



Leading Through Innovation

INSERTS & HOLDERS















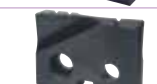
SPADE DRILLS

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
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SERIES Y,Z,0,1,2		SPADE DRILL INSERTS for CAST IRON - CARBIDE(K10) EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)	Ø9.5 (#Y)	Ø35 (#2)	306
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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
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SPADE DRILL HOLDERS

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SPADE DRILLS

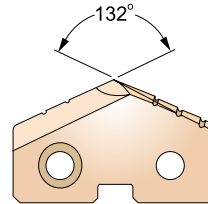
◎ : Excellent ○ : Good

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 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)
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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
		23.00	.9055	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		
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	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-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
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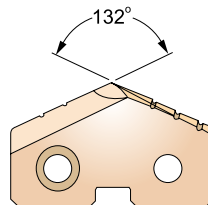
- i-ONE DRILLS
- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -CFRP
- DREAM DRILLS -MQL
- DREAM DRILLS for HIGH HARDENED STEELS
- GENERAL CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- SUPER-GP DRILLS
- STRAIGHT SHANK DRILLS
- TAPER SHANK DRILLS
- NC-SPOTTING DRILLS
- CENTER DRILLS
- SPADE DRILLS
- TECHNICAL DATA

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)		HSS (M4)		
					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
		28.58	1.1250		S1405108	S1410108	S1415108
	1-1/8	29.00	1.1417		S1455290	S1460290	S1465290
		29.37	1.1563		S1405110	S1410110	S1415110
		30.00	1.1811		S1455300	S1460300	S1465300
		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		
1-11/32	34.13	1.3438	S1405122	S1410122	S1415122		
	34.93	1.3750	S1405124	S1410124	S1415124		
1-3/8	35.00	1.3780	S1455350	S1460350	S1465350		
	35.72	1.4063	S1405126	S1410126	S1415126		
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	36.00	1.4173	6.4 (1/4)	S1455360	S1460360	S1465360
		36.51	1.4375		S1405128	S1410128	S1415128
	1-7/16	37.00	1.4567		S1455370	S1460370	S1465370
		37.31	1.4688		S1405130	S1410130	S1415130
		38.00	1.4961		S1455380	S1460380	S1465380
		38.10	1.5000		S1405132	S1410132	S1415132
	1-1/2	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)
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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
-MOL

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

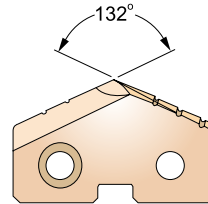
SPADE
DRILLS

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
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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)		TiN	TiCN	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
	1-27/32	46.83	1.8438		S1405154	S1410154	S1415154
		47.00	1.8504		S1455470	S1460470	S1465470
4 Ø46.99 (1.850) to Ø65.28 (2.570)	1-7/8	47.63	1.8750	7.9 (5/16)	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)
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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.
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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)		HSS (M4)		
					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
	2-5/16	58.00	2.2835		S1455580	S1460580	S1465580
		58.74	2.3125		S1405220	S1410220	S1415220
	2-11/32	59.00	2.3228		S1455590	S1460590	S1465590
		59.53	2.3438		S1405222	S1410222	S1415222
	2-3/8	60.00	2.3622		S1455600	S1460600	S1465600
		60.33	2.3750		S1405224	S1410224	S1415224
		61.00	2.4016		S1455610	S1460610	S1465610
		2-13/32	61.12		2.4063	S1405226	S1410226
	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		
2-17/32	64.29	2.5313	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	
5 Ø62.38 (2.456) to Ø76.20 (3.000)	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-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 -MOL

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

- 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

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)	2-27/32	72.00	2.8346	11.1 (7/16)	S1455720	S1460720	S1465720
	2-7/8	72.23	2.8438		S1405254	S1410254	S1415254
	2-29/32	73.03	2.8750		S1405256	S1410256	S1415256
		73.82	2.9063		S1405258	S1410258	S1415258
	2-15/16	74.00	2.9134		S1455740	S1460740	S1465740
	2-31/32	74.61	2.9375		S1405260	S1410260	S1415260
		75.41	2.9688		S1405262	S1410262	S1415262
	3	76.00	2.9921		S1455760	S1460760	S1465760
		76.20	3.0000		S1405300	S1410300	S1415300
	6 Ø76.23 (3.001) to Ø89.08 (3.507)	3-1/32	76.99		3.0313	11.1 (7/16)	S1405302
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		
3-15/32	88.11	3.4688	S1405330	S1410330	S1415330		
3-1/2	88.90	3.5000	S1405332	S1410332	S1415332		
7	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

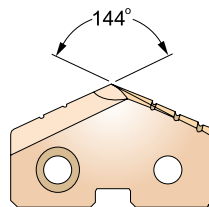
P										M	K	N			
Non- alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)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

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)		HSS (M4)		
					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
		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
			96.00		3.7795	S1455960	S1460960
	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
			100.00		3.9370	S1455A00	S1460A00
3-15/16	100.01	3.9375	S1405360	S1410360	S1415360		
3-31/32	100.81	3.9688	S1405362	S1410362	S1415362		
4	101.60	4.0000	S1405400	S1410400	S1415400		
8 Ø101.63 (4.001) to Ø114.48 (4.507)	4-1/64	102.00	4.0157	11.1 (7/16)	S1455A20	S1460A20	S1465A20
		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
			108.00		4.2520	S1455A80	S1460A80
	4-5/16	109.54	4.3125		S1405420	S1410420	S1415420
			110.00		4.3307	S1455B00	S1460B00
	4-3/8	111.13	4.3750		S1405424	S1410424	S1415424
			112.00		4.4094	S1455B20	S1460B20
	4-7/16	112.71	4.4375		S1405428	S1410428	S1415428
			114.00		4.4882	S1455B40	S1460B40
	4-1/2	114.30	4.5000		S1405432	S1410432	S1415432

◎ : 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 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

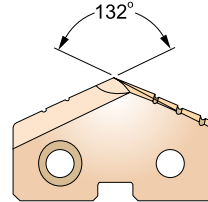
SPADE DRILLS

TECHNICAL DATA

SPADE DRILL INSERTS - 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)	3/8	9.50	.3740	2.4 (3/32)	S1155095	S1160095	S1165095
		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
		10.32	.4063		S1105026	S1110026	S1115026
		10.50	.4134		S1155105	S1160105	S1165105
		10.72	.4219		S1105027	S1110027	S1115027
		10.80	.4252		S1155108	S1160108	S1165108
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.00	.4331	2.4 (3/32)	S1155110	S1160110	S1165110
		11.11	.4375		S1105028	S1110028	S1115028
		11.50	.4528		S1155115	S1160115	S1165115
	29/64	11.51	.4531		S1105029	S1110029	S1115029
		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		S1155130	S1160130	S1165130
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.10	.5156	3.2 (1/8)	S1105033	S1110033	S1115033
		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
15.48		.6094	S1105039	S1110039	S1115039		
5/8	15.50	.6102	S1155155	S1160155	S1165155		
	15.88	.6250	S1105040	S1110040	S1115040		
	16.00	.6299	S1155160	S1160160	S1165160		

◎ : Excellent ○ : Good

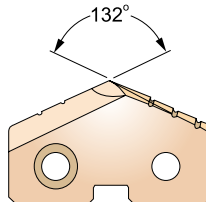
Non- alloyed Steels, Free Machining Steels	P										M	K	N			
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~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

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
		17.50	.6890		S1155175	S1160175	S1165175
	45/64	17.86	.7031		S1105045	S1110045	S1115045
		18.00	.7087		S1155180	S1160180	S1165180
		18.26	.7188		S1105046	S1110046	S1115046
1 Ø17.53 (.690) to Ø24.38 (.960)		18.50	.7283	4.0 (5/32)	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

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 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 - SUPER HSS T15

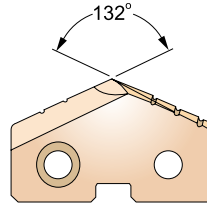
EINWEG BOHREINSATZ - SUPER HSS T15

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		
	32.00	1.2598	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		
3 Ø34.37(1.353) to Ø47.80(1.882)	1-13/32	35.72	1.4063	6.4 (1/4)	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-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

SPADE DRILL INSERTS - SUPER HSS T15

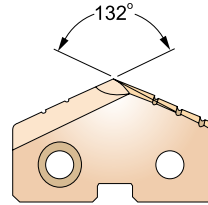
Einweg Bohreinsatz - Super HSS T15

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
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		
1-13/16	46.04	1.8125	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		
4 Ø46.99 (1.850) to Ø65.28 (2.570)		48.00	1.8898	7.9 (5/16)	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

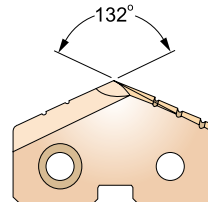
© : Excellent ○ : Good

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)
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

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
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)
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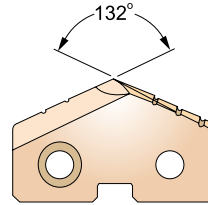
- i-ONE DRILLS
- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -CFRP
- DREAM DRILLS -MQL
- DREAM DRILLS for HIGH HARDENED STEELS
- GENERAL CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- SUPER-GP DRILLS
- STRAIGHT SHANK DRILLS
- TAPER SHANK DRILLS
- NC-SPOTTING DRILLS
- CENTER DRILLS
- SPADE DRILLS
- TECHNICAL DATA

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
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
	25/64	9.80	.3860		S1555098	S1560098	S1565098
		9.92	.3906		S1505025	S1510025	S1515025
	13/32	10.00	.3937		S1555100	S1560100	S1565100
		10.20	.4016		S1555102	S1560102	S1565102
	27/64	10.32	.4063		S1505026	S1510026	S1515026
		10.50	.4134		S1555105	S1560105	S1565105
	11.00	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
	31/64	12.00	.4724		S1555120	S1560120	S1565120
		12.30	.4844		S1505030	S1510030	S1515030
	1/2	12.50	.4921		S1555125	S1560125	S1565125
12.70	.5000	S1505032	S1510032	S1515032			
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00	.5118	3.2 (1/8)	S1555130	S1560130	S1565130
		13.10	.5156		S1505033	S1510033	S1515033
	17/32	13.49	.5313		S1555135	S1560135	S1565135
		13.50	.5315		S1505034	S1510034	S1515034
	35/64	13.89	.5469		S1555140	S1560140	S1565140
		14.00	.5512		S1505035	S1510035	S1515035
	9/16	14.29	.5625		S1555145	S1560145	S1565145
		14.50	.5709		S1505036	S1510036	S1515036
	37/64	14.68	.5781		S1555150	S1560150	S1565150
		15.00	.5906		S1505037	S1510037	S1515037
	19/32	15.08	.5938		S1555155	S1560155	S1565155
		15.48	.6094		S1505038	S1510038	S1515038
	39/64	15.50	.6102		S1555160	S1560160	S1565160
		15.88	.6250		S1505039	S1510039	S1515039
5/8	16.00	.6299	S1555160	S1560160	S1565160		

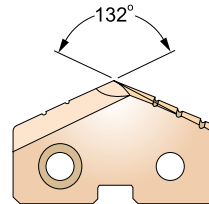
◎ : Excellent ○ : Good

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
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

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
		17.50	.6890		S1555175	S1560175	S1565175
	45/64	17.86	.7031		S1505045	S1510045	S1515045
		18.00	.7087		S1555180	S1560180	S1565180
		23/32	18.26		.7188	S1505046	S1510046
1 Ø17.53 (.690) to Ø24.38 (.960)		18.50	.7283	4.0 (5/32)	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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

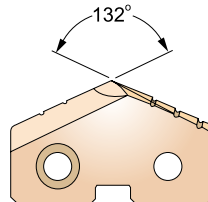
- 1-ONE DRILLS
- I-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -CFRP
- DREAM DRILLS -MQL
- DREAM DRILLS for HIGH HARDENED STEELS
- GENERAL CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- 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
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

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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

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

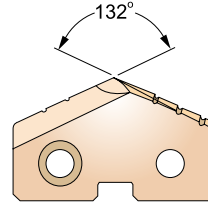
TECHNICAL
DATA

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)	3/8	9.50	.3740	2.4 (3/32)	S1655095	S1660095	S1665095		
		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		
		10.32	.4063		S1605026	S1610026	S1615026		
		10.50	.4134		S1655105	S1660105	S1665105		
		10.72	.4219		S1605027	S1610027	S1615027		
		10.80	.4252		S1655108	S1660108	S1665108		
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.00	.4331	2.4 (3/32)	S1655110	S1660110	S1665110		
		11.11	.4375		S1605028	S1610028	S1615028		
		11.50	.4528		S1655115	S1660115	S1665115		
	29/64	11.51	.4531		S1605029	S1610029	S1615029		
		11.91	.4688		S1605030	S1610030	S1615030		
		12.00	.4724		S1655120	S1660120	S1665120		
	15/32	12.30	.4844		S1605031	S1610031	S1615031		
		12.50	.4921		S1655125	S1660125	S1665125		
	0 Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70		.5000	3.2 (1/8)	S1605032	S1610032	S1615032
			13.00		.5118		S1655130	S1660130	S1665130
33/64		13.10	.5156	S1605033	S1610033		S1615033		
		13.49	.5313	S1605034	S1610034		S1615034		
35/64		13.50	.5315	S1655135	S1660135		S1665135		
		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				
	15.08	.5938	S1605038	S1610038	S1615038				
19/32	15.08	.5938	S1605039	S1610039	S1615039				
	15.48	.6094	S1655155	S1660155	S1665155				
	15.50	.6102	S1605040	S1610040	S1615040				
5/8	15.88	.6250	S1655160	S1660160	S1665160				
	16.00	.6299							

◎ : Excellent ○ : Good

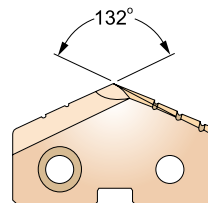
P										M	K	N			
Non-alloy Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)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

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. CARBIDE (K10)		
	Inch (inch)	Metric (mm)	Decimal (inch)		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
	45/64	17.86	.7031		S1605045	S1610045	S1615045
		18.00	.7087		S1655180	S1660180	S1665180
		18.26	.7188		S1605046	S1610046	S1615046
1 Ø17.53 (.690) to Ø24.38 (.960)		18.50	.7283	4.0 (5/32)	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		

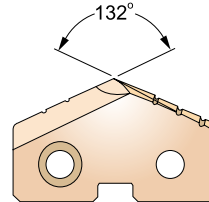
◎ : Excellent ○ : Good

P										M	K	N			
Non-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
											◎	◎			

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. CARBIDE (K10)		
	Inch (inch)	Metric (mm)	Decimal (inch)		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-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
											◎	◎			

SPADE DRILL INSERTS - CARBIDE (K20)

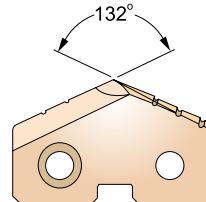
🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

🇫🇷 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. CARBIDE (K20)		
	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)	S1755095	S1760095	S1765095
		9.53	.3750		S1705024	S1710024	S1715024
	25/64	9.80	.3860		S1755098	S1760098	S1765098
		9.92	.3906		S1755025	S1710025	S1715025
	13/32	10.00	.3937		S1755100	S1760100	S1765100
		10.20	.4016		S1755102	S1760102	S1765102
		10.32	.4063		S1705026	S1710026	S1715026
		10.50	.4134		S1755105	S1760105	S1765105
		10.72	.4219		S1705027	S1710027	S1715027
		10.80	.4252		S1755108	S1760108	S1765108
11.00		.4331	S1755110	S1760110	S1765110		
7/16		11.11	.4375	S1705028	S1710028	S1715028	
Z Ø11.11(.437) to Ø12.95(.510)	29/64	11.50	.4528	2.4 (3/32)	S1755115	S1760115	S1765115
		11.51	.4531		S1705029	S1710029	S1715029
	15/32	11.91	.4688		S1705030	S1710030	S1715030
	31/64	12.00	.4724		S1755120	S1760120	S1765120
		12.30	.4844		S1705031	S1710031	S1715031
	12.50	.4921	S1755125		S1760125	S1765125	
1/2	12.70	.5000	S1705032	S1710032	S1715032		
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00	.5118	3.2 (1/8)	S1755130	S1760130	S1765130
		13.10	.5156		S1705033	S1710033	S1715033
	17/32	13.49	.5313		S1705034	S1710034	S1715034
	35/64	13.50	.5315		S1755135	S1760135	S1765135
		13.89	.5469		S1705035	S1710035	S1715035
	9/16	14.00	.5512		S1755140	S1760140	S1765140
		14.29	.5625		S1705036	S1710036	S1715036
	37/64	14.50	.5709		S1755145	S1760145	S1765145
		14.68	.5781		S1705037	S1710037	S1715037
	19/32	15.00	.5906		S1755150	S1760150	S1765150
		15.08	.5938		S1705038	S1710038	S1715038
	39/64	15.48	.6094		S1705039	S1710039	S1715039
		15.50	.6102		S1755155	S1760155	S1765155
	5/8	15.88	.6250		S1705040	S1710040	S1715040
16.00		.6299	S1755160	S1760160	S1765160		

◎ : 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
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎



SPADE DRILL INSERTS - CARBIDE (K20)

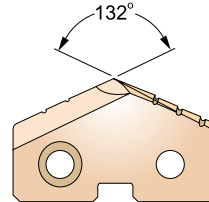
Einweg Bohreinsatz - Vollhartmetall (K20)

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. CARBIDE (K20)				
	Inch (inch)	Metric (mm)	Decimal (inch)		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		
		17.46	.6875		S1705044	S1710044	S1715044		
	11/16	17.50	.6890		S1755175	S1760175	S1765175		
		17.86	.7031		S1705045	S1710045	S1715045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	18.00	18.00		.7087	4.0 (5/32)	S1755180	S1760180	S1765180
			18.26		.7188		S1705046	S1710046	S1715046
23/32		18.50	.7283	S1755185	S1760185		S1765185		
		18.65	.7344	S1705047	S1710047		S1715047		
47/64		19.00	.7480	S1755190	S1760190		S1765190		
		19.05	.7500	S1705048	S1710048		S1715048		
3/4		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		
Ø17.53 (.690) to Ø24.38 (.960)	51/64	20.24	.7969	4.0 (5/32)	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		
		21.83	.8594		S1705055	S1710055	S1715055		
	55/64	22.00	.8661		S1755220	S1760220	S1765220		
		22.23	.8750		S1705056	S1710056	S1715056		
	7/8	22.62	.8906		S1705057	S1710057	S1715057		
		23.00	.9055		S1755230	S1760230	S1765230		
Ø17.53 (.690) to Ø24.38 (.960)	29/32	23.02	.9063	4.0 (5/32)	S1705058	S1710058	S1715058		
		23.42	.9219		S1705059	S1710059	S1715059		
	59/64	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)
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SPADE DRILL INSERTS - CARBIDE (K20)

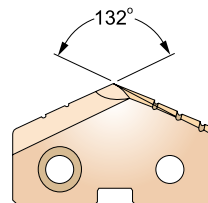
🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

🇫🇷 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

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)
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SPADE DRILL INSERTS - CARBIDE (K20)

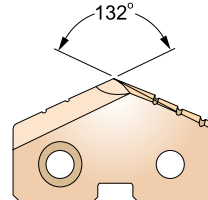
EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

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
		42.86	1.6875		S1705144	S1710144	S1715144
	1-11/16	43.00	1.6929		S1755430	S1760430	S1765430
		43.66	1.7188		S1705146	S1710146	S1715146
	1-3/4	44.00	1.7323		S1755440	S1760440	S1765440
44.45		1.7500	S1705148	S1710148	S1715148		
1-25/32	45.00	1.7717	S1755450	S1760450	S1765450		
	45.24	1.7813	S1705150	S1710150	S1715150		
1-13/16	46.00	1.8110	S1755460	S1760460	S1765460		
	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)
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SPADE DRILL INSERTS - CARBIDE (P40)

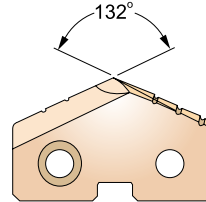
🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

🇫🇷 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)	3/8	9.50	.3740	2.4 (3/32)	S1855095	S1860095	S1865095	
		9.53	.3750		S1805024	S1810024	S1815024	
	25/64	9.80	.3860		S1855098	S1860098	S1865098	
		9.92	.3906		S1805025	S1810025	S1815025	
	13/32	10.00	.3937		S1855100	S1860100	S1865100	
		10.20	.4016		S1855102	S1860102	S1865102	
		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	
11.00		.4331	S1855110	S1860110	S1865110			
7/16		11.11	.4375	S1805028	S1810028	S1815028		
Z Ø11.11(.437) to Ø12.95(.510)	29/64	11.50	.4528	2.4 (3/32)	S1855115	S1860115	S1865115	
		11.51	.4531		S1805029	S1810029	S1815029	
	15/32	11.91	.4688		S1805030	S1810030	S1815030	
	31/64	12.00	.4724		S1855120	S1860120	S1865120	
		12.30	.4844		S1805031	S1810031	S1815031	
	1/2	12.50	.4921		S1855125	S1860125	S1865125	
		12.70	.5000		S1805032	S1810032	S1815032	
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00	.5118	3.2 (1/8)	S1855130	S1860130	S1865130	
		13.10	.5156		S1805033	S1810033	S1815033	
	17/32	13.49	.5313		S1805034	S1810034	S1815034	
	35/64	13.50	.5315		S1855135	S1860135	S1865135	
		13.89	.5469		S1805035	S1810035	S1815035	
	9/16	14.00	.5512		S1855140	S1860140	S1865140	
		14.29	.5625		S1805036	S1810036	S1815036	
	37/64	14.50	.5709		S1855145	S1860145	S1865145	
		14.68	.5781		S1805037	S1810037	S1815037	
	19/32	15.00	.5906		S1855150	S1860150	S1865150	
		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

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 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)

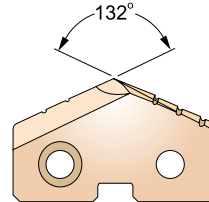
🇩🇪 **EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)**

🇫🇷 **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. CARBIDE (P40)		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
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
		17.50	.6890		S1855175	S1860175	S1865175
	45/64	17.86	.7031		S1805045	S1810045	S1815045
		18.00	.7087		S1855180	S1860180	S1865180
		23/32	18.26		.7188	S1805046	S1810046
1 Ø17.53 (.690) to Ø24.38 (.960)		18.50	.7283	4.0 (5/32)	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

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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

SPADE DRILL INSERTS - CARBIDE (P40)

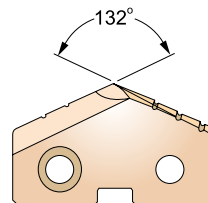
🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

🇫🇷 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
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

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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

SPADE DRILL INSERTS - CARBIDE (P40)

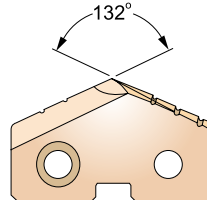
🇩🇪 **EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)**

🇫🇷 **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. CARBIDE (P40)		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-13/32	35.72	1.4063	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
		42.86	1.6875		S1805144	S1810144	S1815144
	1-11/16	43.00	1.6929		S1855430	S1860430	S1865430
		43.66	1.7188		S1805146	S1810146	S1815146
	1-3/4	44.00	1.7323		S1855440	S1860440	S1865440
44.45		1.7500	S1805148	S1810148	S1815148		
1-25/32	45.00	1.7717	S1855450	S1860450	S1865450		
	45.24	1.7813	S1805150	S1810150	S1815150		
1-13/16	46.00	1.8110	S1855460	S1860460	S1865460		
	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

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 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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

- 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



Special features of SM-Point Spade Drill

This new "Hybrid Point" combines the strength of the standard point with additional "Web Thinning".

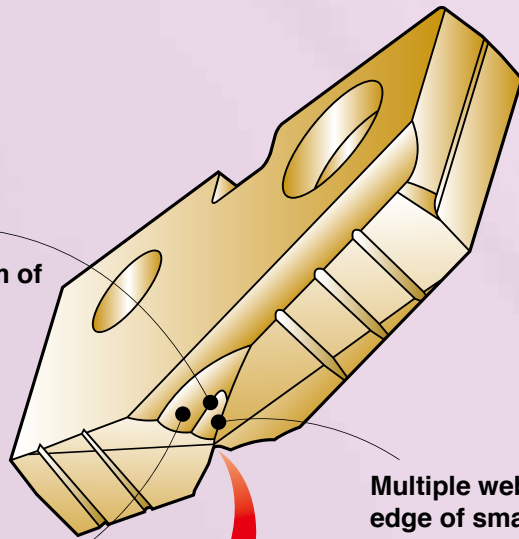
This new point increases stability, reduces thrust, improves centering and allows increased speeds and feeds.

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

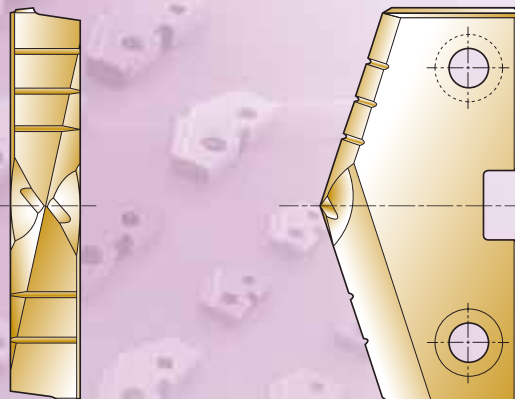
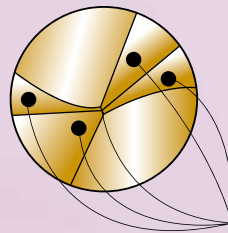


Multiple web thinning with the cutting edge of small web thinning.

- ▶ Good self-centering
- ▶ Less tool lead off
- ▶ Reduction in bell mousing, thrust
- ▶ Increased stability

Four-facet point

- ▶ Self-centering
- ▶ Less thrust force

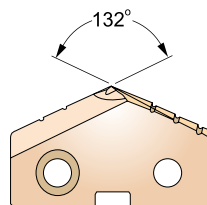


SM-POINT SPADE DRILL INSERTS - HSS M4

- 🇩🇪 **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 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. HSS (M4)		
	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)	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
		19.45	.7656		SM405049	SM410049	SM415049
	25/32	19.50	.7677		SM455195	SM460195	SM465195
		20.00	.7874		SM405050	SM410050	SM415050
	51/64	20.24	.7969		SM455200	SM460200	SM465200
		20.50	.8071		SM405051	SM410051	SM415051
	13/16	20.64	.8125		SM455205	SM460205	SM465205
		21.00	.8268		SM405052	SM410052	SM415052
	27/32	21.43	.8438		SM455210	SM460210	SM465210
		55/64	21.83		.8594	SM405054	SM410054
	7/8	22.00	.8661		SM455220	SM460220	SM465220
		22.23	.8750		SM405056	SM410056	SM415056
	57/64	22.62	.8906		SM455230	SM460230	SM465230
		23.00	.9055		SM405057	SM410057	SM415057
29/32	23.02	.9062	SM455240	SM460240	SM465240		
	59/64	23.42	.9219	SM405058	SM410058	SM415058	
15/16	23.81	.9375	SM455240	SM460240	SM465240		
	24.00	.9449					

◎ : Excellent ○ : Good

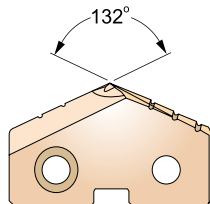
P										M	K		N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys	
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~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

SM-POINT SPADE DRILL INSERTS - 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

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)
○	○	○	○		○		○	○			◎	◎	○	◎	◎

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

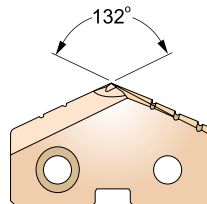


SM-POINT SPADE DRILL INSERTS - HSS M4

- 🇩🇪 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. HSS (M4)		
	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
		40.48	1.5938		SM405138	SM410138	SM415138
	1-19/32	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

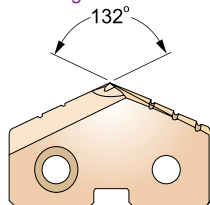
P										M	K			N	
Non- alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)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

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 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
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
		10.80	.4252		SM155108	SM160108	SM165108
	11.00	.4331	SM155110	SM160110	SM165110		
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	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
	31/64	12.30	.4844		SM155120	SM160120	SM165120
		12.50	.4921		SM105031	SM110031	SM115031
	1/2	12.70	.5000		SM155125	SM160125	SM165125
		12.70	.5000		SM105032	SM110032	SM115032
0 Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)	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-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 - SUPER HSS T15

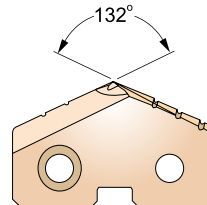
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

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 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		
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		
		17.46	.6875		SM105044	SM110044	SM115044		
	11/16	17.50	.6890		SM155175	SM160175	SM165175		
		17.86	.7031		SM105045	SM110045	SM115045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	23/32	18.00		.7087	4.0 (5/32)	SM155180	SM160180	SM165180
			18.26		.7188		SM105046	SM110046	SM115046
47/64		18.50	.7283	SM155185	SM160185		SM165185		
		18.65	.7344	SM105047	SM110047		SM115047		
3/4		19.00	.7480	SM155190	SM160190		SM165190		
		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				
	21.83	.8594	SM105055	SM110055	SM115055				
55/64	22.00	.8661	SM155220	SM160220	SM165220				
	22.23	.8750	SM105056	SM110056	SM115056				
7/8	22.23	.8750	SM105057	SM110057	SM115057				
	22.62	.8906	SM155230	SM160230	SM165230				
57/64	23.00	.9055	SM105058	SM110058	SM115058				
	23.02	.9062	SM105059	SM110059	SM115059				
29/32	23.42	.9219	SM105060	SM110060	SM115060				
	23.81	.9375	SM155240	SM160240	SM165240				
15/16	23.81	.9375							
	24.00	.9449							

◎ : 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 - SUPER HSS T15

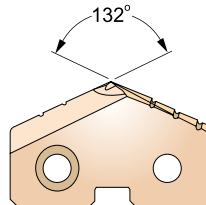
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

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 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
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

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)
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
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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

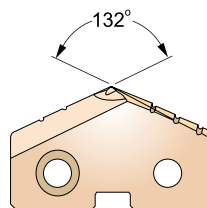
SM-POINT EINWEG BOHREINSATZ - SUPER HSS T15

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
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
		42.86	1.6875		SM105144	SM110144	SM115144
	1-11/16	43.00	1.6929		SM155430	SM160430	SM165430
		43.66	1.7188		SM105146	SM110146	SM115146
	1-3/4	44.00	1.7323		SM155440	SM160440	SM165440
44.45		1.7500	SM105148	SM110148	SM115148		
1-25/32	45.00	1.7717	SM155450	SM160450	SM165450		
	45.24	1.7812	SM105150	SM110150	SM115150		
1-13/16	46.00	1.8110	SM155460	SM160460	SM165460		
	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

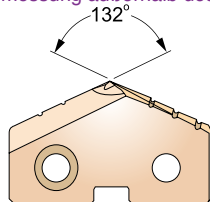
P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)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

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
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	SM555095	SM560095	SM565095
		9.53	.3750		SM505024	SM510024	SM515024
	25/64	9.80	.3858		SM555098	SM560098	SM565098
		9.92	.3906		SM505025	SM510025	SM515025
	13/32	10.00	.3937		SM555100	SM560100	SM565100
		10.20	.4016		SM555102	SM560102	SM565102
	27/64	10.32	.4062		SM505026	SM510026	SM515026
		10.50	.4134		SM555105	SM560105	SM565105
	10.72	.4219	SM505027		SM510027	SM515027	
		10.80	.4252		SM555108	SM560108	SM565108
11.00	.4331	SM555110	SM560110	SM565110			
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	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
	31/64	12.00	.4724		SM555120	SM560120	SM565120
		12.30	.4844		SM505031	SM510031	SM515031
	1/2	12.50	.4921		SM555125	SM560125	SM565125
12.70	.5000	SM505032	SM510032	SM515032			
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00	.5118	3.2 (1/8)	SM555130	SM560130	SM565130
		13.10	.5156		SM505033	SM510033	SM515033
	17/32	13.49	.5312		SM505034	SM510034	SM515034
	35/64	13.50	.5315		SM555135	SM560135	SM565135
		13.89	.5469		SM505035	SM510035	SM515035
	9/16	14.00	.5512		SM555140	SM560140	SM565140
		14.29	.5625		SM505036	SM510036	SM515036
	37/64	14.50	.5709		SM555145	SM560145	SM565145
		14.68	.5781		SM505037	SM510037	SM515037
	15.00	.5906	SM555150		SM560150	SM565150	
		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

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
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

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 - PREMIUM HSS M48

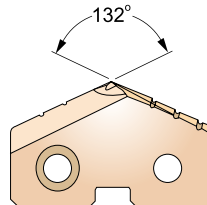
SM-POINT EINWEG BOHREINSATZ - PREMIUM HSS M48

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 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)		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		
		17.46	.6875		SM505044	SM510044	SM515044		
	11/16	17.50	.6890		SM555175	SM560175	SM565175		
		17.86	.7031		SM505045	SM510045	SM515045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	23/32	18.00		.7087	4.0 (5/32)	SM555180	SM560180	SM565180
			18.26		.7188		SM505046	SM510046	SM515046
47/64		18.50	.7283	SM555185	SM560185		SM565185		
		18.65	.7344	SM505047	SM510047		SM515047		
3/4		19.00	.7480	SM555190	SM560190		SM565190		
		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				
	21.83	.8594	SM505055	SM510055	SM515055				
55/64	22.00	.8661	SM555220	SM560220	SM565220				
	22.23	.8750	SM505056	SM510056	SM515056				
7/8	22.23	.8750	SM505057	SM510057	SM515057				
	22.62	.8906	SM555230	SM560230	SM565230				
57/64	23.00	.9055	SM505058	SM510058	SM515058				
	23.02	.9062	SM505059	SM510059	SM515059				
29/32	23.42	.9219	SM505060	SM510060	SM515060				
	23.81	.9375	SM555240	SM560240	SM565240				
15/16	23.81	.9375							
	24.00	.9449							

◎ : 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
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

SM-POINT SPADE DRILL INSERTS - PREMIUM HSS M48

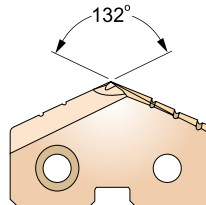
SM-POINT EINWEG BOHREINSATZ - PREMIUM HSS M48

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

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
	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

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)

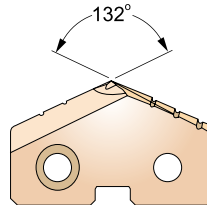
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

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. CARBIDE (K10)				
	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)	SM655095	SM660095	SM665095		
		9.53	.3750		SM605024	SM610024	SM615024		
	25/64	9.80	.3858		SM655098	SM660098	SM665098		
		9.92	.3906		SM605025	SM610025	SM615025		
	13/32	10.00	.3937		SM655100	SM660100	SM665100		
		10.20	.4016		SM655102	SM660102	SM665102		
	27/64	10.32	.4062		SM605026	SM610026	SM615026		
		10.50	.4134		SM655105	SM660105	SM665105		
	11.00	10.72	.4219		SM605027	SM610027	SM615027		
		10.80	.4252		SM655108	SM660108	SM665108		
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	SM655110	SM660110	SM665110		
		11.50	.4528		SM605028	SM610028	SM615028		
	29/64	11.51	.4531		SM655115	SM660115	SM665115		
		11.91	.4688		SM605029	SM610029	SM615029		
	31/64	12.00	.4724		SM605030	SM610030	SM615030		
		12.30	.4844		SM655120	SM660120	SM665120		
	1/2	12.50	.4921		SM605031	SM610031	SM615031		
		12.70	.5000		SM655125	SM660125	SM665125		
	0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00		.5118	3.2 (1/8)	SM605032	SM610032	SM615032
			13.10		.5156		SM655130	SM660130	SM665130
17/32		13.49	.5312	SM605033	SM610033		SM615033		
		13.50	.5315	SM605034	SM610034		SM615034		
35/64		13.89	.5469	SM655135	SM660135		SM665135		
		14.00	.5512	SM605035	SM610035		SM615035		
9/16		14.29	.5625	SM655140	SM660140		SM665140		
		14.50	.5709	SM605036	SM610036		SM615036		
37/64		14.68	.5781	SM655145	SM660145		SM665145		
		15.00	.5906	SM605037	SM610037		SM615037		
19/32	15.08	.5938	SM655150	SM660150	SM665150				
	15.48	.6094	SM605038	SM610038	SM615038				
5/8	15.50	.6102	SM655155	SM660155	SM665155				
	15.88	.6250	SM605039	SM610039	SM615039				
16.00	15.50	.6102	SM655155	SM660155	SM665155				
	16.00	.6299	SM605040	SM610040	SM615040				
				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)

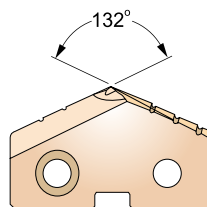
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K10)

Plaquettes SPADE DRILL, pointe SM pour la fonte - 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 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 (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
	45/64	17.86	.7031		SM605045	SM610045	SM615045
		18.00	.7087		SM655180	SM660180	SM665180
		18.26	.7188		SM605046	SM610046	SM615046
1 Ø17.53 (.690) to Ø24.38 (.960)		18.50	.7283	4.0 (5/32)	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

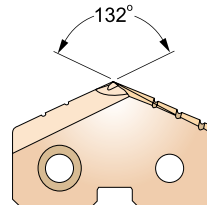
Non- alloyed Steels, Free Machining Steels	P										M	K	N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRC24 (~HB250)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC28 (~HB275)	HRC28~ (HB275~)	~HRC37 (~HB350)	HRC37~ (HB350~)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

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 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. CARBIDE (K10)		
	Inch (inch)	Metric (mm)	Decimal (inch)		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)
											◎	◎			

SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

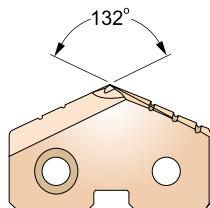
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

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		
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	SM755095	SM760095	SM765095		
		9.53	.3750		SM705024	SM710024	SM715024		
	25/64	9.80	.3858		SM755098	SM760098	SM765098		
		9.92	.3906		SM705025	SM710025	SM715025		
	13/32	10.00	.3937		SM755100	SM760100	SM765100		
		10.20	.4016		SM755102	SM760102	SM765102		
	27/64	10.32	.4062		SM705026	SM710026	SM715026		
		10.50	.4134		SM755105	SM760105	SM765105		
	11.00	10.72	.4219		SM705027	SM710027	SM715027		
		10.80	.4252		SM755108	SM760108	SM765108		
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	SM755110	SM760110	SM765110		
		11.50	.4528		SM705028	SM710028	SM715028		
	29/64	11.51	.4531		SM755115	SM760115	SM765115		
		11.91	.4688		SM705029	SM710029	SM715029		
	31/64	12.00	.4724		SM705030	SM710030	SM715030		
		12.30	.4844		SM755120	SM760120	SM765120		
	1/2	12.50	.4921		SM705031	SM710031	SM715031		
		12.70	.5000		SM755125	SM760125	SM765125		
	0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00		.5118	3.2 (1/8)	SM705032	SM710032	SM715032
			13.10		.5156		SM755130	SM760130	SM765130
17/32		13.49	.5312	SM705033	SM710033		SM715033		
		13.50	.5315	SM705034	SM710034		SM715034		
35/64		13.89	.5469	SM755135	SM760135		SM765135		
		14.00	.5512	SM705035	SM710035		SM715035		
9/16		14.29	.5625	SM755140	SM760140		SM765140		
		14.50	.5709	SM705036	SM710036		SM715036		
37/64		14.68	.5781	SM755145	SM760145		SM765145		
		15.00	.5906	SM705037	SM710037		SM715037		
19/32	15.08	.5938	SM755150	SM760150	SM765150				
	15.48	.6094	SM705038	SM710038	SM715038				
39/64	15.50	.6102	SM755155	SM760155	SM765155				
	15.88	.6250	SM705039	SM710039	SM715039				
5/8	16.00	.6299	SM755160	SM760160	SM765160				

◎ : 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 (K20)

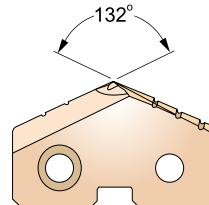
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

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.
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- ▶ 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. CARBIDE (K20)				
	Inch (inch)	Metric (mm)	Decimal (inch)		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		
		17.46	.6875		SM705044	SM710044	SM715044		
	11/16	17.50	.6890		SM755175	SM760175	SM765175		
		17.86	.7031		SM705045	SM710045	SM715045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	23/32	18.00		.7087	4.0 (5/32)	SM755180	SM760180	SM765180
			18.26		.7188		SM705046	SM710046	SM715046
47/64		18.50	.7283	SM755185	SM760185		SM765185		
		18.65	.7344	SM705047	SM710047		SM715047		
3/4		19.00	.7480	SM755190	SM760190		SM765190		
		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				
	21.83	.8594	SM705055	SM710055	SM715055				
55/64	22.00	.8661	SM755220	SM760220	SM765220				
	22.23	.8750	SM705056	SM710056	SM715056				
7/8	22.62	.8906	SM705057	SM710057	SM715057				
	23.00	.9055	SM755230	SM760230	SM765230				
29/32	23.02	.9062	SM705058	SM710058	SM715058				
	23.42	.9219	SM705059	SM710059	SM715059				
59/64	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)
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

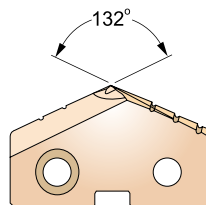
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

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.
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- ▶ 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

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
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SM-POINT SPADE DRILL INSERTS - CARBIDE (K20)

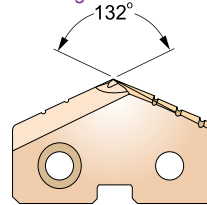
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (K20)

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)		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
		42.86	1.6875		SM705144	SM710144	SM715144
	1-11/16	43.00	1.6929		SM755430	SM760430	SM765430
		43.66	1.7188		SM705146	SM710146	SM715146
	1-23/32	44.00	1.7323		SM755440	SM760440	SM765440
44.45		1.7500	SM705148	SM710148	SM715148		
1-3/4	45.00	1.7717	SM755450	SM760450	SM765450		
	45.24	1.7812	SM705150	SM710150	SM715150		
1-25/32	46.00	1.8110	SM755460	SM760460	SM765460		
	46.04	1.8125	SM705152	SM710152	SM715152		
1-13/16	46.83	1.8438	SM705154	SM710154	SM715154		
	47.00	1.8504	SM755470	SM760470	SM765470		
1-27/32	47.00	1.8504	SM705156	SM710156	SM715156		
	47.63	1.8750					

◎ : 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)
○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎

SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

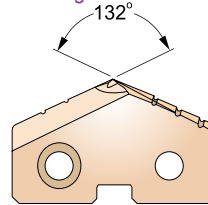
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

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
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	SM855095	SM860095	SM865095
		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
	13/32	10.20	.4016		SM855102	SM860102	SM865102
		10.32	.4062		SM805026	SM810026	SM815026
	27/64	10.50	.4134		SM855105	SM860105	SM865105
		10.72	.4219		SM805027	SM810027	SM815027
		10.80	.4252		SM855108	SM860108	SM865108
	11.00	.4331	SM855110	SM860110	SM865110		
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	SM805028	SM810028	SM815028
		11.50	.4528		SM855115	SM860115	SM865115
	29/64	11.51	.4531		SM805029	SM810029	SM815029
		11.91	.4688		SM805030	SM810030	SM815030
	31/64	12.00	.4724		SM855120	SM860120	SM865120
		12.30	.4844		SM805031	SM810031	SM815031
	1/2	12.50	.4921		SM855125	SM860125	SM865125
	12.70	.5000	SM805032	SM810032	SM815032		
0 Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)	SM855130	SM860130	SM865130
	33/64	13.10	.5156		SM805033	SM810033	SM815033
		17/32	13.49		.5312	SM805034	SM810034
		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
		15.50	.6102		SM855155	SM860155	SM865155
	5/8	15.88	.6250		SM805040	SM810040	SM815040
		16.00	.6299		SM855160	SM860160	SM865160

◎ : 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
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○



SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

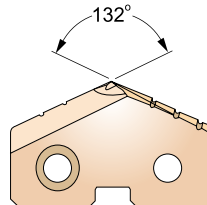
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

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 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. CARBIDE (P40)				
	Inch (inch)	Metric (mm)	Decimal (inch)		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		
		17.46	.6875		SM805044	SM810044	SM815044		
	11/16	17.50	.6890		SM855175	SM860175	SM865175		
		17.86	.7031		SM805045	SM810045	SM815045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	18.00		.7087	4.0 (5/32)	SM855180	SM860180	SM865180
			18.26		.7188		SM805046	SM810046	SM815046
23/32		18.50	.7283	SM855185	SM860185		SM865185		
		18.65	.7344	SM805047	SM810047		SM815047		
47/64		19.00	.7480	SM855190	SM860190		SM865190		
		19.05	.7500	SM805048	SM810048		SM815048		
3/4		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				
	21.83	.8594	SM805055	SM810055	SM815055				
55/64	22.00	.8661	SM855220	SM860220	SM865220				
	22.23	.8750	SM805056	SM810056	SM815056				
7/8	22.62	.8906	SM805057	SM810057	SM815057				
	23.00	.9055	SM855230	SM860230	SM865230				
29/32	23.02	.9062	SM805058	SM810058	SM815058				
	23.42	.9219	SM805059	SM810059	SM815059				
59/64	23.81	.9375	SM805060	SM810060	SM815060				
	24.00	.9449	SM855240	SM860240	SM865240				

◎ : 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
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

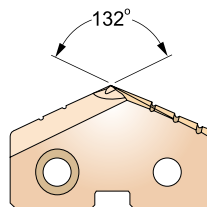
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

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
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

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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

SM-POINT SPADE DRILL INSERTS - CARBIDE (P40)

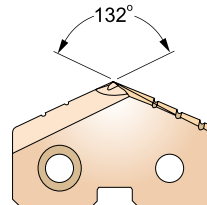
SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL (P40)

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. CARBIDE (P40)		
	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)	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
		40.48	1.5938		SM805138	SM810138	SM815138
	1-19/32	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

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 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)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○

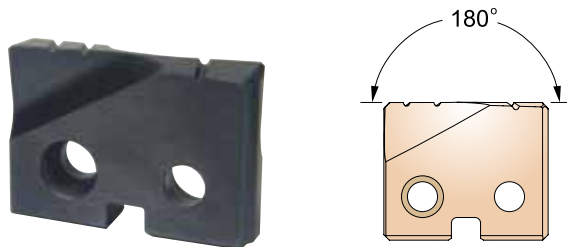
SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM

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	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	S2155095	S2170095	S2165095
		9.53	.3750		S2105024	S2120024	S2115024
	25/64	9.80	.3858		S2155098	S2170098	S2165098
		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
		11.00	.4331	S2155110	S2170110	S2165110	
Z Ø11.11(.437) to Ø12.95(.510)	7/16	11.11	.4375	2.4 (3/32)	S2105028	S2120028	S2115028
		11.50	.4528		S2155115	S2170115	S2165115
	29/64	11.51	.4531		S2105029	S2120029	S2115029
		11.91	.4688		S2105030	S2120030	S2115030
	31/64	12.00	.4724		S2155120	S2170120	S2165120
		12.30	.4844		S2105031	S2120031	S2115031
	1/2	12.50	.4921		S2155125	S2170125	S2165125
12.70		.5000	S2105032	S2120032	S2115032		
0 Ø12.98 (.511) to Ø17.65 (.695)	33/64	13.00	.5118	3.2 (1/8)	S2155130	S2170130	S2165130
		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
		15.48	.6094		S2105039	S2120039	S2115039
	5/8	15.50	.6102		S2155155	S2170155	S2165155
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)
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

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
-MOL

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

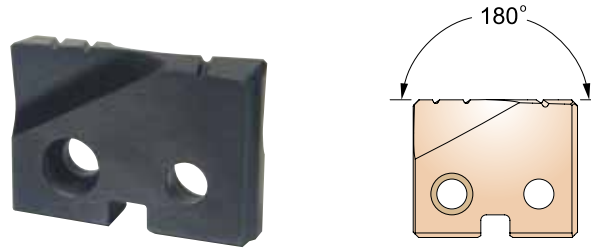
SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM

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. SUPER HSS (T15)				
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	Hardslick	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		
		17.46	.6875		S2105044	S2120044	S2115044		
	11/16	17.50	.6890		S2155175	S2170175	S2165175		
		17.86	.7031		S2105045	S2120045	S2115045		
	1 Ø17.53 (.690) to Ø24.38 (.960)	23/32	18.00		.7087	4.0 (5/32)	S2155180	S2170180	S2165180
			18.26		.7188		S2105046	S2120046	S2115046
47/64		18.50	.7283	S2155185	S2170185		S2165185		
		18.65	.7344	S2105047	S2120047		S2115047		
3/4		19.00	.7480	S2155190	S2170190		S2165190		
		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				
	21.83	.8594	S2105055	S2120055	S2115055				
55/64	22.00	.8661	S2155220	S2170220	S2165220				
	22.23	.8750	S2105056	S2120056	S2115056				
7/8	22.62	.8906	S2105057	S2120057	S2115057				
	23.00	.9055	S2155230	S2170230	S2165230				
29/32	23.02	.9062	S2105058	S2120058	S2115058				
	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)
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

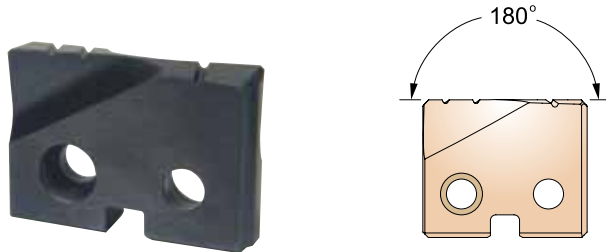
SPADE DRILL INSERTS - SUPER COBALT T15 FLAT BOTTOM

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		

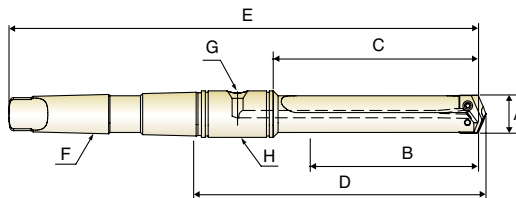
◎ : Excellent ○ : Good

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
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

- 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

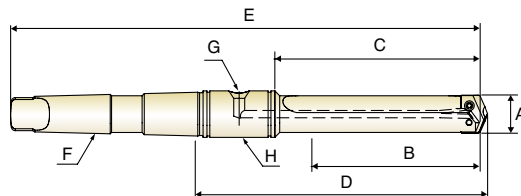
 PUNTE CON ATTACCO CM

SHORT LENGTH - Straight Flute (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

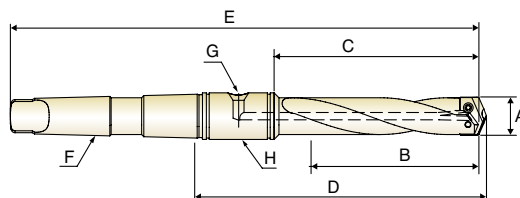
- HALTER MIT MORSEKEGEL
- Porte-plaquette à queue cône morse
- PUNTE CON ATTACCO CM



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)

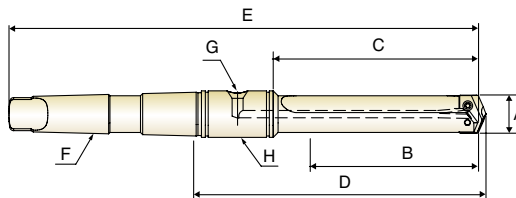


TAPER SHANK HOLDERS

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	ZYOSDSMT02I	3/8 ~ 27/64	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
Z	ZZOSDSMT02I	7/16 ~ 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
O	ZOOSDSMT02I	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

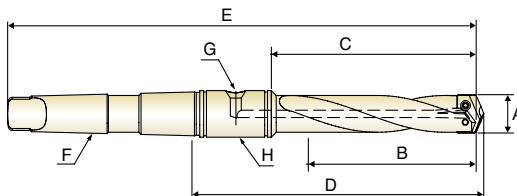
► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 324)

TAPER SHANK HOLDERS

HALTER MIT MORSEKEGEL

Porte-plaquette à queue cône morse

PUNTE CON ATTACCO CM

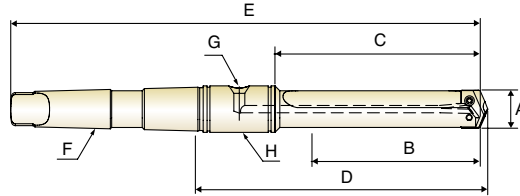

STANDARD LENGTH - Helical Flute (Inch)

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	ZYOSDHMT02I	3/8 ~ 27/64	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
Z	ZZOSDHMT02I	7/16 ~ 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR110048
O	ZOOSDHMT02I	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)

TAPER SHANK HOLDERS

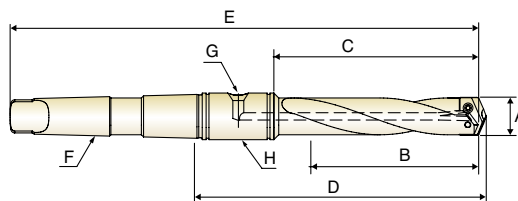
- HALTER MIT MORSEKEGEL
- Porte-plaquette à queue cône morse
- PUNTE CON ATTACCO CM



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			
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	ZO5EXSMT02I	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)

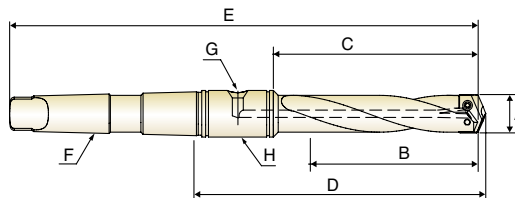
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E			
Y	ZYOEXHMT02I	3/8 ~ 27/64	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
Z	ZZOEXHMT02I	7/16 ~ 1/2	4-3/8	5-5/32	6-19/32	9-7/16	#2	1/16	PR110048
O	ZOOEXHMT02I	33/64 ~ 11/16	4-1/2	5-5/16	6-49/64	9-19/32	#2	1/16	PR110048
0.5	ZO5EXHMT02I	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)

- 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


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)

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

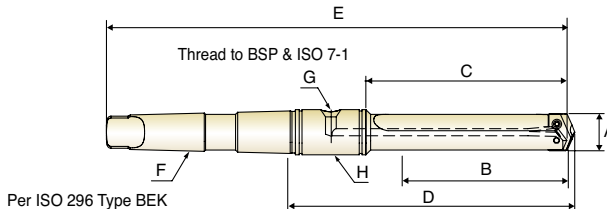
 SPADE
DRILLS

 TECHNICAL
DATA



TAPER SHANK HOLDERS

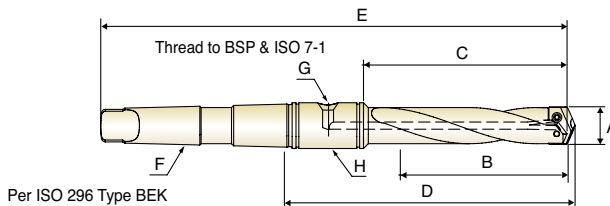
- HALTER MIT MORSEKEGEL
- Porte-plaquette à queue cône morse
- PUNTE CON ATTACCO CM



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	ZO5STSMT02M	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)



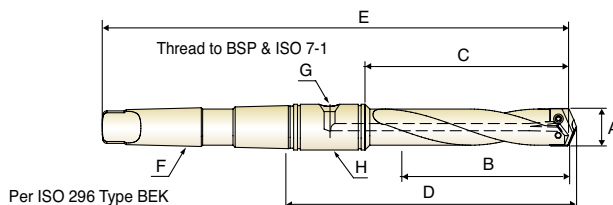
INTERMEDIATE LENGTH - Helical Flute (Metric)

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-plaquette à queue cône morse
- PUNTE CON ATTACCO CM

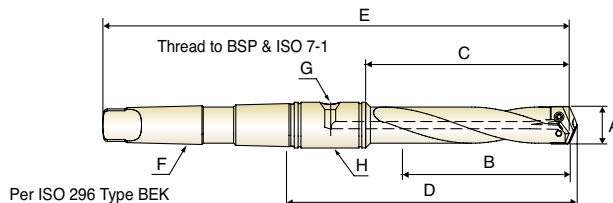

STANDARD LENGTH - Helical Flute (Metric)

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	ZY0SDHMT02M	9.5 ~ 11.0	60.3	80.2	116.7	188.9	#2	1/16	PR120190
Z	ZZ0SDHMT02M	11.5 ~ 12.5	60.3	80.2	116.7	188.9	#2	1/16	PR120190
0	Z00SDHMT02M	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	Z10SDHMT03M	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	Z20SDHMT04M	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	Z30SDHMT04M	36.0 ~ 47.0	209.5	241.3	295.3	408.0	#4	1/4	PR120317
4	Z40SDHMT05M	48.0 ~ 65.0	231.8	266.7	320.7	465.1	#5	1/4	PR120444
5	Z50SDHMT05M	64.0 ~ 88.0	273.1	317.5	388.9	531.8	#5	1/2	PR120571
7	Z70SDHMT05M	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 inernal cooling. (See page 324)

TAPER SHANK HOLDERS

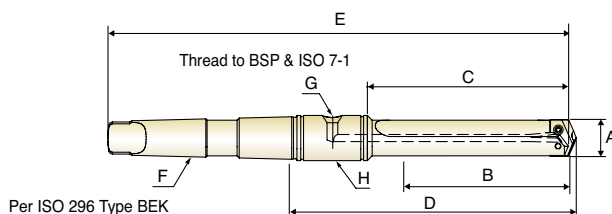
- HALTER MIT MORSEKEGEL
- Porte-plaquette à queue cône morse
- PUNTE CON ATTACCO CM



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	ZYOEXHMT02M	9.5 ~ 11.0	111.1	130.9	167.4	239.7	#2	1/16	PR120190
Z	ZZOEXHMT02M	11.5 ~ 12.5	111.1	130.9	167.4	239.7	#2	1/16	PR120190
O	ZOOEXHMT02M	13.0 ~ 17.5	114.3	135.0	171.8	243.7	#2	1/16	PR120190
0.5	ZO5EXHMT02M	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)



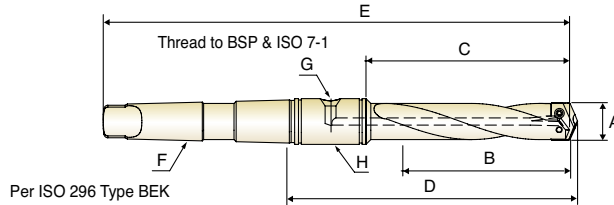
EXTENDED LENGTH - Straight Flute (Metric)

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	ZOOLGHMT02M	13.0 ~ 17.5	177.8	198.5	235.3	307.2	#2	1/16	PR120190
0.5	ZO5LGHMT02M	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)

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

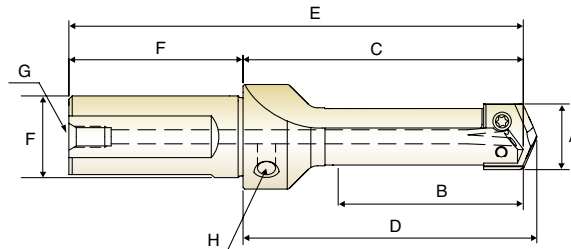
TECHNICAL DATA

FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

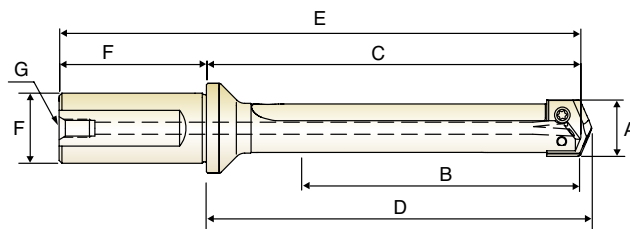
Porte-plaquette à colerette queue cylindrique

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	ZYOSBSF063I	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	ZZOSBSF063I	7/16~1/2	3/4	1-7/8	1-31/32	3-3/4	5/8	1-7/8	1/16	1/8
O	ZOOSBSF075I	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	ZO5SBSF075I	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	Z1OSBSF100I	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	Z2OSBSF125I	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	Z3OSBSF150I	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

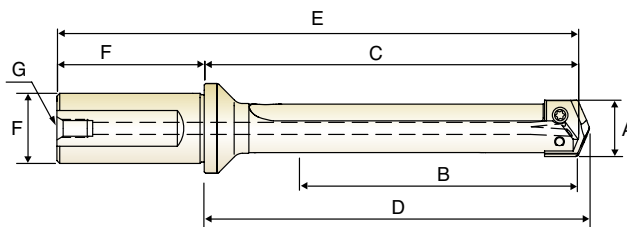


SHORT LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	G
		A	B	C	D	E	F	G	
Y	ZYOSTSF075I	3/8~27/64	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
Z	ZZOSTSF075I	7/16~1/2	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
O	ZOOSTSF075I	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	ZO5STSF075I	39/64~11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
1	Z1OSTSF100I	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	Z2OSTSF125I	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	Z3OSTSF150I	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	Z4OSTSF150I	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

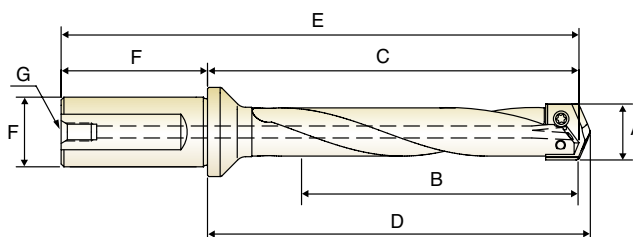
FLANGED STRAIGHT SHANK HOLDERS

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
							Dia.	Length	
		A	B	C	D	E	F		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
							Dia.	Length	
		A	B	C	D	E	F		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

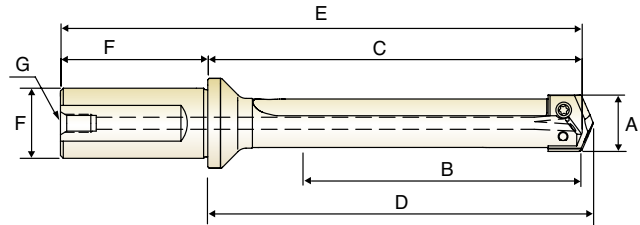


FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

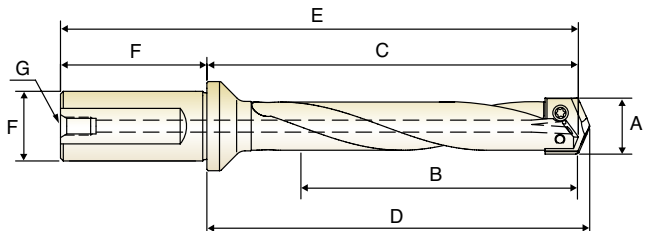
Porte-plaquette à colerette queue cylindrique

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	ZYOSDSF075I	3/8~27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	ZZOSDSF075I	7/16~1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
O	ZOOSDSF075I	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	ZO5SDSF075I	39/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	Z1OSDSF100I	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	Z2OSDSF125I	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	Z3OSDSF150I	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	Z4OSDSF150I	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

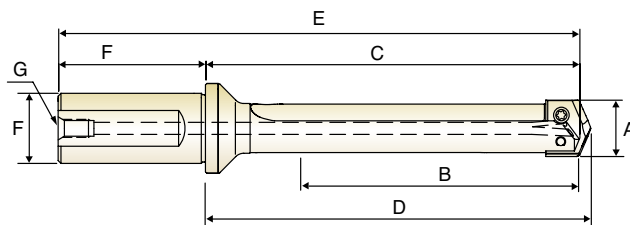


STANDARD LENGTH - Helical Flute (Inch)

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	ZYOSDHF075I	3/8~27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	ZZOSDHF075I	7/16~1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
O	ZOOSDHF075I	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	ZO5SDHF075I	39/64~11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	Z1OSDHF100I	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	Z2OSDHF125I	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	Z3OSDHF150I	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	Z4OSDHF150I	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

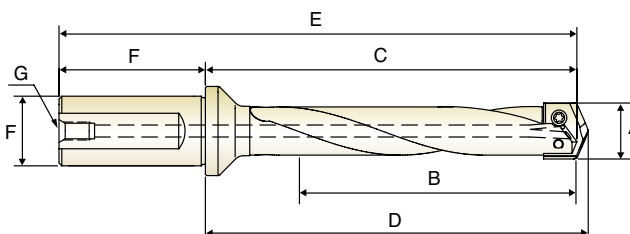
FLANGED STRAIGHT SHANK HOLDERS

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	G
Y	ZYOEXSF075I	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	ZZOEXSF075I	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	ZOOEXSF075I	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)

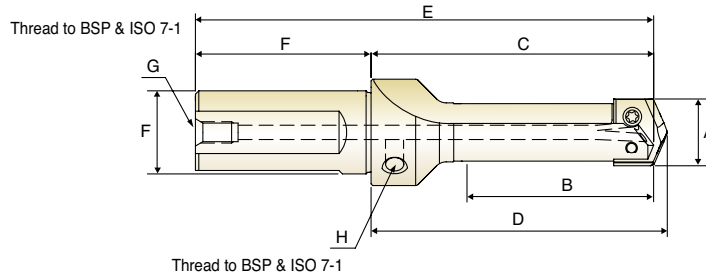
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	G
Y	ZYOEXHF075I	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	ZZOEXHF075I	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	ZOOEXHF075I	33/64 ~ 11/16	4-1/2	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

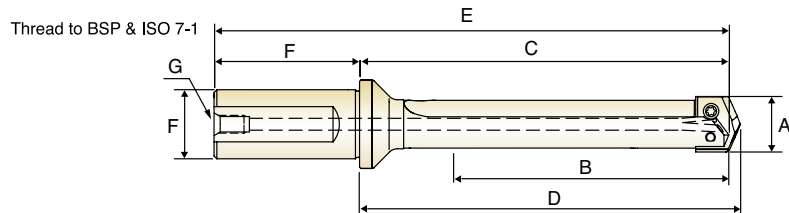
Porte-plaque à colerette queue cylindrique

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	ZYOSBSF016M	9.5 ~ 11.0	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
Z	ZZOSBSF016M	11.5 ~ 12.5	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
O	ZOOSBSF020M	13.0 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
0.5	ZO5SBSF020M	15.5 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
1	Z1OSBSF025M	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	Z2OSBSF032M	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	Z3OSBSF040M	36.0 ~ 47.0	76.2	125.0	129.8	195.0	40.0	70.0	1/4	1/4

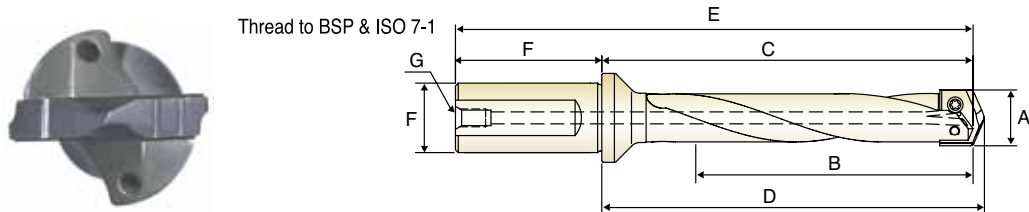


SHORT LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	G
		A	B	C	D	E	F	G	
Y	ZYOSTSF020M	9.5 ~ 11.0	31.8	61.1	63.5	111.1	20.0	50.0	1/8
Z	ZZOSTSF020M	11.5 ~ 12.5	31.8	61.1	63.5	111.1	20.0	50.0	1/8
O	ZOOSTSF020M	13.0 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8
0.5	ZO5STSF020M	15.5 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8
1	Z1OSTSF025M	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	Z2OSTSF032M	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	Z3OSTSF040M	36.0 ~ 47.0	120.7	173.0	177.8	243.0	40.0	70.0	1/4
4	Z4OSTSF040M	48.0 ~ 65.0	130.2	179.4	184.0	249.4	40.0	70.0	1/4

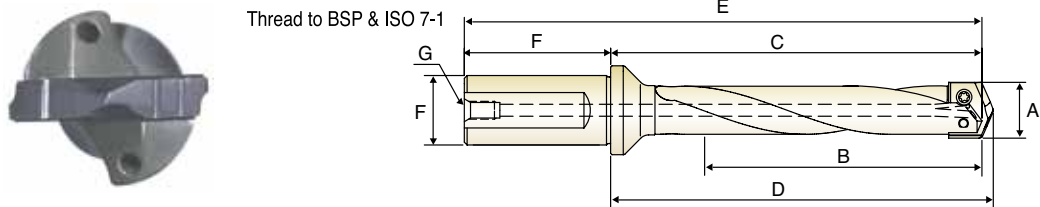
FLANGED STRAIGHT SHANK HOLDERS

- HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE
- Porte-plaquette à colerette queue cylindrique
- PUNTE ATTACCO CILINDRICO FLANGIATO



INTERMEDIATE LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
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



STANDARD LENGTH - Helical Flute (Metric)

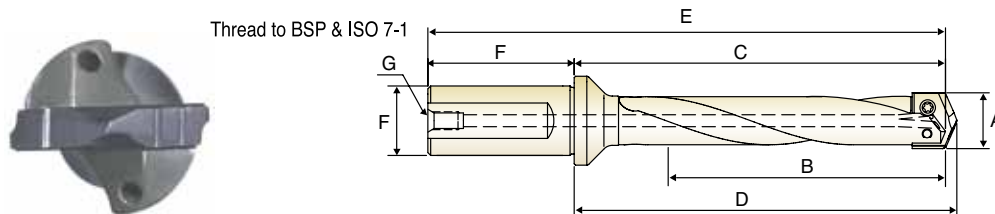
Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
Y	ZY0SDHF020M	9.5 ~ 11.0	60.3	89.7	92.1	139.7	20.0	50.0	1/8
Z	ZZ0SDHF020M	11.5 ~ 12.5	60.3	89.7	92.1	139.7	20.0	50.0	1/8
O	ZO0SDHF020M	13.0 ~ 17.5	63.5	92.1	94.9	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

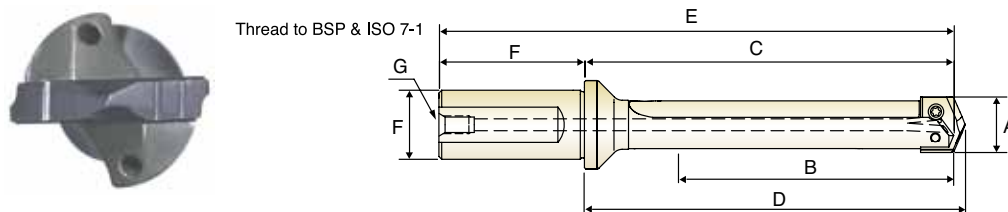
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



EXTENDED LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
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

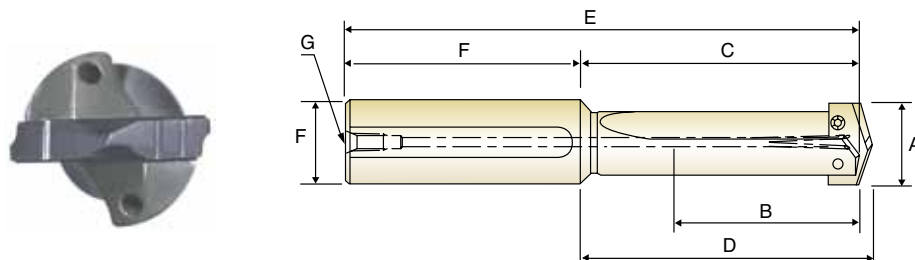


EXTENDED LENGTH - Straight Flute (Metric)

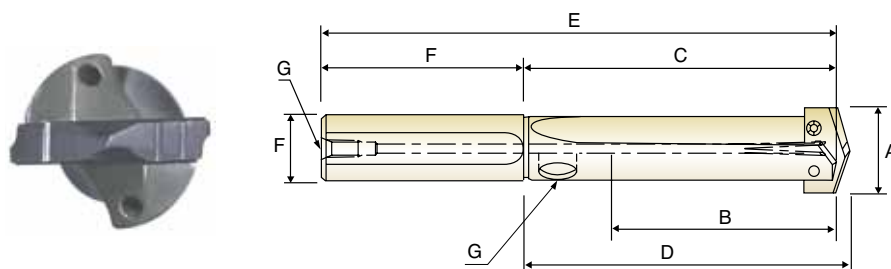
Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
3	Z30EXSF040M	36.0 ~ 47.0	349.3	401.6	406.4	471.6	40.0	70.0	1/4
4	Z40EXSF040M	48.0 ~ 65.0	422.3	471.5	476.3	541.5	40.0	70.0	1/4

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 A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
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

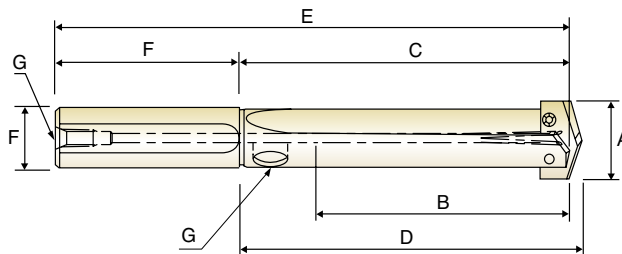

SHORT LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
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



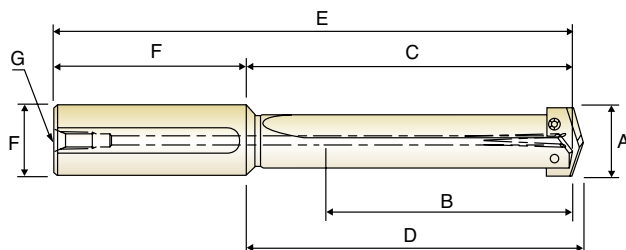
INTERMEDIATE LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
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

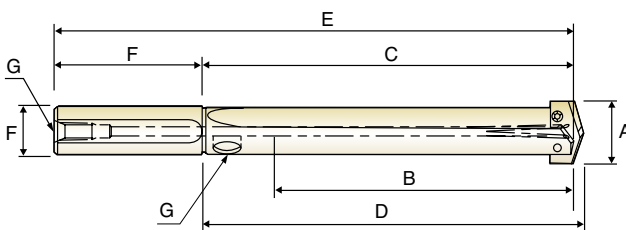
- i-ONE DRILLS
- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -CFRP
- DREAM DRILLS -MQL
- DREAM DRILLS for HIGH HARDENED STEELS
- GENERAL CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- SUPER-GP DRILLS
- STRAIGHT SHANK DRILLS
- TAPER SHANK DRILLS
- NC-SPOTTING DRILLS
- CENTER DRILLS
- SPADE DRILLS
- TECHNICAL DATA

STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT
 Porte-plaquette à queue cylindrique
 PUNTE ATTACCO CILINDRICO FLANGIATO


STANDARD LENGTH - Straight Flute (Inch)

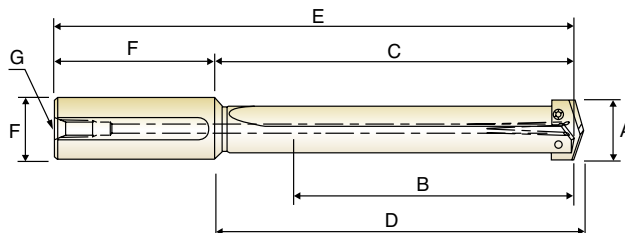
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZYOSDSS075I	3/8 ~ 27/64	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
Z	ZZOSDSS075I	7/16 ~ 1/2	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
O	ZOOSDSS075I	33/64 ~ 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
O.5	ZOSDSS075I	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	Z1OSDSS075I	45/64 ~ 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	Z1OSDSS100I	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	Z2OSDSS100I	31/32 ~ 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	Z2OSDSS125I	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	Z3OSDSS125I	1-13/32 ~ 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/4	4	1/4
	Z3OSDSS150I	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	Z4OSDSS150I	1-29/32 ~ 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-1/2	4	1/4
	Z4OSDSS175I	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	Z5OSDSS200I	2-1/2 ~ 3-1/2	10-3/4	12-1/2	12-3/4	16-1/2	2	4	1/2
7	Z7OSDSS300I	3-17/32 ~ 4-1/2	10-3/4	12-7/8	13-1/8	17-7/8	3	5	1/2

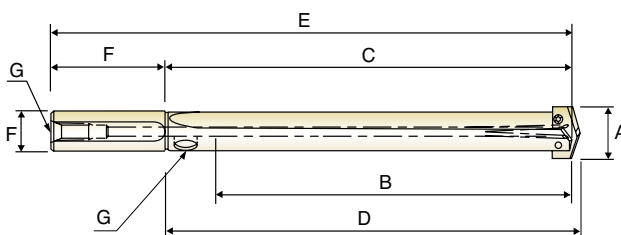
STRAIGHT SHANK HOLDERS

- HALTER MIT ZYLINDERSCHAFT
- Porte-plaquette à queue cylindrique
- PUNTE ATTACCO CILINDRICO FLANGIATO



EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
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

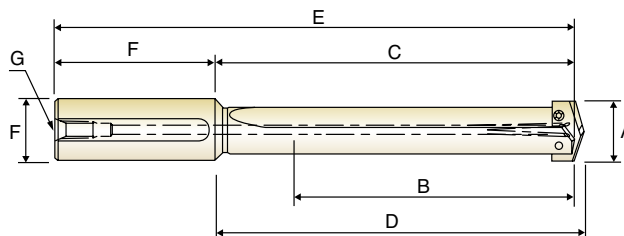


EXTENDED LENGTH - Straight Flute (Inch)

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Body Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
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
							Dia.	Length	
		A	B	C	D	E	F		G
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

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

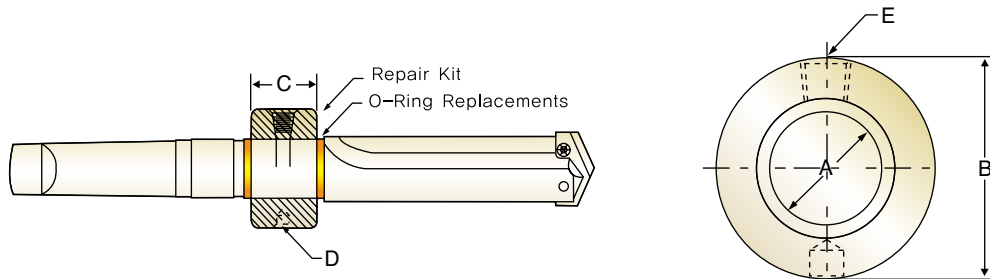
 SPADE
DRILLS

 TECHNICAL
DATA



HOLDER ACCESSORIES

ROTARY COOLANT ADAPTER (RCA) AND ACCESSORIES



Inch

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap	RCA Repair Kit Item No.	RCA O-Ring Replacements Item No.
	A	B					
PR110048	3/4	1-3/4	7/8	5/16-NC	◆1/8	PR210048	PR310048
PR110100	1	2-1/8	1-1/8	5/16-NC	◆1/8	PR210100	PR310100
PR110116	1-1/4	2-1/2	1-3/8	3/8-NC	◆1/4	PR210116	PR310116
PR110148	1-3/4	3	1-3/8	3/8-NC	◆1/4	PR210148	PR310148
PR110216	2-1/4	3-3/4	1-3/4	1/2-NC	◆1/2	PR210216	PR310216

Metric

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap	RCA Repair Kit Item No.	RCA O-Ring Replacements Item No.
	A	B					
PR120190	19.05	44.45	22.23	M8 × 1.25	◆1/8	PR220190	PR320190
PR120254	25.40	53.97	28.57	M8 × 1.25	◆1/8	PR220254	PR320254
PR120317	31.75	63.50	34.92	M10 × 1.5	◆1/4	PR220317	PR320317
PR120444	44.45	76.20	34.92	M10 × 1.5	◆1/4	PR220444	PR320444
PR120571	57.15	95.27	44.45	M12 × 1.75	◆1/2	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
0	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, X10CrA118, 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
		135 - 185	- 9	HSS	24	29	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
K	Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GGG50, 70 GTW35, GTS70 etc	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
		30		HSS	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.62
S	High Temp. Alloy Hastelloy B, Inconel etc	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 :**

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

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

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

* 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
-MOL

 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



DRILL INSERT (METRIC) - CARBIDE
BOHREINSATZ (METRISCH) - VOLLHARTMETALL

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

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
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	
Aluminum AlCuSiMn, AlMgSiO.5, AlZnMgCu1.5 etc	120 - 150	- 19	K20,K10	98	125	137	0.18	0.30	0.37	0.46	0.56	
	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	
High Temp. Alloy Hastelloy B, Inconel 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	
High Temp. Alloy Hastelloy B, Inconel etc	180	- 8	K20	244	290	291	0.22	0.33	0.40	0.45	0.48	
	140 - 220	- 9	K20	50	55	62	0.19	0.19	0.21	0.24	0.30	
High Temp. Alloy Hastelloy B, Inconel etc	220 - 310	9 - 28	K20	38	44	46	0.15	0.17	0.20	0.21	0.25	

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.

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
		175 - 225	7 - 20	45	46	0.10	0.16	0.19	0.29
	Tool Steels 102Cr6, 105WCr6, C75W etc	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
		325 - 375	34 - 40	34	37	0.06	0.12	0.17	0.22
	High Strength Alloy 36CrNiMo4, 34CrNiMo8 40NiCrMo73 etc	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	
225 - 300		- 32	27	28	0.10	0.14	0.16	0.19	
M	Stainless Steels X7Cr13, X10CrAl18, X5CrNi189, X5CrNiMo18 10 etc	300 - 350	32 - 37	21	22	0.08	0.14	0.18	0.19
		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
K	Cast Iron / S,G Iron GG10, 20, 25, 35, 40 GG50, 70 GTW35, GTS70 etc	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
		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
N	Aluminum AlCuSiMn, AlMgSi0.5, AlZnMgCu1.5 etc	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
		30		20	10	0.06	0.14	0.16	0.19
S	High Temp. Alloy Hastelloy B, Inconel etc	180	- 8	7	9	0.06	0.11	0.14	0.15
		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 :**

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

$$mm/min = \frac{(RPM) \cdot (mm/rev)}{(M/min) \cdot (1000)}$$

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

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.



Global Cutting Tool Leader **YG-1**

