



Being the best through innovation

**CARBIDE INSERT**





# *i* - Dream Drills

## i-Dream Drill

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

# SELECTION GUIDE

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## Comparison with Split Point Drill, Spade Drill & Dream Drill



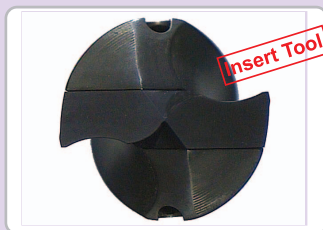
Normal Split Point Drill



Dream Drill



Spade Drill



i-Dream Drill

# i-DREAM DRILLS, CARBIDE INSERT

⊙ : Excellent  
○ : Good

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

# i-DREAM DRILL INSERTS & HOLDERS

## i-DREAM DRILL EINSÄTZE UND HALTER

**- Features of i-Dream Drill Inserts-**  
**Merkmale des i-Dream Drill Einsätze**

- ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.  
 Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

**i-Dream Drill General / i-Dream Drill allgemeinen**

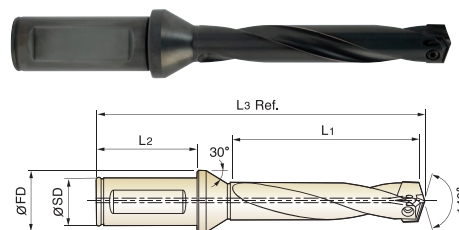
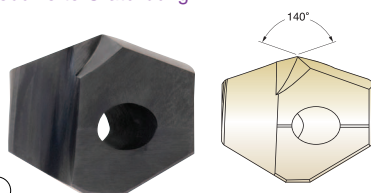
- ▶ For most steels materials / In den meisten Stahlsorten

**i-Dream Drill INOX / i-Dream Drill INOX**

- ▶ For tough, ductile materials and stainless steels  
 Für zähe, verformbare Werkstoffe und rostfreie Stähle.
- ▶ Light, sharp cutting edge / Scharfe Schneidkante
- ▶ Soft cutting action / Weicher Schnitt
- ▶ Minimize cutting forces / Minimaler Schneiddruck
- ▶ Reduce built-up edge / Reduzierte Gratbildung

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

- ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures.  
 Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.
- ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.  
 Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.
- ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.  
 Optimierte Nutenform für maximale Spanabfuhr.



cutting conditions : p.38~39

Series Range (mm)	Insert EDP No.		Insert O.D.			Drilling Depth	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Flute Length L1	Overall Length L3 Ref.	Clamping Screw No.
	TiAlN General	TiCN INOX	dec.	h7 frac. mm									
A Ø12.00 to Ø13.99	YA1A1200	YA2C1200	0.4724		12.00	3D	ZH12003020	20	50	25	52	121	TX1213T08
	YA1A1210	YA2C1210	0.4764		12.10	5D	ZH12005020				77	146	
	YA1A1220	YA2C1220	0.4803		12.20	7D	ZH12007020				101	170	
	YA1A1230	YA2C1230	0.4844	31/64	12.30								
	YA1A1250	YA2C1250	0.4921		12.50								
	YA1A1260	YA2C1260	0.4961		12.60	3D	ZH12503020				54	122	
	YA1A1270	YA2C1270	0.5000	1/2	12.70	5D	ZH12505020	20	50	25	80	148	
	YA1A1280	YA2C1280	0.5039		12.80	7D	ZH12507020				106	174	
	YA1A1290	YA2C1290	0.5079		12.90								
	YA1A1300	YA2C1300	0.5118		13.00	3D	ZH13003020				56	124	
	YA1A1310	YA2C1310	0.5156	33/64	13.10	5D	ZH13005020	20	50	25	83	151	
	YA1A1320	YA2C1320	0.5197		13.20	7D	ZH13007020				110	178	
	YA1A1349	YA2C1349	0.5312	17/32	13.49								
	YA1A1350	YA2C1350	0.5315		13.50								
YA1A1360	YA2C1360	0.5354		13.60	3D	ZH13503020				57	125		
YA1A1370	YA2C1370	0.5394		13.70	5D	ZH13505020	20	50	25	85	153		
YA1A1380	YA2C1380	0.5433		13.80	7D	ZH13507020				113	181		
YA1A1389	YA2C1389	0.5469	35/64	13.89									
B Ø14.00 to Ø15.99	YB1A1400	YB2C1400	0.5512		14.00								TX1415T08
	YB1A1410	YB2C1410	0.5551		14.10	3D	ZH14003020				59	126	
	YB1A1420	YB2C1420	0.5591		14.20	5D	ZH14005020	20	50	25	88	155	
	YB1A1429	YB2C1429	0.5625	9/16	14.29	7D	ZH14007020				117	184	
	YB1A1430	YB2C1430	0.5630		14.30								
	YB1A1440	YB2C1440	0.5669		14.40								

Coating : TiN, TiCN, TiAlN & Hardslick are available on your request.

◎ : Excellent ○ : Good

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



# i-DREAM DRILL INSERTS & HOLDERS

## i-DREAM DRILL EINSÄTZE UND HALTER

**- Features of i-Dream Drill Inserts-**  
**Merkmale des i-Dream Drill Einsätze**

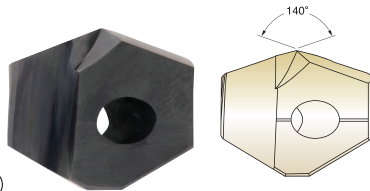
- ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.  
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**i-Dream Drill General / i-Dream Drill allgemeinen**

- ▶ For most steels materials / In den meisten Stahlsorten

**i-Dream Drill INOX / i-Dream Drill INOX**

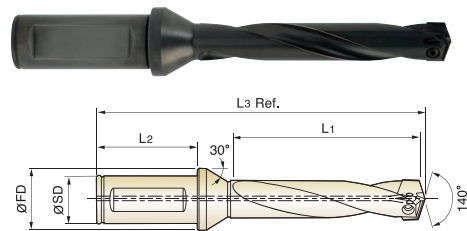
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Für zähe, verformbare Werkstoffe und rostfreie Stähle.
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- ▶ Soft cutting action / Weicher Schnitt
- ▶ Minimize cutting forces / Minimaler Schneidendruck
- ▶ Reduce built-up edge / Reduzierte Gratbildung



cutting conditions : p.38~39

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**- Merkmale des i-Dream Drill Halters-**

- ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures.  
Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.
- ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.  
Innovative Oberflächenbehandlung, die die Verschleissfestigkeit erhöht und die Korrosion vermindert.
- ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.  
Optimierte Nutenform für maximale Spanabfuhr.



Series Range (mm)	Insert EDP No.		Insert O.D.			Drilling Depth	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Flute Length L1	Overall Length L3 Ref.	Clamping Screw No.
	TiAlN General	TiCN INOX	dec.	frac.	mm								
B Ø14.00 to Ø15.99	YB1A1450	YB2C1450	0.5709		14.50	3D	ZH14503020				61	128	TX1415T08
	YB1A1460	YB2C1460	0.5748		14.60	5D	ZH14505020	20	50	25	91	158	
	YB1A1468	YB2C1468	0.5781	37/64	14.68	7D	ZH14507020				121	188	
	YB1A1480	YB2C1480	0.5827		14.80								
	YB1A1500	YB2C1500	0.5906		15.00								
	YB1A1508	YB2C1508	0.5938	19/32	15.08	3D	ZH15003020				63	130	
	YB1A1510	YB2C1510	0.5945		15.10	5D	ZH15005020	20	50	25	94	161	
	YB1A1520	YB2C1520	0.5984		15.20	7D	ZH15007020				125	192	
	YB1A1530	YB2C1530	0.6024		15.30								
	YB1A1548	YB2C1548	0.6094	39/64	15.48								
	YB1A1550	YB2C1550	0.6102		15.50								
	YB1A1560	YB2C1560	0.6142		15.60	3D	ZH15503020				65	131	
	YB1A1570	YB2C1570	0.6181		15.70	5D	ZH15505020	20	50	25	97	163	
YB1A1580	YB2C1580	0.6220		15.80	7D	ZH15507020				128	194		
YB1A1587	YB2C1587	0.6250	5/8	15.87									
C Ø16.00 to Ø17.99	YC1A1600	YC2C1600	0.6299		16.00								TX1617T08
	YC1A1609	YC2C1609	0.6335		16.09	3D	ZH16003020				65	131	
	YC1A1620	YC2C1620	0.6378		16.20	5D	ZH16005020	20	50	25	98	164	
	YC1A1627	YC2C1627	0.6406	41/64	16.27	7D	ZH16007020				131	197	
	YC1A1630	YC2C1630	0.6417		16.30								
	YC1A1650	YC2C1650	0.6496		16.50	3D	ZH16503020				67	133	
	YC1A1667	YC2C1667	0.6562	21/32	16.67	5D	ZH16505020	20	50	25	101	167	
	YC1A1680	YC2C1680	0.6614		16.80	7D	ZH16507020				134	200	

Coating : TiN, TiCN, TiAlN & Hardslick are available on your request.

◎ : Excellent ○ : Good

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

## i-DREAM DRILL INSERTS & HOLDERS i-DREAM DRILL EINSÄTZE UND HALTER

### - Features of i-Dream Drill Inserts- - Merkmale des i-Dream Drill Einsätze

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#### i-Dream Drill General / i-Dream Drill allgemeinen

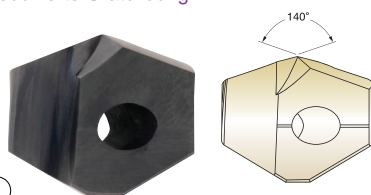
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#### i-Dream Drill INOX / i-Dream Drill INOX

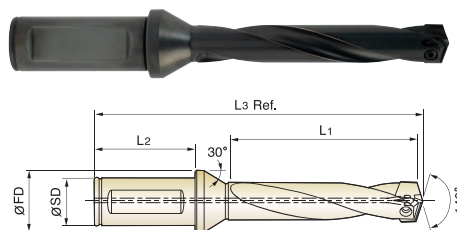
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Optimierte Nutenform für maximale Spanabfuhr.



cutting conditions : p.38~39



Series Range	Insert EDP No.		Insert O.D.			Drilling Depth	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Flute Length	Overall Length	Clamping Screw No.	
	TiAIN	TiCN	dec.	h7										
(mm)	General	INOX		frac.	mm			SD	L2	FD	L1	L3 Ref.		
C Ø16.00 to Ø17.99	YC1A1700	YC2C1700	0.6693		17.00	3D	ZH17003020				69	134	TX1617T08	
	YC1A1707	YC2C1707	0.6919	43/64	17.07	5D	ZH17005020	20	50	25	104	169		
	YC1A1746	YC2C1746	0.6875	11/16	17.46	7D	ZH17007020				139	204		
	YC1A1750	YC2C1750	0.6890		17.50	3D	ZH17503020				70	135		
	YC1A1780	YC2C1780	0.7008		17.80	5D	ZH17505020	20	50	25	106	171		
	YC1A1786	YC2C1786	0.7031	45/64	17.86	7D	ZH17507020				142	207		
D Ø18.00 to Ø19.99	YD1A1800	YD2C1800	0.7087		18.00	3D	ZH18003025				72	149	TX1819T15	
	YD1A1826	YD2C1826	0.7188	23/32	18.26	5D	ZH18005025	25	56	32	109	186		
	YD1A1850	YD2C1850	0.7283		18.50	7D	ZH18007025				146	223		
	YD1A1850	YD2C1850	0.7283		18.50	3D	ZH18503025				74	150		
	YD1A1865	YD2C1865	0.7344	47/64	18.65	5D	ZH18505025	25	56	32	112	188		
	YD1A1880	YD2C1880	0.7402		18.80	7D	ZH18507025				150	226		
	YD1A1900	YD2C1900	0.7480		19.00									
	YD1A1905	YD2C1905	0.7500	3/4	19.05	3D	ZH19003025				76	152		
	YD1A1927	YD2C1927	0.7587		19.27	5D	ZH19005025	25	56	32	115	191		
	YD1A1945	YD2C1945	0.7656	49/64	19.45	7D	ZH19007025				154	230		
	YD1A1950	YD2C1950	0.7677		19.50	3D	ZH19503025				77	153		
	YD1A1980	YD2C1980	0.7795		19.80	5D	ZH19505025	25	56	32	117	193		
	YD1A1984	YD2C1984	0.7812	25/32	19.84	7D	ZH19507025				157	233		

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	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
Y * 1A	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
Y * 2C	○	○	○	○	○	○	○	○	○	○	○	◎			○	○

# i-DREAM DRILL INSERTS & HOLDERS

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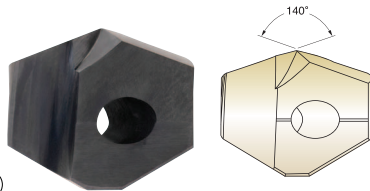
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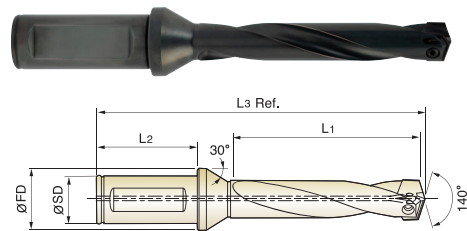
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cutting conditions : p.38~39

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	TiAlN General	TiCN INOX	dec.	frac.	mm			SD	L2	FD	L1	L3 Ref.	
E Ø20.00 to Ø21.99	YE1A2000	YE2C2000	0.7874		20.00	3D	ZH20003025				77	152	TX2021T20
	YE1A2024	YE2C2024	0.7969	51/64	20.24	5D	ZH20005025	25	56	32	118	193	
	YE1A2050	YE2C2050	0.8071		20.50	7D	ZH20007025				159	234	
	YE1A2064	YE2C2064	0.8125	13/16	20.64	3D	ZH20503025				79	154	
	YE1A2070	YE2C2070	0.8150		20.70	5D	ZH20505025	25	56	32	121	196	
	YE1A2070	YE2C2070	0.8150		20.70	7D	ZH20507025				163	238	
	YE1A2100	YE2C2100	0.8268		21.00	3D	ZH21003025				81	156	
	YE1A2103	YE2C2103	0.8281	53/64	21.03	5D	ZH21005025	25	56	32	124	199	
	YE1A2143	YE2C2143	0.8438	27/32	21.43	7D	ZH21007025				167	242	
	YE1A2150	YE2C2150	0.8465		21.50	3D	ZH21503025				83	157	
YE1A2170	YE2C2170	0.8543		21.70	5D	ZH21505025	25	56	32	126	200		
YE1A2183	YE2C2183	0.8594	55/64	21.83	7D	ZH21507025				170	244		
F Ø22.00 to Ø23.99	YF1A2200	YF2C2200	0.8661		22.00	3D	ZH22003025				85	159	TX2223T20
	YF1A2223	YF2C2223	0.8750	7/8	22.23	5D	ZH22005025	25	56	32	129	203	
	YF1A2250	YF2C2250	0.8858		22.50	7D	ZH22007025				174	248	
	YF1A2262	YF2C2262	0.8906	57/64	22.62	3D	ZH22503025				86	159	
	YF1A2262	YF2C2262	0.8906	57/64	22.62	5D	ZH22505025	25	56	32	132	205	
	YF1A2270	YF2C2270	0.8937		22.70	7D	ZH22507025				178	251	
	YF1A2300	YF2C2300	0.9055		23.00	3D	ZH23003025				88	161	
	YF1A2302	YF2C2302	0.9062	29/32	23.02	5D	ZH23005025	25	56	32	135	208	
	YF1A2342	YF2C2342	0.9219	59/64	23.42	7D	ZH23007025				182	255	
	YF1A2350	YF2C2350	0.9252		23.50	3D	ZH23503025				90	163	
YF1A2370	YF2C2370	0.9331		23.70	5D	ZH23505025	25	56	32	137	210		
YF1A2381	YF2C2381	0.9375	15/16	23.81	7D	ZH23507025				185	258		

Coating : TiN, TiCN, TiAlN & Hardslick are available on your request.

◎ : Excellent ○ : Good

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

# i-DREAM DRILL INSERTS & HOLDERS

## i-DREAM DRILL EINSÄTZE UND HALTER

**- Features of i-Dream Drill Inserts-**  
**- Merkmale des i-Dream Drill Einsätze**

- ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.  
Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

**i-Dream Drill General / i-Dream Drill allgemeinen**

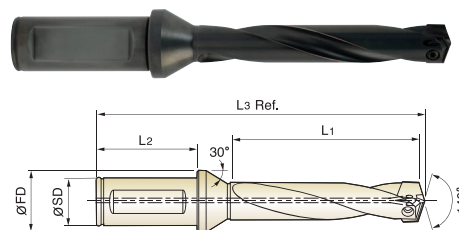
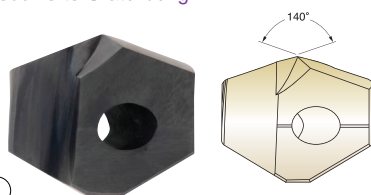
- ▶ For most steels materials / In den meisten Stahlsorten

**i-Dream Drill INOX / i-Dream Drill INOX**

- ▶ For tough, ductile materials and stainless steels  
Für zähe, verformbare Werkstoffe und rostfreie Stähle.
- ▶ Light, sharp cutting edge / Scharfe Schneidkante
- ▶ Soft cutting action / Weicher Schnitt
- ▶ Minimize cutting forces / Minimaler Schneiddruck
- ▶ Reduce built-up edge / Reduzierte Gratbildung

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

- ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures.  
Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.
- ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.  
Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.
- ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.  
Optimierte Nutenform für maximale Spanabfuhr.



cutting conditions : p.38~39

Series Range (mm)	Insert EDP No.		Insert O.D.			Drilling Depth	Holder EDP No.	Shank Dia. SD	Shank Length L2	Flange Dia. FD	Flute Length L1	Overall Length L3 Ref.	Clamping Screw No.
	TiAlN General	TiCN INOX	dec.	frac.	mm								
G Ø24.00 to Ø25.99	YG1A2400	YG2C2400	0.9449		24.00	3D	ZH24003032				91	172	TX2425T20
	YG1A2421	YG2C2421	0.9531	61/64	24.21	5D	ZH24005032	32	60	37	140	221	
	YG1A2450	YG2C2450	0.9646		24.50	7D	ZH24007032				189	270	
	YG1A2461	YG2C2461	0.9688	31/32	24.61	3D	ZH24503032				93	173	
	YG1A2470	YG2C2470	0.9724		24.70	5D	ZH24505032	32	60	37	143	223	
	YG1A2500	YG2C2500	0.9843	63/64	25.00	7D	ZH24507032				193	273	
	YG1A2540	YG2C2540	1.0000	1	25.40	3D	ZH25003032				95	175	
	YG1A2550	YG2C2550	1.0039		25.50	5D	ZH25005032	32	60	37	146	226	
	YG1A2567	YG2C2567	1.0106		25.67	7D	ZH25007032				197	277	
	YG1A2570	YG2C2570	1.0118		25.70	3D	ZH25503032				97	177	
YG1A2580	YG2C2580	1.0156	1 * 1/64	25.80	5D	ZH25505032	32	60	37	148	228		
H Ø26.00 to Ø27.99	YH1A2600	YH2C2600	1.0236		26.00	7D	ZH25507032				200	280	TX2627T25
	YH1A2619	YH2C2619	1.0312	1 * 1/32	26.19	3D	ZH26003032				98	177	
	YH1A2619	YH2C2619	1.0312	1 * 1/32	26.19	5D	ZH26005032	32	60	37	150	229	
	YH1A2619	YH2C2619	1.0312	1 * 1/32	26.19	7D	ZH26007032				202	281	
	YH1A2650	YH2C2650	1.0433		26.50	3D	ZH26503032				99	178	
	YH1A2659	YH2C2659	1.0469	1 * 3/64	26.59	5D	ZH26505032	32	60	37	152	231	
	YH1A2699	YH2C2699	1.0625	1 * 1/16	26.99	7D	ZH26507032				205	284	
	YH1A2700	YH2C2700	1.0630		27.00	3D	ZH27003032				101	180	
	YH1A2700	YH2C2700	1.0630		27.00	5D	ZH27005032	32	60	37	155	234	
	YH1A2700	YH2C2700	1.0630		27.00	7D	ZH27007032				209	288	
YH1A2750	YH2C2750	1.0827		27.50	3D	ZH27503032				103	181		
YH1A2750	YH2C2750	1.0827		27.50	5D	ZH27505032	32	60	37	159	237		
YH1A2778	YH2C2778	1.0938	1 * 3/32	27.78	7D	ZH27507032				214	292		

Coating : TiN, TiCN, TiAlN & Hardslick are available on your request.

◎ : Excellent ○ : Good

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



# i-DREAM DRILL INSERTS & HOLDERS

## i-DREAM DRILL EINSÄTZE UND HALTER

**- Features of i-Dream Drill Inserts-**  
**Merkmale des i-Dream Drill Einsätze**

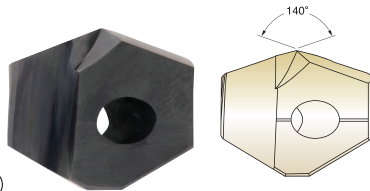
- ▶ Secure and accurate seating resulting in accurate repeatability and concentricity.  
Der sichere und genaue Sitz der Platte garantiert genaue Wiederholbarkeit beim Einsatz und beim Rundlauf.

**i-Dream Drill General / i-Dream Drill allgemeinen**

- ▶ For most steels materials / In den meisten Stahlsorten

**i-Dream Drill INOX / i-Dream Drill INOX**

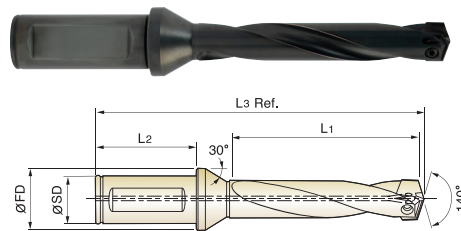
- ▶ For tough, ductile materials and stainless steels  
Für zähe, verformbare Werkstoffe und rostfreie Stähle.
- ▶ Light, sharp cutting edge / Scharfe Schneidkante
- ▶ Soft cutting action / Weicher Schnitt
- ▶ Minimize cutting forces / Minimaler Schneidendruck
- ▶ Reduce built-up edge / Reduzierte Gratbildung



cutting conditions : p.38~39

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

- ▶ Special Alloy Steels that maintains its hardness and toughness under high temperatures.  
Speziell legierter Stahl, der seine Härte und Zähigkeit auch bei hohen Temperaturen behält.
- ▶ Innovative surface treatment that improves wear resistance and reduces corrosion.  
Innovative Oberflächenbehandlung, die die Verschleißfestigkeit erhöht und die Korrosion vermindert.
- ▶ High Performance flute design allowing maximum chip evacuation and minimum interference.  
Optimierte Nutenform für maximale Spanabfuhr.



Series Range (mm)	Insert EDP No.		Insert O.D.			Drilling Depth	Holder EDP No.	Shank Dia.	Shank Length	Flange Dia.	Flute Length	Overall Length	Clamping Screw No.
	TiAlN General	TiCN INOX	dec.	frac.	mm			SD	L2	FD	L1	L3 Ref.	
I ø28.00 to ø29.99	YI1A2800	YI2C2800	1.1024		28.00	3D	ZH28003032				105	183	TX2829T25
	YI1A2818	YI2C2818	1.1094	1*7/64	28.18	5D	ZH28005032	32	60	37	161	239	
						7D	ZH28007032				217	295	
	YI1A2850	YI2C2850	1.1220		28.50	3D	ZH28503032				106	184	
	YI1A2858	YI2C2858	1.1250	1*1/8	28.58	5D	ZH28505032	32	60	37	163	241	
						7D	ZH28507032				220	298	
	YI1A2900	YI2C2900	1.1417		29.00	3D	ZH29003032				109	186	
						5D	ZH29005032	32	60	37	168	245	
					7D	ZH29007032				226	303		
	YI1A2937	YI2C2937	1.1562	1*5/32	29.37	3D	ZH29503032				110	187	
						5D	ZH29505032	32	60	37	170	247	
						7D	ZH29507032				229	306	
J ø30.00 to ø31.99	YJ1A3000	YJ2C3000	1.1811		30.00	3D	ZH30003032				112	189	TX3031T25
	YJ1A3016	YJ2C3016	1.1875	1*3/16	30.16	5D	ZH30005032	32	60	37	172	249	
						7D	ZH30007032				232	309	
	YJ1A3050	YJ2C3050	1.2008		30.50	3D	ZH30503032				114	190	
	YJ1A3056	YJ2C3056	1.2031	1*11/64	30.56	5D	ZH30505032	32	60	37	176	252	
						7D	ZH30507032				238	314	
	YJ1A3096	YJ2C3096	1.2188	1*7/32	30.96	3D	ZH31003032				115	191	
						5D	ZH31005032	32	60	37	177	253	
					7D	ZH31007032				239	315		
	YJ1A3100	YJ2C3100	1.2205		31.00	3D	ZH31503032				118	194	
						5D	ZH31505032	32	60	37	182	258	
						7D	ZH31507032				246	322	

Coating : TiN, TiCN, TiAlN & Hardslick are available on your request.

◎ : Excellent ○ : Good

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

# METRIC

Material Werkstück		Tensile Strength [N/mm <sup>2</sup> ]	Hardness		Cutting Speed Vc [M/min]	Feed [mm/rev]					
			HB	HRc		Ø12.0 ~Ø14.9	Ø15.0 ~Ø17.9	Ø18.0 ~Ø21.9	Ø22.0 ~Ø26.9	Ø27.0 ~Ø31.9	
Non-alloyed steels, Cast steels Free-machining steels	9SMn28, 9SMnPb28,	~500	100-150		95~120	0.16-0.28	0.21~0.35	0.27~0.40	0.34~0.52	0.37~0.55	
	10SPb20 etc	500-850	150-250	~24	80~105	0.14-0.24	0.21~0.35	0.27~0.40	0.34~0.52	0.37~0.55	
Low-alloyed steels, Cast steels(<5% ) Carbon steels	C15, C22, 20Mn5, Ck45, C45 etc	~450	85-125		90~115	0.14-0.25	0.20~0.33	0.25~0.39	0.31~0.47	0.34~0.50	
		450-755	125-225	~19	70-90	0.12-0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.33~0.49	
		755-900	225-265	19-27	60~80	0.12-0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.33~0.49	
Alloyed steels	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	900-1200	265-350	27~37	55~70	0.10-0.16	0.15~0.25	0.21~0.30	0.25~0.38	0.29~0.43	
		~600	125-175	~7	80~100	0.14-0.24	0.17~0.28	0.22~0.32	0.30~0.46	0.34~0.50	
		600-800	175-235	7~22	70~90	0.12-0.20	0.17~0.28	0.22~0.32	0.30~0.46	0.34~0.50	
		800-950	235-280	22~29	60~80	0.12-0.20	0.15~0.25	0.22~0.32	0.30~0.46	0.34~0.50	
		950~1110	280-330	29~35	55~70	0.10-0.16	0.13~0.21	0.21~0.30	0.25~0.38	0.29~0.43	
High-alloyed steels	36CrNiMo4, 41CrAlMo7 etc	1110~1230	330-360	35~39	45~60	0.08-0.12	0.13~0.21	0.21~0.30	0.25~0.38	0.29~0.43	
		600-1020	225-300	19~32	45~60	0.12-0.20	0.15~0.25	0.21~0.30	0.20~0.31	0.24~0.35	
		1020-1200	300-355	32~38	40~55	0.10-0.16	0.11~0.18	0.21~0.30	0.20~0.31	0.24~0.35	
Structural steels	St33, St37-2, St44-2, St52, St60 etc	1200-1330	355-390	38~42	40~50	0.08-0.12	0.09~0.14	0.18~0.26	0.19~0.29	0.23~0.34	
		350-500	100-150		75~95	0.14-0.24	0.21~0.35	0.27~0.39	0.29~0.44	0.32~0.47	
		500-850	150-250	~24	60~75	0.12-0.20	0.20~0.33	0.22~0.32	0.25~0.38	0.29~0.43	
Tool steels	102Cr6, 105WCr6, C75W etc	850-1200	250-355	24~38	50~65	0.10-0.16	0.17~0.28	0.21~0.30	0.21~0.32	0.26~0.38	
		500-705	150-210	~16	50~65	0.10-0.16	0.13~0.21	0.18~0.26	0.20~0.31	0.24~0.35	
Grey cast iron	Pearlitic, Ferritic Pearlitic	705-950	210-280	16~29	40~50	0.10-0.16	0.13~0.21	0.18~0.26	0.20~0.31	0.24~0.35	
		500-700	150-210	~16	100~125	0.15-0.26	0.20~0.37	0.27~0.42	0.36~0.51	0.40~0.55	
Cast iron nodular	Ferritic Pearlitic	700-850	210-250	16~24	75~95	0.11~0.20	0.16~0.29	0.20~0.30	0.25~0.35	0.29~0.40	
			540	165	4	95~120	0.13~0.22	0.17~0.31	0.21~0.32	0.28~0.40	0.32~0.44
Malleable cast iron	Ferritic Pearlitic		850	250	24	75~95	0.11~0.20	0.14~0.26	0.19~0.29	0.25~0.35	0.29~0.40
			450	125		100~125	0.13~0.22	0.17~0.31	0.21~0.32	0.28~0.40	0.32~0.44
Aluminum alloys (Wrought)	not heat treatable hardened		780	230	21	75~95	0.11~0.18	0.14~0.26	0.19~0.29	0.25~0.35	0.29~0.40
				65		250~330	0.30-0.40	0.35~0.45	0.40~0.50	0.45~0.55	0.50~0.60
Aluminum alloys (Cast)	≤12% Si, not heat treatable ≤12% Si, hardened >12% Si, not heat treatable										
				75		200~50	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55
				90		150~220	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50	0.45~0.55
Copper alloys	Free machining(Pb>1%) Brass Electrolytic copper										
				130		100~200	0.20~0.30	0.25~0.35	0.30~0.40	0.35~0.45	0.40~0.50
				110		115~145	0.16~0.28	0.23~0.36	0.29~0.36	0.37~0.45	0.41~0.48
Non ferrous material	Duroplastics Fiber plastics Hard rubber										
				90		145~185	0.17~0.29	0.24~0.37	0.30~0.38	0.38~0.46	0.42~0.49
Stainless steels	Austenitic and Austenitic/ferritic										
				100		95~120	0.06~0.09	0.09~0.13	0.11~0.13	0.15~0.18	0.19~0.22
		450-610	135-185	~9	45~60	0.10-0.16	0.12~0.18	0.14~0.20	0.15~0.26	0.18~0.28	
		610-930	185-275	9~28	30~45	0.08-0.14	0.09~0.15	0.10~0.16	0.12~0.20	0.14~0.22	

\*Formulas :

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

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

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

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

- ▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.  
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- ▶ Recommend you to reduce the feed rate to 85%,70% when you use 5xD,7xD holders.
- ▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140 ° point angle to min. 2/3 cutting diameter.  
The use of the centering pre-hole improves hole location , roundness and surface finish.

# INCH

Material Werkstück		Tensile Strength	Hardness		Cutting Speed	Feed [IPR]					
		MPa	HB	HRC	Vc [SFM]	Ø31/64 ~Ø37/64	Ø19/32 ~Ø45/64	Ø23/32 ~Ø55/64	Ø7/8 ~Ø1-1/16	Ø1-3/32 ~Ø1-1/4	
Non-alloyed steels, Cast steels Free-machining steels	9SMn28, 9SMnPb28, 10SPb20 etc	~500	100~150		312~394	0.006~0.011	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022	
		500~850	150~250	~24	262~344	0.006~0.009	0.008~0.014	0.011~0.016	0.013~0.020	0.015~0.022	
Low-alloyed steels, Cast steels(<5% ) Carbon steels	C15, C22, 20Mn5, Ck45, C45 etc	~450	85~125		295~377	0.006~0.010	0.008~0.013	0.010~0.015	0.012~0.019	0.013~0.020	
		450~755	125~225	~19	230~295	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.019	
		755~900	225~265	19~27	197~262	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.019	
Alloyed steels	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	900~1200	265~350	27~37	180~230	0.004~0.006	0.006~0.010	0.008~0.012	0.010~0.015	0.011~0.017	
		~600	125~175	~7	262~328	0.006~0.009	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.020	
		600~800	175~235	7~22	230~295	0.005~0.008	0.007~0.011	0.009~0.013	0.012~0.018	0.013~0.020	
		800~950	235~280	22~29	197~262	0.005~0.008	0.006~0.010	0.009~0.013	0.012~0.018	0.013~0.020	
High-alloyed steels	36CrNiMo4, 41CrAlMo7 etc	950~1110	280~330	29~35	180~230	0.004~0.006	0.005~0.008	0.008~0.012	0.010~0.015	0.011~0.017	
		600~1020	225~300	19~32	148~197	0.005~0.008	0.006~0.010	0.008~0.012	0.008~0.012	0.009~0.014	
		1020~1200	300~355	32~38	131~180	0.004~0.006	0.004~0.007	0.008~0.012	0.008~0.012	0.009~0.014	
Structural steels	St33, St37-2, St44-2, St52, St60 etc	1200~1330	355~390	38~42	131~164	0.003~0.005	0.004~0.006	0.007~0.010	0.007~0.011	0.009~0.013	
		350~500	100~150		246~312	0.006~0.009	0.008~0.014	0.011~0.015	0.011~0.017	0.013~0.019	
		500~850	150~250	~24	197~246	0.005~0.008	0.008~0.013	0.009~0.013	0.010~0.015	0.011~0.017	
Tool steels	102Cr6, 105WCr6, C75W etc	850~1200	250~355	24~38	164~213	0.004~0.006	0.007~0.011	0.008~0.012	0.008~0.013	0.010~0.015	
		500~705	150~210	~16	164~213	0.004~0.006	0.005~0.008	0.007~0.010	0.008~0.012	0.009~0.014	
Grey cast iron	Pearlitic, Ferritic Pearlitic	705~950	210~280	16~29	131~164	0.004~0.006	0.005~0.008	0.007~0.010	0.008~0.012	0.009~0.014	
		500~700	150~210	~16	328~410	0.006~0.010	0.008~0.015	0.011~0.017	0.014~0.020	0.016~0.022	
Cast iron nodular	Ferritic Pearlitic	700~850	210~250	16~24	246~312	0.004~0.008	0.006~0.011	0.008~0.012	0.010~0.014	0.011~0.016	
		540	165	4	312~394	0.005~0.009	0.007~0.012	0.008~0.013	0.011~0.016	0.013~0.017	
Malleable cast iron	Ferritic Pearlitic	850	250	24	246~312	0.004~0.008	0.006~0.010	0.007~0.011	0.010~0.014	0.011~0.016	
		450	125		328~410	0.005~0.009	0.007~0.012	0.008~0.013	0.011~0.016	0.013~0.017	
Aluminum alloys (Wrought)	not heat treatable hardened	780	230	21	246~312	0.004~0.007	0.006~0.010	0.007~0.011	0.010~0.014	0.011~0.016	
			65		820~1083	0.0118~0.0157	0.0138~0.0177	0.0157~0.0197	0.0177~0.0217	0.0197~0.0236	
Aluminum alloys (Cast)	≤12% Si, not heat treatable ≤12% Si, hardened >12% Si, not heat treatable		75		656~820	0.0118~0.0157	0.0138~0.0177	0.0157~0.0197	0.0177~0.0217	0.0197~0.0236	
			90		492~722	0.0098~0.0138	0.0118~0.0157	0.0138~0.0177	0.0157~0.0197	0.0177~0.0217	
			130		328~656	0.0079~0.0118	0.0098~0.0138	0.0118~0.0157	0.0138~0.0177	0.0157~0.0197	
Copper alloys	Free machining(Pb>1%) Brass Electrolytic copper		110		377~476	0.006~0.011	0.009~0.014	0.011~0.014	0.015~0.018	0.016~0.019	
			90		476~607	0.007~0.011	0.009~0.015	0.012~0.015	0.015~0.018	0.017~0.019	
			100		312~394	0.002~0.004	0.004~0.005	0.004~0.005	0.006~0.007	0.007~0.009	
Non ferrous material	Duroplastics Fiber plastics Hard rubber										
Stainless steels	Austenitic and Austenitic/ferritic	Y10A / Y20C	450~610	135~185	~9	145~197	0.004~0.006	0.005~0.007	0.006~0.008	0.006~0.011	0.007~0.011
			610~930	185~275	9~28	89~145	0.003~0.005	0.004~0.006	0.004~0.006	0.005~0.008	0.006~0.009

\*Formulas :

$$SFM = \frac{(RPM) \cdot \pi \cdot (DIA.)}{12}$$

$$IPM = (RPM) \cdot (IPR)$$

$$RPM = \frac{(SFM) \cdot 12}{(\pi) \cdot (DIA.)}$$

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

- ▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.  
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- ▶ Recommend you to reduce the feed rate to 85%,70% when you use 5xD,7xD holders.
- ▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140 ° point angle to min. 2/3 cutting diameter.  
The use of the centering pre-hole improves hole location , roundness and surface finish.

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





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



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



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

WRENCH TYPE	PRODUCT No.	SERIES
	TWWT08	A
		B
		C
	TWH600	D-J

Use the wing type or T-type wrench.  
 Benutzen Sie den Winkeldreher oder T - Schlüsse

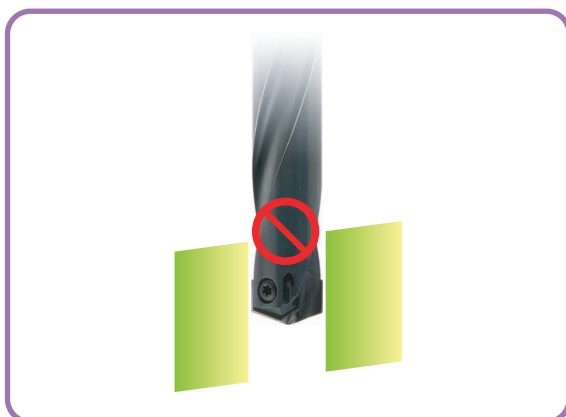
- ▶ Need to use appropriate wrenches and screws as indicated.  
 Unbedingt die angegebenen Schrauben und Dreher verwenden.
- ▶ It's important to tighten up the screw properly.  
 Es ist wichtig, die Schraube korrekt und fest anzuziehen.



**CAUTION-NOT RECOMMENDABLE APPLICATION**  
**ACHTUNG - NICHT EMPFOHLENE ANWENDUNG**



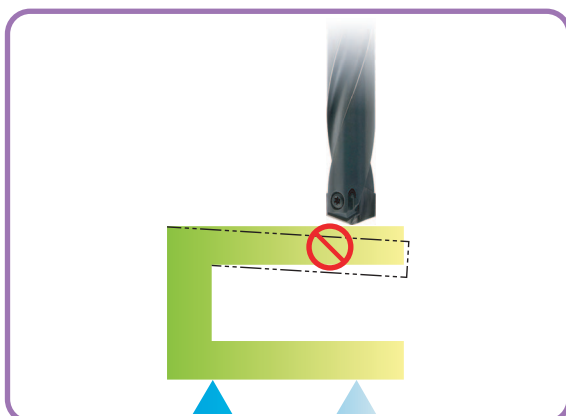
**Intersecting cross hole is bigger than the drill insert's Margin Length.**  
**Der Haltersitz ist größer als die Breite des Schneideinsatzes.**



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



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



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

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -INOX

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HARDENED STEELS

GENERAL CARBIDE DRILLS

NC-SPOTTING DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

WORM PATTERN DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

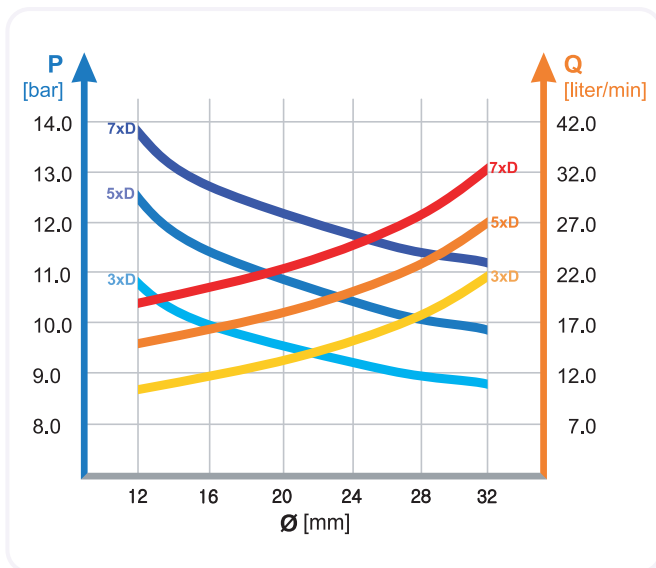
NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

TECHNICAL DATA

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



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

## TROUBLE SHOOTING PROBLEMLÖSUNGEN



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



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



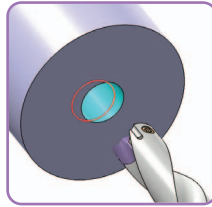
- 3) Build up on cutting edge**
- Increase cutting speed
  - Use a coated insert



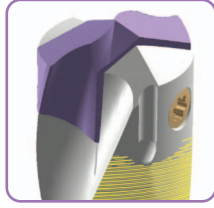
- 4) Chipping or break down on outer corner**
- Reduce feed
  - Rigid clamping of workpiece



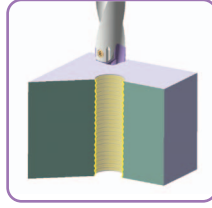
- 5) Wear of land margin**
- Rigid clamping of workpiece
  - Reduce cutting speed
  - Increase coolant flow



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



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



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