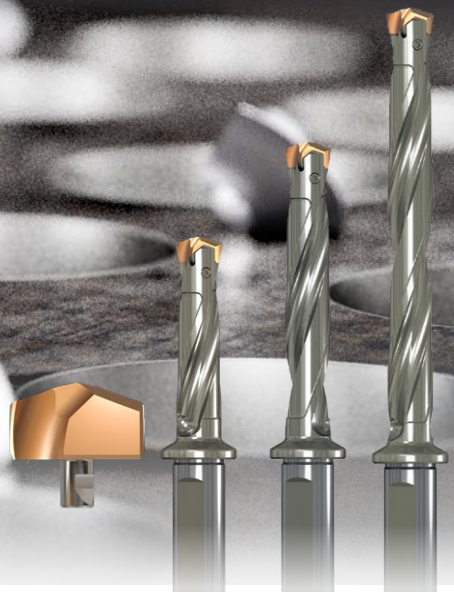




Leading Through Innovation

CARBIDE INSERTS & HOLDERS



i - ONE DRILLS

i-One Drills

- High Performance Exchangeable for General Steels and Cast Iron
- Leistungsstarke, austauschbare Bohrwerkzeuge für allgemeine Stähle und Gusseisen

SELECTION GUIDE

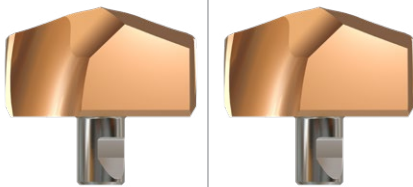


SERIES	Y101H	Y121H	Y141H	Y161H
SIZE MIN	10.00	12.00	14.00	16.00
SIZE MAX	11.90	13.90	15.90	17.90
PAGE	A24	A25	A26	A27
SURFACE TREATMENT	H-Coating			

CARBIDE INSERTS & HOLDERS

i-ONE DRILLS

High Performance Exchangeable
for General Steels and Cast Iron



Please visit globalyg1.com/mat for material search

© : Excellent ○ : Good

Recommended cutting conditions : p.A34

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		Austenitic10		180	10				
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎	◎	◎	◎
	16		Pearlitic (Martensitic)		260	26	◎	◎	◎	◎
	17	Nodular cast iron	Ferritic		160	3	◎	◎	◎	◎
	18		Pearlitic		250	25	◎	◎	◎	◎
	19	Malleable cast iron	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	Non Metallic Materials	CuSn, lead-free copper and electrolytic copper		100					
	29		Duroplastic, Fiber Reinforced Plastic							
	30		Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15				
	32			Cured	280	30				
	33		Ni or Co Based	Annealed	250	25				
	34			Cured	350	38				
	35			Cast	320	34				
	36	Titanium Alloys	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				

Y181H	Y201H	Y221H	Y241H	Y261H	Y281H	Y301H	Y321H	ZD*3	ZD*5	ZD*8
18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00			
19.80	21.83	23.90	25.80	27.78	29.77	31.75	33.73			
A28	A29	A30	A31	A32		A33				
H-Coating								3XD	5XD	8XD
										
◎	◎	◎	◎	◎	◎	◎	◎			
◎	◎	◎	◎	◎	◎	◎	◎			
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i-ONE DRILL INSERTS & HOLDERS

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

- Applications

►For carbon steels, alloy steels and cast iron.

►Holder length: 3xD, 5xD, 8xD

- Benefits

►Secure and quick clamping system.

►High performance with cost efficiency.

►Multi-layered coating delivers outstanding productivity and reliability.
- Anwendungen

►Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

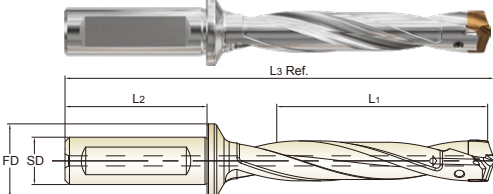
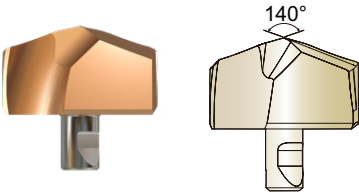
►Halterlänge: 3xD, 5xD, 8xD

- Vorteile

►Sicheres und schnelles Spannsystem.

►Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

►Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
(mm)	H-Coating	dec.	frac.	mm		SD	L2	FD	L1		L3 Ref.	Screw No.
S10 Ø10.00 to Ø11.99	Y101H1000	0.3937	-	10.00	ZD10003016	16	48	23	3D	31.5	103.0	TX1011P5
	Y101H1010	0.3976	-	10.10					5D	52.5	123.0	
	Y101H1020	0.4016	-	10.20					8D	84.0	153.0	
	Y101H1030	0.4055	-	10.30								
	Y101H1050	0.4134	-	10.50	ZD10503016	16	48	23	3D	33.0	104.0	
	Y101H1060	0.4173	-	10.60					5D	55.0	125.0	
	Y101H1070	0.4213	-	10.70					8D	88.0	156.5	
	Y101H1080	0.4252	-	10.80								
	Y101H1090	0.4291	-	10.90	ZD11003016	16	48	23	3D	34.5	105.0	
	Y101H1100	0.4331	-	11.00					5D	57.5	127.0	
	Y101H1110	0.4370	-	11.10					8D	92.0	160.0	
	Y101H1130	0.4449	-	11.30								
	Y101H1140	0.4488	-	11.40	ZD11503016	16	48	23	3D	36.0	106.0	
	Y101H1150	0.4528	-	11.50					5D	60.0	129.0	
	Y101H1151	0.4531	29/64	11.51					8D	96.0	163.5	
	Y101H1160	0.4567	-	11.60								
	Y101H1170	0.4606	-	11.70								
	Y101H1180	0.4646	-	11.80								
	Y101H1190	0.4685	-	11.90								

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

◎ : Excellent ○ : Good																							
ISO	P										M				K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Duplex	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	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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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- Applications

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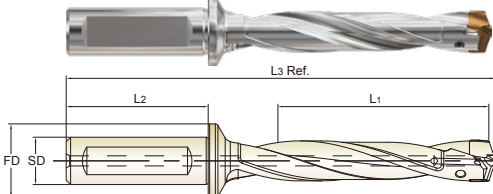
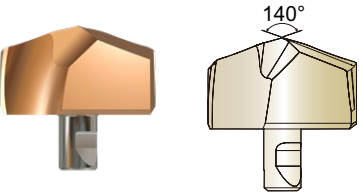
►Halterlänge: 3xD, 5xD, 8xD

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►Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	 Screw No.
(mm)	H-Coating	h7				SD	L2	FD	L1		L3 Ref.	
		dec.	frac.	mm								
S12 Ø12.00 to Ø13.99	Y121H1200	0.4724	-	12.00	ZD12003016	16	48	23	3D	37.5	109.8	TX1213P5
	Y121H1210	0.4764	-	12.10								
	Y121H1220	0.4803	-	12.20								
	Y121H1230	0.4844	31/64	12.30								
	Y121H1240	0.4882	-	12.40	ZD12005016				5D	62.5	133.8	
	Y121H1250	0.4921	-	12.50								
	Y121H1260	0.4961	-	12.60								
	Y121H1270	0.5000	1/2	12.70								
	Y121H1280	0.5039	-	12.80	ZD12503016	16	48	23	3D	39.0	110.8	
	Y121H1290	0.5079	-	12.90					5D	65.0	135.8	
									8D	104.0	173.3	
	Y121H1300	0.5118	-	13.00	ZD12505016	16	48	23	3D	40.5	112.8	
	Y121H1310	0.5156	33/64	13.10								
	Y121H1320	0.5197	-	13.20								
	Y121H1330	0.5236	-	13.30								
	Y121H1340	0.5276	-	13.40	ZD13003016	16	48	23	5D	67.5	138.8	
	Y121H1349	0.5313	17/32	13.49								
									8D	108.0	177.8	
	Y121H1350	0.5315	-	13.50	ZD13008016	16	48	23	3D	42.0	113.8	
Y121H1360	0.5354	-	13.60									
Y121H1390	0.5472	-	13.90									

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

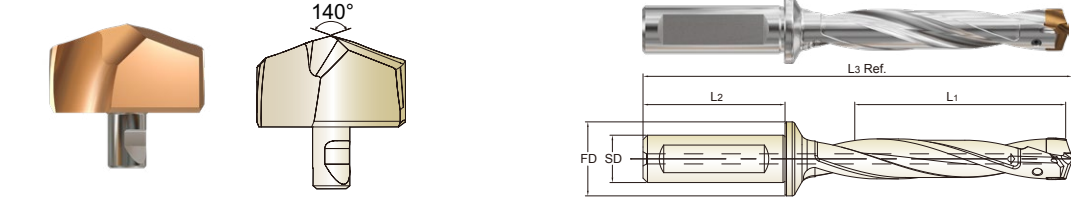
◎ : Excellent ○ : Good																							
ISO	P										M				K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Duplex	Grey cast iron		Nodular cast iron		Malleable cast iron				
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15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



i-ONE DRILL INSERTS & HOLDERS

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

- | | |
|---|--|
| <ul style="list-style-type: none"> - Applications ► For carbon steels, alloy steels and cast iron. ► Holder length: 3xD, 5xD, 8xD - Benefits ► Secure and quick clamping system. ► High performance with cost efficiency. ► Multi-layered coating delivers outstanding productivity and reliability. | <ul style="list-style-type: none"> - Anwendungen ► Für Kohlenstoffstähle, legierte Stähle und Gusseisen. ► Halterlänge: 3xD, 5xD, 8xD - Vorteile ► Sicheres und schnelles Spannsystem. ► Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz. ► Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit |
|---|--|



Unit : mm																										
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length															
(mm)	H-Coating	dec.	frac.	mm		SD	L2	FD	L1		L3 Ref.	Screw No.														
S14 Ø14.00 to Ø15.99	Y141H1400	0.5512	-	14.00	ZD14003016	16	48	23	3D	43.5	116.3	TX1415P7														
	Y141H1410	0.5551	-	14.10																						
	Y141H1420	0.5591	-	14.20									ZD14005016	16	48	23	5D	72.5	144.3							
	Y141H1429	0.5625	9/16	14.29																ZD14008016	16	48	23	8D	116.0	186.3
	Y141H1430	0.5630	-	14.30																						
	Y141H1440	0.5669	-	14.40																						
	Y141H1450	0.5709	-	14.50	ZD14503016	16	48	23	3D	45.0	118.3															
	Y141H1460	0.5748	-	14.60									ZD14505016	16	48	23	5D	75.0	147.3							
	Y141H1468	0.5781	37/64	14.68																ZD14508016	16	48	23	8D	120.0	190.8
	Y141H1470	0.5787	-	14.70																						
	Y141H1480	0.5827	-	14.80																						
	Y141H1490	0.5866	-	14.90																						
	Y141H1500	0.5906	-	15.00	ZD15003016	16	48	23	3D	46.5	120.3															
	Y141H1508	0.5938	19/32	15.08									ZD15005016	16	48	23	5D	77.5	150.3							
	Y141H1510	0.5945	-	15.10																ZD15008016	16	48	23	8D	124.0	195.3
	Y141H1520	0.5984	-	15.20																						
	Y141H1530	0.6024	-	15.30																						
	Y141H1540	0.6063	-	15.40																						
	Y141H1548	0.6094	39/64	15.48																						
	Y141H1550	0.6102	-	15.50	ZD15503016	16	48	23	3D	48.0	121.3															
Y141H1560	0.6142	-	15.60	ZD15505016								16	48	23	5D	80.0	152.3									
Y141H1570	0.6181	-	15.70															ZD15508016	16	48	23	8D	128.0	198.8		
Y141H1580	0.6220	-	15.80																							
Y141H1588	0.6250	5/8	15.88																							
Y141H1590	0.6260	-	15.90																							

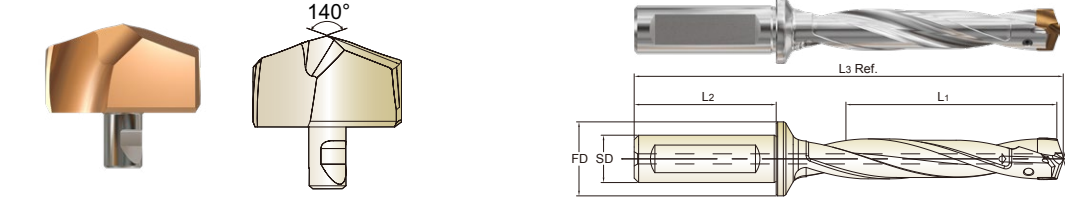
► Other diameters of insert and shank types of holder are available upon request.

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- | | |
|---|---|
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|---|---|



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	 Screw No.
(mm)	H-Coating	h7				SD	L2	FD	L1		L3 Ref.	
S16 Ø16.00 to Ø17.99	Y161H1600	0.6299	-	16.00	ZD16003020	20	50	25	3D	51.0	127.0	TX1617P7
	Y161H1609	0.6335	-	16.09								
	Y161H1610	0.6339	-	16.10								
	Y161H1620	0.6378	-	16.20								
	Y161H1630	0.6417	-	16.30								
	Y161H1640	0.6457	-	16.40	ZD16005020	20	50	25	5D	85.0	160.0	
	Y161H1650	0.6496	-	16.50								
	Y161H1660	0.6535	-	16.60	ZD16008020	20	50	25	8D	136.0	209.5	
	Y161H1667	0.6563	21/32	16.67								
	Y161H1670	0.6575	-	16.70								
	Y161H1680	0.6614	-	16.80								
	Y161H1690	0.6654	-	16.90								
	Y161H1700	0.6693	-	17.00	ZD17003020	20	50	25	3D	54.0	130.0	TX1718P7
	Y161H1707	0.6719	43/64	17.07								
	Y161H1720	0.6772	-	17.20								
	Y161H1730	0.6811	-	17.30								
	Y161H1740	0.6850	-	17.40								
	Y161H1746	0.6875	11/16	17.46	ZD17005020	20	50	25	5D	90.0	165.0	
	Y161H1750	0.6890	-	17.50								
	Y161H1760	0.6929	-	17.60	ZD17008020	20	50	25	8D	144.0	217.5	
Y161H1770	0.6969	-	17.70									
Y161H1780	0.7008	-	17.80									
Y161H1786	0.7031	45/64	17.86									
Y161H1790	0.7047	-	17.90									

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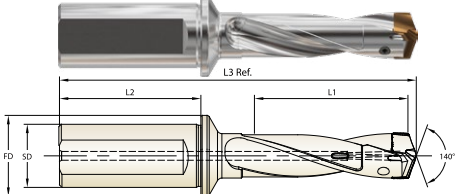
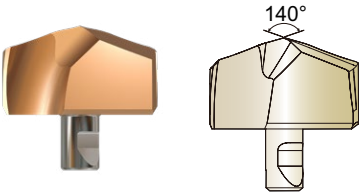
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►Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



FULL-FLAT SHANK



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
(mm)	H-Coating	h7				SD	L2	FD	L1		L3 Ref.	Screw No.
		dec.	frac.	mm								
S18 Ø18.00 to Ø19.99	Y181H1800	0.7087	-	18.00	ZD18003025	25	56	32				TX1819P9
	Y181H1810	0.7126	-	18.10								
	Y181H1820	0.7165	-	18.20								
	Y181H1826	0.7188	23/32	18.26								
	Y181H1840	0.7244	-	18.40								
	Y181H1850	0.7283	-	18.50								
	Y181H1860	0.7323	-	18.60	ZD18008025							
	Y181H1870	0.7362	-	18.70								
	Y181H1880	0.7402	-	18.80								
	Y181H1900	0.7480	-	19.00	ZD19003025	25	56	32				TX1920P9
	Y181H1910	0.7520	-	19.10								
	Y181H1950	0.7677	-	19.50								
	Y181H1960	0.7717	-	19.60								
	Y181H1970	0.7756	-	19.70								
	Y181H1980	0.7795	-	19.80								

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

◎ : Excellent ○ : Good																					
ISO	P									M				K							
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel		Duplex	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	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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																					



i-ONE DRILL INSERTS & HOLDERS

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

- Applications

►For carbon steels, alloy steels and cast iron.

►Holder length: 3xD, 5xD, 8xD

- Benefits

►Secure and quick clamping system.

►High performance with cost efficiency.

►Multi-layered coating delivers outstanding productivity and reliability.
- Anwendungen

►Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

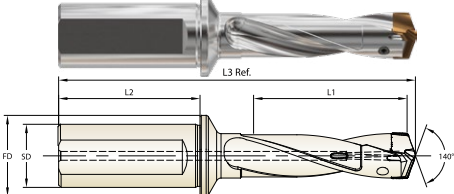
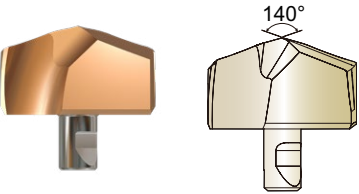
►Halterlänge: 3xD, 5xD, 8xD

- Vorteile

►Sicheres und schnelles Spannsystem.

►Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

►Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



FULL-FLAT SHANK



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length		Screw No.
(mm)	H-Coating	h7				SD	L2	FD	L1	L3 Ref.		
S20 Ø20.00 to Ø21.99	Y201H2000	0.7874	-	20.00	ZD20003025	25	56	32	3D	63.0	147.5	TX2021P9
	Y201H2020	0.7953	-	20.20								
	Y201H2030	0.7992	-	20.30								
	Y201H2040	0.8031	-	20.40								
	Y201H2050	0.8071	-	20.50								
	Y201H2064	0.8125	13/16	20.64	ZD20008025				8D	168.0	250.0	
	Y201H2070	0.8150	-	20.70								
	Y201H2080	0.8189	-	20.80								
	Y201H2090	0.8228	-	20.90	ZD21003025	25	56	32				TX2122P9
	Y201H2100	0.8268	-	21.00								
	Y201H2110	0.8307	-	21.10								
	Y201H2130	0.8386	-	21.30								
	Y201H2143	0.8438	27/32	21.43								
	Y201H2150	0.8465	-	21.50								
	Y201H2160	0.8504	-	21.60								
	Y201H2180	0.8583	-	21.80								
	Y201H2183	0.8594	55/64	21.83								

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

◎ : Excellent ○ : Good																					
ISO	P									M		K									
Material Description	Non-alloy steel				Low alloy steel				High alloyed steel, and tool steel	Stainless steel		Duplex	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	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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																					



i-ONE DRILL INSERTS & HOLDERS

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- INSERTI & PORTAINSERTI i-ONE DRILL

- Applications

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►Holder length: 3xD, 5xD, 8xD

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►Secure and quick clamping system.

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- Anwendungen

►Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

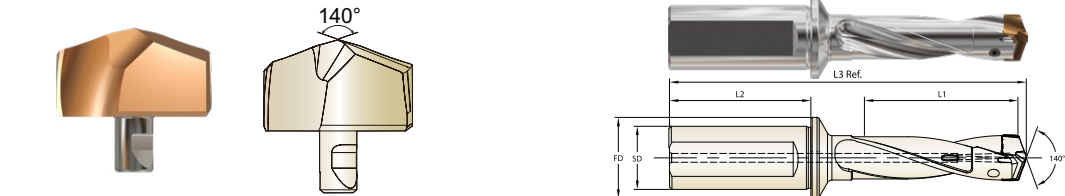
►Halterlänge: 3xD, 5xD, 8xD

- Vorteile

►Sicheres und schnelles Spannsystem.

►Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

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FULL-FLAT SHANK



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
(mm)	H-Coating	h7				SD	L2	FD	L1		L3 Ref.	Screw No.
		dec.	frac.	mm								
S22 Ø22.00 to Ø23.99	Y221H2200	0.8661	-	22.00	ZD22003025	25	56	32	3D	69.0	153.4	TX2223P9
	Y221H2223	0.8750	7/8	22.23								
	Y221H2230	0.8780	-	22.30								
	Y221H2240	0.8819	-	22.40								
	Y221H2250	0.8858	-	22.50								
	Y221H2270	0.8937	-	22.70	ZD22008025	25	56	32	5D	115.0	198.4	TX2223P9
	Y221H2280	0.8976	-	22.80								
	Y221H2290	0.9016	-	22.90								
	Y221H2310	0.9094	-	23.10								
	Y221H2330	0.9173	-	23.30	ZD23003025	25	56	32	3D	72.0	157.4	TX2324P9
	Y221H2342	0.9219	59/64	23.42								
	Y221H2350	0.9252	-	23.50								
	Y221H2380	0.9370	-	23.80								
	Y221H2381	0.9375	15/16	23.81	ZD23008025	25	56	32	8D	192.0	274.9	
	Y221H2390	0.9409	-	23.90								

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

◎ : Excellent ○ : Good																					
ISO	P										M				K						
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel		Duplex	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	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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- Applications

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- Benefits

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►Für Kohlenstoffstähle, legierte Stähle und Gusseisen.

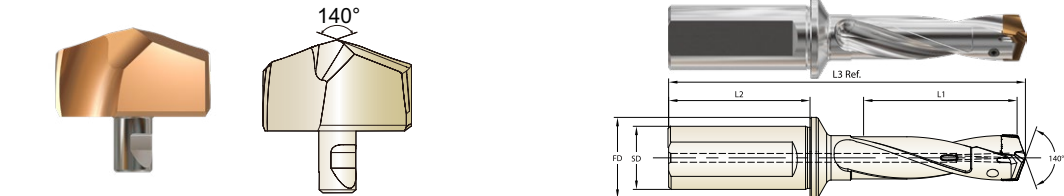
►Halterlänge: 3xD, 5xD, 8xD

- Vorteile

►Sicheres und schnelles Spannsystem.

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FULL-FLAT SHANK



Unit : mm												
Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
(mm)	H-Coating	h7				SD	L2	FD	L1		L3 Ref.	Screw No.
		dec.	frac.	mm								
S24 Ø24.00 to Ø25.99	Y241H2400	0.9449	-	24.00	ZD24003032	32	60	37				TX2425P10
	Y241H2410	0.9488	-	24.10								
	Y241H2420	0.9528	-	24.20								
	Y241H2450	0.9646	-	24.50								
	Y241H2480	0.9764	-	24.80	ZD24008032	32	60	37	8D	200.0	288.3	
	Y241H2490	0.9803	-	24.90								
	Y241H2500	0.9844	63/64	25.00	ZD25003032	32	60	37				TX2526P10
	Y241H2510	0.9882	-	25.10								
	Y241H2520	0.9921	-	25.20								
	Y241H2540	1.0000	1	25.40								
	Y241H2550	1.0039	-	25.50								
	Y241H2560	1.0079	-	25.60								
	Y241H2580	1.0156	1-1/64	25.80	ZD25008032				8D	208.0	298.3	

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

◎ : Excellent ○ : Good																							
ISO	P										M		K										
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Duplex	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	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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																							



Y261H SERIES
Y281H SERIES

i-ONE DRILL INSERTS & HOLDERS

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🇮🇹 INSERTI & PORTAINSERTI i-ONE DRILL

- Applications

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►Holder length: 3xD, 5xD, 8xD

- Benefits

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- Anwendungen

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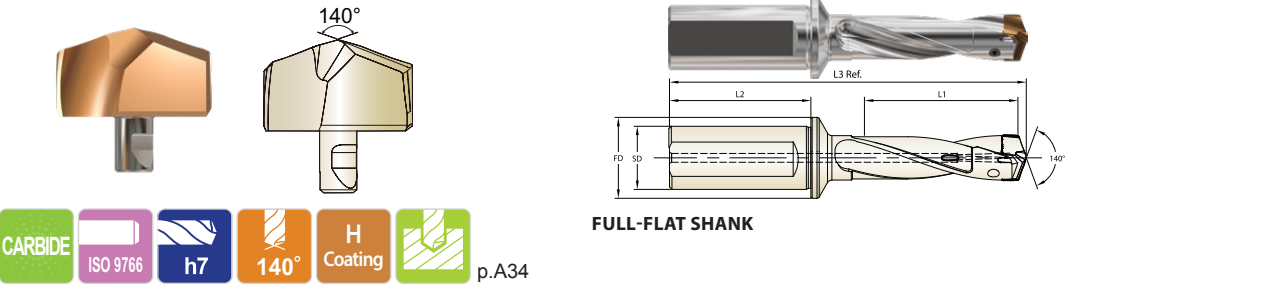
►Halterlänge: 3xD, 5xD, 8xD

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►Sicheres und schnelles Spannsystem.

►Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

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Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
(mm)	H-Coating	dec.	frac.	mm		SD	L2	FD	L1		L3 Ref.	Screw No.
S26 Ø26.00 to Ø27.99	Y261H2600	1.0236	-	26.00	ZD26003032	32	60	37	3D	81.0	172.2	TX2627P10
	Y261H2650	1.0433	-	26.50	ZD26005032				5D	135.0	225.2	
					ZD26008032				8D	216.0	304.	
	Y261H2700	1.0630	-	27.00	ZD27003032	32	60	37	3D	84.0	175.2	TX2728P10
	Y261H2750	1.0827	-	27.50	ZD27005032				5D	140.0	230.2	
Y261H2778	1.0938	1-3/32	27.78	ZD27008032	8D				224.0	312.7		
S28 Ø28.00 to Ø29.99	Y281H2800	1.1024	-	28.00	ZD28003032	32	60	37	3D	87.0	179.2	TX2829P10
	Y281H2850	1.1220	-	28.50	ZD28005032				5D	145.0	236.2	
	Y281H2858	1.1250	1-1/8	28.58	ZD28008032				8D	232.0	321.7	
	Y281H2900	1.1417	-	29.00	ZD29003032	32	60	37	3D	90.0	183.2	TX2930P10
	Y281H2950	1.1614	-	29.50	ZD29005032				5D	150.0	242.2	
Y281H2977	1.1719	1-11/64	29.77	ZD29008032	8D				240.0	330.7		

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

◎ : Excellent ○ : Good																							
ISO	P										M				K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel	Stainless steel		Duplex	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	10	26	3	25	21			
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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																							



Y301H SERIES
Y321H SERIES

i-ONE DRILL INSERTS & HOLDERS

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🇮🇹 INSERTI & PORTAINSERTI i-ONE DRILL

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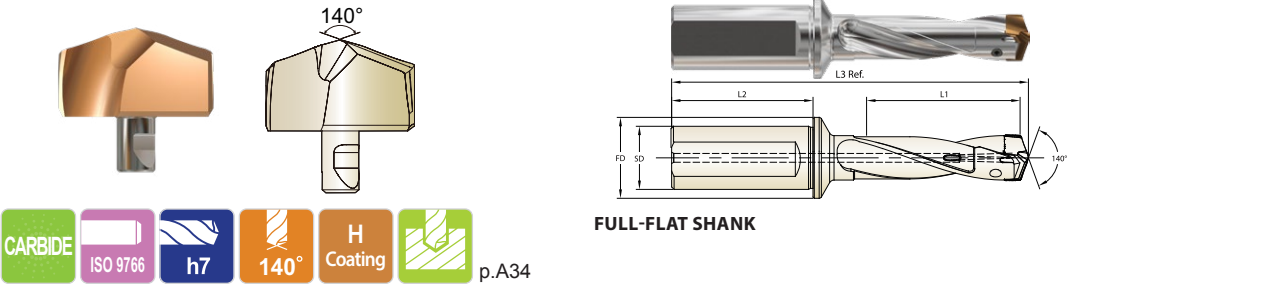
►Halterlänge: 3xD, 5xD, 8xD

- Vorteile

►Sicheres und schnelles Spannsystem.

►Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.

►Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth		Overall Length	
		h7				SD	L2	FD	L1		L3 Ref.	Screw No.
(mm)	H-Coating	dec.	frac.	mm								
S30 Ø30.00 to Ø31.99	Y301H3000	1.1811	-	30.00	ZD30003032				3D	93.0	187.0	TX3031P15
	Y301H3050	1.2008	-	30.50	ZD30005032	32	60	37	5D	155.0	248.0	
	Y301H3100	1.2205	-	31.00	ZD30008032				8D	248.0	339.5	
	Y301H3150	1.2402	-	31.50	ZD31003032				3D	96.0	191.0	TX3132P15
	Y301H3175	1.2500	1-1/4	31.75	ZD31005032	32	60	37	5D	160.0	254.0	
					ZD31008032				8D	256.0	348.5	
S32 Ø32.00 to Ø33.99	Y321H3200	1.2598	-	32.00	ZD32003032				3D	99.0	197.2	TX3233P15
	Y321H3250	1.2795	-	32.50	ZD32005032	32	60	37	5D	165.0	262.2	
	Y321H3300	1.2992	-	33.00	ZD32008032				8D	264.0	359.7	
	Y321H3350	1.3189	-	33.50	ZD33003032				3D	102.0	201.2	TX3334P15
	Y321H3373	1.3281	1-21/64	33.73	ZD33005032	32	60	37	5D	170.0	268.2	
					ZD33008032				8D	272.0	368.7	

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

◎ : Excellent ○ : Good																							
ISO	P										M				K								
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Duplex	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	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	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																							

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

ISO	VDI 3323	Material Description	Cutting Speed	Feed					
			Vc	Ø10.0-11.99	Ø12.09-14.99	Ø15.00-17.99	Ø18.00-21.99	Ø22.0-26.9	Ø27.0-33.99
P	1	Non-alloy steel	80-135	0.13-0.29	0.18-0.33	0.23-0.37	0.28-0.43	0.34-0.50	0.36-0.52
	2		70-120	0.13-0.29	0.18-0.33	0.23-0.37	0.28-0.43	0.34-0.50	0.36-0.52
	3		70-95	0.13-0.29	0.18-0.33	0.23-0.37	0.28-0.43	0.34-0.50	0.36-0.52
	4		70-95	0.13-0.29	0.18-0.33	0.23-0.37	0.28-0.43	0.34-0.50	0.36-0.52
	5		40-80	0.13-0.29	0.18-0.33	0.23-0.37	0.28-0.43	0.34-0.50	0.36-0.52
	6	Low alloy steel	80-100	0.12-0.29	0.17-0.33	0.22-0.35	0.27-0.38	0.32-0.45	0.35-0.49
	7		70-90	0.12-0.29	0.17-0.33	0.22-0.35	0.27-0.38	0.32-0.45	0.35-0.49
	8		60-80	0.12-0.29	0.17-0.33	0.22-0.35	0.27-0.38	0.32-0.45	0.35-0.49
	9		50-60	0.12-0.29	0.17-0.33	0.22-0.35	0.27-0.38	0.32-0.45	0.35-0.49
	10	High alloyed steel, and tool steel	45-80	0.12-0.24	0.15-0.29	0.20-0.34	0.25-0.39	0.27-0.39	0.34-0.40
	11		35-70	0.12-0.24	0.15-0.29	0.20-0.34	0.25-0.39	0.27-0.39	0.34-0.40
K	15	Grey cast iron	100-140	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60
	16		90-120	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60
	17	Nodular cast iron	100-135	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60
	18		90-120	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60
	19	Malleable cast iron	100-135	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60
	20		90-120	0.15-0.35	0.20-0.40	0.25-0.45	0.30-0.55	0.35-0.60	0.40-0.60

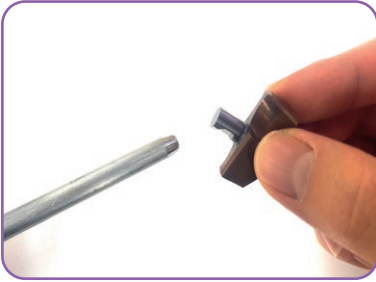
- The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- Recommend you to reduce the feed rate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

Comparison with Split Point Drill, Spade Drill & Dream Drill

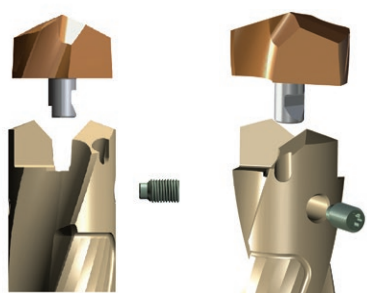


ASSEMBLY OF i-ONE DRILLS

MONTAGE DES i-ONE DRILLS

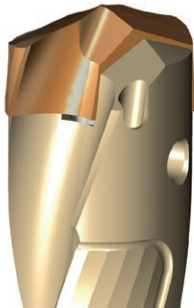


Make sure to clean the insert and insert seat.
Schneideinsatz und Haltersitz sorgfältig reinigen.



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

After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.
Wenn der Schneideinsatz fest auf den Grund des Haltersitzes gepresst ist, die Schraube fest anziehen und dabei Spezialfett verwenden.



Torx Plus® Screw

Torx Plus® Wrench

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

Use the Torx Plus wrench
Benutzen Sie den Winkeldreher oder T - Schlüsse

- Need to use appropriate wrenches and screws as indicated.
Unbedingt die angegebenen Schrauben und Dreher verwenden.
- It's important to tighten up the screw properly.
Es ist wichtig, die Schraube korrekt und fest anzuziehen.

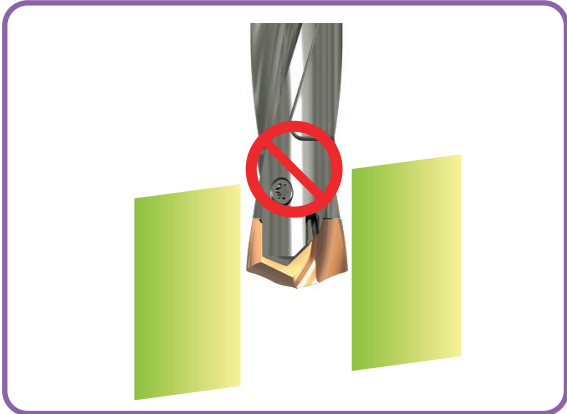
CARBIDE
HSS
i-ONE DRILLS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS X
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL
DREAM DRILLS for HIGH HARDENED STEELS
GENERAL CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
SUPER-GP DRILLS
STRAIGHT SHANK DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
CENTER DRILLS
SPADE DRILLS
REAMERS
COUNTER SINKS
COUNTER BORES

CAUTION-NOT RECOMMENDABLE APPLICATION

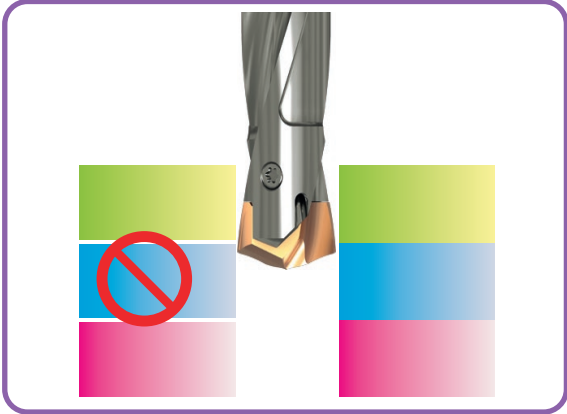
ACHTUNG - NICHT EMPFOHLENE ANWENDUNG



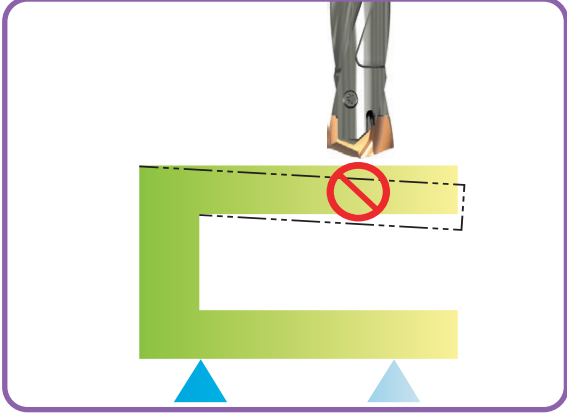
Intersecting cross hole is bigger than the drill insert's Margin Length.
Der Haltersitz ist größer als die Breite des Schneideinsatzes.



Material with slanting entrance and exit over 7 degrees.
(If drilling 7 degrees or under slanting surface, reduce the feed about 30-50%)
Werkstücke mit schrägem Anschnitt oder Austritt von über 7°. (Zum Bohren von bis zu 7° Schräge den Vorschub um ca. 30-50% reduzieren).



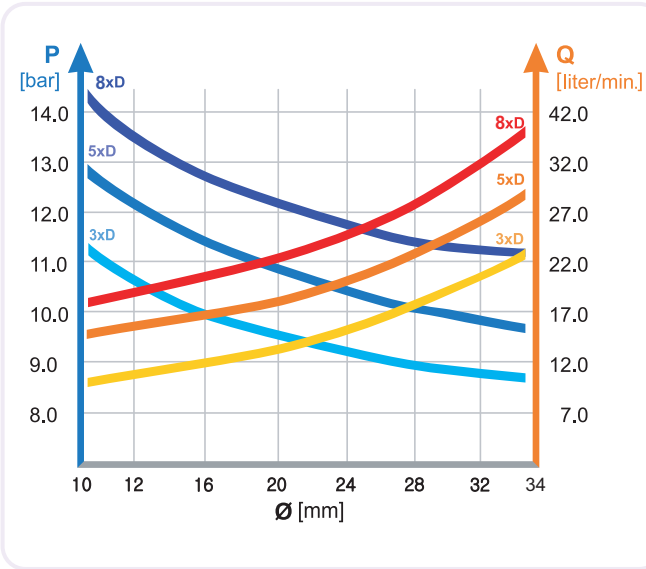
For drilling stacked plates, minimize the space between the plates.
Beim Bohren von Blechpaketen den Abstand der Bleche minimieren.
The space between stacked plates can cause insert breakage or poor chip control.
Freiraum in Blechpaketen kann den Bruch des Schneideinsatzes oder schlechte Entspannung verursachen.



The material needs to be fixtured securely before drilling.
Das Werkstück muss fest und sicher aufgespannt sein

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING

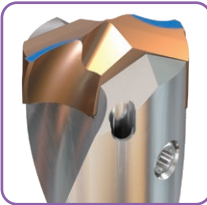
EMPFOHLENE KÜHLMITTELDRUCK UND - MENGE BEIM VERTIKALEN BOHREN



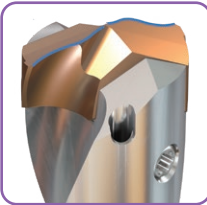
- Recommended emulsion mix is 6 - 8%.
Empfohlene Emulsionsmischung 6 - 8%.
- For Drilling into Stainless and High Strength steels, a mix of 10% is recommended.
Beim Bohren in rostfreie und hochfeste Stähle werden 10% empfohlen.
- For horizontal drilling, 30% reduction on the coolant pressure and flow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

TROUBLE SHOOTING

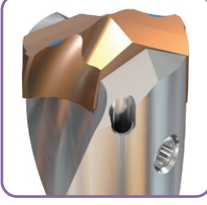
PROBLEMLÖSUNGEN



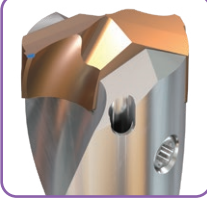
- 1) Heavy flank wear / Fast flank wear
- Reduce cutting speed
 - Increase feed



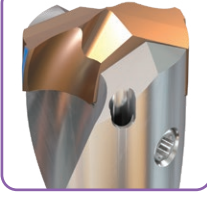
- 2) Chipping on cutting edge
- Reduce feed
 - Check the rigidity of spindle and chuck
 - Rigid clamping of workpiece



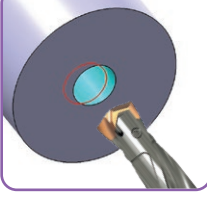
- 3) Build-up on cutting edge
- Increase cutting speed
 - Use a coated insert



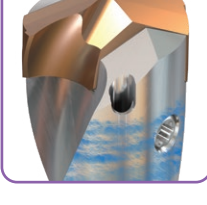
- 4) Chipping or break down on outer corner
- Reduce feed
 - Rigid clamping of workpiece



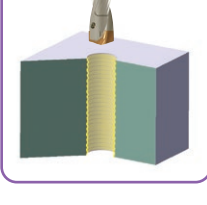
- 5) Wear of land margin
- Rigid clamping of workpiece
 - Reduce cutting speed
 - Increase coolant flow



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



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

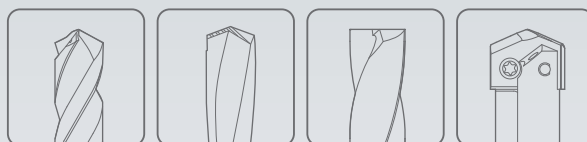


- 8) Unsatisfactory surface finish
- Rigid clamping of workpiece
 - Increase coolant flow and pressure

CARBIDE
HSS
i-ONE DRILLS
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



Global Cutting Tool Leader **YG-1**



HOLEMAKING