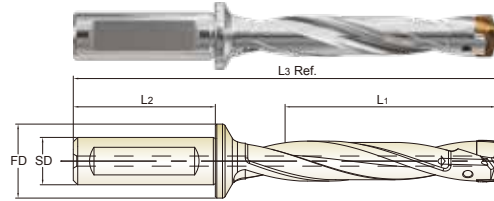
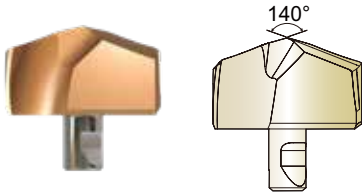


i-ONE DRILL INSERTS & HOLDERS

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

- Applications
 - ▶ For carbon steels, alloy steels and cast iron.
 - ▶ Holder length: 3xD, 5xD, 8xD
- Benefits
 - ▶ Secure and quick clamping system.
 - ▶ High performance with cost efficiency.
 - ▶ Multi-layered coating delivers outstanding productivity and reliability.
- Anwendungen
 - ▶ Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
 - ▶ Halterlänge: 3xD, 5xD, 8xD
- Vorteile
 - ▶ Sicheres und schnelles Spannsystem.
 - ▶ Hohe Leistungsfähigkeit bei gleichzeitiger Kosteneffizienz.
 - ▶ Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK		D73-115	

Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.	
		h7										
(mm)	H-Coating	dec.	frac.	mm								
S10	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								
	Y101H1032	0.4063	13/32	10.32								
	Y101H1040	0.4094	-	10.40								
	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	
	Y101H1072	0.4219	27/64	10.72								
	Y101H1080	0.4252	-	10.80								
	Y101H1090	0.4291	-	10.90								
	Y101H1100	0.4331	-	11.00	ZD11003016	16	48	23	3D	34.5	105.0	
	Y101H1110	0.4370	-	11.10					5D	57.5	127.0	
	Y101H1111	0.4375	7/16	11.11					8D	92.0	160.0	
	Y101H1120	0.4409	-	11.20								
	Y101H1130	0.4449	-	11.30								
	Y101H1140	0.4488	-	11.40								
	Y101H1150	0.4528	-	11.50	ZD11503016	16	48	23	3D	36.0	106.0	
Y101H1151	0.4531	29/64	11.51	5D					60.0	129.0		
Y101H1160	0.4567	-	11.60	8D					96.0	163.5		
Y101H1170	0.4606	-	11.70									
Y101H1180	0.4646	-	11.80									
Y101H1190	0.4685	-	11.90									
Y101H1191	0.4688	15/32	11.91									

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

◎ : Excellent ○ : Good

ISO	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Duplex	Grey cast iron		Nodular cast iron		Malleable cast iron	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	10	15	16	17	18	19	20
VDI 3323																					
HRc																					
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				
	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
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323																					
HRc																					
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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- Applications

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- ▶ Holder length: 3xD, 5xD, 8xD

- Benefits

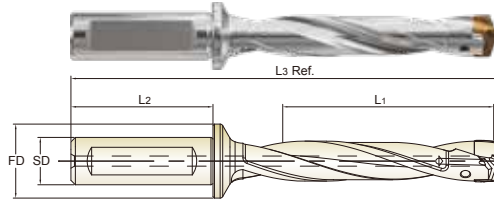
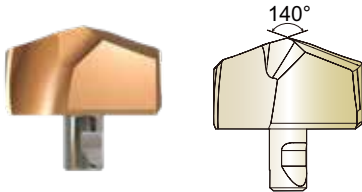
- ▶ Secure and quick clamping system.
- ▶ High performance with cost efficiency.
- ▶ Multi-layered coating delivers outstanding productivity and reliability.

- Anwendungen

- ▶ Für Kohlenstoffstähle, legierte Stähle und Gusseisen.
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Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK		D73-115	

Unit : mm

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.		
		h7											
		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					ZD12005016	5D	62.5		133.8
	Y121H1220	0.4803	-	12.20					ZD12008016	8D	100.0		169.8
	Y121H1230	0.4844	31/64	12.30	ZD12503016	16	48	23	3D	39.0	110.8		
	Y121H1240	0.4882	-	12.40					ZD12505016	5D	65.0		135.8
	Y121H1250	0.4921	-	12.50					ZD12508016	8D	104.0		173.3
	Y121H1260	0.4961	-	12.60	ZD13003016	16	48	23	3D	40.5	112.8		
	Y121H1270	0.5000	1/2	12.70					ZD13005016	5D	67.5		138.8
	Y121H1280	0.5039	-	12.80					ZD13008016	8D	108.0		177.8
	Y121H1290	0.5079	-	12.90	ZD13503016	16	48	23	3D	42.0	113.8		
	Y121H1300	0.5118	-	13.00					ZD13505016	5D	70.0		140.8
	Y121H1310	0.5156	33/64	13.10					ZD13508016	8D	112.0		181.3
	Y121H1320	0.5197	-	13.20									
	Y121H1330	0.5236	-	13.30									
	Y121H1340	0.5276	-	13.40									
	Y121H1349	0.5313	17/32	13.49									
	Y121H1350	0.5315	-	13.50									
	Y121H1360	0.5354	-	13.60									
	Y121H1370	0.5394	-	13.70									
Y121H1380	0.5433	-	13.80										
Y121H1389	0.5469	35/64	13.89										
Y121H1390	0.5472	-	13.90										

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

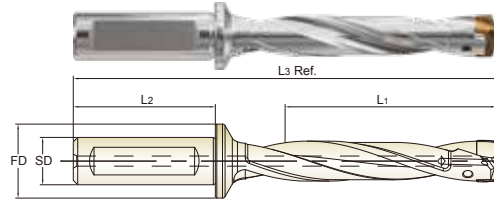
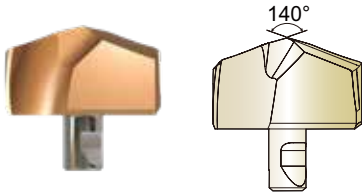
◎ : Excellent ○ : Good

ISO Material Description	P										M				K						
	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	260	160	250	130	230	
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
ISO Material Description	N								S							H					
	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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Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK			D73-115

Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.	
		h7										
(mm)	H-Coating	dec.	frac.	mm								
S14	Y141H1400	0.5512	-	14.00	ZD14003016	16	48	23	3D	43.5	116.3	TX1415P7
	Y141H1410	0.5551	-	14.10					5D	72.5	144.3	
	Y141H1420	0.5591	-	14.20					8D	116.0	186.3	
	Y141H1429	0.5625	9/16	14.29								
	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					5D	75.0	147.3	
	Y141H1468	0.5781	37/64	14.68					8D	120.0	190.8	
	Y141H1470	0.5787	-	14.70	ZD14505016	16	48	23	3D	46.5	120.3	
	Y141H1480	0.5827	-	14.80					5D	77.5	150.3	
	Y141H1490	0.5866	-	14.90					8D	124.0	195.3	
	Y141H1500	0.5906	-	15.00								
	Y141H1508	0.5938	19/32	15.08								
	Y141H1510	0.5945	-	15.10								
	Y141H1520	0.5984	-	15.20	ZD15003016	16	48	23	3D	48.0	121.3	
	Y141H1530	0.6024	-	15.30					5D	80.0	152.3	
	Y141H1540	0.6063	-	15.40					8D	128.0	198.8	
	Y141H1548	0.6094	39/64	15.48	ZD15005016	16	48	23	3D	48.0	121.3	
Y141H1550	0.6102	-	15.50	5D					80.0	152.3		
Y141H1560	0.6142	-	15.60	8D					128.0	198.8		
Y141H1570	0.6181	-	15.70									
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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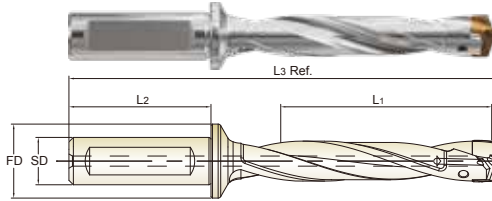
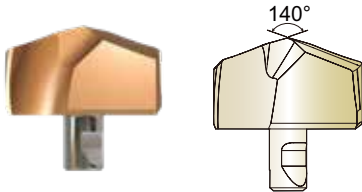
ISO	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel				Stainless steel		Duplex	Grey cast iron		Nodular cast iron	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	10	15	16	17	18	19	20
VDI 3323																					
HRc	13	25	28	32	30	10	29	32	38	15	35	12	23	10	10	15	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				
	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
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323																					
HRc	21	22	23	24	25	26	27	28	29	30	15	30	25	38	34	36	37	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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CARBIDE ISO 9766 h7 140° Coating p.A34

Flat Shank	Page	Plain Shank	Page
INDEXABLE DRILL HOLDER D245-246	-	-	-
ER COLLET CHUCK	-	-	D73-115

Unit : mm

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.			
		dec.	frac.	mm										
S16 Ø16.00 to Ø17.99	Y161H1600	0.6299	-	16.00	ZD16003020	20	50	25	3D	51.0	127.0			
	Y161H1609	0.6335	-	16.09										
	Y161H1610	0.6339	-	16.10										
	Y161H1620	0.6378	-	16.20										
	Y161H1627	0.6406	41/64	16.27										
	Y161H1630	0.6417	-	16.30										
	Y161H1640	0.6457	-	16.40										
	Y161H1650	0.6496	-	16.50										
	Y161H1660	0.6535	-	16.60										
	Y161H1667	0.6563	21/32	16.67										
	Y161H1670	0.6575	-	16.70										
	Y161H1680	0.6614	-	16.80										
	Y161H1690	0.6654	-	16.90										
	Y161H1700	0.6693	-	17.00										
	Y161H1707	0.6719	43/64	17.07										
	Y161H1710	0.6732	-	17.10										
	Y161H1720	0.6772	-	17.20										
	Y161H1730	0.6811	-	17.30										
	Y161H1740	0.6850	-	17.40										
Y161H1746	0.6875	11/16	17.46											
Y161H1750	0.6890	-	17.50											
Y161H1760	0.6929	-	17.60											
Y161H1770	0.6969	-	17.70											
Y161H1780	0.7008	-	17.80											
Y161H1786	0.7031	45/64	17.86											
Y161H1790	0.7047	-	17.90											
				ZD17003020	20	50	25	3D	54.0	130.0	TX1718P7			
ZD17005020	20	50	25									5D	90.0	165.0
ZD17008020	20	50	25									8D	144.0	217.5

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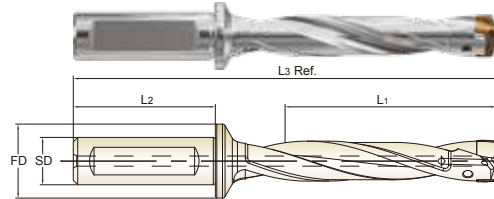
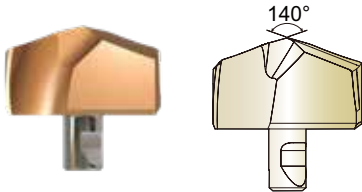
ISO Material Description	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Duplex	Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	10	15	16	17	18	19	20
HRc	125	13	25	28	32	10	29	32	38	15	35	15	23	10	10	180	260	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	
Recommended	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙

ISO Material Description	N					S					H										
	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	60	100	75	90	130	110	90	100			15	30	25	38	34	400 Rm	1050 Rm	550	630	400	550
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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Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK		D73-115	

Unit : mm

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

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

◎ : Excellent ○ : Good

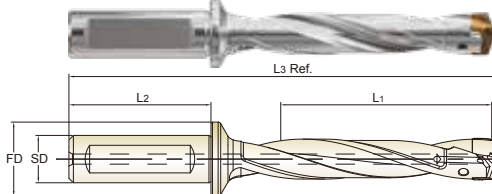
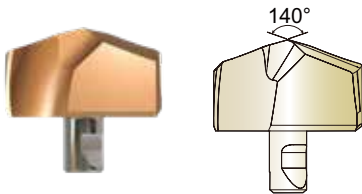
ISO Material Description	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Duplex	Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	10	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	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 Material Description	N										S						H				
	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	34	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																					

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.
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 - ▶ Mehrschichtige Beschichtung bietet hervorragende Produktivität und Zuverlässigkeit.



CARBIDE ISO 9766 h7 140° Coating p.A34

Flat Shank	Page	Plain Shank	Page
INDEXABLE DRILL HOLDER D245-246	-	-	-
ER COLLET CHUCK	-	-	D73-115

Unit : mm

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.
		dec.	frac.	mm							
S20 Ø20.00 to Ø21.99	Y201H2000	0.7874	-	20.00	ZD20003025	25	56	32	3D	63.0	147.5
	Y201H2010	0.7913	-	20.10							
	Y201H2020	0.7953	-	20.20							
	Y201H2024	0.7969	51/64	20.24							
	Y201H2030	0.7992	-	20.30							
	Y201H2040	0.8031	-	20.40							
	Y201H2050	0.8071	-	20.50							
	Y201H2060	0.8110	-	20.60							
	Y201H2064	0.8125	13/16	20.64							
	Y201H2070	0.8150	-	20.70							
	Y201H2080	0.8189	-	20.80							
	Y201H2090	0.8228	-	20.90							
	Y201H2100	0.8268	-	21.00	ZD21003025	25	56	32	3D	66.0	150.5
	Y201H2103	0.8281	53/64	21.03							
	Y201H2110	0.8307	-	21.10							
	Y201H2120	0.8346	-	21.20							
	Y201H2130	0.8386	-	21.30							
	Y201H2140	0.8425	-	21.40							
	Y201H2143	0.8438	27/32	21.43							
	Y201H2150	0.8465	-	21.50							
Y201H2160	0.8504	-	21.60								
Y201H2170	0.8543	-	21.70								
Y201H2180	0.8583	-	21.80								
Y201H2183	0.8594	55/64	21.83								
Y201H2190	0.8622	-	21.90	ZD21008025	25	56	32	8D	176.0	258.0	

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

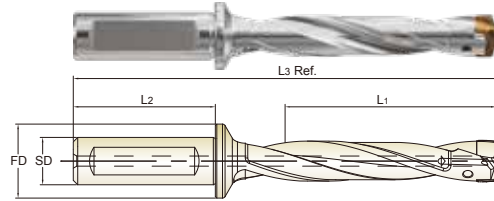
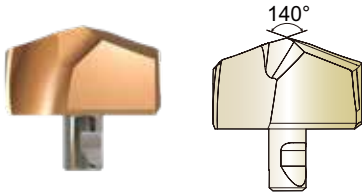
◎ : Excellent ○ : Good

ISO Material Description	P										M				K						
	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	260	160	250	130	230	
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
ISO Material Description	N					S					H										
	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

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- PLAQUETTES ET PORTE-PLAQUETTE i-ONE DRILL
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Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK			D73-115

Unit : mm

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

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

◎ : Excellent ○ : Good

ISO Material Description	P										M				K						
	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	10	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 Material Description	N										S						H				
	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																					

i-ONE DRILL INSERTS & HOLDERS

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- Applications

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

- Benefits

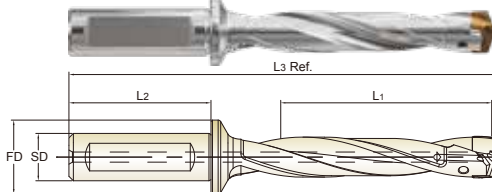
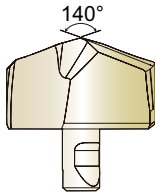
- ▶ Secure and quick clamping system.
- ▶ High performance with cost efficiency.
- ▶ Multi-layered coating delivers outstanding productivity and reliability.

- 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.



Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER D245-246	-	-	-
	ER COLLET CHUCK			D73-115

Unit : mm

Series Range (mm)	Insert EDP No. H-Coating	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.
		dec.	frac.	mm							
S24 Ø24.00 to Ø25.99	Y241H2400	0.9449	-	24.00	ZD24003032	32	60	37	3D	75.0	165.8
	Y241H2410	0.9488	-	24.10							
	Y241H2420	0.9528	-	24.20							
	Y241H2421	0.9531	61/64	24.21							
	Y241H2430	0.9567	-	24.30							
	Y241H2440	0.9606	-	24.40							
	Y241H2450	0.9646	-	24.50							
	Y241H2460	0.9685	-	24.60							
	Y241H2461	0.9688	31/32	24.61							
	Y241H2470	0.9724	-	24.70							
	Y241H2480	0.9764	-	24.80							
	Y241H2490	0.9803	-	24.90							
	Y241H2500	0.9844	63/64	25.00	ZD25003032	32	60	37	3D	78.0	170.8
	Y241H2510	0.9882	-	25.10							
	Y241H2520	0.9921	-	25.20							
	Y241H2530	0.9961	-	25.30							
	Y241H2540	1.0000	1	25.40							
	Y241H2550	1.0039	-	25.50							
	Y241H2560	1.0079	-	25.60							
	Y241H2567	1.0106	-	25.67							
Y241H2570	1.0118	-	25.70								
Y241H2580	1.0156	1-1/64	25.80								
Y241H2590	1.0197	-	25.90								
				ZD24008032				8D	200.0	288.3	
				ZD25008032				8D	208.0	298.3	

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

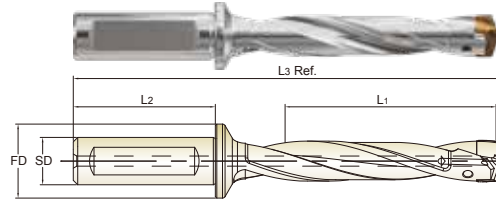
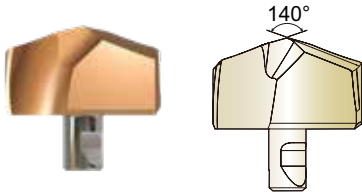
◎ : Excellent ○ : Good

ISO Material Description	P										M				K							
	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	10	11	12	13	14	10	15	16	17	18	19	20
HRc																						
HB	125	190	250	270	300	180	275	300	350	200	200	325	200	240	180	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
ISO Material Description	N										S						H					
	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																						
HB	60	100	75	90	130	110	90	100			15	30	25	38	34	400 Rm	1050 Rm	550	630	400	550	
Recommended																						

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CARBIDE
ISO 9766
h7
140°
H Coating
p.A34

Recommended ToolHolder	Flat Shank	Page	Plain Shank	Page
	INDEXABLE DRILL HOLDER	D245-246	-	-
	ER COLLET CHUCK			D73-115

Unit : mm

Series Range	Insert EDP No.	Insert O.D.			Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Drilling Depth L1	Overall Length L3 Ref.	Screw No.						
		h7															
(mm)	H-Coating	dec.	frac.	mm													
S26 Ø26.00 to Ø27.99	Y261H2600	1.0236	-	26.00	ZD26003032	32	60	37	3D	81.0	172.2	TX2627P10					
	Y261H2619	1.0313	1-1/32	26.19					5D	135.0	225.2						
	Y261H2650	1.0433	-	26.50					8D	216.0	304.						
	Y261H2659	1.0469	1-3/64	26.59													
	Y261H2699	1.0625	1-1/16	26.99													
	Y261H2700	1.0630	-	27.00					ZD27003032	32	60		37	3D	84.0	175.2	TX2728P10
	Y261H2738	1.0781	1-5/64	27.38					5D					140.0	230.2		
	Y261H2750	1.0827	-	27.50					8D					224.0	312.7		
Y261H2778	1.0938	1-3/32	27.78														
S28 Ø28.00 to Ø29.99	Y281H2800	1.1024	-	28.00	ZD28003032	32	60	37	3D	87.0	179.2	TX2829P10					
	Y281H2818	1.1094	1-7/64	28.18					5D	145.0	236.2						
	Y281H2850	1.1220	-	28.50					8D	232.0	321.7						
	Y281H2858	1.1250	1-1/8	28.58													
	Y281H2897	1.1406	1-9/64	28.97					ZD29003032	32	60		37	3D	90.0	183.2	TX2930P10
	Y281H2900	1.1417	-	29.00					5D					150.0	242.2		
	Y281H2937	1.1563	1-5/32	29.37					8D					240.0	330.7		
	Y281H2950	1.1614	-	29.50													
Y281H2977	1.1719	1-11/64	29.77	ZD29008032													

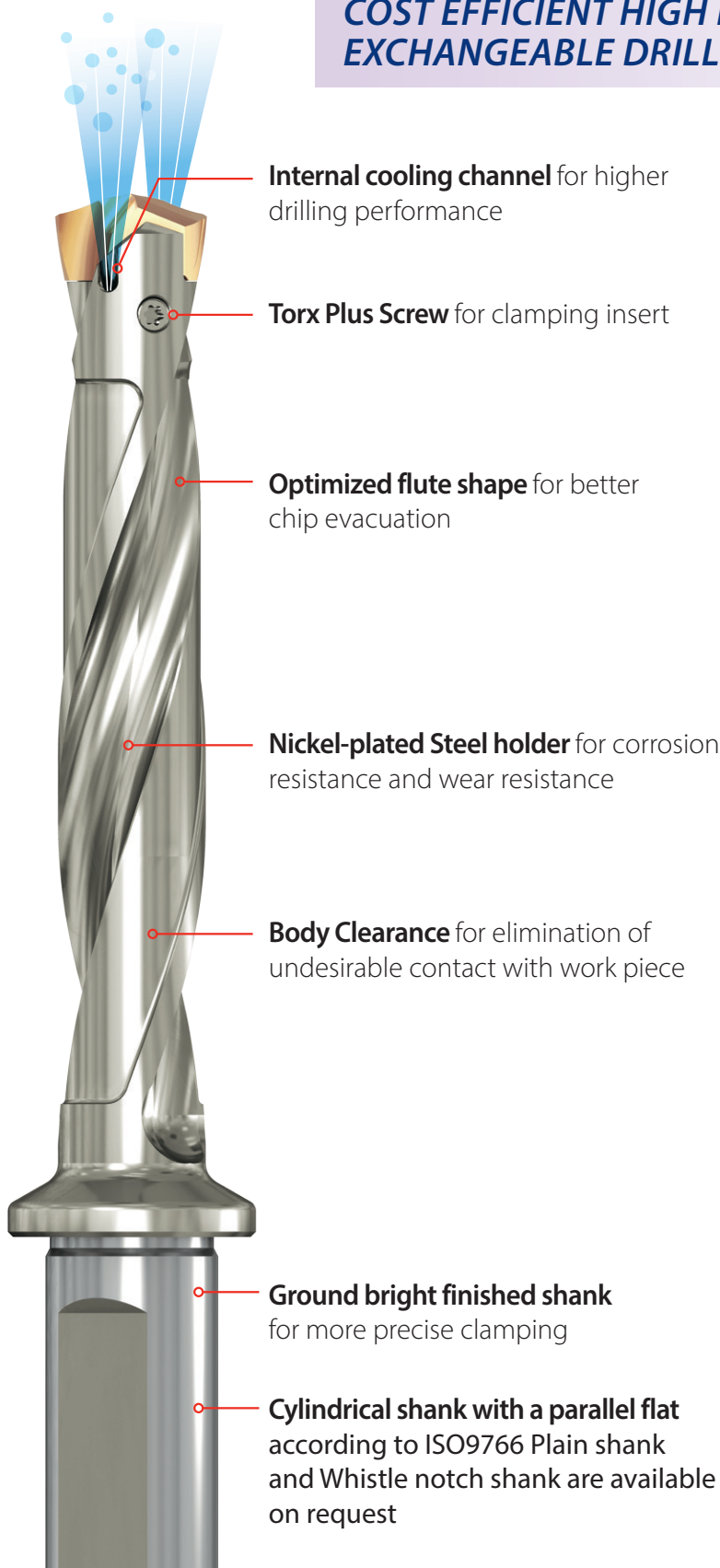
▶ Other diameters of insert and shank types of holder are available upon request.

◎ : Excellent ○ : Good

ISO	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Duplex	Grey cast iron		Nodular cast iron		Malleable cast iron	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	10	15	16	17	18	19	20
VDI 3323																					
HRc	13	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					
	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	
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323																					
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	42	42	55	
HB											200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

Micro Grain Carbide Inserts and Premium Tool Steel Holder with Coolant Holes

COST EFFICIENT HIGH PERFORMANCE EXCHANGEABLE DRILLING TOOLS



Internal cooling channel for higher drilling performance

Torx Plus Screw for clamping insert

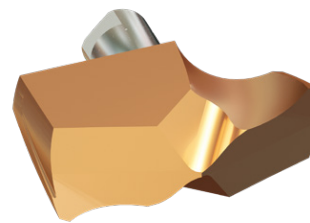
Optimized flute shape for better chip evacuation

Nickel-plated Steel holder for corrosion resistance and wear resistance

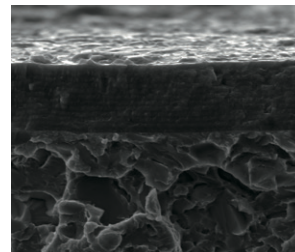
Body Clearance for elimination of undesirable contact with work piece

Ground bright finished shank for more precise clamping

Cylindrical shank with a parallel flat according to ISO9766 Plain shank and Whistle notch shank are available on request



- **Secure & Quick clamping system**
- **Multi layered 'H'-coating** reduces the cracking and provides higher shear strength while achieving excellent oxidation resistance and hot hardness



- **Optimized point geometry** of i-ONE Drills ensures centering ability and smoother cutting
- **Self Centering and Chip Breaking** by Radius Thinning
- **Ground Negative land** on cutting edge for Reliable Tool Life

SELECTION GUIDE



SERIES

Y101H	Y121H	Y141H	Y161H
10.00	12.00	14.00	16.00
11.91	13.90	15.90	17.90
A24	A25	A26	A27

SIZE MIN

SIZE MAX

PAGE

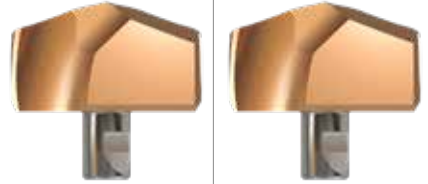
SURFACE TREATMENT

H-Coating

CARBIDE INSERTS & HOLDERS

i-ONE DRILLS

High Performance Exchangeable
for General Steels and Cast Iron



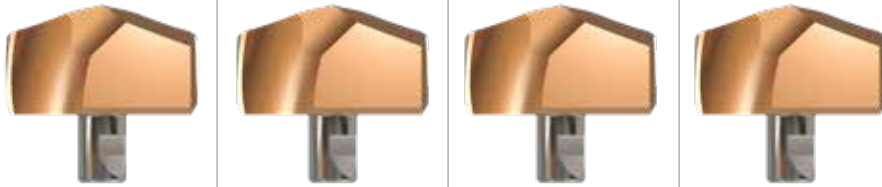
Please visit
globalyg1.com/mat
for material search

◎ : 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	Low alloy steel	About 0.75% C	Annealed	270	28	◎	◎	◎	◎
	5		About 0.75% C	Quenched & Tempered	300	32	◎	◎	◎	◎
	6			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		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							
	30		Duroplastic, Fiber Reinforced Plastic Rubber, Wood, etc.							
S	31	Heat Resistant Super Alloys	Fe Based		200	15				
	32		Cured		280	30				
	33		Annealed		250	25				
	34		Ni or Co Based		350	38				
	35	Cast		320	34					
	36	Titanium Alloys	Pure Titanium		400 Rm					
	37		Alpha + Beta Alloys		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			
19.90	21.90	23.90	25.90	27.78	29.77	31.75	33.73			
A28	A29	A30	A31	A32		A33				
H-Coating								3XD	5XD	8XD



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⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙				7
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⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙				9
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HSS

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -PRO

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

TECHNICAL DATA

VC = M/MIN
RPM = rev./min.
FEED = mm/rev.

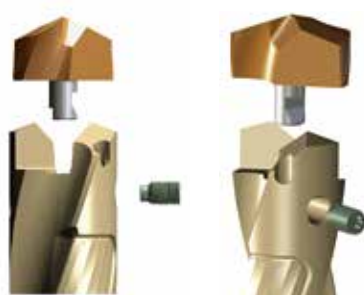
ISO	VDI 3323	Material Description	Vc (m/min)	Feed(mm/rev)					
				Ø10.0-11.99	Ø12.09-14.99	Ø15.00-17.99	Ø18.00-21.99	Ø22.0-26.9	Ø27.0-33.99
P	1	Non-alloy steel	100-126	0.14-0.24	0.18-0.31	0.23-0.39	0.30-0.44	0.37-0.57	0.41-0.61
	2		84-110	0.12-0.21	0.15-0.26	0.23-0.39	0.30-0.44	0.37-0.57	0.41-0.61
	3		63-84	0.11-0.18	0.13-0.22	0.19-0.31	0.24-0.35	0.33-0.51	0.36-0.54
	4		58-74	0.09-0.14	0.11-0.18	0.17-0.28	0.23-0.33	0.28-0.42	0.32-0.47
	5		58-74	0.09-0.14	0.11-0.18	0.17-0.28	0.23-0.33	0.28-0.42	0.32-0.47
	6	Low alloy steel	74-95	0.11-0.18	0.13-0.22	0.19-0.31	0.24-0.35	0.33-0.51	0.37-0.55
	7		63-84	0.11-0.18	0.13-0.22	0.17-0.28	0.24-0.35	0.33-0.51	0.37-0.55
	8		58-74	0.09-0.14	0.11-0.18	0.14-0.23	0.23-0.33	0.28-0.42	0.32-0.47
	9		47-63	0.07-0.11	0.09-0.13	0.14-0.23	0.23-0.33	0.28-0.42	0.32-0.47
	10		High alloyed steel, and tool steel	53-68	0.09-0.14	0.11-0.18	0.14-0.23	0.20-0.29	0.22-0.34
	11	42-58		0.09-0.14	0.11-0.18	0.12-0.20	0.23-0.33	0.22-0.34	0.26-0.39
K	15	Grey cast iron	105-131	0.13-0.23	0.17-0.29	0.22-0.41	0.30-0.46	0.40-0.56	0.44-0.61
	16		79-100	0.10-0.18	0.12-0.22	0.18-0.32	0.22-0.33	0.28-0.39	0.32-0.44
	17	Nodular cast iron	100-126	0.11-0.20	0.14-0.24	0.19-0.34	0.23-0.35	0.31-0.44	0.35-0.48
	18		79-100	0.10-0.18	0.12-0.22	0.15-0.29	0.21-0.32	0.28-0.39	0.32-0.44
	19	Malleable cast iron	105-131	0.11-0.20	0.14-0.24	0.19-0.34	0.23-0.35	0.31-0.44	0.35-0.48
	20		79-100	0.10-0.15	0.12-0.20	0.15-0.29	0.21-0.32	0.28-0.39	0.32-0.44

- ▶ 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.



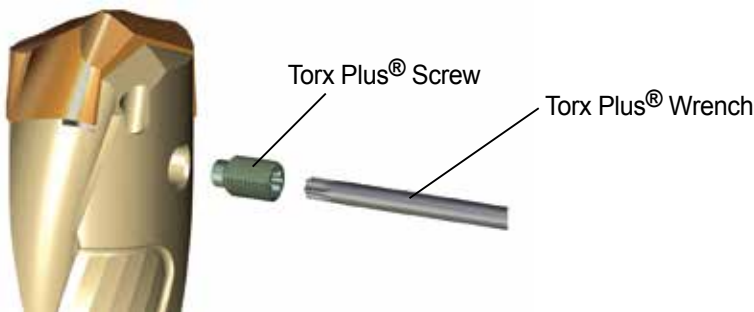
ASSEMBLY OF i-ONE DRILLS
MONTAGE DES i-ONE DRILLS




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



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

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



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

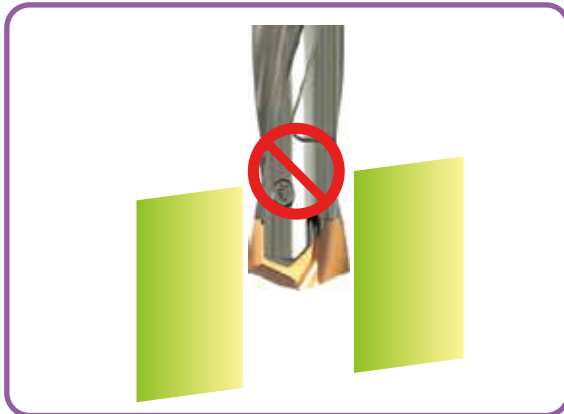
Use the Torx Plus wrench
 Benutzen Sie den Winkeldreher oder T - Schlüsse

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

CAUTION-NOT RECOMMENDABLE APPLICATION
ACHTUNG - NICHT EMPFOHLENE ANWENDUNG

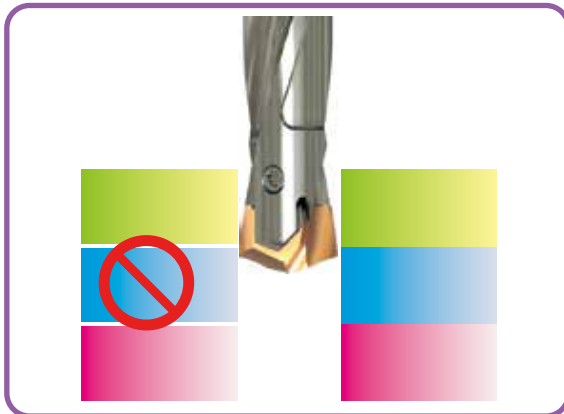

Intersecting cross hole is bigger than the drill insert's Margin Length.

Der Haltersitz ist größer als die Breite des Schneideinsatzes.



Material with slanting entrance and exit over 7 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).

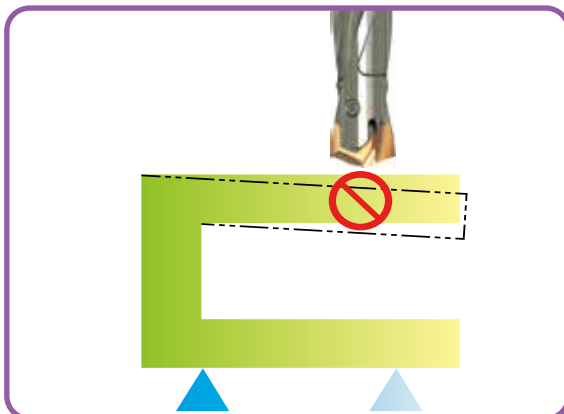


For drilling stacked plates, minimize the space between the plates.

Beim Bohren von Blechpaketen den Abstand der Bleche minimieren.

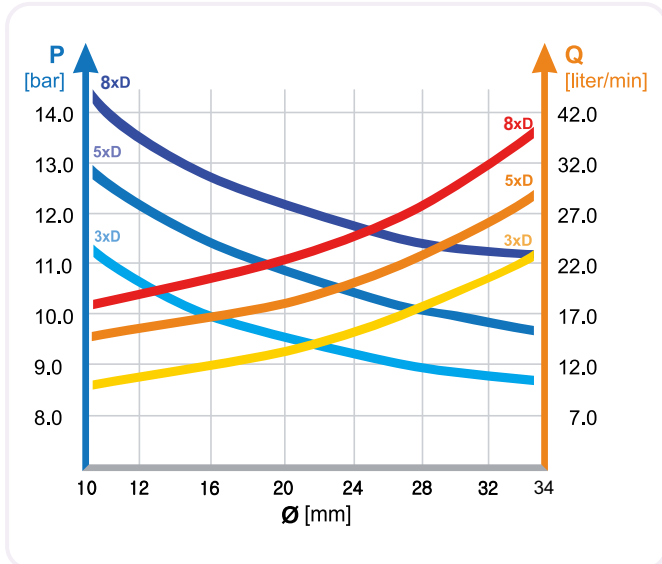
The space between stacked plates can cause insert breakage or poor chip control.

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



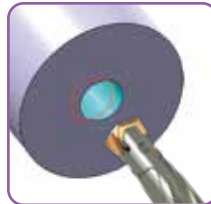
- 3) Build-up on cutting edge**
- Increase cutting speed
 - Use a coated insert



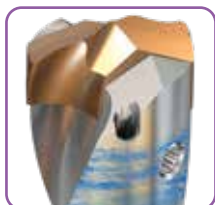
- 4) Chipping or break down on outer corner**
- Reduce feed
 - Rigid clamping of workpiece



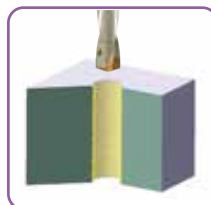
- 5) Wear of land margin**
- Rigid clamping of workpiece
 - Reduce cutting speed
 - Increase coolant flow



- 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