
HSS, STRAIGHT SHANK TWIST DRILLS for ALUMINUM
JOBBER
 **HSS, SPIRALBOHRER für ALUMINIUM mit ZYLINDERSCHAFT**
KURZ
 **Forets HSS, queue cylindrique pour ALU, Forme C, série courte**
COURTE
 **PUNTE ELICOIDALI, GAMBO CILINDRICO, PER ALLUMINIO (HSS)**
CORTA

► **Application** : Drilling hard, brittle and short-chip materials. i.e., brass, bronze, phosphor bronze aluminum and magnesium alloys.

► **Verwendung** : Zum Bohren von harten und spröden Werkstoffen wie Messing, Magnesium-Legierungen, Bronze, Phosphorbronze.



under 1.6mm 1.6mm & over



P.253

				Unit : mm			
EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1106071	7.1	69	109	D1106089	8.9	81	125
D1106072	7.2	69	109	D1106090	9.0	81	125
D1106073	7.3	69	109	D1106091	9.1	81	125
D1106074	7.4	69	109	D1106092	9.2	81	125
D1106075	7.5	69	109	D1106093	9.3	81	125
D1106076	7.6	75	117	D1106094	9.4	81	125
D1106077	7.7	75	117	D1106095	9.5	81	125
D1106078	7.8	75	117	D1106096	9.6	87	133
D1106079	7.9	75	117	D1106097	9.7	87	133
D1106080	8.0	75	117	D1106098	9.8	87	133
D1106081	8.1	75	117	D1106099	9.9	87	133
D1106082	8.2	75	117	D1106100	10.0	87	133
D1106083	8.3	75	117	D1106105	10.5	87	133
D1106084	8.4	75	117	D1106110	11.0	94	142
D1106085	8.5	75	117	D1106115	11.5	94	142
D1106086	8.6	81	125	D1106120	12.0	101	151
D1106087	8.7	81	125	D1106125	12.5	101	151
D1106088	8.8	81	125	D1106130	13.0	101	151

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP		Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
							◎		○			

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

DL510 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES

STUB
Germany HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

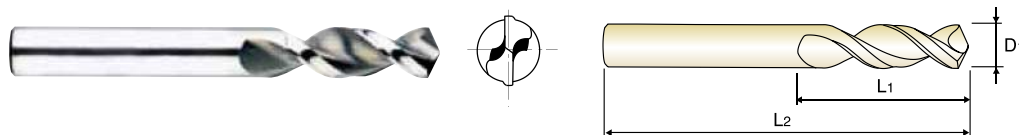
EXTRA KURZ
France Forets HSS-E, queue cylindrique pour perçage profond, série extra-courte

EXTRA-COURTE
Italy PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP

EXTRA CORTA

► **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.253

► **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
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

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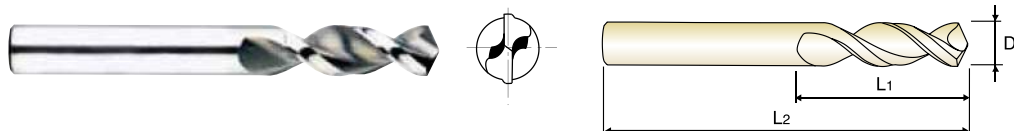
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES
STUB
 **HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT**
EXTRA KURZ
 **Forets HSS-E, queue cylindrique pour perçage profond, série extra-courte**
EXTRA-COURTE
 **PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP**
EXTRA CORTA

► **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.253

► **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
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				

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○					○	○				

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

DL508 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES

JOBBER
DL508 HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

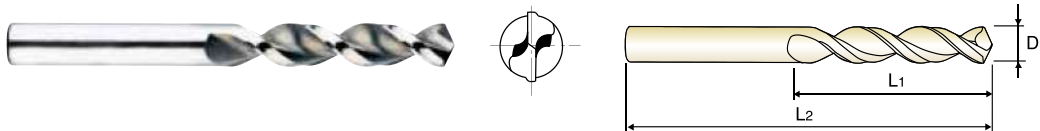
KURZ
DL508 Forets HSS-E, queue cylindrique pour perçage profond, série courte

COURTE
DL508 PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP

CORTA

► **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.253

► **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
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

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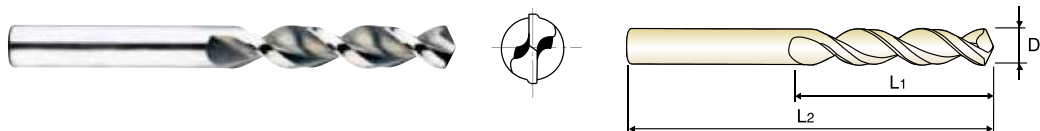
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES
JOBBER
 **HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT**
KURZ
 **Forets HSS-E, queue cylindrique pour perçage profond, série courte**
COURTE
 **PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP**
CORTA

► **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.253

► **DH100**
worm pattern drills

				Unit : mm			
EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂	EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
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				

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP		Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
○	○					○	○					

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

DL509 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES

LONG

LANG

LONGUE

LUNGA

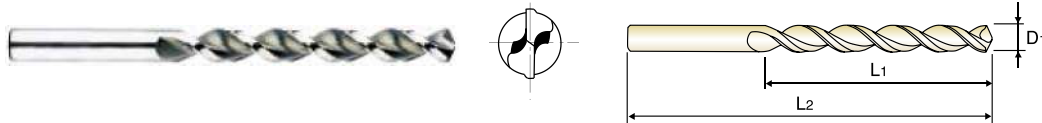
HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

Forets HSS-E, queue cylindrique pour perçage profond, série longue

PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP

► **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
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

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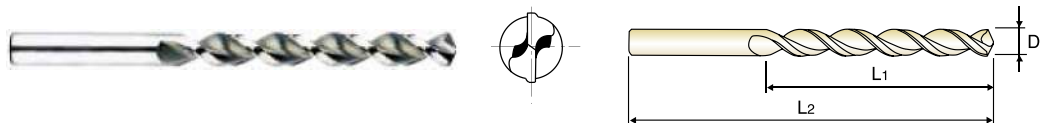
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES
LONG
■ HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT
LANG
■ Forets HSS-E, queue cylindrique pour perçage profond, série longue
LONGUE
■ PUNTA IN HSS-E, GAMBO CILINDRICO 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.



► **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		

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○					○	○				

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

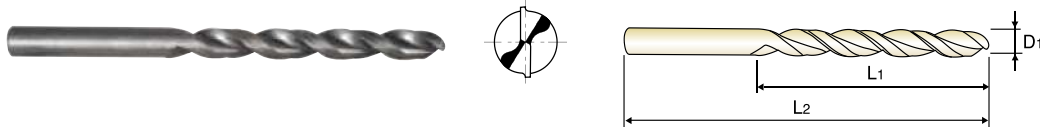
DL505 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES

JOBBER
HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT
KURZ
Forets HSS-E, queue cylindrique pour perçage profond, série courte
COURTE
PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP
CORTA

► **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.253**

► **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
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.

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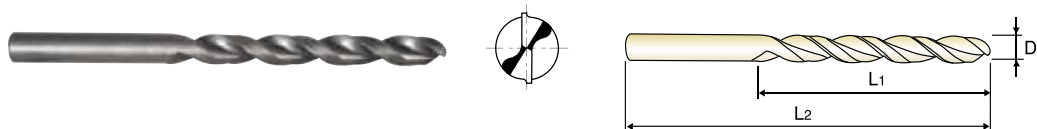
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES
JOBBER
 **HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT**
KURZ
 **Forets HSS-E, queue cylindrique pour perçage profond, série courte**
COURTE
 **PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP**
CORTA

► **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.253**

► **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
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.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○					○	○				

◎ : Excellent ○ : Good

 I-ONE
DRILLS

 I-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

DL504 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES

LONG

LANG

LONGUE

LUNGA

HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT

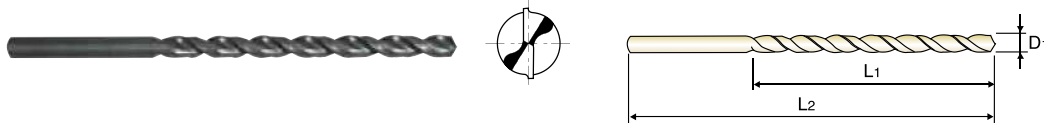
Forets HSS-E, queue cylindrique pour perçage profond, série longue

PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP

► 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 340

HSS-E

38°

h8

130°



P.253

► 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
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 TiAlN(DT504) are available on your request.

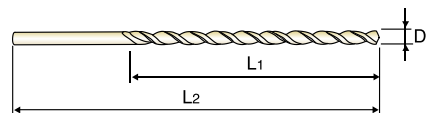
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for DEEP HOLES
EXTRA LONG
 **HSS-E, SPIRALBOHRER für TIEFLOCH mit ZYLINDERSCHAFT**
ÜBERLANG
 **Forets HSS-E, queue cylindrique pour perçage profond, Forme C, série extra-longue**
EXTRA-LONGUE
 **PUNTA IN HSS-E, GAMBO CILINDRICO PER FORI NON - STOP**
EXTRA 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.



P.253

► **DH100**
worm pattern drills

DT600 SERIES (DIN1869/1)

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
DT600020	2.0	85	125
DT600025	2.5	95	140
DT600030	3.0	100	150
DT600035	3.5	115	165
DT600040	4.0	120	175
DT600045	4.5	125	185
DT600050	5.0	135	195
DT600055	5.5	140	205
DT600060	6.0	140	205
DT600065	6.5	150	215
DT600070	7.0	155	225
DT600075	7.5	155	225
DT600080	8.0	165	240
DT600085	8.5	165	240
DT600090	9.0	175	250
DT600095	9.5	175	250
DT600100	10.0	185	265
DT600105	10.5	185	265

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

DT692 SERIES (DIN1869/2)

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
DT692030	3.0	130	190
DT692035	3.5	145	210
DT692040	4.0	150	220
DT692045	4.5	160	235
DT692050	5.0	170	245
DT692055	5.5	180	260
DT692060	6.0	180	260
DT692065	6.5	190	275
DT692070	7.0	200	290
DT692075	7.5	200	290
DT692080	8.0	210	305
DT692085	8.5	210	305
DT692090	9.0	220	320
DT692095	9.5	220	320
DT692100	10.0	235	340
DT692102	10.2	235	340

DT693 SERIES (DIN1869/3)

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
DT693040	4.0	190	280
DT693050	5.0	210	315
DT693060	6.0	225	330
DT693080	8.0	265	390
DT693100	10.0	295	430

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎					○	○				

i-ONE
DRILLS

i-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

TECHNICAL
DATA



STRAIGHT SHANK DRILLS

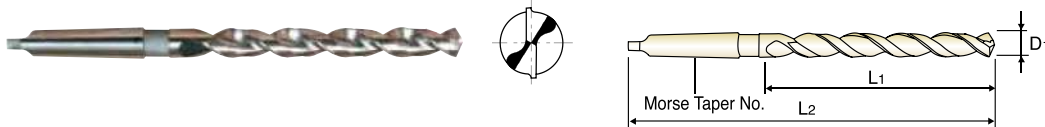
DL608 SERIES

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

LONG
LANG
LONGUE
LUNGA
■ HSS-E, SPIRALBOHRER für TIEFLOCH mit MORSEKEGELSCHAFT
■ Forets HSS-E, queue cône morse pour perçage profond, série longue
■ PUNTE IN HSS - E, ATTACCO CONO MORSE PER FORI NON - STOP

► **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.253

► **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
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					

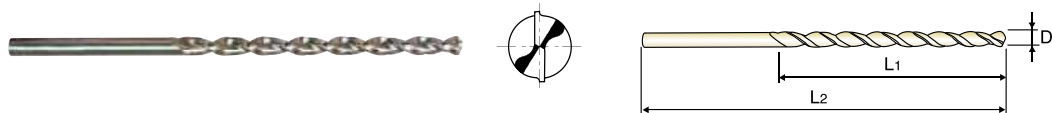
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎					○	○				

HSS-E, STRAIGHT SHANK TWIST DRILLS for ALUMINUM DEEP HOLES
■ HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT
■ Forets HSS-E, queue cylindrique pour ALU, perçage profond, série extra-longue
■ PUNTE HSS-E, GAMBO CILINDRICO PER FORATURE NON - STOP SU ALLUMINIO
EXTRA LONG
ÜBERLANG
EXTRA-LONGUE
EXTRA LUNGA

► **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 D ₁	Flute Length L ₁	Overall Length L ₂	EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
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

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	○					○	◎				

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



STRAIGHT SHANK DRILLS

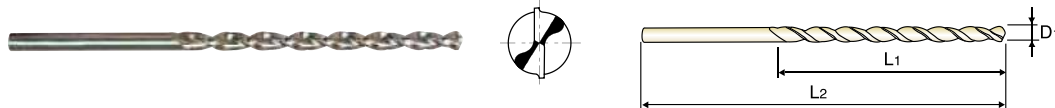
DL507 SERIES

HSS-E, STRAIGHT SHANK TWIST DRILLS for ALUMINUM DEEP HOLES

EXTRA LONG
HSS-E, SPIRALBOHRER für ALUMINIUM TIEFLOCH mit ZYLINDERSCHAFT
ÜBERLANG
Forets HSS-E, queue cylindrique pour ALU, perçage profond, série extra-longue
EXTRA-LONGUE
PUNTE HSS-E, GAMBO CILINDRICO PER FORATURE NON - STOP SU ALLUMINIO
EXTRA LUNGA

► **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.



P.254

► **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
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

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55								
◎	○				○	◎					



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

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

WORK MATERIAL	P												M	
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS		STAINLESS STEELS	
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		~ 270 N/mm ²		830 N/mm ²	
DRILLING SPEED	22 ~ 27 m/min		15 ~ 20 m/min		10 ~ 15 m/min		15 ~ 20 m/min		8 ~ 12 m/min		20 ~ 25 m/min		15 ~ 20 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.5	3380	0.025	2550	0.025	1900	0.015	2380	0.020	1400	0.015	3180	0.042	2550	0.025
3.0	2700	0.050	2000	0.050	1500	0.025	1880	0.050	1100	0.020	2500	0.050	2000	0.050
5.0	1700	0.063	1280	0.063	960	0.038	1190	0.063	700	0.025	1590	0.063	1280	0.063
8.0	1050	0.130	780	0.130	590	0.076	730	0.130	430	0.038	970	0.130	780	0.130
11.0	750	0.150	560	0.150	425	0.076	520	0.180	310	0.050	700	0.180	560	0.150
19.0	440	0.230	330	0.230	255	0.130	300	0.230	180	0.050	440	0.230	330	0.230
31.0	260	0.280	195	0.280	145	0.180	180	0.280	107	0.076	240	0.300	195	0.280

WORK MATERIAL	K		N								S	
	CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS		TITANIUM ALLOYS	
HARDNESS	~ HRC21											
STRENGTH	~ 800 N/mm ²										410 N/mm ²	
DRILLING SPEED	15 ~ 20 m/min		45 ~ 50 m/min		55 ~ 65 m/min		40 ~ 50 m/min		20 ~ 25 m/min		8 ~ 12 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.5	2250	0.025	6400	0.038	8600	0.038	6400	0.038	3380	0.025	1400	0.020
3.0	2000	0.050	5000	0.063	6800	0.063	5000	0.063	2700	0.050	1100	0.025
5.0	1280	0.063	3200	0.076	4300	0.076	3200	0.076	1700	0.063	700	0.038
8.0	780	0.130	2000	0.180	2600	0.180	2000	0.180	1050	0.130	430	0.076
11.0	560	0.150	1400	0.200	1900	0.200	1400	0.200	750	0.150	430	0.076
19.0	330	0.230	820	0.300	1100	0.300	820	0.300	440	0.230	180	0.130
31.0	195	0.280	490	0.380	660	0.380	490	0.380	260	0.280	107	0.180

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

CARBIDE

HSS

i-ONE DRILLS

i-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

TECHNICAL DATA



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

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

DL109 SERIES

WORK MATERIAL	P										M		K	
	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	
DRILLING SPEED	25 ~ 30 m/min		20 ~ 25 m/min		15 ~ 20 m/min		18 ~ 23 m/min		10 ~ 15 m/min		27 ~ 33 m/min		27 ~ 33 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2.0	5000	0.03	3750	0.03	2850	0.02	3500	0.02	2070	0.02	5000	0.03	5000	0.03
3.0	3750	0.04	2810	0.04	2150	0.02	2625	0.04	1560	0.02	3750	0.04	3750	0.04
4.0	2500	0.06	1870	0.06	1450	0.03	1750	0.06	1050	0.02	2500	0.06	2500	0.06
5.0	2085	0.07	1560	0.07	1205	0.04	1460	0.07	870	0.03	2085	0.07	2085	0.07
6.0	1670	0.08	1250	0.08	960	0.05	1170	0.09	690	0.03	1670	0.08	1670	0.08
7.0	1460	0.10	1095	0.10	840	0.06	1025	0.11	605	0.03	1460	0.10	1460	0.10
8.0	1250	0.13	940	0.13	720	0.08	880	0.13	520	0.04	1250	0.13	1250	0.13
9.0	1125	0.14	845	0.14	645	0.08	790	0.15	465	0.04	1125	0.14	1125	0.14
10.0	1000	0.14	750	0.14	570	0.08	700	0.16	410	0.05	1000	0.14	1000	0.14
11.0	925	0.15	685	0.15	525	0.08	640	0.18	380	0.05	925	0.15	925	0.15
12.0	850	0.16	620	0.16	480	0.08	580	0.19	350	0.05	850	0.16	850	0.16
13.0	785	0.17	575	0.17	445	0.09	540	0.20	325	0.05	785	0.17	785	0.17

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

HSS, TWIST DRILLS for BRASS/BRONZE, DIN 338 HSS, SPIRALBOHRER für MESSING/BRONZE, DIN338

D1100 SERIES

WORK MATERIAL	N			
	BRASS		BRONZE	
DRILLING SPEED	45 ~ 55 m/min		30 ~ 35 m/min	
DIAMETER	RPM	FEED	RPM	FEED
2.0	8750	0.080	5688	0.052
3.0	5850	0.100	3803	0.065
4.0	4400	0.120	2860	0.078
5.0	3500	0.140	2275	0.091
6.0	2900	0.160	1885	0.104
7.0	2500	0.180	1625	0.117
8.0	2200	0.200	1430	0.130
9.0	1950	0.220	1268	0.143
10.0	1750	0.250	1138	0.163
11.0	1600	0.270	1040	0.176
12.0	1450	0.290	943	0.189
13.0	1350	0.320	878	0.208

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



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

CARBIDE

HSS

HSS, TWIST DRILLS for ALUMINUM, DIN338 HSS, SPIRALBOHRER für ALUMINIUM, DIN338

D1106 SERIES

WORK MATERIAL	N			
	LONG CHIP ALUMINUM ALLOYS		SHORT CHIP ALUMINUM ALLOYS	
	40 ~ 50 m/min		30 ~ 35 m/min	
DRILLING SPEED DIAMETER	RPM	FEED	RPM	FEED
2.0	7950	0.08	5550	0.06
3.0	5300	0.10	3700	0.07
4.0	4000	0.12	2800	0.08
5.0	3200	0.14	2230	0.09
6.0	2650	0.16	1850	0.10
7.0	2250	0.18	1600	0.11
8.0	2000	0.20	1400	0.12
9.0	1750	0.22	1250	0.14
10.0	1600	0.25	1100	0.16
11.0	1450	0.28	1000	0.18
12.0	1330	0.32	930	0.20
13.0	1220	0.35	860	0.22

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

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

DL510, DL508, DL509, DL505, DL504, DT600, DT692, DT693, DL608 SERIES

WORK MATERIAL	P				K			
	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
	13 ~ 18 m/min		8 ~ 13 m/min		20 ~ 25 m/min		7 ~ 12 m/min	
HARDNESS	HRC15 ~ 30		HRC20 ~ 40					
STRENGTH	700 ~ 1000 N/mm ²		800 ~ 1200 N/mm ²					
DRILLING SPEED DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
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

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

i-ONE DRILLS

i-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

TECHNICAL DATA

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA
HSS-E, DH50 TYPE WORM PATTERN DRILLS
HSS-E, DH50 TYPE WORM PATTERN SPIRALBOHRER
DL507 SERIES

WORK MATERIAL	P		K		N	
	CARBON STEELS ALLOY STEELS		SOFT GREY CAST IRON		ALUMINUM ALLOYS	
HARDNESS	HRC15 ~ 30					
STRENGTH	700 ~ 1000 N/mm ²					
DRILLING SPEED	13 ~ 18 m/min		25 ~ 30 m/min		45 ~ 55 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
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

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

HSS



Leading Through Innovation



MORSE TAPER SHANK DRILLS

BOHRER MIT MK

- General Purpose, HSS & HSS-E & 8% Cobalt
- Für allgemeinen Einsatz, HSS und HSSE-Co8

SELECTION GUIDE

MORSE TAPER SHANK DRILLS

Morse Taper Shank Twist Drills for wide applications

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
DL205		HSS-E, TAPER SHANK TWIST DRILLS for HEAVY DUTY HSS-E, SPIRALBOHRER für HOHE LEISTUNGEN mit MORSEKEGELSCHAFT	<i>JOBBER</i> <i>KURZ</i>	D13.0 D30.0	258
D1205		HSS, TAPER SHANK TWIST DRILLS HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT	<i>JOBBER</i> <i>KURZ</i>	D5.0 D60.0	259
D1206		HSS, TAPER SHANK TWIST DRILLS HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT	<i>LONG</i> <i>LANG</i>	D13.0 D30.0	262
D1209		HSS, TAPER SHANK TWIST DRILLS HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT	<i>EXTRA LONG</i> <i>ÜBERLANG</i>	D13.0 D50.0	263
D1210		HSS, TAPER SHANK TWIST DRILLS HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT	<i>EXTRA LONG</i> <i>ÜBERLANG</i>	D13.0 D50.0	264
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					265

HSS MORSE TAPER SHANK DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				
◎	◎	○			○	○	○				
◎	◎	○			○	○	○				
◎	◎	○			○	○	○				
◎	◎	○			○	○	○				

YG MORSE TAPER SHANK DRILLS

DL205 SERIES

HSS-E, MORSE TAPER SHANK TWIST DRILLS for HEAVY DUTY

JOBBER

HSS-E, SPIRALBOHRER für HOHELEISTUNGEN mit MORSEKEGELSCHAFT

KURZ

Forets HSS-E, queue cône morse pour matériaux durs, série courte

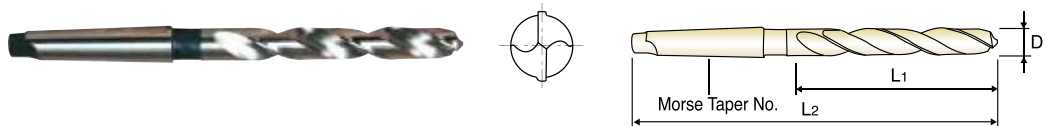
COURTE

HSS-E, PUNTE ELICOIDALI, ATTACCO CM PER LAVORAZIONI GRAVOSE

CORTA

► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphit.



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
DL205130	13.0	101	182	1	DL205220	22.0	150	248	2
DL205135	13.5	108	189	1	DL205225	22.5	155	253	2
DL205140	14.0	108	189	1	DL205230	23.0	155	253	2
DL205145	14.5	114	212	2	DL205235	23.5	155	276	3
DL205150	15.0	114	212	2	DL205240	24.0	160	281	3
DL205155	15.5	120	218	2	DL205245	24.5	160	281	3
DL205160	16.0	120	218	2	DL205250	25.0	160	281	3
DL205165	16.5	125	223	2	DL205255	25.5	165	286	3
DL205170	17.0	125	223	2	DL205260	26.0	165	286	3
DL205175	17.5	130	228	2	DL205265	26.5	165	286	3
DL205180	18.0	130	228	2	DL205270	27.0	170	291	3
DL205185	18.5	135	233	2	DL205275	27.5	170	291	3
DL205190	19.0	135	233	2	DL205280	28.0	170	291	3
DL205195	19.5	140	238	2	DL205285	28.5	175	296	3
DL205200	20.0	140	238	2	DL205290	29.0	175	296	3
DL205205	20.5	145	243	2	DL205295	29.5	175	296	3
DL205210	21.0	145	243	2	DL205300	30.0	175	296	3
DL205215	21.5	150	248	2					

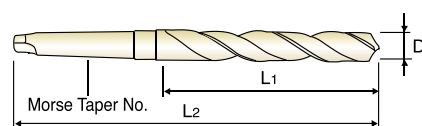
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				

HSS, MORSE TAPER SHANK TWIST DRILLS
JOBBER
 **HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT**
KURZ
 **Forets HSS, queue cône morse, série courte**
COURTE
 **PUNTE ELICOIDALI IN HSS, ATTACCO CM**
CORTA

- **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

- **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphit.



					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
D1205050	5.0	52	133	1	D120515A	15.25	120	218	2
D1205055	5.5	57	138	1	D1205155	15.5	120	218	2
D1205060	6.0	57	138	1	D120515B	15.75	120	218	2
D1205065	6.5	63	144	1	D1205160	16.0	120	218	2
D1205070	7.0	69	150	1	D120516A	16.25	125	223	2
D1205075	7.5	69	150	1	D1205165	16.5	125	223	2
D1205080	8.0	75	156	1	D120516B	16.75	125	223	2
D1205085	8.5	75	156	1	D1205170	17.0	125	223	2
D1205090	9.0	81	162	1	D120517A	17.25	130	228	2
D1205095	9.5	81	162	1	D1205175	17.5	130	228	2
D1205100	10.0	87	168	1	D120517B	17.75	130	228	2
D1205105	10.5	87	168	1	D1205180	18.0	130	228	2
D1205110	11.0	94	175	1	D120518A	18.25	135	233	2
D1205115	11.5	94	175	1	D1205185	18.5	135	233	2
D1205120	12.0	101	182	1	D120518B	18.75	135	233	2
D1205125	12.5	101	182	1	D1205190	19.0	135	233	2
D1205130	13.0	101	182	1	D120519A	19.25	140	238	2
D1205132	13.2	101	182	1	D1205195	19.5	140	238	2
D120513A	13.25	108	189	1	D120519B	19.75	140	238	2
D1205135	13.5	108	189	1	D1205200	20.0	140	238	2
D120513B	13.75	108	189	1	D120520A	20.25	145	243	2
D1205138	13.8	108	189	1	D1205205	20.5	145	243	2
D1205140	14.0	108	189	1	D120520B	20.75	145	243	2
D120514A	14.25	114	212	2	D1205210	21.0	145	243	2
D1205145	14.5	114	212	2	D120521A	21.25	150	248	2
D120514B	14.75	114	212	2	D1205215	21.5	150	248	2
D1205150	15.0	114	212	2	D120521B	21.75	150	248	2

► NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○	○				

◎ : Excellent ○ : Good

 I-ONE
DRILLS

 I-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

 TECHNICAL
DATA

YG MORSE TAPER SHANK DRILLS

D1205 SERIES

HSS, MORSE TAPER SHANK TWIST DRILLS

🇩🇪 HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT

🇫🇷 Forets HSS, queue cône morse, série courte

🇮🇹 PUNTE ELICOIDALI IN HSS, ATTACCO CM

JOBBER

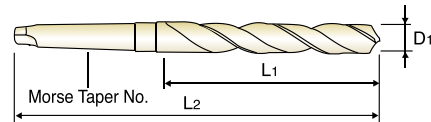
KURZ

COURTE

CORTA

► **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

► **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen, Graphit.



DIN 345

HSS

N 30°

1 ~ 5

h8

118°

P.265

P.265

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
D1205220	22.0	150	248	2	D120528B	28.75	175	296	3
D120522A	22.25	150	248	2	D1205290	29.0	175	296	3
D1205225	22.5	155	253	2	D120529A	29.25	175	296	3
D120522B	22.75	155	253	2	D1205295	29.5	175	296	3
D1205230	23.0	155	253	2	D120529B	29.75	175	296	3
D120523A	23.25	155	276	3	D1205300	30.0	175	296	3
D1205235	23.5	155	276	3	D120530A	30.25	180	301	3
D120523B	23.75	160	281	3	D1205305	30.5	180	301	3
D1205240	24.0	160	281	3	D120530B	30.75	180	301	3
D120524A	24.25	160	281	3	D1205310	31.0	180	301	3
D1205245	24.5	160	281	3	D120531A	31.25	180	301	3
D120524B	24.75	160	281	3	D1205315	31.5	180	301	3
D1205250	25.0	160	281	3	D120531B	31.75	185	306	3
D120525A	25.25	165	286	3	D1205320	32.0	185	334	4
D1205255	25.5	165	286	3	D1205325	32.5	185	334	4
D120525B	25.75	165	286	3	D1205330	33.0	185	334	4
D1205260	26.0	165	286	3	D1205335	33.5	185	334	4
D120526A	26.25	165	286	3	D1205340	34.0	190	339	4
D1205265	26.5	165	286	3	D1205345	34.5	190	339	4
D120526B	26.75	170	291	3	D1205350	35.0	190	339	4
D1205270	27.0	170	291	3	D1205355	35.5	190	339	4
D120527A	27.25	170	291	3	D1205360	36.0	195	344	4
D1205275	27.5	170	291	3	D1205365	36.5	195	344	4
D120527B	27.75	170	291	3	D1205370	37.0	195	344	4
D1205280	28.0	170	291	3	D1205375	37.5	195	344	4
D120528A	28.25	175	296	3	D1205380	38.0	200	349	4
D1205285	28.5	175	296	3	D1205385	38.5	200	349	4

► NEXT PAGE

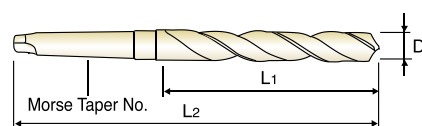
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				

HSS, MORSE TAPER SHANK TWIST DRILLS
JOBBER
 **HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT**
KURZ
 **Forets HSS, queue cône morse, série courte**
COURTE
 **PUNTE ELICOIDALI IN HSS, ATTACCO CM**
CORTA

- **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

- **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sinterisen, Graphit.



					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
D1205390	39.0	200	349	4	D1205475	47.5	215	364	4
D1205395	39.5	200	349	4	D1205480	48.0	220	369	4
D1205400	40.0	200	349	4	D1205485	48.5	220	369	4
D1205405	40.5	205	354	4	D1205490	49.0	220	369	4
D1205410	41.0	205	354	4	D1205495	49.5	220	369	4
D1205415	41.5	205	354	4	D1205500	50.0	220	369	4
D1205420	42.0	205	354	4	D1205505	50.5	225	374	4
D1205425	42.5	205	354	4	D1205510	51.0	225	412	5
D1205430	43.0	210	359	4	D1205520	52.0	225	412	5
D1205435	43.5	210	359	4	D1205530	53.0	225	412	5
D1205440	44.0	210	359	4	D1205540	54.0	230	417	5
D1205445	44.5	210	359	4	D1205550	55.0	230	417	5
D1205450	45.0	210	359	4	D1205560	56.0	230	417	5
D1205455	45.5	215	364	4	D1205570	57.0	235	422	5
D1205460	46.0	215	364	4	D1205580	58.0	235	422	5
D1205465	46.5	215	364	4	D1205590	59.0	235	422	5
D1205470	47.0	215	364	4	D1205600	60.0	235	422	5

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
○	○	○			○	○	○				

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

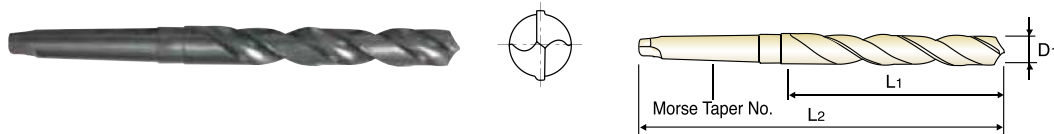
 SPADE
DRILLS

 TECHNICAL
DATA

HSS, MORSE TAPER SHANK TWIST DRILLS
**LONG
LANG
LONGUE
LUNGA**
 **HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT**
 **Forets HSS, queue cône morse, série longue**
 **PUNTE ELICOIDALI IN HSS, ATTACCO CM**

► **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling deep holes in steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

► **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Für Bohrungen mit Bohrbuchsen oder an tief liegenden Stellen.
 Zum Bohren von Stahl und Stahlguß, Grauß, Temperguß, Sphäroguß, Sinterisen, Neusilber und Graphit.



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
D1206130	13.0	134	215	1	D1206195	19.5	177	275	2
D1206135	13.5	142	223	1	D1206200	20.0	177	275	2
D1206140	14.0	142	223	1	D1206210	21.0	184	282	2
D1206145	14.5	147	245	2	D1206220	22.0	191	289	2
D1206150	15.0	147	245	2	D1206230	23.0	198	296	2
D1206155	15.5	153	251	2	D1206240	24.0	206	327	3
D1206160	16.0	153	251	2	D1206250	25.0	206	327	3
D1206165	16.5	159	257	2	D1206260	26.0	214	335	3
D1206170	17.0	159	257	2	D1206270	27.0	222	343	3
D1206175	17.5	165	263	2	D1206280	28.0	222	343	3
D1206180	18.0	165	263	2	D1206290	29.0	230	351	3
D1206185	18.5	171	269	2	D1206300	30.0	230	351	3
D1206190	19.0	171	269	2					

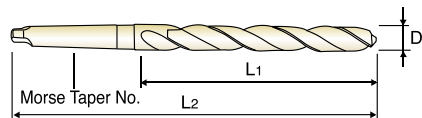
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				

HSS, MORSE TAPER SHANK TWIST DRILLS
 **HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT**
 **Forets HSS, queue cône morse, série extra-longue**
 **PUNTE ELICOIDALI IN HSS, ATTACCO CM**
EXTRA LONG
ÜBERLANG
EXTRA-LONGUE
EXTRA LUNGA

- **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling deep holes in steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.

- **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Für Bohrungen mit Bohrbuchsen oder an tief liegenden Stellen.
 Zum Bohren von Stahl und Stahlguß, Grauß, Temperguß, Sphäroguß, Sinterisen, Neusilber und Graphit


**DIN
1870/1**
HSS






P.265

										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		
D1209130	13.0	205	310	1	D1209270	27.0	305	460	3		
D1209135	13.5	220	325	1	D1209275	27.5	305	460	3		
D1209140	14.0	220	325	1	D1209280	28.0	305	460	3		
D1209145	14.5	220	340	2	D1209285	28.5	305	460	3		
D1209150	15.0	220	340	2	D1209290	29.0	305	460	3		
D1209155	15.5	230	355	2	D1209295	29.5	305	460	3		
D1209160	16.0	230	355	2	D1209300	30.0	305	460	3		
D1209165	16.5	230	355	2	D1209305	30.5	320	480	3		
D1209170	17.0	230	355	2	D1209310	31.0	320	480	3		
D1209175	17.5	245	370	2	D1209320	32.0	320	505	4		
D1209180	18.0	245	370	2	D1209330	33.0	320	505	4		
D1209185	18.5	245	370	2	D1209340	34.0	340	530	4		
D1209190	19.0	245	370	2	D1209350	35.0	340	530	4		
D1209195	19.5	260	385	2	D1209360	36.0	340	530	4		
D1209200	20.0	260	385	2	D1209370	37.0	340	530	4		
D1209205	20.5	260	385	2	D1209380	38.0	360	555	4		
D1209210	21.0	260	385	2	D1209390	39.0	360	555	4		
D1209215	21.5	270	405	2	D1209400	40.0	360	555	4		
D1209220	22.0	270	405	2	D1209410	41.0	360	555	4		
D1209225	22.5	270	405	2	D1209420	42.0	360	555	4		
D1209230	23.0	270	405	2	D1209430	43.0	385	585	4		
D1209235	23.5	270	425	3	D1209440	44.0	385	585	4		
D1209240	24.0	290	440	3	D1209450	45.0	385	585	4		
D1209245	24.5	290	440	3	D1209460	46.0	385	585	4		
D1209250	25.0	290	440	3	D1209470	47.0	385	585	4		
D1209255	25.5	290	440	3	D1209480	48.0	405	605	4		
D1209260	26.0	290	440	3	D1209490	49.0	405	605	4		
D1209265	26.5	290	440	3	D1209500	50.0	405	605	4		

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○	○			○	○	○				

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

 TECHNICAL
DATA



MORSE TAPER SHANK DRILLS

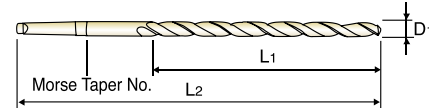
D1210 SERIES

HSS, MORSE TAPER SHANK TWIST DRILLS

HSS, SPIRALBOHRER mit MORSEKEGELSCHAFT
Forets HSS, queue cône morse, série extra-longue
PUNTE ELICOIDALI IN HSS, ATTACCO CM
EXTRA LONG
ÜBERLANG
EXTRA-LONGUE
EXTRA LUNGA

- **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Designed for drilling deep holes or deeply located holes. Drilling into steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, Spheroidal graphite cast iron, sintered iron, aluminum and aluminum alloys.

- **Oberflächenbehandlung** : Steam Homo(Schwarzoxidation)
 ► **Verwendung** : Standardbohrer zum Bohren extrem tiefer Löcher.
 Zum Bohren von Stahl und Stahlguß, Grauguß, Temperguß, Sphäroguß, Sintereisen und Graphit



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
D1210130	13.0	260	395	1	D1210270	27.0	385	580	3
D1210135	13.5	275	410	1	D1210275	27.5	385	580	3
D1210140	14.0	275	410	1	D1210280	28.0	385	580	3
D1210145	14.5	275	425	2	D1210285	28.5	385	580	3
D1210150	15.0	275	425	2	D1210290	29.0	385	580	3
D1210155	15.5	295	445	2	D1210295	29.5	385	580	3
D1210160	16.0	295	445	2	D1210300	30.0	385	580	3
D1210165	16.5	295	445	2	D1210310	31.0	410	610	3
D1210170	17.0	295	445	2	D1210320	32.0	410	635	4
D1210175	17.5	310	465	2	D1210330	33.0	410	635	4
D1210180	18.0	310	465	2	D1210340	34.0	430	665	4
D1210185	18.5	310	465	2	D1210350	35.0	430	665	4
D1210190	19.0	310	465	2	D1210360	36.0	430	665	4
D1210195	19.5	325	490	2	D1210370	37.0	430	665	4
D1210200	20.0	325	490	2	D1210380	38.0	460	695	4
D1210205	20.5	325	490	2	D1210390	39.0	460	695	4
D1210210	21.0	325	490	2	D1210400	40.0	460	695	4
D1210215	21.5	345	515	2	D1210410	41.0	460	695	4
D1210220	22.0	345	515	2	D1210420	42.0	460	695	4
D1210225	22.5	345	515	2	D1210430	43.0	490	735	4
D1210230	23.0	345	515	2	D1210440	44.0	490	735	4
D1210235	23.5	345	535	3	D1210450	45.0	490	735	4
D1210240	24.0	365	555	3	D1210460	46.0	490	735	4
D1210245	24.5	365	555	3	D1210470	47.0	490	735	4
D1210250	25.0	365	555	3	D1210480	48.0	510	765	4
D1210255	25.5	365	555	3	D1210490	49.0	510	765	4
D1210260	26.0	365	555	3	D1210500	50.0	510	765	4
D1210265	26.5	365	555	3					

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				



MORSE TAPER SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

CARBIDE

HSS

HSS-E, TWIST DRILLS for HEAVY DUTY, DIN345 HSS-E, SPIRALBOHRER für HOHELEISTUNGEN DIN 345

DL205 SERIES

WORK MATERIAL	P										M		K	
	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	
DRILLING SPEED	27 ~ 32 m/min		20 ~ 25 m/min		13 ~ 18 m/min		17 ~ 22 m/min		8 ~ 13 m/min		27 ~ 32 m/min		27 ~ 32 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
13.0	785	0.17	575	0.17	445	0.09	540	0.20	325	0.05	785	0.17	785	0.17
14.0	720	0.18	530	0.18	410	0.10	500	0.20	300	0.05	720	0.18	720	0.18
16.0	635	0.20	475	0.20	365	0.11	445	0.22	265	0.05	635	0.20	635	0.20
18.0	550	0.22	420	0.22	320	0.12	390	0.23	230	0.05	550	0.22	550	0.22
20.0	500	0.23	380	0.23	290	0.13	355	0.23	210	0.06	500	0.23	500	0.23
22.0	450	0.24	340	0.24	260	0.14	320	0.23	190	0.06	450	0.24	450	0.24
24.0	420	0.25	320	0.25	240	0.15	295	0.23	175	0.07	420	0.25	420	0.25
26.0	390	0.26	300	0.26	220	0.16	270	0.23	160	0.07	390	0.26	390	0.26
28.0	360	0.27	275	0.27	205	0.17	250	0.23	150	0.07	360	0.27	360	0.27
30.0	330	0.28	250	0.28	190	0.18	230	0.23	140	0.08	330	0.28	330	0.28

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

HSS DRILLS DIN345, DIN341, DIN1870 HSS SPIRALBOHRER DIN 345, DIN 341, DIN 1870

D1205, D1206, D1209, D1210 SERIES

WORK MATERIAL	P										M	
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS	
HARDNESS			~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38			
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		~ 270 N/mm ²	
DRILLING SPEED	20 ~ 25 m/min		18 ~ 22 m/min		10 ~ 15 m/min		13 ~ 18 m/min		8 ~ 12 m/min		20 ~ 25 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
13.0	645	0.17	480	0.17	370	0.09	440	0.17	265	0.05	645	0.17
19.0	440	0.23	330	0.23	255	0.13	300	0.23	180	0.05	440	0.23
32.0	260	0.28	195	0.28	145	0.18	180	0.28	107	0.08	240	0.30
50.0	165	0.33	125	0.33	93	0.20	115	0.33	68	0.08	150	0.43
60.0	140	0.40	105	0.40	78	0.23	95	0.40	57	0.10	125	0.48

WORK MATERIAL	K		N						S	
	CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS	
HARDNESS	~ HRC21									
STRENGTH	~ 800 N/mm ²								410 N/mm ²	
DRILLING SPEED	15 ~ 20 m/min		40 ~ 50 m/min		55 ~ 65 m/min		40 ~ 50 m/min		20 ~ 25 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
13.0	480	0.17	1200	0.26	1600	0.26	1200	0.26	645	0.17
19.0	330	0.23	820	0.30	1100	0.30	820	0.30	440	0.23
32.0	195	0.28	490	0.38	660	0.38	490	0.38	260	0.28
50.0	125	0.33	310	0.46	415	0.46	310	0.46	165	0.33
60.0	105	0.40	260	0.50	345	0.50	260	0.50	140	0.40

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

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA



Global Cutting Tool Leader **YG-1**





CARBIDE & HSS

Leading Through Innovation



NC-SPOTTING DRILLS

NC-ANBOHRER

- Centering and Chamfering of Holes
- Zum Zentrieren und Anfasen

SELECTION GUIDE

NC-SPOTTING DRILLS

Centering and Chamfering of Holes

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D5306 D5307		CARBIDE, NC-SPOTTING DRILLS 90°, 120° VOLLHARTMETALL NC-ANBOHRER 90°, 120°	D6.0	D20.0	270
D5320		CARBIDE, NC-SPOTTING DRILLS 142° VOLLHARTMETALL NC-ANBOHRER 142°	D3.0	D20.0	271
D2306 D2321		HSSCo8, NC-SPOTTING DRILLS 90° HSSCo8, NC-ANBOHRER 90°	D3.0	D20.0	272
D2307 D2322		HSSCo8, NC-SPOTTING DRILLS 120° HSSCo8, NC-ANBOHRER 120°	D3.0 D6.0	D20.0 D12.0	273
D2320 D2323		HSSCo8, NC-SPOTTING DRILLS 142° HSSCo8, NC-ANBOHRER 142°	D3.0 D6.0	D20.0 D12.0	274
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					275

SOLID CARBIDE & HSS NC-SPOTTING DRILLS

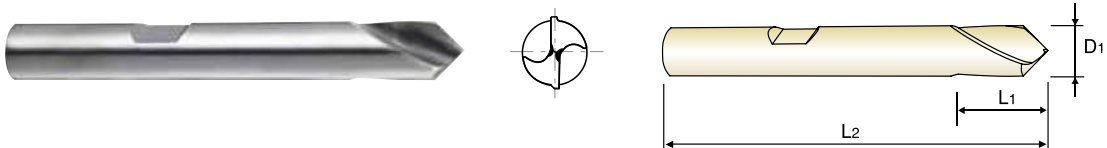
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○	○				○
◎	◎	◎			○	○	○				○
◎	◎				○		○		○		
◎	◎				○		○		○		
◎	◎				○		○		○		

CARBIDE, NC-SPOTTING DRILLS 90°, 120°
 **VOLLHARTMETALL NC-ANBOHRER 90°, 120°**
 **Forets carbure à pointer NC 90°, 120°**
 **PUNTE IN MD A CENTRARE NC 90°, 120°**

► **Application** : For more precise centering work on NC/CNC machines.
The large diameter of the tool permits chamfering work after centering continuously.

► **Verwendung** : Auf NC-Maschinen, Lehrenbohrwerken u.a. kapitalintensiven Bohrwerken, zum Zentrieren und Anfasen von Gewindebohrungen in einem Arbeitsgang. Besonders geeignet zum Anbohren von hochfesten Stählen, Stahlguß, Grauguß, Hartguß, Mangan-Hartstahl, CrNi-Stählen, Bronze, Leicht- und Buntmetallen.


NC-Spotting drills 90°
NC-Anbohrer 90°

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5306060	6.0	13	50
D5306080	8.0	23	60
D5306100	10.0	24	70
D5306120	12.0	24	70
D5306160	16.0	29	75
D5306200	20.0	35	100

NC-Spotting drills 120°
NC-Anbohrer 120°

Unit : mm

EDP No.	Drill Diameter D ₁	Flute Length L ₁	Overall Length L ₂
D5307060	6.0	13	50
D5307080	8.0	23	60
D5307100	10.0	24	70
D5307120	12.0	24	70
D5307160	16.0	29	75
D5307200	20.0	35	100

► TiN(D6306, D6307), TiCN(DG306, DG307) and TiAlN(DH306, DH307) are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○	○				○

CARBIDE, NC-SPOTTING DRILLS 142°

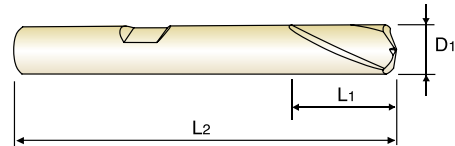
 **VOLLHARTMETALL NC-ANBOHRER 142°**

 **Forets carbure à pointer NC 142°**

 **PUNTE IN MD A CENTRARE NC 142°**

► Application : For more precise centering work on NC/CNC machines.
 The large diameter of the tool permits chamfering work after centering continuously.

► Verwendung : Auf NC-Maschinen, Lehrenbohrwerken u.a. kapitalintensiven Bohrwerken, zum Zentrieren und Anfasen von Gewindebohrungen in einem Arbeitsgang. Besonders geeignet zum Anbohren von hochfesten Stählen, Stahlguß, Grauguß, Hartguß, Mangan-Hartstahl, CrNi-Stählen, Bronze, Leicht- und Buntmetallen.


**NC-Spotting drills 142°
NC-Anbohrer 142°**

Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
● D5320030	3.0	8	32
● D5320040	4.0	10	40
● D5320050	5.0	13	50
D5320060	6.0	13	50
D5320080	8.0	23	60
D5320100	10.0	24	70
D5320120	12.0	24	70
D5320160	16.0	29	75
D5320200	20.0	35	100

● with plain shank

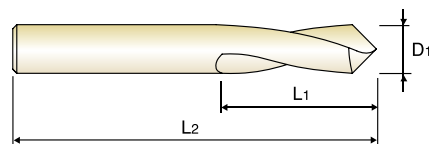
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○	○				○


HSSCo8, NC-SPOTTING DRILLS 90°
HSSCo8, NC-ANBOHRER 90°
Forets HSSCo8 à pointer NC 90°
PUNTE A CENTRARE NC 90°, HSSCo8

► **Application** : For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

► **Verwendung** : Für positionsgenaueres und schnelles Anbohren mit NC/CNC-Maschinen und Bearbeitungszentren, die Ausführung mit Spitzenwinkel 90° ermöglicht sowohl ein Zentrieren, als auch das Vorbohren für einen nächstgrößeren Durchmesser.


LONG LENGTH

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2306030	3.0	12	46
D2306040	4.0	12	55
D2306050	5.0	15	60
D2306060	6.0	20	66
D2306080	8.0	25	79
D2306100	10.0	25	89
D2306120	12.0	30	102
D2306160	16.0	35	115
D2306200	20.0	40	131

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2321030	3.0	12	80
D2321040	4.0	12	100
D2321050	5.0	15	120
D2321060	6.0	20	140
D2321080	8.0	25	140
D2321100	10.0	25	170
D2321120	12.0	30	170
D2321160	16.0	35	200
D2321200	20.0	40	200

► TiN, TiCN and TiAlN are available on your request.

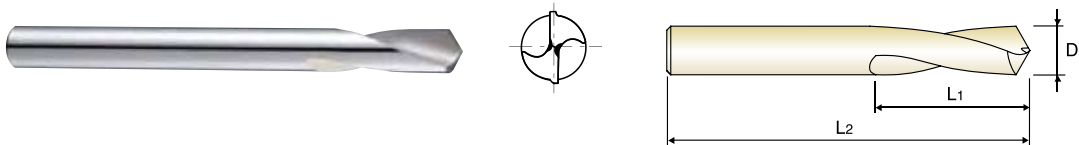
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○		○		○		

HSSCo8, NC-SPOTTING DRILLS 120°
 **HSSCo8, NC-ANBOHRER 120°**
 **Forets HSSCo8 à pointer NC 120°**
 **PUNTE A CENTRARE NC 120°, HSSCo8**

► **Application** : For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

► **Verwendung** : Für positionsgenaueres und schnelles Anbohren mit NC/CNC-Maschinen und Bearbeitungszentren, die Ausführung mit Spitzenwinkel 90° ermöglicht sowohl ein Zentrieren, als auch das Vorbohren für einen nächstgrößeren Durchmesser.


LONG LENGTH

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2307030	3.0	12	46
D2307040	4.0	12	55
D2307050	5.0	15	60
D2307060	6.0	20	66
D2307080	8.0	25	79
D2307100	10.0	25	89
D2307120	12.0	30	102
D2307160	16.0	35	115
D2307200	20.0	40	131

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2322060	6.0	20	140
D2322080	8.0	25	140
D2322100	10.0	25	170
D2322120	12.0	30	170

► TiN, TiCN and TiAlN are available on your request.

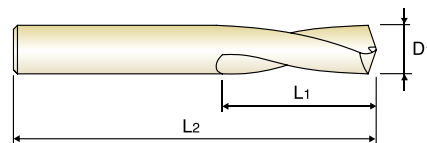
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎				○		○		○		

HSSCo8, NC-SPOTTING DRILLS 142°
 **HSSCo8, NC-ANBOHRER 142°**
 **Forets HSSCo8 à pointer NC 142°**
 **PUNTE A CENTRARE NC 142°, HSSCo8**

► **Application** : For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

► **Verwendung** : Für positionsgenaueres und schnelles Anbohren mit NC/CNC-Maschinen und Bearbeitungszentren, die Ausführung mit Spitzenwinkel 90° ermöglicht sowohl ein Zentrieren, als auch das Vorbohren für einen nächstgrößeren Durchmesser.

**LONG LENGTH**

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2320030	3.0	12	46
D2320040	4.0	12	55
D2320050	5.0	15	60
D2320060	6.0	20	66
D2320080	8.0	25	79
D2320100	10.0	25	89
D2320120	12.0	30	102
D2320160	16.0	35	115
D2320200	20.0	40	131

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2323060	6.0	20	140
D2323080	8.0	25	140
D2323100	10.0	25	170
D2323120	12.0	30	170

► TiN, TiCN and TiAlN are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○		○		○		



NC-SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

CARBIDE NC - SPOTTING DRILLS 90°, 120°, 142° with FLATTED SHANK VOLLHARTMETALL NC-ANBOHRER 90°, 120°, 142° MIT MITNAHME FLÄCHE

D5306, D5307, D5320 SERIES

WORK MATERIAL	P				M		K				N				S	
	NON-ALLOY STEELS		ALLOY STEELS		STAINLESS STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON		AL-SI ALLOYS, SI<10%		AL-SI ALLOYS, SI>10%		TI, NI ALLOY STEELS	
STRENGTH	< 700 N/mm ²		< 1000 N/mm ²				< HB240, GG25		< HB300, GG40							
DRILLING SPEED	65 ~ 75 m/min		45 ~ 55 m/min		35 ~ 40 m/min		90 ~ 100 m/min		65 ~ 75 m/min		145 ~ 165 m/min		115 ~ 135 m/min		35 ~ 40 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6.0	3900	0.08	2850	0.08	2000	0.07	5200	0.09	3800	0.09	8800	0.11	7100	0.11	1950	0.07
8.0	2900	0.10	2150	0.10	1500	0.09	3900	0.12	2850	0.12	6600	0.15	5350	0.15	1450	0.09
10.0	2350	0.12	1700	0.12	1200	0.11	3100	0.16	2300	0.16	5300	0.19	4250	0.19	1200	0.11
12.0	1950	0.14	1450	0.14	1000	0.13	2600	0.20	1900	0.20	4450	0.23	3550	0.23	980	0.13
16.0	1450	0.17	1100	0.17	755	0.17	1950	0.24	1450	0.24	3300	0.27	2650	0.27	735	0.17
20.0	1150	0.19	850	0.19	590	0.20	1550	0.28	1150	0.28	2650	0.31	2150	0.31	590	0.20

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

CARBIDE

HSS

i-ONE
DRILLS

i-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

TECHNICAL
DATA

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA**HSSCo8, NC-SPOTTING DRILLS 90°, 120°, 142°**
HSSCo8, NC-ANBOHRER 90°, 120°, 142°**D2306, D2321, D2307, D2322, D2320, D2323** SERIES

WORK MATERIAL	P						M		N	
	CARBON STEELS		ALLOY STEELS		ALLOY STEELS, TOOL STEELS, HARDENED STEELS		STAINLESS STEELS		ALUMINUM, ALUMINUM ALLOYS	
DRILLING SPEED	18 ~ 23 m/min		15 ~ 20 m/min		8 ~ 12 m/min		8 ~ 12 m/min		55 ~ 65 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3.0	2460	0.06	2110	0.06	1080	0.06	940	0.06	7040	0.14
4.0	1850	0.07	1580	0.07	800	0.07	700	0.07	5280	0.15
5.0	1510	0.08	1300	0.08	670	0.08	580	0.08	4400	0.17
6.0	1170	0.09	1030	0.09	540	0.09	460	0.09	3520	0.19
8.0	880	0.11	790	0.11	400	0.11	350	0.11	2640	0.22
10.0	700	0.12	630	0.12	320	0.12	290	0.12	2110	0.25
12.0	590	0.14	530	0.14	260	0.14	240	0.14	1760	0.28
16.0	460	0.20	400	0.20	200	0.20	180	0.20	1320	0.33
20.0	350	0.24	320	0.24	150	0.24	140	0.24	1060	0.45

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

CARBIDE & HSS



Leading Through Innovation



CENTER DRILLS

ZENTRIERBOHRER

- General Purpose
- Für allgemeinen Einsatz

SELECTION GUIDE

CENTER DRILLS

General Purpose

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
D5303		CARBIDE, CENTER DRILLS / FORM A VOLLHARTMETALL, ZENTRIERBOHRER / FORM A	D1.0	D6.3	280
DV303		HSS-EX, CENTER DRILLS / FORM A HSS-EX, ZENTRIERBOHRER / FORM A	D0.5	D6.3	281
DV333		HSS-EX, CENTER DRILLS / FORM A HSS-EX, ZENTRIERBOHRER / FORM A	D1.6	D6.3	281
DV334		HSS-EX, CENTER DRILLS EXTRA LONG / FORM A HSS-EX, ZENTRIERBOHRER / FORM A	D1.0	D5.0	282
D1303		HSS, CENTER DRILLS / FORM A HSS, ZENTRIERBOHRER / FORM A	D0.5	D10.0	283
D1343		HSS, CENTER DRILLS LEFT HELIX / FORM A HSS, ZENTRIERBOHRER / FORM A	D0.5	D8.0	283
D1313		HSS, CENTER DRILLS / FORM B HSS, ZENTRIERBOHRER / FORM B	D1.0	D6.3	284
D1353		HSS, CENTER DRILLS LEFT HELIX / FORM B HSS, ZENTRIERBOHRER / FORM B	D2.0	D6.3	284
D1363		HSS, CENTER DRILLS / FORM R HSS, ZENTRIERBOHRER / FORM R	D0.5	D8.0	285
D1373		HSS, CENTER DRILLS LEFT HELIX / FORM R HSS, ZENTRIERBOHRER / FORM R	D0.8	D5.0	285
DV383		HSS-EX, CENTER DRILLS / FORM R HSS-EX, ZENTRIERBOHRER / FORM R	D1.6	D6.3	286
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					287

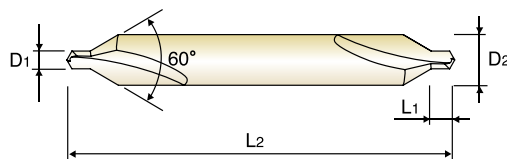
SOLID CARBIDE & HSS CENTER DRILLS

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○	○	○		○
◎	◎				○	○	○	○	○		○
◎	◎				○	○	○	○	○		○
◎	◎				○	○	○	○	○		○
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◎	◎				○	○	○	○	○		○
◎	◎				○	○	○	○	○		○
◎	◎				○	○	○	○	○		○

CARBIDE

HSS


**CENTER
DRILLS**
D5303 SERIES**CARBIDE, CENTER DRILLS / FORM A**
 **VOLLHARTMETALL, ZENTRIERBOHRER / FORM A**
 **Forets carbure à centrer / Forme A**
 **PUNTE A CENTRARE IN MD / FORMA A**


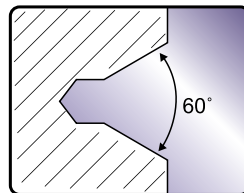





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FORM A (60°)

EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
D5303010	1.0	3.15	1.3	31.5
D5303912	1.25	3.15	1.6	31.5
D5303016	1.6	4	2	35.5
D5303020	2.0	5	2.5	40
D5303025	2.5	6.3	3.1	45
D5303931	3.15	8	3.9	50
D5303040	4.0	10	5	56
D5303050	5.0	12.5	6.3	63
D5303063	6.3	16	8	71



◎ : Excellent ○ : Good

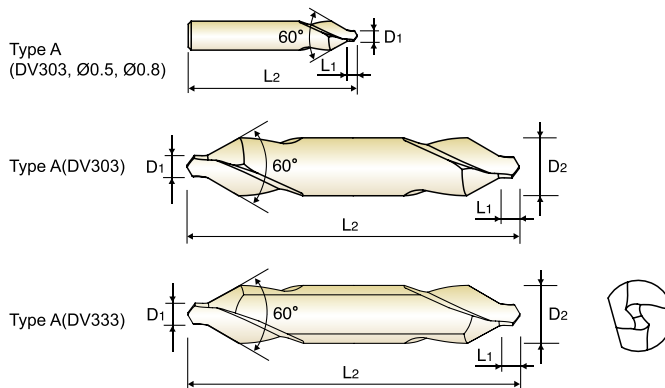
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎	○			○	○	○	○	○		○

HSS-EX, CENTER DRILLS / FORM A

 **HSS-EX, ZENTRIERBOHRER / FORM A**

 **Forets HSS-EX à centrer / Forme A**

 **PUNTE A CENTRARE PER TORNİ IN HSS-EX / FORMA A**



FORM A (60°)

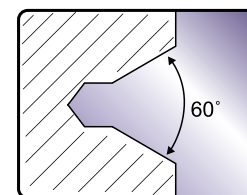
EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
DV303005	0.5	3.15	0.8	25
DV303008	0.8	3.15	1.1	25
DV303010	1.0	3.15	1.3	31.5
DV303912	1.25	3.15	1.6	31.5
DV303016	1.6	4	2	35.5
DV303020	2.0	5	2.5	40
DV303025	2.5	6.3	3.1	45
DV303931	3.15	8	3.9	50
DV303040	4.0	10	5	56
DV303050	5.0	12.5	6.3	63
DV303063	6.3	16	8	71

► Under 1.0mm : Single End

FORM A (60°), FLAT

EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
DV333016	1.6	4	2	35.5
DV333020	2.0	5	2.5	40
DV333025	2.5	6.3	3.1	45
DV333931	3.15	8	3.9	50
DV333040	4.0	10	5	56
DV333050	5.0	12.5	6.3	63
DV333063	6.3	16	8	71

Unit : mm



P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○	○	○		○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

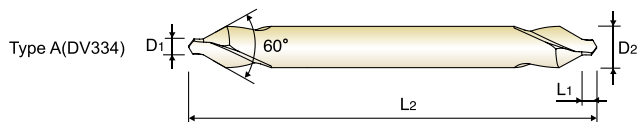
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

TECHNICAL
DATA

HSS-EX, CENTER DRILLS EXTRA LONG / FORM A
 **HSS-EX, ZENTRIERBOHRER / FORM A**
 **Forets HSS-EX à centrer / Forme A, série extra-longue**
 **PUNTE A CENTRARE PER TORNII IN HSS-EX / FORMA A**
**HSS
EX**

h8

k12

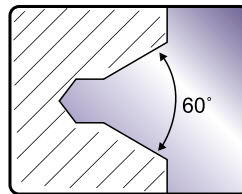
120°



P.288

EXTRA LONG / FORM A (60°)

EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
DV334010	1.0	4	1.3	120
DV334016	1.6	5	2	120
DV334020	2.0	6	2.5	120
DV334025	2.5	8	3.1	120
DV334931	3.15	10	3.9	120
DV334040	4.0	12	5	120
DV334050	5.0	14	6.3	120

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLS**CENTER
DRILLS**SPADE
DRILLSTECHNICAL
DATA

◎ : Excellent ○ : Good

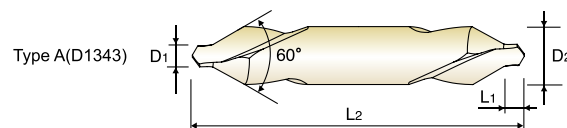
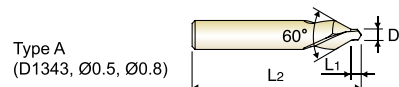
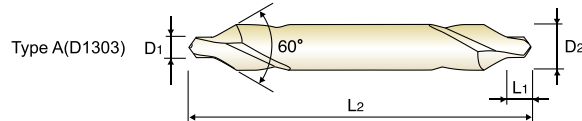
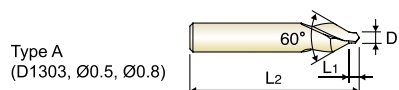
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○	○	○		○

HSS, CENTER DRILLS / FORM A

 **HSS, ZENTRIERBOHRER / FORM A**

 **Forets HSS à centrer / Forme A**

 **PUNTE A CENTRARE PER TORNÌ IN HSS / FORMA A**



FORM A (60°)

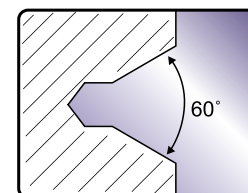
EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
D1303005	0.5	3.15	0.8	25
D1303008	0.8	3.15	1.1	25
D1303010	1.0	3.15	1.3	31.5
D1303912	1.25	3.15	1.6	31.5
D1303016	1.6	4	2	35.5
D1303020	2.0	5	2.5	40
D1303025	2.5	6.3	3.1	45
D1303931	3.15	8	3.9	50
D1303040	4.0	10	5	56
D1303050	5.0	12.5	6.3	63
D1303063	6.3	16	8	71
D1303080	8.0	20	10.1	80
D1303100	10.0	25	12.8	100

► Under 1.0mm : Single End

LEFT HELIX / FORM A (60°)

EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
D1343005	0.5	3.15	0.8	25
D1343008	0.8	3.15	1.1	25
D1343010	1.0	3.15	1.3	31.5
D1343912	1.25	3.15	1.6	31.5
D1343016	1.6	4	2	35.5
D1343020	2.0	5	2.5	40
D1343025	2.5	6.3	3.1	45
D1343931	3.15	8	3.9	50
D1343040	4.0	10	5	56
D1343050	5.0	12.5	6.3	63
D1343063	6.3	16	8	71
D1343080	8.0	20	10.1	80

► Under 1.0mm : Single End



P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○	○	○		○

◎ : Excellent ○ : Good

i-ONE
DRILLS

i-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

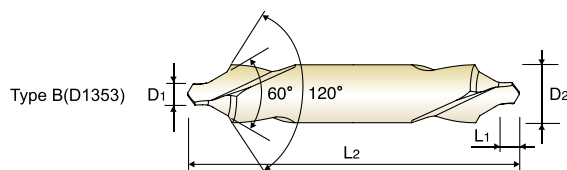
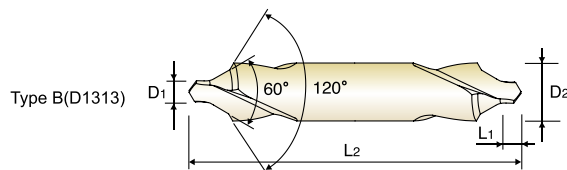
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

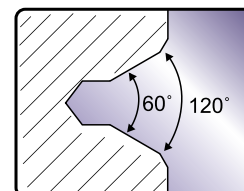
TECHNICAL
DATA


HSS, CENTER DRILLS / FORM B
Germany HSS, ZENTRIERBOHRER / FORM B
France Forets HSS à centrer / Forme B
Italy PUNTE A CENTRARE PER TORNII IN HSS / FORMA B

FORM B (60° + 120°)
LEFT HELIX / FORM B (60° + 120°)

Unit : mm

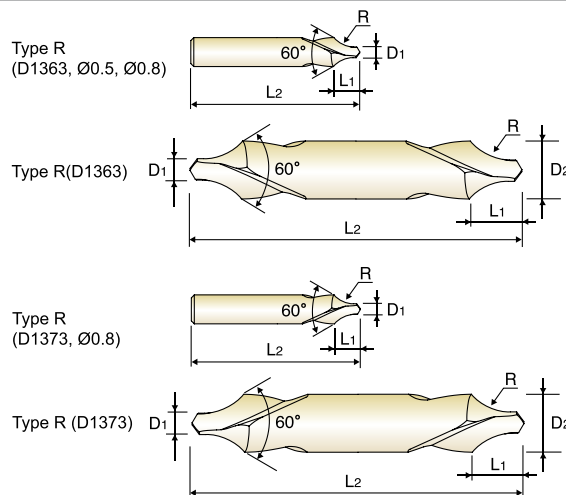
EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
D1313010	1.0	4	1.3	35.5
D1313912	1.25	5	1.6	40
D1313016	1.6	6.3	2	45
D1313020	2.0	8	2.5	50
D1313025	2.5	10	3.1	55
D1313931	3.15	11.2	3.9	60
D1313040	4.0	14	5	67
D1313050	5.0	18	6.3	75
D1313063	6.3	20	8	80

EDP No.	Drill Diameter D1	Shank Diameter D2	Pilot Length L1	Overall Length L2
D1353020	2.0	8	2.5	50
D1353025	2.5	10	3.1	55
D1353931	3.15	11.2	3.9	60
D1353040	4.0	14	5	67
D1353063	6.3	20	8	80



◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRc55~							
◎	◎				○	○	○	○	○		○

HSS, CENTER DRILLS / FORM R
■ HSS, ZENTRIERBOHRER / FORM R
■ Forets HSS à centrer / Forme R
■ PUNTE A CENTRARE PER TORNİ IN HSS / FORMA R

FORM R

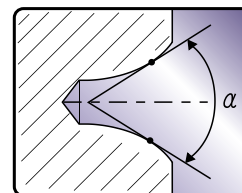
EDP No.	Drill Diameter	Shank Diameter	Pilot Length (Include Radius)	Overall Length	Radius
	D1	D2	L1	L2	R
D1363005	0.5	3.15	2.12	25	1.25
D1363008	0.8	3.15	2.65	25	2
D1363010	1.0	3.15	3	31.5	2.5
D1363912	1.25	3.15	3.35	31.5	3.15
D1363016	1.6	4	4.25	35.5	4
D1363020	2.0	5	5.3	40	5
D1363025	2.5	6.3	6.7	45	6.3
D1363931	3.15	8	8.5	50	8
D1363040	4.0	10	10.6	56	10
D1363050	5.0	12.5	13.2	63	12.5
D1363063	6.3	16	17	71	16
D1363080	8.0	20	21.2	80	20

▶ Under 1.0mm : Single End

LEFT HELIX / FORM R

EDP No.	Drill Diameter	Shank Diameter	Pilot Length (Include Radius)	Overall Length	Radius
	D1	D2	L1	L2	R
D1373008	0.8	3.15	2.65	25	2
D1373010	1.0	3.15	3	31.5	2.5
D1373912	1.25	3.15	3.35	31.5	3.15
D1373016	1.6	4	4.25	35.5	4
D1373020	2.0	5	5.3	40	5
D1373025	2.5	6.3	6.7	45	6.3
D1373931	3.15	8	8.5	50	8
D1373040	4.0	10	10.6	56	10
D1373050	5.0	12.5	13.2	63	12.5

▶ Under 1.0mm : Single End



P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
○	○				○	○	○	○	○		○

◎ : Excellent ○ : Good

 i-ONE
DRILLS

 i-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

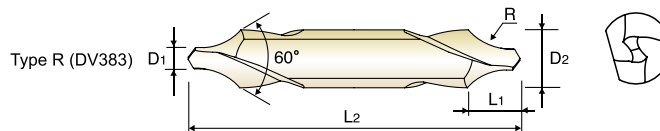
 TAPER
SHANK
DRILLS

 NC-SPOTTING
DRILLS

 CENTER
DRILLS

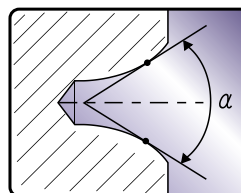
 SPADE
DRILLS

 TECHNICAL
DATA

HSS-EX, CENTER DRILLS / FORM R
 **HSS-EX, ZENTRIERBOHRER / FORM R**
 **Forets HSS-EX à centrer / Forme R**
 **PUNTE A CENTRARE PER TORNİ IN HSS-EX / FORMA R**
**FORM R / FLAT**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Pilot Length (Include Radius)	Overall Length	Radius
	D1	D2	L1	L2	R
DV383016	1.6	4	4.25	35.5	4
DV383020	2.0	5	5.3	40	5
DV383025	2.5	6.3	6.7	45	6.3
DV383931	3.15	8	8.5	50	8
DV383040	4.0	10	10.6	56	10
DV383050	5.0	12.5	13.2	63	12.5
DV383063	6.3	16	17	71	16



◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎				○	○	○	○	○		○

CARBIDE, CENTER DRILLS
VOLLHARTMETALL ZENTRIERBOHRER

D5303 SERIES

WORK MATERIAL HARDNESS DIAMETER	P						M	
	MILD STEELS		ALLOY STEELS				STAINLESS STEELS	
	< 700 N/mm ²		~ HRc 23		~ HRc 32			
	SPEED	FEED	SPEED	FEED	SPEED	FEED	SPEED	FEED
1.0	30 ~ 50	0.01~0.03	30 ~ 50	0.01~0.03	20 ~ 40	0.01~0.03	15 ~ 25	0.01~0.03
2.0		0.01~0.035		0.01~0.035		0.01~0.035		0.01~0.035
3.0		0.015~0.05		0.015~0.05		0.015~0.05		0.015~0.05
4.0		0.02~0.06		0.02~0.06		0.02~0.06		0.02~0.06
5.0		0.03~0.07		0.03~0.07		0.03~0.07		0.03~0.07
6.0		0.04~0.07		0.04~0.07		0.04~0.07		0.04~0.07

SPEED = m/min.
FEED = mm/rev.

i-ONE
DRILLS

i-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

TECHNICAL
DATA

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA
HSS & HSS-EX, CENTER DRILLS
HSS & HSS-EX, ZENTRIERBOHRER
DV303, DV333, DV334, D1303, D1343, D1313, D1353, D1363, D1373, DV383 SERIES

WORK MATERIAL	P						M	
	MILD STEELS		ALLOY STEELS				STAINLESS STEELS	
	< 700 N/mm ²		~ HRc 23		~ HRc 32			
HARDNESS DIAMETER	SPEED	FEED	SPEED	FEED	SPEED	FEED	SPEED	FEED
2.0	30 ~ 45	0.02~0.05	25 ~ 30	0.02~0.05	15 ~ 25	0.01~0.03	6 ~ 10	0.01~0.03
3.0		0.06		0.06		0.04		0.04
6.0		0.08		0.08		0.06		0.06
10.0		0.15		0.15		0.10		0.10

 SPEED = m/min.
 FEED = mm/rev.



Leading Through Innovation

INSERTS & HOLDERS



SPADE DRILLS

BOHRMESSER

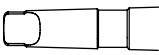
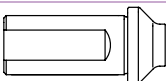
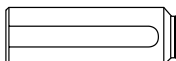
- For General Machines and Drilling Large Diameters Longer Tool Life and High Productivity
- VHM für lange Standzeit; HSS-PM für große Durchmesser und konventionelle Maschinen. Größere Produktivität als andere Bohrer

SELECTION GUIDE

SPADE DRILL INSERTS

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
SERIES 1~8		SPADE DRILL INSERTS - HSS M4 EINWEG BOHREINSATZ - HSS M4	Ø17.86 (#1)	Ø114.3 (#8)	292
SERIES Y,Z,0,1~4		SPADE DRILL INSERTS - SUPER HSS T15 EINWEG BOHREINSATZ - SUPER HSS T15	Ø9.5 (#Y)	Ø65.09 (#4)	298
SERIES Y,Z,0,1,2		SPADE DRILL INSERTS - PREMIUM HSS M48 EINWEG BOHREINSATZ - PREMIUM HSS M48	Ø9.5 (#Y)	Ø35 (#2)	303
SERIES Y,Z,0,1,2		SPADE DRILL INSERTS for CAST IRON - CARBIDE(K10) EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)	Ø9.5 (#Y)	Ø35 (#2)	306
SERIES Y,Z,0,1~3		SPADE DRILL INSERTS - CARBIDE(K20) EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)	Ø9.5 (#Y)	Ø47.63 (#3)	309
SERIES Y,Z,0,1~3		SPADE DRILL INSERTS - CARBIDE(P40) EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)	Ø9.5 (#Y)	Ø47.63 (#3)	313
SERIES 1~3		SM-POINT SPADE DRILL INSERTS - HSS M4 SM-POINT EINWEG BOHREINSATZ - HSS M4	Ø17.86 (#1)	Ø47.63 (#3)	318
SERIES Y,Z,0,1~3		SM-POINT SPADE DRILL INSERTS - SUPER HSS T15 SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15	Ø9.5 (#Y)	Ø47.63 (#3)	321
SERIES Y,Z,0,1,2		SM-POINT SPADE DRILL INSERTS - PREMIUM HSS M48 SM-POINT EINWEG BOHREINSATZ - PREMIUM HSS M48	Ø9.5 (#Y)	Ø35 (#2)	325
SERIES Y,Z,0,1,2		SM-POINT SPADE DRILL INSERTS for CAST IRON - CARBIDE(K10) SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)	Ø9.5 (#Y)	Ø35 (#2)	328
SERIES Y,Z,0,1~3		SM-POINT SPADE DRILL INSERTS - CARBIDE(K20) SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)	Ø9.5 (#Y)	Ø47.63 (#3)	331
SERIES Y,Z,0,1~3		SM-POINT SPADE DRILL INSERTS - CARBIDE(P40) SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)	Ø9.5 (#Y)	Ø47.63 (#3)	335
SERIES Y,Z,0,1,2		SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM SPADE DRILL BOHRER-EINSÄTZE - SUPER COBALT T15(FLACH-NUT)	Ø9.5 (#Y)	Ø35 (#2)	339

SPADE DRILL HOLDERS

TAPER SHANK		TAPER SHANK HOLDERS - INCH/METRIC HALTER MIT MORSEKEGEL	342
FLANGED SHANK		FLANGED STRAIGHT SHANK HOLDERS - INCH/METRIC HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE	352
STRAIGHT SHANK		STRAIGHT SHANK HOLDERS - INCH HALTER MIT ZYLINDERSCHAFT	359

SPADE DRILLS

◎ : Excellent ○ : Good

P											M	K			N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron			Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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SPADE DRILL INSERTS - HSS M4

🇩🇪 EINWEG BOHREINSATZ - HSS M4

🇫🇷 Plaquettes SPADE DRILL - HSS M4

🇮🇹 CUSPIDI SPADE DRILL - HSS M4

► For general use in steels and cast irons.

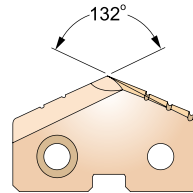
► Set up time can be reduced due to changing inserts easily on the machine.

► Any non-standard size available.

► Für allgemeine Anwendung in Stahl und Gusseisen

► Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine

► Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)	S1405045	S1410045	S1415045
		18.00	.7087		S1455180	S1460180	S1465180
	23/32	18.26	.7188		S1405046	S1410046	S1415046
		18.50	.7283		S1455185	S1460185	S1465185
	47/64	18.65	.7344		S1405047	S1410047	S1415047
		19.00	.7480		S1455190	S1460190	S1465190
	3/4	19.05	.7500		S1405048	S1410048	S1415048
	49/64	19.45	.7656		S1405049	S1410049	S1415049
		19.50	.7677		S1455195	S1460195	S1465195
	25/32	19.84	.7813		S1405050	S1410050	S1415050
		20.00	.7874		S1455200	S1460200	S1465200
	51/64	20.24	.7969		S1405051	S1410051	S1415051
		20.50	.8071		S1455205	S1460205	S1465205
	13/16	20.64	.8125		S1405052	S1410052	S1415052
		21.00	.8268		S1455210	S1460210	S1465210
	27/32	21.43	.8438		S1405054	S1410054	S1415054
	55/64	21.83	.8594		S1405055	S1410055	S1415055
		22.00	.8661		S1455220	S1460220	S1465220
	7/8	22.23	.8750		S1405056	S1410056	S1415056
	57/64	22.62	.8906		S1405057	S1410057	S1415057
2 Ø24.41 (.961) to Ø35.05 (1.380)		23.00	.9055	4.8 (3/16)	S1455230	S1460230	S1465230
	29/32	23.02	.9063		S1405058	S1410058	S1415058
	59/64	23.42	.9219		S1405059	S1410059	S1415059
	15/16	23.81	.9375		S1405060	S1410060	S1415060
		24.00	.9449		S1455240	S1460240	S1465240
	31/32	24.61	.9688		S1405062	S1410062	S1415062
	63/64	25.00	.9843		S1455250	S1460250	S1465250
	1	25.40	1.0000		S1405100	S1410100	S1415100
	1-1/64	25.80	1.0156		S1405101	S1410101	S1415101
		26.00	1.0236		S1455260	S1460260	S1465260
	1-1/32	26.19	1.0313		S1405102	S1410102	S1415102
	1-3/64	26.59	1.0469		S1405103	S1410103	S1415103
	1-1/16	26.99	1.0625		S1405104	S1410104	S1415104
		27.00	1.0630		S1455270	S1460270	S1465270

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○				◎	◎	○	◎	◎



SPADE DRILLS

SERIES **2,3**

CARBIDE

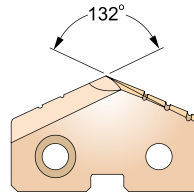
HSS

SPADE DRILL INSERTS - HSS M4

EINWEG BOHREINSATZ - HSS M4
 Plaquettes FORETS A LAME - HSS M4
 CUSPIDI SPADE DRILL - HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	1-3/32	27.78	1.0938	4.8 (3/16)	S1405106	S1410106	S1415106
		28.00	1.1024		S1455280	S1460280	S1465280
	1-7/64	28.18	1.1094		S1405107	S1410107	S1415107
	1-1/8	28.58	1.1250		S1405108	S1410108	S1415108
		29.00	1.1417		S1455290	S1460290	S1465290
	1-5/32	29.37	1.1563		S1405110	S1410110	S1415110
		30.00	1.1811		S1455300	S1460300	S1465300
	1-3/16	30.16	1.1875		S1405112	S1410112	S1415112
	1-7/32	30.96	1.2188		S1405114	S1410114	S1415114
		31.00	1.2205		S1455310	S1460310	S1465310
	1-1/4	31.75	1.2500		S1405116	S1410116	S1415116
		32.00	1.2598		S1455320	S1460320	S1465320
	1-9/32	32.54	1.2813		S1405118	S1410118	S1415118
		33.00	1.2992		S1455330	S1460330	S1465330
	1-5/16	33.34	1.3125		S1405120	S1410120	S1415120
		34.00	1.3386		S1455340	S1460340	S1465340
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-11/32	34.13	1.3438	6.4 (1/4)	S1405122	S1410122	S1415122
	1-3/8	34.93	1.3750		S1405124	S1410124	S1415124
		35.00	1.3780		S1455350	S1460350	S1465350
	1-13/32	35.72	1.4063		S1405126	S1410126	S1415126
		36.00	1.4173		S1455360	S1460360	S1465360
	1-7/16	36.51	1.4375		S1405128	S1410128	S1415128
		37.00	1.4567		S1455370	S1460370	S1465370
	1-15/32	37.31	1.4688		S1405130	S1410130	S1415130
		38.00	1.4961		S1455380	S1460380	S1465380
	1-1/2	38.10	1.5000		S1405132	S1410132	S1415132
	1-17/32	38.89	1.5313		S1405134	S1410134	S1415134
		39.00	1.5354		S1455390	S1460390	S1465390
	1-9/16	39.69	1.5625		S1405136	S1410136	S1415136
		40.00	1.5748		S1455400	S1460400	S1465400
	1-19/32	40.48	1.5938		S1405138	S1410138	S1415138
		41.00	1.6142		S1455410	S1460410	S1465410
	1-5/8	41.28	1.6250		S1405140	S1410140	S1415140
		42.00	1.6535		S1455420	S1460420	S1465420

◎ : Excellent ○ : Good

P										M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SPADE DRILL INSERTS - HSS M4

🇩🇪 EINWEG BOHREINSATZ - HSS M4

🇫🇷 Plaquettes FORETS A LAME - HSS M4

🇮🇹 CUSPIDI SPADE DRILL - HSS M4

► For general use in steels and cast irons.

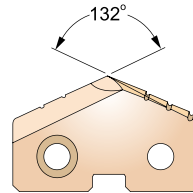
► Set up time can be reduced due to changing inserts easily on the machine.

► Any non-standard size available.

► Für allgemeine Anwendung in Stahl und Gusseisen

► Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine

► Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN HSS (M4)	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-21/32	42.07	1.6563	6.4 (1/4)	S1405142	S1410142	S1415142
	1-11/16	42.86	1.6875		S1405144	S1410144	S1415144
		43.00	1.6929		S1455430	S1460430	S1465430
	1-23/32	43.66	1.7188		S1405146	S1410146	S1415146
		44.00	1.7323		S1455440	S1460440	S1465440
	1-3/4	44.45	1.7500		S1405148	S1410148	S1415148
		45.00	1.7717		S1455450	S1460450	S1465450
	1-25/32	45.24	1.7813		S1405150	S1410150	S1415150
		46.00	1.8110		S1455460	S1460460	S1465460
	1-13/16	46.04	1.8125		S1405152	S1410152	S1415152
4 Ø46.99 (1.850) to Ø65.28 (2.570)	1-27/32	46.83	1.8438	7.9 (5/16)	S1405154	S1410154	S1415154
		47.00	1.8504		S1455470	S1460470	S1465470
	1-7/8	47.63	1.8750		S1405156	S1410156	S1415156
		48.00	1.8898		S1455480	S1460480	S1465480
	1-29/32	48.42	1.9063		S1405158	S1410158	S1415158
		49.00	1.9291		S1455490	S1460490	S1465490
	1-15/16	49.21	1.9375		S1405160	S1410160	S1415160
		50.00	1.9685		S1455500	S1460500	S1465500
	1-31/32	50.01	1.9688		S1405162	S1410162	S1415162
	2	50.80	2.0000		S1405200	S1410200	S1415200
		51.00	2.0079		S1455510	S1460510	S1465510
	2-1/32	51.59	2.0313		S1405202	S1410202	S1415202
	2-3/64	52.00	2.0472		S1455520	S1460520	S1465520
	2-1/16	52.39	2.0625		S1405204	S1410204	S1415204
		53.00	2.0866		S1455530	S1460530	S1465530
	2-3/32	53.18	2.0938		S1405206	S1410206	S1415206
	2-1/8	53.98	2.1250		S1405208	S1410208	S1415208
		54.00	2.1260		S1455540	S1460540	S1465540
	2-5/32	54.77	2.1563		S1405210	S1410210	S1415210
		55.00	2.1654		S1455550	S1460550	S1465550
	2-3/16	55.56	2.1875		S1405212	S1410212	S1415212
		56.00	2.2047		S1455560	S1460560	S1465560
	2-7/32	56.36	2.2188		S1405214	S1410214	S1415214
		57.00	2.2441		S1455570	S1460570	S1465570

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎



SPADE DRILLS

SERIES 4,5

CARBIDE

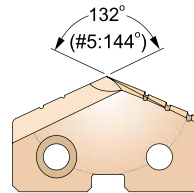
HSS

SPADE DRILL INSERTS - HSS M4

EINWEG BOHREINSATZ - HSS M4
 Plaquettes FORETS A LAME - HSS M4
 CUSPIDI SPADE DRILL - HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
4 Ø46.99 (1.850) to Ø65.28 (2.570)	2-1/4	57.15	2.2500	7.9 (5/16)	S1405216	S1410216	S1415216
	2-9/32	57.94	2.2813		S1405218	S1410218	S1415218
		58.00	2.2835		S1455580	S1460580	S1465580
	2-5/16	58.74	2.3125		S1405220	S1410220	S1415220
		59.00	2.3228		S1455590	S1460590	S1465590
	2-11/32	59.53	2.3438		S1405222	S1410222	S1415222
		60.00	2.3622		S1455600	S1460600	S1465600
	2-3/8	60.33	2.3750		S1405224	S1410224	S1415224
		61.00	2.4016		S1455610	S1460610	S1465610
	2-13/32	61.12	2.4063		S1405226	S1410226	S1415226
	2-7/16	61.91	2.4375		S1405228	S1410228	S1415228
		62.00	2.4409		S1455620	S1460620	S1465620
	2-15/32	62.71	2.4688		S1405230	S1410230	S1415230
		63.00	2.4803		S1455630	S1460630	S1465630
	2-1/2	63.50	2.5000		S1405232	S1410232	S1415232
		64.00	2.5197		S1455640	S1460640	S1465640
5 Ø62.38 (2.456) to Ø76.20 (3.000)	2-17/32	64.29	2.5313	11.1 (7/16)	S1405234	S1410234	S1415234
		65.00	2.5591		S1455650	S1460650	S1465650
	2-9/16	65.09	2.5625		S1405236	S1410236	S1415236
	2-1/2	63.50	2.5000		S14052D2	S14102D2	S14152D2
		64.00	2.5197		S145564A	S146064A	S146564A
	2-17/32	64.29	2.5313		S14052D4	S14102D4	S14152D4
	2-9/16	65.09	2.5625		S14052D6	S14102D6	S14152D6
	2-19/32	65.88	2.5938		S1405238	S1410238	S1415238
		66.00	2.5984		S1455660	S1460660	S1465660
	2-5/8	66.68	2.6250		S1405240	S1410240	S1415240
	2-21/32	67.47	2.6563		S1405242	S1410242	S1415242
		68.00	2.6772		S1455680	S1460680	S1465680
	2-11/16	68.26	2.6875		S1405244	S1410244	S1415244
	2-23/32	69.05	2.7188		S1405246	S1410246	S1415246
	2-3/4	69.85	2.7500		S1405248	S1410248	S1415248
		70.00	2.7559		S1455700	S1460700	S1465700
	2-25/32	70.64	2.7813		S1405250	S1410250	S1415250
	2-13/16	71.44	2.8125		S1405252	S1410252	S1415252

○ : Excellent ○ : Good

P										M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SPADE DRILL INSERTS - HSS M4

EINWEG BOHREINSATZ - HSS M4

Plaquettes FORETS A LAME - HSS M4

CUSPIDI SPADE DRILL - HSS M4

► For general use in steels and cast irons.

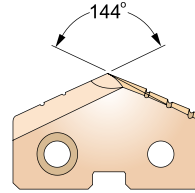
► Set up time can be reduced due to changing inserts easily on the machine.

► Any non-standard size available.

► Für allgemeine Anwendung in Stahl und Gusseisen

► Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine

► Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
5 Ø62.38 (2.456) to Ø76.20 (3.000)		72.00	2.8346	11.1 (7/16)	S1455720	S1460720	S1465720
	2-27/32	72.23	2.8438		S1405254	S1410254	S1415254
	2-7/8	73.03	2.8750		S1405256	S1410256	S1415256
	2-29/32	73.82	2.9063		S1405258	S1410258	S1415258
		74.00	2.9134		S1455740	S1460740	S1465740
	2-15/16	74.61	2.9375		S1405260	S1410260	S1415260
	2-31/32	75.41	2.9688		S1405262	S1410262	S1415262
		76.00	2.9921		S1455760	S1460760	S1465760
6 Ø76.23 (3.001) to Ø89.08 (3.507)	3	76.20	3.0000	11.1 (7/16)	S1405300	S1410300	S1415300
	3-1/32	76.99	3.0313		S1405302	S1410302	S1415302
	3-1/16	77.79	3.0625		S1405304	S1410304	S1415304
		78.00	3.0709		S1455780	S1460780	S1465780
	3-3/32	78.58	3.0938		S1405306	S1410306	S1415306
	3-1/8	79.38	3.1250		S1405308	S1410308	S1415308
		80.00	3.1496		S1455800	S1460800	S1465800
	3-5/32	80.17	3.1563		S1405310	S1410310	S1415310
	3-3/16	80.96	3.1875		S1405312	S1410312	S1415312
	3-7/32	81.76	3.2188		S1405314	S1410314	S1415314
		82.00	3.2283		S1455820	S1460820	S1465820
	3-1/4	82.55	3.2500		S1405316	S1410316	S1415316
	3-9/32	83.34	3.2813		S1405318	S1410318	S1415318
		84.00	3.3071		S1455840	S1460840	S1465840
	3-5/16	84.14	3.3125		S1405320	S1410320	S1415320
	3-11/32	84.93	3.3438		S1405322	S1410322	S1415322
	3-3/8	85.73	3.3750		S1405324	S1410324	S1415324
		86.00	3.3858		S1455860	S1460860	S1465860
	3-13/32	86.52	3.4063		S1405326	S1410326	S1415326
	3-7/16	87.31	3.4375		S1405328	S1410328	S1415328
		88.00	3.4646		S1455880	S1460880	S1465880
7	3-15/32	88.11	3.4688		S1405330	S1410330	S1415330
	3-1/2	88.90	3.5000		S1405332	S1410332	S1415332
	3-17/32	89.69	3.5313	11.1 (7/16)	S1405334	S1410334	S1415334
		90.00	3.5433		S1455900	S1460900	S1465900
	3-9/16	90.49	3.5625		S1405336	S1410336	S1415336

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎



SPADE DRILLS

SERIES 7,8

CARBIDE

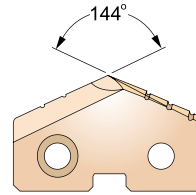
HSS

SPADE DRILL INSERTS - HSS M4

EINWEG BOHREINSATZ - HSS M4
 Plaquettes FORETS A LAME - HSS M4
 CUSPIDI SPADE DRILL - HSS M4

- For general use in steels and cast irons.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
7 Ø87.76 (3.455) to Ø101.60 (4.000)	3-19/32	91.28	3.5938	11.1 (7/16)	S1405338	S1410338	S1415338
		92.00	3.6221		S1455920	S1460920	S1465920
	3-5/8	92.08	3.6250		S1405340	S1410340	S1415340
	3-21/32	92.87	3.6563		S1405342	S1410342	S1415342
	3-11/16	93.66	3.6875		S1405344	S1410344	S1415344
		94.00	3.7008		S1455940	S1460940	S1465940
	3-23/32	94.46	3.7188		S1405346	S1410346	S1415346
	3-3/4	95.25	3.7500		S1405348	S1410348	S1415348
		96.00	3.7795		S1455960	S1460960	S1465960
	3-25/32	96.04	3.7813		S1405350	S1410350	S1415350
	3-13/16	96.84	3.8125		S1405352	S1410352	S1415352
	3-27/32	97.63	3.8438		S1405354	S1410354	S1415354
		98.00	3.8583		S1455980	S1460980	S1465980
	3-7/8	98.43	3.8750		S1405356	S1410356	S1415356
	3-29/32	99.22	3.9063		S1405358	S1410358	S1415358
		100.00	3.9370		S1455A00	S1460A00	S1465A00
8 Ø101.63 (4.001) to Ø114.48 (4.507)	3-15/16	100.01	3.9375	11.1 (7/16)	S1405360	S1410360	S1415360
	3-31/32	100.81	3.9688		S1405362	S1410362	S1415362
	4	101.60	4.0000		S1405400	S1410400	S1415400
	4-1/64	102.00	4.0157		S1455A20	S1460A20	S1465A20
	4-1/16	103.19	4.0625		S1405404	S1410404	S1415404
	4-3/32	104.00	4.0945		S1455A40	S1460A40	S1465A40
	4-1/8	104.78	4.1250		S1405408	S1410408	S1415408
		106.00	4.1732		S1455A60	S1460A60	S1465A60
	4-3/16	106.36	4.1875		S1405412	S1410412	S1415412
	4-1/4	107.95	4.2500		S1405416	S1410416	S1415416
		108.00	4.2520		S1455A80	S1460A80	S1465A80
	4-5/16	109.54	4.3125		S1405420	S1410420	S1415420
		110.00	4.3307		S1455B00	S1460B00	S1465B00
	4-3/8	111.13	4.3750		S1405424	S1410424	S1415424
		112.00	4.4094		S1455B20	S1460B20	S1465B20
	4-7/16	112.71	4.4375		S1405428	S1410428	S1415428
		114.00	4.4882		S1455B40	S1460B40	S1465B40
	4-1/2	114.30	4.5000		S1405432	S1410432	S1415432

○ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

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DRILLS
-ALU

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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

TECHNICAL
DATA

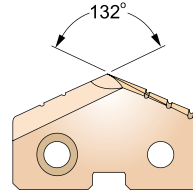


SPADE DRILL INSERTS - SUPER HSS T15

EINWEG BOHREINSATZ - SUPER HSS T15
 Plaquettes SPADE DRILL - Super HSS T15
 CUSPIDI SPADE DRILL - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1155095	S1160095	S1165095
	3/8	9.53	.3750		S1105024	S1110024	S1115024
		9.80	.3860		S1155098	S1160098	S1165098
	25/64	9.92	.3906		S1105025	S1110025	S1115025
		10.00	.3937		S1155100	S1160100	S1165100
		10.20	.4016		S1155102	S1160102	S1165102
	13/32	10.32	.4063		S1105026	S1110026	S1115026
		10.50	.4134		S1155105	S1160105	S1165105
	27/64	10.72	.4219		S1105027	S1110027	S1115027
		10.80	.4252		S1155108	S1160108	S1165108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	S1155110	S1160110	S1165110
	7/16	11.11	.4375		S1105028	S1110028	S1115028
		11.50	.4528		S1155115	S1160115	S1165115
	29/64	11.51	.4531		S1105029	S1110029	S1115029
	15/32	11.91	.4688		S1105030	S1110030	S1115030
		12.00	.4724		S1155120	S1160120	S1165120
	31/64	12.30	.4844		S1105031	S1110031	S1115031
		12.50	.4921		S1155125	S1160125	S1165125
	1/2	12.70	.5000		S1105032	S1110032	S1115032
		13.00	.5118	3.2 (1/8)	S1155130	S1160130	S1165130
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.10	.5156		S1105033	S1110033	S1115033
	17/32	13.49	.5313		S1105034	S1110034	S1115034
		13.50	.5315		S1155135	S1160135	S1165135
	35/64	13.89	.5469		S1105035	S1110035	S1115035
		14.00	.5512		S1155140	S1160140	S1165140
	9/16	14.29	.5625		S1105036	S1110036	S1115036
		14.50	.5709		S1155145	S1160145	S1165145
	37/64	14.68	.5781		S1105037	S1110037	S1115037
		15.00	.5906		S1155150	S1160150	S1165150
	19/32	15.08	.5938		S1105038	S1110038	S1115038
	39/64	15.48	.6094		S1105039	S1110039	S1115039
		15.50	.6102		S1155155	S1160155	S1165155
	5/8	15.88	.6250		S1105040	S1110040	S1115040
		16.00	.6299		S1155160	S1160160	S1165160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



SPADE DRILLS

SERIES **0,1**

CARBIDE

HSS

SPADE DRILL INSERTS - SUPER HSS T15

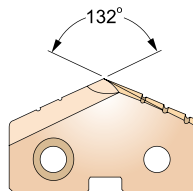
EINWEG BOHREINSATZ - SUPER HSS T15

Plaquettes SPADE DRILL - Super HSS T15

CUSPIDI SPADE DRILL - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S1105041	S1110041	S1115041
		16.50	.6496		S1155165	S1160165	S1165165
	21/32	16.67	.6563		S1105042	S1110042	S1115042
		17.00	.6693		S1155170	S1160170	S1165170
	43/64	17.07	.6719		S1105043	S1110043	S1115043
	11/16	17.46	.6875		S1105044	S1110044	S1115044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	S1155175	S1160175	S1165175
	45/64	17.86	.7031		S1105045	S1110045	S1115045
		18.00	.7087		S1155180	S1160180	S1165180
	23/32	18.26	.7188		S1105046	S1110046	S1115046
		18.50	.7283		S1155185	S1160185	S1165185
	47/64	18.65	.7344		S1105047	S1110047	S1115047
		19.00	.7480		S1155190	S1160190	S1165190
	3/4	19.05	.7500		S1105048	S1110048	S1115048
	49/64	19.45	.7656		S1105049	S1110049	S1115049
		19.50	.7677		S1155195	S1160195	S1165195
	25/32	19.84	.7813		S1105050	S1110050	S1115050
		20.00	.7874		S1155200	S1160200	S1165200
	51/64	20.24	.7969		S1105051	S1110051	S1115051
		20.50	.8071		S1155205	S1160205	S1165205
	13/16	20.64	.8125		S1105052	S1110052	S1115052
		21.00	.8268		S1155210	S1160210	S1165210
	27/32	21.43	.8438		S1105054	S1110054	S1115054
	55/64	21.83	.8594		S1105055	S1110055	S1115055
		22.00	.8661		S1155220	S1160220	S1165220
	7/8	22.23	.8750		S1105056	S1110056	S1115056
	57/64	22.62	.8906		S1105057	S1110057	S1115057
		23.00	.9055		S1155230	S1160230	S1165230
	29/32	23.02	.9063		S1105058	S1110058	S1115058
	59/64	23.42	.9219		S1105059	S1110059	S1115059
	15/16	23.81	.9375		S1105060	S1110060	S1115060
		24.00	.9449		S1155240	S1160240	S1165240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

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DRILLS
-FLAT BOTTOM

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DRILLS
-INOX

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DRILLS
-ALU

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-CFRP

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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

TECHNICAL
DATA



SPADE DRILL INSERTS - SUPER HSS T15

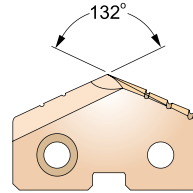
▶ **EINWEG BOHREINSATZ - SUPER HSS T15**

▶ **Plaquettes SPADE DRILL - Super HSS T15**

▶ **CUSPIDI SPADE DRILL - SUPER HSS T15**

- ▶ For use in high nickel alloys and materials over 280 Brinell.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1105062	S1110062	S1115062
	63/64	25.00	.9843		S1155250	S1160250	S1165250
	1	25.40	1.0000		S1105100	S1110100	S1115100
	1-1/64	25.80	1.0156		S1105101	S1110101	S1115101
		26.00	1.0236		S1155260	S1160260	S1165260
	1-1/32	26.19	1.0313		S1105102	S1110102	S1115102
	1-3/64	26.59	1.0469		S1105103	S1110103	S1115103
	1-1/16	26.99	1.0625		S1105104	S1110104	S1115104
		27.00	1.0630		S1155270	S1160270	S1165270
	1-3/32	27.78	1.0938		S1105106	S1110106	S1115106
		28.00	1.1024		S1155280	S1160280	S1165280
	1-7/64	28.18	1.1094		S1105107	S1110107	S1115107
	1-1/8	28.58	1.1250		S1105108	S1110108	S1115108
		29.00	1.1417		S1155290	S1160290	S1165290
	1-5/32	29.37	1.1563		S1105110	S1110110	S1115110
		30.00	1.1811		S1155300	S1160300	S1165300
	1-3/16	30.16	1.1875		S1105112	S1110112	S1115112
	1-7/32	30.96	1.2188		S1105114	S1110114	S1115114
		31.00	1.2205		S1155310	S1160310	S1165310
	1-1/4	31.75	1.2500		S1105116	S1110116	S1115116
3 Ø34.37(1.353) to Ø47.80(1.882)		32.00	1.2598	6.4 (1/4)	S1155320	S1160320	S1165320
	1-9/32	32.54	1.2813		S1105118	S1110118	S1115118
	1-5/16	33.00	1.2992		S1155330	S1160330	S1165330
		33.34	1.3125		S1105120	S1110120	S1115120
		34.00	1.3386		S1155340	S1160340	S1165340
	1-11/32	34.13	1.3438		S1105122	S1110122	S1115122
	1-3/8	34.93	1.3750		S1105124	S1110124	S1115124
		35.00	1.3780		S1155350	S1160350	S1165350
	1-13/32	35.72	1.4063		S1105126	S1110126	S1115126
		36.00	1.4173		S1155360	S1160360	S1165360
	1-7/16	36.51	1.4375		S1105128	S1110128	S1115128
		37.00	1.4567		S1155370	S1160370	S1165370
	1-15/32	37.31	1.4688		S1105130	S1110130	S1115130
		38.00	1.4961		S1155380	S1160380	S1165380

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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SPADE DRILLS

SERIES **3,4**

CARBIDE

HSS

SPADE DRILL INSERTS - SUPER HSS T15

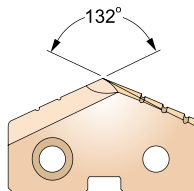
EINWEG BOHREINSATZ - SUPER HSS T15

Plaquettes SPADE DRILL - Super HSS T15

CUSPIDI SPADE DRILL - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. SUPER HSS (T15)		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-1/2	38.10	1.5000	6.4 (1/4)	S1105132	S1110132	S1115132
	1-17/32	38.89	1.5313		S1105134	S1110134	S1115134
		39.00	1.5354		S1155390	S1160390	S1165390
	1-9/16	39.69	1.5625		S1105136	S1110136	S1115136
		40.00	1.5748		S1155400	S1160400	S1165400
	1-19/32	40.48	1.5938		S1105138	S1110138	S1115138
		41.00	1.6142		S1155410	S1160410	S1165410
	1-5/8	41.28	1.6250		S1105140	S1110140	S1115140
		42.00	1.6535		S1155420	S1160420	S1165420
	1-21/32	42.07	1.6563		S1105142	S1110142	S1115142
	1-11/16	42.86	1.6875		S1105144	S1110144	S1115144
		43.00	1.6929		S1155430	S1160430	S1165430
	1-23/32	43.66	1.7188		S1105146	S1110146	S1115146
		44.00	1.7323		S1155440	S1160440	S1165440
	1-3/4	44.45	1.7500		S1105148	S1110148	S1115148
		45.00	1.7717		S1155450	S1160450	S1165450
	1-25/32	45.24	1.7813		S1105150	S1110150	S1115150
		46.00	1.8110		S1155460	S1160460	S1165460
4 Ø46.99 (1.850) to Ø65.28 (2.570)	1-13/16	46.04	1.8125	7.9 (5/16)	S1105152	S1110152	S1115152
	1-27/32	46.83	1.8438		S1105154	S1110154	S1115154
		47.00	1.8504		S1155470	S1160470	S1165470
	1-7/8	47.63	1.8750		S1105156	S1110156	S1115156
		48.00	1.8898		S1155480	S1160480	S1165480
	1-29/32	48.42	1.9063		S1105158	S1110158	S1115158
		49.00	1.9291		S1155490	S1160490	S1165490
	1-15/16	49.21	1.9375		S1105160	S1110160	S1115160
		50.00	1.9685		S1155500	S1160500	S1165500
	1-31/32	50.01	1.9688		S1105162	S1110162	S1115162
	2	50.80	2.0000		S1105200	S1110200	S1115200
		51.00	2.0079		S1155510	S1160510	S1165510
	2-1/32	51.59	2.0313		S1105202	S1110202	S1115202
	2-3/64	52.00	2.0472		S1155520	S1160520	S1165520
	2-1/16	52.39	2.0625		S1105204	S1110204	S1115204
		53.00	2.0866		S1155530	S1160530	S1165530

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
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i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
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-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

TECHNICAL
DATA



SPADE DRILL INSERTS - SUPER HSS T15

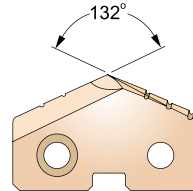
🇩🇪 EINWEG BOHREINSATZ - SUPER HSS T15

🇫🇷 Plaquettes SPADE DRILL - Super HSS T15

🇮🇹 CUSPIDI SPADE DRILL - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
4 Ø46.99 (1.850) to Ø65.28 (2.570)	2-3/32	53.18	2.0938	7.9 (5/16)	S1105206	S1110206	S1115206
	2-1/8	53.98	2.1250		S1105208	S1110208	S1115208
		54.00	2.1260		S1155540	S1160540	S1165540
	2-5/32	54.77	2.1563		S1105210	S1110210	S1115210
		55.00	2.1654		S1155550	S1160550	S1165550
	2-3/16	55.56	2.1875		S1105212	S1110212	S1115212
		56.00	2.2047		S1155560	S1160560	S1165560
	2-7/32	56.36	2.2188		S1105214	S1110214	S1115214
		57.00	2.2441		S1155570	S1160570	S1165570
	2-1/4	57.15	2.2500		S1105216	S1110216	S1115216
	2-9/32	57.94	2.2813		S1105218	S1110218	S1115218
		58.00	2.2835		S1155580	S1160580	S1165580
	2-5/16	58.74	2.3125		S1105220	S1110220	S1115220
		59.00	2.3228		S1155590	S1160590	S1165590
	2-11/32	59.53	2.3438		S1105222	S1110222	S1115222
		60.00	2.3622		S1155600	S1160600	S1165600
	2-3/8	60.33	2.3750		S1105224	S1110224	S1115224
		61.00	2.4016		S1155610	S1160610	S1165610
	2-13/32	61.12	2.4063		S1105226	S1110226	S1115226
	2-7/16	61.91	2.4375		S1105228	S1110228	S1115228
		62.00	2.4409		S1155620	S1160620	S1165620
	2-15/32	62.71	2.4688		S1105230	S1110230	S1115230
		63.00	2.4803		S1155630	S1160630	S1165630
	2-1/2	63.50	2.5000		S1105232	S1110232	S1115232
		64.00	2.5197		S1155640	S1160640	S1165640
	2-17/32	64.29	2.5313		S1105234	S1110234	S1115234
		65.00	2.5591		S1155650	S1160650	S1165650
	2-9/16	65.09	2.5625		S1105236	S1110236	S1115236

◎ : Excellent ○ : Good

P											M	K	N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



SPADE DRILLS

SERIES **Y,Z,0**

CARBIDE

HSS

SPADE DRILL INSERTS - PREMIUM HSS M48

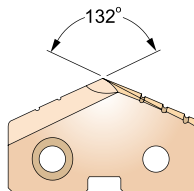
EINWEG BOHREINSATZ - PREMIUM HSS M48

Plaquettes SPADE DRILL - HSS Premium M48

CUSPIDI SPADE DRILL - PREMIUM HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei hitzebeständigen Legierungen und Werkstoffen mit 350~500 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. PREMIUM HSS (M48)		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	S1555095	S1560095	S1565095
		9.53	.3750		S1505024	S1510024	S1515024
		9.80	.3860		S1555098	S1560098	S1565098
	25/64	9.92	.3906		S1505025	S1510025	S1515025
		10.00	.3937		S1555100	S1560100	S1565100
	13/32	10.20	.4016		S1555102	S1560102	S1565102
		10.32	.4063		S1505026	S1510026	S1515026
		10.50	.4134		S1555105	S1560105	S1565105
	27/64	10.72	.4219		S1505027	S1510027	S1515027
		10.80	.4252		S1555108	S1560108	S1565108
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	S1555110	S1560110	S1565110
		11.50	.4528		S1505028	S1510028	S1515028
	29/64	11.51	.4531		S1555115	S1560115	S1565115
		11.91	.4688		S1505029	S1510029	S1515029
	15/32	12.00	.4724		S1505030	S1510030	S1515030
		12.30	.4844		S1555120	S1560120	S1565120
	31/64	12.50	.4921		S1505031	S1510031	S1515031
		12.70	.5000		S1555125	S1560125	S1565125
	1/2	13.00	.5118		S1505032	S1510032	S1515032
		13.10	.5156		S1555130	S1560130	S1565130
0 Ø12.98 (.511) to Ø17.65 (.695)	17/32	13.49	.5313	3.2 (1/8)	S1505033	S1510033	S1515033
		13.50	.5315		S1505034	S1510034	S1515034
	35/64	13.89	.5469		S1555135	S1560135	S1565135
		14.00	.5512		S1505035	S1510035	S1515035
	9/16	14.29	.5625		S1555140	S1560140	S1565140
		14.50	.5709		S1505036	S1510036	S1515036
	37/64	14.68	.5781		S1555145	S1560145	S1565145
		15.00	.5906		S1505037	S1510037	S1515037
	19/32	15.08	.5938		S1555150	S1560150	S1565150
		15.48	.6094		S1505038	S1510038	S1515038
	5/8	15.50	.6102		S1555155	S1560155	S1565155
		15.88	.6250		S1505039	S1510039	S1515039
	16.00	.6299			S1555160	S1560160	S1565160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

i-ONE
DRILLS

i-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

TECHNICAL
DATA

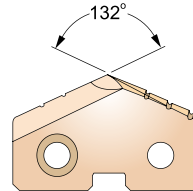


SPADE DRILL INSERTS - PREMIUM HSS M48

EINWEG BOHREINSATZ - PREMIUM HSS M48
 Plaquettes SPADE DRILL - HSS Premium M48
 CUSPIDI SPADE DRILL - PREMIUM HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei hitzebeständigen Legierungen und Werkstoffen mit 350~500 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS (M48)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S1505041	S1510041	S1515041
		16.50	.6496		S1555165	S1560165	S1565165
	21/32	16.67	.6563		S1505042	S1510042	S1515042
		17.00	.6693		S1555170	S1560170	S1565170
	43/64	17.07	.6719		S1505043	S1510043	S1515043
	11/16	17.46	.6875		S1505044	S1510044	S1515044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	S1555175	S1560175	S1565175
	45/64	17.86	.7031		S1505045	S1510045	S1515045
		18.00	.7087		S1555180	S1560180	S1565180
	23/32	18.26	.7188		S1505046	S1510046	S1515046
		18.50	.7283		S1555185	S1560185	S1565185
	47/64	18.65	.7344		S1505047	S1510047	S1515047
		19.00	.7480		S1555190	S1560190	S1565190
	3/4	19.05	.7500		S1505048	S1510048	S1515048
	49/64	19.45	.7656		S1505049	S1510049	S1515049
		19.50	.7677		S1555195	S1560195	S1565195
	25/32	19.84	.7813		S1505050	S1510050	S1515050
		20.00	.7874		S1555200	S1560200	S1565200
	51/64	20.24	.7969		S1505051	S1510051	S1515051
		20.50	.8071		S1555205	S1560205	S1565205
	13/16	20.64	.8125		S1505052	S1510052	S1515052
		21.00	.8268		S1555210	S1560210	S1565210
	27/32	21.43	.8438		S1505054	S1510054	S1515054
	55/64	21.83	.8594		S1505055	S1510055	S1515055
		22.00	.8661		S1555220	S1560220	S1565220
	7/8	22.23	.8750		S1505056	S1510056	S1515056
	57/64	22.62	.8906		S1505057	S1510057	S1515057
		23.00	.9055		S1555230	S1560230	S1565230
	29/32	23.02	.9063		S1505058	S1510058	S1515058
	59/64	23.42	.9219		S1505059	S1510059	S1515059
	15/16	23.81	.9375		S1505060	S1510060	S1515060
		24.00	.9449		S1555240	S1560240	S1565240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○



SPADE DRILLS

SERIES 2

CARBIDE

HSS

SPADE DRILL INSERTS - PREMIUM HSS M48

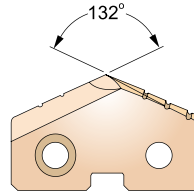
EINWEG BOHREINSATZ - PREMIUM HSS M48

Plaquettes SPADE DRILL - HSS Premium M48

CUSPIDI SPADE DRILL - PREMIUM HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung bei hitzebeständigen Legierungen und Werkstoffen mit 350~500 Brinell
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS (M48)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1505062	S1510062	S1515062
	63/64	25.00	.9843		S1555250	S1560250	S1565250
	1	25.40	1.0000		S1505100	S1510100	S1515100
	1-1/64	25.80	1.0156		S1505101	S1510101	S1515101
		26.00	1.0236		S1555260	S1560260	S1565260
	1-1/32	26.19	1.0313		S1505102	S1510102	S1515102
	1-3/64	26.59	1.0469		S1505103	S1510103	S1515103
	1-1/16	26.99	1.0625		S1505104	S1510104	S1515104
		27.00	1.0630		S1555270	S1560270	S1565270
	1-3/32	27.78	1.0938		S1505106	S1510106	S1515106
		28.00	1.1024		S1555280	S1560280	S1565280
	1-7/64	28.18	1.1094		S1505107	S1510107	S1515107
	1-1/8	28.58	1.1250		S1505108	S1510108	S1515108
		29.00	1.1417		S1555290	S1560290	S1565290
	1-5/32	29.37	1.1563		S1505110	S1510110	S1515110
		30.00	1.1811		S1555300	S1560300	S1565300
	1-3/16	30.16	1.1875		S1505112	S1510112	S1515112
	1-7/32	30.96	1.2188		S1505114	S1510114	S1515114
		31.00	1.2205		S1555310	S1560310	S1565310
	1-1/4	31.75	1.2500		S1505116	S1510116	S1515116
		32.00	1.2598		S1555320	S1560320	S1565320
	1-9/32	32.54	1.2813		S1505118	S1510118	S1515118
		33.00	1.2992		S1555330	S1560330	S1565330
	1-5/16	33.34	1.3125		S1505120	S1510120	S1515120
		34.00	1.3386		S1555340	S1560340	S1565340
	1-11/32	34.13	1.3438		S1505122	S1510122	S1515122
	1-3/8	34.93	1.3750		S1505124	S1510124	S1515124
		35.00	1.3780		S1555350	S1560350	S1565350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

i-ONE DRILLS

i-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

TECHNICAL DATA



SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

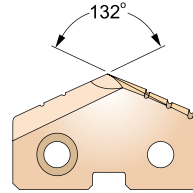
EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL pour la fonte - Carbure (K10)

CUSPIDI SPADE DRILL - MD (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1655095	S1660095	S1665095
	3/8	9.53	.3750		S1605024	S1610024	S1615024
		9.80	.3860		S1655098	S1660098	S1665098
	25/64	9.92	.3906		S1605025	S1610025	S1615025
		10.00	.3937		S1655100	S1660100	S1665100
		10.20	.4016		S1655102	S1660102	S1665102
	13/32	10.32	.4063		S1605026	S1610026	S1615026
		10.50	.4134		S1655105	S1660105	S1665105
	27/64	10.72	.4219		S1605027	S1610027	S1615027
		10.80	.4252		S1655108	S1660108	S1665108
	11.00	.4331		S1655110	S1660110	S1665110	
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	S1605028	S1610028	S1615028
		11.50	.4528		S1655115	S1660115	S1665115
	29/64	11.51	.4531		S1605029	S1610029	S1615029
	15/32	11.91	.4688		S1605030	S1610030	S1615030
		12.00	.4724		S1655120	S1660120	S1665120
	31/64	12.30	.4844		S1605031	S1610031	S1615031
		12.50	.4921		S1655125	S1660125	S1665125
	1/2	12.70	.5000		S1605032	S1610032	S1615032
O Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)	S1655130	S1660130	S1665130
	33/64	13.10	.5156		S1605033	S1610033	S1615033
	17/32	13.49	.5313		S1605034	S1610034	S1615034
		13.50	.5315		S1655135	S1660135	S1665135
	35/64	13.89	.5469		S1605035	S1610035	S1615035
		14.00	.5512		S1655140	S1660140	S1665140
	9/16	14.29	.5625		S1605036	S1610036	S1615036
		14.50	.5709		S1655145	S1660145	S1665145
	37/64	14.68	.5781		S1605037	S1610037	S1615037
		15.00	.5906		S1655150	S1660150	S1665150
	19/32	15.08	.5938		S1605038	S1610038	S1615038
	39/64	15.48	.6094		S1605039	S1610039	S1615039
		15.50	.6102		S1655155	S1660155	S1665155
	5/8	15.88	.6250		S1605040	S1610040	S1615040
		16.00	.6299			S1655160	S1660160

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
													◎	◎		



SPADE DRILLS

SERIES **0,1**

CARBIDE

HSS

SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

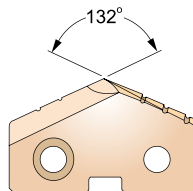
EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL pour la fonte - Carbure (K10)

CUSPIDI SPADE DRILL - MD (K10)

- High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S1605041	S1610041	S1615041
		16.50	.6496		S1655165	S1660165	S1665165
	21/32	16.67	.6563		S1605042	S1610042	S1615042
		17.00	.6693		S1655170	S1660170	S1665170
	43/64	17.07	.6719		S1605043	S1610043	S1615043
	11/16	17.46	.6875		S1605044	S1610044	S1615044
		17.50	.6890		S1655175	S1660175	S1665175
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)	S1605045	S1610045	S1615045
		18.00	.7087		S1655180	S1660180	S1665180
	23/32	18.26	.7188		S1605046	S1610046	S1615046
		18.50	.7283		S1655185	S1660185	S1665185
	47/64	18.65	.7344		S1605047	S1610047	S1615047
		19.00	.7480		S1655190	S1660190	S1665190
	3/4	19.05	.7500		S1605048	S1610048	S1615048
	49/64	19.45	.7656		S1605049	S1610049	S1615049
		19.50	.7677		S1655195	S1660195	S1665195
	25/32	19.84	.7813		S1605050	S1610050	S1615050
		20.00	.7874		S1655200	S1660200	S1665200
	51/64	20.24	.7969		S1605051	S1610051	S1615051
		20.50	.8071		S1655205	S1660205	S1665205
	13/16	20.64	.8125		S1605052	S1610052	S1615052
		21.00	.8268		S1655210	S1660210	S1665210
	27/32	21.43	.8438		S1605054	S1610054	S1615054
	55/64	21.83	.8594		S1605055	S1610055	S1615055
		22.00	.8661		S1655220	S1660220	S1665220
	7/8	22.23	.8750		S1605056	S1610056	S1615056
	57/64	22.62	.8906		S1605057	S1610057	S1615057
		23.00	.9055		S1655230	S1660230	S1665230
	29/32	23.02	.9063		S1605058	S1610058	S1615058
	59/64	23.42	.9219		S1605059	S1610059	S1615059
	15/16	23.81	.9375		S1605060	S1610060	S1615060
		24.00	.9449		S1655240	S1660240	S1665240

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
												◎	◎			

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

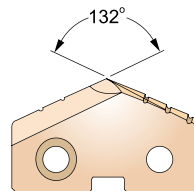
🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

🇫🇷 Plaquettes SPADE DRILL pour la fonte - Carbure (K10)

🇮🇹 CUSPIDI SPADE DRILL - MD (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1605062	S1610062	S1615062
	63/64	25.00	.9843		S1655250	S1660250	S1665250
	1	25.40	1.0000		S1605100	S1610100	S1615100
	1-1/64	25.80	1.0156		S1605101	S1610101	S1615101
		26.00	1.0236		S1655260	S1660260	S1665260
	1-1/32	26.19	1.0313		S1605102	S1610102	S1615102
	1-3/64	26.59	1.0469		S1605103	S1610103	S1615103
	1-1/16	26.99	1.0625		S1605104	S1610104	S1615104
		27.00	1.0630		S1655270	S1660270	S1665270
	1-3/32	27.78	1.0938		S1605106	S1610106	S1615106
		28.00	1.1024		S1655280	S1660280	S1665280
	1-7/64	28.18	1.1094		S1605107	S1610107	S1615107
	1-1/8	28.58	1.1250		S1605108	S1610108	S1615108
		29.00	1.1417		S1655290	S1660290	S1665290
	1-5/32	29.37	1.1563		S1605110	S1610110	S1615110
		30.00	1.1811		S1655300	S1660300	S1665300
	1-3/16	30.16	1.1875		S1605112	S1610112	S1615112
	1-7/32	30.96	1.2188		S1605114	S1610114	S1615114
		31.00	1.2205		S1655310	S1660310	S1665310
	1-1/4	31.75	1.2500		S1605116	S1610116	S1615116
		32.00	1.2598		S1655320	S1660320	S1665320
	1-9/32	32.54	1.2813		S1605118	S1610118	S1615118
		33.00	1.2992		S1655330	S1660330	S1665330
	1-5/16	33.34	1.3125		S1605120	S1610120	S1615120
		34.00	1.3386		S1655340	S1660340	S1665340
	1-11/32	34.13	1.3438		S1605122	S1610122	S1615122
	1-3/8	34.93	1.3750		S1605124	S1610124	S1615124
		35.00	1.3780		S1655350	S1660350	S1665350

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
												◎	◎		



SPADE DRILLS

SERIES **Y,Z,0**

SPADE DRILL INSERTS - CARBIDE (K20)

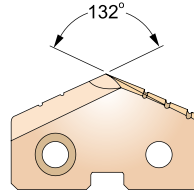
EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL - Carbure (K20)

CUSPIDI SPADE DRILL - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	S1755095	S1760095	S1765095
		9.53	.3750		S1705024	S1710024	S1715024
		9.80	.3860		S1755098	S1760098	S1765098
	25/64	9.92	.3906		S1705025	S1710025	S1715025
		10.00	.3937		S1755100	S1760100	S1765100
	13/32	10.20	.4016		S1755102	S1760102	S1765102
		10.32	.4063		S1705026	S1710026	S1715026
	27/64	10.50	.4134		S1755105	S1760105	S1765105
		10.72	.4219		S1705027	S1710027	S1715027
		10.80	.4252		S1755108	S1760108	S1765108
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	S1755110	S1760110	S1765110
		11.50	.4528		S1705028	S1710028	S1715028
	29/64	11.51	.4531		S1755115	S1760115	S1765115
		11.91	.4688		S1705029	S1710029	S1715029
	15/32	12.00	.4724		S1705030	S1710030	S1715030
		12.30	.4844		S1755120	S1760120	S1765120
	31/64	12.50	.4921		S1705031	S1710031	S1715031
		12.70	.5000		S1755125	S1760125	S1765125
0 Ø12.98 (.511) to Ø17.65 (.695)	17/32	13.00	.5118	3.2 (1/8)	S1705032	S1710032	S1715032
		13.10	.5156		S1755130	S1760130	S1765130
		13.49	.5313		S1705033	S1710033	S1715033
	35/64	13.50	.5315		S1705034	S1710034	S1715034
		13.89	.5469		S1755135	S1760135	S1765135
	9/16	14.00	.5512		S1705035	S1710035	S1715035
		14.29	.5625		S1755140	S1760140	S1765140
	37/64	14.50	.5709		S1705036	S1710036	S1715036
		14.68	.5781		S1755145	S1760145	S1765145
	19/32	15.00	.5906		S1705037	S1710037	S1715037
		15.08	.5938		S1755150	S1760150	S1765150
	39/64	15.50	.6102		S1705038	S1710038	S1715038
		15.88	.6250		S1705039	S1710039	S1715039
	5/8	16.00	.6299		S1755155	S1760155	S1765155
					S1705040	S1710040	S1715040
					S1755160	S1760160	S1765160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILL INSERTS - CARBIDE (K20)

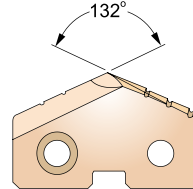
EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL - Carbure (K20)

CUSPIDI SPADE DRILL - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S1705041	S1710041	S1715041
		16.50	.6496		S1755165	S1760165	S1765165
	21/32	16.67	.6563		S1705042	S1710042	S1715042
		17.00	.6693		S1755170	S1760170	S1765170
	43/64	17.07	.6719		S1705043	S1710043	S1715043
	11/16	17.46	.6875		S1705044	S1710044	S1715044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	S1755175	S1760175	S1765175
	45/64	17.86	.7031		S1705045	S1710045	S1715045
		18.00	.7087		S1755180	S1760180	S1765180
	23/32	18.26	.7188		S1705046	S1710046	S1715046
		18.50	.7283		S1755185	S1760185	S1765185
	47/64	18.65	.7344		S1705047	S1710047	S1715047
		19.00	.7480		S1755190	S1760190	S1765190
	3/4	19.05	.7500		S1705048	S1710048	S1715048
	49/64	19.45	.7656		S1705049	S1710049	S1715049
		19.50	.7677		S1755195	S1760195	S1765195
	25/32	19.84	.7813		S1705050	S1710050	S1715050
		20.00	.7874		S1755200	S1760200	S1765200
	51/64	20.24	.7969		S1705051	S1710051	S1715051
		20.50	.8071		S1755205	S1760205	S1765205
	13/16	20.64	.8125		S1705052	S1710052	S1715052
		21.00	.8268		S1755210	S1760210	S1765210
	27/32	21.43	.8438		S1705054	S1710054	S1715054
	55/64	21.83	.8594		S1705055	S1710055	S1715055
		22.00	.8661		S1755220	S1760220	S1765220
	7/8	22.23	.8750		S1705056	S1710056	S1715056
	57/64	22.62	.8906		S1705057	S1710057	S1715057
		23.00	.9055		S1755230	S1760230	S1765230
	29/32	23.02	.9063		S1705058	S1710058	S1715058
	59/64	23.42	.9219		S1705059	S1710059	S1715059
	15/16	23.81	.9375		S1705060	S1710060	S1715060
		24.00	.9449		S1755240	S1760240	S1765240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILLS

SERIES 2

CARBIDE

HSS

SPADE DRILL INSERTS - CARBIDE (K20)

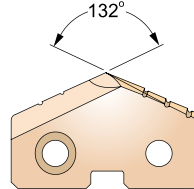
■ EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

■ Plaquettes SPADE DRILL - Carbure (K20)

■ CUSPIDI SPADE DRILL - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1705062	S1710062	S1715062
	63/64	25.00	.9843		S1755250	S1760250	S1765250
	1	25.40	1.0000		S1705100	S1710100	S1715100
	1-1/64	25.80	1.0156		S1705101	S1710101	S1715101
		26.00	1.0236		S1755260	S1760260	S1765260
	1-1/32	26.19	1.0313		S1705102	S1710102	S1715102
	1-3/64	26.59	1.0469		S1705103	S1710103	S1715103
	1-1/16	26.99	1.0625		S1705104	S1710104	S1715104
		27.00	1.0630		S1755270	S1760270	S1765270
	1-3/32	27.78	1.0938		S1705106	S1710106	S1715106
		28.00	1.1024		S1755280	S1760280	S1765280
	1-7/64	28.18	1.1094		S1705107	S1710107	S1715107
	1-1/8	28.58	1.1250		S1705108	S1710108	S1715108
		29.00	1.1417		S1755290	S1760290	S1765290
	1-5/32	29.37	1.1563		S1705110	S1710110	S1715110
		30.00	1.1811		S1755300	S1760300	S1765300
	1-3/16	30.16	1.1875		S1705112	S1710112	S1715112
	1-7/32	30.96	1.2188		S1705114	S1710114	S1715114
		31.00	1.2205		S1755310	S1760310	S1765310
	1-1/4	31.75	1.2500		S1705116	S1710116	S1715116
		32.00	1.2598		S1755320	S1760320	S1765320
	1-9/32	32.54	1.2813		S1705118	S1710118	S1715118
		33.00	1.2992		S1755330	S1760330	S1765330
	1-5/16	33.34	1.3125		S1705120	S1710120	S1715120
		34.00	1.3386		S1755340	S1760340	S1765340
	1-11/32	34.13	1.3438		S1705122	S1710122	S1715122
	1-3/8	34.93	1.3750		S1705124	S1710124	S1715124
		35.00	1.3780		S1755350	S1760350	S1765350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

i-ONE DRILLS

i-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

TECHNICAL DATA



SPADE DRILL INSERTS - CARBIDE (K20)

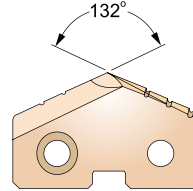
EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL - Carbure (K20)

CUSPIDI SPADE DRILL - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
				TiN	TiCN	TiAlN	
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4063	6.4 (1/4)	S1705126	S1710126	S1715126
		36.00	1.4173		S1755360	S1760360	S1765360
	1-7/16	36.51	1.4375		S1705128	S1710128	S1715128
		37.00	1.4567		S1755370	S1760370	S1765370
	1-15/32	37.31	1.4688		S1705130	S1710130	S1715130
		38.00	1.4961		S1755380	S1760380	S1765380
	1-1/2	38.10	1.5000		S1705132	S1710132	S1715132
	1-17/32	38.89	1.5313		S1705134	S1710134	S1715134
		39.00	1.5354		S1755390	S1760390	S1765390
	1-9/16	39.69	1.5625		S1705136	S1710136	S1715136
		40.00	1.5748		S1755400	S1760400	S1765400
	1-19/32	40.48	1.5938		S1705138	S1710138	S1715138
		41.00	1.6142		S1755410	S1760410	S1765410
	1-5/8	41.28	1.6250		S1705140	S1710140	S1715140
		42.00	1.6535		S1755420	S1760420	S1765420
	1-21/32	42.07	1.6563		S1705142	S1710142	S1715142
	1-11/16	42.86	1.6875		S1705144	S1710144	S1715144
		43.00	1.6929		S1755430	S1760430	S1765430
	1-23/32	43.66	1.7188		S1705146	S1710146	S1715146
		44.00	1.7323		S1755440	S1760440	S1765440
	1-3/4	44.45	1.7500		S1705148	S1710148	S1715148
		45.00	1.7717		S1755450	S1760450	S1765450
	1-25/32	45.24	1.7813		S1705150	S1710150	S1715150
		46.00	1.8110		S1755460	S1760460	S1765460
	1-13/16	46.04	1.8125		S1705152	S1710152	S1715152
	1-27/32	46.83	1.8438		S1705154	S1710154	S1715154
		47.00	1.8504		S1755470	S1760470	S1765470
	1-7/8	47.63	1.8750		S1705156	S1710156	S1715156

◎ : Excellent ○ : Good

P											M	K	N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILLS

SERIES **Y,Z,0**

SPADE DRILL INSERTS - CARBIDE (P40)

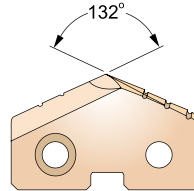
EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL - Carbure (P40)

CUSPIDI SPADE DRILL - MD (P40)

- For general use in carbon steels and alloy steels.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1855095	S1860095	S1865095
	3/8	9.53	.3750		S1805024	S1810024	S1815024
		9.80	.3860		S1855098	S1860098	S1865098
	25/64	9.92	.3906		S1805025	S1810025	S1815025
		10.00	.3937		S1855100	S1860100	S1865100
		10.20	.4016		S1855102	S1860102	S1865102
	13/32	10.32	.4063		S1805026	S1810026	S1815026
		10.50	.4134		S1855105	S1860105	S1865105
	27/64	10.72	.4219		S1805027	S1810027	S1815027
		10.80	.4252		S1855108	S1860108	S1865108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	S1855110	S1860110	S1865110
	7/16	11.11	.4375		S1805028	S1810028	S1815028
		11.50	.4528		S1855115	S1860115	S1865115
	29/64	11.51	.4531		S1805029	S1810029	S1815029
	15/32	11.91	.4688		S1805030	S1810030	S1815030
		12.00	.4724		S1855120	S1860120	S1865120
	31/64	12.30	.4844		S1805031	S1810031	S1815031
		12.50	.4921		S1855125	S1860125	S1865125
	1/2	12.70	.5000		S1805032	S1810032	S1815032
		13.00	.5118		S1855130	S1860130	S1865130
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.10	.5156	3.2 (1/8)	S1805033	S1810033	S1815033
	17/32	13.49	.5313		S1805034	S1810034	S1815034
		13.50	.5315		S1855135	S1860135	S1865135
	35/64	13.89	.5469		S1805035	S1810035	S1815035
		14.00	.5512		S1855140	S1860140	S1865140
	9/16	14.29	.5625		S1805036	S1810036	S1815036
		14.50	.5709		S1855145	S1860145	S1865145
	37/64	14.68	.5781		S1805037	S1810037	S1815037
		15.00	.5906		S1855150	S1860150	S1865150
	19/32	15.08	.5938		S1805038	S1810038	S1815038
	39/64	15.48	.6094		S1805039	S1810039	S1815039
		15.50	.6102		S1855155	S1860155	S1865155
	5/8	15.88	.6250		S1805040	S1810040	S1815040
		16.00	.6299		S1855160	S1860160	S1865160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



SPADE DRILL INSERTS - CARBIDE (P40)

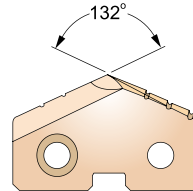
EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL - Carbure (P40)

CUSPIDI SPADE DRILL - MD (P40)

- ▶ For general use in carbon steels and alloy steels.
- ▶ Set up time can be reduced due to changing inserts easily on the machine.
- ▶ Any non-standard size available.

- ▶ Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- ▶ Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAIN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S1805041	S1810041	S1815041
		16.50	.6496		S1855165	S1860165	S1865165
	21/32	16.67	.6563		S1805042	S1810042	S1815042
		17.00	.6693		S1855170	S1860170	S1865170
	43/64	17.07	.6719		S1805043	S1810043	S1815043
	11/16	17.46	.6875		S1805044	S1810044	S1815044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	S1855175	S1860175	S1865175
	45/64	17.86	.7031		S1805045	S1810045	S1815045
		18.00	.7087		S1855180	S1860180	S1865180
	23/32	18.26	.7188		S1805046	S1810046	S1815046
		18.50	.7283		S1855185	S1860185	S1865185
	47/64	18.65	.7344		S1805047	S1810047	S1815047
		19.00	.7480		S1855190	S1860190	S1865190
	3/4	19.05	.7500		S1805048	S1810048	S1815048
	49/64	19.45	.7656		S1805049	S1810049	S1815049
		19.50	.7677		S1855195	S1860195	S1865195
	25/32	19.84	.7813		S1805050	S1810050	S1815050
		20.00	.7874		S1855200	S1860200	S1865200
	51/64	20.24	.7969		S1805051	S1810051	S1815051
		20.50	.8071		S1855205	S1860205	S1865205
	13/16	20.64	.8125		S1805052	S1810052	S1815052
		21.00	.8268		S1855210	S1860210	S1865210
	27/32	21.43	.8438		S1805054	S1810054	S1815054
	55/64	21.83	.8594		S1805055	S1810055	S1815055
		22.00	.8661		S1855220	S1860220	S1865220
	7/8	22.23	.8750		S1805056	S1810056	S1815056
	57/64	22.62	.8906		S1805057	S1810057	S1815057
		23.00	.9055		S1855230	S1860230	S1865230
	29/32	23.02	.9063		S1805058	S1810058	S1815058
	59/64	23.42	.9219		S1805059	S1810059	S1815059
	15/16	23.81	.9375		S1805060	S1810060	S1815060
		24.00	.9449		S1855240	S1860240	S1865240

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



SPADE DRILLS

SERIES 2

CARBIDE

HSS

SPADE DRILL INSERTS - CARBIDE (P40)

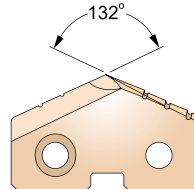
Einweg Bohreinsetz - Vollhartmetall (P40)

Plaquettes SPADE DRILL - Carbure (P40)

Cuspidi SPADE DRILL - MD (P40)

- For general use in carbon steels and alloy steels.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1805062	S1810062	S1815062
	63/64	25.00	.9843		S1855250	S1860250	S1865250
	1	25.40	1.0000		S1805100	S1810100	S1815100
	1-1/64	25.80	1.0156		S1805101	S1810101	S1815101
		26.00	1.0236		S1855260	S1860260	S1865260
	1-1/32	26.19	1.0313		S1805102	S1810102	S1815102
	1-3/64	26.59	1.0469		S1805103	S1810103	S1815103
	1-1/16	26.99	1.0625		S1805104	S1810104	S1815104
		27.00	1.0630		S1855270	S1860270	S1865270
	1-3/32	27.78	1.0938		S1805106	S1810106	S1815106
		28.00	1.1024		S1855280	S1860280	S1865280
	1-7/64	28.18	1.1094		S1805107	S1810107	S1815107
	1-1/8	28.58	1.1250		S1805108	S1810108	S1815108
		29.00	1.1417		S1855290	S1860290	S1865290
	1-5/32	29.37	1.1563		S1805110	S1810110	S1815110
		30.00	1.1811		S1855300	S1860300	S1865300
	1-3/16	30.16	1.1875		S1805112	S1810112	S1815112
	1-7/32	30.96	1.2188		S1805114	S1810114	S1815114
		31.00	1.2205		S1855310	S1860310	S1865310
	1-1/4	31.75	1.2500		S1805116	S1810116	S1815116
		32.00	1.2598		S1855320	S1860320	S1865320
	1-9/32	32.54	1.2813		S1805118	S1810118	S1815118
		33.00	1.2992		S1855330	S1860330	S1865330
	1-5/16	33.34	1.3125		S1805120	S1810120	S1815120
		34.00	1.3386		S1855340	S1860340	S1865340
	1-11/32	34.13	1.3438		S1805122	S1810122	S1815122
	1-3/8	34.93	1.3750		S1805124	S1810124	S1815124
		35.00	1.3780		S1855350	S1860350	S1865350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

i-ONE DRILLS

i-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

TECHNICAL DATA



SPADE DRILL INSERTS - CARBIDE (P40)

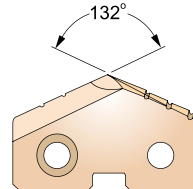
EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL - Carbure (P40)

CUSPIDI SPADE DRILL - MD (P40)

- For general use in carbon steels and alloy steels.
- Set up time can be reduced due to changing inserts easily on the machine.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Reduzierte Rüstzeiten, einfacher Einsatzwechsel auf der Maschine
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4063	6.4 (1/4)	S1805126	S1810126	S1815126
		36.00	1.4173		S1855360	S1860360	S1865360
	1-7/16	36.51	1.4375		S1805128	S1810128	S1815128
		37.00	1.4567		S1855370	S1860370	S1865370
	1-15/32	37.31	1.4688		S1805130	S1810130	S1815130
		38.00	1.4961		S1855380	S1860380	S1865380
	1-1/2	38.10	1.5000		S1805132	S1810132	S1815132
	1-17/32	38.89	1.5313		S1805134	S1810134	S1815134
		39.00	1.5354		S1855390	S1860390	S1865390
	1-9/16	39.69	1.5625		S1805136	S1810136	S1815136
		40.00	1.5748		S1855400	S1860400	S1865400
	1-19/32	40.48	1.5938		S1805138	S1810138	S1815138
		41.00	1.6142		S1855410	S1860410	S1865410
	1-5/8	41.28	1.6250		S1805140	S1810140	S1815140
		42.00	1.6535		S1855420	S1860420	S1865420
	1-21/32	42.07	1.6563		S1805142	S1810142	S1815142
	1-11/16	42.86	1.6875		S1805144	S1810144	S1815144
		43.00	1.6929		S1855430	S1860430	S1865430
	1-23/32	43.66	1.7188		S1805146	S1810146	S1815146
		44.00	1.7323		S1855440	S1860440	S1865440
	1-3/4	44.45	1.7500		S1805148	S1810148	S1815148
		45.00	1.7717		S1855450	S1860450	S1865450
	1-25/32	45.24	1.7813		S1805150	S1810150	S1815150
		46.00	1.8110		S1855460	S1860460	S1865460
	1-13/16	46.04	1.8125		S1805152	S1810152	S1815152
	1-27/32	46.83	1.8438		S1805154	S1810154	S1815154
		47.00	1.8504		S1855470	S1860470	S1865470
	1-7/8	47.63	1.8750		S1805156	S1810156	S1815156

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



Special features of SM-Point Spade Drill

This new "Hybrid Point" combines the strength of the standard point with additional "Web Thinning".

This new point increases stability, reduces thrust, improves centering and allows increased speeds and feeds.

Multiple thinning form at the bottom of the large thinning.

- The optimum thinning for the difference from the cutting speed, the cutting quantity and the cutting load according to the distance from the drill point to the cutting edge.

Radius back face

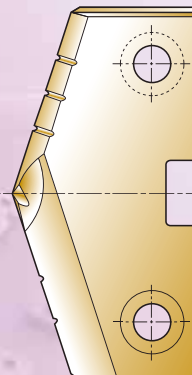
- Wide chip space

Multiple web thinning with the cutting edge of small web thinning.

- Good self-centering
- Less tool lead off
- Reduction in bell mouching, thrust
- Increased stability

Four-facet point

- Self-centering
- Less thrust force





SM-POINT SPADE DRILL INSERTS - HSS M4

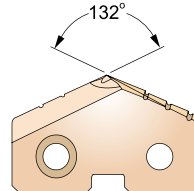
SM-POINT EINWEG BOHREINSATZ - HSS M4

Plaquettes SPADE DRILL, pointe SM - HSS M4

CUSPIDI, SM-POINT - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnittsgeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAIN
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)	SM405045	SM410045	SM415045
		18.00	.7087		SM455180	SM460180	SM465180
	23/32	18.26	.7188		SM405046	SM410046	SM415046
		18.50	.7283		SM455185	SM460185	SM465185
	47/64	18.65	.7344		SM405047	SM410047	SM415047
		19.00	.7480		SM455190	SM460190	SM465190
	3/4	19.05	.7500		SM405048	SM410048	SM415048
	49/64	19.45	.7656		SM405049	SM410049	SM415049
		19.50	.7677		SM455195	SM460195	SM465195
	25/32	19.84	.7812		SM405050	SM410050	SM415050
		20.00	.7874		SM455200	SM460200	SM465200
	51/64	20.24	.7969		SM405051	SM410051	SM415051
		20.50	.8071		SM455205	SM460205	SM465205
	13/16	20.64	.8125		SM405052	SM410052	SM415052
		21.00	.8268		SM455210	SM460210	SM465210
	27/32	21.43	.8438		SM405054	SM410054	SM415054
	55/64	21.83	.8594		SM405055	SM410055	SM415055
		22.00	.8661		SM455220	SM460220	SM465220
	7/8	22.23	.8750		SM405056	SM410056	SM415056
	57/64	22.62	.8906		SM405057	SM410057	SM415057
		23.00	.9055		SM455230	SM460230	SM465230
	29/32	23.02	.9062		SM405058	SM410058	SM415058
	59/64	23.42	.9219		SM405059	SM410059	SM415059
	15/16	23.81	.9375		SM405060	SM410060	SM415060
		24.00	.9449		SM455240	SM460240	SM465240

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎



SPADE DRILLS

SERIES 2

CARBIDE

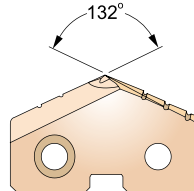
HSS

SM-POINT SPADE DRILL INSERTS - HSS M4

SM-POINT EINWEG BOHREINSATZ - HSS M4
Plaquettes SPADE DRILL, pointe SM - HSS M4
CUSPIDI, SM-POINT - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnittsgeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		HSS (M4)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM405062	SM410062	SM415062
	63/64	25.00	.9843		SM455250	SM460250	SM465250
	1	25.40	1.0000		SM405100	SM410100	SM415100
	1-1/64	25.80	1.0156		SM405101	SM410101	SM415101
		26.00	1.0236		SM455260	SM460260	SM465260
	1-1/32	26.19	1.0312		SM405102	SM410102	SM415102
	1-3/64	26.59	1.0469		SM405103	SM410103	SM415103
	1-1/16	26.99	1.0625		SM405104	SM410104	SM415104
		27.00	1.0630		SM455270	SM460270	SM465270
	1-3/32	27.78	1.0938		SM405106	SM410106	SM415106
		28.00	1.1024		SM455280	SM460280	SM465280
	1-7/64	28.18	1.1094		SM405107	SM410107	SM415107
	1-1/8	28.58	1.1250		SM405108	SM410108	SM415108
		29.00	1.1417		SM455290	SM460290	SM465290
	1-5/32	29.37	1.1562		SM405110	SM410110	SM415110
		30.00	1.1811		SM455300	SM460300	SM465300
	1-3/16	30.16	1.1875		SM405112	SM410112	SM415112
	1-7/32	30.96	1.2188		SM405114	SM410114	SM415114
		31.00	1.2205		SM455310	SM460310	SM465310
	1-1/4	31.75	1.2500		SM405116	SM410116	SM415116
		32.00	1.2598		SM455320	SM460320	SM465320
	1-9/32	32.54	1.2812		SM405118	SM410118	SM415118
		33.00	1.2992		SM455330	SM460330	SM465330
	1-5/16	33.34	1.3125		SM405120	SM410120	SM415120
		34.00	1.3386		SM455340	SM460340	SM465340
	1-11/32	34.13	1.3438		SM405122	SM410122	SM415122
	1-3/8	34.93	1.3750		SM405124	SM410124	SM415124
		35.00	1.3780		SM455350	SM460350	SM465350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○		○		○	○			◎	◎	○	◎	◎

i-ONE DRILLS

i-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

TECHNICAL DATA



SM-POINT SPADE DRILL INSERTS - HSS M4

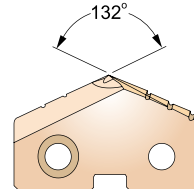
SM-POINT EINWEG BOHREINSATZ - HSS M4

Plaquettes SPADE DRILL, pointe SM - HSS M4

CUSPIDI, SM-POINT - HSS M4

- For general use in steels and cast irons.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Stahl und Gusseisen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4062	6.4 [1/4]	SM405126	SM410126	SM415126
		36.00	1.4173		SM455360	SM460360	SM465360
	1-7/16	36.51	1.4375		SM405128	SM410128	SM415128
		37.00	1.4567		SM455370	SM460370	SM465370
	1-15/32	37.31	1.4688		SM405130	SM410130	SM415130
		38.00	1.4961		SM455380	SM460380	SM465380
	1-1/2	38.10	1.5000		SM405132	SM410132	SM415132
	1-17/32	38.89	1.5312		SM405134	SM410134	SM415134
		39.00	1.5354		SM455390	SM460390	SM465390
	1-9/16	39.69	1.5625		SM405136	SM410136	SM415136
		40.00	1.5748		SM455400	SM460400	SM465400
	1-19/32	40.48	1.5938		SM405138	SM410138	SM415138
		41.00	1.6142		SM455410	SM460410	SM465410
	1-5/8	41.28	1.6250		SM405140	SM410140	SM415140
		42.00	1.6535		SM455420	SM460420	SM465420
	1-21/32	42.07	1.6562		SM405142	SM410142	SM415142
	1-11/16	42.86	1.6875		SM405144	SM410144	SM415144
		43.00	1.6929		SM455430	SM460430	SM465430
	1-23/32	43.66	1.7188		SM405146	SM410146	SM415146
		44.00	1.7323		SM455440	SM460440	SM465440
	1-3/4	44.45	1.7500		SM405148	SM410148	SM415148
		45.00	1.7717		SM455450	SM460450	SM465450
	1-25/32	45.24	1.7812		SM405150	SM410150	SM415150
		46.00	1.8110		SM455460	SM460460	SM465460
	1-13/16	46.04	1.8125		SM405152	SM410152	SM415152
	1-27/32	46.83	1.8438		SM405154	SM410154	SM415154
		47.00	1.8504		SM455470	SM460470	SM465470
	1-7/8	47.63	1.8750		SM405156	SM410156	SM415156

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○		○		○	○				◎	◎	○	◎	◎



SPADE DRILLS

SERIES **Y,Z,0**

CARBIDE

HSS

SM-POINT SPADE DRILL INSERTS - SUPER HSS T15

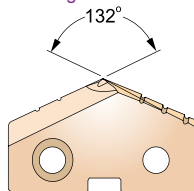
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

Plaquettes SPADE DRILL, pointe SM - Super HSS T15

CUSPIDI, SM-POINT - HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnittsgeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM155095	SM160095	SM165095
	3/8	9.53	.3750		SM105024	SM110024	SM115024
		9.80	.3858		SM155098	SM160098	SM165098
	25/64	9.92	.3906		SM105025	SM110025	SM115025
		10.00	.3937		SM155100	SM160100	SM165100
		10.20	.4016		SM155102	SM160102	SM165102
	13/32	10.32	.4062		SM105026	SM110026	SM115026
		10.50	.4134		SM155105	SM160105	SM165105
	27/64	10.72	.4219		SM105027	SM110027	SM115027
Z Ø11.11(.437) to Ø12.95(.510)		10.80	.4252	2.4 (3/32)	SM155108	SM160108	SM165108
		11.00	.4331		SM155110	SM160110	SM165110
	7/16	11.11	.4375		SM105028	SM110028	SM115028
		11.50	.4528		SM155115	SM160115	SM165115
	29/64	11.51	.4531		SM105029	SM110029	SM115029
	15/32	11.91	.4688		SM105030	SM110030	SM115030
		12.00	.4724		SM155120	SM160120	SM165120
	31/64	12.30	.4844		SM105031	SM110031	SM115031
		12.50	.4921		SM155125	SM160125	SM165125
0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	3.2 (1/8)	SM105032	SM110032	SM115032
		13.00	.5118		SM155130	SM160130	SM165130
	33/64	13.10	.5156		SM105033	SM110033	SM115033
	17/32	13.49	.5312		SM105034	SM110034	SM115034
		13.50	.5315		SM155135	SM160135	SM165135
	35/64	13.89	.5469		SM105035	SM110035	SM115035
		14.00	.5512		SM155140	SM160140	SM165140
	9/16	14.29	.5625		SM105036	SM110036	SM115036
		14.50	.5709		SM155145	SM160145	SM165145
	37/64	14.68	.5781		SM105037	SM110037	SM115037
		15.00	.5906		SM155150	SM160150	SM165150
	19/32	15.08	.5938		SM105038	SM110038	SM115038
	39/64	15.48	.6094		SM105039	SM110039	SM115039
		15.50	.6102		SM155155	SM160155	SM165155
	5/8	15.88	.6250		SM105040	SM110040	SM115040
		16.00	.6299		SM155160	SM160160	SM165160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SM-POINT SPADE DRILL INSERTS - SUPER HSS T15

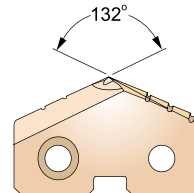
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

Plaquettes SPADE DRILL, pointe SM - Super HSS T15

CUSPIDI DI FORATURA SM-POINT - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	SM105041	SM110041	SM115041
		16.50	.6496		SM155165	SM160165	SM165165
	21/32	16.67	.6562		SM105042	SM110042	SM115042
		17.00	.6693		SM155170	SM160170	SM165170
	43/64	17.07	.6719		SM105043	SM110043	SM115043
	11/16	17.46	.6875		SM105044	SM110044	SM115044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	SM155175	SM160175	SM165175
	45/64	17.86	.7031		SM105045	SM110045	SM115045
		18.00	.7087		SM155180	SM160180	SM165180
	23/32	18.26	.7188		SM105046	SM110046	SM115046
		18.50	.7283		SM155185	SM160185	SM165185
	47/64	18.65	.7344		SM105047	SM110047	SM115047
		19.00	.7480		SM155190	SM160190	SM165190
	3/4	19.05	.7500		SM105048	SM110048	SM115048
	49/64	19.45	.7656		SM105049	SM110049	SM115049
		19.50	.7677		SM155195	SM160195	SM165195
	25/32	19.84	.7812		SM105050	SM110050	SM115050
		20.00	.7874		SM155200	SM160200	SM165200
	51/64	20.24	.7969		SM105051	SM110051	SM115051
		20.50	.8071		SM155205	SM160205	SM165205
	13/16	20.64	.8125		SM105052	SM110052	SM115052
		21.00	.8268		SM155210	SM160210	SM165210
	27/32	21.43	.8438		SM105054	SM110054	SM115054
	55/64	21.83	.8594		SM105055	SM110055	SM115055
		22.00	.8661		SM155220	SM160220	SM165220
	7/8	22.23	.8750		SM105056	SM110056	SM115056
	57/64	22.62	.8906		SM105057	SM110057	SM115057
		23.00	.9055		SM155230	SM160230	SM165230
	29/32	23.02	.9062		SM105058	SM110058	SM115058
	59/64	23.42	.9219		SM105059	SM110059	SM115059
	15/16	23.81	.9375		SM105060	SM110060	SM115060
		24.00	.9449		SM155240	SM160240	SM165240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



SPADE DRILLS

SERIES 2

CARBIDE

HSS

SM-POINT SPADE DRILL INSERTS - SUPER HSS T15

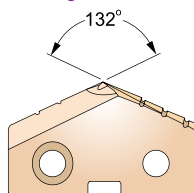
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

Plaquettes SPADE DRILL, pointe SM - Super HSS T15

CUSPIDI DI FORATURA SM-POINT - SUPER HSS T15

- For use in high nickel alloys and materials over 280 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
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- Zur Anwendung bei legierten Stählen mit hohem Nickelanteil und Werkstoffen über 280 Brinell
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnitengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAIN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM105062	SM110062	SM115062
	63/64	25.00	.9843		SM155250	SM160250	SM165250
	1	25.40	1.0000		SM105100	SM110100	SM115100
	1-1/64	25.80	1.0156		SM105101	SM110101	SM115101
		26.00	1.0236		SM155260	SM160260	SM165260
	1-1/32	26.19	1.0312		SM105102	SM110102	SM115102
	1-3/64	26.59	1.0469		SM105103	SM110103	SM115103
	1-1/16	26.99	1.0625		SM105104	SM110104	SM115104
		27.00	1.0630		SM155270	SM160270	SM165270
	1-3/32	27.78	1.0938		SM105106	SM110106	SM115106
		28.00	1.1024		SM155280	SM160280	SM165280
	1-7/64	28.18	1.1094		SM105107	SM110107	SM115107
	1-1/8	28.58	1.1250		SM105108	SM110108	SM115108
		29.00	1.1417		SM155290	SM160290	SM165290
	1-5/32	29.37	1.1562		SM105110	SM110110	SM115110
		30.00	1.1811		SM155300	SM160300	SM165300
	1-3/16	30.16	1.1875		SM105112	SM110112	SM115112
	1-7/32	30.96	1.2188		SM105114	SM110114	SM115114
		31.00	1.2205		SM155310	SM160310	SM165310
	1-1/4	31.75	1.2500		SM105116	SM110116	SM115116
		32.00	1.2598		SM155320	SM160320	SM165320
	1-9/32	32.54	1.2812		SM105118	SM110118	SM115118
		33.00	1.2992		SM155330	SM160330	SM165330
	1-5/16	33.34	1.3125		SM105120	SM110120	SM115120
		34.00	1.3386		SM155340	SM160340	SM165340
	1-11/32	34.13	1.3438		SM105122	SM110122	SM115122
	1-3/8	34.93	1.3750		SM105124	SM110124	SM115124
		35.00	1.3780		SM155350	SM160350	SM165350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SM-POINT SPADE DRILL INSERTS - SUPER HSS T15

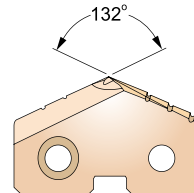
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- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4062	6.4 (1/4)	SM105126	SM110126	SM115126
		36.00	1.4173		SM155360	SM160360	SM165360
	1-7/16	36.51	1.4375		SM105128	SM110128	SM115128
		37.00	1.4567		SM155370	SM160370	SM165370
	1-15/32	37.31	1.4688		SM105130	SM110130	SM115130
		38.00	1.4961		SM155380	SM160380	SM165380
	1-1/2	38.10	1.5000		SM105132	SM110132	SM115132
	1-17/32	38.89	1.5312		SM105134	SM110134	SM115134
		39.00	1.5354		SM155390	SM160390	SM165390
	1-9/16	39.69	1.5625		SM105136	SM110136	SM115136
		40.00	1.5748		SM155400	SM160400	SM165400
	1-19/32	40.48	1.5938		SM105138	SM110138	SM115138
		41.00	1.6142		SM155410	SM160410	SM165410
	1-5/8	41.28	1.6250		SM105140	SM110140	SM115140
		42.00	1.6535		SM155420	SM160420	SM165420
	1-21/32	42.07	1.6562		SM105142	SM110142	SM115142
	1-11/16	42.86	1.6875		SM105144	SM110144	SM115144
		43.00	1.6929		SM155430	SM160430	SM165430
	1-23/32	43.66	1.7188		SM105146	SM110146	SM115146
		44.00	1.7323		SM155440	SM160440	SM165440
	1-3/4	44.45	1.7500		SM105148	SM110148	SM115148
		45.00	1.7717		SM155450	SM160450	SM165450
	1-25/32	45.24	1.7812		SM105150	SM110150	SM115150
		46.00	1.8110		SM155460	SM160460	SM165460
	1-13/16	46.04	1.8125		SM105152	SM110152	SM115152
	1-27/32	46.83	1.8438		SM105154	SM110154	SM115154
		47.00	1.8504		SM155470	SM160470	SM165470
	1-7/8	47.63	1.8750		SM105156	SM110156	SM115156

◎ : Excellent ○ : Good

P											M	K			N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron			Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)		~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	○	◎	○	○



SM-POINT SPADE DRILL INSERTS - PREMIUM HSS M48

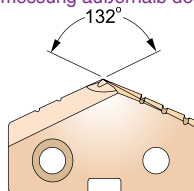
SM-POINT EINWEG BOHREINSATZ - PREMIUM HSS M48

Plaquettes SPADE DRILL, pointe SM - HSS Premium M48

CUSPIDI, SM-POINT - PREMIUM HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung bei hitzebeständigen Legierungen und Werkstoffen mit 350~500 Brinell
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
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- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS (M48)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM555095	SM560095	SM565095
	3/8	9.53	.3750		SM505024	SM510024	SM515024
		9.80	.3858		SM555098	SM560098	SM565098
	25/64	9.92	.3906		SM505025	SM510025	SM515025
		10.00	.3937		SM555100	SM560100	SM565100
		10.20	.4016		SM555102	SM560102	SM565102
	13/32	10.32	.4062		SM505026	SM510026	SM515026
		10.50	.4134		SM555105	SM560105	SM565105
	27/64	10.72	.4219		SM505027	SM510027	SM515027
		10.80	.4252		SM555108	SM560108	SM565108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	SM555110	SM560110	SM565110
	7/16	11.11	.4375		SM505028	SM510028	SM515028
		11.50	.4528		SM555115	SM560115	SM565115
	29/64	11.51	.4531		SM505029	SM510029	SM515029
	15/32	11.91	.4688		SM505030	SM510030	SM515030
		12.00	.4724		SM555120	SM560120	SM565120
	31/64	12.30	.4844		SM505031	SM510031	SM515031
		12.50	.4921		SM555125	SM560125	SM565125
0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	3.2 (1/8)	SM505032	SM510032	SM515032
		13.00	.5118		SM555130	SM560130	SM565130
	33/64	13.10	.5156		SM505033	SM510033	SM515033
	17/32	13.49	.5312		SM505034	SM510034	SM515034
		13.50	.5315		SM555135	SM560135	SM565135
	35/64	13.89	.5469		SM505035	SM510035	SM515035
		14.00	.5512		SM555140	SM560140	SM565140
	9/16	14.29	.5625		SM505036	SM510036	SM515036
		14.50	.5709		SM555145	SM560145	SM565145
	37/64	14.68	.5781		SM505037	SM510037	SM515037
		15.00	.5906		SM555150	SM560150	SM565150
	19/32	15.08	.5938		SM505038	SM510038	SM515038
	39/64	15.48	.6094		SM505039	SM510039	SM515039
		15.50	.6102		SM555155	SM560155	SM565155
	5/8	15.88	.6250		SM505040	SM510040	SM515040
		16.00	.6299		SM555160	SM560160	SM565160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○



SM-POINT SPADE DRILL INSERTS - PREMIUM HSS M48

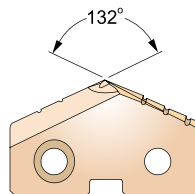
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cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS (M48)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	SM505041	SM510041	SM515041
		16.50	.6496		SM555165	SM560165	SM565165
	21/32	16.67	.6562		SM505042	SM510042	SM515042
		17.00	.6693		SM555170	SM560170	SM565170
	43/64	17.07	.6719		SM505043	SM510043	SM515043
	11/16	17.46	.6875		SM505044	SM510044	SM515044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	SM555175	SM560175	SM565175
	45/64	17.86	.7031		SM505045	SM510045	SM515045
		18.00	.7087		SM555180	SM560180	SM565180
	23/32	18.26	.7188		SM505046	SM510046	SM515046
		18.50	.7283		SM555185	SM560185	SM565185
	47/64	18.65	.7344		SM505047	SM510047	SM515047
		19.00	.7480		SM555190	SM560190	SM565190
	3/4	19.05	.7500		SM505048	SM510048	SM515048
	49/64	19.45	.7656		SM505049	SM510049	SM515049
		19.50	.7677		SM555195	SM560195	SM565195
	25/32	19.84	.7812		SM505050	SM510050	SM515050
		20.00	.7874		SM555200	SM560200	SM565200
	51/64	20.24	.7969		SM505051	SM510051	SM515051
		20.50	.8071		SM555205	SM560205	SM565205
	13/16	20.64	.8125		SM505052	SM510052	SM515052
		21.00	.8268		SM555210	SM560210	SM565210
	27/32	21.43	.8438		SM505054	SM510054	SM515054
	55/64	21.83	.8594		SM505055	SM510055	SM515055
		22.00	.8661		SM555220	SM560220	SM565220
	7/8	22.23	.8750		SM505056	SM510056	SM515056
	57/64	22.62	.8906		SM505057	SM510057	SM515057
		23.00	.9055		SM555230	SM560230	SM565230
	29/32	23.02	.9062		SM505058	SM510058	SM515058
	59/64	23.42	.9219		SM505059	SM510059	SM515059
	15/16	23.81	.9375		SM505060	SM510060	SM515060
		24.00	.9449		SM555240	SM560240	SM565240

◎ : Excellent ○ : Good

P											M	K			N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron			Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)		~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○	○



SPADE DRILLS

SERIES 2

CARBIDE

HSS

SM-POINT SPADE DRILL INSERTS - PREMIUM HSS M48

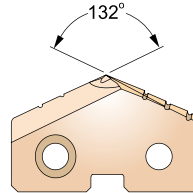
SM-POINT EINWEG BOHREINSATZ - PREMIUM HSS M48

Plaquettes SPADE DRILL, pointe SM - HSS Premium M48

CUSPIDI, SM-POINT - PREMIUM HSS M48

- For use in high temperature alloys and materials with 350~500 Brinell.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung bei hitzebeständigen Legierungen und Werkstoffen mit 350~500 Brinell
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.365

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS (M48)		
					TiN	TiCN	TiAlN
2 Ø24.41 [.961] to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM505062	SM510062	SM515062
	63/64	25.00	.9843		SM555250	SM560250	SM565250
	1	25.40	1.0000		SM505100	SM510100	SM515100
	1-1/64	25.80	1.0156		SM505101	SM510101	SM515101
		26.00	1.0236		SM555260	SM560260	SM565260
	1-1/32	26.19	1.0312		SM505102	SM510102	SM515102
	1-3/64	26.59	1.0469		SM505103	SM510103	SM515103
	1-1/16	26.99	1.0625		SM505104	SM510104	SM515104
		27.00	1.0630		SM555270	SM560270	SM565270
	1-3/32	27.78	1.0938		SM505106	SM510106	SM515106
		28.00	1.1024		SM555280	SM560280	SM565280
	1-7/64	28.18	1.1094		SM505107	SM510107	SM515107
	1-1/8	28.58	1.1250		SM505108	SM510108	SM515108
		29.00	1.1417		SM555290	SM560290	SM565290
	1-5/32	29.37	1.1562		SM505110	SM510110	SM515110
		30.00	1.1811		SM555300	SM560300	SM565300
	1-3/16	30.16	1.1875		SM505112	SM510112	SM515112
	1-7/32	30.96	1.2188		SM505114	SM510114	SM515114
		31.00	1.2205		SM555310	SM560310	SM565310
	1-1/4	31.75	1.2500		SM505116	SM510116	SM515116
		32.00	1.2598		SM555320	SM560320	SM565320
	1-9/32	32.54	1.2812		SM505118	SM510118	SM515118
		33.00	1.2992		SM555330	SM560330	SM565330
	1-5/16	33.34	1.3125		SM505120	SM510120	SM515120
		34.00	1.3386		SM555340	SM560340	SM565340
	1-11/32	34.13	1.3438		SM505122	SM510122	SM515122
	1-3/8	34.93	1.3750		SM505124	SM510124	SM515124
		35.00	1.3780		SM555350	SM560350	SM565350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

i-ONE DRILLS

i-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

TECHNICAL DATA



SM-POINT SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

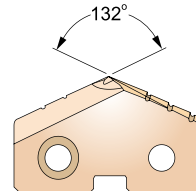
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL, pointe SM pour la fonte - Carbure (K10)

CUSPIDI SM-POINT - MD (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

- ▶ Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- ▶ Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- ▶ Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- ▶ Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM655095	SM660095	SM665095
	3/8	9.53	.3750		SM605024	SM610024	SM615024
		9.80	.3858		SM655098	SM660098	SM665098
	25/64	9.92	.3906		SM605025	SM610025	SM615025
		10.00	.3937		SM655100	SM660100	SM665100
		10.20	.4016		SM655102	SM660102	SM665102
	13/32	10.32	.4062		SM605026	SM610026	SM615026
		10.50	.4134		SM655105	SM660105	SM665105
	27/64	10.72	.4219		SM605027	SM610027	SM615027
		10.80	.4252		SM655108	SM660108	SM665108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	SM655110	SM660110	SM665110
	7/16	11.11	.4375		SM605028	SM610028	SM615028
		11.50	.4528		SM655115	SM660115	SM665115
	29/64	11.51	.4531		SM605029	SM610029	SM615029
	15/32	11.91	.4688		SM605030	SM610030	SM615030
		12.00	.4724		SM655120	SM660120	SM665120
0 Ø12.98 (.511) to Ø17.65 (.695)	31/64	12.30	.4844	3.2 (1/8)	SM605031	SM610031	SM615031
		12.50	.4921		SM655125	SM660125	SM665125
	1/2	12.70	.5000		SM605032	SM610032	SM615032
		13.00	.5118		SM655130	SM660130	SM665130
	33/64	13.10	.5156		SM605033	SM610033	SM615033
	17/32	13.49	.5312		SM605034	SM610034	SM615034
		13.50	.5315		SM655135	SM660135	SM665135
	35/64	13.89	.5469		SM605035	SM610035	SM615035
		14.00	.5512		SM655140	SM660140	SM665140
	9/16	14.29	.5625		SM605036	SM610036	SM615036
		14.50	.5709		SM655145	SM660145	SM665145
	37/64	14.68	.5781		SM605037	SM610037	SM615037
		15.00	.5906		SM655150	SM660150	SM665150
	19/32	15.08	.5938		SM605038	SM610038	SM615038
	39/64	15.48	.6094		SM605039	SM610039	SM615039
		15.50	.6102		SM655155	SM660155	SM665155
	5/8	15.88	.6250		SM605040	SM610040	SM615040
		16.00	.6299		SM655160	SM660160	SM665160

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
													◎	◎		



SPADE DRILLS

SERIES 0,1

SM-POINT SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

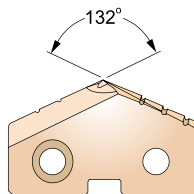
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL, pointe SM pour la fonte - Carburé (K10)

CUSPIDI SM-POINT - MD (K10)

- High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	SM605041	SM610041	SM615041
		16.50	.6496		SM655165	SM660165	SM665165
	21/32	16.67	.6562		SM605042	SM610042	SM615042
		17.00	.6693		SM655170	SM660170	SM665170
	43/64	17.07	.6719		SM605043	SM610043	SM615043
	11/16	17.46	.6875		SM605044	SM610044	SM615044
		17.50	.6890		SM655175	SM660175	SM665175
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)	SM605045	SM610045	SM615045
		18.00	.7087		SM655180	SM660180	SM665180
	23/32	18.26	.7188		SM605046	SM610046	SM615046
		18.50	.7283		SM655185	SM660185	SM665185
	47/64	18.65	.7344		SM605047	SM610047	SM615047
		19.00	.7480		SM655190	SM660190	SM665190
	3/4	19.05	.7500		SM605048	SM610048	SM615048
	49/64	19.45	.7656		SM605049	SM610049	SM615049
		19.50	.7677		SM655195	SM660195	SM665195
	25/32	19.84	.7812		SM605050	SM610050	SM615050
		20.00	.7874		SM655200	SM660200	SM665200
	51/64	20.24	.7969		SM605051	SM610051	SM615051
		20.50	.8071		SM655205	SM660205	SM665205
	13/16	20.64	.8125		SM605052	SM610052	SM615052
		21.00	.8268		SM655210	SM660210	SM665210
	27/32	21.43	.8438		SM605054	SM610054	SM615054
	55/64	21.83	.8594		SM605055	SM610055	SM615055
		22.00	.8661		SM655220	SM660220	SM665220
	7/8	22.23	.8750		SM605056	SM610056	SM615056
	57/64	22.62	.8906		SM605057	SM610057	SM615057
		23.00	.9055		SM655230	SM660230	SM665230
	29/32	23.02	.9062		SM605058	SM610058	SM615058
	59/64	23.42	.9219		SM605059	SM610059	SM615059
	15/16	23.81	.9375		SM605060	SM610060	SM615060
		24.00	.9449		SM655240	SM660240	SM665240

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
													◎	◎		

CARBIDE

HSS

i-ONE DRILLS

i-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

TECHNICAL DATA



SM-POINT SPADE DRILL INSERTS FOR CAST IRON - CARBIDE (K10)

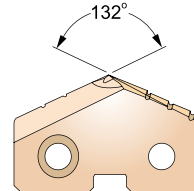
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL, pointe SM pour la fonte - Carbure (K10)

CUSPIDI SM-POINT - MD (K10)

- High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Beste Leistung in Grauguss über 220 Brinell, kurzspanendem Kugelgraphitguss, Si-Aluminium und Kupferlegierungen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K10)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM605062	SM610062	SM615062
	63/64	25.00	.9843		SM655250	SM660250	SM665250
	1	25.40	1.0000		SM605100	SM610100	SM615100
	1-1/64	25.80	1.0156		SM605101	SM610101	SM615101
		26.00	1.0236		SM655260	SM660260	SM665260
	1-1/32	26.19	1.0312		SM605102	SM610102	SM615102
	1-3/64	26.59	1.0469		SM605103	SM610103	SM615103
	1-1/16	26.99	1.0625		SM605104	SM610104	SM615104
		27.00	1.0630		SM655270	SM660270	SM665270
	1-3/32	27.78	1.0938		SM605106	SM610106	SM615106
		28.00	1.1024		SM655280	SM660280	SM665280
	1-7/64	28.18	1.1094		SM605107	SM610107	SM615107
	1-1/8	28.58	1.1250		SM605108	SM610108	SM615108
		29.00	1.1417		SM655290	SM660290	SM665290
	1-5/32	29.37	1.1562		SM605110	SM610110	SM615110
		30.00	1.1811		SM655300	SM660300	SM665300
	1-3/16	30.16	1.1875		SM605112	SM610112	SM615112
	1-7/32	30.96	1.2188		SM605114	SM610114	SM615114
		31.00	1.2205		SM655310	SM660310	SM665310
	1-1/4	31.75	1.2500		SM605116	SM610116	SM615116
		32.00	1.2598		SM655320	SM660320	SM665320
	1-9/32	32.54	1.2812		SM605118	SM610118	SM615118
		33.00	1.2992		SM655330	SM660330	SM665330
	1-5/16	33.34	1.3125		SM605120	SM610120	SM615120
		34.00	1.3386		SM655340	SM660340	SM665340
	1-11/32	34.13	1.3438		SM605122	SM610122	SM615122
	1-3/8	34.93	1.3750		SM605124	SM610124	SM615124
		35.00	1.3780		SM655350	SM660350	SM665350

◎ : Excellent ○ : Good

P											M	K		N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
													◎	◎		



SPADE DRILLS

SERIES **Y,Z,0**

CARBIDE

HSS

SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

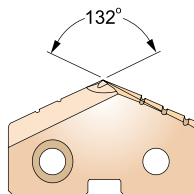
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL, pointe SM - Carburé (K20)

CUSPIDI SM-POINT - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnitengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM755095	SM760095	SM765095
	3/8	9.53	.3750		SM705024	SM710024	SM715024
		9.80	.3858		SM755098	SM760098	SM765098
	25/64	9.92	.3906		SM705025	SM710025	SM715025
		10.00	.3937		SM755100	SM760100	SM765100
		10.20	.4016		SM755102	SM760102	SM765102
	13/32	10.32	.4062		SM705026	SM710026	SM715026
		10.50	.4134		SM755105	SM760105	SM765105
	27/64	10.72	.4219		SM705027	SM710027	SM715027
		10.80	.4252		SM755108	SM760108	SM765108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	SM755110	SM760110	SM765110
	7/16	11.11	.4375		SM705028	SM710028	SM715028
		11.50	.4528		SM755115	SM760115	SM765115
	29/64	11.51	.4531		SM705029	SM710029	SM715029
	15/32	11.91	.4688		SM705030	SM710030	SM715030
		12.00	.4724		SM755120	SM760120	SM765120
	31/64	12.30	.4844		SM705031	SM710031	SM715031
		12.50	.4921		SM755125	SM760125	SM765125
0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	3.2 (1/8)	SM705032	SM710032	SM715032
		13.00	.5118		SM755130	SM760130	SM765130
	33/64	13.10	.5156		SM705033	SM710033	SM715033
	17/32	13.49	.5312		SM705034	SM710034	SM715034
		13.50	.5315		SM755135	SM760135	SM765135
	35/64	13.89	.5469		SM705035	SM710035	SM715035
		14.00	.5512		SM755140	SM760140	SM765140
	9/16	14.29	.5625		SM705036	SM710036	SM715036
		14.50	.5709		SM755145	SM760145	SM765145
	37/64	14.68	.5781		SM705037	SM710037	SM715037
		15.00	.5906		SM755150	SM760150	SM765150
	19/32	15.08	.5938		SM705038	SM710038	SM715038
	39/64	15.48	.6094		SM705039	SM710039	SM715039
		15.50	.6102		SM755155	SM760155	SM765155
	5/8	15.88	.6250		SM705040	SM710040	SM715040
		16.00	.6299		SM755160	SM760160	SM765160

○ : Excellent ○ : Good

P										M	K	N			
Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

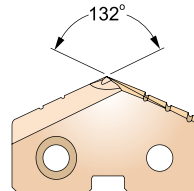
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL, pointe SM - Carbure (K20)

CUSPIDI SM-POINT - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	SM705041	SM710041	SM715041
		16.50	.6496		SM755165	SM760165	SM765165
	21/32	16.67	.6562		SM705042	SM710042	SM715042
		17.00	.6693		SM755170	SM760170	SM765170
	43/64	17.07	.6719		SM705043	SM710043	SM715043
	11/16	17.46	.6875		SM705044	SM710044	SM715044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	SM755175	SM760175	SM765175
	45/64	17.86	.7031		SM705045	SM710045	SM715045
		18.00	.7087		SM755180	SM760180	SM765180
	23/32	18.26	.7188		SM705046	SM710046	SM715046
		18.50	.7283		SM755185	SM760185	SM765185
	47/64	18.65	.7344		SM705047	SM710047	SM715047
		19.00	.7480		SM755190	SM760190	SM765190
	3/4	19.05	.7500		SM705048	SM710048	SM715048
	49/64	19.45	.7656		SM705049	SM710049	SM715049
		19.50	.7677		SM755195	SM760195	SM765195
	25/32	19.84	.7812		SM705050	SM710050	SM715050
		20.00	.7874		SM755200	SM760200	SM765200
	51/64	20.24	.7969		SM705051	SM710051	SM715051
		20.50	.8071		SM755205	SM760205	SM765205
	13/16	20.64	.8125		SM705052	SM710052	SM715052
		21.00	.8268		SM755210	SM760210	SM765210
	27/32	21.43	.8438		SM705054	SM710054	SM715054
	55/64	21.83	.8594		SM705055	SM710055	SM715055
		22.00	.8661		SM755220	SM760220	SM765220
	7/8	22.23	.8750		SM705056	SM710056	SM715056
	57/64	22.62	.8906		SM705057	SM710057	SM715057
		23.00	.9055		SM755230	SM760230	SM765230
	29/32	23.02	.9062		SM705058	SM710058	SM715058
	59/64	23.42	.9219		SM705059	SM710059	SM715059
	15/16	23.81	.9375		SM705060	SM710060	SM715060
		24.00	.9449		SM755240	SM760240	SM765240

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILLS

SERIES 2

SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

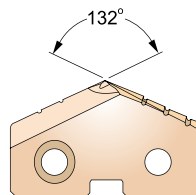
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL, pointe SM - Carbure (K20)

CUSPIDI SM-POINT - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM705062	SM710062	SM715062
	63/64	25.00	.9843		SM755250	SM760250	SM765250
	1	25.40	1.0000		SM705100	SM710100	SM715100
	1-1/64	25.80	1.0156		SM705101	SM710101	SM715101
		26.00	1.0236		SM755260	SM760260	SM765260
	1-1/32	26.19	1.0312		SM705102	SM710102	SM715102
	1-3/64	26.59	1.0469		SM705103	SM710103	SM715103
	1-1/16	26.99	1.0625		SM705104	SM710104	SM715104
		27.00	1.0630		SM755270	SM760270	SM765270
	1-3/32	27.78	1.0938		SM705106	SM710106	SM715106
		28.00	1.1024		SM755280	SM760280	SM765280
	1-7/64	28.18	1.1094		SM705107	SM710107	SM715107
	1-1/8	28.58	1.1250		SM705108	SM710108	SM715108
		29.00	1.1417		SM755290	SM760290	SM765290
	1-5/32	29.37	1.1562		SM705110	SM710110	SM715110
		30.00	1.1811		SM755300	SM760300	SM765300
	1-3/16	30.16	1.1875		SM705112	SM710112	SM715112
	1-7/32	30.96	1.2188		SM705114	SM710114	SM715114
		31.00	1.2205		SM755310	SM760310	SM765310
	1-1/4	31.75	1.2500		SM705116	SM710116	SM715116
		32.00	1.2598		SM755320	SM760320	SM765320
	1-9/32	32.54	1.2812		SM705118	SM710118	SM715118
		33.00	1.2992		SM755330	SM760330	SM765330
	1-5/16	33.34	1.3125		SM705120	SM710120	SM715120
		34.00	1.3386		SM755340	SM760340	SM765340
	1-11/32	34.13	1.3438		SM705122	SM710122	SM715122
	1-3/8	34.93	1.3750		SM705124	SM710124	SM715124
		35.00	1.3780		SM755350	SM760350	SM765350

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

CARBIDE

HSS

i-ONE DRILLS

i-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

TECHNICAL DATA



SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

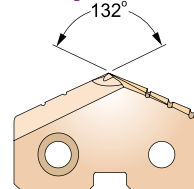
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

Plaquettes SPADE DRILL, pointe SM - Carbure (K20)

CUSPIDI SM-POINT - MD (K20)

- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (K20)		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4062	6.4 [1/4]	SM705126	SM710126	SM715126
		36.00	1.4173		SM755360	SM760360	SM765360
	1-7/16	36.51	1.4375		SM705128	SM710128	SM715128
		37.00	1.4567		SM755370	SM760370	SM765370
	1-15/32	37.31	1.4688		SM705130	SM710130	SM715130
		38.00	1.4961		SM755380	SM760380	SM765380
	1-1/2	38.10	1.5000		SM705132	SM710132	SM715132
	1-17/32	38.89	1.5312		SM705134	SM710134	SM715134
		39.00	1.5354		SM755390	SM760390	SM765390
	1-9/16	39.69	1.5625		SM705136	SM710136	SM715136
		40.00	1.5748		SM755400	SM760400	SM765400
	1-19/32	40.48	1.5938		SM705138	SM710138	SM715138
		41.00	1.6142		SM755410	SM760410	SM765410
	1-5/8	41.28	1.6250		SM705140	SM710140	SM715140
		42.00	1.6535		SM755420	SM760420	SM765420
	1-21/32	42.07	1.6562		SM705142	SM710142	SM715142
	1-11/16	42.86	1.6875		SM705144	SM710144	SM715144
		43.00	1.6929		SM755430	SM760430	SM765430
	1-23/32	43.66	1.7188		SM705146	SM710146	SM715146
		44.00	1.7323		SM755440	SM760440	SM765440
	1-3/4	44.45	1.7500		SM705148	SM710148	SM715148
		45.00	1.7717		SM755450	SM760450	SM765450
	1-25/32	45.24	1.7812		SM705150	SM710150	SM715150
		46.00	1.8110		SM755460	SM760460	SM765460
	1-13/16	46.04	1.8125		SM705152	SM710152	SM715152
	1-27/32	46.83	1.8438		SM705154	SM710154	SM715154
		47.00	1.8504		SM755470	SM760470	SM765470
	1-7/8	47.63	1.8750		SM705156	SM710156	SM715156

◎ : Excellent ○ : Good

P											M	K	N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILLS

SERIES **Y,Z,0**

SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

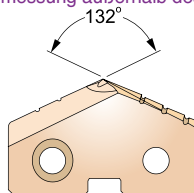
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL, pointe SM - Carbure (P40)

CUSPIDI SM-POINT - MD (P40)

- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM855095	SM860095	SM865095
	3/8	9.53	.3750		SM805024	SM810024	SM815024
		9.80	.3858		SM855098	SM860098	SM865098
	25/64	9.92	.3906		SM805025	SM810025	SM815025
		10.00	.3937		SM855100	SM860100	SM865100
		10.20	.4016		SM855102	SM860102	SM865102
	13/32	10.32	.4062		SM805026	SM810026	SM815026
		10.50	.4134		SM855105	SM860105	SM865105
	27/64	10.72	.4219		SM805027	SM810027	SM815027
		10.80	.4252		SM855108	SM860108	SM865108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	SM855110	SM860110	SM865110
	7/16	11.11	.4375		SM805028	SM810028	SM815028
		11.50	.4528		SM855115	SM860115	SM865115
	29/64	11.51	.4531		SM805029	SM810029	SM815029
	15/32	11.91	.4688		SM805030	SM810030	SM815030
		12.00	.4724		SM855120	SM860120	SM865120
	31/64	12.30	.4844		SM805031	SM810031	SM815031
		12.50	.4921		SM855125	SM860125	SM865125
0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	3.2 (1/8)	SM805032	SM810032	SM815032
		13.00	.5118		SM855130	SM860130	SM865130
	33/64	13.10	.5156		SM805033	SM810033	SM815033
	17/32	13.49	.5312		SM805034	SM810034	SM815034
		13.50	.5315		SM855135	SM860135	SM865135
	35/64	13.89	.5469		SM805035	SM810035	SM815035
		14.00	.5512		SM855140	SM860140	SM865140
	9/16	14.29	.5625		SM805036	SM810036	SM815036
		14.50	.5709		SM855145	SM860145	SM865145
	37/64	14.68	.5781		SM805037	SM810037	SM815037
		15.00	.5906		SM855150	SM860150	SM865150
	19/32	15.08	.5938		SM805038	SM810038	SM815038
	39/64	15.48	.6094		SM805039	SM810039	SM815039
		15.50	.6102		SM855155	SM860155	SM865155
	5/8	15.88	.6250		SM805040	SM810040	SM815040
		16.00	.6299		SM855160	SM860160	SM865160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

CARBIDE

HSS

i-ONE
DRILLS

i-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

TECHNICAL
DATA



SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

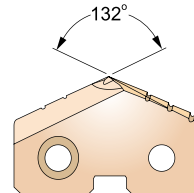
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL, pointe SM - Carbure (P40)

CUSPIDI SM-POINT - MD (P40)

- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	SM805041	SM810041	SM815041
		16.50	.6496		SM855165	SM860165	SM865165
	21/32	16.67	.6562		SM805042	SM810042	SM815042
		17.00	.6693		SM855170	SM860170	SM865170
	43/64	17.07	.6719		SM805043	SM810043	SM815043
	11/16	17.46	.6875		SM805044	SM810044	SM815044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	SM855175	SM860175	SM865175
	45/64	17.86	.7031		SM805045	SM810045	SM815045
		18.00	.7087		SM855180	SM860180	SM865180
	23/32	18.26	.7188		SM805046	SM810046	SM815046
		18.50	.7283		SM855185	SM860185	SM865185
	47/64	18.65	.7344		SM805047	SM810047	SM815047
		19.00	.7480		SM855190	SM860190	SM865190
	3/4	19.05	.7500		SM805048	SM810048	SM815048
	49/64	19.45	.7656		SM805049	SM810049	SM815049
		19.50	.7677		SM855195	SM860195	SM865195
	25/32	19.84	.7812		SM805050	SM810050	SM815050
		20.00	.7874		SM855200	SM860200	SM865200
	51/64	20.24	.7969		SM805051	SM810051	SM815051
		20.50	.8071		SM855205	SM860205	SM865205
	13/16	20.64	.8125		SM805052	SM810052	SM815052
		21.00	.8268		SM855210	SM860210	SM865210
	27/32	21.43	.8438		SM805054	SM810054	SM815054
	55/64	21.83	.8594		SM805055	SM810055	SM815055
		22.00	.8661		SM855220	SM860220	SM865220
	7/8	22.23	.8750		SM805056	SM810056	SM815056
	57/64	22.62	.8906		SM805057	SM810057	SM815057
		23.00	.9055		SM855230	SM860230	SM865230
	29/32	23.02	.9062		SM805058	SM810058	SM815058
	59/64	23.42	.9219		SM805059	SM810059	SM815059
	15/16	23.81	.9375		SM805060	SM810060	SM815060
		24.00	.9449		SM855240	SM860240	SM865240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



SPADE DRILLS

SERIES 2

SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

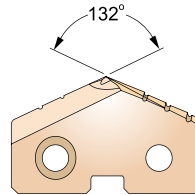
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL, pointe SM - Carbure (P40)

CUSPIDI SM-POINT - MD (P40)

- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	SM805062	SM810062	SM815062
	63/64	25.00	.9843		SM855250	SM860250	SM865250
	1	25.40	1.0000		SM805100	SM810100	SM815100
	1-1/64	25.80	1.0156		SM805101	SM810101	SM815101
		26.00	1.0236		SM855260	SM860260	SM865260
	1-1/32	26.19	1.0312		SM805102	SM810102	SM815102
	1-3/64	26.59	1.0469		SM805103	SM810103	SM815103
	1-1/16	26.99	1.0625		SM805104	SM810104	SM815104
		27.00	1.0630		SM855270	SM860270	SM865270
	1-3/32	27.78	1.0938		SM805106	SM810106	SM815106
		28.00	1.1024		SM855280	SM860280	SM865280
	1-7/64	28.18	1.1094		SM805107	SM810107	SM815107
	1-1/8	28.58	1.1250		SM805108	SM810108	SM815108
		29.00	1.1417		SM855290	SM860290	SM865290
	1-5/32	29.37	1.1562		SM805110	SM810110	SM815110
		30.00	1.1811		SM855300	SM860300	SM865300
	1-3/16	30.16	1.1875		SM805112	SM810112	SM815112
	1-7/32	30.96	1.2188		SM805114	SM810114	SM815114
		31.00	1.2205		SM855310	SM860310	SM865310
	1-1/4	31.75	1.2500		SM805116	SM810116	SM815116
		32.00	1.2598		SM855320	SM860320	SM865320
	1-9/32	32.54	1.2812		SM805118	SM810118	SM815118
		33.00	1.2992		SM855330	SM860330	SM865330
	1-5/16	33.34	1.3125		SM805120	SM810120	SM815120
		34.00	1.3386		SM855340	SM860340	SM865340
	1-11/32	34.13	1.3438		SM805122	SM810122	SM815122
	1-3/8	34.93	1.3750		SM805124	SM810124	SM815124
		35.00	1.3780		SM855350	SM860350	SM865350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

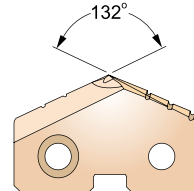
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

Plaquettes SPADE DRILL, pointe SM - Carbure (P40)

CUSPIDI SM-POINT - MD (P40)

- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar

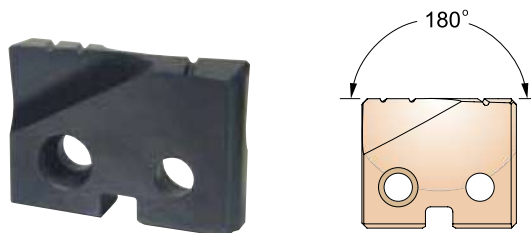


cutting conditions : P.366

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE (P40)		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4062	6.4 (1/4)	SM805126	SM810126	SM815126
		36.00	1.4173		SM855360	SM860360	SM865360
	1-7/16	36.51	1.4375		SM805128	SM810128	SM815128
		37.00	1.4567		SM855370	SM860370	SM865370
	1-15/32	37.31	1.4688		SM805130	SM810130	SM815130
		38.00	1.4961		SM855380	SM860380	SM865380
	1-1/2	38.10	1.5000		SM805132	SM810132	SM815132
	1-17/32	38.89	1.5312		SM805134	SM810134	SM815134
		39.00	1.5354		SM855390	SM860390	SM865390
	1-9/16	39.69	1.5625		SM805136	SM810136	SM815136
		40.00	1.5748		SM855400	SM860400	SM865400
	1-19/32	40.48	1.5938		SM805138	SM810138	SM815138
		41.00	1.6142		SM855410	SM860410	SM865410
	1-5/8	41.28	1.6250		SM805140	SM810140	SM815140
		42.00	1.6535		SM855420	SM860420	SM865420
	1-21/32	42.07	1.6562		SM805142	SM810142	SM815142
	1-11/16	42.86	1.6875		SM805144	SM810144	SM815144
		43.00	1.6929		SM855430	SM860430	SM865430
	1-23/32	43.66	1.7188		SM805146	SM810146	SM815146
		44.00	1.7323		SM855440	SM860440	SM865440
	1-3/4	44.45	1.7500		SM805148	SM810148	SM815148
		45.00	1.7717		SM855450	SM860450	SM865450
	1-25/32	45.24	1.7812		SM805150	SM810150	SM815150
		46.00	1.8110		SM855460	SM860460	SM865460
	1-13/16	46.04	1.8125		SM805152	SM810152	SM815152
	1-27/32	46.83	1.8438		SM805154	SM810154	SM815154
		47.00	1.8504		SM855470	SM860470	SM865470
	1-7/8	47.63	1.8750		SM805156	SM810156	SM815156

◎ : Excellent ○ : Good

P											M	K		N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM
SPADE DRILL BOHRER-EINSÄTZE - SUPER COBALT T15 (FLACH-NUT)
Plaquettes SPADE DRILL à fond plat - Super Cobalt T15
INSERTI SPADE DRILL - SUPER HSS T15 FONDO PIATTO
POINT ANGLE : 180 degree


cutting conditions : P.367

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	Hardslick	TiAIN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S2155095	S2170095	S2165095
	3/8	9.53	.3750		S2105024	S2120024	S2115024
		9.80	.3858		S2155098	S2170098	S2165098
	25/64	9.92	.3906		S2105025	S2120025	S2115025
		10.00	.3937		S2155100	S2170100	S2165100
		10.20	.4016		S2155102	S2170102	S2165102
	13/32	10.32	.4062		S2105026	S2120026	S2115026
		10.50	.4134		S2155105	S2170105	S2165105
	27/64	10.72	.4219		S2105027	S2120027	S2115027
		10.80	.4252		S2155108	S2170108	S2165108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	S2155110	S2170110	S2165110
	7/16	11.11	.4375		S2105028	S2120028	S2115028
		11.50	.4528		S2155115	S2170115	S2165115
	29/64	11.51	.4531		S2105029	S2120029	S2115029
	15/32	11.91	.4688		S2105030	S2120030	S2115030
		12.00	.4724		S2155120	S2170120	S2165120
	31/64	12.30	.4844		S2105031	S2120031	S2115031
		12.50	.4921		S2155125	S2170125	S2165125
0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	3.2 (1/8)	S2105032	S2120032	S2115032
		13.00	.5118		S2155130	S2170130	S2165130
	33/64	13.10	.5156		S2105033	S2120033	S2115033
	17/32	13.49	.5312		S2105034	S2120034	S2115034
		13.50	.5315		S2155135	S2170135	S2165135
	35/64	13.89	.5469		S2105035	S2120035	S2115035
		14.00	.5512		S2155140	S2170140	S2165140
	9/16	14.29	.5625		S2105036	S2120036	S2115036
		14.50	.5709		S2155145	S2170145	S2165145
	37/64	14.68	.5781		S2105037	S2120037	S2115037
		15.00	.5906		S2155150	S2170150	S2165150
	19/32	15.08	.5938		S2105038	S2120038	S2115038
	39/64	15.48	.6094		S2105039	S2120039	S2115039
		15.50	.6102		S2155155	S2170155	S2165155
	5/8	15.88	.6250		S2105040	S2120040	S2115040
		16.00	.6299		S2155160	S2170160	S2165160

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



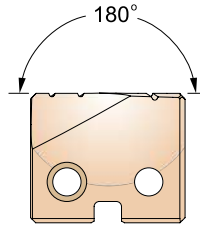
SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM

SPADE DRILL BOHRER-EINSÄTZE - SUPER COBALT T15 (FLACH-NUT)

Plaquettes SPADE DRILL à fond plat - Super Cobalt T15

INSERTI SPADE DRILL - SUPER HSS T15 FONDO PIATTO

POINT ANGLE : 180 degree

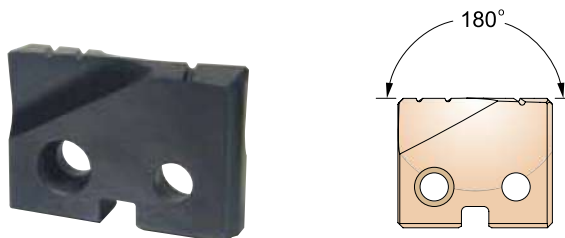


cutting conditions : P.367

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	Hardslck	TiAIN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)	S2105041	S2120041	S2115041
		16.50	.6496		S2155165	S2170165	S2165165
	21/32	16.67	.6562		S2105042	S2120042	S2115042
		17.00	.6693		S2155170	S2170170	S2165170
	43/64	17.07	.6719		S2105043	S2120043	S2115043
	11/16	17.46	.6875		S2105044	S2120044	S2115044
1 Ø17.53 (.690) to Ø24.38 (.960)		17.50	.6890	4.0 (5/32)	S2155175	S2170175	S2165175
	45/64	17.86	.7031		S2105045	S2120045	S2115045
		18.00	.7087		S2155180	S2170180	S2165180
	23/32	18.26	.7188		S2105046	S2120046	S2115046
		18.50	.7283		S2155185	S2170185	S2165185
	47/64	18.65	.7344		S2105047	S2120047	S2115047
		19.00	.7480		S2155190	S2170190	S2165190
	3/4	19.05	.7500		S2105048	S2120048	S2115048
	49/64	19.45	.7656		S2105049	S2120049	S2115049
		19.50	.7677		S2155195	S2170195	S2165195
	25/32	19.84	.7812		S2105050	S2120050	S2115050
		20.00	.7874		S2155200	S2170200	S2165200
	51/64	20.24	.7969		S2105051	S2120051	S2115051
		20.50	.8071		S2155205	S2170205	S2165205
	13/16	20.64	.8125		S2105052	S2120052	S2115052
		21.00	.8268		S2155210	S2170210	S2165210
	27/32	21.43	.8438		S2105054	S2120054	S2115054
	55/64	21.83	.8594		S2105055	S2120055	S2115055
		22.00	.8661		S2155220	S2170220	S2165220
	7/8	22.23	.8750		S2105056	S2120056	S2115056
	57/64	22.62	.8906		S2105057	S2120057	S2115057
		23.00	.9055		S2155230	S2170230	S2165230
	29/32	23.02	.9062		S2105058	S2120058	S2115058
	59/64	23.42	.9219		S2105059	S2120059	S2115059
	15/16	23.81	.9375		S2105060	S2120060	S2115060
		24.00	.9449		S2155240	S2170240	S2165240

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM
SPADE DRILL BOHRER-EINSÄTZE - SUPER COBALT T15 (FLACH-NUT)
Plaquettes SPADE DRILL à fond plat - Super Cobalt T15
INSERTI SPADE DRILL - SUPER HSS T15 FONDO PIATTO
POINT ANGLE : 180 degree


cutting conditions : P.367

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS (T15)		
					TiN	Hardslick	TiAIN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S2105062	S2120062	S2115062
	63/64	25.00	.9843		S2105063	S2120063	S2115063
	1	25.40	1.0000		S2105100	S2120100	S2115100
	1-1/64	25.80	1.0156		S2105101	S2120101	S2115101
		26.00	1.0236		S2155260	S2170260	S2165260
	1-1/32	26.19	1.0312		S2105102	S2120102	S2115102
	1-3/64	26.59	1.0469		S2105103	S2120103	S2115103
	1-1/16	26.99	1.0625		S2105104	S2120104	S2115104
		27.00	1.0630		S2155270	S2170270	S2165270
	1-3/32	27.78	1.0938		S2105106	S2120106	S2115106
		28.00	1.1024		S2155280	S2170280	S2165280
	1-7/64	28.18	1.1094		S2105107	S2120107	S2115107
	1-1/8	28.58	1.1250		S2105108	S2120108	S2115108
		29.00	1.1417		S2155290	S2170290	S2165290
	1-5/32	29.37	1.1562		S2105110	S2120110	S2115110
		30.00	1.1811		S2155300	S2170300	S2165300
	1-3/16	30.16	1.1875		S2105112	S2120112	S2115112
	1-7/32	30.96	1.2188		S2105114	S2120114	S2115114
		31.00	1.2205		S2155310	S2170310	S2165310
	1-1/4	31.75	1.2500		S2105116	S2120116	S2115116
		32.00	1.2598		S2155320	S2170320	S2165320
	1-9/32	32.54	1.2812		S2105118	S2120118	S2115118
		33.00	1.2992		S2155330	S2170330	S2165330
	1-5/16	33.34	1.3125		S2105120	S2120120	S2115120
		34.00	1.3386		S2155340	S2170340	S2165340
	1-11/32	34.13	1.3438		S2105122	S2120122	S2115122
	1-3/8	34.93	1.3750		S2105124	S2120124	S2115124
		35.00	1.3780		S2155350	S2170350	S2165350

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)	~HRC24 (~HB250)	HRC24~ (HB250~)	~HRC13 (~HB200)	HRC13~ (HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (HB220~)	~HRC8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

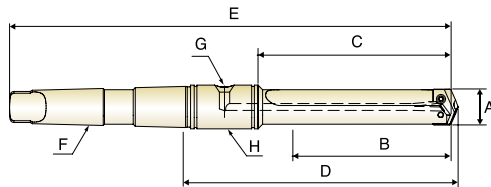


TAPER SHANK HOLDERS

HALTER MIT MORSEKEGEL

Porte-plaquette à queue cône morse

PUNTE CON ATTACCO CM



SHORT LENGTH - Straight Flute (Inch)

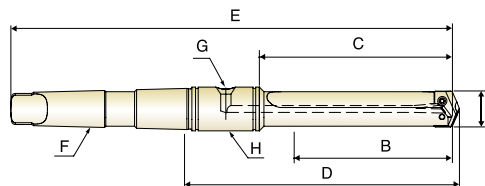
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0STSMT02I	3/8 ~ 27/64	1-1/4	2-1/32	3-15/32	6-5/16	#2	1/16	PR110048
Z	ZZ0STSMT02I	7/16 ~ 1/2	1-1/4	2-1/32	3-15/32	6-5/16	#2	1/16	PR110048
O	ZO0STSMT02I	33/64 ~ 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR110048
0.5	Z05STSMT02I	39/64 ~ 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR110048
1	Z10STSMT03I	45/64 ~ 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR110100
	Z10STSMT04I	45/64 ~ 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR110100
1.5	Z15STSMT03I	55/64 ~ 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR110100
	Z15STSMT04I	55/64 ~ 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR110100
2	Z20STSMT03I	31/32 ~ 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR110100
	Z20STSMT04I	31/32 ~ 1-3/8	3-3/8	4-1/2	6-19/64	10-25/32	#4	1/8	PR110100
2.5	Z25STSMT03I	1-3/16 ~ 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR110100
	Z25STSMT04I	1-3/16 ~ 1-3/8	3-3/8	4-1/2	6-37/64	11-1/16	#4	1/4	PR110116
3	Z30STSMT04I	1-13/32 ~ 1-7/8	4-3/4	6	8-1/8	12-9/16	#4	1/4	PR110116
	Z30STSMT05I	1-13/32 ~ 1-7/8	4-3/4	6	8-1/8	13-13/16	#5	1/4	PR110148
4	Z40STSMT04I	1-29/32 ~ 2-9/16	5-1/8	6-1/2	8-5/8	13-1/16	#4	1/4	PR110116
	Z40STSMT05I	1-29/32 ~ 2-9/16	5-1/8	6-1/2	8-5/8	14-5/16	#5	1/4	PR110148
5	Z50STSMT05I	2-1/2 ~ 3-1/2	6-3/4	8-1/2	11-5/16	16-15/16	#5	1/2	PR110216
7	Z70STSMT05I	3-17/32 ~ 4-1/2	6-3/4	8-7/8	11-11/16	17-5/16	#5	1/2	PR110216

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS

 HALTER MIT MORSEKEGEL

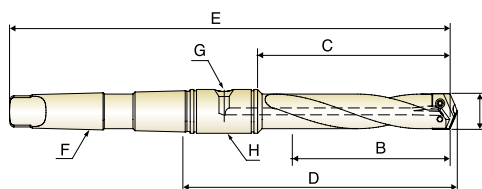
 Porte-plaquette à queue cône morse

 PUNTE CON ATTACCO CM


INTERMEDIATE LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
1	Z10ITSMT03I	45/64 ~ 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR110100
1.5	Z15ITSMT03I	55/64 ~ 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR110100
2	Z20ITSMT04I	31/32 ~ 1-3/8	5-3/8	6-1/2	8-19/64	12-25/32	#4	1/8	PR110100
2.5	Z25ITSMT04I	1-3/16 ~ 1-3/8	5-3/8	6-1/2	8-37/64	13-1/16	#4	1/4	PR110116
3	Z30ITSMT04I	1-13/32 ~ 1-7/8	6-1/2	7-3/4	9-7/8	14-5/16	#4	1/4	PR110116

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)



INTERMEDIATE LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
1	Z10ITHMT03I	45/64 ~ 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR110100
1.5	Z15ITHMT03I	55/64 ~ 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR110100
2	Z20ITHMT04I	31/32 ~ 1-3/8	5-3/8	6-1/2	8-19/64	12-25/32	#4	1/8	PR110100
2.5	Z25ITHMT04I	1-3/16 ~ 1-3/8	5-3/8	6-1/2	8-37/64	13-1/16	#4	1/4	PR110116

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

i-ONE
DRILLS

i-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

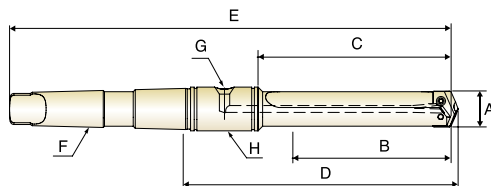
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

TECHNICAL
DATA

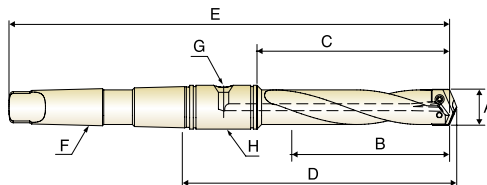
TAPER SHANK HOLDERS
 **HALTER MIT MORSEKEGEL**
 **Porte-plaquette à queue cône morse**
 **PUNTE CON ATTACCO CM**

STANDARD LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0SDSMT02I	3/8 ~ 27/64	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
Z	ZZ0SDSMT02I	7/16 ~ 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
O	Z00SDSMT02I	33/64 ~ 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR110048
0.5	Z05SDSMT02I	39/64 ~ 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR110048
1	Z10SDSMT03I	45/64 ~ 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR110100
	Z10SDSMT04I	45/64 ~ 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR110100
1.5	Z15SDSMT03I	55/64 ~ 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR110100
	Z15SDSMT04I	55/64 ~ 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR110100
2	Z20SDSMT03I	31/32 ~ 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR110100
	Z20SDSMT04I	31/32 ~ 1-3/8	7-3/8	8-1/2	10-19/64	14-25/32	#4	1/8	PR110100
2.5	Z25SDSMT03I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR110100
	Z25SDSMT04I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	10-37/64	15-1/16	#4	1/4	PR110116
3	Z30SDSMT04I	1-13/32 ~ 1-7/8	8-1/4	9-1/2	11-5/8	16-1/16	#4	1/4	PR110116
	Z30SDSMT05I	1-13/32 ~ 1-7/8	8-1/4	9-1/2	11-5/8	17-5/16	#5	1/4	PR110148
4	Z40SDSMT04I	1-29/32 ~ 2-9/16	9-1/8	10-1/2	12-5/8	17-1/16	#4	1/4	PR110116
	Z40SDSMT05I	1-29/32 ~ 2-9/16	9-1/8	10-1/2	12-5/8	18-5/16	#5	1/4	PR110148
5	Z50SDSMT05I	2-1/2 ~ 3-1/2	10-3/4	12-1/2	15-5/16	20-15/16	#5	1/2	PR110216
7	Z70SDSMT05I	3-17/32 ~ 4-1/2	10-3/4	12-7/8	15-11/16	21-5/16	#5	1/2	PR110216

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS
 HALTER MIT MORSEKEGEL

 Porte-plaquette à queue cône morse

 PUNTE CON ATTACCO CM

STANDARD LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0SDHMT02I	3/8 ~ 27/64	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
Z	ZZ0SDHMT02I	7/16 ~ 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
O	Z00SDHMT02I	33/64 ~ 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR110048
0.5	Z05SDHMT02I	39/64 ~ 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR110048
1	Z10SDHMT03I	45/64 ~ 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR110100
	Z10SDHMT04I	45/64 ~ 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR110100
1.5	Z15SDHMT03I	55/64 ~ 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR110100
	Z15SDHMT04I	55/64 ~ 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR110100
2	Z20SDHMT03I	31/32 ~ 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR110100
	Z20SDHMT04I	31/32 ~ 1-3/8	7-3/8	8-1/2	10-19/64	14-25/32	#4	1/8	PR110100
2.5	Z25SDHMT03I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR110100
	Z25SDHMT04I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	10-37/64	15-1/16	#4	1/4	PR110116

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)

CARBIDE

HSS

i-ONE
DRILLS

i-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

TECHNICAL
DATA

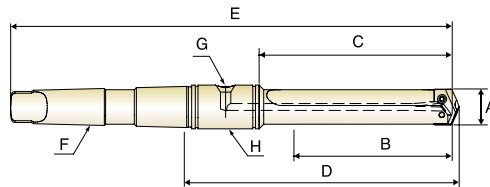


TAPER SHANK HOLDERS

HALTER MIT MORSEKEGEL

Porte-plaquette à queue cône morse

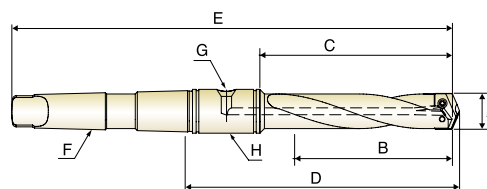
PUNTE CON ATTACCO CM



EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZYOEXSMT02I	3/8 ~ 27/64	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
Z	ZZOEXSMT02I	7/16 ~ 1/2	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
O	ZOOEXSMT02I	33/64 ~ 11/16	4-1/2	5-5/16	6-49/64	9-19/32	#2	1/16	PR110048
0.5	Z05EXSMT02I	39/64 ~ 11/16	4-1/2	5-5/16	6-49/64	9-19/32	#2	1/16	PR110048
1	Z10EXSMT03I	45/64 ~ 15/16	10-3/4	11-7/8	13-39/64	17-5/32	#3	1/8	PR110100
1.5	Z15EXSMT03I	55/64 ~ 15/16	10-3/4	11-7/8	13-39/64	17-5/32	#3	1/8	PR110100
2	Z20EXSMT04I	31/32 ~ 1-3/8	11-3/8	12-1/2	14-15/64	18-25/32	#4	1/8	PR110100
2.5	Z25EXSMT04I	1-3/16 ~ 1-3/8	11-3/8	12-1/2	14-37/64	19-1/16	#4	1/4	PR110116
3	Z30EXSMT04I	1-13/32 ~ 1-7/8	13-3/4	15	17-1/8	21-9/16	#4	1/4	PR110116
4	Z40EXSMT05I	1-29/32 ~ 2-9/16	16-5/8	18	20-1/8	25-13/16	#5	1/4	PR110148
5	Z50EXSMT05I	2-1/2 ~ 3-1/2	18-1/4	20	22-13/16	28-7/16	#5	1/2	PR110216
7	Z70EXSMT05I	3-17/32 ~ 4-1/2	21-7/8	24	26-13/16	32-7/16	#5	1/2	PR110216

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)



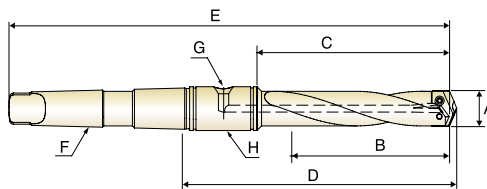
EXTENDED LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZYOEXHMT02I	3/8 ~ 27/64	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
Z	ZZOEXHMT02I	7/16 ~ 1/2	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
O	ZOOEXHMT02I	33/64 ~ 11/16	4-1/2	5-5/16	6-49/64	9-19/32	#2	1/16	PR110048
0.5	Z05EXHMT02I	39/64 ~ 11/16	4-1/2	5-5/16	6-49/64	9-19/32	#2	1/16	PR110048
1	Z10EXHMT03I	45/64 ~ 15/16	10-3/4	11-7/8	13-39/64	17-5/32	#3	1/8	PR110100
1.5	Z15EXHMT03I	55/64 ~ 15/16	10-3/4	11-7/8	13-39/64	17-5/32	#3	1/8	PR110100
2	Z20EXHMT04I	31/32 ~ 1-3/8	11-3/8	12-1/2	14-15/64	18-25/32	#4	1/8	PR110100
2.5	Z25EXHMT04I	1-3/16 ~ 1-3/8	11-3/8	12-1/2	14-37/64	19-1/16	#4	1/4	PR110116

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS
 HALTER MIT MORSEKEGEL

 Porte-plaquette à queue cône morse

 PUNTE CON ATTACCO CM

LONG LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
0	Z00LGHMT02I	33/64 ~ 11/16	7	7-13/16	8-17/64	12-3/32	#2	1/16	PR110048
0.5	Z05LGHMT02I	39/64 ~ 11/16	7	7-13/16	8-17/64	12-3/32	#2	1/16	PR110048

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

i-ONE
DRILLS

i-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

TECHNICAL
DATA

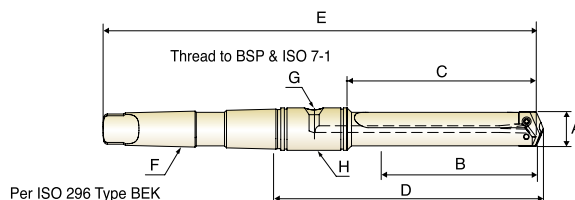


TAPER SHANK HOLDERS

HALTER MIT MORSEKEGEL

Porte-plaquette à queue cône morse

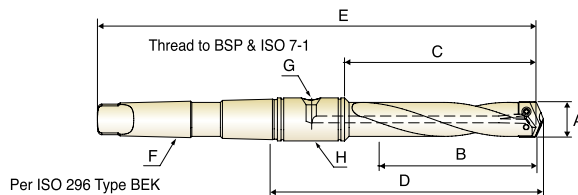
PUNTE CON ATTACCO CM



SHORT LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0STSMT02M	9.5 ~ 11.0	31.8	51.5	88.0	160.3	#2	1/16	PR120190
Z	ZZ0STSMT02M	11.5 ~ 12.5	31.8	51.5	88.0	160.3	#2	1/16	PR120190
O	ZO0STSMT02M	13.0 ~ 17.5	35.0	55.5	92.4	164.3	#2	1/16	PR120190
0.5	Z05STSMT02M	15.5 ~ 17.5	35.0	55.5	92.4	164.3	#2	1/16	PR120190
1	Z10STSMT03M	18.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8	PR120254
1.5	Z15STSMT03M	22.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8	PR120254
2	Z20STSMT04M	25.0 ~ 35.0	85.7	114.3	160.4	273.8	#4	1/8	PR120254
2.5	Z25STSMT04M	30.0 ~ 35.0	85.7	114.3	167.6	281.0	#4	1/4	PR120317
3	Z30STSMT04M	36.0 ~ 47.0	120.6	152.4	206.4	319.1	#4	1/4	PR120317
4	Z40STSMT05M	48.0 ~ 65.0	130.1	165.1	219.1	363.5	#5	1/4	PR120444
5	Z50STSMT05M	64.0 ~ 88.0	171.5	215.9	287.3	430.2	#5	1/2	PR120571
7	Z70STSMT05M	90.0 ~ 114.0	171.5	225.4	296.8	439.7	#5	1/2	PR120571

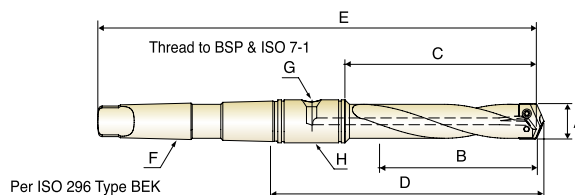
► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)



INTERMEDIATE LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
1	Z10ITHMT03M	18.0 ~ 24.0	120.7	149.2	193.3	283.3	#3	1/8	PR120254
1.5	Z15ITHMT03M	22.0 ~ 24.0	120.7	149.2	193.3	283.3	#3	1/8	PR120254
2	Z20ITHMT04M	25.0 ~ 35.0	136.5	165.1	211.2	324.6	#4	1/8	PR120254
2.5	Z25ITHMT04M	30.0 ~ 35.0	136.5	165.1	218.4	331.8	#4	1/4	PR120317
3	Z30ITHMT04M	36.0 ~ 47.0	165.1	196.9	250.9	363.6	#4	1/4	PR120317

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS
 **HALTER MIT MORSEKEGEL**
 **Porte-plaque à queue cône morse**
 **PUNTE CON ATTACCO CM**

STANDARD LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZYOSDHMT02M	9.5 ~ 11.0	60.3	80.2	116.7	188.9	#2	1/16	PR120190
Z	ZZOSDHMT02M	11.5 ~ 12.5	60.3	80.2	116.7	188.9	#2	1/16	PR120190
0	Z0OSDHMT02M	13.0 ~ 17.5	63.5	84.1	121.0	192.9	#2	1/16	PR120190
0.5	Z05SDHMT02M	15.5 ~ 17.5	63.5	84.1	121.0	192.9	#2	1/16	PR120190
1	Z1OSDHMT03M	18.0 ~ 24.0	171.5	200.0	244.1	334.2	#3	1/8	PR120254
1.5	Z15SDHMT03M	22.0 ~ 24.0	171.5	200.0	244.1	334.2	#3	1/8	PR120254
2	Z2OSDHMT04M	25.0 ~ 35.0	187.3	215.9	262.0	375.4	#4	1/8	PR120254
2.5	Z25SDHMT04M	30.0 ~ 35.0	187.3	215.9	269.2	382.6	#4	1/4	PR120317
3	Z3OSDHMT04M	36.0 ~ 47.0	209.5	241.3	295.3	408.0	#4	1/4	PR120317
4	Z4OSDHMT05M	48.0 ~ 65.0	231.8	266.7	320.7	465.1	#5	1/4	PR120444
5	Z5OSDHMT05M	64.0 ~ 88.0	273.1	317.5	388.9	531.8	#5	1/2	PR120571
7	Z7OSDHMT05M	90.0 ~ 114.0	273.1	327.0	398.5	541.3	#5	1/2	PR120571

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

i-ONE
DRILLS

i-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

TECHNICAL
DATA

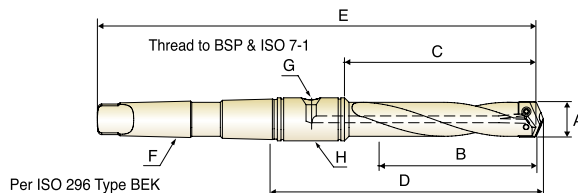


TAPER SHANK HOLDERS

HALTER MIT MORSEKEGEL

Porte-plaquette à queue cône morse

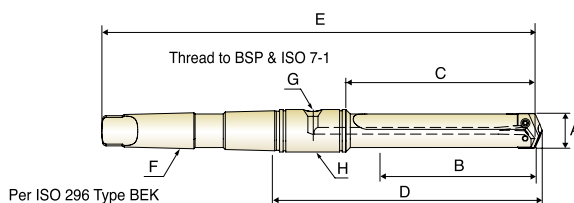
PUNTE CON ATTACCO CM



EXTENDED LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0EXHMT02M	9.5 ~ 11.0	111.1	130.9	167.4	239.7	#2	1/16	PR120190
Z	ZZ0EXHMT02M	11.5 ~ 12.5	111.1	130.9	167.4	239.7	#2	1/16	PR120190
O	ZO0EXHMT02M	13.0 ~ 17.5	114.3	135.0	171.8	243.7	#2	1/16	PR120190
0.5	Z05EXHMT02M	15.5 ~ 17.5	114.3	135.0	171.8	243.7	#2	1/16	PR120190
1	Z10EXHMT03M	18.0 ~ 24.0	273.1	301.6	345.7	435.8	#3	1/8	PR120254
1.5	Z15EXHMT03M	22.0 ~ 24.0	273.1	301.6	345.7	435.8	#3	1/8	PR120254
2	Z20EXHMT04M	25.0 ~ 35.0	289.0	317.5	363.6	477.0	#4	1/8	PR120254
2.5	Z25EXHMT04M	30.0 ~ 35.0	289.0	317.5	370.8	484.2	#4	1/4	PR120317

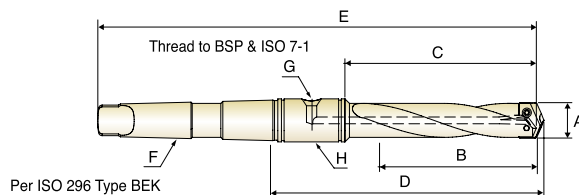
► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)



EXTENDED LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
3	Z30EXSMT04M	36.0 ~ 47.0	349.3	381.0	435.0	547.7	#4	1/4	PR120317
4	Z40EXSMT05M	48.0 ~ 65.0	422.3	457.2	511.2	655.6	#5	1/4	PR120444
5	Z50EXSMT05M	64.0 ~ 88.0	463.6	508.0	579.4	722.3	#5	1/2	PR120571
7	Z70EXSMT05M	90.0 ~ 114.0	555.6	609.6	681.1	823.9	#5	1/2	PR120571

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS
 **HALTER MIT MORSEKEGEL**
 **Porte-plaquette à queue cône morse**
 **PUNTE CON ATTACCO CM**

LONG LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
0	Z00LGHMT02M	13.0 ~ 17.5	177.8	198.5	235.3	307.2	#2	1/16	PR120190
0.5	Z05LGHMT02M	15.5 ~ 17.5	177.8	198.5	235.3	307.2	#2	1/16	PR120190

► You can also apply **RCA**(Rotary Coolant Adapter) for internal cooling. (See page 324)

CARBIDE
HSS

i-ONE
DRILLS

i-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

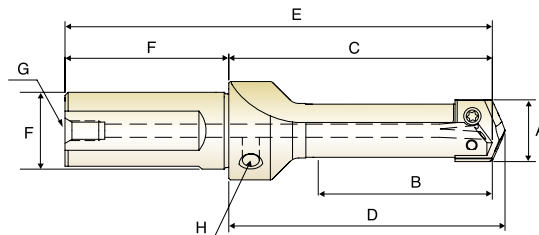
STRAIGHT
SHANK
DRILLS

TAPER
SHANK
DRILLS

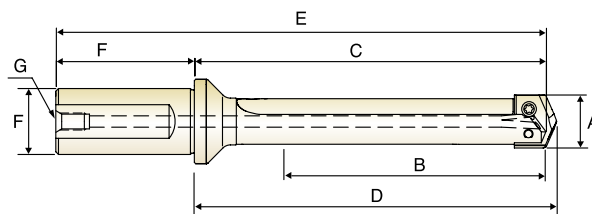
NC-SPOTTING
DRILLS

CENTER
DRILLS

**SPADE
DRILLS**
**TECHNICAL
DATA**

FLANGED STRAIGHT SHANK HOLDERS
 **HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE**
 **Porte-plaquette à colerette queue cylindrique**
 **PUNTE ATTACCO CILINDRICO FLANGIATO**
**STUB LENGTH - Straight Flute (Inch)**

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia.	Length	Rear	Side
		A	B	C	D	E	F		G	H
Y	ZY0SBSF063I	3/8~27/64	3/4	1-7/8	1-31/32	3-3/4	5/8	1-7/8	1/16	1/8
Z	ZZ0SBSF063I	7/16~1/2	3/4	1-7/8	1-31/32	3-3/4	5/8	1-7/8	1/16	1/8
0	Z00SBSF075I	33/64~11/16	7/8	1-7/8	1-63/64	3-29/32	3/4	2-1/32	1/8	1/8
0.5	Z05SBSF075I	39/64~11/16	7/8	1-7/8	1-63/64	3-29/32	3/4	2-1/32	1/8	1/8
1	Z10SBSF100I	45/64~15/16	1-7/8	2-63/64	3-1/8	5-17/64	1	2-9/32	1/8	1/8
1.5	Z15SBSF100I	55/64~15/16	2-1/4	3-31/64	3-5/8	5-49/64	1	2-9/32	1/8	1/8
2	Z20SBSF125I	31/32~1-3/8	2-1/4	3-31/64	3-5/8	5-49/64	1-1/4	2-9/32	1/4	1/8
2.5	Z25SBSF125I	1-3/16~1-3/8	3-5/8	4-55/64	5	7-9/64	1-1/4	2-9/32	1/4	1/8
3	Z30SBSF150I	1-13/32~1-7/8	3	4-59/64	5-7/64	7-39/64	1-1/2	2-11/16	1/4	1/4

**SHORT LENGTH - Straight Flute (Inch)**

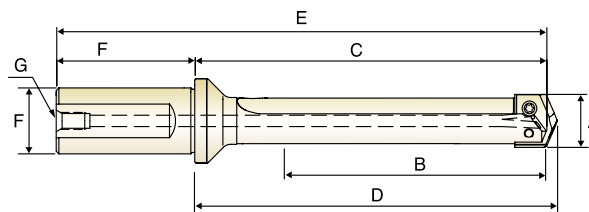
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0STSF075I	3/8~27/64	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
Z	ZZ0STSF075I	7/16~1/2	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
0	Z00STSF075I	33/64~11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
0.5	Z05STSF075I	39/64~11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
1	Z10STSF100I	45/64~15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
1.5	Z15STSF100I	55/64~15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
2	Z20STSF125I	31/32~1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
2.5	Z25STSF125I	1-3/16~1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
3	Z30STSF150I	1-13/32~1-7/8	4-3/4	6-13/16	7	9-1/2	1-1/2	2-11/16	1/4
4	Z40STSF150I	1-29/32~2-9/16	5-1/8	7-1/16	7-1/4	9-3/4	1-1/2	2-11/16	1/4

FLANGED STRAIGHT SHANK HOLDERS

 HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

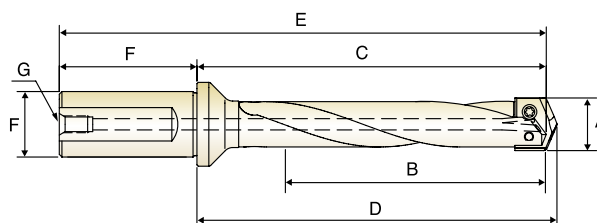
 Porte-plaquette à colerette queue cylindrique

 PUNTE ATTACCO CILINDRICO FLANGIATO



INTERMEDIATE LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	G
1	Z10ITSF100I	45/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
1.5	Z15ITSF100I	55/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
2	Z20ITSF125I	31/32 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
2.5	Z25ITSF125I	1-3/16 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
3	Z30ITSF150I	1-13/32 ~ 1-7/8	6-1/2	8-9/16	8-3/4	11-1/4	1-1/2	2-11/32	1/4



INTERMEDIATE LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	G
1	Z10ITHF100I	45/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
1.5	Z15ITHF100I	55/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
2	Z20ITHF125I	31/32 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
2.5	Z25ITHF125I	1-3/16 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
3	Z30ITHF150I	1-13/32 ~ 1-7/8	6-1/2	8-9/16	8-3/4	11-1/4	1-1/2	2-11/32	1/4

i-ONE
DRILLS

i-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

TECHNICAL
DATA

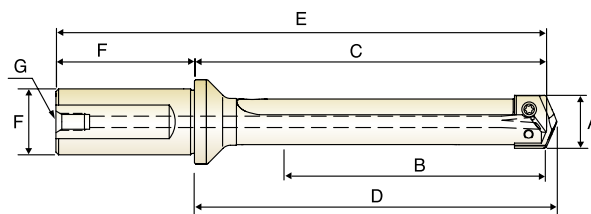


FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

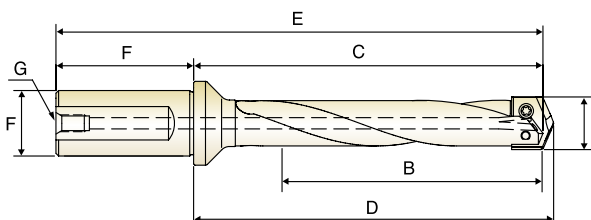
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



STANDARD LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0SDSF075I	3/8~27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	ZZ0SDSF075I	7/16~1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
O	Z00SDSF075I	33/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
0.5	Z05SDSF075I	39/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	Z10SDSF100I	45/64~15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
1.5	Z15SDSF100I	55/64~15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
2	Z20SDSF125I	31/32~1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
2.5	Z25SDSF125I	1-3/16~1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
3	Z30SDSF150I	1-13/32~1-7/8	8-1/4	10-5/16	10-1/2	13	1-1/2	2-11/16	1/4
4	Z40SDSF150I	1-29/32~2-9/16	9-1/8	11-1/16	11-1/4	13-3/4	1-1/2	2-11/16	1/4



STANDARD LENGTH - Helical Flute (Inch)

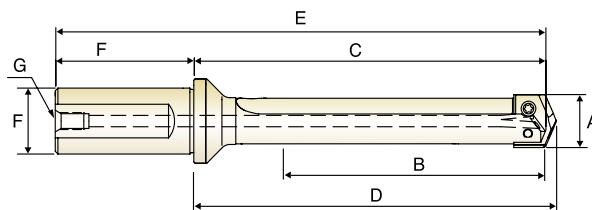
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0SDHF075I	3/8~27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	ZZ0SDHF075I	7/16~1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
O	Z00SDHF075I	33/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
0.5	Z05SDHF075I	39/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	Z10SDHF100I	45/64~15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
1.5	Z15SDHF100I	55/64~15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
2	Z20SDHF125I	31/32~1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
2.5	Z25SDHF125I	1-3/16~1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
3	Z30SDHF150I	1-13/32~1-7/8	8-1/4	10-5/16	10-1/2	13	1-1/2	2-11/16	1/4
4	Z40SDHF150I	1-29/32~2-9/16	9-1/8	11-1/16	11-1/4	13-3/4	1-1/2	2-11/16	1/4

FLANGED STRAIGHT SHANK HOLDERS

 HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

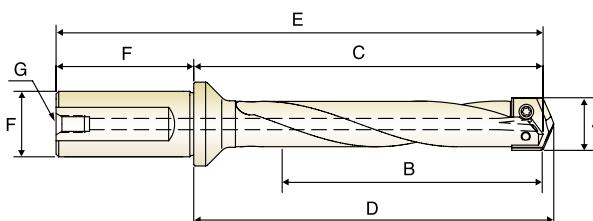
 Porte-plaquette à colerette queue cylindrique

 PUNTE ATTACCO CILINDRICO FLANGIATO



EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	
Y	ZY0EXSF075I	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	ZZ0EXSF075I	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	Z00EXSF075I	33/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
0.5	Z05EXSF075I	39/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
1	Z10EXSF100I	45/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
1.5	Z15EXSF100I	55/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
2	Z20EXSF125I	31/32 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4
2.5	Z25EXSF125I	1-3/16 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4



EXTENDED LENGTH - Helical Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	
Y	ZY0EXHF075I	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	ZZ0EXHF075I	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	Z00EXHF075I	33/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
0.5	Z05EXHF075I	39/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
1	Z10EXHF100I	45/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
1.5	Z15EXHF100I	55/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
2	Z20EXHF125I	31/32 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4
2.5	Z25EXHF125I	1-3/16 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4

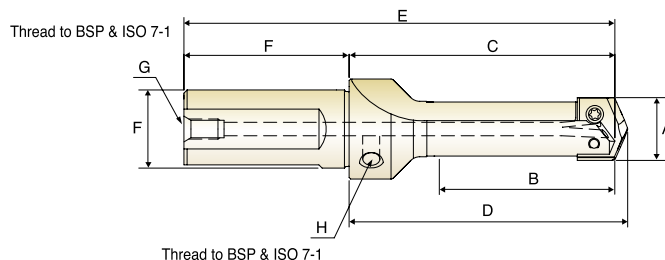


FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

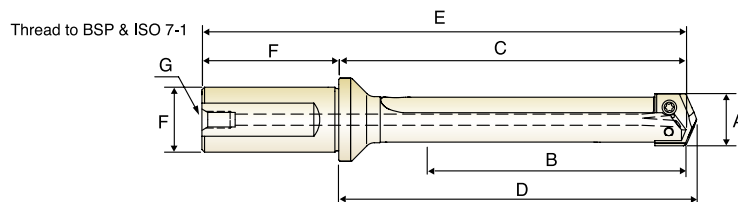
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



STUB LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia.	Length	Rear	Side
		A	B	C	D	E	F		G	H
Y	ZY0SBSF016M	9.5 ~ 11.0	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
Z	ZZ0SBSF016M	11.5 ~ 12.5	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
O	ZO0SBSF020M	13.0 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
0.5	Z05SBSF020M	15.5 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
1	Z10SBSF025M	18.0 ~ 24.0	47.6	75.8	79.4	131.8	25.0	56.0	1/8	1/8
1.5	Z15SBSF025M	22.0 ~ 24.0	57.2	88.5	92.1	144.5	25.0	56.0	1/8	1/8
2	Z20SBSF032M	25.0 ~ 35.0	57.2	88.5	92.1	148.5	32.0	60.0	1/4	1/8
2.5	Z25SBSF032M	30.0 ~ 35.0	92.1	123.4	127.0	183.4	32.0	60.0	1/4	1/8
3	Z30SBSF040M	36.0 ~ 47.0	76.2	125.0	129.8	195.0	40.0	70.0	1/4	1/4



SHORT LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia.	Length	Rear	Side
		A	B	C	D	E	F		G	H
Y	ZY0STSF020M	9.5 ~ 11.0	31.8	61.1	63.5	111.1	20.0	50.0	1/8	
Z	ZZ0STSF020M	11.5 ~ 12.5	31.8	61.1	63.5	111.1	20.0	50.0	1/8	
O	ZO0STSF020M	13.0 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8	
0.5	Z05STSF020M	15.5 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8	
1	Z10STSF025M	18.0 ~ 24.0	66.7	107.2	110.7	163.2	25.0	56.0	1/8	
1.5	Z15STSF025M	22.0 ~ 24.0	66.7	107.2	110.7	163.2	25.0	56.0	1/8	
2	Z20STSF032M	25.0 ~ 35.0	85.7	128.6	132.2	188.6	32.0	60.0	1/4	
2.5	Z25STSF032M	30.0 ~ 35.0	85.7	128.6	132.2	188.6	32.0	60.0	1/4	
3	Z30STSF040M	36.0 ~ 47.0	120.7	173.0	177.8	243.0	40.0	70.0	1/4	
4	Z40STSF040M	48.0 ~ 65.0	130.2	179.4	184.0	249.4	40.0	70.0	1/4	

FLANGED STRAIGHT SHANK HOLDERS

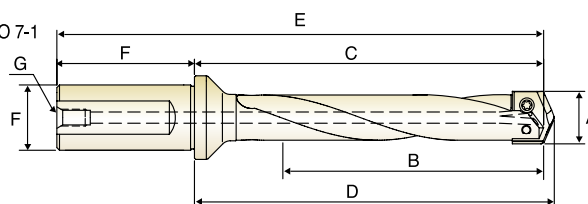
HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

Porte-plaque à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



Thread to BSP & ISO 7-1

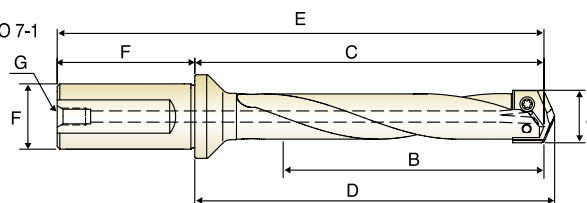


INTERMEDIATE LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	G
1	Z10ITHF025M	18.0 ~ 24.0	117.5	154.8	158.4	210.8	25.0	56.0	1/8
1.5	Z15ITHF025M	22.0 ~ 24.0	117.5	154.8	158.4	210.8	25.0	56.0	1/8
2	Z20ITHF032M	25.0 ~ 35.0	136.5	179.4	183.0	239.4	32.0	60.0	1/4
2.5	Z25ITHF032M	30.0 ~ 35.0	136.5	179.4	183.0	239.4	32.0	60.0	1/4
3	Z30ITHF040M	36.0 ~ 47.0	165.1	217.5	222.3	287.5	40.0	70.0	1/4



Thread to BSP & ISO 7-1



STANDARD LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0SDHF020M	9.5 ~ 11.0	60.3	89.7	92.1	139.7	20.0	50.0	1/8
Z	ZZ0SDHF020M	11.5 ~ 12.5	60.3	89.7	92.1	139.7	20.0	50.0	1/8
O	ZO0SDHF020M	13.0 ~ 17.5	63.5	92.1	94.9	142.1	20.0	50.0	1/8
0.5	Z05SDHF020M	15.5 ~ 17.5	63.5	92.1	94.9	142.1	20.0	50.0	1/8
1	Z10SDHF025M	18.0 ~ 24.0	168.3	205.6	209.2	261.6	25.0	56.0	1/8
1.5	Z15SDHF025M	22.0 ~ 24.0	168.3	205.6	209.2	261.6	25.0	56.0	1/8
2	Z20SDHF032M	25.0 ~ 35.0	187.3	230.2	233.8	290.2	32.0	60.0	1/4
2.5	Z25SDHF032M	30.0 ~ 35.0	187.3	230.2	233.8	290.2	32.0	60.0	1/4
3	Z30SDHF040M	36.0 ~ 47.0	209.6	261.9	266.7	331.9	40.0	70.0	1/4
4	Z40SDHF040M	48.0 ~ 65.0	231.8	281.0	285.8	351.0	40.0	70.0	1/4

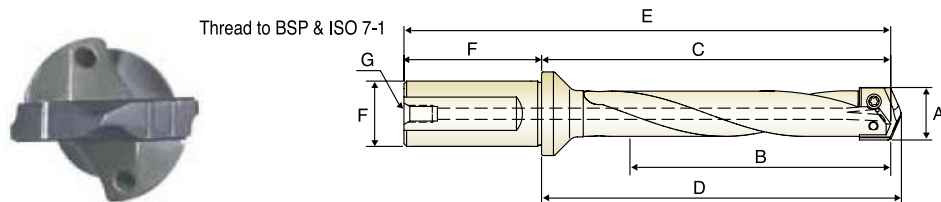


FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

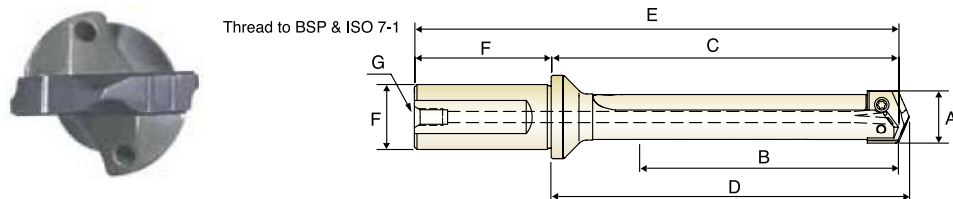
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



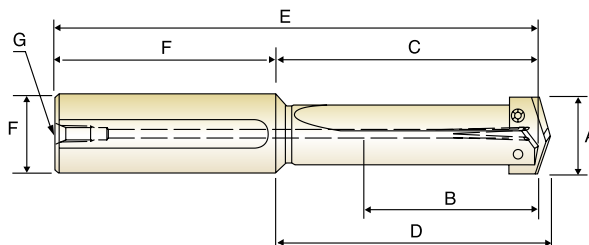
EXTENDED LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0EXHF020M	9.5 ~ 11.0	111.1	140.5	142.9	190.5	20.0	50.0	1/8
Z	ZZ0EXHF020M	11.5 ~ 12.5	111.1	140.5	142.9	190.5	20.0	50.0	1/8
O	Z00EXHF020M	13.0 ~ 17.5	114.3	142.9	145.7	192.9	20.0	50.0	1/8
0.5	Z05EXHF020M	15.5 ~ 17.5	114.3	142.9	145.7	192.9	20.0	50.0	1/8
1	Z10EXHF025M	18.0 ~ 24.0	269.9	307.2	310.8	363.2	25.0	56.0	1/8
1.5	Z15EXHF025M	22.0 ~ 24.0	269.9	307.2	310.8	363.2	25.0	56.0	1/8
2	Z20EXHF032M	25.0 ~ 35.0	288.9	331.8	335.4	391.8	32.0	60.0	1/4
2.5	Z25EXHF032M	30.0 ~ 35.0	288.9	331.8	335.4	391.8	32.0	60.0	1/4

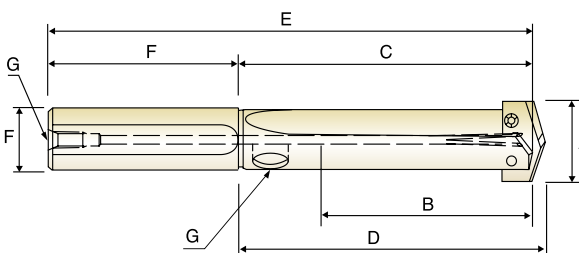


EXTENDED LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
3	Z30EXSF040M	36.0 ~ 47.0	349.3	401.6	406.4	471.6	40.0	70.0	1/4
4	Z40EXSF040M	48.0 ~ 65.0	422.3	471.5	476.3	541.5	40.0	70.0	1/4

STRAIGHT SHANK HOLDERS
 **HALTER MIT ZYLINDERSCHAFT**
 **Porte-plaquette à queue cylindrique**
 **PUNTE ATTACCO CILINDRICO FLANGIATO**

SHORT LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	
Y	ZY0STSS075I	3/8~27/64	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
Z	ZZ0STSS075I	7/16~1/2	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
O	ZO0STSS075I	33/64~11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8
O.5	ZO5STSS075I	39/64~11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8


SHORT LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	
1	Z10STSS075I	45/64 ~ 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	Z10STSS100I	45/64 ~ 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
1.5	Z15STSS075I	55/64 ~ 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	Z15STSS100I	55/64 ~ 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
2	Z20STSS100I	31/32 ~ 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	Z20STSS125I	31/32 ~ 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
2.5	Z25STSS100I	1-3/16 ~ 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	Z25STSS125I	1-3/16 ~ 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
3	Z30STSS125I	1-13/32 ~ 1-7/8	4-3/4	6	6-3/16	10	1-1/4	4	1/4
	Z30STSS150I	1-13/32 ~ 1-7/8	4-3/4	6	6-3/16	10	1-1/2	4	1/4
4	Z40STSS150I	1-29/32 ~ 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-1/2	4	1/4
	Z40STSS175I	1-29/32 ~ 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-3/4	4	1/4
5	Z50STSS200I	2-1/2 ~ 3-1/2	6-3/4	8-1/2	8-3/4	12-1/2	2	4	1/2

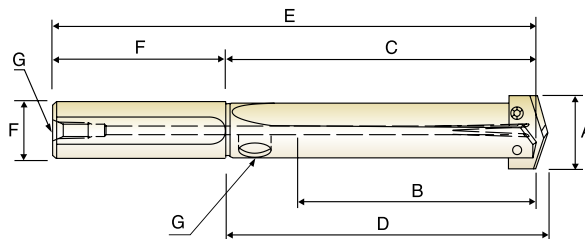


STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT

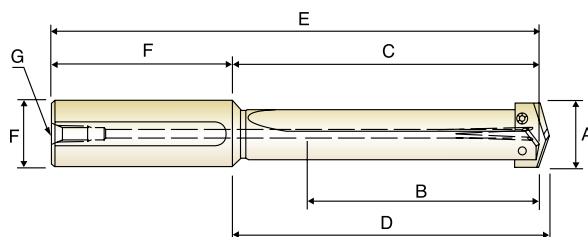
Porte-plaquette à queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO

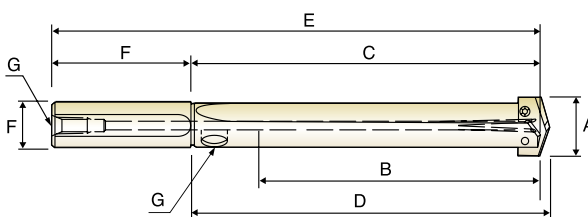


INTERMEDIATE LENGTH - Straight Flute (Inch)

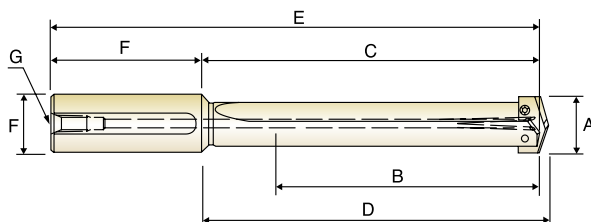
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
1	Z10ITSS100I	45/64~15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
1.5	Z15ITSS100I	55/64~15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
2	Z20ITSS125I	31/32~1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
2.5	Z25ITSS125I	1-3/16~1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
3	Z30ITSS150I	1-13/32~1-7/8	6-1/2	7-3/4	7-15/16	11-3/4	1-1/2	4	1/4

STRAIGHT SHANK HOLDERS
 **HALTER MIT ZYLINDERSCHAFT**
 **Porte-plaquette à queue cylindrique**
 **PUNTE ATTACCO CILINDRICO FLANGIATO**

STANDARD LENGTH - Straight Flute (Inch)

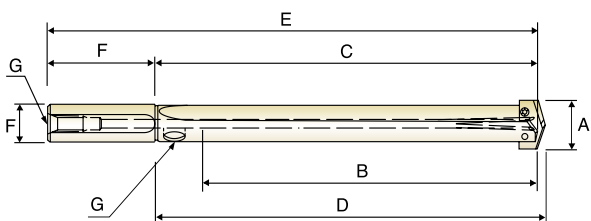
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0SDSS075I	3/8 ~ 27/64	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
Z	ZZ0SDSS075I	7/16 ~ 1/2	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
O	ZO0SDSS075I	33/64 ~ 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
O.5	ZO5SDSS075I	39/64 ~ 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8


STANDARD LENGTH - Straight Flute (Inch)

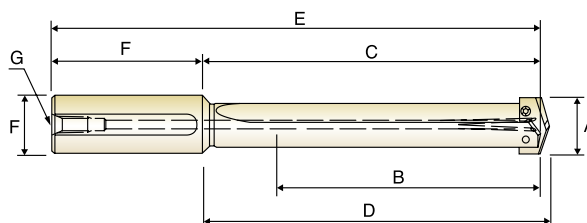
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
1	Z10SDSS075I	45/64 ~ 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	Z10SDSS100I	45/64 ~ 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
1.5	Z15SDSS075I	55/64 ~ 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	Z15SDSS100I	55/64 ~ 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
2	Z20SDSS100I	31/32 ~ 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	Z20SDSS125I	31/32 ~ 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
2.5	Z25SDSS100I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	Z25SDSS125I	1-3/16 ~ 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
3	Z30SDSS125I	1-13/32 ~ 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/4	4	1/4
	Z30SDSS150I	1-13/32 ~ 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/2	4	1/4
4	Z40SDSS150I	1-29/32 ~ 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-1/2	4	1/4
	Z40SDSS175I	1-29/32 ~ 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-3/4	4	1/4
5	Z50SDSS200I	2-1/2 ~ 3-1/2	10-3/4	12-1/2	12-3/4	16-1/2	2	4	1/2
7	Z70SDSS300I	3-17/32 ~ 4-1/2	10-3/4	12-7/8	13-1/8	17-7/8	3	5	1/2

STRAIGHT SHANK HOLDERS
 **HALTER MIT ZYLINDERSCHAFT**
 **Porte-plaquette à queue cylindrique**
 **PUNTE ATTACCO CILINDRICO FLANGIATO**

EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0EXSS075I	3/8~27/64	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
Z	ZZ0EXSS075I	7/16~1/2	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
O	Z00EXSS075I	33/64~11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8
O.5	Z05EXSS075I	39/64~11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8


EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
1	Z10EXSS100I	45/64~15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
1.5	Z15EXSS100I	55/64~15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
2	Z20EXSS125I	31/32~1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
2.5	Z25EXSS125I	1-3/16~1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
3	Z30EXSS125I	1-13/32~1-7/8	13-3/4	15	15-3/16	19	1-1/4	4	1/4
4	Z40EXSS150I	1-29/32~2-9/16	16-5/8	18	18-3/16	22	1-1/2	4	1/4
5	Z50EXSS200I	2-1/2~3-1/2	18-1/4	20	20-1/4	24	2	4	1/2
7	Z70EXSS300I	3-17/32~4-1/2	21-7/8	24	24-1/4	29	3	5	1/2

STRAIGHT SHANK HOLDERS
 **HALTER MIT ZYLINDERSCHAFT**
 **Porte-plaquette à queue cylindrique**
 **PUNTE ATTACCO CILINDRICO FLANGIATO**

LONG LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	
0	Z00LGSS075I	33/64 ~ 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8
0.5	Z05LGSS075I	39/64 ~ 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8

i-ONE
DRILLS

i-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

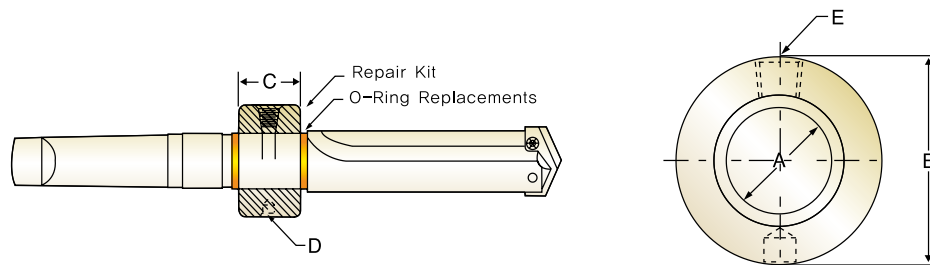
TAPER
SHANK
DRILLS

NC-SPOTTING
DRILLS

CENTER
DRILLS

**SPADE
DRILLS**

TECHNICAL
DATA

HOLDER ACCESSORIES
ROTARY COOLANT ADAPTER (RCA) AND ACCESSORIES

Inch

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap
	A	B	C	D	E
PR110048	3/4	1-3/4	7/8	5/16-NC	◆1/8
PR110100	1	2-1/8	1-1/8	5/16-NC	◆1/8
PR110116	1-1/4	2-1/2	1-3/8	3/8-NC	◆1/4
PR110148	1-3/4	3	1-3/8	3/8-NC	◆1/4
PR110216	2-1/4	3-3/4	1-3/4	1/2-NC	◆1/2

RCA Repair Kit Item No.	RCA O-Ring Replacements Item No.
PR210048	PR310048
PR210100	PR310100
PR210116	PR310116
PR210148	PR310148
PR210216	PR310216

Metric

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap
	A	B	C	D	E
PR120190	19.05	44.45	22.23	M8 × 1.25	◆1/8
PR120254	25.40	53.97	28.57	M8 × 1.25	◆1/8
PR120317	31.75	63.50	34.92	M10 × 1.5	◆1/4
PR120444	44.45	76.20	34.92	M10 × 1.5	◆1/4
PR120571	57.15	95.27	44.45	M12 × 1.75	◆1/2

RCA Repair Kit Item No.	RCA O-Ring Replacements Item No.
PR220190	PR320190
PR220254	PR320254
PR220317	PR320317
PR220444	PR320444
PR220571	PR320571

◆ Thread to BSP & ISO 7-1

TORX SCREWS

Holder Series	Item No.	TORX Hand Driver	Drill Range Used With	
			Inch	Metric
Y	J07Y0010	J05Y0070	3/8 ~ 27/64	9.5 mm ~ 11.0 mm
Z	J07Z0110		7/16 ~ 1/2	11.5 mm ~ 12.5 mm
O	J0800210	J0500080	33/64 ~ 11/16	13.0 mm ~ 17.5 mm
0.5	J0805310		39/64 ~ 11/16	15.5 mm ~ 17.5 mm
1	J0910410	J0510090	45/64 ~ 15/16	18.0 mm ~ 24.0 mm
1.5	J0915510		55/64 ~ 15/16	22.0 mm ~ 24.0 mm
2	J1520610	J0520150	31/32 ~ 1-3/8	25.0 mm ~ 35.0 mm
2.5	J1525710		1-3/16 ~ 1-3/8	30.0 mm ~ 35.0 mm
3,4	J2030810	J0530200	1-13/32 ~ 2-9/16	36.0 mm ~ 65.0 mm
5 ~ 8	J2550910	J0550250	2-1/2 ~ 4-1/2	64.0 mm ~ 114.0 mm

** Note : Replacement screws sold in packages(10 screws per package)



DRILL INSERT (METRIC) - HSS BOHREINSATZ (METRISCH) - HSS

ISO	Material	Material Hardness		* HSS Grade	Speed (M/min)			Feed (mm/rev)						
		(Bhn)	(HRC)		TiN	TiCN	TiAlN	Ø9.5 ~12.5	Ø13 ~17.5	Ø18 ~24	Ø25 ~35	Ø36 ~47	Ø48 ~65	Ø66 ~114
P	Free machining Steels 9SMn36, 9SMnPb28 10SPb20 etc	100 - 150		HSS	63	79	84	0.16	0.23	0.31	0.40	0.48	0.55	0.67
		150 - 200	- 13	HSS	58	70	81	0.16	0.23	0.31	0.40	0.48	0.55	0.67
		200 - 250	13 - 24	HSS	51	66	72	0.14	0.23	0.31	0.38	0.48	0.57	0.69
	Low Carbon Steels C10, C15, C22, C25 etc	85 - 125		HSS	54	67	75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
		125 - 175	- 7	HSS	51	63	72	0.15	0.22	0.28	0.37	0.46	0.56	0.67
		175 - 225	7 - 20	HSS	49	58	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	Medium Carbon Steels C35, C40, C45 etc	225 - 275	20 - 28	HSS	45	56	66	0.13	0.19	0.24	0.34	0.43	0.50	0.57
		125 - 175	- 7	HSS	52	63	75	0.14	0.22	0.28	0.35	0.45	0.55	0.65
		175 - 225	7 - 20	HSS	48	59	69	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	Structural Steels St33, St37-2, St44-2 St52, St60 etc	225 - 275	20 - 28	HSS	45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
		275 - 325	28 - 34	SH, PH	42	52	58	0.10	0.17	0.21	0.28	0.38	0.45	0.55
		100 - 150		HSS	44	56	63	0.14	0.23	0.29	0.35	0.44	0.50	0.63
	Alloy Steels 45CrMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5 etc	150 - 250	- 24	HSS	39	47	55	0.13	0.22	0.24	0.28	0.38	0.46	0.59
		250 - 350	24 - 37	SH, PH	32	41	45	0.10	0.20	0.22	0.24	0.34	0.40	0.48
		125 - 175	- 7	HSS	48	58	63	0.15	0.20	0.24	0.36	0.43	0.47	0.53
		175 - 225	7 - 20	HSS	45	56	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
	Tool Steels 102Cr6, 105WCr6, C75W etc	225 - 275	20 - 28	HSS	41	50	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
		275 - 325	28 - 34	SH, PH	39	47	53	0.09	0.15	0.22	0.28	0.38	0.41	0.50
		325 - 375	34 - 40	SH, PH	36	43	46	0.08	0.15	0.21	0.27	0.38	0.40	0.51
	High Strength Alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73 etc	150 - 200	- 13	SH	25	34	36	0.08	0.17	0.20	0.24	0.30	0.37	0.39
		200 - 250	13 - 24	SH, PH	19	27	29	0.08	0.14	0.18	0.19	0.25	0.29	0.34
		225 - 300	- 32	SH, PH	25	34	35	0.13	0.18	0.23	0.24	0.36	0.43	0.50
M	Stainless Steels X7Cr13, X10CrAl18, X5CrNi189, X5CrNiMo18 10 etc	300 - 350	32 - 37	SH, PH	19	26	27	0.10	0.18	0.23	0.24	0.36	0.43	0.50
		350 - 400	37 - 43	PH	16	21	22	0.08	0.15	0.20	0.22	0.30	0.48	0.46
K	Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GGG50, 70 GTW35, GTS70 etc	135 - 185	- 9	HSS	24	29	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
		185 - 275	9 - 28	HSS	20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46
		120 - 150		HSS	52	64	75	0.16	0.30	0.40	0.49	0.59	0.69	0.75
		150 - 200	- 13	HSS	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
		200 - 220	13 - 19	HSS	42	53	58	0.14	0.23	0.30	0.41	0.46	0.52	0.60
N	Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	220 - 260	19 - 26	SH, PH	35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
		260 - 320	26 - 34	SH, PH	29	35	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
S	High Temp. Alloy Hastelloy B, Inconel etc	30		HSS	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.62
		180	- 8	HSS	92	137	137	0.19	0.33	0.41	0.46	0.54	0.64	0.62
		140 - 220	- 19	SH, PH	9	11	12	0.08	0.17	0.20	0.24	0.30	0.37	0.39
		220 - 310	19 - 33	PH	8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34

RPM= revolution per minute (rev/min)
M/min= surface meter per minute(M/min)
DIA= diameter of drill (mm)
mm/rev = feed rate(mm/rev)

* Formulas :

$$\begin{aligned} \text{M/min} &= \frac{(\text{RPM}) \cdot (\pi) \cdot (\text{DIA.})}{1000} \\ \text{mm/min} &= (\text{RPM}) \cdot (\text{mm/rev}) \\ \text{RPM} &= \frac{(\text{M/min}) \cdot (1000)}{(\pi) \cdot (\text{DIA.})} \end{aligned}$$

* HSS Grade : HSS = HSS M4, SH = Super HSS T15, PH = Premium HSS M48

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

i-ONE
DRILLS

i-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

TECHNICAL
DATA

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

DRILL INSERT (METRIC) - CARBIDE BOHREINSATZ (METRISCH) - VOLLHARTMETALL

ISO	Material	Material Hardness		CARBIDE Grade	Speed (M/min)			Feed (mm/rev)				
		(Bhn)	(HRc)		TiN	TiCN	TiAlN	Ø 9.5 ~12.5	Ø 13 ~17.5	Ø 18 ~24	Ø 25 ~35	Ø 36 ~47
P	Free machining Steels 9SMn36, 9SMnPb28 10SPb20 etc	100 - 150		P40	101	113	125	0.18	0.28	0.36	0.44	0.50
		150 - 200	- 13	P40	88	99	110	0.16	0.26	0.33	0.39	0.45
		200 - 250	13 - 24	P40	82	88	101	0.14	0.23	0.31	0.41	0.42
	Low Carbon Steels C10, C15, C22, C25 etc	85 - 125		P40	94	110	119	0.20	0.24	0.31	0.42	0.46
		125 - 175	- 7	P40	82	88	107	0.18	0.24	0.31	0.39	0.43
		175 - 225	7 - 20	P40	76	82	96	0.15	0.22	0.29	0.36	0.40
	Medium Carbon Steels C35, C40, C45 etc	225 - 275	20 - 28	P40	62	73	84	0.13	0.22	0.29	0.36	0.40
		125 - 175	- 7	P40	82	88	102	0.17	0.24	0.31	0.37	0.42
		175 - 225	7 - 20	P40	75	84	93	0.15	0.22	0.28	0.36	0.40
	Structural Steels St33, St37-2, St44-2 St52, St60 etc	225 - 275	20 - 28	P40	66	70	84	0.15	0.22	0.28	0.36	0.40
		275 - 325	28 - 34	P40	56	64	67	0.13	0.19	0.26	0.33	0.37
		100 - 150		P40	75	82	91	0.19	0.26	0.34	0.39	0.43
	Alloy Steels 45CrMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5 etc	150 - 250	- 24	P40	62	70	75	0.15	0.24	0.29	0.33	0.37
		250 - 350	24 - 37	P40	55	64	73	0.13	0.23	0.27	0.29	0.33
		125 - 175		P40	79	85	98	0.18	0.25	0.32	0.40	0.45
	Tool Steels 102Cr6, 105WCr6, C75W etc	175 - 225	- 13	P40	73	81	88	0.15	0.23	0.29	0.38	0.42
		225 - 275	13 - 19	P40	66	73	81	0.15	0.21	0.28	0.37	0.41
		275 - 325	19 - 26	P40	62	70	78	0.12	0.20	0.27	0.33	0.40
M	High Strength Alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73 etc	325 - 375	26 - 34	P40	53	58	64	0.10	0.18	0.23	0.30	0.38
		150 - 200	- 7	P40	50	56	67	0.09	0.18	0.22	0.28	0.31
		200 - 250	7 - 20	P40	37	46	50	0.09	0.18	0.22	0.28	0.31
	Stainless Steels X7Cr13, X10CrA118, X5CrNi189, X5CrNiMo18 10 etc	225 - 300	20 - 28	K20	26	27	30	0.10	0.17	0.23	0.27	0.33
		300 - 350	28 - 34	K20	20	23	24	0.10	0.14	0.20	0.24	0.30
		350 - 400	34 - 40	P40	49	55	62	0.15	0.23	0.25	0.29	0.38
	Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GGG50, 70 GTW35, GTS70 etc	135 - 185	- 13	P40	43	49	55	0.12	0.20	0.23	0.27	0.35
		185 - 275	13 - 24	P40	38	43	47	0.10	0.18	0.20	0.24	0.30
		120 - 150	- 19	K20,K10	98	125	137	0.18	0.30	0.37	0.46	0.56
	Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	150 - 200	19 - 33	K20,K10	95	101	125	0.17	0.26	0.32	0.42	0.53
		200 - 220	- 32	K20,K10	75	91	111	0.14	0.23	0.30	0.38	0.45
		220 - 260	32 - 37	K20,K10	66	81	93	0.13	0.15	0.28	0.33	0.37
K	Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	260 - 320	37 - 43	K20,K10	56	70	79	0.13	0.18	0.23	0.28	0.33
		30		K20	366	396	427	0.24	0.38	0.45	0.50	0.53
		180	- 8	K20	244	290	291	0.22	0.33	0.40	0.45	0.48
N	High Temp. Alloy Hastelloy B, Inconel etc	140 - 220	- 9	K20	50	55	62	0.19	0.19	0.21	0.24	0.30
		220 - 310	9 - 28	K20	38	44	46	0.15	0.17	0.20	0.21	0.25
S												

RPM= revolution per minute (rev/min)

M/min= surface meter per minute(M/min)

DIA= diameter of drill (mm)

mm/rev = feed rate(mm/rev)

* Formulas :

$$M/min = \frac{(RPM) \cdot (\pi) \cdot (DIA.)}{1000}$$

$$mm/min = \frac{(RPM) \cdot (mm/rev)}{(M/min) \cdot (1000)}$$

$$RPM = \frac{(\pi) \cdot (DIA.)}{mm/min}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.



SUPER HSS T-15 FLAT BOTTOM SPADE DRILL BOHRER-EINSÄTZE - SUPER COBALT T15 (FLACH-NUT)

ISO	Material	Material Hardness		Speed		Feed			
		(Bhn)	(HRc)	TiN	TiAlN (Hardslick)	Ø 9.5 ~12.5	Ø 13 ~17.5	Ø 18 ~24	Ø 25 ~35
P	Free machining Steels 9SMn36, 9SMnPb28 10SPb20 etc	100 - 150		63	67	0.13	0.18	0.25	0.32
		150 - 200	- 13	56	65	0.13	0.18	0.25	0.32
		200 - 250	13 - 24	53	58	0.11	0.18	0.25	0.30
	Low Carbon Steels C10, C15, C22, C25 etc	85 - 125		54	60	0.12	0.18	0.22	0.30
		125 - 175	- 7	50	58	0.12	0.18	0.22	0.30
		175 - 225	7 - 20	46	55	0.10	0.15	0.19	0.27
	Medium Carbon Steels C35, C40, C45 etc	225 - 275	20 - 28	45	53	0.10	0.15	0.19	0.27
		125 - 175	- 7	50	60	0.11	0.18	0.22	0.28
		175 - 225	7 - 20	47	55	0.10	0.15	0.18	0.27
	Structural Steels St33, St37-2, St44-2 St52, St60 etc	225 - 275	20 - 28	45	50	0.10	0.15	0.18	0.27
		275 - 325	28 - 34	42	46	0.08	0.14	0.17	0.22
		100 - 150		45	50	0.11	0.18	0.23	0.28
	Alloy Steels 45CrMo4, 42CrMo4 16MnCr5, Ck75 35CrMo4, 16MnCr5 etc	150 - 250	- 24	38	44	0.10	0.18	0.19	0.22
		250 - 350	24 - 37	33	36	0.08	0.16	0.18	0.19
		125 - 175	- 7	46	50	0.12	0.16	0.19	0.29
	Tool Steels 102Cr6, 105WCr6, C75W etc	175 - 225	7 - 20	45	46	0.10	0.16	0.19	0.29
		225 - 275	20 - 28	40	45	0.10	0.13	0.18	0.28
		275 - 325	28 - 34	38	42	0.07	0.12	0.18	0.22
	High Strength Alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73 etc	325 - 375	34 - 40	34	37	0.06	0.12	0.17	0.22
		150 - 200	- 13	27	29	0.07	0.12	0.15	0.20
		200 - 250	13 - 24	22	23	0.07	0.12	0.15	0.20
M	Stainless Steels X7Cr13, X10CrAl18, X5CrNi189, X5CrNiMo18 10 etc	225 - 300	- 32	27	28	0.10	0.14	0.16	0.19
		300 - 350	32 - 37	21	22	0.08	0.14	0.18	0.19
K	Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GGG50, 70 GTW35, GTS70 etc	350 - 400	37 - 43	17	18	0.06	0.12	0.18	0.18
		135 - 185	- 9	9	29	0.18	0.18	0.20	0.23
		185 - 275	9 - 28	26	25	0.15	0.15	0.18	0.22
		120 - 150		56	66	0.13	0.25	0.35	0.41
N	Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	150 - 200	- 13	51	60	0.12	0.21	0.29	0.40
		200 - 220	13 - 19	47	51	0.12	0.20	0.25	0.36
		220 - 260	19 - 26	38	48	0.10	0.14	0.20	0.25
		260 - 320	26 - 34	30	37	0.10	0.13	0.13	0.20
S	High Temp. Alloy Hastelloy B, Inconel etc	30		20	10	0.06	0.14	0.16	0.19
		180	- 8	7	9	0.06	0.11	0.14	0.15
S	High Temp. Alloy Hastelloy B, Inconel etc	140 - 220	- 19	208	213	0.17	0.28	0.36	0.43
		220 - 310	19 - 33	112	121	0.17	0.28	0.36	0.41

RPM= revolution per minute (rev/min)

M/min= surface meter per minute(M/min)

DIA= diameter of drill (mm)

mm/rev = feed rate(mm/rev)

* Formulas :

$$M/min = \frac{(RPM) \cdot (\pi) \cdot (DIA.)}{1000}$$

$$mm/min = \frac{(RPM) \cdot (mm/rev)}{(M/min) \cdot (1000)}$$

$$RPM = \frac{(M/min) \cdot (1000)}{(\pi) \cdot (DIA.)}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

i-ONE
DRILLS

i-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

TECHNICAL
DATA



Global Cutting Tool Leader **YG-1**



DRILLS



Leading Through Innovation



TECHNICAL DATA

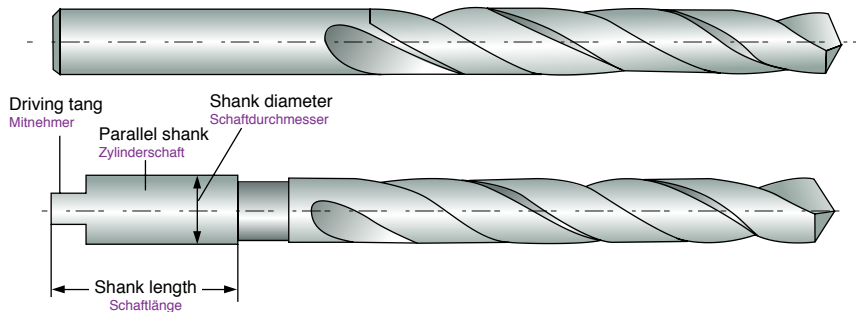
TECHNISCHE DATEN

i-ONE
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DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
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-INOXDREAM
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-ALUDREAM
DRILLS
-CFRPDREAM
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-MQLDREAM DRILLS
for HIGH
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CARBIDE
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DRILLS

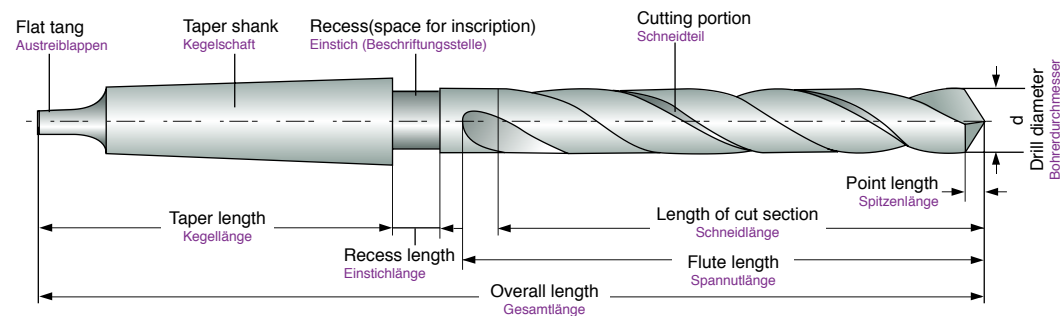
HPD DRILLS

GOLD-P
DRILLSSUPER-GP
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DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

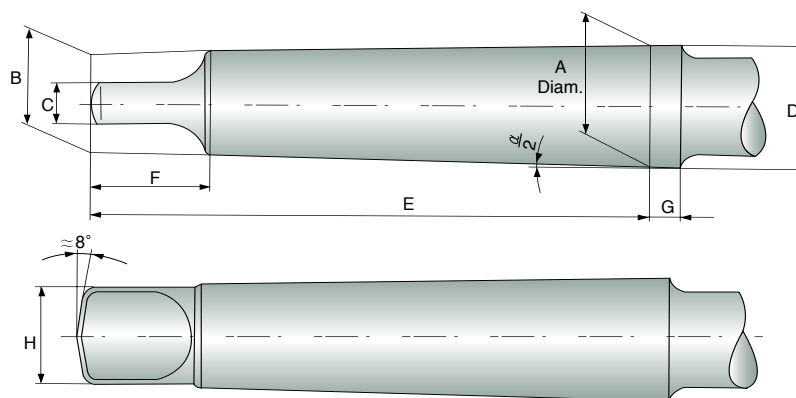
TWIST DRILL WITH PARALLEL SHANK SPIRALBOHRER MIT ZYLINDERSCHAFT



TWIST DRILL WITH TAPER SHANK SPIRALBOHRER MIT KEGELSCHAFT



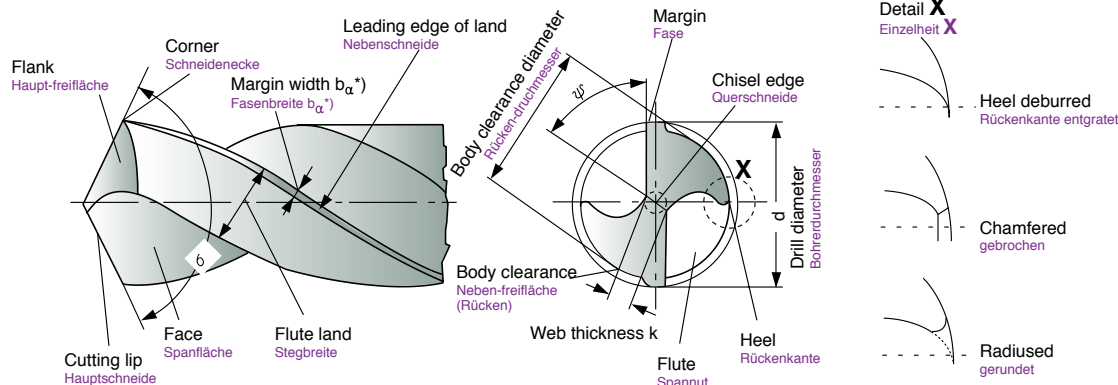
GENERAL DIMENSIONS OF MORSE TAPER SHANKS TOLERANZEN DES KEGELSCHAFTES



Morse Taper Shank Morsekegelschaft	A mm	B mm	C(h13) mm	D mm	E mm	F(max.) mm	G mm	H(max.) mm	$\alpha/2$
No.1	12.065	9	5.2	12.2	62	13.5	3.5	8.7	1°25'43"
No.2	17.780	14	6.3	18.0	75	16	5	13.5	1°25'50"
No.3	23.825	19.1	7.9	24.1	94	20	5	18.5	1°26'16"
No.4	31.267	25.2	11.9	31.6	117.5	24	6.5	24.5	1°29'15"
No.5	44.399	36.5	15.9	44.7	149.5	29	6.5	35.7	1°30'26"
No.6	63.348	52.4	19	63.8	210	40	8	51	1°29'36"



CUTTING PORTION SCHNEIDTEIL



σ = Point angle (sigma) Spitzenwinkel (Sigma)

ψ = Chisel edge angle (psi) Querschneidenwinkel (Psi)

* In the context of cutting technology, land width b_{α} is the body clearance land width which is to be by b_{fan} , see DIN 6581.

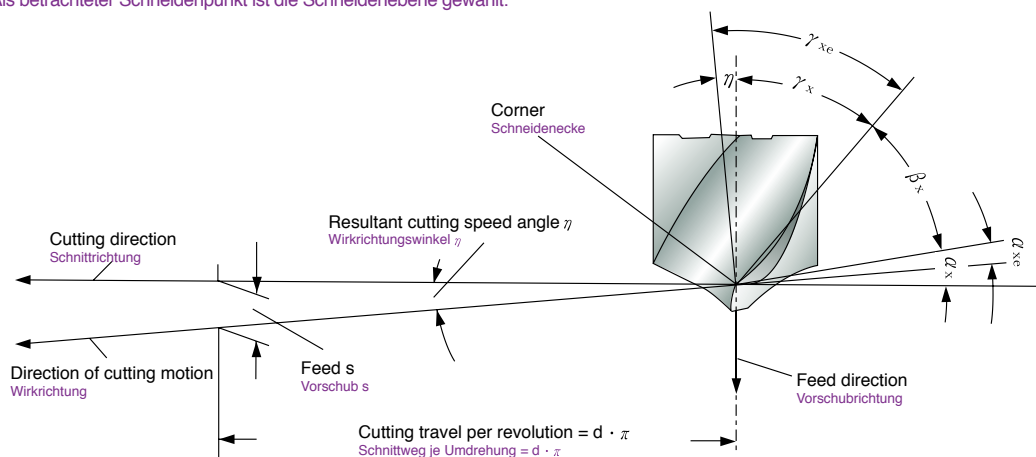
Die Fasenbreite b_{α} ist bei zerspanungstechnischen Betrachtungen die Fasenbreite der Nebenfreifläche und mit b_{fan} zu bezeichnen, siehe DIN 6581.



ANGLE AT THE CUTTING EDGES WINKEL AN DEN SCHNEIDEN

The corner has been adopted as the observed edge point.

Als betrachteter Schnittpunkt ist die Schneidenebene gewählt.



α_x = Side clearance angle (alpha) Seitenfreiwinkel (Alpa)

α_{xe} = Effective side clearance angle Wirk-Seitenfreiwin

β_x = Side wedge angle (beta) Seitenkeilwinkel (Beta)

γ_x = Front rake angle (gamma) Seitenspanwinkel (Gamma)

γ_{xe} = Working front rake angle Wirk-Seitenspanwinkel

η = Resultant cutting speed angle (eta) Wirkrichtungswinkel (Eta)

Clearance angle α , wedge angle β and rake angle γ are measured in the tool orthogonal plane. For details, see DIN 6581, definitions of metal-cutting technology; geometry at the tool edge.

Freiwinkel α , keilwinkel β und Spanwinkel γ werden in der keilme β ebene gemessen.

Einzelheiten siehe DIN 6581, Begriffe der Zerspantechnik; Geometrie am Schneidkeil des Werkzeuges.

i-ONE
DRILLSi-DREAM
DRILLSDREAM
DRILLS
-GENERALDREAM
DRILLS
-HIGH FEEDDREAM
DRILLS
-FLAT BOTTOMDREAM
DRILLS
-INOXDREAM
DRILLS
-ALUDREAM
DRILLS
-CFRPDREAM
DRILLS
-MQLDREAM DRILLS
for HIGH
HARDENED
STEELSGENERAL
CARBIDE
DRILLSMULTI-1
DRILLS

HPD DRILLS

GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA

WEB THICKNESS K KERNDICKE K

Test values : The web thickness according to Fig. 1 shall not be less than the minimum value $k_{\min}$ indicated in Fig. 2.

Prüfwerte : Die kerndicke nach Bild 1 soll den Bild 2 angegebenen Mindestwert $k_{\min}$ nicht unterschreiten.

Test point : At the point of the drill. **Prüfstelle :** An der Bohrspitze

Testing equipment : Slide gauge with measuring points. **Prüfmittel :** Meß schieber (Schieblehre) mit Messerspitzen

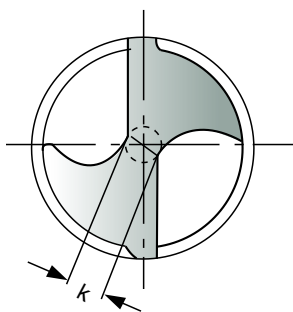


Figure 1. Web thickness k
Bild 1. kerndicke k

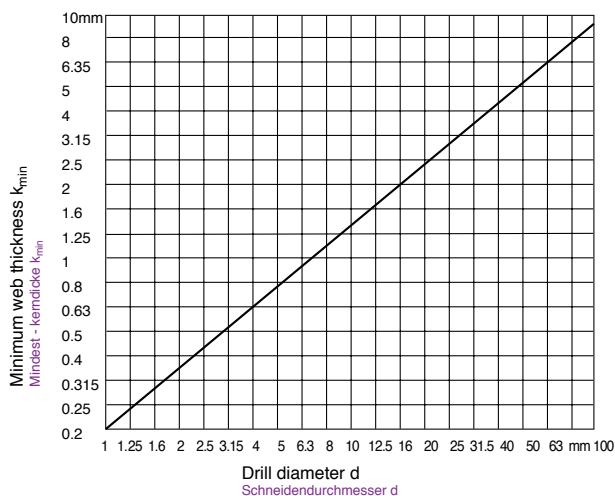


Figure 2. Web thickness $k_{\min}$
Bild 2. Kerndicke $k_{\min}$



MARGIN WIDTH b_{α} Fasenbreite b_{α}

Test values : The land width as in Fig. 3 shall lie within the limiting values indicated in Fig. 4.

Prüfwerte : Die Fasenbreite nach Bild 3 soll im Bereich der Grenzwerte liegen, die im Bild 4 angegeben sind.

Test point : 5mm behind the corner **Prüfstell :** 5mm hinter der Schneidenecke

Testing equipment : Slide gauge **Prüfmittel :** Meß schieber

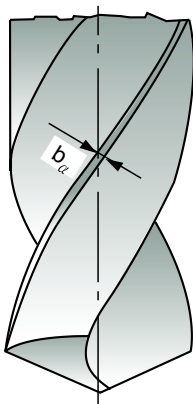


Figure 3. Margin width b_{α}
Bild 3. Fasenbreite b_{α}

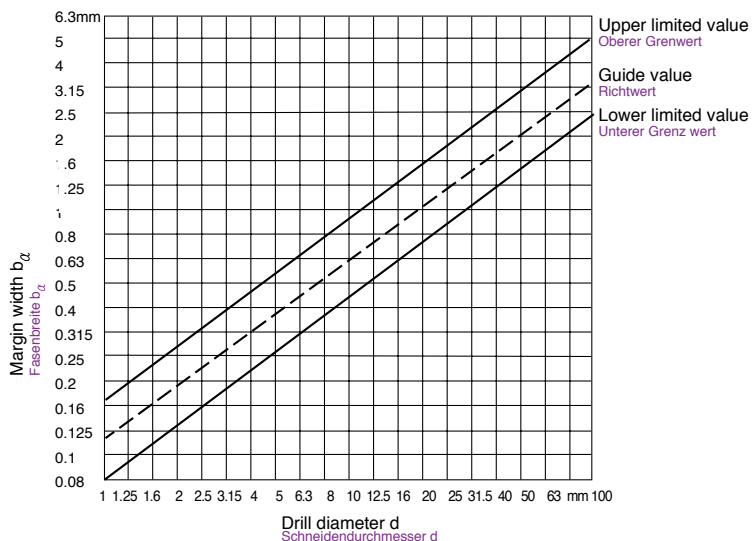


Figure 4. Margin width b_{α}
Bild 4. Fasenbreite b_{α}



ANGLE ON TWIST DRILLS WINKEL AN SPIRALBOHRERN

(1) Side rake angle γ_f (Helix angle)

Seitenspanwinkel (Spiralwinkel) γ_f

Recommended test value : Recommended ranges depending on the tool types N,H and W according to DIN 1836 and the diameter of the drill included in Fig. 5.

Empfohlene Prüfwerte : Empfohlene Bereiche in Abhängigkeit der Werkzeugtypen N, H und W nach DIN 1836 und des Schneidendurchmessers sind in Bild 5.

Test point : At the corner, see Fig. 6.

Prüfstell : An der Schneidenecke, siehe Bild 6

Testing equipment : According to VDI Guideline 3331 Part 1, Section Margin width b_α

Prüfmittel : Nach der VDI-Richtlinie 3331 Blatt 1, Abschnitt Fasenbreite b_α

Note : The side rake angle γ_f is measured in place of the orthogonal rake angle γ_o found in the wedge measuring plane (see DIN 6581), as this changes along the cutting edge (becoming smaller towards the point of the drill).

Anmerkung : Der Seitenspanwinkel γ_f wird an Stelle des in der Keilmeß ebene befindlichen Orthogonal-Spanwinkels γ_o (Siehe DIN 6581) gemessen, da sich dieser entlang der Hauptschneide verändert (er wird zur Bohrspitze hin kleiner)

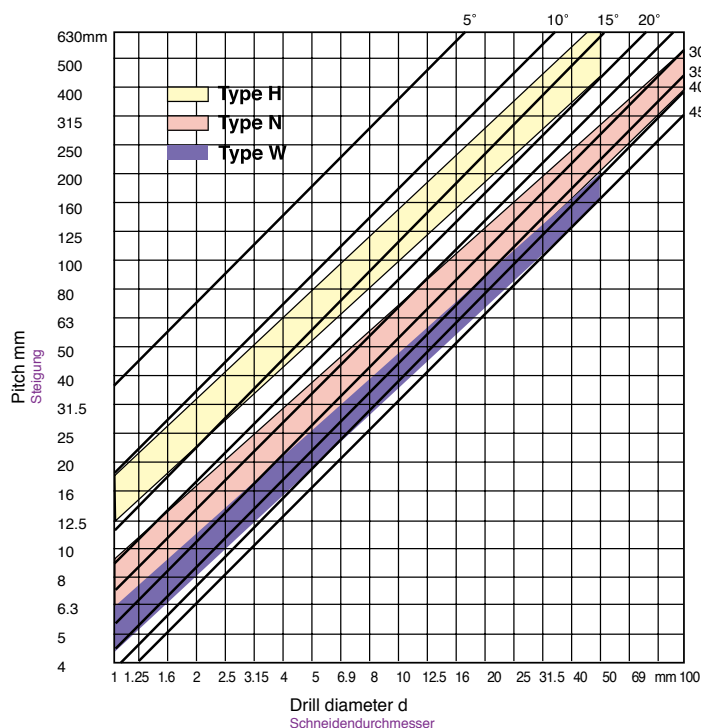


Figure 6. Side rake angle γ_f

Build 6. Seitenspanwinkel γ_f

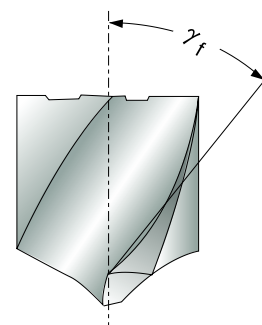


Figure 5. Side rake angle γ_f

Build 5. Seitenspanwinkel γ_f

(2) Point angle σ **Spitzenwinkel σ**

Test value : Usual execution for tool types N and H : $\sigma=118^\circ$,
for tool type W : $\sigma=130^\circ$

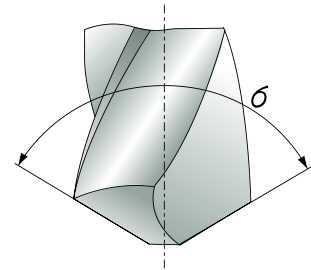
Prüfwerte : Regelausführung bei Werkzeugtyp N und H : $\sigma=118^\circ$
bei Werkzeugtyp W : $\sigma=130^\circ$

Test point : At the cutting, see Fig. 7.

Prüfstelle : An den Hauptschneiden, siehe Bild 7.

Testing equipment : According to VDI Guideline 3331 Part 1,
Section Margin width b_α .

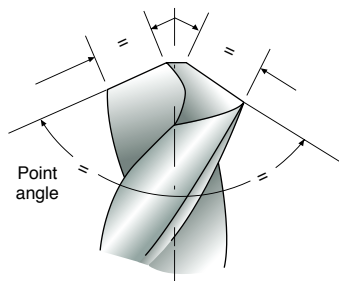
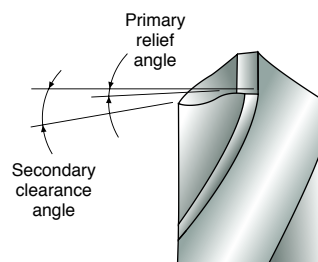
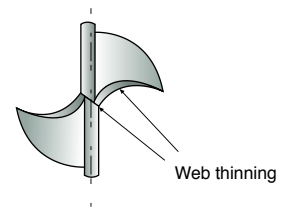
Prüfmittel : Nach der VDI-Richtlinie 3331 Blatt 1, Abschnitt Fasenbreite b_α .

Figure 7. Point angle σ Bild 7. Spitzenwinkel σ 
RESHARPENING TWIST DRILLS
NACHSCHLEIFEN VON SPIRALBOHRERN

(1) Drills are worn off irregularly. It should be sharpened prior to developing into excessive wear.
Unregelmäßiger Verschleiß von Bohrern. Bohrer soll vor übermäßigem Verschleiß nachgeschliffen werden.

(2) Resharpener (Nachschleifen)

- ① Grind the correct point angle to suit your application.(figure 8)
 Den für Ihre Anwendung passenden korrekten Spitzenwinkel schleifen (Bild 8)
- ② Check that both cutting lips have the same angle. On a 130° point, each lip should be 65° toward the axis. The point must be on center, i.e., the chisel edge must produce cutting lips of equal length.(figure 8)
 Überprüfen, dass beide Hauptschneiden den gleichen Winkel haben. Bei einem 130° Spitzenwinkel, sollte jede Hauptschneide 65° haben (Bild 8)
- ③ Grind Primary relief and Secondary clearance.(figure 9)
 Primärer Hinterschliff und Sekundärer Freiwinkel (Bild 9)
- ④ Grind web thinning. (figure 10)
 Den ausgespitzten Kern schleifen (Bild 10)

Figure 8
Bild 8Figure 9
Bild 9Figure 10
Bild 10



WEB THINNING KEGELMANTELSCHLIFF

(1) Without thinning

Normalanschliff

Suitable for drill of general purpose.

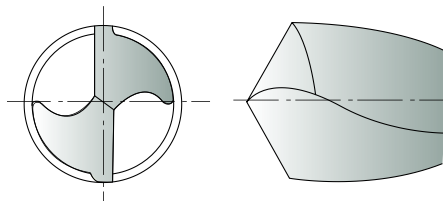
Thanks to thin web thickness, web thinning is not needed.

This without web thinning type is applied to design of drills for mild steels, alloy steels, cast iron, stainless steels, titanium, inconel, etc. and conventional cutting conditons.

Zum Bohren für allgemeine Zwecke.

Dank dünner Kerndicke, ist Kegelmanlanschliff nicht nötig.

Geeignet für Stahl, Stahl-Legierungen, Gusseisen, Edeistahl, Tian, Inconel usw. und für konventionelle Schneidbedingungen



(2) Type C thinning (DIN1412 FORM C, SPLIT POINT)

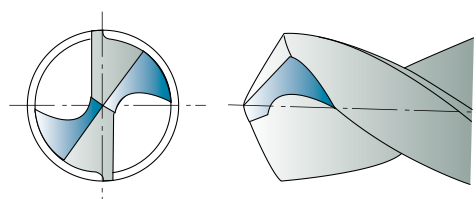
DiN 1412 Form C kegelmanlanschliff mit Kreuzanschliff

Because Split point enables good centering when drilling and breaks the chips, chip removals are easy.

Suitable for drill design in high hardened tough materials, i.e. heat treated steels, titanium alloys, stainless steels, incoroy inconel, nimonic, etc.

Da Kreuzanschliff gute Zentrierung und Spanbruch während des Bohrens ermöglicht, wird die Spanentfernung erleichtert.

Geeignet für zähe Werkstücke oder Werkstücke mit hoher Härte, z.B. hitzebehandelten Stahl, Titan-Legierungen, Edelstahl, Incoroy Inconel, Nimonic usw.

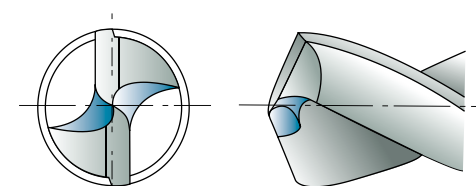


(3) Type R thinning (HELICAL THINNING)

Form R Kegelmanlanschliff (Spiralanschliff)

Helical thinning ensures to frequent chip breaking and removal. The different direction force of cutting edges and helical thinning parts enable that chips curl, break and remove through the flutes. In addition, helical thinning makes the chip room up to center, remove the chisel and enables good centering

Häufiger Spanbruch und Spanentfernung durch Spiralanschliff, es wird ausreichend Raum für Späne geschaffen, und gute Zentrierung ist möglich.



(4) Type A thinning (DIN1412 FORM A)

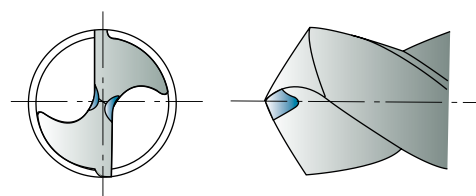
DiN 1412 Form A Kegelmanlanschliff mit ausgespitzer Querschnide

A type thinning makes thin chisel, good chip removal and favorable centering.

This type is the easiest type to grind the thinning. In narrow web and wide fluted drills, keeping of the rigidity and smooth chip removal are possible.

Diese Form hat eine dünne Querschnide, dadurch ist gute Spanentfernung und Zentrierung möglich.

Der Kegelmanlanschliff ist bei dieser Form am einfachsten nachzuschleifen, Ein enger Kern und breite Schneiden erhalten die Stabilität.


i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

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DRILLS
-INOX

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-ALU

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-CFRP

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-MQL

DREAM DRILLS
for HIGH
HARDENED
STEELS

GENERAL
CARBIDE
DRILLS

MULTI-1
DRILLS

HPD DRILLS

GOLD-P
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SUPER-GP
DRILLS

STRAIGHT
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CENTER
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TECHNICAL
DATA

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HPD DRILLS

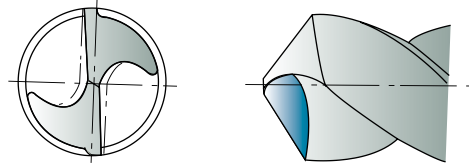
GOLD-P
DRILLSSUPER-GP
DRILLSSTRAIGHT
SHANK
DRILLSTAPER
SHANK
DRILLSNC-SPOTTING
DRILLSCENTER
DRILLSSPADE
DRILLSTECHNICAL
DATA**(5) Type B thinning (DIN1412 FORM B)****DIN 1412 Form B Kegelmantelanschliff mit ausgespitzter Querschneide**

In case of work materials with low cutting resistance and good chip removal, i.e., cast iron, aluminum, plastic etc., B type thinning is suitable.

Especially when drills for high hardened steels are designed, this type is applied to decrease rake angle and avoid chipping of cutting lips.

Geeignet für Werkstücke mit geringem Schneidwiderstand und guter Spanentfernung, z.B. Gusseisen, Aluminium, Plastik usw.

Diese Form wird besonders dann angewendet, wenn der Bohrer für Stähle mit hoher Härte produziert wurde, da dadurch der Seitenspanwinkel verkleinert wird und Brüche an der Schneidkante vermieden werden.

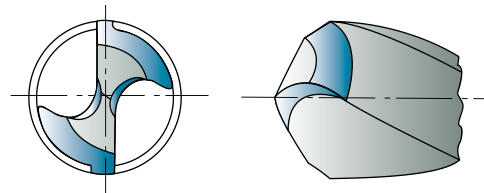
**(6) Type D thinning (DIN1412 FORM D)****DIN 1412 Form D Kegelmantelanschliff mit ausgespitztem Kern**

Grey cast iron thinning; bevelling of external edges strengthens the cutting edge.

Used for medium to high grey cast iron hardness and for abrasives.

GG-Anschliff; Fasen auf dem Steg verstärken die Schneidkante.

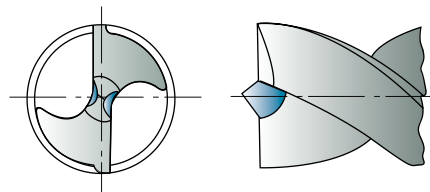
Geeignet für medium bis hohe Härte GG und für abrasive Materialien.

**(7) Type E thinning (DIN1412 FORM E)****DIN 1412 Form E Zentrumschneide**

Center drill bit thinning; ensures optimal center drilling and does not leave burrs in through holes.

As the bit and cutting edges are delicate, this bit should be used for drilling thin sheet metal.

Zentrisches Bohren, Niedrige Gratbildung, Geeignet zum Bohren von dünnen Blechen und Rohren.


Surface Finishes for high speed steels Twist Drills
Oberflächenbeschaffenheit von HSS-Spiralbohrern
(1) Bright Finish Helle Beschaffenheit

Drills with a bright finish are without surface treatment and ground condition.

Especially bright finished drills are used in machining of non ferrous materials.

Ohne Oberflächenbehandlung, geeignet zum Bearbeiten von Nichteisen Materialien.

(2) Coloring (Gold color) Farbe (Bernstein)

The coloring is a thin oxide layer formed on the tool surfaces. Dies ist eine dünne Oxidschicht.

This is often applied to cobalt high speed steels twist drills. Geeignet für Kobalt-HSS-Spiralbohrer.

(3) Steam Tempered (black oxide finish) Dampfoxidierte Ausführung

This is a black oxide layer 1-2 μ m formed on the tool surfaces.

Steam Tempered treated drill is the result of a steam tempering operation. Because the oxide layer retains some coolant on the tool surface, and aids chip flow, helps to dissipate heat, steam homo treated drills are recommended for ferrous applications.

Eine schwarze Oxidschicht 1-2 μ m.

Da die Oxidschicht Kühlmitelegenschaften auf der Werkzeugoberfläche beinhaltet und den Spanfluss verbessert und die Hitze verteilt, sind diese Bohrer für die Bearbeitung von Metal-Werkstücken empfohlen.



COATING BESCHICHTUNGEN

The use of coated cutting tools reduce production costs.

For example

- Avoidance of machine downtime due to premature tool wear.
- Higher cutting capabilities to reduce actual machining times.
- Reproducible tool life.
- Improvement of component surface quality.

Durch den Gebrauch von beschichteten Werkzeugen werden Produktionskosten reduziert, z.B.

- Vermeidung von Maschinen-Ausfallzeiten wegen frühzeitigem Verschleiß des Bohrers.
- Höhere Bohrleistung, dadurch Verminderung von Arbeitszeit.
- Längere Standzeit.
- Verbesserte Oberflächengüte des Werkstücks.

(1) TiN (Titanium Nitride) coating **TiN (Titan-Nitrid) Beschichtung**

Titanium Nitride gives the tool a higher performance in comparison to traditional non-coated drills.

TiN coating, with good all-around properties, is recommended for the general application, i.e., attack by abrasive, adhesive and chemical wear in equal proportions.

Bessere Leistung im Vergleich zu unbeschichteten Werkzeugen

TiN-Beschichtung wird für allgemeine Anwendungen empfohlen guten.

(2) TiCN (Titanium Carbon Nitride) coating **TiCN (Titan karbon Nitrid) Beschichtung**

TiCN coating should be employed when severe thermodynamic stress is expected, for example when drilling in high hardened steels or in mild steels with high speed and feed.

Diese Beschichtung soll bei extremen thermodynamischen Bedingungen verwendet werden, z.B. bei Bohren von Stählen mit hoher Härte und Stähle mit hoher Geschwindigkeit und Vorschub.

(3) TiAlN (Titanium Aluminium Nitride) coating **TiAlN (Titan Aluminium Nitrid) Beschichtung**

The addition of Aluminum to the Titanium Nitride produces an increase in hardness and an exceptional increase in resistance to oxidation at high temperature.

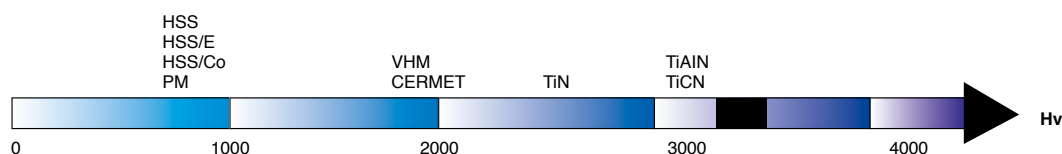
TiAlN coating is applied to drilling with severe thermal stress on cutting edges when continuous non-step feed, dry cutting or high speed cutting.

Der Zusatz von Aluminium zum Titan-Nitrid ermöglicht eine höhere Härte und einen auß. erordentlich guten Widerstand gegen Oxidation und hohe Temperaturen.

Geeignet zum Bohren unter extremen thermischen Bedingungen auf der Hauptschneide bei kontinuierlichem Vorschub, Trockenschnitt oder Hochgeschwindigkeitsbohren.

(4) Properties of coating **Beschichtungs-Eigenschaften**

Properties	TiN	TiCN	TiAlN
Coating color Beschichtungsfarbe	gold - yellow	blue - grey	violet - grey
Hardness (Hv 0.05) härtegrad (Hv 0.05)	2300	3000	3000
Coating thickness (μm) Beschichtungsstärke (μm)	1 ~ 4	1 ~ 4	1 ~ 5
Max. working temperature (°C) Max. Arbeitstemperatur (°C)	600	400	800
Coefficient of friction against steels (dry) Reibungskoeffizient für stahl (trocken)	0.4	0.4	0.4


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DREAM DRILLS
for HIGH
HARDENED
STEELS

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DRILLS

HPD DRILLS

GOLD-P
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SUPER-GP
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DRILLSTECHNICAL
DATA**(5) Selection of coating** **Verschiedene Beschichtungen**

Work-material	HSS TWIST DRILLS	CARBIDE DRILLS
Unalloyed steels Unlegierter Stahl	TiCN, TiAlN	TiCN, TiAlN
Steels < 1000 N/mm² Stahls < 1000 N/mm²	TiCN, TiAlN	TiCN, TiAlN
Steels > 1000 N/mm² Stahls > 1000 N/mm²	TiCN, TiAlN	TiCN, TiAlN
Stainless steels Edelstähle	TiCN, TiAlN	TiCN, TiAlN
Cast iron Gusseisen	TiCN, TiAlN	TiAlN
Al-wrought alloys Al-Knetlegierungen	TiN	TiN
Al-cast alloys Al-Gusslegierungen	TiCN	TiCN
Copper (pure) Kupfer (pur)	CrN	CrN
Brass Messing	TiCN	TiCN
Bronze Bronze	TiCN	TiCN


DRILL SIZES BEFORE TAPPING
DURCHMESSER FÜR BOHRWERKZEUGE FÜR GEWINDEKERNLÖCHER
(1) Metric - ISO threads coarse pitch **Metrisch - ISO Gewinde, grobverzahnt**

Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter
		M3	2.5	M11	9.5	M30	26.5
M1	0.75	M3.5	2.9	M12	10.2	M33	29.5
M1.2	0.95	M4	3.3	M14	12.0	M36	32.0
M1.4	1.1	M5	4.2	M16	14.0	M39	35.0
M1.6	1.25	M6	5.0	M18	15.5	M42	37.5
M1.8	1.45	M7	6.0	M20	17.5	M45	40.5
M2	1.6	M8	6.8	M22	19.5	M48	43.0
M2.2	1.75	M9	7.8	M24	21.0	M52	47.0
M2.5	2.05	M10	8.5	M27	24.0	M56	50.5

(2) Metric ISO threads fine pitch
Metrisch - ISO Gewinde, feinverzahnt

Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter
2.5	0.35	2.15	7	0.75	6.2
3	0.35	2.65	8	0.75	7.2
3.5	0.35	3.15	8	1	7
4	0.5	3.5	9	0.75	8.2
4.5	0.5	4	9	1	8
5	0.5	4.5	10	0.75	9.2
5.5	0.5	5	10	1	9
6	0.75	5.2	10	1.25	8.8

Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter
11	0.75	10.2	30	1	29
11	1	10	30	1.5	28.5
12	1	11	30	2	28
12	1.25	10.8	30	3	27
12	1.5	10.5	32	1.5	30.5
14	1	13	32	2	30
14	1.25	12.8	33	1.5	31.5
14	1.5	12.5	33	2	31
15	1	14	33	3	30
15	1.5	13.5	35	1.5	33.5
16	1	15	36	1.5	34.5
16	1.5	14.5	36	2	34
17	1	16	36	3	33
17	1.5	15.5	38	1.5	36.5
18	1	17	39	1.5	37.5
18	1.5	16.5	39	2	37
18	2	16	39	3	36
20	1	19	40	1.5	38.5
20	1.5	18.5	40	2	38
20	2	18	40	3	37
22	1	21	42	1.5	40.5
22	1.5	20.5	42	2	40
22	2	20	42	3	39
24	1	23	45	1.5	43.5
24	1.5	22.5	45	2	43
24	2	22	45	3	42
25	1	24	48	1.5	46.5
25	1.5	23.5	48	2	46
25	2	23	48	3	45
26	1.5	24.5	50	1.5	48.5
27	1	26	50	2	48
27	1.5	25.5	50	3	47
27	2	25	52	1.5	50.5
28	1	27	52	2	50
28	1.5	26.5	52	3	49
28	2	26			

(3) WITHWORTH pipe threads (BSP)
WITHWORTH Rohrgewinde (BSP)

Nominal size	Drill diameter	Nominal size	Drill diameter
inches	mm	inches	mm
G1/8	8.8	G1-1/4	39.5
G1/4	11.8	G1-3/8	42.0
G3/8	15.25	G1-1/2	45.0
G1/2	19.0	G1-3/4	51.0
G5/8	21.0	G2	57.0
G3/4	24.5	G2-1/4	63.0
G7/8	28.25	G2-1/2	73.0
G1	30.75	G2-3/4	79.0
G1 1/8	35.5	G3	85.0

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DREAM DRILLS
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DATA**(4) American unified coarse threads** Amerikanischer Standard, Grobverzahnung

UNC	Drill diameter		UNC	Drill diameter	
	inches	mm		inches	mm
No. 1	53	1.51	7/16	U	9.35
No. 2	50	1.78	1/2	27/64	10.71
No. 3	47	1.99	9/16	31/64	12.30
No. 4	43	2.26	5/8	17/32	13.49
No. 5	38	2.58	3/4	21/32	16.67
No. 6	36	2.71	7/8	49/64	19.44
No. 8	29	3.45	1	7/8	22.22
No. 10	25	3.8	1-1/8	63/64	25.00
No. 12	16	4.5	1-1/4	1-7/64	28.18
1/4	7	5.11	1-3/8	1-7/32	30.95
5/16	F	6.53	1-1/2	1-11/32	34.13
3/8	5/16	7.94			

(5) American unified fine threads Amerikanischer Standard, Feinverzahnung

NF	Drill diameter		NF	Drill diameter	
	inches	mm		inches	mm
No. 0	3/64	1.19	3/8	Q	8.43
No. 1	53	1.51	7/16	25/64	9.92
No. 2	50	1.78	1/2	29/64	11.51
No. 3	45	2.08	9/16	33/64	13.10
No. 4	42	2.37	5/8	37/64	14.86
No. 5	37	2.64	3/4	11/16	17.46
No. 6	33	2.87	7/8	13/16	20.64
No. 8	29	3.45	1	59/64	23.42
No. 10	21	4.04	1-1/8	1-3/64	26.59
No. 12	14	4.62	1-1/4	1-11/32	29.76
1/4	3	5.41	1-3/8	1-19/32	32.94
5/16	1	6.91	1-1/2	1-27/64	36.11

**ISO TOLERANCE
ISO TOLERANZ** $\mu\text{m} = 1/1000\text{mm}$

Diameter (mm)	1 - 3 from to	3 - 6 over to	6 - 10 over to	10 - 18 over to	18 - 30 over to	30 - 50 over to
Tolerance range in μm / Toleranzwerte in μm						
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13	0 - 16
h7	0 - 10	0 - 12	0 - 15	0 - 18	0 - 21	0 - 25
h8	0 - 14	0 - 18	0 - 22	0 - 27	0 - 33	0 - 39
m7	+ 12 + 2	+ 16 + 4	+ 21 + 6	+ 25 + 7	+ 29 + 8	+ 34 + 9

15 TROUBLE SHOOTING IN DRILLING PROBLEME UND ABHILFE

Occurrence of trouble	Cause of trouble	Countermeasures
Drill will not enter work Bohrer dringt nicht durch werkstück	1. Drill is dull. 2. Lip relief too small. 3. Too thick a web. 1. Bohrer ist stumpf 2. Hauptschneide ist zu klein 3. Kern ist zu dick	1. Grind lip relief sufficiently. 2. Grind web thinning. 3. Choose a drill with narrow web. 1. Schleifen der Hauptschneide 2. Kegeimantel schleifen 3. Bohrer mit engerem kern wählen
Margin chipping Fasenbruch	1. Oversized jig bushing. 1. Bohrbuchse ist zu ungleich.	1. Choose the suitable jig bushing for drill diameter 1. Den passenden Bohrbuchse wählen.
Cutting lip breaks Bruch der Hauptschneide	1. Lip relief too much. 2. Feed too heavy. 1. Zu große Entlastung der Hauptschneide 2. Vorschub zu stark	1. Grind lip relief sufficiently. 2. Decrease feed rate. 1. Schleifen der Hauptschneide 2. Vorschub verringern
Tang breaks Bruch der Austriablappen am kagelschaft	1. Imperfect fit between taper shank and socket. 2. Burred or Badly worn sockets. 1. Befestigung zwischen Morsekegel und Aufnahme ungenügend 2. Verschleiß der Aufnahme	1. Clean the dirt or chips in sockets. 2. Change the worn sockets to new ones. 1. Schmutz oder Späne in der Aufnahme entfernen 2. Aufnahme wechseln
Drill breaks in brass Bohrer bricht in Messing	1. Unsuitable drill 2. Flutes clogged with chips 1. Unpassender Bohrer 2. Schneiden durch Späne verstopft	1. Choose the suitable drill for work material. 1. Den passenden Bohrer wählen
Chipping of drill center Brüche auf der Querschneide	1. Lip relief too much. 2. Feed too heavy. 1. Zu große Entlastung der Hauptschneide 2. Vorschub zu stark	1. Grind lip relief sufficiently. 2. Decrease feed rate. 1. Schleifen der Hauptschneide 2. Vorschub verringern
Hole oversize Übergröße des Lochs	1. Unequal angle or length of cutting edges. 2. Loosen spindle. 1. Ungleiches Winkel oder Länge der Hauptschneiden 2. Lockere Spindel	1. Resharpener point, choose correct drills. 2. Tighten spindle sufficiently. 1. Nachschleifen der Bohrspitze, passenden Bohrer wählen 2. Spindel ausreichend befestigen
Outer corners broken down. Brüche in der Schneidenecke	1. Cutting speed too high. 2. Hard spots in work material. 3. Flutes clogged with chips. 4. Too wear of drills. 1. Schnittgeschwindigkeit zu hoch 2. Harte Flächen im Werkstück 3. Schneiden durch Späne verstopft 4. Verschleiß des Bohrers zu groß	1. Grind point to suit work material. 2. Decrease the feed rates. 3. Resharpener early before too wear. 1. Bohrspitze nachschleifen und ans Werkstück anpassen 2. Vorschub verringern 3. Nachschleifen vor zu groß ern Verschleiß
Large chip of one flute and small chip of other flute Ungleiche Späne auf den Schneiden	1. Improperly ground point. 2. Only one lip doing all the cutting 1. Bohrspitze nicht richtig geschliffen 2. Nur eine Schneide bohrt	1. Properly grind point. 2. Grind point with same point angle and length of lip 3. Grind with small lip height. 1. Bohrspitze richtig schleifen 2. Bohrspitze mit dem gleichen Spitzenwinkel und Länge nachschleifen 3. Schleifen mit geringer Hauptschneidenhöhe
Hole rough Grobes Loch	1. Improperly ground point. 2. Unenough coolant supply 3. Too much feed. 4. Fixture not rigid. 1. Bohrspitze nicht richtig geschliffen 2. Ungenügende Kühlmittelzufuhr 3. Vorschub zu hoch 4. Befestigung nicht stabil	1. Properly grind point. 2. Supply coolant enough. 3. Decrease the feed rate. 4. Tighten the fixture or replace. 1. Bohrspitze richtig schleifen 2. Genügend Kühlmittel zuführen 3. Vorschub verringern 4. Befestigung stabilisieren oder erneuern

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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

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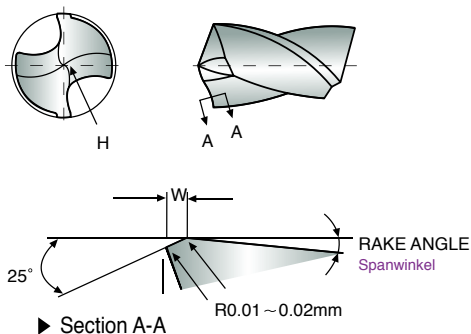
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DRILLSTECHNICAL
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16 CHARACTERISTIC OF DREAM DRILLS MERKMALE VON DREAM BOHRER

- YG-1's Dream Drill Series are suitable for high speed and accurate drilling operations by special design and high quality.
YG-1's DREAM Bohrer Serien sind durch ihre spezielle konstruktion und höchste Genauigkeit geeignet zum Hochgeschwindigkeitsbohren und für genaue Bohrvorgänge.
- Good performance for Steels, Cast Irons, Tool steels, Alloy steels and Stainless steels.
Gute Leistung bei Stählen, Grauguss, Werkzeugstählen, Stahllegierungen sowie bei Rost- und Säurebeständigen Stählen.
- Rapid chip evacuation and excellent chip breaking can be achieved by special designed cutting edges on point and chip breakers on leading edges.
Schnelle Spanabfuhr und hervorragender Spanbruch durch speziell entwickelte Schneidengeometrien und Spanbrechern.
- High accuracy and stability.
Hohe Genauigkeit und Stabilität.
- Longer tool life with TiAlN coating.
Höhere Standzeiten mit TiAlN-Beschichtungen.
- Self-centering
Selbstzentrierend

17 HONING GUIDE OF DREAM DRILLS HINWEIS ZUM HONEN VON DREAM BOHRER

Dimension of Honing Abmessung beim Honen



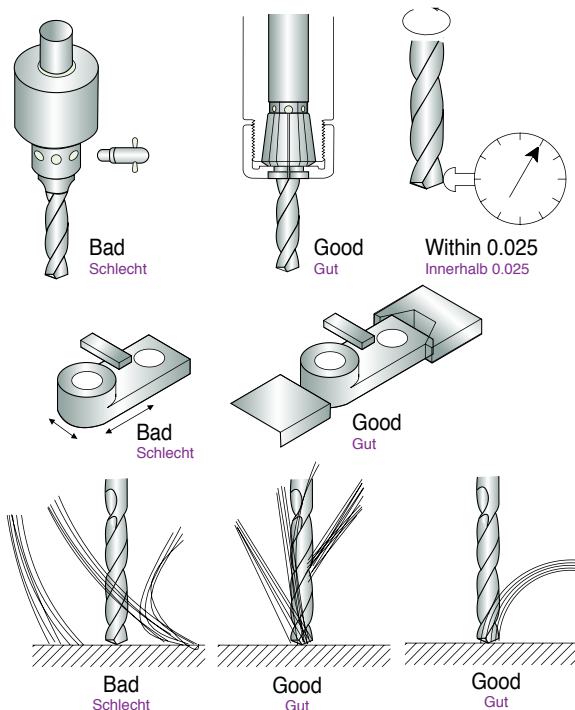
Scraper Schaben



Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15~0.2	0.1~0.15	0.03

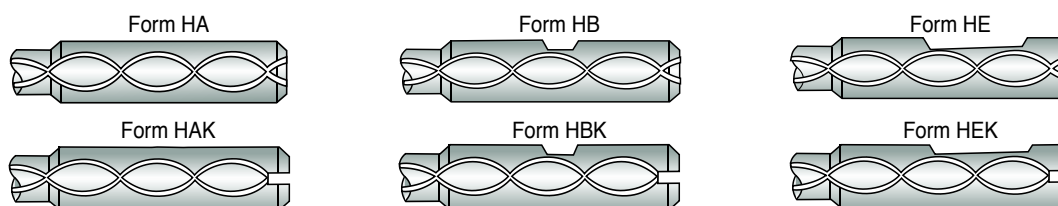
- The dimension W of stocked products is 0.1 ~ 0.15.
Das Maß w ist bei lagerhaltigen Produkten 0.1 ~ 0.15.

18 USE OF DREAM DRILLS VERWENDUNG VON DREAM BOHRER



- Chucking with spring collet correctly.
Richtiges Spannen mit Spannzangen.
- Radial run out at cutting lip must not exceed 0.025 mm.
Radialer Rundlauf und der Schneidlippe darf nicht 0.025 überschreiten.
- Tighten clamp of work piece.
Sicheres Spannen des Werkstückes
- Supply coolant enough to the entrance of hole.
Ausreichend Kühlmittelzufluss am Bohrloch.
- When using Dream Drills with Coolant holes, supply high pressure coolant.
Beim Verwenden von DREAM BOHRER mit Kühlkanal wird Hochdruckkühlung benötigt.

19 SHANK TYPE DREAM DRILLS WITH COOLANT HOLES SCHAFTAUSFÜHRUNG DREAM BOHRER MIT KÜHLKANAL



- Shank Type of stocked products is Form HA.
Schaftausführung von lagerhaltigen Produkten ist HA.
- Other shank types are available on your request.
Andere Schaftausführungen können geliefert werden.

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