



Leading Through Innovation



INSERTS & HOLDERS

SPADE DRILLS

BOHRMESSER

- For General Machines and Drilling Large Diameters, Longer Tool Life and High Productivity
- Für allgemeine Maschinen und zum Bohren großer Durchmesser, längere Werkzeugstandzeiten und höhere Produktivität

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

COUNTER
BORES

SELECTION GUIDE



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INSERTS & HOLDERS
SPADE DRILLS

For General Machines and Drilling Large Diameters
Longer Tool Life and High Productivity

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A357

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc			
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	◎	◎
	2		About 0.45% C	Annealed	190	13	○	◎	◎
	3		About 0.45% C	Quenched & Tempered	250	25	○	◎	◎
	4		About 0.75% C	Annealed	270	28	○	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32			
	6	Low alloy steel		Annealed	180	10	○	◎	◎
	7			Quenched & Tempered	275	29	○	◎	◎
	8			Quenched & Tempered	300	32		○	◎
	9			Quenched & Tempered	350	38		○	◎
	10	High alloyed steel, and tool steel		Annealed	200	15		○	◎
	11			Quenched & Tempered	325	35		○	◎
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		○	○
	13		Martensitic	Quenched & Tempered	240	23		○	○
	14		Austenitic		180	10		○	○
	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	○	○
K	16	Nodular cast iron	Pearlitic (Martensitic)		260	26	○	◎	◎
	17		Ferritic		160	3	◎	○	○
	18	Malleable cast iron	Pearlitic		250	25	○	◎	◎
	19		Ferritic		130		◎	○	○
	20		Pearlitic		230	21	○	◎	◎
N	21	Aluminum-wrought alloy	Not Curable		60		◎	○	○
	22		Curable	Hardened	100		◎	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75				
	24		≤ 12% Si, Curable	Hardened	90				
	25		> 12% Si, Not Curable		130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110				
	27		CuZn, CuSnZn (Brass)		90		◎	○	○
	28		CuSn, lead-free copper and electrolytic copper		100				
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		◎	◎
	32			Cured	280	30		○	◎
	33			Annealed	250	25		○	◎
	34		Ni or Co Based	Cured	350	38		○	◎
	35	Titanium Alloys		Cast	320	34		○	◎
	36		Pure Titanium		400 Rm				
	37		Alpha + Beta Alloys	Hardened	1050 Rm				
H	38	Hardened steel		Hardened	550	55		○	◎
	39			Hardened	630	60			
	40	Chilled Cast Iron		Cast	400	42			
	41	Hardened Cast Iron		Hardened	550	55			

TAPER SHANK		TAPER SHANK HOLDERS - INCH/METRIC	A340
FLANGED SHANK		FLANGED STRAIGHT SHANK HOLDERS - INCH/METRIC	A344

Y,Z,0,1,2	Y,Z,0,1~3	Y,Z,0,1~3	1~3	Y,Z,0,1~3	Y,Z,0,1,2	Y,Z,0,1,2	Y,Z,0,1~3	Y,Z,0,1~3	Y,Z,0,1,2
CARBIDE K10	CARBIDE K20	CARBIDE P40	HSS M4	SUPER HSS T15	PREMIUM HSS M48	CARBIDE K10	CARBIDE K20	CARBIDE P40	SUPER COBALT T15
STANDARD	STANDARD	STANDARD	SM-POINT	SM-POINT	SM-POINT	SM-POINT	SM-POINT	SM-POINT	FALT BOTTOM
Ø9.5(#Y)	Ø9.8(#Y)	Ø9.5(#Y)	Ø18(#1)	Ø9.5(#Y)	Ø9.5(#Y)	Ø9.5(#Y)	Ø9.5(#Y)	Ø9.5(#Y)	Ø9.5(#Y)
Ø34(#2)	Ø47(#3)	Ø47(#3)	Ø46(#3)	Ø47.63(#3)	Ø35(#2)	Ø34(#2)	Ø46.04(#3)	Ø47(#3)	Ø35(#2)
A323	A325	A328	A332	A333	A336	A339	A341	A343	A346

TiN / TiCN / TiAlN									TiN / Hardslick / TiAlN
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	○	◎	○	◎	◎		○	◎	◎	1
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	○	◎	○	◎	◎		○	◎	◎	4
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◎	○	○	◎	○	○	◎	○	○	○	17 K
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	◎	○		○	◎		◎	○	○	34 S
	◎	○		○	◎		◎	○	○	35
										36
										37
	○	◎		○	◎		○	◎	○	38
										39
										40 H
										41

Coating	Characteristics	Coating	Characteristics
H	-First choice for excellent wear resistance and toughness -Preventive of chipping due to cold welding -Achieve high penetration rates even in deep holes with reliable tool life -Coefficient of friction against steel : 0.25 -Color : Bronze	TiCN	-Maximum working temperature up to 400℃ -Better wear resistance over non-coating -Coefficient of friction against steel : 0.4 -Color : Blue-Grey
		TiAlN	-Maximum working temperature up to 800℃ -Excellent heat and oxidation resistance -Coefficient of friction against steel : 0.4 -Color : Violet-Grey
TiN	-Increased tool life over non-coating -Improved wear resistance and high hardness -For normal applications -Coefficient of friction against steel : 0.4 -Color : Gold	Hardslick	-Better chip evauation for tapping and drilling -High hardness and improved lubrication -Coefficient of friction against steel : 0.2 -Color : Black-Gery

CARBIDE

HSS

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BORES

SPADE DRILL INSERTS - HSS M4

-  EINWEG BOHREINSATZ - HSS M4
 Plaquettes FORETS A LAME - HSS M4
 CUSPIDI SPADE DRILL - HSS M4



Cutting conditions : p.A356

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		HSS M4		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)		36.00	1.4173	6.4 (1/4)			S1465360
		37.00	1.4567		S1455370		S1465370
		38.00	1.4961		S1455380		S1465380
		39.00	1.5354		S1455390		S1465390
		40.00	1.5748		S1455400		S1465400
		41.00	1.6142				S1465410
		42.00	1.6535		S1455420	S1460420	S1465420
	1-11/16	42.86	1.6875		S1405144		S1415144
		43.00	1.6929		S1455430		S1465430
		44.00	1.7323				S1465440
		45.00	1.7717		S1455450		S1465450
		46.00	1.8110		S1455460		S1465460
	1-27/32	46.83	1.8438		S1405154		
		47.00	1.8504		S1455470		S1465470
	1-7/8	47.63	1.8750				S1415156
4 Ø46.99 (1.850) to Ø65.28 (2.570)		48.00	1.8898	7.9 (5/16)	S1455480		S1465480
		49.00	1.9291		S1455490		
	1-15/16	49.21	1.9375				S1415160
		50.00	1.9685		S1455500		S1465500
		51.00	2.0079				S1465510
		53.00	2.0866		S1455530		
		54.00	2.1260		S1455540		S1465540
		55.00	2.1654		S1455550		S1465550
		56.00	2.2047				S1465560

◎ : Excellent ○ : Good

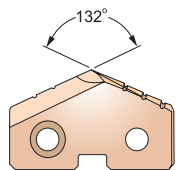
ISO	P										M				K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
HB	125	130	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21			
Recommended	○	○	○	○	○	○	○								◎	○	◎	○	◎	○			
ISO	N										S										H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
HB	60	100	75	90	130	110	90	100			15	30	25	38	34			55	60	42	55		
Recommended	◎	◎					◎				200	280	250	350	320	400Rm	1050Rm	550	630	400	550		

Y/G SPADE DRILLS

SERIES **4,5**

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.A356

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. HSS M4		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
4 Ø46.99 (1.850) to Ø65.28 (2.570)	2-5/16	58.74	2.3125	7.9 (5/16)	S1405220		
		59.00	2.3228		S1455590		
		60.00	2.3622		S1455600		S1465600
		61.00	2.4016		S1455610		
		62.00	2.4409		S1455620		S1465620
		63.00	2.4803		S1455630		
	2-1/2	63.50	2.5000				S1415232
		64.00	2.5197		S1455640		S1465640
5 Ø62.38 (2.456) to Ø76.20 (3.000)	2-17/32	64.29	2.5313	11.1 (7/16)			
		65.00	2.5591		S1455650		S1465650
	2-1/2	63.50	2.5000				S14152D2
		64.00	2.5197		S145564A		S146564A
	2-9/16	65.09	2.5625				S14152D6
	2-19/32	65.88	2.5938				S1415238
		66.00	2.5984		S1455660		S1465660
	2-5/8	66.68	2.6250				S1415240
	2-21/32	67.47	2.6563				S1415242
		68.00	2.6772		S1455680		S1465680
	2-11/16	68.26	2.6875		S1405244		
	2-23/32	69.05	2.7188				S1415246
	2-3/4	69.85	2.7500				S1415248
		70.00	2.7559		S1455700		S1465700
	2-25/32	70.64	2.7813				S1415250

ISO	P										M					K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron						
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
HRc	125	13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25						
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230				
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○				
ISO	N										S										H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HRc											15	30	25	38	34			55	60					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550			
Recommended	◎	◎					◎																	

Y/G SPADE DRILLS

SERIES **5, 6**

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.A356

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. HSS M4		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
5 Ø62.38 (2.456) to Ø76.20 (3.000)		72.00	2.8346	11.1 (7/16)	S1455720		S1465720
	2-7/8	73.03	2.8750				S1415256
	2-29/32	73.82	2.9063				S1415258
		74.00	2.9134		S1455740		S1465740
	2-15/16	74.61	2.9375				S1415260
	2-31/32	75.41	2.9688				S1415262
		76.00	2.9921		S1455760		S1465760
	3	76.20	3.0000				S1415300
6 Ø76.23 (3.001) to Ø89.08 (3.507)		78.00	3.0709	11.1 (7/16)	S1455780		S1465780
	3-1/8	79.38	3.1250		S1405308		
		80.00	3.1496		S1455800	S1460800	S1465800
	3-5/32	80.17	3.1563		S1405310		
	3-7/32	81.76	3.2188		S1405314		
		82.00	3.2283		S1455820		S1465820
		84.00	3.3071		S1455840		S1465840
	3-11/32	84.93	3.3438				S1415322
	3-3/8	85.73	3.3750				S1415324
		86.00	3.3858		S1455860		S1465860
		88.00	3.4646		S1455880	S1460880	S1465880

		◎ : Excellent ○ : Good																											
ISO	P										M						K												
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron								
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20									
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21									
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230									
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○									
ISO	N										S										H								
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron							
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41								
HRc											15	30	25	38	34			55	60	42	55								
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550								
Recommended	◎	◎					◎																						

CARBIDE

HSS

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -PRO

DREAM DRILLS X

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -MQL

DREAM DRILLS for HIGH HARDENED STEELS

GENERAL CARBIDE DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

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CENTER DRILLS

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

 SPADE DRILLS

SERIES 7, 8

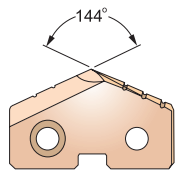
SPADE DRILL INSERTS - HSS M4

- 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.A356

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. HSS M4		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
7 Ø87.76 (3.455) to Ø101.60 (4.000)		90.00	3.5433	11.1 (7/16)	S1455900		S1465900
	3-19/32	91.28	3.5938		S1405338		
		92.00	3.6221		S1455920		S1465920
	3-5/8	92.08	3.6250				S1415340
	3-21/32	92.87	3.6563				S1415342
	3-11/16	93.66	3.6875				S1415344
		94.00	3.7008				S1465940
	3-23/32	94.46	3.7188		S1405346		
		96.00	3.7795				S1465960
		98.00	3.8583		S1455980		S1465980
8 Ø101.63 (4.001) to Ø114.48 (4.507)		100.00	3.9370	11.1 (7/16)	S1455A00		S1465A00
	4	101.60	4.0000				S1415400
	4-3/32	104.00	4.0945		S1455A40		
	4-1/8	104.78	4.1250				S1415408
	4-5/16	109.54	4.3125		S1405420		
		110.00	4.3307		S1455B00		S1465B00
	4-3/8	111.13	4.3750		S1405424		
		112.00	4.4094		S1455B20		S1465B20
		114.00	4.4882		S1455B40		S1465B40
	4-1/2	114.30	4.5000				S1415432

		◎ : Excellent ○ : Good																											
ISO	P										M					K													
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron										
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20									
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21									
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230									
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○									
ISO	N										S										H								
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron							
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41								
HRc											15	30	25	38	34	36	37	55	60	42	41								
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550								
Recommended	◎	◎					◎																						

A314 phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions YG-1 CO., LTD.

 SPADE DRILLS

SERIES Y, Z, 0

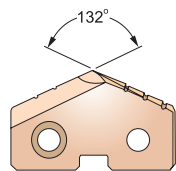
SPADE DRILL INSERTS - SUPER HSS T15

- 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.A356

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
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1155095	S1160095	S1165095
	3/8	9.53	.3750				S1115024
		9.80	.3860		S1155098		
	25/64	9.92	.3906				S1115025
		10.00	.3937		S1155100		S1165100
		10.20	.4016				S1165102
	13/32	10.32	.4063				S1115026
		10.50	.4134			S1160105	S1165105
	27/64	10.72	.4219				S1115027
		10.80	.4252				S1165108
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	S1155110	S1160110	S1165110
	7/16	11.11	.4375				S1115028
		11.50	.4528		S1155115	S1160115	S1165115
	29/64	11.51	.4531				S1115029
	15/32	11.91	.4688				S1115030
		12.00	.4724		S1155120	S1160120	S1165120
	31/64	12.30	.4844		S1105031		S1115031
		12.50	.4921		S1155125		S1165125
	1/2	12.70	.5000				S1115032
		13.00	.5118		S1155130	S1160130	S1165130
0 Ø12.98 (.511) to Ø17.65 (.695)		13.10	.5156	3.2 (1/8)			S1115033
	33/64	13.10	.5156				S1115034
	17/32	13.49	.5313				S1165135
		13.50	.5315				S1165135
		14.00	.5512		S1155140		S1165140
	9/16	14.29	.5625				S1115036
		14.50	.5709		S1155145		S1165145
	37/64	14.68	.5781				S1115037
		15.00	.5906		S1155150	S1160150	S1165150
	19/32	15.08	.5938				S1115038
		15.48	.6094	3.2 (1/8)			S1115039
	39/64	15.48	.6094		S1155155		S1165155
		15.50	.6102				S1115040
	5/8	15.88	.6250				S1165155
		16.00	.6299		S1155160		S1165160
							S1115040
							S1165160
							S1115040
							S1165160
							S1115040
							S1165160

◎ : Excellent ○ : Good																												
ISO	P										M										K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron								
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20								
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21								
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230								
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	◎	○	○	○	○	◎	○	◎	○	◎								
ISO	N										S										H							
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41							
HRc											15	30	25	38	34			55	60	42	55							
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550							
Recommended	○	○					○				◎	○	○	○	○			○										

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

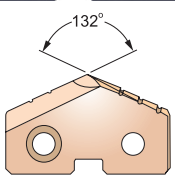
COUNTER
BORES

 SPADE DRILLS

SERIES 0, 1

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.A360

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
0 Ø12.98 (.511) to Ø17.65 (.695)	41/64	16.27	.6406	3.2 (1/8)			S1115041
		16.50	.6496		S1155165	S1160165	S1165165
	21/32	16.67	.6563				S1115042
		17.00	.6693		S1155170	S1160170	S1165170
1 Ø17.53 (.690) to Ø24.38 (.960)	43/64	17.07	.6719	4.0 (5/32)			S1115043
		17.50	.6890			S1160175	S1165175
	45/64	17.86	.7031				S1115045
		18.00	.7087		S1155180	S1160180	S1165180
	23/32	18.26	.7188				S1115046
		18.50	.7283		S1155185	S1160185	S1165185
	47/64	18.65	.7344				S1115047
		19.00	.7480		S1155190	S1160190	S1165190
	3/4	19.05	.7500				S1115048
	49/64	19.45	.7656				S1115049
		19.50	.7677		S1155195		S1165195
	25/32	19.84	.7813				S1115050
		20.00	.7874		S1155200	S1160200	S1165200
	51/64	20.24	.7969				S1115051
		20.50	.8071		S1155205	S1160205	S1165205
		21.00	.8268		S1155210		S1165210
	27/32	21.43	.8438		S1105054		S1115054
		22.00	.8661		S1155220	S1160220	S1165220
	7/8	22.23	.8750			S1110056	S1115056
	57/64	22.62	.8906				S1115057
		23.00	.9055		S1155230		S1165230
	29/32	23.02	.9063				S1115058
	59/64	23.42	.9219				S1115059
	15/16	23.81	.9375				S1115060
		24.00	.9449		S1155240		S1165240

◎ : Excellent ○ : Good

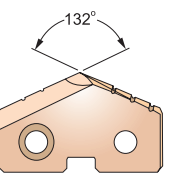
ISO	P										M					K																													
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel					Stainless steel					Grey cast iron					Nodular cast iron					Malleable cast iron														
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	15	16	17	18	19	20	17	18	19	20	15	16	17	18	19	20									
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21		10	26	3	25	21	160	250	130	230																
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	180	260	160	250	130	230	160	250	130	230															
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	◎	◎	◎	◎	○	◎	○	◎	○	◎	○	◎	○	◎															
ISO	N										S										H																								
Material Description	Aluminum-wrought alloy					Aluminum-cast, alloyed					Copper and Copper Alloys (Bronze / Brass)					Non Metallic Materials					Heat Resistant Super Alloys					Titanium Alloys					Hardened steel					Chilled Cast Iron					Hardened Cast Iron				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	38	39	40	41	38	39	40	41	38	39	40	41	38	39	40	41								
HRc											15	30	25	38	34			55	60	42	55	55	60	42	55	55	60	42	55																
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	550	630	400	550	550	630	400	550																
Recommended	○	○						○			◎	○	○	○	○			○																											

 SPADE DRILLS

SERIES 2, 3

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.A360

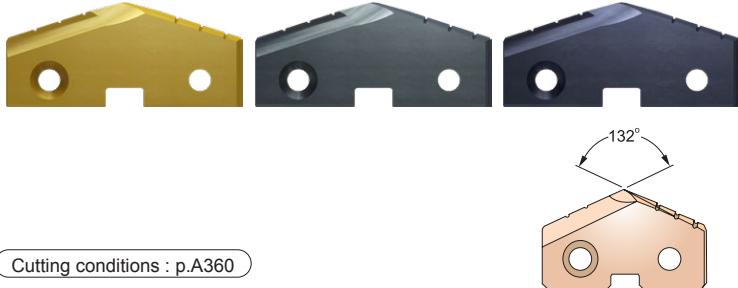
Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. SUPER HSS T15		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)	S1105062		S1115062
	63/64	25.00	.9843		S1155250		S1165250
	1	25.40	1.0000				S1115100
		26.00	1.0236		S1155260		S1165260
	1-1/32	26.19	1.0313				S1115102
	1-3/64	26.59	1.0469		S1105103		S1115103
	1-1/16	26.99	1.0625				S1115104
		27.00	1.0630		S1155270		S1165270
	1-3/32	27.78	1.0938				S1115106
		28.00	1.1024		S1155280		S1165280
	1-7/64	28.18	1.1094				S1115107
	1-1/8	28.58	1.1250				S1115108
		29.00	1.1417		S1155290	S1160290	S1165290
	1-5/32	29.37	1.1563				S1115110
		30.00	1.1811		S1155300		S1165300
	1-3/16	30.16	1.1875				S1115112
	1-7/32	30.96	1.2188				S1115114
		31.00	1.2205		S1155310	S1160310	S1165310
	1-1/4	31.75	1.2500				S1115116
		32.00	1.2598		S1155320		S1165320
	1-9/32	32.54	1.2813				S1115118
3 Ø34.37(1.353) to Ø47.80(1.882)	1-5/16	33.00	1.2992	6.4 (1/4)	S1155330		S1165330
		33.34	1.3125				S1115120
		34.00	1.3386		S1155340		S1165340
	1-11/32	34.13	1.3438				S1115122
	1-3/8	34.93	1.3750				S1115124
		35.00	1.3780		S1155350	S1160350	S1165350
	1-13/32	35.72	1.4063				S1115126
		36.00	1.4173		S1155360		S1165360
	1-7/16	36.51	1.4375				S1115128
		37.00	1.4567		S1155370		S1165370
	1-15/32	37.31	1.4688				S1115130
		38.00	1.4961		S1155380		S1165380

◎ : Excellent ○ : Good

ISO	P										M				K									
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron					
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21					
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230				
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	○	○	○	○	○	◎	○	◎	○	◎				
ISO	N										S										H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HRc											15	30	25	38	34			55	60	42	55			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550			
Recommended	○	○					○				◎	○	○	○	○			○						

SPADE DRILL INSERTS - SUPER HSS T15

-  EINWEG BOHREINSATZ - SUPER HSS T15
 Plaquettes SPADE DRILL - Super HSS T15
 CUSPIDI SPADE DRILL - SUPER HSS T15



Cutting conditions : p.A360

Cutting conditions : p.A360

Series Min. to Max. mm (inch)	Diameter			Thick	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)	Metric (mm, inch)	SUPER HSS T15		
					TiN	TiCN	TiAlN
4 Ø46.99 (1.850) to Ø65.28 (2.570)	2-3/32	53.18	2.0938	7.9 (5/16)			S1115206
	2-1/8	53.98	2.1250				S1115208
		54.00	2.1260		S1155540		S1165540
	2-5/32	54.77	2.1563				S1115210
		55.00	2.1654		S1155550	S1160550	S1165550
	2-3/16	55.56	2.1875				S1115212
		56.00	2.2047		S1155560		S1165560
	2-7/32	56.36	2.2188				S1115214
		57.00	2.2441		S1155570		S1165570
	2-1/4	57.15	2.2500				S1115216
	2-9/32	57.94	2.2813				S1115218
		58.00	2.2835		S1155580	S1160580	S1165580
		59.00	2.3228		S1155590		S1165590
	2-11/32	59.53	2.3438				S1115222
		60.00	2.3622		S1155600		S1165600
	2-3/8	60.33	2.3750				S1115224
		61.00	2.4016		S1155610		S1165610
		62.00	2.4409		S1155620		S1165620
		63.00	2.4803		S1155630		S1165630
		64.00	2.5197		S1155640		S1165640
	2-17/32	64.29	2.5313				S1115234
		65.00	2.5591		S1155650		S1165650
	2-9/16	65.09	2.5625				S1115236

◎ : Excellent ○ : Good

ISO		P										M				K						
Material Description		Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommended	⊙	⊙	⊙	⊙		⊙	⊙	○	○	○	○	○	○	○	○	⊙	○	⊙	○	⊙		
ISO		N										S								H		
Material Description		Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
HRC											15	30	25	38	34			55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550	
Recommended	○	○					○				⊙	○	○	○	○			○				

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YG YG-1 CO., LTD.

◎ : Excellent ○ : Good

ISO	P										M			K									
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
HrC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21			
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230			
Recommended	⊙	⊙	⊙	⊙		⊙	⊙	○	○	○	⊙	○	○	○	○	⊙	○	⊙	○	⊙			
ISO	N										S										H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
HrC											15	30	25	38	34			55	60	42	55		
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550		
Recommended	○	○					○				⊙	○	○	○	○			○					

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A319

 SPADE DRILLS

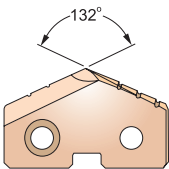
SERIES **Y, Z, 0**

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.A358

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. PREMIUM HSS M48		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1555095		S1565095
		9.80	.3860		S1555098		S1565098
		10.00	.3937		S1555100	S1560100	S1565100
		10.20	.4016		S1555102		S1565102
	13/32	10.32	.4063				S1515026
		10.50	.4134		S1555105		S1565105
Z Ø11.11(.437) to Ø12.95(.510)	27/64	10.72	.4219	2.4 (3/32)			S1515027
		10.80	.4252				S1565108
		11.00	.4331		S1555110	S1560110	S1565110
		11.50	.4528		S1555115		S1565115
	29/64	11.51	.4531				S1515029
		12.00	.4724				S1565120
0 Ø12.98 (.511) to Ø17.65 (.695)		12.50	.4921	3.2 (1/8)			S1565125
		13.00	.5118		S1555130		S1565130
	33/64	13.10	.5156				S1515033
		13.50	.5315		S1555135	S1560135	S1565135
		14.00	.5512			S1560140	S1565140
	9/16	14.29	.5625				S1515036
		14.50	.5709		S1555145	S1560145	S1515037
	37/64	14.68	.5781				
		15.00	.5906				S1565150
		15.50	.6102				S1565155
	5/8	15.88	.6250	3.2 (1/8)			S1515040
		16.00	.6299			S1560160	S1565160

◎ : Excellent ○ : Good

ISO	P										M					K					
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	19	20	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎	

ISO	N										S										H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HRC											15	30	25	38	34			55	60	42	55			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550			
Recommended	○	○						○			◎	◎	◎	◎	◎			◎						

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 SPADE DRILLS

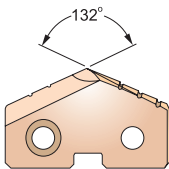
SERIES **0, 1**

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.A358

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. PREMIUM HSS M48		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
0 Ø12.98(.511) to Ø17.65(.695)	41/64	16.27	.6406	3.2 (1/8)			S1515041
		16.50	.6496		S1555165		S1565165
		17.00	.6693				S1565170
	11/16	17.46	.6875				S1515044
		17.50	.6890		S1555175		S1565175
		18.00	.7087		S1555180		S1565180
1 Ø17.53 (.690) to Ø24.38 (.960)	23/32	18.26	.7188	4.0 (5/32)			S1515046
		18.50	.7283				S1565185
		19.00	.7480		S1555190	S1560190	S1565190
	3/4	19.05	.7500				S1515048
		19.50	.7677		S1555195	S1560195	S1565195
	25/32	19.84	.7813				S1515050
		20.00	.7874		S1555200		S1565200
		20.50	.8071				S1565205
		21.00	.8268				S1565210
	27/32	21.43	.8438				S1515054
		22.00	.8661		S1555220		S1565220
	7/8	22.23	.8750				S1515056
		23.00	.9055				S1565230
	59/64	23.42	.9219				S1515059
	15/16	23.81	.9375				S1515060
		24.00	.9449		S1555240		S1565240

◎ : Excellent ○ : Good

ISO	P										M					K						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel	Stainless steel					Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	25	21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎		

ISO	N										S										H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and CopperAlloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HRC											15	30	25	38	34			55	60	42	55			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550			
Recommended	○	○									◎	◎	◎	◎	◎			◎						

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A321

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

DREAM
DRILLS
-MQL

DREAM DRILLS
for HIGH
HARDENED STEELS

GENERAL
CARBIDE
DRILLS

MULTI-1
DRILLS

HPD
DRILLS

GOLD-P
DRILLS

CARBIDE

HSS

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -PRO

DREAM DRILLS X

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

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

REAMERS

COUNTER SINKS

COUNTER BORES

YG SPADE DRILLS

SERIES **2**

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.A358

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		S1515062
	63/64	25.00	.9843				S1565250
	1	25.40	1.0000				S1515100
		26.00	1.0236		S1555260	S1560260	S1565260
	1-1/32	26.19	1.0313				S1515102
	1-3/64	26.59	1.0469				S1515103
		27.00	1.0630			S1560270	S1565270
	1-3/32	27.78	1.0938				S1515106
		28.00	1.1024				S1565280
	1-1/8	28.58	1.1250				S1515108
		29.00	1.1417		S1555290		S1565290
	1-5/32	29.37	1.1563				S1515110
		30.00	1.1811		S1555300		S1565300
	1-3/16	30.16	1.1875				S1515112
		31.00	1.2205				S1565310
	1-1/4	31.75	1.2500				S1515116
		32.00	1.2598		S1555320		S1565320
	1-9/32	32.54	1.2813				S1515118
		33.00	1.2992		S1555330		S1565330
	1-5/16	33.34	1.3125				S1515120
		34.00	1.3386				S1565340
	1-3/8	34.93	1.3750				S1515124
		35.00	1.3780			S1555350	

◎ : Excellent ○ : Good

ISO	P										M				K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34		55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○					○				◎	◎	◎	◎	◎			◎			

YG SPADE DRILLS

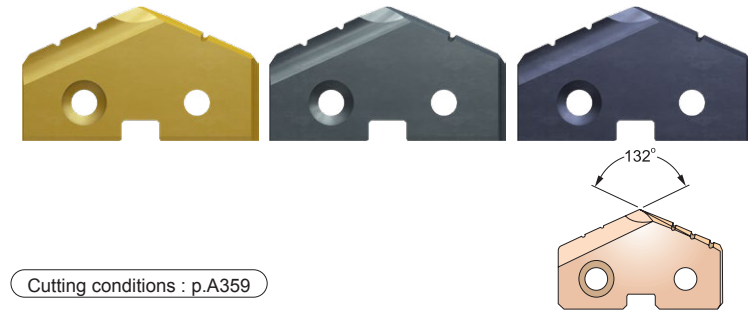
SERIES **Y, Z, O**

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.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE K10	
					TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S1655095	
		9.80	.3860		S1655098	
		10.00	.3937		S1655100	S1665100
		10.20	.4016		S1655102	
		10.80	.4252		S1655108	
		11.00	.4331		S1655110	S1665110
O Ø12.98 (.511) to Ø17.65 (.695)		11.50	.4528	3.2 (1/8)	S1655115	
		12.00	.4724		S1655120	
		12.50	.4921		S1655125	S1665125
		13.00	.5118			S1665130
		13.50	.5315		S1655135	S1665135
		14.00	.5512			S1665140
		14.50	.5709		S1655145	S1665145
		15.00	.5906		S1655150	S1665150
		16.00	.6299			S1665160
		16.50	.6496		S1655165	

◎ : Excellent ○ : Good

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended															◎	◎	◎	◎	◎	◎	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

 SPADE DRILLS

SERIES 1, 2

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.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. CARBIDE K10		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		18.00	.7087	4.0 (5/32)	S1655180		
		19.00	.7480		S1665190		
		20.00	.7874		S1655200		
		20.50	.8071		S1655205		
		23.00	.9055		S1655230		
2 Ø24.41 (.961) to Ø35.05 (1.380)		24.00	.9449	4.8 (3/16)	S1655240		
		26.00	1.0236		S1655260		
		29.00	1.1417		S1665290		
		30.00	1.1811		S1655300		
		32.00	1.2598		S1655320		
		33.00	1.2992		S1655330		
		34.00	1.3386		S1665340		

 SPADE DRILLS

SERIES Y, Z, 0

SPADE DRILL INSERTS - CARBIDE K20

- 🇩🇪 EINWEG BOHREINSATZ - VOLLHARTMETALL K20
- 🇫🇷 Plaquettes SPADE DRILL - Carbure K20
- 🇮🇹 CUSPIDI SPADE DRILL - MD K20



- ▶ 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.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. CARBIDE K20	
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.80	.3860	2.4 (3/32)		S1765098
		10.20	.4016			S1765102
Z Ø11.11(.437) to Ø12.95(.510)		11.00	.4331	2.4 (3/32)	S1755110	S1765110
	7/16	11.11	.4375		S1705028	
	29/64	11.51	.4531			S1715029
	15/32	11.91	.4688			S1715030
		12.00	.4724			S1765120
0 Ø12.98 (.511) to Ø17.65 (.695)		12.50	.4921	3.2 (1/8)		S1765125
	1/2	12.70	.5000			S1715032
		13.00	.5118			S1765130
	17/32	13.49	.5313			S1715034
		13.50	.5315			S1765135
		14.00	.5512			S1765140
	9/16	14.29	.5625			S1715036
		14.50	.5709			S1765145
	37/64	14.68	.5781		S1705037	
		15.00	.5906		S1755150	
		15.50	.6102			S1765155
	5/8	15.88	.6250			S1715040
		16.00	.6299			S1765160
		17.00	.6693		S1755170	
	11/16	17.46	.6875			S1715044
		17.50	.6890			S1765175

◎ : Excellent ○ : Good

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended															◎	◎	◎	◎	◎	◎	
ISO	N									S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

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◎ : Excellent ○ : Good

ISO	P										M				K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC		13	25	28	32	10	29	32	38	15	35	12	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	○	○	○	○		○	○	○	○	○	◎	◎	◎	◎	○	○	○	○	○	○	
ISO	N									S							H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials	Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎						◎			◎	◎	◎	◎	◎			○			

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A325

YG SPADE DRILLS

SERIES **Y, Z, O**

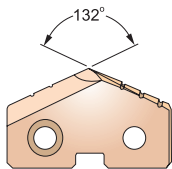
SPADE DRILL INSERTS - CARBIDE P40

-  **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.A361

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. CARBIDE P40		
	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)			S1865095
		9.53	.3750				S1815024
		9.80	.3860		S1855098		
	25/64	9.92	.3906		S1805025		
		10.00	.3937				S1865100
		10.50	.4134				S1865105
Z Ø11.11(.437) to Ø12.95(.510)	27/64	10.72	.4219				S1815027
		11.00	.4331		S1855110	S1860110	
		11.11	.4375				S1815028
	31/64	12.00	.4724			S1860120	
		12.30	.4844				S1815031
		12.50	.4921				S1865125
O Ø12.98 (.511) to Ø17.65 (.695)	1/2	12.70	.5000	2.4 (3/32)			S1815032
		13.00	.5118		S1855130		S1865130
		13.50	.5315		S1855135		S1865135
	35/64	13.89	.5469				
		14.00	.5512		S1855140		S1865140
		14.50	.5709		S1855145		S1865145
	37/64	14.68	.5781				S1815037
		15.00	.5906		S1855150		S1865150
		19/32	15.08	.5938			S1815038
	39/64	15.48	.6094	3.2 (1/8)			S1815039
		15.50	.6102				S1865155
		15.88	.6250				S1815040
	5/8	16.00	.6299				S1865160
		16.50	.6496		S1855165		S1865165
		17.00	.6693				S1865170
	11/16	17.46	.6875				S1815044
		17.50	.6890				S1865175

ISO	P										M										K									
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron										
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20										
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21											
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230										
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎										
ISO	N										S										H									
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron								
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41									
HRc											15	30	25	38	34			55	60	42	55									
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550									
Recommended	◎	◎					◎				◎	◎	◎	◎	◎			◎												

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YG SPADE DRILLS

SERIES **1, 2**

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.A361

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. CARBIDE P40		
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiCN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		18.00	.7087	4.0 (5/32)			S1865180
		18.50	.7283				S1865185
		19.00	.7480		S1855190		S1865190
	25/32	19.50	.7677				S1865195
		19.84	.7813				S1815050
		20.00	.7874				S1865200
		20.50	.8071				S1865205
		21.00	.8268				S1865210
	27/32	21.43	.8438				S1815054
		22.00	.8661				S1865220
		22.23	.8750			S1810056	
	7/8	23.00	.9055				S1865230
		23.42	.9219		S1805059		
		15/16	.9375				S1815060
	31/32	24.00	.9449		S1855240		S1865240
		24.61	.9688				S1815062
		63/64	.9843				S1865250
2 Ø24.41 (.961) to Ø35.05 (1.380)	1	25.40	1.0000	4.8 (3/16)			S1815100
		26.00	1.0236				S1865260
		27.00	1.0630				S1865270
	1-3/16	28.00	1.1024		S1855280		S1865280
		29.00	1.1417				S1865290
		30.00	1.1811				S1865300
		30.16	1.1875		S1805112		S1815112
		30.96	1.2188				S1815114
	1-7/32	31.00	1.2205		S1855310		S1865310
		31.75	1.2500				S1815116
		32.00	1.2598				S1865320
	1-1/4	33.00	1.2992				S1865330
		34.00	1.3386				S1865340
		35.00	1.3780				S1865350

◎ : Excellent ○ : Good																												
ISO	P										M										K							
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron							
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20								
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21								
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230								
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○								
ISO	N										S										H							
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and CopperAlloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41							
HRc											15	30	25	38	34			55	60	42	55							
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550							
Recommended	○	○					○				○	○	○	○	○			◎										

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

COUNTER
BORES

YG SPADE DRILLS

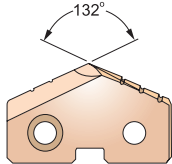
SERIES **3**

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.A361

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)		36.00	1.4173	6.4 (1/4)			S1865360
	1-7/16	36.51	1.4375		S1805128		
		37.00	1.4567				S1865370
		38.00	1.4961				S1865380
	1-9/16	39.69	1.5625				S1815136
		40.00	1.5748		S1855400		S1865400
	1-19/32	40.48	1.5938		S1805138		
		42.00	1.6535			S1860420	
		43.00	1.6929				S1865430
		45.00	1.7717				S1865450
		47.00	1.8504				S1865470

◎ : Excellent ○ : Good

ISO	P										M					K									
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel				Grey cast iron		Nodular cast iron		Malleable cast iron					
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20					
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25							
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230					
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○					
ISO	N										S										H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41				
HRc											15	30	25	38	34			55	60	42	55				
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550				
Recommended	○	○					○				○	○	○	○	○			◎	◎	◎	◎				

YG *Special features of SM-Point Spade Drill*

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

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

Multiple thinning form at the bottom of the large thinning.

- ▶ The optimum thinning for the difference from the cutting speed, the cutting quantity and the cutting load according to the distance from the drill point to the cutting edge.

Radius back face
▶ Wide chip space

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

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

Four-facet point

- ▶ Self-centering
- ▶ Less thrust force

YG SPADE DRILLS

SERIES **1, 2, 3**

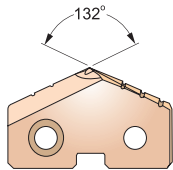
SM-POINT SPADE DRILL INSERTS - HSS M4

- 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 entwickelteQ uerschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : p.A356

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		HSS M4		
					TiN	TiCN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		18.00	.7087	4.0 (5/32)			SM465180
		20.00	.7874				SM465200
		20.50	.8071				SM465205
		21.00	.8268				SM465210
2 Ø24.41 (.961) to Ø35.05 (1.380)	63/64	25.00	.9843				SM465250
		26.00	1.0236			SM460260	
		34.00	1.3386				SM465340
3 Ø34.37 (1.353) to Ø47.80 (1.882)	1-3/8	34.93	1.3750	6.4 (1/4)		SM405124	
		38.00	1.4961		SM455380		SM465380
		39.00	1.5354		SM455390		
		40.00	1.5748		SM455400		SM465400
		42.00	1.6535		SM455420		SM465420
	1-11/16	42.86	1.6875				SM415144
		43.00	1.6929		SM455430		SM465430
		44.00	1.7323				SM465440
		45.00	1.7717		SM455450		SM465450
		46.00	1.8110				SM465460

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC		13	25	28	32		29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	○	○	○	○		○	○								◎	○	◎	○	◎	○	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎					◎														

YG SPADE DRILLS

SERIES **Y, Z, 0**

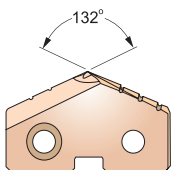
SM-POINT SPADE DRILL INSERTS - SUPER HSS T15

- 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 entwickelteQ uerschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar



cutting conditions : p.A349

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)		SUPER HSS T15	
					TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)	3/8	9.50	.3740	2.4 (3/32)	SM155095	SM165095
		9.53	.3750			SM115024
		9.80	.3858		SM155098	SM165098
	25/64	9.92	.3906			SM115025
		10.00	.3937		SM155100	SM165100
		10.20	.4016			SM165102
		10.50	.4134			SM165105
	27/64	10.72	.4219			SM115027
Z Ø11.11(.437) to Ø12.95(.510)		10.80	.4252	2.4 (3/32)	SM155108	SM165108
		11.00	.4331		SM155110	SM165110
	7/16	11.11	.4375			SM115028
		11.50	.4528			SM165115
	29/64	11.51	.4531			SM115029
	15/32	11.91	.4688			SM115030
		12.00	.4724		SM155120	SM165120
	31/64	12.30	.4844			SM115031
0 Ø12.98 (.511) to Ø17.65 (.695)		12.50	.4921	3.2 (1/8)		SM165125
	1/2	12.70	.5000			SM115032
		13.00	.5118		SM155130	SM165130
	17/32	13.49	.5312			SM115034
		13.50	.5315			SM165135
		14.00	.5512		SM155140	SM165140
	9/16	14.29	.5625			SM115036
		14.50	.5709			SM165145
	37/64	14.68	.5781			SM115037
		15.00	.5906		SM155150	SM165150
		15.50	.6102			SM165155
	5/8	15.88	.6250			SM115040
		16.00	.6299		SM155160	SM165160
		16.50	.6496			SM165165
	21/32	16.67	.6562			SM115042
		17.00	.6693		SM155170	SM165170
	11/16	17.46	.6875			SM115044
		17.50	.6890		SM155175	SM165175

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc																					
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎		◎			◎	◎		○	○	◎	○	○	○	○	◎	○	◎	○	◎	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○					○				◎	○	○	○	○			○			

CARBIDE

HSS

SPADE DRILLS

SERIES 1, 2

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

132°

cutting conditions : p.A349

Series

Min. to Max.

mm (inch)

1

Ø17.53 (.690)

to

Ø24.38 (.960)

2

Ø24.41 (.961)

to

Ø35.05 (1.380)

Diameter

Inch (inch)

Metric (mm)

Decimal (inch)

Thick

Metric (mm, inch)

EDP No.

SUPER HSS T15

TiN

TiAlN

18.00

.7087

18.26

.7188

18.50

.7283

19.00

.7480

19.05

.7500

19.45

.7656

19.50

.7677

20.00

.7874

20.50

.8071

20.64

.8125

21.00

.8268

21.43

.8438

22.00

.8661

22.23

.8750

23.00

.9055

23.02

.9062

23.42

.9219

23.81

.9375

24.00

.9449

25.00

.9843

25.40

1.0000

26.00

1.0236

26.59

1.0469

26.99

1.0625

27.00

1.0630

28.00

1.1024

29.00

1.1417

30.00

1.1811

30.16

1.1875

31.00

1.2205

31.75

1.2500

32.00

1.2598

32.54

1.2812

33.00

1.2992

34.00

1.3386

34.93

1.3750

35.00

1.3780

4.0

(5/32)

4.8

(3/16)

SM165180

SM115046

SM165185

SM165190

SM115048

SM115049

SM165195

SM165200

SM155205

SM165205

SM115052

SM165210

SM115054

SM165220

SM115056

SM165230

SM115058

SM115059

SM115060

SM165240

SM155250

SM165250

SM115100

SM165260

SM115103

SM115104

SM165270

SM165280

SM155290

SM165290

SM165300

SM115112

SM155310

SM165310

SM115116

SM165320

SM165320

SM115118

SM165330

SM165340

SM115124

SM155350

SM165350

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 Q uerschneidengeometrie

Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung

Jede Abmessung außerhalb des Kataloges lieferbar

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions

YG-1 CO., LTD.

SPADE DRILLS

SERIES 3

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

132°

cutting conditions : p.A349

Series

Min. to Max.

mm (inch)

3

Ø34.37 (1.353)

to

Ø47.80 (1.882)

6.4

(1/4)

Diameter

Inch (inch)

Metric (mm)

Decimal (inch)

Thick

Metric (mm, inch)

EDP No.

SUPER HSS T15

TiN

TiCN

TiAlN

1-13/32

35.72

1.4062

36.00

1.4173

37.00

1.4567

38.00

1.4961

1-1/2

38.10

1.5000

1-17/32

38.89

1.5312

39.00

1.5354

40.00

1.5748

1-19/32

40.48

1.5938

41.00

1.6142

1-5/8

41.28

1.6250

42.00

1.6535

1-11/16

42.86

1.6875

43.00

1.6929

1-23/32

43.66

1.7188

44.00

1.7323

1-3/4

44.45

1.7500

45.00

1.7717

1-25/32

45.24

1.7812

46.00

1.8110

1-13/16

46.04

1.8125

47.00

1.8504

1-7/8

47.63

1.8750

6.4

(1/4)

SM115126

SM165360

SM165370

SM155370

SM165380

SM115132

SM115134

SM165390

SM155400

SM165400

SM115138

SM155410

SM165410

SM115140

SM155420

SM165420

SM115144

SM165430

SM115146

SM165440

SM115148

SM165450

SM115150

SM155460

SM165460

SM115152

SM155470

SM165470

SM115156

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 Q uerschneidengeometrie

Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung

Jede Abmessung außerhalb des Kataloges lieferbar

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phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

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YG-1 CO., LTD.

CARBIDE

HSS

SPADE DRILLS

SERIES 3

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

132°

cutting conditions : p.A349

Series

Min. to Max.

mm (inch)

3

Ø34.37 (1.353)

to

Ø47.80 (1.882)

6.4

(1/4)

Diameter

Inch (inch)

Metric (mm)

Decimal (inch)

Thick

Metric (mm, inch)

EDP No.

SUPER HSS T15

TiN

TiCN

TiAlN

1-13/32

35.72

1.4062

36.00

1.4173

37.00

1.4567

38.00

1.4961

1-1/2

38.10

1.5000

1-17/32

38.89

1.5312

39.00

1.5354

40.00

1.5748

1-19/32

40.48

1.5938

41.00

1.6142

1-5/8

41.28

1.6250

42.00

1.6535

1-11/16

42.86

1.6875

43.00

1.6929

1-23/32

43.66

1.7188

44.00

1.7323

1-3/4

44.45

1.7500

45.00

1.7717

1-25/32

45.24

1.7812

46.00

1.8110

1-13/16

46.04

1.8125

47.00

1.8504

1-7/8

47.63

1.8750

6.4

(1/4)

SM115126

SM165360

SM165370

SM155370

SM165380

SM115132

SM115134

SM165390

SM155400

SM165400

SM115138

SM155410

SM165410

SM115140

SM155420

SM165420

SM115144

SM165430

SM115146

SM165440

SM115148

SM165450

SM115150

SM155460

SM165460

SM115152

SM155470

SM165470

SM115156

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 Q uerschneidengeometrie

Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung

Jede Abmessung außerhalb des Kataloges lieferbar

YG-1 CO., LTD.

phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

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YG-1 CO., LTD.


SPADE DRILLS

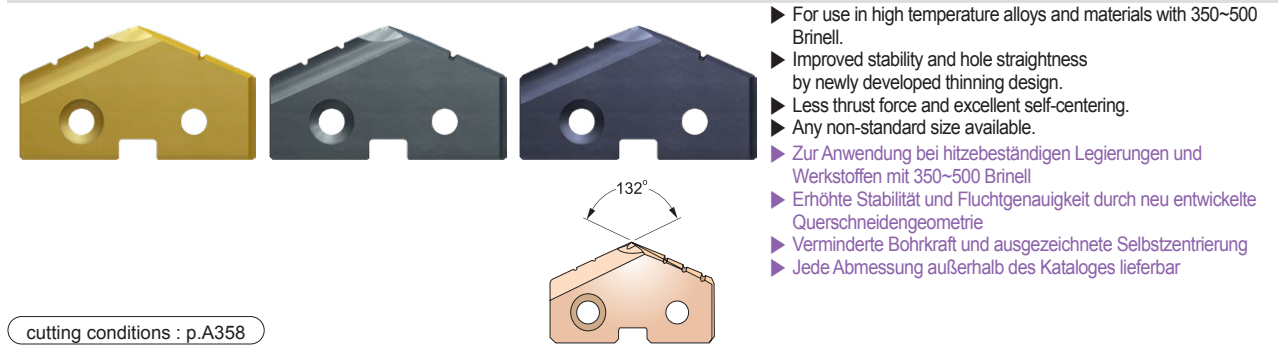
SERIES **1**

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



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
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)			SM515045
		18.00	.7087		SM555180		SM565180
		18.50	.7283				SM565185
		19.00	.7480		SM555190	SM560190	SM565190
	3/4	19.05	.7500				SM515048
	49/64	19.45	.7656				SM515049
		19.50	.7677				SM565195
	25/32	19.84	.7812				SM515050
		20.00	.7874		SM555200	SM560200	SM565200
	51/64	20.24	.7969				SM515051
		20.50	.8071		SM555205		SM565205
	13/16	20.64	.8125				SM515052
		21.00	.8268				SM565210
	27/32	21.43	.8438		SM505054		SM515054
		22.00	.8661		SM555220		SM565220
		23.00	.9055				SM565230
	29/32	23.02	.9062				SM515058
	59/64	23.42	.9219				SM515059
	15/16	23.81	.9375				SM515060
		24.00	.9449		SM555240		SM565240

◎ : Excellent ○ : Good																							
ISO	P										M					K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
HrC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21			
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230			
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎			
ISO	N										S										H		
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
HrC											15	30	25	38	34			55	60	42	55		
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550		
Recommended	○	○					○				◎	◎	◎	◎	◎			◎					

CARBIDE

HSS

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -PRO

DREAM DRILLS X

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

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

REAMERS

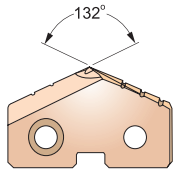
COUNTER SINKS

COUNTER BORES

 SPADE DRILLS

SERIES 2

SM-POINT SPADE DRILL INSERTS - 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 Querschnidegeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar

Cutting conditions : p.A358

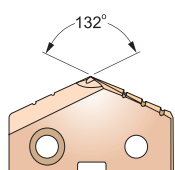
Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		PREMIUM HSS M48		
					TiN		TiAlN
2 Ø24.41 (.961) to Ø35.05 (1.380)	31/32	24.61	.9688	4.8 (3/16)			SM515062
	63/64	25.00	.9843		SM555250		SM565250
	1-1/64	25.80	1.0156				SM515101
		26.00	1.0236		SM555260		SM565260
	1-3/64	26.59	1.0469				SM515103
		27.00	1.0630				SM565270
	1-3/32	27.78	1.0938				SM515106
		28.00	1.1024		SM555280		SM565280
		29.00	1.1417		SM555290		SM565290
		30.00	1.1811		SM555300		SM565300
	1-7/32	30.96	1.2188				SM515114
		31.00	1.2205		SM555310		SM565310
		32.00	1.2598			SM560320	SM565320
		33.00	1.2992		SM555330		SM565330
		34.00	1.3386		SM555340		SM565340
		35.00	1.3780		SM555350		SM565350

ISO	P											M			K								◎ : Excellent ○ : Good			
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron							
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25								
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230						
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	◎	○	◎	○	◎						
ISO	N										S						H									
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron					
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41					
HRc											15	30	25	38	34			55	60	42	55					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550					
Recommended	○	○						○			◎	◎	◎	◎	◎			◎								

 SPADE DRILLS

SERIES Y, Z, O

SM-POINT SPADE DRILL INSERTS for CAST IRON - CARBIDE 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 Querschnidegeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar

cutting conditions : p.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE K10	
					TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	SM655095	
		9.80	.3858		SM655098	
		10.00	.3937		SM655100	
		10.20	.4016		SM655102	
		10.80	.4252		SM655108	
		11.00	.4331		SM655110	
Z Ø11.11(.437) to Ø12.95 (.510)		11.50	.4528	2.4 (3/32)	SM655115	
		12.00	.4724		SM655120	
O Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)	SM655130	SM665130
		13.50	.5315		SM655135	SM665135
		14.00	.5512		SM655140	
	9/16	14.29	.5625			SM615036
		14.50	.5709		SM655145	
	5/8	15.88	.6250			SM615040
		16.00	.6299		SM655160	
		16.50	.6496		SM655165	

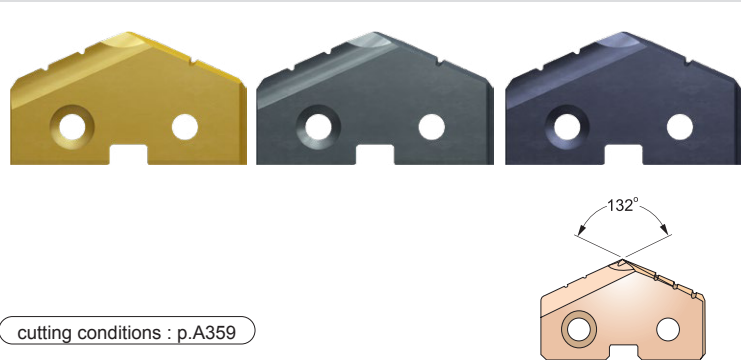
◎ : Excellent ○ : Good																							
ISO	P											M			K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21			
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230			
Recommended															◎	◎	◎	◎	◎	◎			
ISO	N									S						H							
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
HRc											15	30	25	38	34			55	60	42	55		
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550		
Recommended																							

 SPADE DRILLS

SERIES 1, 2

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.A359

Series Min. to Max. mm (inch)	Diameter			Thick	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)	Metric (mm, inch)	CARBIDE K10	
					TiN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		19.00	.7480	4.0 (5/32)	SM655190	
		19.50	.7677		SM655195	
		20.00	.7874		SM655200	
		20.50	.8071		SM655205	
		22.00	.8661		SM655220	
		24.00	.9449			SM665240
2 Ø24.41(.961) to Ø35.05 (1.380)		30.00	1.1811	4.8 (3/16)	SM655300	
		32.00	1.2598		SM655320	
		34.00	1.3386		SM655340	

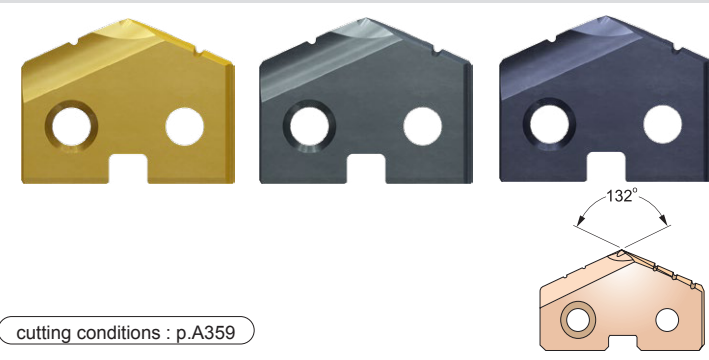
◎ : Excellent ○ : Good																					
ISO	P										M				K						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended															◎	◎	◎	◎	◎	◎	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

 SPADE DRILLS

SERIES Y, Z, 0

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



- 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.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE K20	
					TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)		SM765095
		9.80	.3858			SM765098
		10.00	.3937			SM765100
		10.20	.4016			SM765102
		10.80	.4252			SM765108
		11.00	.4331			SM765110
Z Ø11.11(.437) to Ø12.95 (.510)		11.50	.4528	2.4 (3/32)		SM765115
		12.00	.4724			SM765120
		12.50	.4921			SM765125
O Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)		SM765130
	9/16	14.29	.5625			SM715036
		14.50	.5709			SM765145
		15.00	.5906			SM765150
		15.50	.6102			SM765155
		16.00	.6299			SM765160
		16.50	.6496			SM765165
	21/32	16.67	.6562			SM715042
		17.00	.6693			SM765170
		17.50	.6890			SM765175

ISO	P											M			K									◎ : Excellent ○ : Good		
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron							
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21						
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230						
Recommended	○	○	○	○		○		○	○	○	○	◎	◎	◎		○	○	○	○	○						
ISO	N									S						H										
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast iron		Hardened Cast iron					
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41					
HRc											15	30	25	38	34			55	60	42	55					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550					
Recommended	◎	◎					◎				◎	◎	◎	◎	◎			○								

 SPADE DRILLS

SERIES 1, 2, 3

SM-POINT SPADE DRILL INSERTS - CARBIDE K20

- SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL K20
- Plaquettes SPADE DRILL, pointe SM - Carbure K20
- CUSPIDI SM-POINT - MD K20



- For use in Gray cast iron up to 220 Brinell, nonferrous metals, copper, brass and aluminum.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.
- Zur Anwendung in Grauguss bis 220 Brinell, Nichteisen - Metallen, Kupfer, Messing und Aluminium
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar

cutting conditions : p.A359

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.	
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE K20	
					TiN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		18.00	.7087	4.0 (5/32)	SM755180	SM765180
		18.50	.7283		SM755185	SM765185
		19.00	.7480			SM765190
		19.50	.7677			SM765195
		20.00	.7874			SM765200
	51/64	20.24	.7969			SM715051
		20.50	.8071		SM755205	SM765205
	13/16	20.64	.8125			SM715052
		21.00	.8268			SM765210
		22.00	.8661			SM765220
2 Ø24.41(.961) to Ø35.05 (1.380)		22.23	.8750	4.8 (3/16)	SM705056	
		23.00	.9055			SM765230
		24.00	.9449			SM765240
	63/64	25.00	.9843			SM765250
	1	25.40	1.0000			SM715100
		26.00	1.0236			SM765260
	1-3/64	26.59	1.0469			SM715103
		27.00	1.0630			SM765270
		30.00	1.1811			SM765300
	1-3/16	30.16	1.1875		SM705112	
3 Ø34.37 (1.353) to Ø47.80 (1.882)		32.00	1.2598	6.4 (1/4)		SM765320
		33.00	1.2992			SM765330
		34.00	1.3386			SM765340
	1-15/32	37.31	1.4688			SM715130
		38.00	1.4961			SM765380
		39.00	1.5354			SM765390
		43.00	1.6929			SM765430
		44.00	1.7323			SM765440
	1-13/16	46.04	1.8125		SM705152	
		44.00	1.7323		SM755440	

◎ : Excellent ○ : Good

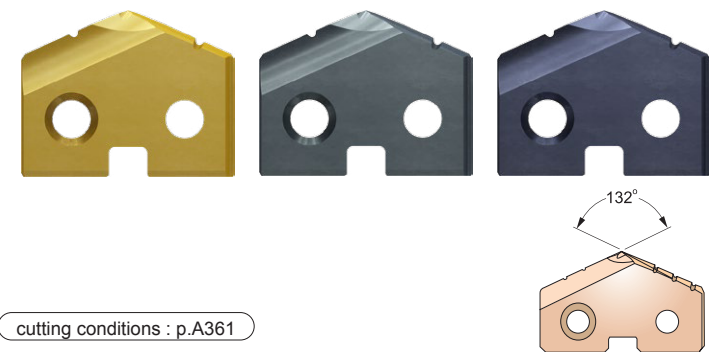
ISO	P										M				K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRC																						
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommended	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	○	○	○	○	○	○		
ISO	N										S						H					
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
HRC											15	30	25	38	34			55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	◎	◎					◎				◎	◎	◎	◎	◎			○				

 SPADE DRILLS

SERIES Y, Z, 0

SM-POINT SPADE DRILL INSERTS - CARBIDE P40

- SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL P40
- Plaquettes SPADE DRILL, pointe SM - Carbure P40
- CUSPIDI SM-POINT - MD P40



- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.
- Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen
- Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschneidengeometrie
- Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung
- Jede Abmessung außerhalb des Kataloges lieferbar

cutting conditions : p.A361

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE P40		
					TiN	TiCN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)			SM865095
		10.00	.3937				SM865100
		10.50	.4134				SM865105
		11.00	.4331				SM865110
Z Ø11.11 (.437) to Ø12.95 (.510)		11.50	.4528	2.4 (3/32)	SM855115		SM865115
	29/64	11.51	.4531				SM815029
		12.00	.4724				SM865120
		13.50	.5315				SM865135
		14.00	.5512	3.2 (1/8)			SM865140
		14.50	.5709		SM855140		SM865140
					SM855145		SM865145
		15.00	.5906				SM865150
		15.50	.6102				SM865155
		16.00	.6299		SM855160		SM865160
		16.50	.6496		SM855165		SM865165
		17.00	.6693				SM865170
	11/16	17.46	.6875				SM815044
		17.50	.6890		SM855175	SM860175	SM865175

◎ : Excellent ○ : Good

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC																					
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎		◎			◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○					○				○	○	○	○	○			◎			

Y/G SPADE DRILLS

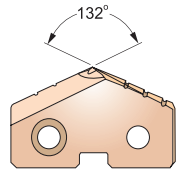
SERIES **1, 2**

SM-POINT SPADE DRILL INSERTS - CARBIDE P40

🇪🇺 **SM-POINT EINWEG BOHREINSATZ - VOLLHARTMETALL P40**

🇫🇷 **Plaquettes SPADE DRILL, pointe SM - Carbure P40**

🇮🇹 **CUSPIDI SM-POINT - MD P40**



- For general use in carbon steels and alloys steels.
- Improved stability and hole straightness by newly developed thinning design.
- Less thrust force and excellent self-centering.
- Any non-standard size available.

► Für allgemeine Anwendung in Kohlenstoffstählen und legierten Stählen

► Erhöhte Stabilität und Fluchtgenauigkeit durch neu entwickelte Querschnidegeometrie

► Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung

► Jede Abmessung außerhalb des Kataloges lieferbar

cutting conditions : p.A361

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE P40		
					TiN	TiCN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)	45/64	17.86	.7031	4.0 (5/32)			SM815045
		18.00	.7087		SM855180		SM865180
		18.50	.7283		SM855185		SM865185
		19.00	.7480				SM865190
		19.50	.7677				SM865195
		20.00	.7874			SM860200	SM865200
	51/64	20.24	.7969				SM815051
		20.50	.8071				SM865205
		21.00	.8268				SM865210
	27/32	21.43	.8438				SM815054
		22.00	.8661				SM865220
		23.00	.9055				SM865230
		24.00	.9449				SM865240
							SM865250
2 Ø24.41 (.961) to Ø35.05 (1.380)	63/64	25.00	.9843	4.8 (3/16)			SM815100
	1	25.40	1.0000		SM855260		SM865260
		26.00	1.0236				SM815102
	1-1/32	26.19	1.0312				SM815103
	1-3/64	26.59	1.0469				SM865270
		27.00	1.0630				SM815106
	1-3/32	27.78	1.0938				SM865280
		28.00	1.1024		SM805110		
	1-5/32	29.37	1.1562				SM865300
		30.00	1.1811				SM815112
	1-3/16	30.16	1.1875				SM815114
	1-7/32	30.96	1.2188				SM865310
		31.00	1.2205				SM865320
		32.00	1.2598				SM865330
		33.00	1.2992				SM815120
	1-5/16	33.34	1.3125				SM865340
		34.00	1.3386				SM865350
		35.00	1.3780				

◎ : Excellent ○ : Good

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○						○			○	○	○	○	○			◎			

Y/G SPADE DRILLS

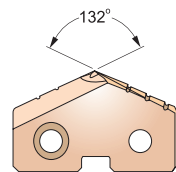
SERIES **3**

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 Querschnidegeometrie

► Verminderte Bohrkraft und ausgezeichnete Selbstzentrierung

► Jede Abmessung außerhalb des Kataloges lieferbar

cutting conditions : p.A361

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No.		
	Inch (inch)	Metric (mm)	Decimal (inch)		CARBIDE P40		
					TiN	TiCN	TiAlN
3 Ø34.37 (1.353) to Ø47.80 (1.882)		36.00	1.4173	6.4 (1/4)			SM865360
	1-15/32	37.31	1.4688				SM815130
		38.00	1.4961				SM865380
		39.00	1.5354				SM865390
		40.00	1.5748				SM865400
		41.00	1.6142				SM865410
		42.00	1.6535				SM865420
		43.00	1.6929				SM865430
		47.00	1.8504				SM865470

◎ : Excellent ○ : Good

ISO	P										M			K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommended	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○	
ISO	N										S						H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○						○			○	○	○	○	○			◎			

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

COUNTER
BORES

 SPADE DRILLS

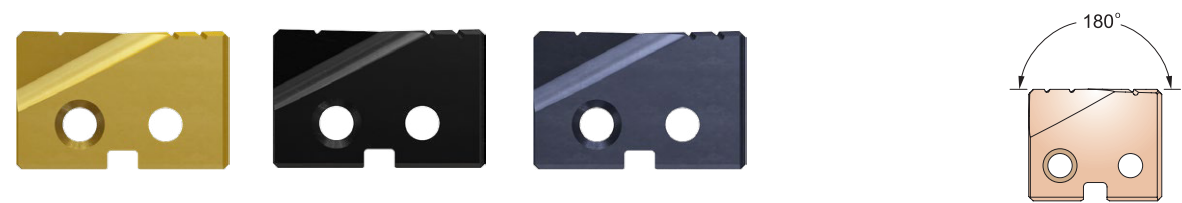
SERIES **Y, Z, 0**

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**



cutting conditions : p.A352

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. SUPER HSS T15	
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN
Y Ø9.50 (.374) to Ø11.07 (.436)		9.50	.3740	2.4 (3/32)	S215509	
		9.80	.3858			S2165098
		10.00	.3937			S2165100
		10.20	.4016			S2165102
		10.50	.4134			S2165105
		10.80	.4252			S2165108
Z Ø11.11 (.437) to Ø12.95 (.510)		11.50	.4528	2.4 (3/32)		S2165115
0 Ø12.98 (.511) to Ø17.65 (.695)		13.00	.5118	3.2 (1/8)		S2165130
		14.00	.5512			S2165140
		14.50	.5709			S2165145
		15.00	.5906			S2165150
		15.50	.6102			S2165155
		16.00	.6299			S2165160
		16.50	.6496			S2165165
		17.00	.6693			S2165170
		17.50	.6890			S2165175

ISO	P										M			K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	◎	○	○	○	○	◎	○	◎	○	◎		
ISO	N										S						H					
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys				Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
HRc											15	30	25	38	34			55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
Recommended	○	○					○				◎	○	○	○	○			○				

A346 phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions  **YG-1 CO., LTD.**

 SPADE DRILLS

SERIES **1, 2**

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**



Cutting conditions : p.A352

Series Min. to Max. mm (inch)	Diameter			Thick Metric (mm, inch)	EDP No. SUPER HSS T15	
	Inch (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN
1 Ø17.53 (.690) to Ø24.38 (.960)		18.00	.7087	4.0 (5/32)		S2165180
		18.50	.7283		S2155185	S2165185
	47/64	18.65	.7344			S2115047
		19.00	.7480			S2165190
		20.00	.7874			S2165200
	13/16	20.64	.8125		S2105052	S2115052
		21.00	.8268			S2165210
		22.00	.8661			S2165220
2 Ø24.41 (.961) to Ø35.05 (1.380)		23.00	.9055	4.8 (3/16)	S2155230	S2165230
		24.00	.9449			S2165240
		26.00	1.0236			S2165260
	1-1/16	26.99	1.0625			S2115104
		27.00	1.0630			S2165270
		28.00	1.1024			S2165280
		29.00	1.1417			S2165290
		30.00	1.1811			S2165300
		31.00	1.2205			S2165310
		32.00	1.2598			S2165320
		33.00	1.2992		S2155330	S2165330
		34.00	1.3386			S2165340
		35.00	1.3780			S2165350

ISO	P											M			K						◎ : Excellent ○ : Good			
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron					
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21				
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230				
Recommended	◎	◎	◎	◎		◎	◎	○	○	○	◎	○	○	○	○	◎	○	◎	○	◎				
ISO	N									S										H				
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
HRc											15	30	25	38	34			55	60	42				
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400				
Recommended	○	○						○			◎	○	○	○	○			○						

 **YG-1 CO., LTD.** phone:+82-32-526-0909, www.yg1.solutions, E-mail:yg1@yg1.solutions **A347**

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

COUNTER
BORES

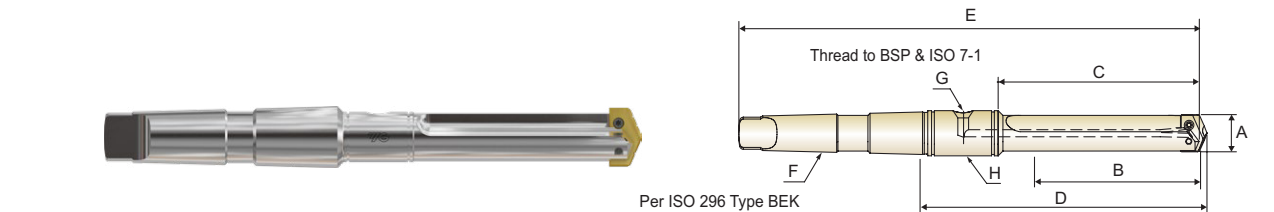


Z**STSMT SERIES

Z**ITHMT SERIES

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
0	Z00STSMT02M	13.0 ~ 17.5	35.0	55.5	92.4	164.3	#2	1/16	PR120190
0.5	Z05STSMT02M	15.5 ~ 17.5	35.0	55.5	92.4	164.3	#2	1/16	PR120190
1	Z10STSMT03M	18.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8	PR120254
1.5	Z15STSMT03M	22.0 ~ 24.0	69.8	98.4	142.5	232.5	#3	1/8	PR120254
2	Z20STSMT04M	25.0 ~ 35.0	85.7	114.3	160.4	273.8	#4	1/8	PR120254
2.5	Z25STSMT04M	30.0 ~ 35.0	85.7	114.3	167.6	281.0	#4	1/4	PR120317
3	Z30STSMT04M	36.0 ~ 47.0	120.6	152.4	206.4	319.1	#4	1/4	PR120317
4	Z40STSMT05M	48.0 ~ 65.0	130.1	165.1	219.1	363.5	#5	1/4	PR120444
5~6	Z50STSMT05M	64.0 ~ 88.0	171.5	215.9	287.3	430.2	#5	1/2	PR120571
7~8	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 374)



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 374)



Z**SDHMT SERIES

TAPER SHANK HOLDERS

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



STANDARD 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	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
5~6	Z50SDHMT05M	64.0 ~ 88.0	273.1	317.5	388.9	531.8	#5	1/2	PR120571
7~8	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 internal cooling. (See page 374)

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

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DRILLS
-HIGH FEED

DREAM
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-FLAT BOTTOM

DREAM
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-INOX

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DRILLS
-ALU

DREAM
DRILLS
-MQL

DREAM DRILLS
for HIGH
HARDENED STEELS

GENERAL
CARBIDE
DRILLS

MULTI-1
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HPD
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GOLD-P
DRILLS

SUPER-GP
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TAPER SHANK
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NC-
SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

REAMERS

COUNTER
SINKS

COUNTER
BORES

CARBIDE

HSS

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i-DREAM
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-PRO

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-GENERAL

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-HIGH FEED

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-FLAT BOTTOM

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-INOX

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-ALU

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-MQL

DREAM DRILLS
for HIGH
HARDENED STEELS

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SUPER-GP
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REAMERS

COUNTER
SINKS

COUNTER
BORES



Z**EXHMT SERIES

Z**EXSMT SERIES

TAPER SHANK HOLDERS

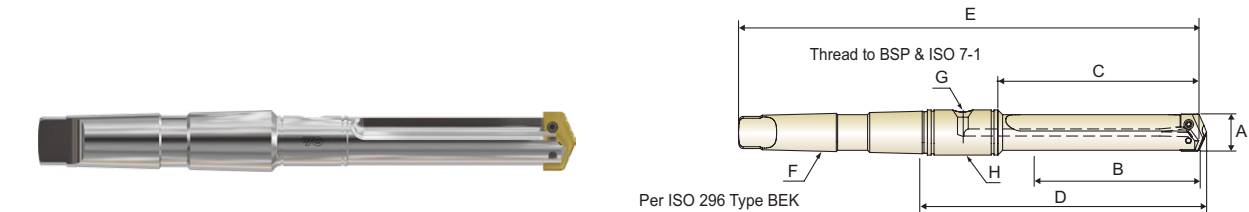
- HALTER MIT MORSEKEGEL
- Porte-plaquette à queue cône morse
- PUNTE CON ATTACCO CM



EXTENDED LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
Y	ZY0EXHMT02M	9.5 ~ 11.0	111.1	130.9	167.4	239.7	#2	1/16	PR120190
Z	ZZ0EXHMT02M	11.5 ~ 12.5	111.1	130.9	167.4	239.7	#2	1/16	PR120190
0	Z00EXHMT02M	13.0 ~ 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 374)



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
5~6	Z50EXSMT05M	64.0 ~ 88.0	463.6	508.0	579.4	722.3	#5	1/2	PR120571
7~8	Z70EXSMT05M	90.0 ~ 114.0	555.6	609.6	681.1	823.9	#5	1/2	PR120571

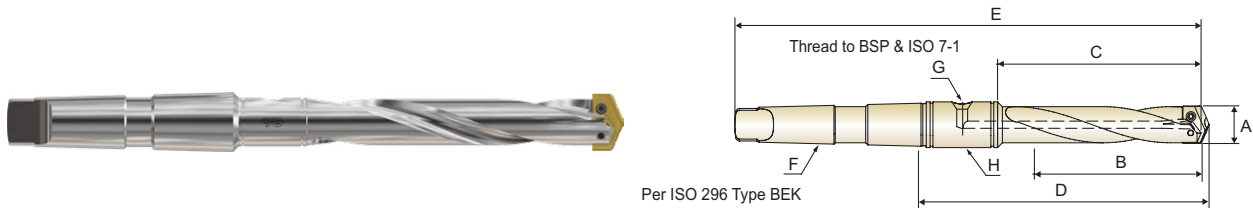
► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 374)



Z**LGHMT SERIES

TAPER SHANK HOLDERS

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



LONG LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	MT	Pipe Tap	RCA
		A	B	C	D	E	F	G	H
0	Z00LGHMT02M	13.0 ~ 17.5	177.8	198.5	235.3	307.2	#2	1/16	PR120190
0.5	Z05LGHMT02M	15.5 ~ 17.5	177.8	198.5	235.3	307.2	#2	1/16	PR120190

► You can also apply RCA(Rotary Coolant Adapter) for internal cooling. (See page 374)

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

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

REAMERS

COUNTER
SINKS

COUNTER
BORES

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

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-INOX

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-ALU

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-MQL

DREAM DRILLS
for HIGH
HARDENED STEELS

GENERAL
CARBIDE
DRILLS

MULTI-1
DRILLS

HPD
DRILLS

GOLD-P
DRILLS

SUPER-GP
DRILLS

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SHANK
DRILLS

TAPER SHANK
DRILLS

NC-
SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

REAMERS

COUNTER
SINKS

COUNTER
BORES



Z**SBSF SERIES

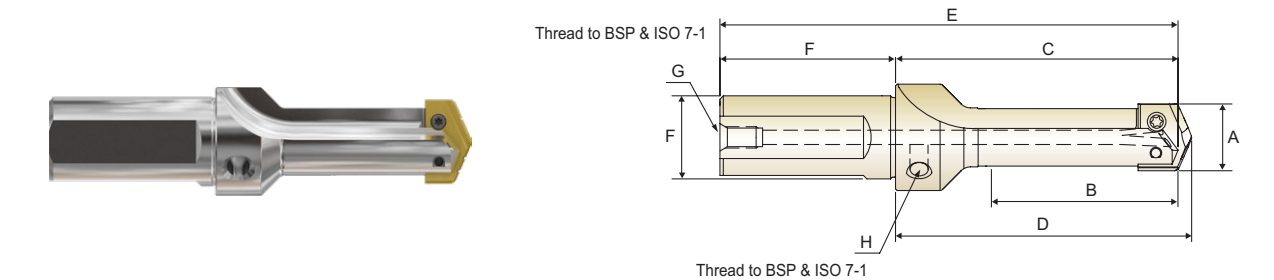
Z**STSF SERIES

FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

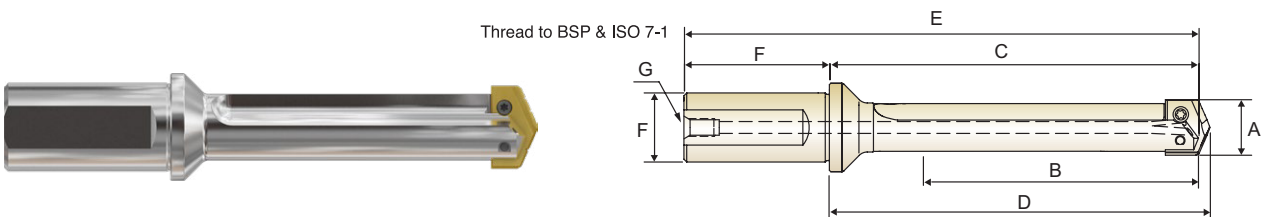
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



STUB LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia.	Length	Rear	Side
		A	B	C	D	E	F		G	H
Y	ZY0SBSF016M	9.5 ~ 11.0	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
Z	ZZ0SBSF016M	11.5 ~ 12.5	19.1	47.6	50.0	95.6	16.0	48.0	1/16	1/8
0	Z00SBSF020M	13.0 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
0.5	Z05SBSF020M	15.5 ~ 17.5	22.2	47.6	50.4	97.6	20.0	50.0	1/8	1/8
1	Z10SBSF025M	18.0 ~ 24.0	47.6	75.8	79.4	131.8	25.0	56.0	1/8	1/8
1.5	Z15SBSF025M	22.0 ~ 24.0	57.2	88.5	92.1	144.5	25.0	56.0	1/8	1/8
2	Z20SBSF032M	25.0 ~ 35.0	57.2	88.5	92.1	148.5	32.0	60.0	1/4	1/8
2.5	Z25SBSF032M	30.0 ~ 35.0	92.1	123.4	127.0	183.4	32.0	60.0	1/4	1/8
3	Z30SBSF040M	36.0 ~ 47.0	76.2	125.0	129.8	195.0	40.0	70.0	1/4	1/4



SHORT LENGTH - Straight Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0STSF020M	9.5 ~ 11.0	31.8	61.1	63.5	111.1	20.0	50.0	1/8
Z	ZZ0STSF020M	11.5 ~ 12.5	31.8	61.1	63.5	111.1	20.0	50.0	1/8
0	Z00STSF020M	13.0 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8
0.5	Z05STSF020M	15.5 ~ 17.5	34.9	63.5	66.3	113.5	20.0	50.0	1/8
1	Z10STSF025M	18.0 ~ 24.0	66.7	107.2	110.7	163.2	25.0	56.0	1/8
1.5	Z15STSF025M	22.0 ~ 24.0	66.7	107.2	110.7	163.2	25.0	56.0	1/8
2	Z20STSF032M	25.0 ~ 35.0	85.7	128.6	132.2	188.6	32.0	60.0	1/4
2.5	Z25STSF032M	30.0 ~ 35.0	85.7	128.6	132.2	188.6	32.0	60.0	1/4
3	Z30STSF040M	36.0 ~ 47.0	120.7	173.0	177.8	243.0	40.0	70.0	1/4
4	Z40STSF040M	48.0 ~ 65.0	130.2	179.4	184.0	249.4	40.0	70.0	1/4



Z**ITHF SERIES

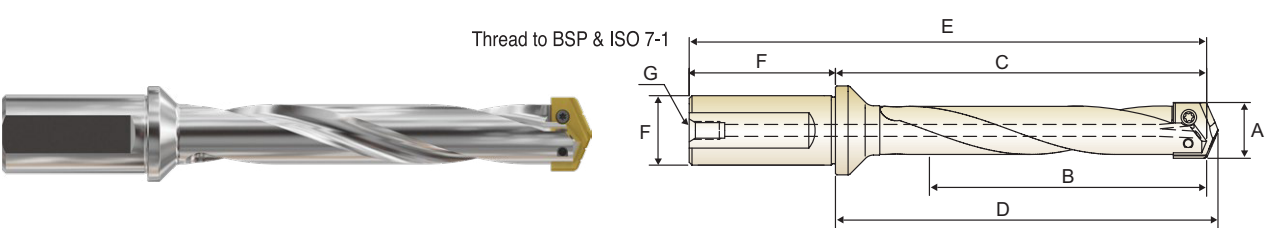
Z**SDHF SERIES

FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

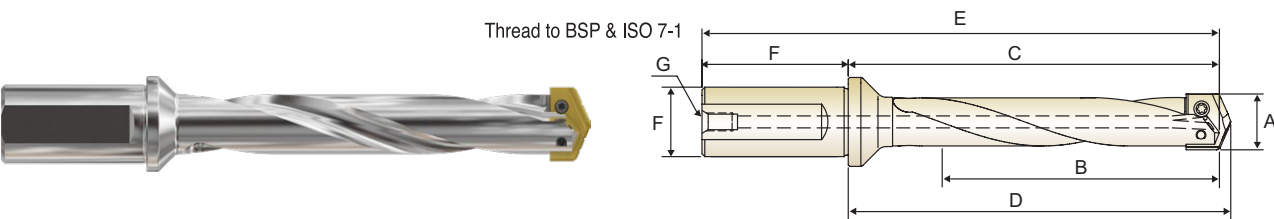
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



INTERMEDIATE LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
1	Z10ITHF025M	18.0 ~ 24.0	117.5	154.8	158.4	210.8	25.0	56.0	1/8
1.5	Z15ITHF025M	22.0 ~ 24.0	117.5	154.8	158.4	210.8	25.0	56.0	1/8
2	Z20ITHF032M	25.0 ~ 35.0	136.5	179.4	183.0	239.4	32.0	60.0	1/4
2.5	Z25ITHF032M	30.0 ~ 35.0	136.5	179.4	183.0	239.4	32.0	60.0	1/4
3	Z30ITHF040M	36.0 ~ 47.0	165.1	217.5	222.3	287.5	40.0	70.0	1/4



STANDARD LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	ZY0SDHF020M	9.5 ~ 11.0	60.3	89.7	92.1	139.7	20.0	50.0	1/8
Z	ZZ0SDHF020M	11.5 ~ 12.5	60.3	89.7	92.1	139.7	20.0	50.0	1/8
0	Z00SDHF020M	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

CARBIDE

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i-ONE
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-GENERAL

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-HIGH FEED

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-FLAT BOTTOM

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DREAM DRILLS
for HIGH
HARDENED STEELS

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Z**EXHF SERIES

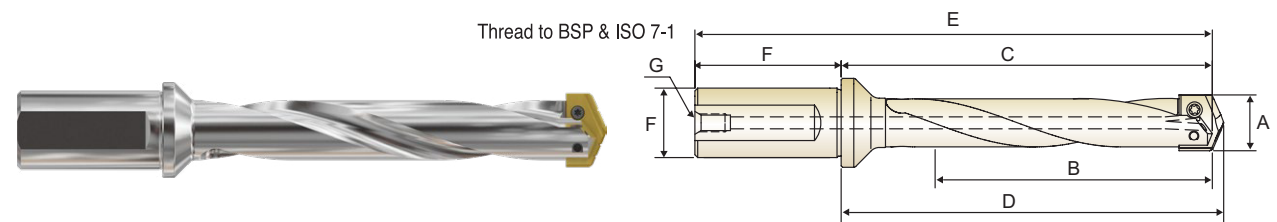
Z**EXSF SERIES

FLANGED STRAIGHT SHANK HOLDERS

HALTER MIT ZYLINDERSCHAFT UND SPANNFLÄCHE

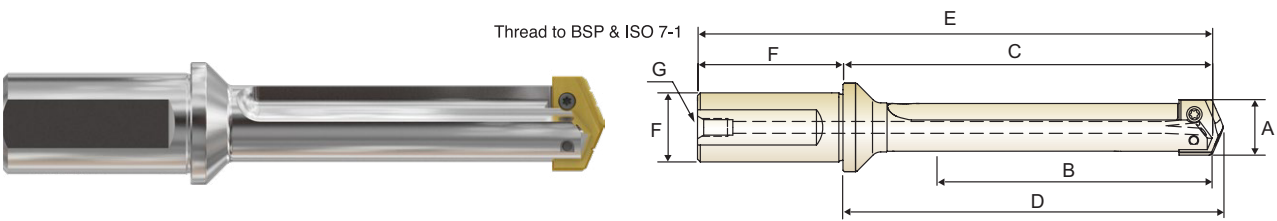
Porte-plaquette à colerette queue cylindrique

PUNTE ATTACCO CILINDRICO FLANGIATO



EXTENDED LENGTH - Helical Flute (Metric)

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Body Length	Ref. Length	Overall Length	Shank		Pipe Tap
		A	B	C	D	E	Dia.	Length	G
Y	ZY0EXHF020M	9.5 ~ 11.0	111.1	140.5	142.9	190.5	20.0	50.0	1/8
Z	ZZ0EXHF020M	11.5 ~ 12.5	111.1	140.5	142.9	190.5	20.0	50.0	1/8
0	Z00EXHF020M	13.0 ~ 17.5	114.3	142.9	145.7	192.9	20.0	50.0	1/8
0.5	Z05EXHF020M	15.5 ~ 17.5	114.3	142.9	145.7	192.9	20.0	50.0	1/8
1	Z10EXHF025M	18.0 ~ 24.0	269.9	307.2	310.8	363.2	25.0	56.0	1/8
1.5	Z15EXHF025M	22.0 ~ 24.0	269.9	307.2	310.8	363.2	25.0	56.0	1/8
2	Z20EXHF032M	25.0 ~ 35.0	288.9	331.8	335.4	391.8	32.0	60.0	1/4
2.5	Z25EXHF032M	30.0 ~ 35.0	288.9	331.8	335.4	391.8	32.0	60.0	1/4



EXTENDED LENGTH - Straight Flute (Metric)

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

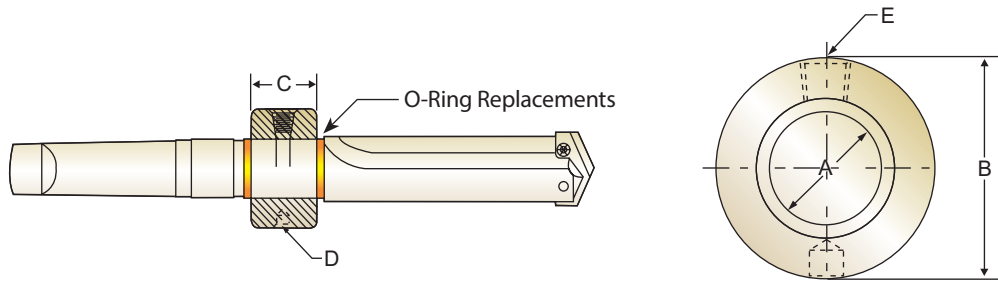


RECOMMENDED CUTTING CONDITIONS

EMPFOHLENE SCHNEIDKONDITIONEN

HOLDER ACCESSORIES

ROTARY COOLANT ADAPTER (RCA) AND ACCESSORIES



Inch

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap
	A	B	C	D	E
PR110048	3/4	1-3/4	7/8	5/16-NC	1/8
PR110100	1	2-1/8	1-1/8	5/16-NC	1/8
PR110116	1-1/4	2-1/2	1-3/8	3/8-NC	1/4
PR110148	1-3/4	3	1-3/8	3/8-NC	1/4
PR110216	2-1/4	3-3/4	1-3/4	1/2-NC	1/2

Metric

Item No.	I.D.	O.D.	Length	Thread for Driving Rod	Pipe Tap
	A	B	C	D	E
PR120190	19.05	44.45	22.23	M8 × 1.25	1/8
PR120254	25.40	53.97	28.57	M8 × 1.25	1/8
PR120317	31.75	63.50	34.92	M10 × 1.5	1/4
PR120444	44.45	76.20	34.92	M10 × 1.5	1/4
PR120571	57.15	95.27	44.45	M12 × 1.75	1/2

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		33/64 ~ 11/16	13.0 mm ~ 17.5 mm
0.5	J0805310	J0500080	39/64 ~ 11/16	15.5 mm ~ 17.5 mm
1	J0910410		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		1-13/32 ~ 2-9/16	36.0 mm ~ 65.0 mm
5 ~ 8	J2550910		2-1/2 ~ 4-1/2	64.0 mm ~ 114.0 mm

** Note : Replacement screws sold in packages(10 screws per package)

CARBIDE

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-GENERAL

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DREAM DRILLS
for HIGH
HARDENED STEELS

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REAMERS

COUNTER
SINKS

COUNTER
BORES



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

SPADE DRILL HSS M4

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

ISO	VDI 3323	Material Description	Vc			Feed						
			TiN	TiCN	TiAlN	Ø9.5-12.5	Ø13-17.5	Ø18-24	Ø25-35	Ø36-47	Ø48-65	Ø66-114
P	1	Non-alloy steel	54	67	75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	2		49	58	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	3		45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	4		45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	6	Low alloy steel	45	56	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
	7		41	50	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
K	15	Grey cast iron	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	16		29	35	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
	17	Nodular cast iron	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	18		35	44	52	0.13	0.17	0.23	0.3	0.35	0.43	0.50
	19	Malleable cast iron	52	64	75	0.16	0.30	0.40	0.49	0.59	0.69	0.75
N	20		35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
	21	Aluminum-wrought alloy	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.70
	22		92	137	137	0.19	0.33	0.41	0.46	0.54	0.64	0.70
	27	Copper and Copper Alloys (Bronze / Brass)	95	128	142	0.19	0.31	0.43	0.53	0.64	0.74	0.79

► 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.



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

SPADE DRILL HSS T15

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

ISO	VDI 3323	Material Description	Vc			Feed						
			TiN	TiCN	TiAlN	Ø9.5-12.5	Ø13-17.5	Ø18-24	Ø25-35	Ø36-47	Ø48-65	Ø66-114
P	1	Non-alloy steel	54	67	75	0.15	0.22	0.28	0.37	0.46	0.56	0.67
	2		49	58	69	0.13	0.19	0.24	0.34	0.43	0.50	0.57
	3		45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	4		45	56	63	0.13	0.19	0.23	0.34	0.43	0.50	0.58
	6	Low alloy steel	45	56	58	0.13	0.20	0.24	0.36	0.42	0.46	0.55
	7		41	50	56	0.13	0.16	0.23	0.35	0.41	0.44	0.55
	8		39	47	53	0.09	0.15	0.22	0.28	0.38	0.41	0.50
	9		36	43	46	0.08	0.15	0.21	0.27	0.38	0.40	0.51
	10	High alloyed steel, and tool steel	25	34	36	0.08	0.17	0.20	0.24	0.30	0.37	0.39
	11		19	27	29	0.08	0.14	0.18	0.19	0.25	0.29	0.34
M	12	Stainless steel	20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46
	13		20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46
	14		24	29	34	0.14	0.20	0.23	0.26	0.36	0.41	0.50
K	15	Grey cast iron	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	16		29	35	41	0.10	0.15	0.16	0.23	0.28	0.35	0.40
	17	Nodular cast iron	48	58	70	0.14	0.26	0.35	0.45	0.56	0.64	0.68
	18		35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
	19	Malleable cast iron	52	64	75	0.16	0.30	0.40	0.49	0.59	0.69	0.75
	20		35	44	52	0.13	0.17	0.23	0.30	0.35	0.43	0.50
N	21	Aluminum-wrought alloy	187	229	244	0.19	0.33	0.41	0.50	0.54	0.64	0.70
	22		92	137	137	0.19	0.33	0.41	0.46	0.54	0.64	0.70
	27	Copper and Copper Alloys (Bronze / Brass)	95	128	142	0.19	0.31	0.43	0.53	0.64	0.74	0.79
S	31	Heat Resistant Super Alloys	9	11	12	0.08	0.17	0.20	0.24	0.30	0.37	0.39
	32		8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
	33		8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
	34		8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
	35		8	9	11	0.08	0.14	0.18	0.19	0.25	0.29	0.34
H	38	Hardened steel	20	23	29	0.12	0.18	0.20	0.24	0.30	0.36	0.46

► 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.

CARBIDE

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DREAM DRILLS
for HIGH
HARDENED STEELS

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SPADE DRILL CARBIDE P40

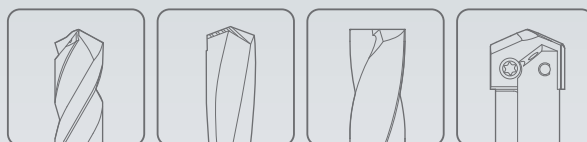
Vc = m/min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc			Feed				
			TiN	TiCN	TiAlN	Ø9.5-12.5	Ø13-17.5	Ø18-24	Ø25-35	Ø36-47
P	1	Non-alloy steel	94	110	119	0.20	0.24	0.31	0.42	0.46
	2		76	82	96	0.15	0.22	0.29	0.36	0.40
	3		66	70	84	0.15	0.22	0.28	0.36	0.40
	4		66	70	84	0.15	0.22	0.28	0.36	0.40
	6	Low alloy steel	73	81	88	0.15	0.23	0.29	0.38	0.42
	7		66	73	81	0.15	0.21	0.28	0.37	0.41
	8		62	70	78	0.12	0.20	0.27	0.33	0.40
	9		53	58	64	0.10	0.18	0.23	0.30	0.38
	10	High alloyed steel, and tool steel	50	56	67	0.09	0.18	0.22	0.28	0.31
	11		37	46	50	0.09	0.18	0.22	0.28	0.31
M	12	Stainless steel	38	43	47	0.10	0.18	0.20	0.24	0.30
	13		38	43	47	0.10	0.18	0.20	0.24	0.30
	14		43	49	55	0.12	0.20	0.23	0.27	0.35
K	15	Grey cast iron	95	101	125	0.17	0.26	0.32	0.42	0.53
	16		56	70	79	0.13	0.18	0.23	0.28	0.33
	17	Nodular cast iron	95	101	125	0.17	0.26	0.32	0.42	0.53
	18		66	81	93	0.13	0.15	0.28	0.33	0.37
	19	Malleable cast iron	98	125	137	0.18	0.30	0.37	0.46	0.56
	20		66	81	93	0.13	0.15	0.28	0.33	0.37
N	21	Aluminum-wrought alloy	366	396	427	0.24	0.38	0.45	0.50	0.53
	22		244	290	291	0.22	0.33	0.40	0.45	0.48
	27	Copper and Copper Alloys (Bronze / Brass)	136	168	193	0.15	0.24	0.29	0.39	0.47
S	31	Heat Resistant Super Alloys	50	55	62	0.19	0.19	0.21	0.24	0.30
	32		38	44	46	0.15	0.17	0.20	0.21	0.25
	33		38	44	46	0.15	0.17	0.20	0.21	0.25
	34		38	44	46	0.15	0.17	0.20	0.21	0.25
	35		38	44	46	0.15	0.17	0.20	0.21	0.25
H	38	Hardened steel	38	43	47	0.10	0.18	0.20	0.24	0.30

► 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**



HOLEMAKING