189, Seonggok-ro, Danwon-Gu, Ansan-si, Gyeonggi-do, Korea e-mail : yestool@yestool.co.kr Tel: +82-31-493-2387/8 (Int, #2) Fax: +82-31-494-7619 www.yestool.com



ООО «АКИТЭК» РФ, г. Москва, ул. Подольских курсантов вл. 22, стр.5 тел. 8 (499) 550 50 39 www.akytec.ru



YC-2017/1(EN)

CARBIDE **CUTTING TOOLS** Yes Carbide Cutting **High Performance Carbide Tools Line** Yes "YESTOOL Co., Ltd.

YESTOOL's worldwide network



- ▶ Argentina▶ Australia
- ▶ Austria
- ▶ Belarus
- ▶ Belgium
- **▶** Canada
- ▶ Iran ▶ Czech Republic ▶ Italy
- **▶** Egypt
 - ▶ Japan ▶ Malaysia

- ▶ Finland
 - ▶ Netherlands
- **▶** Norway ▶ Hong Kong ▶ Pakistan ▶ Hungary
- **▶** Poland ▶ Portugal ▶ Indonesia

▶ Mexico

- ▶ Romania
 - ▶ Singapore ▶ Slovenia
 - ▶ South Africa
 - ▶ Uzbekistan

▶ Ukraine

▶ Slovakia **▶** Spain

▶ Sweden

▶ Taiwan

▶ Turkey

▶ UAE

▶ U.K.

▶ Thailand

▶ Switzerland





New evolutionary deep hole drill, World first !! realeasing max. 1.25meters from a pioneer of carbide indexable drill manufacturer, YESTOOL Co., Ltd.





Optimum quality for your high productivity

Yestool has been providing high quality cutting tools with reasonable prices and wide variety of metal cutting solution.

Recent new tools

KRUZ-FSL: Flange type body to enable anti-vibration

KRUZ-FH: Flange type body with higher helix flute to reduce machine load

IDH: Premium carbide insert with higher helix, single point 140°

IDPH: Premium carbide insert with higher helix, dual point 130°+150°

IDFH: Premium carbide insert with higher helix & flatted bottom point with dual point 140°+170°

IDSH: Special insert for stainless, titanium or exotic material purpose

KRUZ "K" series: Structural machining purpose drill body

>> Former DL or SL version will be depleted soon after inventory is consumed

Expanded special tools

Yestool's capability will exceed your expectations.

Engineered special, modification of standard, made to order and special tolerance etc. easily available per customer's requirements.

Call your local distributor and enjoy optimum service of qualified distributor.

Distribution network

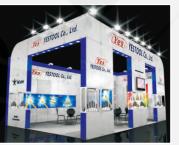
Yestool products are being supplied through the most qualified industrial distributors throughout 50 different countries around the world.

This select organization will be able to support customers to meet the satisfaction.

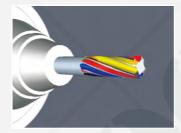
Our goal is to provide the best innovative tool for the job at hand. Reduce your machining cost by Yestool's solution.

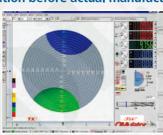


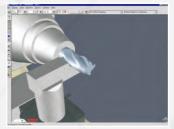




All of our product design is processed by 3D-graphic along with computerized calculation, even more simulation before actual manufacturing tool in CNC machine.









	Model	Description & Available Standard Sizes	Page	Stock
	ORDERING	Ordering Information for Yes brand products 주문방법	8	
F1 DR	(22/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2	F1 deep hole drill (20xD ~ 50xD) F1 딥홀 드릴	2	0
KRUZ-FSL		KRUZ- FSL Drill Flange Type Bodies (Φ8.0~50.0mm, 3xD, 5xD, 7xD, 10xD) 크루즈 -FSL 플랜지드릴 바디	12~17	•
IDP (IDF)	IDP IDF ID	IDP, IDF, ID Carbide Drills Insert (Φ8.0~50.4mm) IDP, IDF, ID형 초경 인서트	12~17	•
New KRUZ-FH		KRUZ "H" series flange+high helix body & carbide insert (Φ12.0~50.0mm, 3xD, 5xD, 7xD, 10xD) 크루즈 "H"시리즈 플랜지 드릴 바디	18~23	
IDPH IDFH	IDPH IDFH IDH IDSH	IDPH, IDFH, IDH, IDSH Carbide Drills Insert (Φ12.0~50.4mm) IDPH, IDFH, IDH, IDSH형 초경 인서트	18~23	A
KRUZ-SLK		KRUZ "K" series drill body & insert, Metric / Inch (Φ14.0~50.0mm) 철구 가공용 "K"시리즈 바디	24~27	•
KRUZ-FSLK 7D		KRUZ-FSLK Flanged body (5xD, 7xD), IDFK & IDPK insert (Φ14.0~50.0mm) 철구 가공용 "K"시리즈 FSLK 롱형 드릴 바디	28~29 30~31	•
IDFK	IDPK IDFK	IDPK, IDFK Carbide Drills Insert (Φ14.0~50.4mm) 초경 인서트	25~31	A
DMH	o Loze, Lwa.lean	Drilling & Milling tool "DMH" 드릴밀 홀더	32	
DM	001 NO 8071	Drilling & Milling tool "DM" 초경 드릴밀	32	A
MTC		MT shank side lock holder MT 생크 사이드락 홀더	32	•
STH		Scribing tool "STH" 스크라이빙 툴 홀더	33	•
SD		Scribing tool "SD" 초경 스크라이빙 드릴	33	

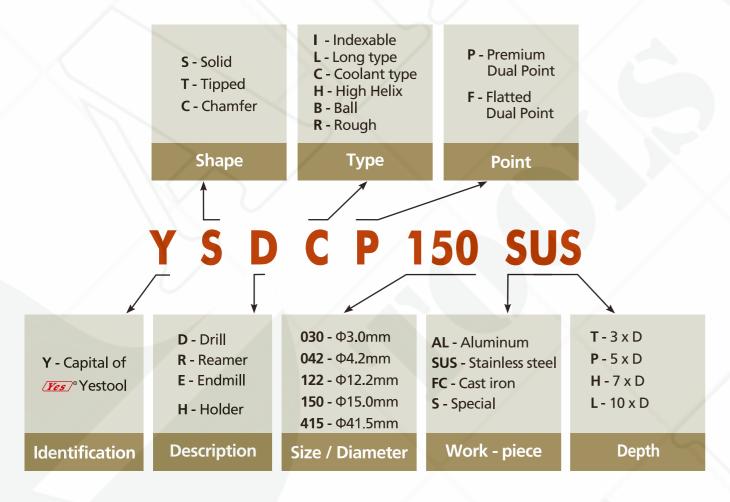
	Model	Description & Available Standard Sizes	Page	Stock
ISO45		ISO 45 Extension holder for Structural 철구용 ISO45 툴연장 홀더	34	A
HSK		HSK Extension holder for Structural 철구용 HSK 툴 연장 홀더	34	0
EXT		Extension socket 철구용 툴 연장 소켓	34	•
RSL		Reduction sleeve 철구용 생크조정 슬리브	35	A
YITM	OSL WITK M	Indexable Thread Mill 인덱서블 스레드밀	38 39~43	0
Special KRUZ		Special KRUZ Step Drill body (drilling, chamfering, counter-boring in one tool body) 스페셜 크루즈 스텝드릴 바디(주문제작)	44	0
KRUZ/DB	Pointmenting ("One Pass" Indexable Drilling & Deburring Bodies (Φ8.0~50.0mm) "원패스 " 전후면취 겸용 드릴	45	0
DBI		Carbide Deburring Inserts, TiN, TiAlN coated (chamfer angle 45°, 60°) 초경 디버링 인서트	45	0
YTRI	19 10 10 10 10 10 10 10 10 10 10 10 10 10	YTRI Indexable Reamer body (Φ15.0~40.0mm) 인덱서블 리머 바디	46	•
(R,IBR)	IR IBR	IR, IBR Indexable Reamer & Broach Insert (Φ15.0~40.0mm) IR, IBR 인덱서블 리머 및 브로치 인서트	46	A
modified KRUZ		KRUZ Combination Chamfer Tool KRUZ 개조형 면취 바디	46	0
YCHR	10	KRUZ Combination Chamfer Tool "YCHR" KRUZ용 면취툴	46	0
YID		Carbide Brazed Tipped Drills, <mark>Metric / Inch</mark> (Φ13.5~41.5mm) 초경용접 팁 드릴	47~49	
YTDL		Carbide Brazed Tipped Drills, Long series, Metric / Inch (Φ13.5~41.5mm) 초경용접 팁 드릴 롱시리즈	50~52	A



	Model	Description & Available Standard Sizes	Page	Stock
YSR(L) YSBR		Solid carbide "Speedy" Reamer / Solid carbide Broach Reamer (Ф3.0~20mm) 초경 스피드 리머 / 초경 스피드 브로치리머	54	A
YSD		Solid Carbide Drills, Metric / Inch (Φ3.0~20mm) 초경 솔리드 드릴	<i>58</i> ~ <i>60</i>	•
YSDP	533	Solid Carbide Drills, "F" & "P" point Drills (Φ3.0~20mm) 초경 솔리드 "F" & "P" 포인트 드릴	<i>56</i> ~ <i>57</i>	0
YSDL		Solid Carbide Drills, Long series, <mark>Metric / Inch</mark> (Φ3.0~20mm) 초경 솔리드 드릴	<i>61</i> ~ <i>63</i>	•
YSDLP	535	Solid Carbide Drills, Long series, "F" & "P" point Drills (Φ3.0~20mm) 초경 솔리드 "F" & "P" 포인트 드릴 롱시리즈	<i>56</i> ~ <i>57</i>	0
YSDC		Solid Carbide Coolant Hole Drills, 5xD, HA shank, Metric / Inch (Ф5.0~20.0mm) 초경 쿨런트 드릴	64~66	•
YSDCP		Solid Carbide Coolant Hole Drills, "F" & "P" point, 5xD, HA shank (Φ5.0~20.0mm) 초경 쿨런트 "F" & "P"포인트 드릴	64~66	0
YSDC,D5		Solid Carbide Coolant Driils, 5xD, HE shank (Ф5.0~20.0mm) 초경 쿨런트 드릴 (5xD)	67~68	•
YSDCP,D5		Solid Carbide Coolant Driils, "F" & "P" point, 5xD, HE shank (Φ5.0~20.0mm) 초경 쿨런트 "F" & "P"포인트 드릴 (5xD)	<i>67~68</i>	0
YSDC,D8		Solid Carbide Coolant Driils, 8xD, HE shank (Ф5.0~20.0mm) 초경 쿨런트 롱 드릴 (8xD)	69~ 70	0
YSDCP,D8		Solid Carbide Coolant Driils, "F" & "P" point, 8xD, HE shank (Ф5.0~20.0mm) 초경 쿨런트 "F" & "P"포인트 롱드릴 (8xD)	69~ 70	0
YCD		Solid Carbide Chamfer Drills, Metric / Inch (Φ5.1~20mm /Φ0.201~0.8125") 초경 챔퍼 드릴	71~73	•

	Model	Description & Available Standard Sizes	Page	Stock
YCH		Chamfer Holders for YCD, <mark>Metric / Inch</mark> (Ф6.0~20.0mm / Ф0.250~0.750") 챔퍼드릴용 홀더	74~75	•
YTEI		Indexable "Eco-Cutter" system (Ф8.0~32.0mm) 인덱서블 "에코-커터" 바디	77	•
IB,R		Carbide "Eco-Cutter" Insert Ball End Mills (Φ8.0~32.0mm) 초경 인서트 엔드밀	78 ~ 79	•
IE,R		Carbide "Eco-Cutter" Insert End Mill & Center Drils (Φ8.0~32.0mm) 초경 인서트 엔드밀, 센터드릴	78 ~ 79	•
YSET		Solid Carbide End Mills, TiAlN (Φ2.0~25.0mm) 초경 솔리드 엔드밀	80	•
YSEL		Solid Carbide End Mills, Long series, TiAlN (Φ6.0~25.0mm) 초경 솔리드 롱 엔드밀	80	•
YSET/HH		Solid Carbide High Helix End Mills, TiAlN (Φ6.0~32.0mm) 초경 하이헬릭스 엔드밀	81	A
YSER		Solid Carbide Roughing End Mills, TiAlN (Φ6.0~25.0mm) 초경 솔리드 러핑 엔드밀	81	•
YSEB		Solid Carbide Ball End Mills, TiAlN (Φ2.0~32.0mm) 초경 솔리드 볼 엔드밀	82	A
YSEBL		Solid Carbide Ball End Mills, Long series, TiAlN (Φ6.0~32.0mm) 초경 솔리드 볼 롱 엔드밀	82	A
YSEBG		Solid Carbide Ball End Mills for Graphite, TiAlN (Φ2.0~16.0mm) 초경 그라파이트용 엔드밀	83	•
	DATA	Technical Information 기술자료	84~97	

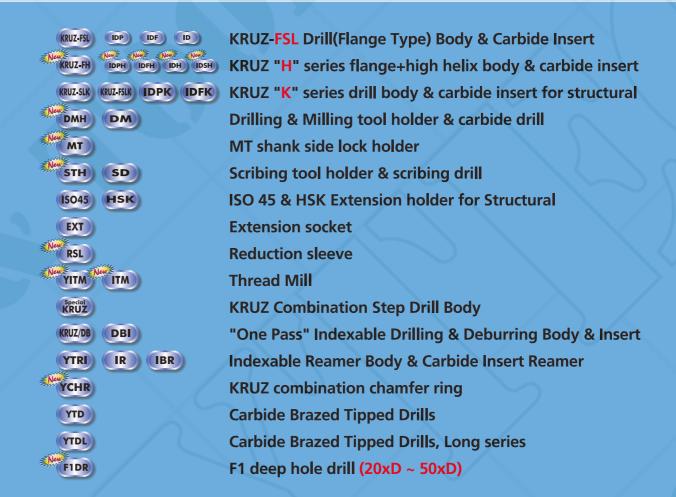






Yestool's product has different shank style each model.

If requesting different shank style, please specify required shank on the left.





KRUZ Drills & Inserts

Caution!!! "H" series insert should use only with "H" series body to avoid drilling failure.



- ▶ Locking with dual screws(set & cap screw)
- ▶ Flanged body construction to reduce vibration
- ▶ Reinforced clamping power with bigger screws
- IDP
- ▶ Deep hole & general purpose
- ▶ Patented dual point 130° + 150°
- ▶ Coated with newest <Y+> coated
- ▶ Designed for deep hole and tough job
- ▶ Thin plate & shallow depth
- ▶ Optimum geometry for structural beams ▶ Dual point 140° + 170° side edge
- - ▶ Alternative solution for interrupted hole



- ▶ General purpose
- ▶ Conventional 140° single point



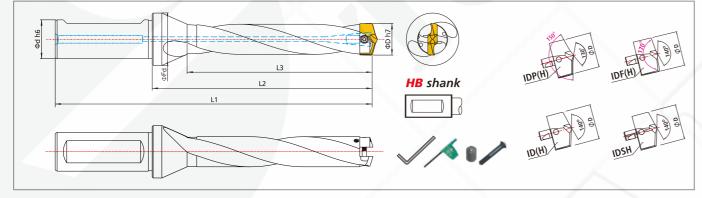
- ▶ Higher helix flute to reduce machine load
- Locking with dual screws(set & cap screw)
- ▶ Flanged body construction to reduce vibration
- IDPH
- ▶ Higher helix flute to fit in "H" series body
- ▶ Deep hole & general purpose
 - ▶ Patented dual point 130° + 150°
 - ▶ Designed for deep hole and tough job



- ▶ Higher helix flute to fit in "H" series body
- ▶ Thin plate & shallow depth
- ▶ Optimum geometry for structural beams ▶ Dual point 140° + 170° side edge
- - ▶ Alternative solution for interrupted hole
- ▶ Higher helix flute to fit in "H" series body
- ▶ General purpose
- ▶ Conventional 140° single point



- ▶ Higher helix flute to fit in "H" series body
- ▶ Stainless, titanium or exotic material purpose
- ▶ Conical 140' single point with oil groove face



KRUZ Body

- ▶ Rugged heat-treated tool steel, polished flute to smooth chip removal
- ▶ Internal coolant channel through body
- ▶ Cylindrical with flatted HB Shank as standard(except small size 8 to 11.5mm cylindrical HA shank)
- ▶ Cutting length 3xDia, 5xDia, 7xDia, 10xDia Wide size selection 8 to 50mm as standard
- ▶ ID insert's quick change without picking up body in the machine
- ▶ Included necessary wrench and one steel bar to remove insert just for safety





performance at high speed.



Chip feature after drilling



12 spindles machining feature used KRUZ body & IDPK inserts

Carbide insert drill

- ▶ Ultra-micro grain carbide material to cover various material from soft to harder
- ▶ Completely ground cutting edge in CNC program
- ▶ Own designed point geometry to increase performance
- ▶ Wide variety of size selection Ф8.0 to 50.4mm by 0.1mm inclusive from stock

Standard and optional geometry for different material

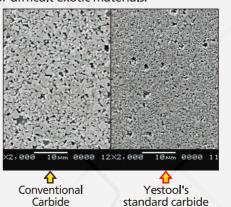
- ID & IDF coated with <TiAIN>, IDP coated with < Y+> as standard
- AL: for Aluminum, made-to-order, uncoated but polished
- SUS: for Stainless steel or Titanium, made-to-order
- FC: for Cast iron, made-to-order

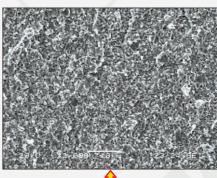
Special made-to-order

- precise micro-size by 0.01mm, different point angle, corner chamfer, corner radius step shape, flat bottom 180 like end-mill or different coating available upon request only

Carbide material substrate

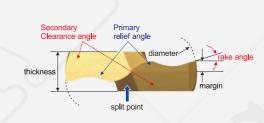
All of Yestool's carbide cutting tool is made of ultra-micro grain carbide material with 13% cobalt contents. This would be greatly affected on higher performance and strong durability for various materials from soft to harder work pieces, even for difficult exotic materials.

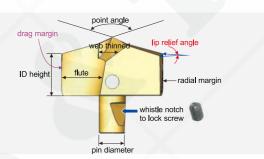




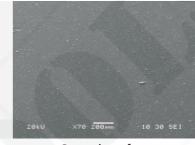
Yestool's New carbide material (0.2+0.5+0.8 μm ultra-micro grain size)

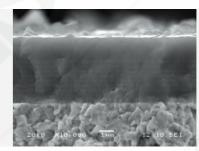
Nomenclature of Carbide Insert





Y+ coated insert





Coated layers

KRUZ-FSL, YTDI-FSL Flange body & Carbide insert



Please make required cutting depth in the ☐ like T, P, H, L

Hole size range	Body Code No.		Cutting depth (Length x ΦD)	1 1	L2	L3	Flanged dia.(ФFd)	Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
Φ9.0	YTDI 080 □ FSL	/ /	T(3xD)	87	42	32		IDP 080, IDP 081, IDP 082, IDP 083, IDP 084				
Ф8.0			P(5xD)	103	58	48		IDF 080, IDF 081, IDF 082, IDF 083, IDF 084				
~Ф8.4	KRUZ 080 □ FSL	1/ /	H(7xD)	119	74	64	1	ID 080, ID 081, ID 082, ID 083, ID 084	CS 080			
			T(3xD)	89	44	34		IDP 085, IDP 086, IDP 087, IDP 088, IDP 089	-085 SL			
	YTDI 085 □ FSL		P(5xD)	106	61	51		IDF 085, IDF 086, IDF 087, IDF 088, IDF 089				
~Ф8.9	KRUZ 085 □ FSL	(HA)	H(7xD)	123	78	68		ID 085, ID 086, ID 087, ID 088, ID 089				
			T(3xD)	92	47	36		IDP 090, IDP 091, IDP 092, IDP 093, IDP 094				
Ф9.0	YTDI 090 □ FSL		P(5xD)	110	65	54		IDF 090, IDF 091, IDF 092, IDF 093, IDF 094				
~Ф9.4	KRUZ 090 □ FSL		H(7xD)	128	83	72		ID 090, ID 091, ID 092, ID 093, ID 094	CS 090			
			T(3xD)	97	49	38	-	IDP 095, IDP 096, IDP 097, IDP 098, IDP 099	-095 SL			
Ф9.5	YTDI 095 □ FSL		P(5xD)	116	68	57	-	IDF 095, IDF 096, IDF 097, IDF 098, IDF 099				
~Ф9.9	KRUZ 095 □ FSL		. ,	135	87	76		ID 095, ID 096, ID 097, ID 098, ID 099				
		T(3xD) 99 51 40 18 IDP 100 IDP 101 IDP 102 IDP 103 IDP 104			None	None						
Ф10.0	YTDI 100 □ FSL		, ,	119	71	60	+	IDF 100, IDF 101, IDF 102, IDF 103, IDF 104		Torque		
~Ф10.4	KRUZ 100 □ FSL		P(5xD)		91			ID 100, ID 101, ID 102, ID 103, ID 104		0.6Nm		
			H(7xD)	139		80				(Max)		
Ф10.5	YTDI 105 □ FSL	12.0	T(3xD)	102	54	42	-	IDP 105, IDP 106, IDP 107, IDP 108, IDP 109				
~Ф10.9	KRUZ 105 □ FSL	(HA)	P(5xD)	123	75	63	-	IDF 105, IDF 106, IDF 107, IDF 108, IDF 109				
			H(7xD)	144	96	84		ID 105, ID 106, ID 107, ID 108, ID 109	CS100			
Ф11 0	YTDI 110 □ FSL		T(3xD) P(5xD)	104 126	56 78	44 66		IDP 110, IDP 111, IDP 112, IDP 113, IDP 114	-115 SL			
	KRUZ 110 □ FSL		H(7xD)	148	100	88		IDF 110, IDF 111, IDF 112, IDF 113, IDF 114				
~Ψ11.4	KNOZ 110 🗆 13E		L(10xD)	181	133	121		ID 110, ID 111, ID 112, ID 113, ID 114				
	\		T(3xD)	107	59	46		IDP 115, IDP 116, IDP 117, IDP 118, IDP 119				
	YTDI 115 □ FSL		P(5xD)	130	82	69		IDF 115, IDF 116, IDF 117, IDF 118, IDF 119				
~Ф11.9	KRUZ 115 □ FSL		H(7xD)	153	105	92	-	ID 115, ID 116, ID 117, ID 118, ID 119				
			L(10xD) T(3xD)	188 109	140 61	127 48						
Ф12.0	YTDI 120 □ FSL		P(5xD)	133	85	72	1	IDP 120, IDP 121, IDP 122, IDP 123, IDP 124	CS120			
~⊕12 <i>/</i> I	KRUZ 120 □ FSL	16.0	H(7xD)	157	109	96	21	IDF 120, IDF 121, IDF 122, IDF 123, IDF 124	-135 SL		M2.5x4	1.3mm
7 12.7			L(10xD)	193	145	132	1	ID 120, ID 121, ID 122, ID 123, ID 124				

Hole size range	Body Code No.		Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia.(ФFd)	Insert Code No, to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
4.5	VTDI 425 🗆 551		T(3xD)	111	63	50		IDP 125, IDP 126, IDP 127, IDP 128, IDP 129				
Ф12.5	YTDI 125 □ FSL		P(5xD)	136	88	75	-	IDF 125, IDF 126, IDF 127, IDF 128, IDF 129				1
~Ф12.9	KRUZ 125 □ FSL		H(7xD)	161	113	100	-	ID 125-, ID 126, ID 127, ID 128, ID 129				1
			L(10xD) T(3xD)	199 114	151 66	138 52	1			T6		
Ф13.0	YTDI 130 ☐ FSL		P(5xD)	140	92	78	1	IDP 130, IDP 131, IDP 132, IDP 133, IDP 134	CS 120	**		
~Ф13.4	KRUZ 130 □ FSL		H(7xD)	166	118	104	1	IDF 130, IDF 131, IDF 132, IDF 133, IDF 134	-135 SL	Torque 0.6Nm		
713.4		16.0	L(10xD)	205	157	143	21	ID 130, ID 131, ID 132, ID 133, ID 134		(Max)	λ	
	V7D1 435 🖂 561	10.0	T(3xD)	116	68	54		IDP 135, IDP 136, IDP 137, IDP 138, IDP 139		, ,		
Ф13.5	YTDI 135 □ FSL		P(5xD)	143	95	81		IDF 135, IDF 136, IDF 137, IDF 138, IDF 139				
~Ф13.9	KRUZ 135 □ FSL		H(7xD)	170	122	108		ID 135, ID 136, ID 137, ID 138, ID 139				
			L(10xD) T(3xD)	211 119	163 71	149 56					< /	
Ф14.0	YTDI 140 □ FSL		P(5xD)	147	99	84	1	IDP 140, IDP 141, IDP 142, IDP 143, IDP 144				
~Ф14.4	KRUZ 140 □ FSL		H(7xD)	175	127	112	1	IDF 140, IDF 141, IDF 142, IDF 143, IDF 144			/	
~Ф14.4	KNOZ 140 🗆 132		L(10xD)		169	154	1	ID 140, ID 141, ID 142, ID 143, ID 144				
			T(3xD)	123	73	58		IDP 145, IDP 146, IDP 147, IDP 148, IDP 149				
Ф14.5	YTDI 145 ☐ FSL		P(5xD)	152	102	87		IDF 145, IDF 146, IDF 147, IDF 148, IDF 149				1
~Ф14.9	KRUZ 145 □ FSL		H(7xD)	181	131	116		ID 145, ID 146, ID 147, ID 148, ID 149				
			L(10xD)		175	160		15 143, 15 140, 15 147, 15 140, 15 143	CS 140			1
Ф15.0	YTDI 150 □ FSL		T(3xD) P(5xD)	127 157	77 107	90		IDP 150, IDP 151, IDP 152, IDP 153, IDP 154	-155 SL			
~Ф15.4	KRUZ 150 □ FSL		H(7xD)	187	137	120	-	IDF 150, IDF 151, IDF 152, IDF 153, IDF 154				
~Ψ15.4	KNUZ 130 LI F3L		L(10xD)		182	165	1	ID 150, ID 151, ID 152, ID 153, ID 154				
			T(3xD)	130	80	62		IDP 155, IDP 156, IDP 157, IDP 158, IDP 159				
Ф15.5	YTDI 155 ☐ FSL		P(5xD)	161	111	93	1	IDF 155, IDF 156, IDF 157, IDF 158, IDF 159				
~Ф15.9	KRUZ 155 □ FSL		H(7xD)	192	142	124						
			L(10xD)		189	171		ID 155, ID 156, ID 157, ID 158, ID 159		Torque		
Ф16.0	YTDI 160 □ FSL		T(3xD)	132	82	64		IDP 160, IDP 161, IDP 162, IDP 163, IDP 164		0.9Nm		
			P(5xD)	164	114	96		IDF 160, IDF 161, IDF 162, IDF 163, IDF 164		(Max)	M2.5x4	1.3mm
~Ф16.4	KRUZ 160 □ FSL		H(7xD) L(10xD)	196 244	146 194		128 176	ID 160, ID 161, ID 162, ID 163, ID 164				
			T(3xD)	135	85	66		IDD 465 IDD 466 IDD 467 IDD 460 IDD 460				
Ф16.5	YTDI 165 ☐ FSL		P(5xD)	168	118	99		IDP 165, IDP 166, IDP 167, IDP 168, IDP 169				
~Ф16.9	KRUZ 165 □ FSL		P(5xD) 168 118 H(7xD) 201 151	132	1	IDF 165, IDF 166, IDF 167, IDF 168, IDF 169						
			L(10xD)	251	201	182		ID 165, ID 166, ID 167, ID 168, ID 169	CS 160			
447.0	VTD1 470 🗆 F61		T(3xD)	137	87	68		IDP 170, IDP 171, IDP 172, IDP 173, IDP 174	-175 SL			
Ф17.0		20.0	P(5xD)	171	121	102	27	IDF 170, IDF 171, IDF 172, IDF 173, IDF 174				
~Ф17.4	KRUZ 170 □ FSL		H(7xD)			136	-	ID 170, ID 171, ID 172, ID 173, ID 174				1
			L(10xD) T(3xD)	139	206 89	187 70	-					
Ф17.5	YTDI 175 □ FSL		P(5xD)	174	124	105	1	IDP 175, IDP 176, IDP 177, IDP 178, IDP 179				
~Ф17 9	KRUZ 175 □ FSL		H(7xD)	_	159	140	1	IDF 175, IDF 176, IDF 177, IDF 178, IDF 179				
717.5	KINGE 175 E 15E		L(10xD)		212	193	1	ID 175, ID 176, ID 177, ID 178, ID 179				
			T(3xD)	142	92	72		IDP 180, IDP 181, IDP 182, IDP 183, IDP 184				1
Ф18.0	YTDI 180 □ FSL		P(5xD)	178	128	108		IDF 180, IDF 181, IDF 182, IDF 183, IDF 184				
~Ф18.4	KRUZ 180 □ FSL		H(7xD)		164	144	-	ID 180, ID 181, ID 182, ID 183, ID 184				
			L(10xD)		218	198		12 100, 12 101, 12 102, 12 103, 12 101				
Ф18.5	YTDI 185 □ FSL		T(3xD) P(5xD)	144 181	94	74 111		IDP 185, IDP 186, IDP 187, IDP 188, IDP 189				
	KRUZ 185 □ FSL		H(7xD)		168	148	-	IDF 185, IDF 186, IDF 187, IDF 188, IDF 189				
~Ф18.9	KKUZ 185 🗆 FSL		L(10xD)		224	204		ID 185, ID 186, ID 187, ID 188, ID 189	CS 180			
			T(3xD)	147	97	76		IDP 190, IDP 191, IDP 192, IDP 193, IDP 194	-195 SL	T8		
Ф19.0	YTDI 190 □ FSL		P(5xD)	185	135	114		IDF 190, IDF 191, IDF 192, IDF 193, IDF 194		Torque		
~Ф19.4	KRUZ 190 □ FSL		H(7xD)		173	152		ID 190, ID 191, ID 192, ID 193, ID 194		1.5Nm		
)		Ī	L(10xD)		230	209		194 טו, וכו טו, וכו טו, ופו טו, ופו טו		(Max)		
Ф19.5	VTDI 10E 🗆 ECI		T(3xD)	149	99	78		IDP 195, IDP 196, IDP 197, IDP 198, IDP 199				
	YTDI 195 □ FSL		P(5xD)	188	138	117		IDF 195, IDF 196, IDF 197, IDF 198, IDF 199				
~Ф19.9	KRUZ 195 □ FSL		H(7xD) L(10xD)		177 236	156 215		ID 195, ID 196, ID 197, ID 198, ID 199				
			T(3xD)	157	101	80		IDD 200 IDD 204 IDD 202 IDD 202 IDD 203				
Ф20.0	YTDI 200 □ FSL	25.5	P(5xD)	197	141	120	1	IDP 200, IDP 201, IDP 202, IDP 203, IDP 204	CS 200			4.5
~Ф20.4	KRUZ 200 □ FSL	25.0	H(7xD)		181	160	32	IDF 200, IDF 201, IDF 202, IDF 203, IDF 204	-215 SL		M3x6	1.5mm
720.7	1.1.02 200 LI I 3L		L(10xD)				1	ID 200, ID 201, ID 202, ID 203, ID 204				

KRUZ-FSL, YTDI-FSL Flange body & Carbide insert

Hole size	Body Code No.	1	Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia.(ΦFd)	Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
			T(3xD)	160	104	82		IDD 205 IDD 206 IDD 207 IDD 200 IDD 200				
Ф20.5	YTDI 205 ☐ FSL		P(5xD)	201	145	123		IDP 205, IDP 206, IDP 207, IDP 208, IDP 209				
Φ20.0	KRUZ 205 □ FSL			242	186	164		IDF 205, IDF 206, IDF 207, IDF 208, IDF 209				
~Ψ20.9	111102 200 2102		L(10xD)		248	226		ID 205, ID 206, ID 207, ID 208, ID 209				
			T(3xD)	162	106	84		IDP 210, IDP 211, IDP 212, IDP 213, IDP 214				
Ф21.0	YTDI 210 ☐ FSL		P(5xD)	204	148	126			CS 200			
~⊕21.4	KRUZ 210 □ FSL		H(7xD)	246	190	168	1	IDF 210, IDF 211, IDF 212, IDF 213, IDF 214	-215 SL			
421.4			L(10xD)	309	253	231		ID 210, ID 211, ID 212, ID 213, ID 214				
			T(3xD)	165	109	86		IDP 215, IDP 216, IDP 217, IDP 218, IDP 219				
Ф21.5	YTDI 215 ☐ FSL		P(5xD)	208	152	129						
~Ф21 9	KRUZ 215 □ FSL		H(7xD)	251	195	172		IDF 215, IDF 216, IDF 217, IDF 218, IDF 219				
72113			L(10xD)	316	260	237		ID 215, ID 216, ID 217, ID 218, ID 219				
			T(3xD)	167	111	88		IDP 220, IDP 221, IDP 222, IDP 223, IDP 224		T8		
Ф22.0	YTDI 220 ☐ FSL	25.0	P(5xD)	211	155	132	1 ,,			Torque		
~Ф22.4	KRUZ 220 □ FSL	25.0	H(7xD)	255	199	176	32	IDF 220, IDF 221, IDF 222, IDF 223, IDF 224		Torque 1.5Nm		
			L(10xD)	321	265	242		ID 220, ID 221, ID 222, ID 223, ID 224		(Max)		
			T(3xD)	169	113	90		IDP 225, IDP 226, IDP 227, IDP 228, IDP 229		(I V I Cary		
Ф22.5	YTDI 225 ☐ FSL		P(5xD)	214	158	135						
~Ф22.9	KRUZ 225 □ FSL		H(7xD)	259	203	180		IDF 225, IDF 226, IDF 227, IDF 228, IDF 229				
			L(10xD)	327	271	248]	ID 225, ID 226, ID 227, ID 228, ID 229	CS 220			
			T(3xD)	172	116	92		IDP 230, IDP 231, IDP 232, IDP 233, IDP 234	-235 SL			
Ф23.0	YTDI 230 □ FSL		P(5xD)	218	162	138		IDF 230, IDF 231, IDF 232, IDF 233, IDF 234				
~Ф23.4	KRUZ 230 □ FSL		H(7xD)	264	208	184						
			L(10xD)	333	277	253		ID 230, ID 231, ID 232, ID 233, ID 234				
			T(3xD)	174	118	94		IDP 235, IDP 236, IDP 237, IDP 238, IDP 239				
Ф23.5	YTDI 235 □ FSL		P(5xD)	221	165	141		IDF 235, IDF 236, IDF 237, IDF 238, IDF 239			M3x6	1.5mm
~Ф23.9	KRUZ 235 □ FSL		H(7xD)	268	212	188		ID 235, ID 236, ID 237, ID 238, ID 239			IVIDAO	1.5111111
			L(10xD)	339	283	259		ID 253, ID 250, ID 251, ID 256, ID 259				
4240	VTD1 240 F1 F61	\ \	T(3xD)	181	121	96		IDP 240, IDP 241, IDP 242, IDP 243, IDP244				
Φ24.0	YTDI 240 □ FSL		P(5xD)	229	169	144		IDF 240, IDF 241, IDF 242, IDF 243, IDF244				
~Ф24.4	KRUZ 240 □ FSL		H(7xD)	277	217	192		ID 240, ID 241, ID 242, ID 243, ID 244				
			L(10xD)		289	264		10 240, 10 241, 10 242, 10 243, 10 244				
4245	VTD1 245 E1 561		T(3xD)	183	123	98		IDP 245, IDP 246, IDP 247, IDP 248, IDP 249				
Ψ24.5	YTDI 245 □ FSL		P(5xD)	232	172	147		IDF 245, IDF 246, IDF 247, IDF 248, IDF 249				
~Ф24.9	KRUZ 245 ☐ FSL		H(7xD)	281	221	196		ID 245, ID 246, ID 247, ID 248, ID 249				
			L(10xD)	_	295	270		10 243, 10 240, 10 247, 10 240, 10 243	CS 240			
Φ2Ε 0	YTDI 250 □ FSL		T(3xD)	185	125	100		IDP 250, IDP 251, IDP 252, IDP 253, IDP 254	-255 SL			
			P(5xD)	235	175	150		IDF 250, IDF 251, IDF 252, IDF 253, IDF 254				
~Ф25.4	KRUZ 250 ☐ FSL	-				200		ID 250, ID 251, ID 252, ID 253, ID 254				
			L(10xD)		300	275						
Ф25.5	YTDI 255 □ FSL		T(3xD)	188	128	102	-	IDP 255, IDP 256, IDP 257, IDP 258, IDP 259				
			P(5xD)	239	179	153		IDF 255, IDF 256, IDF 257, IDF 258, IDF 259				
~Ф25.9	KRUZ 255 □ FSL		H(7xD)	290	230	204		ID 255, ID 256, ID 257, ID 258, ID 259				
			L(10xD)	190	307 130	281 104				T15		
Φ26.0	YTDI 260 □ FSL		T(3xD) P(5xD)	242	182	156	-	IDP 260, IDP 261, IDP 262, IDP 263, IDP 264		44		
		32.0	H(7xD)	294	234	208	39	IDF 260, IDF 261, IDF 262, IDF 263, IDF 264		Torque		
~Ф26.4	KRUZ 260 □ FSL		L(10xD)		312	286	_	ID 260, ID 261, ID 262, ID 263, ID 264		3.5Nm		
			T(3xD)	193	133	106				(Max)		
Ф26.5	YTDI 265 □ FSL		P(5xD)	246	186	159	-	IDP 265, IDP 266, IDP 267, IDP 268, IDP 269				
			H(7xD)	299	239	212	-	IDF 265, IDF 266, IDF 267, IDF 268, IDF 269				
~Ψ26.9	KRUZ 265 □ FSL		L(10xD)		319	292		ID 265, ID 266, ID 267, ID 268, ID 269	CS 260			
			T(3xD)	195	135	108		IDD 270 IDD 274 IDD 272 IDD 273 IDD 274	-275 SL			
Ф27.0	YTDI 270 □ FSL		P(5xD)	249	189	162		IDP 270, IDP 271, IDP 272, IDP 273, IDP 274				
	KRUZ 270 □ FSL		H(7xD)	303	243	216		IDF 270, IDF 271, IDF 272, IDF 273, IDF 274				
~427.4	KNUZ Z/U LI FSL	1	L(10xD)		324	297		ID 270, ID 271, ID 272, ID 273, ID 274		11		
			T(3xD)	197	137	110		IDD 275 IDD 276 IDD 277 IDD 270 IDD 270				
Ф27.5	YTDI 275 □ FSL		P(5xD)	252	192	165	1	IDP 275, IDP 276, IDP 277, IDP 278, IDP 279			\	
\ \	KRUZ 275 □ FSL		H(7xD)	307	247	220	1	IDF 275, IDF 276, IDF 277, IDF 278, IDF 279			M4x8	2.0mm
Ψ21.3	INOZ Z/J LI FSL	1	L(10xD)		330		1	ID 275, ID 276, ID 277, ID 278, ID 279				
		1	T(3xD)	200	140	112	1	IDD 200 IDD 201 IDD 202 IDD 204			1 1	
Ф28.0	YTDI 280 □ FSL		P(5xD)	256	196	168		IDP 280, IDP 281, IDP 282, IDP 283, IDP 284	CS 280			
	KRUZ 280 □ FSL	H(7xD) 312 252 224	H(7xD) 312 252 224	IDF 280, IDF 281, IDF 282, IDF 283, IDF 284	-295 SL							
			ID 280, ID 281, ID 282, ID 283, ID 284									

Hole size range	Body Code No.		Cutting depth (Length x ΦD)	1 1	L2	L3	Flanged dia.(ФFd)	Insert Code No, to fit in body	Cap Screw	Torx driver	Set Screw	L-wren
Ф28.5	YTDI 285 □ FSL		T(3xD) P(5xD)	202 259	142 199	114 171		IDP 285, IDP 286, IDP 287, IDP 288, IDP 289				
	KRUZ 285 □ FSL		H(7xD)	316		228		IDF 285, IDF 286, IDF 287, IDF 288, IDF 289				
~ΨΖΟ.9	KNOZ ZOS EL I SE		L(10xD)	_	_	314		ID 285, ID 286, ID 287, ID 288, ID 289				
			T(3xD)	205	145	116		IDP 290, IDP 291, IDP 292, IDP 293, IDP 294		T15		
	YTDI 290 □ FSL		P(5xD)	263		174		IDF 290, IDF 291, IDF 292, IDF 293, IDF 294	CS 280	Torque		
~Ф29.4	KRUZ 290 □ FSL		H(7xD)	321	261 348	232 319		ID 290, ID 291, ID 292, ID 293, ID 294	-295 SL	3.5Nm		
			L(10xD) T(3xD)	408 207	147	118				(Max)	\wedge	
Ф29.5	YTDI 295 ☐ FSL		P(5xD)	266	_	177		IDP 295, IDP 296, IDP 297, IDP 298, IDP 299				
~Ф29.9	KRUZ 295 □ FSL		H(7xD)	325	_	236		IDF 295, IDF 296, IDF 297, IDF 298, IDF 299			M4x8	2.0mr
			L(10xD)		354	325		ID 295, ID 296, ID 297, ID 298, ID 299				
Ф30.0	YTDI 300 □ FSL		T(3xD)	209	149	120		IDP 300, IDP 301, IDP 302, IDP 303, IDP 304				
			P(5xD)	269	209	180		IDF 300, IDF 301, IDF 302, IDF 303, IDF 304			>	
~Ф30.4	KRUZ 300 □ FSL		H(7xD) L(10xD)	329 419		330		ID 300, ID 301, ID 302, ID 303, ID 304				
			T(3xD)	212	152	122		IDD 205 IDD 205 IDD 207 IDD 200 IDD 200				
Ф30.5	YTDI 305 □ FSL		P(5xD)	273		183		IDP 305, IDP 306, IDP 307, IDP 308, IDP 309	1 .			
~Ф30.9	KRUZ 305 □ FSL		H(7xD)	334	274	244		IDF 305, IDF 306, IDF 307, IDF 308, IDF 309				
			L(10xD)			336		ID 305, ID 306, ID 307, ID 308, ID 309	CS 300			
Ф 31.0	YTDI 310 □ FSL		T(3xD)	214		124		IDP 310, IDP 311, IDP 312, IDP 313, IDP 314	-315 SL			
		32.0	P(5xD) H(7xD)	276 338	216 278	186 248	39	IDF 310, IDF 311, IDF 312, IDF 313, IDF 314				
~Ф31.4	KRUZ 310 □ FSL		L(10xD)		371	341		ID 310, ID 311, ID 312, ID 313, ID 314				
			T(3xD)	217	157	126		IDP 315, IDP 316, IDP 317, IDP 318, IDP 319				
Ф 31.5	YTDI 315 ☐ FSL		P(5xD)	280	220	189		IDF 315, IDF 316, IDF 317, IDF 318, IDF 319				
~Ф31.9	KRUZ 315 □ FSL		H(7xD)	343		252		ID 315, ID 316, ID 317, ID 318, ID 319				
			L(10xD)			347		10 313, 10 316, 10 317, 10 318, 10 319				
ტ32 0	YTDI 320 □ FSL		T(3xD)	219	159	128		IDP 320, IDP 321, IDP 322, IDP 323, IDP 324				
			P(5xD) H(7xD)	283 347	223	192 256		IDF 320, IDF 321, IDF 322, IDF 323, IDF 324				
~Ф32.4	KRUZ 320 ☐ FSL		L(10xD)		383	352		ID 320, ID 321, ID 322, ID 323, ID 324				
-/-			T(3xD)	221	161	130		IDP 325, IDP 326, IDP 327, IDP 328, IDP 329				
Ф32.5	YTDI 325 □ FSL		P(5xD)	286		195		IDF 325, IDF 326, IDF 327, IDF 328, IDF 329				
~Ф32.9	KRUZ 325 □ FSL		H(7xD)	351	291	260		ID 325, ID 326, ID 327, ID 328, ID 329				
-			L(10xD)		389	358		10 323, 10 320, 10 327, 10 323, 10 323		T20		
Ф33.0	YTDI 330 □ FSL		T(3xD) P(5xD)	224	164 230	132 198		IDP 330, IDP 331, IDP 332, IDP 333, IDP 334		-		/
	KRUZ 330 □ FSL		H(7xD)			264		IDF 330, IDF 331, IDF 332, IDF 333, IDF 334		Torque		
~433.4	KNOZ 330 🗆 I SE		L(10xD)			363		ID 330, ID 331, ID 332, ID 333, ID 334		4.0Nm (Max)		
			T(3xD)	226	166	134		IDP 335, IDP 336, IDP 337, IDP 338, IDP 339		(IVIGA)		
	YTDI 335 □ FSL		P(5xD)	293		201		IDF 335, IDF 336, IDF 337, IDF 338, IDF 339			M5x10	2.5m
~Ф33.9	KRUZ 335 □ FSL		H(7xD)	360 461		268 369		ID 335, ID 336, ID 337, ID 338, ID 339	CC 220			
			L(10xD) T(3xD)	239	401 169	136			CS 320 -355 SL			
Ф34.0	YTDI 340 □ FSL		P(5xD)	307	237	204		IDP 340, IDP 341, IDP 342, IDP 343, IDP 344	-55 52			
~Ф34.4	KRUZ 340 □ FSL		H(7xD)	375	305	272		IDF 340, IDF 341, IDF 342, IDF 343, IDF 344				
			L(10xD)	477	407	374		ID 340, ID 341, ID 342, ID 343, ID 344				
Φ24 5	YTDI 345 □ FSL		T(3xD)	241	171	138		IDP 345, IDP 346, IDP 347, IDP 348, IDP 349				
			P(5xD)	310 379	240 309	207 276		IDF 345, IDF 346, IDF 347, IDF 348, IDF 349				
~Ф34.9	KRUZ 345 □ FSL		H(7xD) L(10xD)			380		ID 345, ID 346, ID 347, ID 348, ID 349				
			T(3xD)	243		140		IDD 250 IDD 251 IDD 252 IDD 252 IDD 254				
Ф35.0	YTDI 350 □ FSL	40.0	P(5xD)	313	_	210	EF	IDP 350, IDP 351, IDP 352, IDP 353, IDP 354				
~Ф35.4	KRUZ 350 □ FSL	40.0	H(7xD)			280	55	IDF 350, IDF 351, IDF 352, IDF 353, IDF 354				
			L(10xD)			385		ID 350, ID 351, ID 352, ID 353, ID 354				
Ф 35.5	YTDI 355 □ FSL		T(3xD)	246		142		IDP 355, IDP 356, IDP 357, IDP 358, IDP 359				
			P(5xD) H(7xD)	317 388	247 318	213		IDF 355, IDF 356, IDF 357, IDF 358, IDF 359				
~Ψ 35.9	KRUZ 355 □ FSL		L(10xD)			391		ID 355, ID 356, ID 357, ID 358, ID 359				
	X.	1	T(3xD)	248		144		IDP 360, IDP 361, IDP 362, IDP 363, IDP 364				
Ф 36.0	YTDI 360 □ FSL		P(5xD)	320		216		IDF 360, IDF 361, IDF 362, IDF 363, IDF 364	CS 360			
~Ф36.4	KRUZ 360 □ FSL		H(7xD)		322	288			-395 SL			
			L(10xD)	500	430	396		ID 360, ID 361, ID 362, ID 363, ID 364				

KRUZ-FSL, YTDI-FSL Flange body & Carbide insert

Hole size			Cutting depth (Length x ΦD)		L2	L3	Flanged dia.(ФFd)	Insert Code No, to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
+26 5	VTDI 265 🗆 FCI		T(3xD)	251	181	146		IDP 365, IDP 366, IDP 367, IDP 368, IDP 369				
	YTDI 365 □ FSL		P(5xD)	324				IDF 365, IDF 366, IDF 367, IDF 368, IDF 369				
~Ф36.9	KRUZ 365 □ FSL		H(7xD)	397	327	292	١ ١	ID 365, ID 366, ID 367, ID 368, ID 369				
			L(10xD)		437	402		12 200, 12 200, 12 200, 12 200				
Φ37.0	YTDI 370 □ FSL		T(3xD)	253	183	148		IDP 370, IDP 371, IDP 372, IDP 373, IDP 374				
			P(5xD)	327	257	222	-	IDF 370, IDF 371, IDF 372, IDF 373, IDF 374				
~Ф37.4	KRUZ 370 □ FSL		H(7xD) L(10xD)	401	331 442	296 407		ID 370, ID 371, ID 372, ID 373, ID 374				
			T(3xD)	255	185	150						
Ф37.5	YTDI 375 □ FSL		P(5xD)	330	260	_		IDP 375, IDP 376, IDP 377, IDP 378, IDP 379				
	KRUZ 375 □ FSL		H(7xD)	405	335	300	-	IDF 375, IDF 376, IDF 377, IDF 378, IDF 379				
~Ψ37.9	KKOZ 373 LI 13L		L(10xD)		448	413	-	ID 375, ID 376, ID 377, ID 378, ID 379				
			T(3xD)	258	188	152		IDP 380, IDP 381, IDP 382, IDP 383, IDP 384				
Ф38.0	YTDI 380 □ FSL		P(5xD)	334		_	1		CS 360		1.45 4.0	2.5
~Ф38.4	KRUZ 380 □ FSL		H(7xD)	410	340	304	1	IDF 380, IDF 381, IDF 382, IDF 383, IDF 384	-395 SL		M5x10	2.5mm
+5011			L(10xD)	524	454	418		ID 380, ID 381, ID 382, ID 383, ID 384				
			T(3xD)	260	196	154		IDP 385, IDP 386, IDP 387, IDP 388, IDP 389				
Ф38.5	YTDI 385 □ FSL		P(5xD)	337	267	231		IDF 385, IDF 386, IDF 387, IDF 388, IDF 389				
~Ф38.9	KRUZ 385 □ FSL		H(7xD)	414	344	308						
			L(10xD)	530	460	424		ID 385, ID 386, ID 387, ID 388, ID 389				
+20.0	VTD1 200 🗆 ECL		T(3xD)	263	193	156		IDP 390, IDP 391, IDP 392, IDP 393, IDP 394				
Φ39.0	YTDI 390 □ FSL		P(5xD)	341	271	234		IDF 390, IDF 391, IDF 392, IDF 393, IDF 394				
~Ф39.4	KRUZ 390 □ FSL		H(7xD)	419	349	312		ID 390, ID 391, ID 392, ID 393, ID 394				
			L(10xD)		466	429		10 330, 10 331, 10 332, 10 333, 10 334				
Φ20.5	YTDI 395 □ FSL		T(3xD)	265	195	158	-	IDP 395, IDP 396, IDP 397, IDP 398, IDP 399				
		\mathcal{M}	P(5xD)	344	274	_	-	IDF 395, IDF 396, IDF 397, IDF 398, IDF 399				
~Ф39.9	KRUZ 395 □ FSL		H(7xD)	423	353 472	316 435	-	ID 395, ID 396, ID 397, ID 398, ID 399				
		\ \	L(10xD) T(3xD)	542 267	197	160	-					
Ф40.0	YTDI 400 □ FSL		P(5xD)	347	277	240	-	IDP 400, IDP 401, IDP 402, IDP 403, IDP 404				
	KRUZ 400 □ FSL		H(7xD)	427	357	320	-	IDF 400, IDF 401, IDF 402, IDF 403, IDF 404		T20		
~40.4	KKUZ 400 🗀 F3L	//	L(10xD)		477	440		ID 400, ID 401, ID 402, ID 403, ID 404		-		
		40.0	T(3xD)	270	200	162	55	IDP 405, IDP 406, IDP 407, IDP 408, IDP 409		Torque 4.0Nm		
Ф40.5	YTDI 405 ☐ FSL		P(5xD)	351	281	243	1			(Max)		
~Ф40.9	KRUZ 405 □ FSL		H(7xD)	432	362	324		IDF 405, IDF 406, IDF 407, IDF 408, IDF 409		(IVIGA)		
			L(10xD)	554	484	446		ID 405, ID 406, ID 407, ID 408, ID 409				
			T(3xD)	272	202	164		IDP 410, IDP 411, IDP 412, IDP 413, IDP 414				
Φ41.0	YTDI 410 □ FSL		P(5xD)	354	284	246		IDF 410, IDF 411, IDF 412, IDF 413, IDF 414				
~Ф41.4	KRUZ 410 □ FSL		H(7xD)					ID 410, ID 411, ID 412, ID 413, ID 414				
			L(10xD)		489			10 410, 10 411, 10 412, 10 413, 10 414				
Φ/15	YTDI 415 □ FSL		T(3xD)	275	205		-	IDP 415, IDP 416, IDP 417, IDP 418, IDP 419				
			P(5xD)	358			-	IDF 415, IDF 416, IDF 417, IDF 418, IDF 419				
~Ф41.9	KRUZ 415 □ FSL		H(7xD)	441	371	332 457	-	ID 415, ID 416, ID 417, ID 418, ID 419				
			L(10xD) T(3xD)	277	496 207	168						
Ф42.0	YTDI 420 □ FSL		P(5xD)	361	291	252	-	IDP 420, IDP 421, IDP 422, IDP 423, IDP 424	CS 400			
	KRUZ 420 □ FSL		H(7xD)	445	375		1	IDF 420, IDF 421, IDF 422, IDF 423, IDF 424	-445 SL		M6x12	3.0mm
~42.4	KNU2 420 LI F3L		L(10xD)		501	462	1	ID 420, ID 421, ID 422, ID 423, ID 424				
			T(3xD)	279	209	170		IDP 425, IDP 426, IDP 427, IDP 428, IDP 429				
Ф42.5	YTDI 425 ☐ FSL		P(5xD)	364	294	255	1					
~Ф42.9	KRUZ 425 □ FSL		H(7xD)	449	379	340	1	IDF 425, IDF 426, IDF 427, IDF 428, IDF 429				
			L(10xD)	577	507			ID 425, ID 426, ID 427, ID 428, ID 429				
			T(3xD)	282	212	172		IDP 430, IDP 431, IDP 432, IDP 433, IDP 434				
Φ43.0	YTDI 430 □ FSL		P(5xD)	368				IDF 430, IDF 431, IDF 432, IDF 433, IDF 434				
~Ф43.4	KRUZ 430 □ FSL		H(7xD)	454				ID 430, ID 431, ID 432, ID 433, ID 434				
			L(10xD)					434 עו ,1כר עו ,1כר עו ,1כר עו ,0כר עו				
Δ/2 F	VTDI 435 🗆 501		T(3xD)	284			-	IDP 435, IDP 436, IDP 437, IDP 438, IDP 439				
\ \ \	YTDI 435 □ FSL		P(5xD)	371	301	261	-	IDF 435, IDF 436, IDF 437, IDF 438, IDF 439				
~Ф43.9	KRUZ 435 □ FSL		H(7xD)	458			-	ID 435, ID 436, ID 437, ID 438, ID 439			1	
			L(10xD)	287			-				1 1	
Ф44.0	YTDI 440 □ FSL		T(3xD) P(5xD)	375	305	176 264	1	IDP 440, IDP 441, IDP 442, IDP 443, IDP 444			11	
			H(7xD)				1	IDF 440, IDF 441, IDF 442, IDF 443, IDF 444				
~44.4	KRUZ 440 □ FSL		L(10xD)				1	ID 440, ID 441, ID 442, ID 443, ID 444				
							1					

Hole size range			Cutting depth (Length x ΦD)		L2	L3	Flanged dia.(ФFd)	Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrenc
444 F	VTDI 44E 🗆 ECI		T(3xD)	289		178		IDP 445, IDP 446, IDP 447, IDP 448, IDP 449				
Ф44.5	YTDI 445 □ FSL		P(5xD)	378		267		IDF 445, IDF 446, IDF 447, IDF 448, IDF 449	CS 400			
~Ф44.9	KRUZ 445 □ FSL		H(7xD)	467	397	356		ID 445, ID 446, ID 447, ID 448, ID 449	-445 SL			
			L(10xD)		531	490		10 413, 10 416, 10 417, 10 416, 10 413				
Ф45.0	YTDI 450 □ FSL		T(3xD)	291	221	180		IDP 450, IDP 451, IDP 452, IDP 453, IDP 454				
			P(5xD)	381	311	270		IDF 450, IDF 451, IDF 452, IDF 453, IDF 454	1			
~Ф45.4	KRUZ 450 □ FSL		H(7xD)		401	360		ID 450, ID 451, ID 452, ID 453, ID 454				
			L(10xD)	_	536	495		- 11, 12, 11, 11, 11, 11, 11, 11, 11, 11,			Λ	
Φ45.5	YTDI 455 □ FSL		T(3xD)	294	224	182		IDP 455, IDP 456, IDP 457, IDP 458, IDP 459				
			P(5xD)	385	315	273	-	IDF 455, IDF 456, IDF 457, IDF 458, IDF 459				
~Ф45.9	KRUZ 455 □ FSL		H(7xD)	_		364		ID 455, ID 456, ID 457, ID 458, ID 459				
-			L(10xD)	_		501			-		()	
Ф46.0	YTDI 460 □ FSL		T(3xD)		226	184		IDP 460, IDP 461, IDP 462, IDP 463, IDP 464				
			P(5xD)	388		276	<u> </u>	IDF 460, IDF 461, IDF 462, IDF 463, IDF 464			>	
~Ф46.4	KRUZ 460 □ FSL		H(7xD)	480	410	368		ID 460, ID 461, ID 462, ID 463, ID 464				
			L(10xD)		548 229	506						
Φ46.5	YTDI 465 □ FSL		T(3xD) P(5xD)	392	322	186 279	-	IDP 465, IDP 466, IDP 467, IDP 468, IDP 469				
			H(7xD)		415	372		IDF 465, IDF 466, IDF 467, IDF 468, IDF 469				
~Ф46.9	KRUZ 465 □ FSL		L(10xD)		555	512		ID 465, ID 466, ID 467, ID 468, ID 469				
			T(3xD)	301	231	188			-			
Ф47.0	YTDI 470 □ FSL		P(5xD)	395	325	282		IDP 470, IDP 471, IDP 472, IDP 473, IDP 474				
			H(7xD)		419	376	-	IDF 470, IDF 471, IDF 472, IDF 473, IDF 474		T20		
~Ф47.4	KRUZ 470 □ FSL		L(10xD)		560	517		ID 470, ID 471, ID 472, ID 473, ID 474		4		
		40.0	T(3xD)	303	233	190	55		-	Torque	M6x12	3.0mm
Φ47.5	YTDI 475 □ FSL		P(5xD)	398	328	285		IDP 475, IDP 476, IDP 477, IDP 478, IDP 479	CC 1EO	4.0Nm		
			H(7xD)	493	423	380		IDF 475, IDF 476, IDF 477, IDF 478, IDF 479	CS 450 -500 SL	(Max)		
~Φ47.9	KRUZ 475 □ F SL		L(10xD)			523		ID 475, ID 476, ID 477, ID 478, ID 479	300 32			
			T(3xD)	306	236	192			-			
Ф48.0	YTDI 480 □ F SL		P(5xD)	402	332	288		IDP 480, IDP 481, IDP 482, IDP 483, IDP 484				
DAD A	KRUZ 480 □ FSL		H(7xD)		428	384		IDF 480, IDF 481, IDF 482, IDF 483, IDF 484				
~Ф48.4	KKUZ 460 🗆 FSL		L(10xD)		572	528		ID 480, ID 481, ID 482, ID 483, ID 484				
			T(3xD)	308	238	194						
Ф48.5	YTDI 485 □ FSL		P(5xD)	405	335	291		IDP 485, IDP 486, IDP 487, IDP 488, IDP 489				
400	KRUZ 485 □ FSL		H(7xD)	_	432	388	_	IDF 485, IDF 486, IDF 487, IDF 488, IDF 489				
~Ψ 46. 9	KNUZ 465 LI F3L		L(10xD)	_	578	534		ID 485, ID 486, ID 487, ID 488, ID 489				
			T(3xD)	311	241	196		IDD 400 IDD 404 IDD 403 IDD 403 IDD 404				
Ф49.0	YTDI 490 □ FSL		P(5xD)	409	339	294		IDP 490, IDP 491, IDP 492, IDP 493, IDP 494				
Φ40.4	KRUZ 490 □ FSL		H(7xD)	_		392		IDF 490, IDF 491, IDF 492, IDF 493, IDF 494				
~443.4	KKUZ 490 🗆 F3L		L(10xD)				1	ID 490, ID 491, ID 492, ID 493, ID 494				
1			T(3xD)		243	198	-	IDD 405 IDD 405 IDD 407 IDD 400 IDD 400				
Ф49.5	YTDI 495 □ FSL		P(5xD)	_	342	297	1	IDP 495, IDP 496, IDP 497, IDP 498, IDP 499				
	KRUZ 495 □ FSL		H(7xD)	_	441	396	1	IDF 495, IDF 496, IDF 497, IDF 498, IDF 499				
Ψ+3.3	1.102 733 LI 1'3L		L(10xD)		_	545	1	ID 495, ID 496, ID 497, ID 498, ID 499				
			T(3xD)	_		200	1	IDD 500 IDD 501 IDD 502 IDD 502 IDD 504	-			
Ф 50.0	YTDI 500 □ FSL		P(5xD)	_		300	1	IDP 500, IDP 501, IDP 502, IDP 503, IDP 504				
~⊕50.4	KRUZ 500 □ FSL		H(7xD)	_		400	1	IDF 500, IDF 501, IDF 502, IDF 503, IDF 504				
Ψ.00.4	KNOZ JOU LI I'SL		L(10xD)	_				ID 500, ID 501, ID 502, ID 503, ID 504				

KRUZ-FSL Drills, Cutting Speed Recommendation

Drill Dia.			Ф16-	~25mm	Ф25	~32mm	Ф 32	~40mm	Ф 40~50mm		
Condition Material Group	Speed (m/min)	Feed (mm/rev)									
Grey cast iron (FC)	80~150	0.20~0.30	80~150	0.25~0.45	80~160	0.35~0.55	90~200	0.34~0.58	90~200	0.38~0.60	
Nodular cast iron (FCD)	80~140	0.15~0.25	80~140	0.22~0.45	80~150	0.32~0.52	90~160	0.35~0.62	90~200	0.38~0.60	
Carbon steel (\$45C)	80~140	0.15~0.30	80~140	0.16~0.40	80~150	0.20~0.40	80~150	0.22~0.48	80~160	0.25~0.54	
Alloy steel (SCM440)	70~140	0.15~0.30	70~140	0.15~0.40	70~140	0.18~0.40	80~140	0.25~0.47	80~140	0.27~0.52	
Hardened steel (SKD11)	40~50	0.10~0.20	40~50	0.12~0.28	40~50	0.16~0.35	40~60	0.20~0.38	40~60	0.22~0.42	
Stainless steel (SUS)	30~40	0.10~0.20	35~50	0.10~0.22	35~50	0.15~0.28	40~55	0.18~0.30	40~55	0.22~0.32	
Aluminum 130HB (AL)	120~200	0.20~0.30	120~200	0.25~0.40	120~200	0.30~0.45	120~200	0.30~0.45	120~200	0.30~0.50	

- This data is recommended for 3xDia. And should be reduced about 15~20% for 5xD, 7xD, 10xD drills.
- The data is normally suggested for oil-mist(MQL) coolant condition and also possible to run in other normal condition if machining environment like clamping etc. are secured in good.

KRUZ "H" series flange + higher helix body & carbide insert

Caution >> "H" series insert should use only with

Insert selection

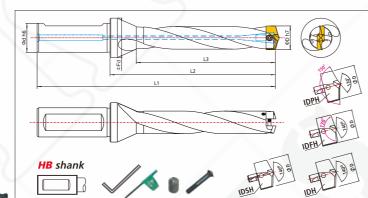
Deep hole & general purpose

Thin plate & shallow depth

General purpose



- ▶ Higher helix flute to reduce machine load and faster chip ejection ▶ Rugged flange type body to decrease vibration or chattering
- ▶ Interchangeable <IDPH>, <IDFH>, <IDH>, <IDSH> carbide "H" drill inserts
- ▶ Drill body consists of premium tool steel with heat treatment
- Increased tool life by less vibration
- Internal coolant fed design
- ▶ "H" series body and insert available upon request only





YTDI-FH body **KRUZ-FH** body

Please make required cutting depth in the ☐ like T, P, H, L Hole size - . . . Shank Cutting depth

range	Body Code No.		(Length x Φ D)		L2	L3	dia.(ΦFd)	Insert Code No. to fit in body	capsacw	driver	Screw	
			T(3xD)	109	61	48		IDPH 120, IDPH 121, IDPH 122, IDPH 123, IDPH 124		V		
Ф12.0	YTDI 120 □ FH		P(5xD)	133	85	72		IDFH 120, IDFH 121, IDFH 122, IDFH 123, IDFH 124				
~Ф12.4	KRUZ 120 □ FH	1	H(7xD)	157	109	96		IDH 120, IDH 121, IDH 122, IDH 123, IDH 124				
			L(10xD)	193	145	132		IDSH 120, IDSH 121, IDSH 122, IDSH 123, IDSH 124				
			T(3xD)	111	63	50		IDPH 125, IDPH 126, IDPH 127, IDPH 128, IDPH 129				
Ф12.5	YTDI 125 ☐ FH		P(5xD)	136	88	75		IDFH 125, IDFH 126, IDFH 127, IDFH 128, IDFH 129				
~Ф12.9	KRUZ 125 □ FH		H(7xD)	161	113	100		IDH 125, IDH 126, IDH 127, IDH 128, IDH 129	CS120 -135 SL	T6		
			L(10xD)	199	151	138		IDSH 125, IDSH 126, IDSH 127, IDSH 128, IDSH 129		Torque		
			T(3xD)	114	66	52		IDPH 130, IDPH 131, IDPH 132, IDPH 133, IDPH 134		0.6Nm		
Ф13.0	YTDI 130 □ FH	16.0	P(5xD)	140	92	78	21	IDFH 130, IDFH 131, IDFH 132, IDFH 133, IDFH 134 IDH 130, IDH 131, IDH 132, IDH 133, IDH 134 IDSH 130, IDSH 131, IDSH 132, IDSH 133, IDSH 134 IDPH 135, IDPH 136, IDPH 137, IDPH 138, IDPH 139 IDFH 135, IDFH 136, IDFH 137, IDFH 138, IDFH 139 IDH 135, IDH 136, IDH 137, IDH 138, IDH 139 IDSH 135, IDSH 136, IDSH 137, IDSH 138, IDSH 139 IDPH 140, IDPH 141, IDPH 142, IDPH 143, IDPH 144		(Max)		
~Ф13.4	KRUZ 130 □ FH		H(7xD)	166	118	104	Z I					
			L(10xD)	205	157	143						
			T(3xD)	116	68	54						
Ф13.5	YTDI 135 □ FH		P(5xD)	143	95	81					M2.5x4	1.3mm
~Ф13.9	KRUZ 135 □ FH		H(7xD)	170	122	108					1012.584	1.5111111
			L(10xD)	211	163	149						
			T(3xD)	119	71	56						
Ф14.0	YTDI 140 □ FH		P(5xD)	147	99	84		IDFH 140, IDFH 141, IDFH 142, IDFH 143, IDFH 144				
~Ф14.4	KRUZ 140 □ FH		H(7xD)	175	127	112		IDH 140, IDH 141, IDH 142, IDH 143, IDH 144				
			L(10xD)	217	169	154		IDSH 140, IDSH 141, IDSH 142, IDSH 143, IDSH 144				
			T(3xD)	123	73	58		IDPH 145, IDPH 146, IDPH 147, IDPH 148, IDPH 149		T7		
Ф14.5	YTDI 145 🗆 FH		P(5xD)	152	102	87		IDFH 145, IDFH 146, IDFH 147, IDFH 148, IDFH 149	CS140	Torque		
~Ф14.9			H(7xD)	181	131	116		IDH 145, IDH 146, IDH 147, IDH 148, IDH 149	-155 SL	0.9Nm		
		20.0	L(10xD)	225	175	160	27	IDSH 145, IDSH 146, IDSH 147, IDSH 148, IDSH 149		(Max)		
		20.0	T(3xD)	127	77	60	2/	IDPH 150, IDPH 151, IDPH 152, IDPH 153, IDPH 154				
Ф15.0	YTDI 150 □ FH		P(5xD)	157	107	90		IDFH 150, IDFH 151, IDFH 152, IDFH 153, IDFH 154				
~Ф15.4	KRUZ 150 □ FH		H(7xD)	187	137	120		IDH 150, IDH 151, IDH 152, IDH 153, IDH 154				
	.4 KNUZ 130 LI FR		L(10xD)	232	182	165		IDSH 150, IDSH 151, IDSH 152, IDSH 153, IDSH 154				

range	Body Code No.		(Length x ΦD)		L2	L3	dia.(ΦFd)		Cap screw	driver	Screw	L-wrenci
445 5	\(\tag{\tag{\tag{\tag{\tag{\tag{\tag{		T(3xD)	130	80	62		IDPH 155, IDPH 156, IDPH 157, IDPH 158, IDPH 159				
Ф15.5	YTDI 155 □ FH		P(5xD)	161	111	93		IDFH 155, IDFH 156, IDFH 157, IDFH 158, IDFH 159	CS 140			
~Ф15.9	KRUZ 155 ☐ FH		H(7xD)	192	142	124		IDH 155, IDH 156, IDH 157, IDH 158, IDH 159 IDSH 155, IDSH 156, IDSH 157, IDSH 158, IDSH 159	-155 SL			
			L(10xD)		189	171						
Ф16.0	YTDI 160 □ FH		T(3xD) P(5xD)	132 164	82 114	64 96		IDPH 160, IDPH 161, IDPH 162, IDPH 163, IDPH 164				
			H(7xD)	196	146	128		IDFH 160, IDFH 161, IDFH 162, IDFH 163, IDFH 164 IDH 160, IDH 161, IDH 162, IDH 163, IDH 164	4			
~Ф16.4	KRUZ 160 ☐ FH		L(10xD)		194	176	-	IDSH 160, IDSH 161, IDSH 162, IDSH 163, IDSH 164			Λ	
			T(3xD)	135	85	66		IDPH 165, IDPH 166, IDPH 167, IDPH 168, IDPH 169				
Ф16.5	YTDI 165 ☐ FH		P(5xD)	168	118	99		IDFH 165, IDFH 166, IDFH 167, IDFH 168, IDFH 169		Torque		
~Ф16.9	KRUZ 165 ☐ FH		H(7xD)	201	151	132		IDH 165, IDH 166, IDH 167, IDH 168, IDH 169		0.9Nm		
			L(10xD)		201	182		IDSH 165, IDSH 166, IDSH 167, IDSH 168, IDSH 169	CS 160	(Max)		
Ф17.0	VTDI 470 🗆 FII		T(3xD)	137	87	68		IDPH 170, IDPH 171, IDPH 172, IDPH 173, IDPH 174	-175 SL		> `	
Ф17.0	YTDI 170 □ FH		P(5xD)	171	121	102		IDFH 170, IDFH 171, IDFH 172, IDFH 173, IDFH 174				
~Ф17.4	KRUZ 170 □ FH		H(7xD) L(10xD)	205	155 206	136 187		IDH 170, IDH 171, IDH 172, IDH 173, IDH 174 IDSH 170, IDSH 171, IDSH 172, IDSH 173, IDSH 174				
			T(3xD)	139	89	70						
Ф17.5	YTDI 175 □ FH		P(5xD)	174	124	105		IDPH 175, IDPH 176, IDPH 177, IDPH 178, IDPH 179 IDFH 175, IDFH 176, IDFH 177, IDFH 178, IDFH 179				
~Ф17.9	KRUZ 175 □ FH	20.0	H(7xD)	209	159	140	27	IDH 175, IDH 176, IDH 177, IDH 178, IDH 179			M2.5x4	1.3mm
Ψ17.5	KKOZ 175 LI III		L(10xD)		212	193		IDSH 175, IDSH 176, IDSH 177, IDSH 178, IDSH 179				
			T(3xD)	142	92	72		IDPH 180, IDPH 181, IDPH 182, IDPH 183, IDPH 184				
Ф18.0	YTDI 180 □ FH		P(5xD)	178	128	108		IDFH 180, IDFH 181, IDFH 182, IDFH 183, IDFH 184				
~Ф18.4	KRUZ 180 □ FH		H(7xD)	214	164	144		IDH 180, IDH 181, IDH 182, IDH 183, IDH 184 IDSH 180, IDSH 181, IDSH 182, IDSH 183, IDSH 184				
			L(10xD)		218	198	-	103H 160, 103H 161, 103H 162, 103H 163, 103H 164				
Ф18.5	YTDI 185 □ FH		T(3xD)	144	94	74		IDPH 185, IDPH 186, IDPH 187, IDPH 188, IDPH 189				
			P(5xD) H(7xD)	181 218	131 168	111 148		IDFH 185, IDFH 186, IDFH 187, IDFH 188, IDFH 189 IDH 185, IDH 186, IDH 187, IDH 188, IDH 189				
~Ф18.9	KRUZ 185 ☐ FH		L(10xD)		224	204		IDSH 185, IDSH 186, IDSH 187, IDSH 188, IDSH 189	CS 180			
			T(3xD)	147	97	76		IDPH 190, IDPH 191, IDPH 192, IDPH 193, IDPH 194	-195 SL			
Ф19.0	YTDI 190 ☐ FH		P(5xD)	185	135	114		IDFH 190, IDFH 191, IDFH 192, IDFH 193, IDFH 194				
~Ф19.4	KRUZ 190 □ FH		H(7xD)	223	173	152		IDH 190, IDH 191, IDH 192, IDH 193, IDH 194				
			L(10xD)	280	230	209		IDSH 190, IDSH 191, IDSH 192, IDSH 193, IDSH 194				
440 F	VTDI 405 🗆 511		T(3xD)	149	99	78		IDPH 195, IDPH 196, IDPH 197, IDPH 198, IDPH 199				1
Ф19.5	YTDI 195 ☐ FH		P(5xD)	188	138	117		IDFH 195, IDFH 196, IDFH 197, IDFH 198, IDFH 199				
~Ф19.9	KRUZ 195 ☐ FH		H(7xD) L(10xD)	227	177	156 215		IDH 195, IDH 196, IDH 197, IDH 198, IDH 199 IDSH 195, IDSH 196, IDSH 197, IDSH 198, IDSH 199				
				157	236 101	80						
Ф20.0	YTDI 200 □ FH						_	IDPH 200, IDPH 201, IDPH 202, IDPH 203, IDPH 204 IDFH 200, IDFH 201, IDFH 202, IDFH 203, IDFH 204				
~Ф20.4	KRUZ 200 □ FH		-	237	181	160	-	IDH 200, IDH 201, IDH 202, IDH 203, IDH 204		T8		
Ψ20.4	KNOL LOO LI III		L(10xD)	297	241	220		IDSH 200, IDSH 201, IDSH 202, IDSH 203, IDSH 204		Torque		
			T(3xD)	160	104	82		IDPH 205, IDPH 206, IDPH 207, IDPH 208, IDPH 209	-	1.5Nm		
Ф20.5	YTDI 205 ☐ FH		P(5xD)	201	145	123		IDFH 205, IDFH 206, IDFH 207, IDFH 208, IDFH 209		(Max)		
~Ф20.9	KRUZ 205 ☐ FH		H(7xD)	242	186	164		IDH 205, IDH 206, IDH 207, IDH 208, IDH 209 IDSH 205, IDSH 206, IDSH 207, IDSH 208, IDSH 209				
			L(10xD)		248	226			CS 200 -215 SL			
Ф21.0	YTDI 210 □ FH		T(3xD) P(5xD)	162 204	106 148	84 126		IDPH 210, IDPH 211, IDPH 212, IDPH 213, IDPH 214	-213 3L			
			H(7xD)	246	190	168		IDFH 210, IDFH 211, IDFH 212, IDFH 213, IDFH 214 IDH 210, IDH 211, IDH 212, IDH 213, IDH 214				
~Ф21.4	KRUZ 210 □ FH		L(10xD)		253	231		IDSH 210, IDSH 211, IDSH 212, IDSH 213, IDSH 214				
		25.0	T(3xD)	165	109	86	32	IDPH 215, IDPH 216, IDPH 217, IDPH 218, IDPH 219			M3x6	1.5mm
Ф21.5	YTDI 215 ☐ FH		P(5xD)	208	152	129		IDFH 215, IDFH 216, IDFH 217, IDFH 218, IDFH 219				
~Ф21.9	KRUZ 215 □ FH		H(7xD)	251	195	172		IDH 215, IDH 216, IDH 217, IDH 218, IDH 219				
			L(10xD)		260	237	ID	IDSH 215, IDSH 216, IDSH 217, IDSH 218, IDSH 219				
Ф22.0	VTDI 220 🗆 EU		T(3xD)	167	111	88		IDPH 220, IDPH 221, IDPH 222, IDPH 223, IDPH 224				
Ф22.0	YTDI 220 □ FH		P(5xD)	211	155	132		IDFH 220, IDFH 221, IDFH 222, IDFH 223, IDFH 224 IDH 220, IDH 221, IDH 222, IDH 223, IDH 224				
~Ф22.4	KRUZ 220 □ FH		H(7xD) L(10xD)	255	199 265	176 242		IDSH 220, IDSH 221, IDSH 222, IDSH 223, IDSH 224	CC 220			
			T(3xD)	169	113	90			CS 220 -235 SL			
Ф22.5	YTDI 225 ☐ FH		P(5xD)	214	158	135		IDPH 225, IDPH 226, IDPH 227, IDPH 228, IDPH 229 IDFH 225, IDFH 226, IDFH 227, IDFH 228, IDFH 229				
~Ф22.9	KRUZ 225 □ FH		H(7xD)	259	203	180		IDH 225, IDH 226, IDH 227L, IDH 228L, IDH 229				
Ψ Ζ Ζ.3	MOL ZZJ LI III		L(10xD)		271	248	1	IDSH 225, IDSH 226, IDSH 227L, IDSH 228L, IDSH 229				

Indexable, Coolant Drill Series

KRUZ-FH

IDH

KRUZ "H" series flange + higher helix body & carbide insert

Hole size range	Body Code No.	1	Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia.(ΦFd)		Cap Screw	Torx driver	Set Screw	L-wrench
			T(3xD)	172	116	92		IDPH 230, IDPH 231, IDPH 232, IDPH 233, IDPH 234				
Ф23.0	YTDI 230 □ FH		P(5xD)	218	162	138		IDFH 230, IDFH 231, IDFH 232, IDFH 233, IDFH 234				
~Ф23.4	KRUZ 230 □ FH		H(7xD)	264	208	184	1	IDH 230, IDH 231, IDH 232, IDH 233, IDH 234		T8		
, 25	KINGE ESG ETTI		L(10xD)	333	277	253		IDSH 230, IDSH 231, IDSH 232, IDSH 233, IDSH 234	CS 220	-		
		25.0	T(3xD)	174	118	94	32	IDPH 235, IDPH 236, IDPH 237, IDPH 238, IDPH 239	-235 SL	Torque 1.5Nm		
Ф23.5	YTDI 235 ☐ FH		P(5xD)	221	165	141	1	IDFH 235, IDFH 236, IDFH 237, IDFH 238, IDFH 239		(Max)		
~Ф23.9	KRUZ 235 □ FH		H(7xD)	268	212	188		IDH 235, IDH 236, IDH 237, IDH 238, IDH 239		(IVIGA)		
Ψ23.3	KNOZ 255 🗆 III	7	L(10xD)		283	259		IDSH 235, IDSH 236, IDSH 237, IDSH 238, IDSH 239				
			T(3xD)	181	121	96		IDPH 240, IDPH 241, IDPH 242, IDPH 243, IDPH 244				
Ф24.0	YTDI 240 □ FH		P(5xD)	229	169	144	1	IDFH 240, IDFH 241, IDFH 242, IDFH 243, IDFH 244				
~Ф24.4	KRUZ 240 □ FH		H(7xD)	277	217	192	1	IDH 240, IDH 241, IDH 242, IDH 243, IDH 244				
~ 424.4	KKOZ 240 LI FH		L(10xD)		289	264	1	IDSH 240, IDSH 241, IDSH 242, IDSH 243, IDSH 244				
			T(3xD)	183	123	98		IDDU 245 IDDU 246 IDDU 247 IDDU 249 IDDU 240				
Ф24.5	YTDI 245 ☐ FH		P(5xD)	232	172	147	1	IDPH 245, IDPH 246, IDPH 247, IDPH 248, IDPH 249 IDFH 245, IDFH 246, IDFH 247, IDFH 248, IDFH 249				
~Ф24.9	KRUZ 245 □ FH		H(7xD)	281	221	196		IDH 245, IDH 246, IDH 247, IDH 248, IDH 249				
~Ψ24.5	KKUZ 243 LI FH		L(10xD)		295	270		IDSH 245, IDSH 246, IDSH 247, IDSH 248, IDSH 249	CS 240		A	
			T(3xD)	185	125	100		IDDIL 350 IDDIL 354 IDDIL 353 IDDIL 353 IDDIL 354	-255 SL		М3х6	1.5mm
Ф25.0	YTDI 250 □ FH		P(5xD)	235	175	150		IDPH 250, IDPH 251, IDPH 252, IDPH 253, IDPH 254 IDFH 250, IDFH 251, IDFH 252, IDFH 253, IDFH 254				
~Ф25.4	KRUZ 250 □ FH		H(7xD)	285	225	200	1	IDH 250, IDH 251, IDH 252, IDH 253L, IDH 254				
~Ψ25.4	KNUZ ZOU LI FII		L(10xD)		300	275		IDSH 250, IDSH 251, IDSH 252, IDSH 253L, IDSH 254				
			T(3xD)	188	128	102		IDDU SEE IDDU SEC IDDU SEZ IDDU SEG IDDU SEG				
Ф25.5	YTDI 255 □ FH		P(5xD)	239	179	153		IDPH 255, IDPH 256, IDPH 257, IDPH 258, IDPH 259 IDFH 255, IDFH 256, IDFH 257, IDFH 258, IDFH 259				
фЭF 0	KDIIZ SEE 🗆 EII		H(7xD)	290	230	204		IDH 255, IDH 256, IDH 257, IDH 258, IDH 259				
~Ф25.9	KRUZ 255 □ FH		L(10xD)		307	281	1	IDSH 255, IDSH 256, IDSH 257, IDSH 258, IDSH 259				
			T(3xD)	190	130	104		IDDIL 200 IDDIL 204 IDDIL 202 IDDIL 202 IDDIL 204				
Ф26.0	YTDI 260 □ FH		P(5xD)	242	182	156	1	IDPH 260, IDPH 261, IDPH 262, IDPH 263, IDPH 264 IDFH 260, IDFH 261, IDFH 262, IDFH 263, IDFH 264				
фэс 4	VDUZ 260 □ EU		H(7xD)	294	234	208	-	IDH 260, IDH 261, IDH 262, IDH 263, IDH 264				
~Ф26.4	KRUZ 260 □ FH	\ `	L(10xD)		312	286	-	IDSH 260, IDSH 261, IDSH 262, IDSH 263, IDSH 264				
			T(3xD)	193	133	106		IDDU 200 IDDU 200 IDDU 200 IDDU 200				
Ф26.5	YTDI 265 □ FH	/	P(5xD)	246	186	159	1	IDPH 265, IDPH 266, IDPH 267, IDPH 268, IDPH 269 IDFH 265, IDFH 266, IDFH 267, IDFH 268, IDFH 269				
фэс 0	KRUZ 265 □ FH		H(7xD)	299	239	212	1	IDH 265, IDH 266, IDH 267, IDH 268, IDH 269		T15		
~Ф26.9	KKUZ 205 LI FH		L(10xD)		319	292	1	IDSH 265, IDSH 266, IDSH 267, IDSH 268, IDSH 269	CS 260	24		
			T(3xD)	195	135	108		IDPH 270, IDPH 271, IDPH 272, IDPH 273, IDPH 274	-275 SL	Torque		
Ф27.0	YTDI 270 □ FH		P(5xD)	249	189	162		IDFH 270, IDFH 271, IDFH 272, IDFH 273, IDFH 274		3.5Nm (Max)		
~Ф27.4	KRUZ 270 □ FH	32.0	H(7xD)	303	243	216	39	IDH 270, IDH 271, IDH 272, IDH 273, IDH 274		(IVIGA)		
~Ψ27.4	KKOZ Z/O 🗆 FH		L(10xD)		324	297		IDSH 270, IDSH 271, IDSH 272, IDSH 273, IDSH 274				
			T(3xD)	197	137	110		IDPH 275, IDPH 276, IDPH 277, IDPH 278, IDPH 279				
Ф27.5	YTDI 275 □ FH		P(5xD)	252	192	165	1	IDFH 275, IDFH 276, IDFH 277, IDFH 278, IDFH 279				
~Ф27.9	KRUZ 275 □ FH		H(7xD)	307	247	220	1	IDH 275, IDH 276, IDH 277, IDH 278, IDH 279				
~Ψ27.9	KKOZ 273 🗆 III		L(10xD)		330	303	1	IDSH 275, IDSH 276, IDSH 277, IDSH 278, IDSH 279				
			T(3xD)	200	140	112	1	IDPH 280, IDPH 281, IDPH 282, IDPH 283, IDPH 284				
Ф28.0	YTDI 280 □ FH		P(5xD)	256	196	168	1	IDFH 280, IDFH 281, IDFH 282, IDFH 283, IDFH 284				
~Ф28.4	KRUZ 280 □ FH		H(7xD)	312	252	224	1	IDH 280, IDH 281, IDH 282, IDH 283, IDH 284				
~420.4	KNOZ 200 🗆 III		L(10xD)		336	308	1	IDSH 280, IDSH 281, IDSH 282, IDSH 283, IDSH 284				
			T(3xD)	202	142	114		IDPH 285, IDPH 286, IDPH 287, IDPH 288, IDPH 289				
Ф28.5	YTDI 285 □ FH		P(5xD)	259	199	171	1	IDFH 285, IDFH 286, IDFH 287, IDFH 288, IDFH 289				
~Ф28.9	KRUZ 285 □ FH		H(7xD)	316	256	228	1	IDH 285, IDH 286, IDH 287, IDH 288, IDH 289			M4x8	2.0mm
~Ψ26.9	KKO2 203 🗆 111		L(10xD)		342	314		IDSH 285, IDSH 286, IDSH 287, IDSH 288, IDSH 289	CS 280			
			T(3xD)	205	145	116		IDPH 290, IDPH 291, IDPH 292, IDPH 293, IDPH 294	-295 SL			
Ф29.0	YTDI 290 □ FH		P(5xD)	263	203	174		IDFH 290, IDFH 291, IDFH 292, IDFH 293, IDFH 294				
~Ф29.4	KRUZ 290 □ FH		H(7xD)	321	261	232		IDH 290, IDH 291, IDH 292, IDH 293, IDH 294				
~425.4	KNOZ Z30 LI FII		L(10xD)		348	319		IDSH 290, IDSH 291, IDSH 292, IDSH 293, IDSH 294				
		1	T(3xD)	207	147	118		IDPH 295, IDPH 296, IDPH 297, IDPH 298, IDPH 299				
Ф29.5	YTDI 295 □ FH		P(5xD)	266	206	177	1	IDFH 295, IDFH 296, IDFH 297, IDFH 298, IDFH 299				
ф20.0	KRUZ 295 □ FH		H(7xD)	325	265	236	1	IDH 295, IDH 296, IDH 297, IDH 298, IDH 299				
~Ф29.9	KNUZ 293 LI PH		L(10xD)		354	325	1	IDSH 295, IDSH 296, IDSH 297, IDSH 298, IDSH 299				
			T(3xD)	209	149	120	1	IDPH 300, IDPH 301, IDPH 302, IDPH 303, IDPH 304		T20	1 1	
Ф30.0	YTDI 300 □ FH		P(5xD)	269	209	180	1	IDFH 300, IDFH 301, IDFH 302, IDFH 303, IDFH 304	CS 300	***		
ф20.4	KRUZ 300 □ FH		H(7xD)		269	240	1	IDH 300, IDH 301, IDH 302, IDH 303, IDH 304	-315 SL	Torque 4.0Nm		
~Ф30.4	KNUZ 300 LI FH		I (10xD)				1	IDSH 300, IDSH 301, IDSH 302, IDSH 303, IDSH 304		4.UNIII (May)		

Ho l e size range			Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia.(ΦFd)	Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrence
Ф30 Б	VIDI 205 E S		T(3xD)	212	152	122		IDPH 305, IDPH 306, IDPH 307, IDPH 308, IDPH 309				
Ф30.5	YTDI 305 □ FH		P(5xD)	273	213	183		IDFH 305, IDFH 306, IDFH 307, IDFH 308, IDFH 309			M4x8	2.0mn
~Ф30.9	KRUZ 305 ☐ FH		H(7xD)	334	274	244		IDH 305, IDH 306, IDH 307, IDH 308, IDH 309 IDSH 305, IDSH 306, IDSH 307, IDSH 308, IDSH 309				
			L(10xD)		366	336		10311 303, 10311 300, 10311 307, 10311 300, 10311 303				
Ф31.0	YTDI 310 □ FH		T(3xD)	214	154	124		IDPH 310, IDPH 311, IDPH 312, IDPH 313, IDPH 314				
			P(5xD) H(7xD)	276 338	216 278	186 248		IDFH 310, IDFH 311, IDFH 312, IDFH 313, IDFH 314 IDH 310, IDH 311, IDH 312, IDH 313, IDH 314	CS 300 -315 SL			
~Ф31.4	KRUZ 310 □ FH		L(10xD)		371	341		IDSH 310, IDSH 311, IDSH 312, IDSH 313, IDSH 314	J 13 JL	\sim	λ	
			T(3xD)	217	157	126		IDDU 245 IDDU 245 IDDU 247 IDDU 240 IDDU 246				
Ф 31.5	YTDI 315 □ FH		P(5xD)	280	220	189		IDPH 315, IDPH 316, IDPH 317, IDPH 318, IDPH 319 IDFH 315, IDFH 316, IDFH 317, IDFH 318, IDFH 319				
~Ф31.9	KRUZ 315 □ FH		H(7xD)	343	283	252		IDH 315, IDH 316, IDH 317, IDH 318, IDH 319		\sim		
~Ψ31.9	KKUZ 313 LI FII		L(10xD)		378	347		IDSH 315, IDSH 316, IDSH 317, IDSH 318, IDSH 319			< /	
			T(3xD)	219	159	128		IDPH 320, IDPH 321, IDPH 322, IDPH 323, IDPH 324				
Ф 32.0	YTDI 320 □ FH		P(5xD)	283	223	192		IDFH 320, IDFH 321, IDFH 322, IDFH 323, IDFH 324			>	
~Ф32.4	KRUZ 320 □ FH	32.0	H(7xD)	347	287	256	39	IDH 320, IDH 321, IDH 322, IDH 323, IDH 324				
			L(10xD)	443	383	352		IDSH 320, IDSH 321, IDSH 322, IDSH 323, IDSH 324				
		1	T(3xD)	221	161	130		IDPH 325, IDPH 326, IDPH 327, IDPH 328, IDPH 329				
Ф 32.5	YTDI 325 □ FH		P(5xD)	286	226	195		IDFH 325, IDFH 326, IDFH 327, IDFH 328, IDFH 329				
~Ф32.9	KRUZ 325 □ FH		H(7xD)	351	291	260		IDH 325, IDH 326, IDH 327, IDH 328, IDH 329				
			L(10xD)		389	358		IDSH 325, IDSH 326, IDSH 327, IDSH 328, IDSH 329				
422.0	VTDI 220 🗆 FII	A	T(3xD)	224	164	132		IDPH 330, IDPH 331, IDPH 332, IDPH 333, IDPH 334				
Ф33.0	YTDI 330 □ FH		P(5xD)	290	230	198		IDFH 330, IDFH 331, IDFH 332, IDFH 333, IDFH 334				
~Ф33.4	KRUZ 330 □ FH		H(7xD)	356	296	264		IDH 330, IDH 331, IDH 332, IDH 333, IDH 334 IDSH 330, IDSH 331, IDSH 332, IDSH 333, IDSH 334				
			L(10xD)		395	363		10311 330, 10311 331, 10311 332, 10311 333, 10311 334				
Ф33.5	YTDI 335 □ FH		T(3xD)	226	166	134		IDPH 335, IDPH 336, IDPH 337, IDPH 338, IDPH 339				
			P(5xD)	293	233	201		IDFH 335, IDFH 336, IDFH 337, IDFH 338, IDFH 339 IDH 335, IDH 336, IDH 337, IDH 338, IDH 339				
~Ф33.9	KRUZ 335 □ FH		H(7xD) L(10xD)	360 461	300 401	268 369		IDSH 335, IDSH 336, IDSH 337, IDSH 338, IDSH 339	66.220			
-			T(3xD)	239	169	136			CS 320 -355 SL	T20		
Ф34.0	YTDI 340 □ FH		P(5xD)	307	237	204		IDPH 340, IDPH 341, IDPH 342, IDPH 343, IDPH 344 IDFH 340, IDFH 341, IDFH 342, IDFH 343, IDFH 344	333 32	0.0		
424.4			H(7xD)	375	305	272		IDH 340, IDH 341, IDH 342, IDH 343, IDH 344		Torque		
~Ф34.4	KRUZ 340 □ FH		L(10xD)		407	374		IDSH 340, IDSH 341, IDSH 342, IDSH 343, IDSH 344		4.0Nm (Max)		
			T(3xD)	241	171	138		IDPH 345. IDPH 346. IDPH 347. IDPH 348. IDPH 349		(IVIAA)	M5x10	2.5mi
Ф34.5	YTDI 345 □ FH		P(5xD)	310	240	207		IDFH 345, IDFH 346, IDFH 347, IDFH 348, IDFH 349				
~Ф34.9	KRUZ 345 □ FH		H(7xD)	379	309	276		IDH 345, IDH 346, IDH 347, IDH 348, IDH 349				
+34.5	KKOL 3 IS E III		L(10xD)	483	413	380		IDSH 345, IDSH 346, IDSH 347, IDSH 348, IDSH 349				
		1	T(3xD)	243	173	140		IDPH 350, IDPH 351, IDPH 352, IDPH 353, IDPH 354				
Ф35.0	YTDI 350 □ FH		P(5xD)	313	243	210		IDFH 350, IDFH 351, IDFH 352, IDFH 353, IDFH 354				
~Ф35.4	KRUZ 350 □ FH		H(7xD)	383		280		IDH 350, IDH 351, IDH 352, IDH 353, IDH 354				
			L(10xD)			385		IDSH 350, IDSH 351, IDSH 352, IDSH 353, IDSH 354				
435.5	VEDI SEE E E		T(3xD)	246	176	142		IDPH 355, IDPH 356, IDPH 357, IDPH 358, IDPH 359				
Ф35.5	YTDI 355 □ FH		P(5xD)	317	247	213		IDFH 355, IDFH 356, IDFH 357, IDFH 358, IDFH 359				
~Ф35.9	KRUZ 355 □ FH		H(7xD)	388		284		IDH 355, IDH 356, IDH 357, IDH 358, IDH 359 IDSH 355, IDSH 356, IDSH 357, IDSH 358, IDSH 359				
		40.0	L(10xD)		425	391	55					
Ф36.0	YTDI 360 □ FH		T(3xD)	248	178	144 216		IDPH 360, IDPH 361, IDPH 362, IDPH 363, IDPH 364				
			P(5xD) H(7xD)	320 392	250 322	216		IDFH 360, IDFH 361, IDFH 362, IDFH 363, IDFH 364 IDH 360, IDH 361, IDH 362, IDH 363, IDH 364				
~Ф36.4	KRUZ 360 □ FH		L(10xD)			396		IDSH 360, IDSH 361, IDSH 362, IDSH 363, IDSH 364				
		1	T(3xD)	251	181	146		IDDU SCE IDDU SCE IDDU SCE IDDU SCO IDDU SCO				
Ф36.5	YTDI 365 □ FH		P(5xD)	324	_	219		IDPH 365, IDPH 366, IDPH 367, IDPH 368, IDPH 369 IDFH 365, IDFH 366, IDFH 367, IDFH 368, IDFH 369				
~Ф36.9	KRUZ 365 □ FH		H(7xD)	397				IDH 365, IDH 366, IDH 367, IDH 368, IDH 369				
~Ψ 30. 9	KNOZ 303 LI PH		L(10xD)			IDSH 365, IDSH 366, IDSH 367, IDSH 368, IDSH 369	CS 360					
		1	T(3xD)	253	183	148	-	IDPH 370, IDPH 371, IDPH 372, IDPH 373, IDPH 374	-395 SL			
Ф 37.0	YTDI 370 □ FH		P(5xD)	327	257	222		IDFH 370, IDFH 371, IDFH 372, IDFH 373, IDFH 374				
~Ф37.4	KRUZ 370 □ FH		H(7xD)	401	331	296		IDH 370, IDH 371, IDH 372, IDH 373, IDH 374				
+37.4			L(10xD)	512	442	407	IDSH 370, IDSH 371, IDSH 372, IDSH 373, IDSH 3	IDSH 370, IDSH 371, IDSH 372, IDSH 373, IDSH 374				
		1	T(3xD)	255	185	150		IDPH 375, IDPH 376, IDPH 377, IDPH 378, IDPH 379				
Ф 37.5	YTDI 375 □ FH		P(5xD)		IDPH 375, IDPH 376, IDPH 377, IDPH 378, IDPH 376, IDFH 375, IDFH 376, IDFH 377, IDFH 378, IDFH 3							
~Ф37.9	KRUZ 375 □ FH		H(7xD)	405	335	300	IDH 375, IDH 376, IDH 377, IDH 378, IDH 379					
			IDSH 375, IDSH 376, IDSH 377, IDSH 378, IDSH 379									



Indexable, Coolant Drill Series

KRUZ "H" series flange + higher helix body & carbide insert

9-38.0 YTDI 380 FH													
9-38.4 KRUZ 380 □ FH -9-38.5 YTDI 385 □ FH -9-38.5 KRUZ 385 □ FH -9-38.6 KRUZ 380 □ FH		Body Code No.				L2	L3		Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
	\$20.0	\/TD1 200 E EU		<u> </u>		188			IDPH 380, IDPH 381, IDPH 382, IDPH 383, IDPH 384				
Def 39, Def 38, Def	Ψ38.0	Y I DI 380 🗆 FH											
038.5 YTDI 385 FH P P P P P P P P P P P P P	~Ф38.4	KRUZ 380 □ FH		<u> </u>									
9-38.5 KTUZ 385 FH									1030 300, 1030 301, 1030 302, 1030 303, 1030 304				
	Ф30 Е	VTDI 205 [7 51]							IDPH 385, IDPH 386, IDPH 387, IDPH 388, IDPH 389				
Company Comp	Ψ36.3	1 101 365 LI FR						-					
039.0 VTDI 390 FH	~Ф38.9	KRUZ 385 □ FH											
												M5x10	2.5mm
-039.4	Φ39.0	ALDI 300 🗆 ER						-		-395 SL			
Company Comp								-					
0-93.5 YTDI 395 FH P(S)D) 246, 724 237 43	~Ф39.4	KRUZ 390 ⊔ FH						-					
□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□													
- □ 39.9	Ф39.5	YTDI 395 □ FH			_			-					
Charles Char													
0-0.0	~Ф39.9	KKUZ 395 🗆 FH										A	
									IDDII 400 IDDII 404 IDDII 402 IDDII 403 IDDII 404				
	Ф40.0	YTDI 400 □ FH											
Color Colo	Φ40.4	VDI 17 400 □ EU						-					
Cod	~ \\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$	KKUZ 400 🗆 FH		` '									4
March Marc									IDDU 405 IDDU 406 IDDU 407 IDDU 409 IDDU 400				
	Ф40.5	YTDI 405 ☐ FH											
041.0 YTDI 410 FH P(5xD) 554 484 446 7(3xD) 272 202 164 P(5xD) 354 284 246 H(7xD) 436 366 328 (10xD) 559 488 451 T(3xD) 275 205 166 P(4xD) 441 371 332 (10xD) 441 371 332 (10xD) 459 375 336 (10xD) 459 441 371 332 (10xD) 459 379 340 (10xD) 471	~040 g	KRUZ 405 □ FH						1					
041.0	~\$40.5	KKOZ 403 🗆 III						1	IDSH 405, IDSH 406, IDSH 407, IDSH 408, IDSH 409				
041.0				T(3xD)	272	202	164		IDPH 410 IDPH 411 IDPH 412 IDPH 413 IDPH 414				
C(10xD) 555 489 451 T(3xD) 275 205 166 P(5xD) 358 288 249 P(5xD) 358 288 249 P(4xD) 441 371 332 (10xD) 566 496 457 T(3xD) 277 207 168 P(5xD) 361 291 525 P(7xD) 445 375 336 (10xD) 571 501 462 T(3xD) 279 209 170 P(5xD) 364 294 255 P(4xD) 445 375 336 (10xD) 571 501 462 T(3xD) 279 209 170 P(5xD) 368 298 258 P(5xD) 369 291 P(5xD) 369 291 P(5xD) 369 291 P(5xD) 371 301 261 P(5xD) 371 261 P(5xD) 371 301 261 P(5xD) 371	Ф41.0	YTDI 410 □ FH		P(5xD)	354	284	246						
Claybox S59 489 451 T(3xD) 275 205 166 FH Code Claybox 489 451 T(3xD) 277 207 168 FH Code Claybox 450 451 462 FH Code Claybox 489 451 T(3xD) 277 207 168 FH Code Claybox 462 451 462 FH Code Claybox 462 462 451 462 FH Code Claybox 462	~Ф41.4	KRUZ 410 □ FH	\ \	H(7xD)	436	366	328		IDH 410, IDH 411, IDH 412, IDH 413, IDH 414				
Φ41.5 YTDI 415 □ FH 40.0 P(SxD) 358 ≥ 288 ≥ 249 H(7xD) 141 ≥ 371 ≥ 332 ≥ 155 EH 16(8xD)				L(10xD)	559	489	451		IDSH 410, IDSH 411, IDSH 412, IDSH 413, IDSH 414				
Φ41.5 YTDI 415 □ FH 40.0 Θ(SXD) 358 288 249 FM(7XD) 441 371 332 55 DFH 415, DFH 416, DFH 417, DFH 418, DFH 419 DSH 415, DSH 419 DSH 415, DSH 416, DSH 417, DSH 418, DSH 419 DSH 415, DSH 416, DSH 417, DSH 418, DSH 419 Torque 4,0Nm (Max) Φ42.0 YTDI 420 □ FH H(7XD) 445 375 336 L(10xD) DFH 415, DFH 416, DFH 417, DFH 418, DFH 419 DSH 415, DSH 419, DSH 412, DSH 422, DFH 423, DFH 424 DFH 429, DFH 423, DFH 424 DFH 429, DFH 423, DFH 424 DSH 420, DFH 421, DFH 422, DFH 423, DFH 424 DFH 420, DFH 421, DFH 422, DFH 423, DFH 424 DSH 420, DFH 421, DFH 422, DFH 423, DFH 424 DSH 420, DFH 425, DFH 429, DFH 425, DFH 429, DFH 439, DFH 449, DFH 440, DFH 441, DFH 442, DFH 443, DFH 444 DFH 440, DFH 441, DFH 442, DFH 443, DFH 444 DFH 440, DFH 441, DFH 442, DFH 443, DFH 444 DFH 443, DFH 444, DFH 443, DFH 444 DFH 443, DFH 444, DFH 443, DFH 444 DFH 443, DFH 444, DFH 443, DFH 449 DFH 445, DFH 446, DFH 447, DFH 448, DFH 449 DFH 445, DFH 446, DFH 447, DFH 448, DFH 449 DFH 445, DFH 446, DFH 447, DFH 448, DFH 449			1)	T(3xD)	275	205	166	1	IDPH 415, IDPH 416, IDPH 417, IDPH 418, IDPH 419		T20		
	Ф41.5	YTDI 415 ☐ FH	40.0		358	288	249				Torque		
Φ42.0 YTDI 420 ☐ FH T(3xD) 277 207 168 IDPH 420, IDPH 421, IDPH 422, IDPH 423, IDPH 424 IDPH 420, IDPH 421	~Ф41.9	KRUZ 415 □ FH	40.0	H(7xD)	441	371	332] 55					
P(5xD) 361 291 252 H(7xD) 445 375 336 L(10xD) 571 501 462 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 420, IDH 421, IDH 422, IDH 423, IDH 424 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 426, IDH 427, IDH 428, IDH 429 IDH 425, IDH 432, IDH 433, IDH 434 IDH 430, IDH 431, IDH 432, IDH 433, IDH 434 IDH 430, IDH 431, IDH 432, IDH 433, IDH 434 IDH 430, IDH 431, IDH 432, IDH 433, IDH 434 IDH 430, IDH 431, IDH 432, IDH 438, IDH 439 IDH 435, IDH 436, IDH 437, IDH 438, IDH 439 IDH 435, IDH 436, IDH 437, IDH 438, IDH 439 IDH 435, IDH 436, IDH 437, IDH 438, IDH 434 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 444 IDH 440, IDH 441, IDH 442, IDH 443, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 446, IDH 447, IDH 448, IDH 449 IDH 445, IDH 447, IDH 448, IDH 449 IDH 445, IDH 447, IDH 448, IDH 449 IDH 446, IDH 447, IDH 448,				L(10xD)	566	496	457		IDSH 415, IDSH 416, IDSH 417, IDSH 418, IDSH 419		(Max)		
									IDPH 420, IDPH 421, IDPH 422, IDPH 423, IDPH 424				
C (10xD 571 501 462 T(3xD) 279 209 170 P(5xD) 364 294 255 H(7xD 449 379 340 L(10xD 577 507 468 T(3xD) 282 212 172 P(5xD) 368 298 258 H(7xD 444 364) P(5xD) 371 301 261 H(7xD 458 388 348 L(10xD 589 519 479 T(3xD) 287 217 176 P(5xD) 375 305 264 H(7xD 445 393 308 267 H(7xD 445 □ FH	Φ42.0	YTDI 420 ☐ FH											
042.5 YTDI 425 □ FH T(3x0) 279 209 170 P(5x0) 364 294 255 H(7x0) 449 379 340 L(10x0) 577 507 468 T(3x0) 282 212 172 P(5x0) 368 298 258 H(7x0) 454 384 344 L(10x0) 583 513 473 T(3x0) 284 214 174 P(5x0) 371 301 261 H(7x0) 454 88 388 348 L(10x0) 589 519 479 T(3x0) 287 217 176 P(5x0) 375 305 264 H(7x0) 463 393 352 L(10x0) 589 519 479 T(3x0) 287 217 176 P(5x0) 375 305 264 H(7x0) 463 393 352 L(10x0) 589 519 479 T(3x0) 289 219 178 P(5x0) 378 308 267 H(7x0) 467 397 356 L(10x0) 501 531 490 T(3x0) 291 221 180 P(5x0) 470 471 401 360 DPH 425, IDPH 426, IDPH 427, IDPH 428, IDPH 429 IDPH 428, IDPH 429 IDPH 425, IDPH 426, IDPH 427, IDPH 428, IDPH 429 IDPH 429, IDPH 443, IDPH 444, IDPH 445, IDPH 448, IDPH 449, IDPH 445, IDPH 448, IDPH 449, IDPH 445, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 445, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 449, IDPH 449, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 445, IDPH 446, IDPH 447, IDPH 448, IDPH 449, IDPH 445, IDPH 446, IDPH 447, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 445, IDPH 446, IDPH 447, IDPH 448, IDPH 449, IDPH 448, IDPH 449, IDPH 445, IDPH 446, IDPH 447, IDPH 448, IDPH 449, IDPH 445, IDPH 449, IDPH 445, IDPH 446, IDP	~Ф42.4	KRUZ 420 □ FH											
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Φ45.0 YTDI 450 □ FH P(5xD) 381 311 270 P(5xD) 381 310 270 P(5	1.4.5			L(10xD)	601	531	_	1	IDSH 445, IDSH 446, IDSH 447, IDSH 448, IDSH 449				
Φ45.0 YTDI 450 □ FH P(5xD) 381 311 270 IDFH 450, IDFH 451, IDFH 452, IDFH 453, IDFH 454 CS 450 □ FH P(7xD) 471 401 360 □ FH P(7xD) 471 401 401 401 401 401 401 401 401 401 40]	T(3xD)	291	221	180		IDPH 450, IDPH 451. IDPH 452, IDPH 453. IDPH 454			/ //	
~45.4 KNUZ 450 LI FII	Ф45.0	YTDI 450 ☐ FH		P(5xD)	381	311	270			CS 450			
	~Ф45.4	KRUZ 450 □ FH		H(7xD)	471		360			-500 SL			
				L(10xD)	606	536	495		103H 45U, 103H 451, 103H 452, 103H 453, 103H 454				

Hole size range	Body Code No.		Cutting depth (Length x ΦD)		L2	L3	Flanged dia.(ФFd)	Insert Code No. to fit in body	Cap Screw	Torx driver	Set Screw	L-wrench
			T(3xD)	294	224	182		IDPH 455, IDPH 456, IDPH 457, IDPH 458, IDPH 459				
Ф45.5	YTDI 455 □ FH		P(5xD)	385	315	273		IDFH 455, IDFH 456, IDFH 457, IDFH 458, IDFH 459				
~Ф45.9	KRUZ 455 □ FH		H(7xD)	476	406	364		IDH 455, IDH 456, IDH 457, IDH 458, IDH 459				
			L(10xD)	613	543	501		IDSH 455, IDSH 456, IDSH 457, IDSH 458, IDSH 459				
	\(\frac{1}{2} \)		T(3xD)	296	226	184		IDPH 460, IDPH 461, IDPH 462, IDPH 463, IDPH 464)			
Ф46.0	YTDI 460 □ FH		P(5xD)	388	318	276		IDFH 460, IDFH 461, IDFH 462, IDFH 463, IDFH 464				
~Ф46.4	KRUZ 460 □ FH		H(7xD)	480	410	368		IDH 460, IDH 461, IDH 462, IDH 463, IDH 464 IDSH 460, IDSH 461, IDSH 462, IDSH 463, IDSH 464				
			L(10xD)	618	548	506		10311 400, 10311 401, 10311 402, 10311 403, 10311 404				
DAC E	VEDI ACE EL EU		T(3xD)	299	229	186		IDPH 465, IDPH 466, IDPH 467, IDPH 468, IDPH 469				
Ф46.5	YTDI 465 □ FH		P(5xD)	392	322	279		IDFH 465, IDFH 466, IDFH 467, IDFH 468, IDFH 469				
~Ф46.9	KRUZ 465 ☐ FH		H(7xD)	485	415	372		IDH 465, IDH 466, IDH 467, IDH 468, IDH 469 IDSH 465, IDSH 466, IDSH 467, IDSH 468, IDSH 469				
			L(10xD)	625	555	512		10311 403, 10311 400, 10311 407, 10311 400, 10311 403				
447.0	VTD1 470 🗆 EU		T(3xD)	301	231	188		IDPH 470, IDPH 471, IDPH 472, IDPH 473, IDPH 474				
Ф47.0	YTDI 470 □ FH		P(5xD)	395	325	282		IDFH 470, IDFH 471, IDFH 472, IDFH 473, IDFH 474				
~Ф47.4	KRUZ 470 □ FH		H(7xD)	489	419	376		IDH 470, IDH 471, IDH 472, IDH 473, IDH 474 IDSH 470, IDSH 471, IDSH 472, IDSH 473, IDSH 474				
		-	L(10xD)		560	517		10311 47 6, 10311 47 1, 10311 47 2, 10311 47 3, 10311 47 4				
Ф47.5	YTDI 475 □ FH		T(3xD)	303	233	190		IDPH 475, IDPH 476, IDPH 477, IDPH 478, IDPH 479				
Ψ47.5	11014/3 LI FR		P(5xD)	398	328	285 IDFH 475, IDFH 476, IDFH 477, IDFH 478, IDFH 479						
~Ф47.9	KRUZ 475 □ FH	1	H(7xD)	493	423	380		IDH 475, IDH 476, IDH 477, IDH 478, IDH 479 IDSH 475, IDSH 476, IDSH 477, IDSH 478, IDSH 479		T20		
		40.0	L(10xD)		566	523	55		CS 450 -500 SL	Torque	M6x12	3.0mm
Ф48.0	YTDI 480 □ FH		T(3xD)	306	236	192		IDPH 480, IDPH 481, IDPH 482, IDPH 483, IDPH 484	-300 3L	4.0Nm		
4-0.0			P(5xD)	402	332	288		IDFH 480, IDFH 481, IDFH 482, IDFH 483, IDFH 484 IDH 480, IDH 481, IDH 482, IDH 483, IDH 484		(Max)		
~Ф48.4	KRUZ 480 □ FH		H(7xD)	498	428	384		IDSH 480, IDSH 481, IDSH 482, IDSH 483, IDSH 484				
		-	L(10xD)		572	528						
Ф48.5	YTDI 485 □ FH		T(3xD)	308	238	194		IDPH 485, IDPH 486, IDPH 487, IDPH 488, IDPH 489				
			P(5xD)	405	335	291		IDFH 485, IDFH 486, IDFH 487, IDFH 488, IDFH 489 IDH 485, IDH 486, IDH 487, IDH 488, IDH 489				
~Ф48.9	KRUZ 485 □ FH		H(7xD) L(10xD)	502 648	432 578	388 534		IDSH 485, IDSH 486, IDSH 487, IDSH 488, IDSH 489				
		-	T(3xD)	311	241	196		/				
Ф49.0	YTDI 490 □ FH		P(5xD)	409	339	294		IDPH 490, IDPH 491, IDPH 492, IDPH 493, IDPH 494 IDFH 490, IDFH 491, IDFH 492, IDFH 493, IDFH 494				
			H(7xD)		437	392		IDH 490, IDH 491, IDH 492, IDH 493, IDH 494				
~Ф49.4	KRUZ 490 □ FH		L(10xD)		584	539		IDSH 490, IDSH 491, IDSH 492, IDSH 493, IDSH 494				
		1	T(3xD)	313	243	198						
Ф49.5	YTDI 495 □ FH		P(5xD)		342	297		IDPH 495, IDPH 496, IDPH 497, IDPH 498, IDPH 499 IDFH 495, IDFH 496, IDFH 497, IDFH 498, IDFH 499				
040.0			H(7xD)		441	396		IDH 495, IDH 496, IDH 497, IDH 498, IDH 499				
~Ф49.9	KRUZ 495 □ FH		L(10xD)		590	545		IDSH 495, IDSH 496, IDSH 497, IDSH 498, IDSH 499				
		1	T(3xD)	315	245	200		IDPH 500, IDPH 501, IDPH 502, IDPH 503, IDPH 504	-			
Ф50.0	YTDI 500 □ FH		P(5xD)		345	300		IDFH 500, IDFH 501, IDFH 502, IDFH 503, IDFH 504				
ΦΕ0.4	KRUZ 500 □ FH		H(7xD)		445	400		IDH 500, IDH 501, IDH 502, IDH 503, IDH 504				
~Ф50.4	KNUZ 300 LI FH		L(10xD)		595	550		IDSH 500, IDSH 501, IDSH 502, IDSH 503, IDSH 504				

KRUZ-FH Drills, Cutting Speed Recommendation

Drill Dia.	Ф8-	-16mm	Ф16	~25mm	Ф25	~32mm	Ф32	~40mm	Ф 40	~50mm
Condition Material Group	Speed (m/min)	Feed (mm/rev)								
Grey cast iron (FC)	80~150	0.20~0.30	80~150	0.25~0.45	80~160	0.35~0.55	90~200	0.34~0.58	90~200	0.38~0.60
Nodular cast iron (FCD)	80~140	0.15~0.25	80~140	0.22~0.45	80~150	0.32~0.52	90~160	0.35~0.62	90~200	0.38~0.60
Carbon steel (S45C)	80~140	0.15~0.30	80~140	0.16~0.40	80~150	0.20~0.40	80~150	0.22~0.48	80~160	0.25~0.54
Alloy steel (SCM440)	70~140	0.15~0.30	70~140	0.15~0.40	70~140	0.18~0.40	80~140	0.25~0.47	80~140	0.27~0.52
Hardened steel (SKD11)	40~50	0.10~0.20	40~50	0.12~0.28	40~50	0.16~0.35	40~60	0.20~0.38	40~60	0.22~0.42
Stainless steel (SUS)	30~40	0.10~0.20	35~50	0.10~0.22	35~50	0.15~0.28	40~55	0.18~0.30	40~55	0.22~0.32
Aluminum 130HB (AL)	120~200	0.20~0.30	120~200	0.25~0.40	120~200	0.30~0.45	120~200	0.30~0.45	120~200	0.30~0.50

- This data is recommended for 3xDia. And should be reduced about 15~20% for 5xD, 7xD, 10xD drills.
- The data is normally suggested for oil-mist(MQL) coolant condition and also possible to run in other normal condition if machining environment like clamping etc. are secured in good.

Indexable, Coolant Drill Series

KRUZ "K" series drill body & insert

Caution !!!

"K" series inserts(IDFK or IDPK) should use only with

"K" series body(KRUZ-SLK or FSLK) to avoid drilling failure.

IDFK Carbide insert

- Carbide insert completely grinded by CNC program
- Patented 140°+170° dual angle flat bottom point
- TiAIN coated insert offers wear resistance and higher feed rate
- Designed exclusively for structural beam, angle or single plate drilling



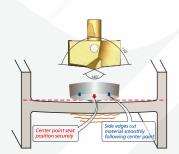
IDPK Carbide insert

- Carbide insert completely grinded by CNC program
- Patented 130°+150° dual point angle
- TiAIN coated insert offers wear resistance and higher feed rate
- Appropriate insert design for stack plates drilling



KRUZ-SLK Drill body

- Rigid drill body made of special premium steel and heat treated
- TiN coated body to enable longer tool life and higher lubricity
- Special flute design to increase faster chip's ejection rate
- Enabling to mount 0.5mm inclusive both IDFK & IDPK inserts
- Stubby length to perform maximum drilling ability of structural machining
- Internal coolant fed



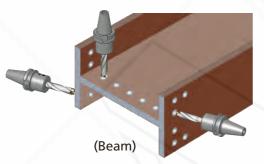






(Plate)





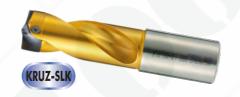


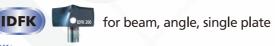






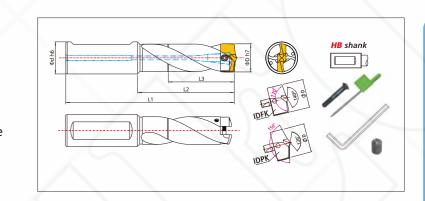
KRUZ "K" series drill body & insert, Metric











Hole (Φ)	Body Code	Shank	Di	mensi	ion	Insert IDFK Insert IDPK	Cap Screw	Torx driver	Set Screw	L-wrench
mm	Body Code	(Фd)	L1	L2	L3	Insert IDFK IDFK IDFK		diver	Screvv	
14.0~14.4	KRUZ 140 L3=50 SLK					IDFK 140, IDFK 141, IDFK 142, IDFK 143, IDFK 144 IDPK 140, IDPK 141, IDPK 142, IDPK 143, IDPK 144				
14.5~14.9	KRUZ 145 L3=50 SLK	16	110	62		IDFK 145, IDFK 146, IDFK 147, IDFK 148, IDFK 149 IDPK 145, IDPK 146, IDPK 147, IDPK 148, IDPK 149	CS 140			
15.0~15.4	KRUZ 150 L3=50 SLK					IDFK 150, IDFK 151, IDFK 152, IDFK 153, IDFK 154 IDPK 150, IDPK 151, IDPK 152, IDPK 153, IDPK 154	-155 SL	T7		
15.5~15.9	KRUZ 155 L3=50 SLK					IDFK 155, IDFK 156, IDFK 157, IDFK 158, IDFK 159				
16.0~16.4	KRUZ 160 L3=50 SLK		115	65		IDPK 155, IDPK 156, IDPK 157, IDPK 158, IDPK 159 IDFK 160, IDFK 161, IDFK 162, IDFK 163, IDFK 164		Torque 0.9Nm		
16.5~16.9	KRUZ 165 L3=50 SLK					IDPK 160, IDPK 161, IDPK 162, IDPK 163, IDPK 164 IDFK 165, IDFK 166, IDFK 167, IDFK 168, IDFK 169		(Max)		
17.0~17.4	KRUZ 170 L3=50 SLK				1	IDPK 165, IDPK 166, IDPK 167, IDPK 168, IDPK 169 IDFK 170, IDFK 171, IDFK 172, IDFK 173, IDFK 174	-175 SL		M2.5x4	1.3mm
17.5~17.9	KRUZ 175 L3=50 SLK	20				IDPK 170, IDPK 171, IDPK 172, IDPK 173, IDPK 174 IDFK 175, IDFK 176, IDFK 177, IDFK 178, IDFK 179	_			4
18.0~18.4	KRUZ 180 L3=50 SLK			7		IDPK 175, IDPK 176, IDPK 177, IDPK 178, IDPK 179 IDFK 180, IDFK 181, IDFK 182, IDFK 183, IDFK 184				
18.5~18.9	KRUZ 185 L3=50 SLK		118	68		IDPK 180, IDPK 181, IDPK 182, IDPK 183, IDPK 184 IDFK 185, IDFK 186, IDFK 187, IDFK 188, IDFK 189			_ ^	
19.0~19.4	KRUZ 190 L3=50 SLK	1				IDPK 185, IDPK 186, IDPK 187, IDPK 188, IDPK 189 IDFK 190, IDFK 191, IDFK 192, IDFK 193, IDFK 194	CS 180 -195 SL			
		-				IDPK 190, IDPK 191, IDPK 192, IDPK 193, IDPK 194 IDFK 195, IDFK 196, IDFK 197, IDFK 198, IDFK 199				
19.5~19.9	KRUZ 195 L3=50 SLK					IDPK 195, IDPK 196, IDPK 197, IDPK 198, IDPK 199 IDFK 200, IDFK 201, IDFK 202, IDFK 203, IDFK 204				
20.0~20.4	KRUZ 200 L3=50 SLK	-				IDPK 200, IDPK 201, IDPK 202, IDPK 203, IDPK 204 IDFK 205, IDFK 206, IDFK 207, IDFK 208, IDFK 209		T8		
20.5~20.9	KRUZ 205 L3=50 SLK	-				IDPK 205, IDPK 206, IDPK 207, IDPK 208, IDPK 209 IDFK 210, IDFK 211, IDFK 212, IDFK 213, IDFK 214	CS 200 -215 SL	Torque		
21.0~21.4	KRUZ 210 L3=50 SLK					IDFK 210, IDFK 211, IDFK 212, IDFK 213, IDFK 214 IDFK 215, IDFK 216, IDFK 217, IDFK 218, IDFK 219	- 21336	1.5Nm (Max)		
21.5~21.9	KRUZ 215 L3=50 SLK	25	130	74	50	IDPK 215, IDPK 216, IDPK 217, IDPK 218, IDPK 219		(**************************************		
22.0~22.4	KRUZ 220 L3=50 SLK	1				IDFK 220, IDFK 221, IDFK 222, IDFK 223, IDFK 224 IDPK 220, IDPK 221, IDPK 222, IDPK 223, IDPK 224				
22.5~22.9	KRUZ 225 L3=50 SLK					IDFK 225, IDFK 226, IDFK 227, IDFK 228, IDFK 229 IDPK 225, IDPK 226, IDPK 227, IDPK 228, IDPK 229	CS 220			
23.0~23.4	KRUZ 230 L3=50 SLK					IDFK 230, IDFK 231, IDFK 232, IDFK 233, IDFK 234 IDPK 230, IDPK 231, IDPK 232, IDPK 233, IDPK 234	-235 SL		М3х6	1.5mm
23.5~23.9	KRUZ 235 L3=50 SLK					IDFK 235, IDFK 236, IDFK 237, IDFK 238, IDFK 239 IDPK 235, IDPK 236, IDPK 237, IDPK 238, IDPK 239			IVISAO	1.5111111
24.0~24.4	KRUZ 240 L3=50 SLK					IDFK 240, IDFK 241, IDFK 242, IDFK 243, IDFK 244 IDPK 240, IDPK 241, IDPK 242, IDPK 243, IDPK 244				
24.5~24.9	KRUZ 245 L3=50 SLK		126	7.0		IDFK 245, IDFK 246, IDFK 247, IDFK 248, IDFK 249 IDPK 245, IDPK 246, IDPK 247, IDPK 248, IDPK 249	CS 240			
25.0~25.4	KRUZ 250 L3=50 SLK		136	76		IDFK 250, IDFK 251, IDFK 252, IDFK 253, IDFK 254 IDPK 250, IDPK 251, IDPK 252, IDPK 253, IDPK 254	-255 SL			
25.5~25.9	KRUZ 255 L3=50 SLK					IDFK 255, IDFK 256, IDFK 257, IDFK 258, IDFK 259 IDPK 255, IDPK 256, IDPK 257, IDPK 258, IDPK 259				
26.0~26.4	KRUZ 260 L3=50 SLK					IDFK 260, IDFK 261, IDFK 262, IDFK 263, IDFK 264 IDPK 260, IDPK 261, IDPK 262, IDPK 263, IDPK 264		T15		
26.5~26.9	KRUZ 265 L3=50 SLK	1				IDFK 265, IDFK 266, IDFK 267, IDFK 268, IDFK 269 IDPK 265, IDPK 266, IDPK 267, IDPK 268, IDPK 269	CS 260	54		
27.0~27.4	KRUZ 270 L3=50 SLK	32				IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274	-275 SL	Torque 3.5Nm		
27.5~27.9	KRUZ 275 L3=50 SLK					IDFK 275, IDFK 276, IDFK 277, IDFK 278, IDFK 279		(Max)	1	
28.0~28.4	KRUZ 280 L3=50 SLK		140	80		IDPK 275, IDPK 276, IDPK 277, IDPK 278, IDPK 279 IDFK 280, IDFK 281, IDFK 282, IDFK 283, IDFK 284				
28.5~28.9	KRUZ 285 L3=50 SLK					IDPK 280, IDPK 281, IDPK 282, IDPK 283, IDPK 284 IDFK 285, IDFK 286, IDFK 287, IDFK 288, IDFK 289	CC 200		M4x8	2.0mm
29.0~29.4	KRUZ 290 L3=50 SLK					IDPK 285, IDPK 286, IDPK 287, IDPK 288, IDPK 289 IDFK 290, IDFK 291, IDFK 292, IDFK 293, IDFK 294	-295 SL			
29.5~29.9	KRUZ 295 L3=50 SLK					IDPK 290, IDPK 291, IDPK 292, IDPK 293, IDPK 294 IDFK 295, IDFK 296, IDFK 297, IDFK 298, IDFK 299				

Size not shown on above is available upon request.

KRUZ "K" series drill body & insert, Metric

	y designed for S	Shank		mensi			Cap Screw	Torx	Set	L-wrench
Ho l e (Φ) mm	Body Code	(Фd)	L1	L2	L3	Insert IDFK Insert IDPK	CAP SCICEV	driver	Screw	2 Wiend
0.0~30.4	KRUZ 300 L3=70 SLK				1	IDFK 300, IDFK 301, IDFK 302, IDFK 303, IDFK 304 IDPK 300, IDPK 301, IDPK 302, IDPK 303, IDPK 304				
0.5~30.9	KRUZ 305 L3=70 SLK					IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309	CS 300		M4x8	2.0mm
1.0~31.4	KRUZ 310 L3=70 SLK	1				IDFK 303, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDFK 310, IDFK 311, IDFK 312, IDFK 313, IDFK 314 IDPK 310, IDPK 311, IDPK 312, IDPK 313, IDPK 314	-315 SL			
1.5~31.9	KRUZ 315 L3=70 SLK					IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319 IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319 IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319				
2.0~32.4	KRUZ 320 L3=70 SLK	32	155	95	70	IDFK 320, IDFK 321, IDFK 322, IDFK 323, IDFK 324 IDFK 320, IDFK 321, IDFK 322, IDFK 323, IDFK 324				
2.5~32.9	KRUZ 325 L3=70 SLK	6				IDFK 325, IDFK 326, IDFK 327, IDFK 328, IDFK 329 IDFK 325, IDFK 326, IDFK 327, IDFK 328, IDFK 329				
3.0~33.4	KRUZ 330 L3=70 SLK					IDFK 330, IDFK 331, IDFK 332, IDFK 333, IDFK 334 IDPK 330, IDPK 331, IDPK 332, IDPK 333, IDPK 334				
3.5~33.9	KRUZ 335 L3=70 SLK					IDFK 335, IDFK 336, IDFK 337, IDFK 338, IDFK 339 IDPK 335, IDPK 336, IDPK 337, IDPK 338, IDPK 339	CS 320			
4.0~34.4	KRUZ 340 L3=80 SLK					IDFK 340, IDFK 341, IDFK 342, IDFK 343, IDFK 344 IDPK 340, IDPK 341, IDPK 342, IDPK 343, IDPK 344	-355 SL			
4.5~34.9	KRUZ 345 L3=80 SLK					IDFK 345, IDFK 346, IDFK 347, IDFK 348, IDFK 349 IDPK 345, IDPK 346, IDPK 347, IDPK 348, IDPK 349				
5.0~35.4	KRUZ 350 L3=80 SLK					IDFK 350, IDFK 351, IDFK 352, IDFK 353, IDFK 354 IDPK 350, IDPK 351, IDPK 352, IDPK 353, IDPK 354				
5.5~35.9	KRUZ 355 L3=80 SLK					IDFK 355, IDFK 356, IDFK 357, IDFK 358, IDFK 359 IDFK 355, IDFK 356, IDFK 357, IDFK 358, IDFK 359			M5x10	2.5mm
6.0~36.4	KRUZ 360 L3=80 SLK					IDFK 360, IDFK 361, IDFK 362, IDFK 363, IDFK 364 IDPK 360, IDPK 361, IDPK 362, IDPK 363, IDPK 364				
6.5~36.9	KRUZ 365 L3=80 SLK	-				IDFK 365, IDFK 366, IDFK 367, IDFK 368, IDFK 369 IDFK 365, IDFK 366, IDFK 367, IDFK 368, IDFK 369				
7.0~37.4	KRUZ 370 L3=80 SLK					IDFK 370, IDFK 371, IDFK 372, IDFK 373, IDFK 374 IDFK 370, IDFK 371, IDFK 372, IDFK 373, IDFK 374 IDFK 370, IDFK 371, IDFK 372, IDFK 373, IDFK 374				
7.5~37.9	KRUZ 375 L3=80 SLK		180	110		IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379 IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379	CS 360			
8.0~38.4	KRUZ 380 L3=80 SLK			1		IDFK 380, IDFK 381, IDFK 382, IDFK 383, IDFK 384 IDPK 380, IDPK 381, IDPK 382, IDPK 383, IDPK 384	-395 SL			
8.5~38.9	KRUZ 385 L3=80 SLK					IDFK 385, IDFK 386, IDFK 387, IDFK 388, IDFK 389 IDPK 385, IDPK 386, IDPK 387, IDPK 388, IDPK 389				
9.0~39.4	KRUZ 390 L3=80 SLK)			IDFK 390, IDFK 391, IDFK 392, IDFK 393, IDFK 394 IDFK 390, IDFK 391, IDFK 392, IDFK 393, IDFK 394				
9.5~39.9	KRUZ 395 L3=80 SLK					IDFK 395, IDFK 396, IDFK 397, IDFK 398, IDFK 399 IDFK 395, IDFK 396, IDFK 397, IDFK 398, IDFK 399		T20		
0.0~40.4	KRUZ 400 L3=80 SLK					IDFK 400, IDFK 401, IDFK 402, IDFK 403, IDFK 404 IDPK 400, IDFK 401, IDPK 402, IDFK 403, IDFK 404		Torque		
0.5~40.9	KRUZ 405 L3=80 SLK					IDFK 405, IDFK 406, IDFK 407, IDFK 408, IDFK 409 IDPK 405, IDPK 406, IDPK 407, IDPK 408, IDPK 409		4.0Nm (Max)		
1.0~41.4	KRUZ 410 L3=80 SLK				80	IDFK 410, IDFK 411, IDFK 412, IDFK 413, IDFK 414 IDPK 410, IDPK 411, IDPK 412, IDPK 413, IDPK 414				
1.5~41.9	KRUZ 415 L3=80 SLK					IDFK 415, IDFK 416, IDFK 417, IDFK 418, IDFK 419 IDFK 415, IDFK 416, IDFK 417, IDFK 418, IDFK 419				
2.0~42.4	KRUZ 420 L3=80 SLK	40				IDFK 420, IDFK 421, IDFK 422, IDFK 423, IDFK 424 IDFK 420, IDFK 421, IDFK 422, IDFK 423, IDFK 424	CS 400			
2.5~42.9	KRUZ 425 L3=80 SLK					IDFK 425, IDFK 426, IDFK 427, IDFK 428, IDFK 429 IDFK 425, IDFK 426, IDFK 427, IDFK 428, IDFK 429	-445 SL			
3.0~43.4	KRUZ 430 L3=80 SLK					IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434 IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434				
3.5~43.9	KRUZ 435 L3=80 SLK					IDFK 435, IDFK 436, IDFK 437, IDFK 438, IDFK 439 IDFK 435, IDFK 436, IDFK 437, IDFK 438, IDFK 439				
4.0~44.4	KRUZ 440 L3=80 SLK					IDFK 440, IDFK 441, IDFK 442, IDFK 443, IDFK 444 IDPK 440, IDPK 441, IDPK 442, IDPK 443, IDPK 444				
4.5~44.9	KRUZ 445 L3=80 SLK		185	115		IDFK 445, IDFK 446, IDFK 447, IDFK 448, IDFK 449 IDFK 445, IDFK 446, IDFK 447, IDFK 448, IDFK 449	1			
5.0~45.4	KRUZ 450 L3=80 SLK					IDFK 450, IDFK 451, IDFK 452, IDFK 453, IDFK 454 IDFK 450, IDFK 451, IDFK 452, IDFK 453, IDFK 454			M6x12	3.0mm
5.5~45.9	KRUZ 455 L3=80 SLK	1				IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459 IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459				
6.0~46.4	KRUZ 460 L3=80 SLK					IDFK 453, IDFK 456, IDFK 457, IDFK 458, IDFK 459 IDFK 460, IDFK 461, IDFK 462, IDFK 463, IDFK 464 IDPK 460, IDPK 461, IDPK 462, IDPK 463, IDPK 464				
6.5~46.9	KRUZ 465 L3=80 SLK					IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469 IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469				
7.0~47.4	KRUZ 470 L3=80 SLK					IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474				
17.5~47.9	KRUZ 475 L3=80 SLK					IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479	CS 450 -500 SL			
8.0~48.4	KRUZ 480 L3=90 SLK					IDFK 473, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484	-200 SF			
8.5~48.9	KRUZ 485 L3=90 SLK					IDFK 480, IDFK 461, IDFK 482, IDFK 463, IDFK 464 IDFK 485, IDFK 486, IDFK 487, IDFK 488, IDFK 489 IDFK 485, IDFK 486, IDFK 487, IDFK 488, IDFK 489				
9.0~49.4	KRUZ 490 L3=90 SLK		200	130	90	IDFK 490, IDFK 491, IDFK 492, IDFK 493, IDFK 494			1 1/1	
19.5~49.9	KRUZ 495 L3=90 SLK					IDPK 490, IDPK 491, IDPK 492, IDPK 493, IDPK 494 IDFK 495, IDFK 496, IDFK 497, IDFK 498, IDFK 499				
50.0~50.4	KRUZ 500 L3=90 SLK				 	IDPK 495, IDPK 496, IDPK 497, IDPK 498, IDPK 499 IDFK 500, IDFK 501, IDFK 502, IDFK 503, IDFK 504	1			





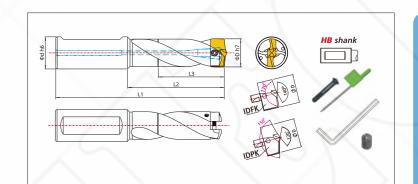


for beam, angle, single plate









Exclusively designed for Structural machining

Hole (Φ)	Body Code	Shank	[Dimension	1	Insert IDFK	Insert IDPK	Alternative Metri
decimal	body code	(Фd)	L1	L2	L3	Insert IDFK IDFK	Insert IDPK IDPK	body
.5512~.5705	KRUZ .5512 SLK	5/8	4.3307	2.4409		IDFK 9/16"(14.29mm)	IDPK 9/16"(14.29mm)	KRUZ 140 L3=50 SLK
.5709~.5902	KRUZ .5709 SLK	(15.875mm)	(70mm)	(62mm)		IDFK 37/64"(14.68mm)	IDPK 37/64"(14.68mm)	KRUZ 145 L3=50 SLK
.5906~.6098	KRUZ .5906 SLK					IDFK 19/32"(15.08mm), IDFK 39/64"(15.48mm)	IDPK 19/32"(15.08mm), IDPK 39/64"(15.48mm)	KRUZ 150 L3=50 SLK
.6102~.6295	KRUZ .6102 SLK	6	4.5276	2.5591		IDFK 5/8"(15.88mm)	IDPK 5/8"(15.88mm)	KRUZ 155 L3=50 SLK
.6299~.6492	KRUZ .6299 SLK		(115mm)	(65mm)		IDFK 41/64"(16.27mm)	IDPK 41/64"(16.27mm)	KRUZ 160 L3=50 SLK
.6496~.6689	KRUZ .6496 SLK					IDFK 21/32"(16.67mm)	IDPK 21/32"(16.67mm)	KRUZ 165 L3=50 SLK
.6693~.6886	KRUZ .6693 SLK	3/4				IDFK 43/64"(17.07mm), IDFK 11/16"(17.46mm)	IDPK 43/64"(17.07mm), IDPK 11/16"(17.46mm)	KRUZ 170 L3=50 SLK
.6890~.7083	KRUZ .6890 SLK	(19.05mm)				IDFK 45/64"(17.86mm)	IDPK 45/64"(17.86mm)	KRUZ 175 L3=50 SLK
.7087~.7280	KRUZ .7087 SLK		4.6457	2.6772		IDFK 23/32"(18.26mm)	IDPK 23/32"(18.26mm)	KRUZ 180 L3=50 SLK
.7283~.7476	KRUZ .7283 SLK	1	(118mm)	(68mm)		IDFK 47/64"(18.65mm)	IDPK 47/64"(18.65mm)	KRUZ 185 L3=50 SLK
.7480~.7673	KRUZ .7480 SLK					IDFK 3/4(19.05mm), IDFK 49/64"(19.45mm)	IDPK 3/4(19.05mm), IDPK 49/64"(19.45mm)	KRUZ 190 L3=50 SLK
.7677~.7870	KRUZ .7677 SLK					IDFK 25/32"(19.84mm)	IDPK 25/32"(19.84mm)	KRUZ 195 L3=50 SLK
.7874~.8067	KRUZ .7874 SLK					IDFK 51/64"(20.24mm)	IDPK 51/64"(20.24mm)	KRUZ 200 L3=50 SLK
.8071~.8264	KRUZ .8071 SLK]				IDFK 13/16"(20.64mm)	IDPK 13/16"(20.64mm)	KRUZ 205 L3=50 SLK
.8268~.8461	KRUZ .8268 SLK				1.9685 (50mm)	IDFK 27/32"(21.43mm)	IDPK 27/32"(21.43mm)	KRUZ 210 L3=50 SLK
.8465~.8657	KRUZ .8465 SLK	1" (25.4mm)	5.1181 (130mm)	2.9134	(3011111)	IDFK 55/64"(21.83mm)	IDPK 55/64"(21.83mm)	KRUZ 215 L3=50 SLK
.8661~.8854	KRUZ .8661 SLK			(74mm)		IDFK 7/8"(22.23mm)	IDPK 7/8"(22.23mm)	KRUZ 220 L3=50 SLK
.8858~.9051	KRUZ .8858 SLK					IDFK 57/64"(22.62mm)	IDPK 57/64"(22.62mm)	KRUZ 225 L3=50 SLK
.9055~.9248	KRUZ .9055 SLK					IDFK 29/32"(23.02mm), IDFK 59/64"(23.42mm)	IDPK 29/32"(23.02mm), IDPK 59/64"(23.42mm)	KRUZ 230 L3=50 SLK
.9252~.9445	KRUZ .9252 SLK					IDFK 15/16"(23.81mm)	IDPK 15/16"(23.81mm)	KRUZ 235 L3=50 SLK
.9646~.9839	KRUZ .9646 SLK					IDFK 31/32"(24.61mm)	IDPK 31/32"(24.61mm)	KRUZ 245 L3=50 SLK
.9843~1.0035	KRUZ .9843 SLK		5.3543 (136mm)	2.9921 (76mm)		IDFK 63/64"(25.00mm), IDFK 1"(25.4mm)	IDPK 63/64"(25.00mm), IDPK 1"(25.4mm)	KRUZ 250 L3=50 SLK
1.0039~1.0232	KRUZ 1.0039 SLK		(1111110C1)	(76mm)		IDFK 1-1/64"(25.80mm)	IDPK 1-1/64"(25.80mm)	KRUZ 255 L3=50 SLK
1.0236~1.0429	KRUZ 1.0236 SLK					IDFK 1-1/32"(26.19mm)	IDPK 1-1/32"(26.19mm)	KRUZ 260 L3=50 SLK
1.0433~1.0626	KRUZ 1.0433 SLK					IDFK 1-3/64"(26.59mm), IDFK 1-1/16"(26.99mm)	IDPK 1-3/64"(26.59mm), IDPK 1-1/16"(26.99mm)	KRUZ 265 L3=50 SLK
1.0827~1.1020	KRUZ 1.0827 SLK		5.5118	3.1496		IDFK 1-3/32"(27.78mm)	IDPK 1-3/32"(27.78mm)	KRUZ 275 L3=50 SLK
1.1024~1.1217	KRUZ 1.1024 SLK		(140mm)	(80mm)		IDFK 1-7/64"(28.18mm)	IDPK 1-7/64"(28.18mm)	KRUZ 280 L3=50 SLK
1.1220~1.1413	KRUZ 1.1220 SLK	1 1/4				IDFK 1-1/8"(28.58mm)	IDPK 1-1/8"(28.58mm)	KRUZ 285 L3=50 SLK
1.1417~1.1610	KRUZ 1.1417 SLK	(31.75mm)				IDFK 1-5/32"(29.37mm)	IDPK 1-5/32"(29.37mm)	KRUZ 290 L3=50 SLK
1.1811~1.2004	KRUZ 1.1811 SLK					IDFK 1-3/16"(30.16mm)	IDPK 1-3/16"(30.16mm)	KRUZ 300 L3=70 SLK
1.2008~1.2201	KRUZ 1.2008 SLK					IDFK 1-7/32"(30.96mm)	IDPK 1-7/32"(30.96mm)	KRUZ 305 L3=70 SLK
1.2402~1.2594	KRUZ 1.2402 SLK		6.1024	3.7402 (05mm)	2.7559	IDFK 1-1/4"(31.75mm)	IDPK 1-1/4"(31.75mm)	KRUZ 315 L3=70 SLK
1.2795~1.2988	KRUZ 1.2795 SLK		(155mm)	(95mm)	(70mm)	IDFK 1-9/32"(32.54mm)	IDPK 1-9/32"(32.54mm)	KRUZ 325 L3=70 SLK
1.2992~1.3185	KRUZ 1.2992 SLK					IDFK 1-5/16"(33.34mm)	IDPK 1-5/16"(33.34mm)	KRUZ 330 L3=70 SLK
1.3386~1.3579	KRUZ 1.3386 SLK		7.0866	4.3307	3.1496	IDFK 1-11/32"(34.13mm)	IDPK 1-11/32"(34.13mm)	KRUZ 340 L3=80 SLK
1.3583~1.3776	KRUZ 1.3583 SLK	-		4.3307 (110mm)	(80mm)	IDFK 1-3/8"(34.93mm)	IDPK 1-3/8"(34.93mm)	KRUZ 345 L3=80 SLK

See to alternative metric body on right if it is suitable to fit in tool holder.

F If requires inch holder to convert with metric drill body, see proper inch RSL(reduction sleeve) with metric size.

KRUZ-FSLK Flanged body(5x0), IDFK & IDPK insert







for beam, angle, single plate



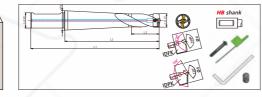
Indexable, Coolant Drill Series



Exclusively designed for Structural machining



- ▶ Drilling closer to flange part
- ▶ Minimized flute design with longer cylindrical neck
- ▶ Increased drill's rigidity than ordinary 5xDia drill length
- ▶ Internal coolant fed design
- ▶ Flanged shank to reduce chattering or vibrating



Ho l e (Φ)	Pody Codo	Shank	Di	mensi	ion	Flanged	Insert IDFK Insert IDPK	Cap Screw	Torx driver	Set	L-wrench
mm	Body Code	(Фd)	L1	L2	L3	dia.(ΦFd)	Insert IDFK IDFK IDFK IDFK		unver	Screw	
14.0~14.4	KRUZ 140P FL50 FSLK	10	147	99		24	IDFK 140, IDFK 141, IDFK 142, IDFK 143, IDFK 144 IDPK 140, IDPK 141, IDPK 142, IDPK 143, IDPK 144				
14.5~14.9	KRUZ 145P FL50 FSLK	16	150	102		21	IDFK 145, IDFK 146, IDFK 147, IDFK 148, IDFK 149 IDPK 145, IDPK 146, IDPK 147, IDPK 148, IDPK 149	CS 140		4	
15.0~15.4	KRUZ 150P FL50 FSLK		157	107			IDFK 150, IDFK 151, IDFK 152, IDFK 153, IDFK 154 IDPK 150, IDPK 151, IDPK 152, IDPK 153, IDPK 154	-155 SL	T7		
15.5~15.9	KRUZ 155P FL50 FSLK		161	111			IDFK 155, IDFK 156, IDFK 157, IDFK 158, IDFK 159 IDPK 155, IDPK 156, IDPK 157, IDPK 158, IDPK 159		95		
16.0~16.4	KRUZ 160P FL50 FSLK		164	114			IDFK 160, IDFK 161, IDFK 162, IDFK 163, IDFK 164 IDPK 160, IDPK 161, IDPK 162, IDPK 163, IDPK 164		Torque 0.9Nm		
16.5~16.9	KRUZ 165P FL50 FSLK		168	118			IDFK 165, IDFK 166, IDFK 167, IDFK 168, IDFK 169 IDPK 165, IDPK 166, IDPK 167, IDPK 168, IDPK 169	CS 160	(Max)		
17.0~17.4	KRUZ 170P FL50 FSLK		171	121			IDFK 170, IDFK 171, IDFK 172, IDFK 173, IDFK 174 IDPK 170, IDPK 171, IDPK 172, IDPK 173, IDPK 174	-175 SL		M2.5x4	1.3mm
17.5~17.9	KRUZ 175P FL50 FSLK	20	174	124		27	IDFK 175, IDFK 176, IDFK 177, IDFK 178, IDFK 179 IDPK 175, IDPK 176, IDPK 177, IDPK 178, IDPK 179				
18.0~18.4	KRUZ 180P FL50 FSLK		178	128			IDFK 180, IDFK 181, IDFK 182, IDFK 183, IDFK 184 IDPK 180, IDPK 181, IDPK 182, IDPK 183, IDPK 184				
18.5~18.9	KRUZ 185P FL50 FSLK		181	131			IDFK 185, IDFK 186, IDFK 187, IDFK 188, IDFK 189 IDPK 185, IDPK 186, IDPK 187, IDPK 188, IDPK 189	CS 180			
19.0~19.4	KRUZ 190P FL50 FSLK		185	135			IDFK 190, IDFK 191, IDFK 192, IDFK 193, IDFK 194 IDPK 190, IDPK 191, IDPK 192, IDPK 193, IDPK 194	-195 SL			
19.5~19.9	KRUZ 195P FL50 FSLK		188	138			IDFK 195, IDFK 196, IDFK 197, IDFK 198, IDFK 199 IDPK 195, IDPK 196, IDPK 197, IDPK 198, IDPK 199				
20.0~20.4	KRUZ 200P FL50 FSLK		197	141			IDFK 200, IDFK 201, IDFK 202, IDFK 203, IDFK 204 IDPK 200, IDPK 201, IDPK 202, IDPK 203, IDPK 204		T8		
20.5~20.9	KRUZ 205P FL50 FSLK		201	145			IDFK 205, IDFK 206, IDFK 207, IDFK 208, IDFK 209 IDPK 205, IDPK 206, IDPK 207, IDPK 208, IDPK 209	CS 200	24		
21.0~21.4	KRUZ 210P FL50 FSLK		204	148		32	IDFK 210, IDFK 211, IDFK 212, IDFK 213, IDFK 214 IDPK 210, IDPK 211, IDPK 212, IDPK 213, IDPK 214	-215 SL	Torque 1.5Nm		
21.5~21.9	KRUZ 215P FL50 FSLK	25	208	152			IDFK 215, IDFK 216, IDFK 217, IDFK 218, IDFK 219 IDPK 215, IDPK 216, IDPK 217, IDPK 218, IDPK 219		(Max)		
22.0~22.4	KRUZ 220P FL50 FSLK	25	211	155	50	32	IDFK 220, IDFK 221, IDFK 222, IDFK 223, IDFK 224 IDPK 220, IDPK 221, IDPK 222, IDPK 223, IDPK 224				
22.5~22.9	KRUZ 225P FL50 FSLK		214	158			IDFK 225, IDFK 226, IDFK 227, IDFK 228, IDFK 229 IDPK 225, IDPK 226, IDPK 227, IDPK 228, IDPK 229	CS 220			
23.0~23.4	KRUZ 230P FL50 FSLK		218	162			IDFK 230, IDFK 231, IDFK 232, IDFK 233, IDFK 234 IDPK 230, IDPK 231, IDPK 232, IDPK 233, IDPK 234	-235 SL		.42.6	1 5
23.5~23.9	KRUZ 235P FL50 FSLK		221	165			IDFK 235, IDFK 236, IDFK 237, IDFK 238, IDFK 239 IDPK 235, IDPK 236, IDPK 237, IDPK 238, IDPK 239			M3x6	1.5mm
24.0~24.4	KRUZ 240P FL50 FSLK		229	169			IDFK 240, IDFK 241, IDFK 242, IDFK 243, IDFK 244 IDPK 240, IDPK 241, IDPK 242, IDPK 243, IDPK 244				
24.5~24.9	KRUZ 245P FL50 FSLK		232	172			IDFK 245, IDFK 246, IDFK 247, IDFK 248, IDFK 249 IDPK 245, IDPK 246, IDPK 247, IDPK 248, IDPK 249	CS 240			
25.0~25.4	KRUZ 250P FL50 FSLK		235	175			IDFK 250, IDFK 251, IDFK 252, IDFK 253, IDFK 254 IDPK 250, IDPK 251, IDPK 252, IDPK 253, IDPK 254	-255 SL			
25.5~25.9	KRUZ 255P FL50 FSLK		239	179			IDFK 255, IDFK 256, IDFK 257, IDFK 258, IDFK 259 IDPK 255, IDPK 256, IDPK 257, IDPK 258, IDPK 259				
26.0~26.4	KRUZ 260P FL50 FSLK		242	182			IDFK 260, IDFK 261, IDFK 262, IDFK 263, IDFK 264 IDPK 260, IDPK 261, IDPK 262, IDPK 263, IDPK 264		T15		
26.5~26.9	KRUZ 265P FL50 FSLK	22	246	186		20	IDFK 265, IDFK 266, IDFK 267, IDFK 268, IDFK 269 IDPK 265, IDPK 266, IDPK 267, IDPK 268, IDPK 269	CS 260	2*		
27.0~27.4	KRUZ 270P FL50 FSLK	32	32 249 189		39	IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDPK 270, IDPK 271, IDPK 272, IDPK 273, IDPK 274	-275 SL	Torque 3.5Nm			
27.5~27.9	KRUZ 275P FL50 FSLK		252	192			IDFK 275, IDFK 276, IDFK 277, IDFK 278, IDFK 279 IDPK 275, IDPK 276, IDPK 277, IDPK 278, IDPK 279		(Max)		
28.0~28.4	KRUZ 280P FL50 FSLK		256 196			IDFK 280, IDFK 281, IDFK 282, IDFK 283, IDFK 284 IDPK 280, IDPK 281, IDPK 282, IDPK 283, IDPK 284			MANO	2 0	
28.5~28.9	KRUZ 285P FL50 FSLK		259	199			IDFK 285, IDFK 286, IDFK 287, IDFK 288, IDFK 289 IDPK 285, IDPK 286, IDPK 287, IDPK 288, IDPK 289	CS 280		M4x8	2.0mm
29.0~29.4	KRUZ 290P FL50 FSLK		259 263	203			IDFK 290, IDFK 291, IDFK 292, IDFK 293, IDFK 294 IDPK 290, IDPK 291, IDPK 292, IDPK 293, IDPK 294	-295 SL			
29.5~29.9	KRUZ 295P FL50 FSLK		266	206			IDFK 295, IDFK 296, IDFK 297, IDFK 298, IDFK 299				

Exclusively designed for Structural machining

Hole (Φ) mm	Body Code	Shank (Фd)	Di L1	mensi L2	on L3	Flanged dia.(ΦFd)	Insert IDFK IDFK INSERT IDPK	Cap Screw	Torx driver	Set Screw	L-wrench
30.0~30.4	KRUZ 300P FL70 FSLK		269	209			IDFK 300, IDFK 301, IDFK 302, IDFK 303, IDFK 304 IDPK 300, IDPK 301, IDPK 302, IDPK 303, IDPK 304			N.44.:0	20
30.5~30.9	KRUZ 305P FL70 FSLK		273	213			IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDPK 305, IDPK 306, IDPK 307, IDPK 308, IDPK 309	CS 300		M4x8	2.0mm
31.0~31.4	KRUZ 310P FL70 FSLK		276	216			IDFK 310, IDFK 311, IDFK 312, IDFK 313, IDFK 314 IDPK 310, IDPK 311, IDPK 312, IDPK 313, IDPK 314	-315 SL			
31.5~31.9	KRUZ 315P FL70 FSLK		280	220			IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319 IDPK 315, IDPK 316, IDPK 317, IDPK 318, IDPK 319				
32.0~32.4	KRUZ 320P FL70 FSLK	32	283	223	70	39	IDFK 320, IDFK 321, IDFK 322, IDFK 323, IDFK 324 IDPK 320, IDPK 321, IDPK 322, IDPK 323, IDPK 324				
32.5~32.9	KRUZ 325P FL70 FSLK		286	226			IDFK 325, IDFK 326, IDFK 327, IDFK 328, IDFK 329 IDPK 325, IDPK 326, IDPK 327, IDPK 328, IDPK 329				
33.0~33.4	KRUZ 330P FL70 FSLK		290	230			IDFK 330, IDFK 331, IDFK 332, IDFK 333, IDFK 334 IDPK 330, IDPK 331, IDPK 332, IDPK 333, IDPK 334				
33.5~33.9	KRUZ 335P FL70 FSLK		293	233			IDFK 335, IDFK 336, IDFK 337, IDFK 338, IDFK 339 IDPK 335, IDPK 336, IDPK 337, IDPK 338, IDPK 339	CS 320			
34.0~34.4	KRUZ 340P FL80 FSLK		307	237			IDFK 340, IDFK 341, IDFK 342, IDFK 343, IDFK 344 IDPK 340, IDPK 341, IDPK 342, IDPK 343, IDPK 344	-355 SL			
34.5~34.9	KRUZ 345P FL80 FSLK		310	240			IDFK 345, IDFK 346, IDFK 347, IDFK 348, IDFK 349 IDPK 345, IDPK 346, IDPK 347, IDPK 348, IDPK 349				
35.0~35.4	KRUZ 350P FL80 FSLK		313	243			IDFK 350, IDFK 351, IDFK 352, IDFK 353, IDFK 354 IDPK 350, IDPK 351, IDPK 352, IDPK 353, IDPK 354				
35.5~35.9	KRUZ 355P FL80 FSLK		317	247			IDFK 355, IDFK 356, IDFK 357, IDFK 358, IDFK 359 IDPK 355, IDPK 356, IDPK 357, IDPK 358, IDPK 359			M5x10	2.5mm
36.0~36.4	KRUZ 360P FL80 FSLK		320	250			IDFK 360, IDFK 361, IDFK 362, IDFK 363, IDFK 364 IDPK 360, IDPK 361, IDPK 362, IDPK 363, IDPK 364				
36.5~36.9	KRUZ 365P FL80 FSLK		324	254			IDFK 365, IDFK 366, IDFK 367, IDFK 368, IDFK 369 IDPK 365, IDPK 366, IDPK 367, IDPK 368, IDPK 369				
37.0~37.4	KRUZ 370P FL80 FSLK		327	257			IDFK 370, IDFK 371, IDFK 372, IDFK 373, IDFK 374 IDPK 370, IDPK 371, IDPK 372, IDPK 373, IDPK 374	-			
37.5~37.9	KRUZ 375P FL80 FSLK		330	260			IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379 IDPK 375, IDPK 376, IDPK 377, IDPK 378, IDPK 379	CS 360			
38.0~38.4	KRUZ 380P FL80 FSLK		334	264			IDFK 380, IDFK 381, IDFK 382, IDFK 383, IDFK 384 IDPK 380, IDPK 381, IDPK 382, IDPK 383, IDPK 384	-395 SL			
38.5~38.9	KRUZ 385P FL80 FSLK		337	267			IDFK 385, IDFK 386, IDFK 387, IDFK 388, IDFK 389 IDPK 385, IDPK 386, IDPK 387, IDPK 388, IDPK 389	-			
39.0~39.4	KRUZ 390P FL80 FSLK		341	271			IDFK 390, IDFK 391, IDFK 392, IDFK 393, IDFK 394 IDPK 390, IDPK 391, IDPK 392, IDPK 393, IDPK 394	-			
39.5~39.9	KRUZ 395P FL80 FSLK		344	274			IDFK 395, IDFK 396, IDFK 397, IDFK 398, IDFK 399 IDPK 395, IDPK 396, IDPK 397, IDPK 398, IDPK 399	-	T20		
40.0~40.4	KRUZ 400P FL80 FSLK		347	277			IDFK 400, IDFK 401, IDFK 402, IDFK 403, IDFK 404 IDPK 400, IDPK 401, IDPK 402, IDPK 403, IDPK 404		Torque		
40.5~40.9	KRUZ 405P FL80 FSLK		351	281			IDFK 405, IDFK 406, IDFK 407, IDFK 408, IDFK 409 IDPK 405, IDPK 406, IDPK 407, IDPK 408, IDPK 409		4.0Nm (Max)		
41.0~41.4	KRUZ 410P FL80 FSLK		354	284	80		IDFK 410, IDFK 411, IDFK 412, IDFK 413, IDFK 414 IDPK 410, IDPK 411, IDPK 412, IDPK 413, IDPK 414				
41.5~41.9	KRUZ 415P FL80 FSLK		358	288			IDFK 415, IDFK 416, IDFK 417, IDFK 418, IDFK 419 IDPK 415, IDPK 416, IDPK 417, IDPK 418, IDPK 419				
42.0~42.4	KRUZ 420P FL80 FSLK	40	361	291		54	IDFK 420, IDFK 421, IDFK 422, IDFK 423, IDFK 424 IDPK 420, IDPK 421, IDPK 422, IDPK 423, IDPK 424	CS 400			
42.5~42.9	KRUZ 425P FL80 FSLK		364	294			IDFK 425, IDFK 426, IDFK 427, IDFK 428, IDFK 429 IDPK 425, IDPK 426, IDPK 427, IDPK 428, IDPK 429	-445 SL			
43.0~43.4	KRUZ 430P FL80 FSLK		368	298			IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434 IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434				
43.5~43.9	KRUZ 435P FL80 FSLK		371	301			IDFK 435, IDFK 436, IDFK 437, IDFK 438, IDFK 439 IDFK 435, IDFK 436, IDFK 437, IDFK 438, IDFK 439 IDPK 435, IDPK 436, IDPK 437, IDPK 438, IDPK 439	-			
44.0~44.4	KRUZ 440P FL80 FSLK		375	305			IDFK 440, IDFK 441, IDFK 442, IDFK 443, IDFK 444 IDPK 440, IDFK 441, IDFK 442, IDFK 443, IDFK 444				
44.5~44.9	KRUZ 445P FL80 FSLK		378	308			IDFK 445, IDFK 446, IDFK 447, IDFK 448, IDFK 449 IDPK 445, IDPK 446, IDPK 447, IDPK 448, IDPK 449	-			
45.0~45.4	KRUZ 450P FL80 FSLK		381	311			IDFK 450, IDFK 451, IDFK 452, IDFK 453, IDFK 454 IDPK 450, IDPK 451, IDPK 452, IDPK 453, IDPK 454			M6x12	3.0mm
45.5~45.9	KRUZ 455P FL80 FSLK		385	315			IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459 IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459				
46.0~46.4	KRUZ 460P FL80 FSLK		388	318			IDFK 460, IDFK 461, IDFK 462, IDFK 463, IDFK 464 IDPK 460, IDFK 461, IDFK 462, IDPK 463, IDFK 464				
46.5~46.9	KRUZ 465P FL80 FSLK		392	322			IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469 IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469 IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469				
47.0~47.4	KRUZ 470P FL80 FSLK		395	325			IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474				
47.5~47.9	KRUZ 475P FL80 FSLK		398	328			IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479	CS 450 -500 SL			
48.0~48.4	KRUZ 480P FL90 FSLK		402	332			IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484	-200 2F			
48.5~48.9	KRUZ 485P FL90 FSLK		405	335			IDPK 480, IDPK 481, IDPK 482, IDPK 483, IDPK 484 IDFK 485, IDFK 486, IDFK 487, IDFK 488, IDFK 489 IDPK 485, IDPK 486, IDPK 487, IDPK 488, IDPK 489	-			
49.0~49.4	KRUZ 490P FL90 FSLK		409	339	90		IDFK 485, IDFK 486, IDFK 487, IDFK 488, IDFK 489 IDFK 490, IDFK 491, IDFK 492, IDFK 493, IDFK 494				
49.5~49.9	KRUZ 495P FL90 FSLK		412	342			IDPK 490, IDPK 491, IDPK 492, IDPK 493, IDPK 494 IDFK 495, IDFK 496, IDFK 497, IDFK 498, IDFK 499	-			
50.0~50.4			415	345			IDPK 495, IDPK 496, IDPK 497, IDPK 498, IDPK 499 IDFK 500, IDFK 501, IDFK 502, IDFK 503, IDFK 504 IDPK 500, IDPK 501, IDPK 502, IDPK 503, IDPK 504				

Size not shown on above is available upon request.

Indexable, Coolant Drill Series

KRUZ-FSLK Flanged body(7xD), IDFK & IDPK insert



for beam, angle, single plate

- ▶ Drilling closer to flange part
- ▶ Minimized flute design with longer cylindrical neck
- ▶ Increased drill's rigidity than ordinary 7xDia drill length

▶ When requires longer drill length, select this ideal drill body

- ▶ Internal coolant fed design
- ▶ Flanged shank to reduce chattering or vibrating



Ho l e (Ф)	Body Code	Shank		mensi		Flanged	Insert IDFK Insert IDPK	Cap Screw	Torx driver	Set Screw	L-wrench
mm	200, 2000	(Фd)	L1	L2	L3	dia.(ΦFd)	IDFK IDPK		7	0	
14.0~14.4	KRUZ 140H FL50 FSLK	16	175	127		21	IDFK 140, IDFK 141, IDFK 142, IDFK 143, IDFK 144 IDPK 140, IDPK 141, IDPK 142, IDPK 143, IDPK 144				
4.5~14.9	KRUZ 145H FL50 FSLK		181	131			IDFK 145, IDFK 146, IDFK 147, IDFK 148, IDFK 149 IDPK 145, IDPK 146, IDPK 147, IDPK 148, IDPK 149	CS 140			
5.0~15.4	KRUZ 150H FL50 FSLK		187	137			IDFK 150, IDFK 151, IDFK 152, IDFK 153, IDFK 154 IDPK 150, IDPK 151, IDPK 152, IDPK 153, IDPK 154	-155 SL	Т7		
5.5~15.9	KRUZ 155H FL50 FSLK		192	142			IDFK 155, IDFK 156, IDFK 157, IDFK 158, IDFK 159 IDPK 155, IDPK 156, IDPK 157, IDPK 158, IDPK 159		Torque		
16.0~16.4	KRUZ 160H FL50 FSLK		196	146			IDFK 160, IDFK 161, IDFK 162, IDFK 163, IDFK 164 IDPK 160, IDPK 161, IDPK 162, IDPK 163, IDPK 164		0.9Nm	1	
6.5~16.9	KRUZ 165H FL50 FSLK		201	151			IDFK 165, IDFK 166, IDFK 167, IDFK 168, IDFK 169 IDPK 165, IDPK 166, IDPK 167, IDPK 168, IDPK 169	CS 160	(Max)	M2.5x4	1.3mm
17.0~17.4	KRUZ 170H FL50 FSLK	20	205	155		27	IDFK 170, IDFK 171, IDFK 172, IDFK 173, IDFK 174 IDPK 170, IDPK 171, IDPK 172, IDPK 173, IDPK 174	-175 SL		1012.384	1
7.5~17.9	KRUZ 175H FL50 FSLK		209	159		21	IDFK 175, IDFK 176, IDFK 177, IDFK 178, IDFK 179 IDPK 175, IDPK 176, IDPK 177, IDPK 178, IDPK 179				
8.0~18.4	KRUZ 180H FL50 FSLK		214	164			IDFK 180, IDFK 181, IDFK 182, IDFK 183, IDFK 184 IDPK 180, IDPK 181, IDPK 182, IDPK 183, IDPK 184				
8.5~18.9	KRUZ 185H FL50 FSLK		218	168			IDFK 185, IDFK 186, IDFK 187, IDFK 188, IDFK 189 IDPK 185, IDPK 186, IDPK 187, IDPK 188, IDPK 189	CS 180			
9.0~19.4	KRUZ 190H FL50 FSLK		223	173			IDFK 190, IDFK 191, IDFK 192, IDFK 193, IDFK 194 IDPK 190, IDPK 191, IDPK 192, IDPK 193, IDPK 194	-195 SL			
9.5~19.9	KRUZ 195H FL50 FSLK		227	177			IDFK 195, IDFK 196, IDFK 197, IDFK 198, IDFK 199 IDPK 195, IDPK 196, IDPK 197, IDPK 198, IDPK 199				
0.0~20.4	KRUZ 200H FL50 FSLK		237	181	4		IDFK 200, IDFK 201, IDFK 202, IDFK 203, IDFK 204 IDPK 200, IDPK 201, IDPK 202, IDPK 203, IDPK 204		T8		
0.5~20.9	KRUZ 205H FL50 FSLK		242	186			IDFK 205, IDFK 206, IDFK 207, IDFK 208, IDFK 209 IDPK 205, IDPK 206, IDPK 207, IDPK 208, IDPK 209	CS 200	Torque		
1.0~21.4	KRUZ 210H FL50 FSLK	-	246	190			IDFK 210, IDFK 211, IDFK 212, IDFK 213, IDFK 214 IDPK 210, IDPK 211, IDPK 212, IDPK 213, IDPK 214	-215 SL	1.5Nm		
1.5~21.9	KRUZ 215H FL50 FSLK		251	195	50	32	IDFK 215, IDFK 216, IDFK 217, IDFK 218, IDFK 219 IDPK 215, IDPK 216, IDPK 217, IDPK 218, IDPK 219		(Max)		
2.0~22.4	KRUZ 220H FL50 FSLK		255	199	30	32	IDFK 220, IDFK 221, IDFK 222, IDFK 223, IDFK 224 IDPK 220, IDPK 221, IDPK 222, IDPK 223, IDPK 224				
2.5~22.9	KRUZ 225H FL50 FSLK		259	203			IDFK 225, IDFK 226, IDFK 227, IDFK 228, IDFK 229 IDPK 225, IDPK 226, IDPK 227, IDPK 228, IDPK 229	CS 220			
3.0~23.4	KRUZ 230H FL50 FSLK		264	208			IDFK 230, IDFK 231, IDFK 232, IDFK 233, IDFK 234 IDPK 230, IDPK 231, IDPK 232, IDPK 233, IDPK 234	-235 SL		M3x6	1.5mn
23.5~23.9	KRUZ 235H FL50 FSLK		268	212			IDFK 235, IDFK 236, IDFK 237, IDFK 238, IDFK 239 IDPK 235, IDPK 236, IDPK 237, IDPK 238, IDPK 239			IVISXO	1.311111
24.0~24.4	KRUZ 240H FL50 FSLK		277	217			IDFK 240, IDFK 241, IDFK 242, IDFK 243, IDFK 244 IDPK 240, IDPK 241, IDPK 242, IDPK 243, IDPK 244				
24.5~24.9	KRUZ 245H FL50 FSLK		281	221			IDFK 245, IDFK 246, IDFK 247, IDFK 248, IDFK 249 IDPK 245, IDPK 246, IDPK 247, IDPK 248, IDPK 249	CS 240			
25.0~25.4	KRUZ 250H FL50 FSLK		285	225			IDFK 250, IDFK 251, IDFK 252, IDFK 253, IDFK 254 IDPK 250, IDPK 251, IDPK 252, IDPK 253, IDPK 254	-255 SL			
25.5~25.9	KRUZ 255H FL50 FSLK		290	230			IDFK 255, IDFK 256, IDFK 257, IDFK 258, IDFK 259 IDPK 255, IDPK 256, IDPK 257, IDPK 258, IDPK 259				
6.0~26.4	KRUZ 260H FL50 FSLK		294	234			IDFK 260, IDFK 261, IDFK 262, IDFK 263, IDFK 264 IDPK 260, IDPK 261, IDPK 262, IDPK 263, IDPK 264		T15		
6.5~26.9	KRUZ 265H FL50 FSLK	1	299	239		30	IDFK 265, IDFK 266, IDFK 267, IDFK 268, IDFK 269 IDPK 265, IDPK 266, IDPK 267, IDPK 268, IDPK 269	CS 260	200		
7.0~27.4	KRUZ 270H FL50 FSLK	32	303	243		39	IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDPK 270, IDPK 271, IDPK 272, IDPK 273, IDPK 274	-275 SL	Torque 3.5Nm		
7.5~27.9	KRUZ 275H FL50 FSLK		307	247			IDFK 275, IDFK 276, IDFK 277, IDFK 278, IDFK 279 IDPK 275, IDPK 276, IDPK 277, IDPK 278, IDPK 279		(Max)	\	
8.0~28.4	KRUZ 280H FL50 FSLK		312	252			IDFK 280, IDFK 281, IDFK 282, IDFK 283, IDFK 284 IDPK 280, IDPK 281, IDPK 282, IDPK 283, IDPK 284			N44.0	20:
8.5~28.9	KRUZ 285H FL50 FSLK		316	256	4		IDFK 285, IDFK 286, IDFK 287, IDFK 288, IDFK 289 IDPK 285, IDPK 286, IDPK 287, IDPK 288, IDPK 289	CS 280		M4x8	2.0mr
29.0~29.4	KRUZ 290H FL50 FSLK		316 256	261			IDFK 290, IDFK 291, IDFK 292, IDFK 293, IDFK 294 IDPK 290, IDPK 291, IDPK 292, IDPK 293, IDPK 294	-295 SL			
9.5~29.9	KRUZ 295H FL50 FSLK				IDFK 295, IDFK 296, IDFK 297, IDFK 298, IDFK 299						

Exclusively designed	d for	Structural	machining
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Hole (Φ)	Shar	k D	imensi	ion	Flanged	Insert IDFK Insert IDPK	Cap Screw	Torx	Set Screw	L-wrench										
mm Body Cod	ie (Φd) L1	L2	L3	dia.(ΦFd)	IDFK IDPK		driver	Screw											
30.0~30.4 KRUZ 300H FL7	O FSLK	329	269			IDFK 300, IDFK 301, IDFK 302, IDFK 303, IDFK 304 IDPK 300, IDPK 301, IDPK 302, IDPK 303, IDPK 304			M4x8	2.0mm										
30.5~30.9 KRUZ 305H FL7	O FSLK	334	274			IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDPK 305, IDPK 306, IDPK 307, IDPK 308, IDPK 309	CS 300		IVI-XO	2.011111										
31.0~31.4 KRUZ 310H FL7	O FSLK	338	278			IDFK 310, IDFK 311, IDFK 312, IDFK 313, IDFK 314 IDPK 310, IDPK 311, IDPK 312, IDPK 313, IDPK 314	-315 SL													
31.5~31.9 KRUZ 315H FL7	<mark>O FSLK</mark>	343	283	70	39	IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319 IDPK 315, IDPK 316, IDPK 317, IDPK 318, IDPK 319														
32.0~32.4 KRUZ 320H FL7		347	287] /0	39	IDFK 320, IDFK 321, IDFK 322, IDFK 323, IDFK 324 IDPK 320, IDPK 321, IDPK 322, IDPK 323, IDPK 324			7											
32.5~32.9 KRUZ 325H FL7	O FSLK	351	291			IDFK 325, IDFK 326, IDFK 327, IDFK 328, IDFK 329 IDPK 325, IDPK 326, IDPK 327, IDPK 328, IDPK 329														
33.0~33.4 KRUZ 330H FL7	O FSLK	356	296			IDFK 330, IDFK 331, IDFK 332, IDFK 333, IDFK 334 IDPK 330, IDPK 331, IDPK 332, IDPK 333, IDPK 334														
33.5~33.9 KRUZ 335H FL7	O FSLK	360	300			IDFK 335, IDFK 336, IDFK 337, IDFK 338, IDFK 339 IDPK 335, IDPK 336, IDPK 337, IDPK 338, IDPK 339	CS 320		//											
34.0~34.4 KRUZ 340H FL8	0 FSLK	375	305			IDFK 340, IDFK 341, IDFK 342, IDFK 343, IDFK 344 IDPK 340, IDPK 341, IDPK 342, IDPK 343, IDPK 344	-355 SL													
34.5~34.9 KRUZ 345H FL8	0 FSLK	379	309			IDFK 345, IDFK 346, IDFK 347, IDFK 348, IDFK 349 IDPK 345, IDPK 346, IDPK 347, IDPK 348, IDPK 349														
35.0~35.4 KRUZ 350H FL8	0 FSLK	383	313			IDFK 350, IDFK 351, IDFK 352, IDFK 353, IDFK 354 IDPK 350, IDPK 351, IDPK 352, IDPK 353, IDPK 354														
35.5~35.9 KRUZ 355H FL8	0 FSLK	388	318			IDFK 355, IDFK 356, IDFK 357, IDFK 358, IDFK 359 IDPK 355, IDPK 356, IDPK 357, IDPK 358, IDPK 359			M5x10	2.5mm										
36.0~36.4 KRUZ 360H FL8	0 FSLK	392	322			IDFK 360, IDFK 361, IDFK 362, IDFK 363, IDFK 364 IDPK 360, IDPK 361, IDPK 362, IDPK 363, IDPK 364														
36.5~36.9 KRUZ 365H FL8	0 FSLK	397	327			IDFK 365, IDFK 366, IDFK 367, IDFK 368, IDFK 369 IDPK 365, IDFK 366, IDPK 367, IDPK 368, IDPK 369	-													
37.0~37.4 KRUZ 370H FL8	0 FSLK	401	331			IDFK 370, IDFK 371, IDFK 372, IDFK 373, IDFK 374 IDPK 370, IDPK 371, IDPK 372, IDPK 373, IDPK 374	-													
37.5~37.9 KRUZ 375H FL8	0 FSLK	405	335			IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379	CS 360													
38.0~38.4 KRUZ 380H FL8	0 FSLK	410	340	1		IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379 IDFK 380, IDFK 381, IDFK 382, IDFK 383, IDFK 384	-395 SL													
38.5~38.9 KRUZ 385H FL8	0 FSLK	414	344	1		IDPK 380, IDPK 381, IDPK 382, IDPK 383, IDPK 384 IDFK 385, IDFK 386, IDFK 387, IDFK 388, IDFK 389	_													
39.0~39.4 KRUZ 390H FL8		419	349			IDFK 385, IDPK 386, IDPK 387, IDPK 388, IDPK 389 IDFK 390, IDFK 391, IDFK 392, IDFK 393, IDFK 394														
39.5~39.9 KRUZ 395H FL8		423	353			IDPK 390, IDPK 391, IDPK 392, IDPK 393, IDPK 394 IDFK 395, IDFK 396, IDFK 397, IDFK 398, IDFK 399		T20												
40.0~40.4 KRUZ 400H FL8		427	357			IDPK 395, IDPK 396, IDPK 397, IDPK 398, IDPK 399 IDFK 400, IDFK 401, IDFK 402, IDFK 403, IDFK 404		Torque												
40.5~40.9 KRUZ 405H FL8		432	362	-		IDFK 400, IDFK 401, IDFK 402, IDFK 403, IDFK 404 IDFK 405, IDFK 406, IDFK 407, IDFK 408, IDFK 409		4.0Nm (Max)												
41.0~41.4 KRUZ 410H FL8		436	366	80		IDFK 405, IDFK 406, IDFK 407, IDFK 408, IDFK 409 IDFK 410, IDFK 411, IDFK 412, IDFK 413, IDFK 414		(IVIaX)												
41.5~41.9 KRUZ 415H FL8		441	371	-		IDPK 410, IDPK 411, IDPK 412, IDPK 413, IDPK 414 IDFK 415, IDFK 416, IDFK 417, IDFK 418, IDFK 419														
42.0~42.4 KRUZ 420H FL8		1	375		54	IDPK 415, IDPK 416, IDPK 417, IDPK 418, IDPK 419 IDFK 420, IDFK 421, IDFK 422, IDFK 423, IDFK 424														
42.5~42.9 KRUZ 425H FL8		449	379			IDPK 420, IDPK 421, IDPK 422, IDPK 423, IDPK 424 IDFK 425, IDFK 426, IDFK 427, IDFK 428, IDFK 429	-445 SL													
43.0~43.4 KRUZ 430H FL8		454	384	1		IDPK 425, IDPK 426, IDPK 427, IDPK 428, IDPK 429 IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434														
		458	388		-	-	-	-	-	_						IDPK 430, IDPK 431, IDPK 432, IDPK 433, IDPK 434 IDFK 435, IDFK 436, IDFK 437, IDFK 438, IDFK 439				
43.5~43.9 KRUZ 435H FL8			-								IDPK 435, IDPK 436, IDPK 437, IDPK 438, IDPK 439 IDFK 440, IDFK 441, IDFK 442, IDFK 443, IDFK 444	435, IDPK 436, IDPK 437, IDPK 438, IDPK 439								
44.0~44.4 KRUZ 440H FL8		463	393	-		IDPK 440, IDPK 441, IDPK 442, IDPK 443, IDPK 444 IDFK 445, IDFK 446, IDFK 447, IDFK 448, IDFK 449	_													
44.5~44.9 KRUZ 445H FL8		467	397	-		IDPK 445, IDPK 446, IDPK 447, IDPK 448, IDPK 449 IDFK 450, IDFK 451, IDFK 452, IDFK 453, IDFK 454			NEW12	2 000000										
45.0~45.4 KRUZ 450H FL8		471	401	-		IDPK 450, IDPK 451, IDPK 452, IDPK 453, IDPK 454 IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459			M6x12	3.0mm										
45.5~45.9 KRUZ 455H FL8		476	406			IDPK 455, IDPK 456, IDPK 457, IDPK 458, IDPK 459 IDFK 460, IDFK 461, IDFK 462, IDFK 463, IDFK 464														
46.0~46.4 KRUZ 460H FL8		480	410			IDFK 460, IDFK 461, IDFK 462, IDFK 463, IDFK 464 IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469														
46.5~46.9 KRUZ 465H FL8		485	415	-		IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469 IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474														
47.0~47.4 KRUZ 470H FL8		489	419	1		IDFK 475, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479	CS 450													
47.5~47.9 KRUZ 475H FL8	0 FSLK	493	423			IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484	-500 SL													
48.0~48.4 KRUZ 480H FL9	0 FSLK	498	428			IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484 IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484 IDFK 485, IDFK 486, IDFK 487, IDFK 488, IDFK 489	-													
48.5~48.9 KRUZ 485H FL9	0 FSLK	502	432			IDPK 485, IDPK 486, IDPK 487, IDPK 488, IDPK 489														
49.0~49.4 KRUZ 490H FL9	0 FSLK	507	437	90		IDFK 490, IDFK 491, IDFK 492, IDFK 493, IDFK 494 IDPK 490, IDPK 491, IDPK 492, IDPK 493, IDPK 494														
49.5~49.9 KRUZ 495H FL9	0 FSLK	511	441			IDFK 495, IDFK 496, IDFK 497, IDFK 498, IDFK 499 IDPK 495, IDPK 496, IDPK 497, IDPK 498, IDPK 499														
50.0~50.4 KRUZ 500H FL9	0 FSLK	515	445			IDFK 500, IDFK 501, IDFK 502, IDFK 503, IDFK 504 IDPK 500, IDPK 501, IDPK 502, IDPK 503, IDPK 504														

Size not shown on above is available upon request.

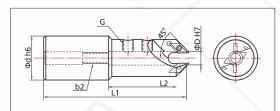
31 <u>Yes</u>

Indexable, Coolant Drill Series

Drilling & Milling tool



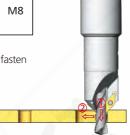




- ▶ Interchangeable carbide drillmill & XCGX insert mounted in the holder
- ▶ Specially designed carbide drillmill(TiAIN) with milling functioned flute
- ▶ Carbide chamfer insert XCGX 1102 with two corner edges
- ▶ Rigid heat-treated tool steel holder with side locking system
- ▶ Drilling, milling and chamfering in one tool economically
- ▶ Added chamfer milling for hole edge

CODE No.	D(mm)	d(mm)	L1	L2	G
DMH 32-8	8				
DMH 32-10	10	32	110	40	M8
DMH 32-12	12				

- Other special size is available upon request.
- Note: Assemble DM drillmill firstly in DMH holder before fasten XCGX inserts.





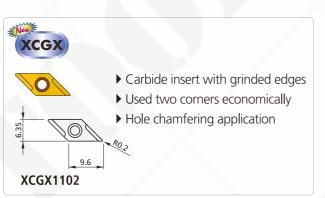




CODE No.	D(mm)	d(mm)	L1	L2	L3
DM 080 TIAIN	8.0	8.0		λ	
DM 100 TIAIN	10.0	10.0	70	30	14.6
DM 120 TiAIN	12.0	12.0			

DM drill is to use max. 14mm hole depth. If requires deeper hole, ask us separately stating necessary hole depth

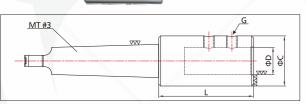
- ▶ Solid carbide material, TiAlN coated
- ▶ YESTOOL's own designed for drilling & milling
- ▶ Flatted grinding to fit two XCGX inserts
- ▶ Used in DMH holder
- ▶ TiAIN coated for longer tool life



New 3

MT shank side lock holder





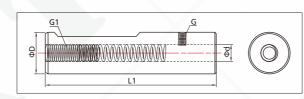
- ▶ Morse Taper shank holder to fit KRUZ body
- ▶ Side locking system by set screw to fit KRUZ straight shank body
- ▶ Alternative tool for excessively longer HSS MT shank drill
- ▶ Ideal tool in old or unstable machine or chattering work-piece

CODE No.	MT#	D(mm)	L(mm)	C(mm)	G
MT3S-SLA16-95		16	95	33	
MT3S-SLA20-70		20		37	
MT3S-SLA25-70	#3	25	70	40	M12
MT3S-SLA32-70		32		42	
MT3S-SLA40-80		40	80	52	

Scribing tool





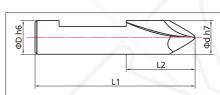


- ▶ Interchangeable carbide scribing drill mounted in the holder
- ▶ Rigid heat-treated tool steel holder
- ▶ Designed with spring system to retract drill for uneven surface.
- ▶ Extra function to use chamfer milling for hole edge

CODE No.	D(mm)	d(mm)	L1	G	G1
STH 080	20	8	83	M4x6	M8x20
STH-Spring	6		40		







In coated 90 degree drill point with dual angle for stable scribil	ng
--	----

Carbide flatted shank drill to fit in STH holderDual angle point to prevent point chipping

► Locking by side screws fastening

• Adjustable tension by threaded so

▶ Adjustable tension by threaded screw from holder end

L1	L2	
37	13	
	L1 37	L1 L2 37 13



How to assemble scribing tool

CODE No.

SD 080 TiN

A. Push <u>1 SD 080, Scribing tool</u> into tool body until hiding flatted shank completely

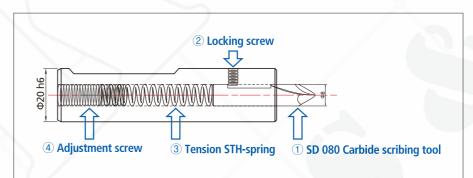
D(mm)

B. Lock 2 Locking screw completely.

C. Insert 3 Tension STH-spring inside of tool body

D. Turn <u>4</u> Adjustment screw right-hand direction and push into the holder-end.

E. Finally, loose 2 Locking screw by 45° left-hand direction(about 1/8 turn) so that spring's tension can be performed.





How to dismantle scribing tool

A. Remove <u>4</u> Adjustment screw by left-hand direction.

B. Take out <u>3 Tension STH-spring from</u> tool body.

C. Loose 2 Locking screw.

D. Take out <u>1</u> SD 080 Scribing tool from tool body.

Warning!: Be sure to locate scribing drill head lower during disassembly for safety, while tool body-end is upper position(See above photo).

ISO 45 & HSK Extension holder for Structural



- ▶ ISO 45(HSK) holder can help drilling with strong rigidity
- ▶ Internal coolant channel structure
- ▶ Side locking with two set screws
- ▶ Ideal holder to run KRUZ-SLK body & IDFK insert
- ▶ HSK holder is available upon request

Worse case	Vibration (X)	
Good case	Less Vibration (0)	

CODE No.	D	L	С	G	CODE No.	D	L	С	G	CODE No.	D	L	С	G		
ISO45(HSK)-SLA16-80		80			ISO45(HSK)-SLA20-400		400			ISO45(HSK)-SLA32-270		270				
ISO45(HSK)-SLA16-160		160			ISO45(HSK)-SLA20-450	20	450			ISO45(HSK)-SLA32-300		300				
ISO45(HSK)-SLA16-210		210			ISO45(HSK)-SLA20-500		500			ISO45(HSK)-SLA32-350	32	350	56			
ISO45(HSK)-SLA16-240		240			ISO45(HSK)-SLA25-80		80			ISO45(HSK)-SLA32-400	32	400	50			
ISO45(HSK)-SLA16-270	16	270		M10	ISO45(HSK)-SLA25-160		160			ISO45(HSK)-SLA32-450		450				
ISO45(HSK)-SLA16-300	10	300		101 10	ISO45(HSK)-SLA25-210		210			ISO45(HSK)-SLA32-500		500				
ISO45(HSK)-SLA16-350		350	56		ISO45(HSK)-SLA25-240		240		M12	ISO45(HSK)-SLA40-90		90				
ISO45(HSK)-SLA16-400		400		56		ISO45(HSK)-SLA25-270	25	270			ISO45(HSK)-SLA40-160		160		M14	
ISO45(HSK)-SLA16-450		450			50 56		ISO45(HSK)-SLA25-300	25	300	56		ISO45(HSK)-SLA40-210		210		10114
ISO45(HSK)-SLA16-500		500				ISO45(HSK)-SLA25-350		350				ISO45(HSK)-SLA40-240		240		P
ISO45(HSK)-SLA20-80		80			ISO45(HSK)-SLA25-400		400			ISO45(HSK)-SLA40-270	40	270	60			
ISO45(HSK)-SLA20-160		160			ISO45(HSK)-SLA25-450		450			ISO45(HSK)-SLA40-300	40	300	00			
ISO45(HSK)-SLA20-210		210		- 4	ISO45(HSK)-SLA25-500		500			ISO45(HSK)-SLA40-350		350				
ISO45(HSK)-SLA20-240	20	240		M12	ISO45(HSK)-SLA32-80		80			ISO45(HSK)-SLA40-400		400				
ISO45(HSK)-SLA20-270		270			ISO45(HSK)-SLA32-160	32	160		M14	ISO45(HSK)-SLA40-450		450				
ISO45(HSK)-SLA20-300		300			ISO45(HSK)-SLA32-210	52	210		10114	ISO45(HSK)-SLA40-500		500				
ISO45(HSK)-SLA20-350		350			ISO45(HSK)-SLA32-240		240			* Pull stud halt not incl	ided in	the aho	we hol	der		

ISO40 holder is available upon request.

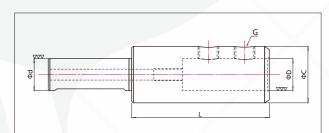
d(mm) D(mm) L(mm) C(mm) G

Extension socket





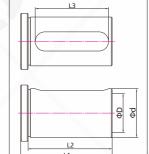
- ▶ When drill length is in short, use extension socket
- ▶ Side lock clamping
- ▶ Holding same drill shank diameter



CODE NO.	u(IIIIII)	D(IIIIII)	L(IIIIII)	C(IIIIII)	G
EXT16-SLA16-80			80		
EXT16-SLA16-125			125		
EXT16-SLA16-150	16	16	150		M10
EXT16-SLA16-200			200		
EXT16-SLA16-250			250		
EXT20-SLA20-80			80		
EXT20-SLA20-125			125		
EXT20-SLA20-150	20	20	150		
EXT20-SLA20-200			200		
EXT20-SLA20-250			250	50	M12
EXT25-SLA25-80			80	30	IVITZ
EXT25-SLA25-125			125		
EXT25-SLA25-150	25	25	150		
EXT25-SLA25-200			200		
EXT25-SLA25-250			250		
EXT32-SLA32-80			80		
EXT32-SLA32-125			125		
EXT32-SLA32-150	32	32	150		
EXT32-SLA32-200			200		
EXT32-SLA32-250			250		M14
EXT40-SLA40-80			80		10114
EXT40-SLA40-125			125		
EXT40-SLA40-150	40	40	150	60	
EXT40-SLA40-200			200		
EXT40-SLA40-250			250		







▶ RSL designed to use smaller drill shank in bigger hol	lc	k	(
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- ▶ Fitting KRUZ drill straight shank body easily
- ▶ Both Metric and Inch size available

CODE No.	d(mm)	D(mm)	L1	L2	L3		
RSL 32-16		16		59			
RSL 32-20	32	20	65		50		
RSL 32-25		25		$\searrow \lambda$			
RSL 40-32	40	32	75	69	60		
RSL 1 1/4-16		16		59	50		
RSL 1 1/4-20	1 1/4"	20	65				
RSL 1 1/4-25		25					
RSL 1 1/2-32	1 1/2"	32					

Technical tip for structural steel machining

Note that structural steel can not be clamped easily due to too big and longer work-piece shape than industrial smaller component parts.

When the drilling spindle feed down toward the structural, the part will have a tendency of bending, deformation, chattering or vibrating that is not visible.

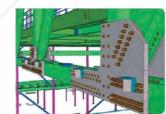
In order to achieve better drilling, we suggest you to consider following technical points.

- Don't use excessive longer length to maximize performance. Select a drill as shorter length as it is available to avoid vibrating or chattering trouble.
- Structural steel is generally less than 50mm thickness only. YESTOOL'S KRUZ-SLK drill is properly designed with stubby length enough to run majority of structural steel.
- In case running with unnecessary longer drill like HSS MT shank length, it will be badly influenced on chattering, vibrating, distorted or oversize hole trouble etc. Of course, tool life could be decreased by above reasons.
- Figure 1 If you would like to use longer drill inevitably by interruption of flange height, recommend to select KRUZ-FSLK neck extended drill body that is designed to reduce chattering or vibrating trouble than conventional drill.
- If ISO holder and KRUZ-SLK drill length is insufficient, use Extension socket that can be compensated for shorter length.
- Freduction sleeve also helpes to run current holder without new holder change. This sleeve can be used for reducing shank diameter if inner holder size is bigger than drill shank.
- The cutting parameter table is shown for recommendation only. Machine operator should find certain optimum value where runs smoothly without vibrating.
- Plate machining is to apply with different insert. (See the photos on right.)

Stacked plate (special IDPK insert recommended)

Single plate (IDFK recommended)

If you are seeking more information, please feel free to contact your local YESTOOL distributor or yestool@yestool.co.kr











Indexable, Coolant Drill Series

Cutting Parameter table (for structural steel)

KRUZ SLK body + Carbide IDFK insert

	Di	ri ll Dia		Feed rate		Surfac	e speed	Forward s	peed/min.	Power	Thrust	6. 1.30	T 100	
Step	Metric	Inch	RPM		IPR(inch/rev.)		SFM(feet/min.)		IPM(inch)	(KW)	(KGF)	Stability	Tool life	Spee
	14.0	9/16"	760	0.20	0.008	33	110	152	6.0	1.7	331			—
	16.0	41/64"	740	0.21	0.008	37	122	155	6.1	2.2	387	stable	longer	slow
	17.5	45/64"	720	0.22	0.009	40	130	158	6.3	2.6	434	1	†	1
	18.0	23/32"	700	0.22	0.009	40	130	154	6.1	2.6	445			:
	21.5 22.0	55/64" 7/8"	620 600	0.24	0.009	42 41	137 136	149 144	5.8 5.6	3.3 3.3	556 568	- 1	1	1
tep 1	24.0	15/16"	570	0.24	0.009	43	141	148	5.8	3.9	648			
rep i	24.5	31/32"	550	0.26	0.010	42	139	143	5.6	3.9	661	1 :	;	1
	26.0	1-1/32"	520	0.28	0.011	42	139	146	5.7	4.2	732] :		:
	26.5	1-3/64"	510	0.28	0.011	42	139	143	5.6	4.3	745] ;		;
	27.0	1-1/16"	500	0.28	0.011	42	139	140	5.5	4.3	758	!	!	!
	30.0	1-3/16"	400	0.29	0.011	38 38	124	116	4.6	4.1	856	- :		;
	40.0 14.0	1-37/64" 9/16"	300 970	0.29	0.011	43	124 140	87 204	3.4 8.1	5.0 2.3	1126 341			
	16.0	41/64"	950	0.21	0.009	48	157	209	8.3	3.0	398			
	17.5	45/64"	930	0.24	0.009	51	168	223	8.7	3.7	457		DEK 200	
	18.0	23/32"	900	0.24	0.009	51	167	216	8.5	3.8	470	1 ! !		
	21.5	55/64"	800	0.26	0.010	54	177	208	8.2	4.8	584		i	///
	22.0	7/8"	780	0.26	0.010	54	177	203	8.0	4.9	597		F 10K20	WI.
tep 2	24.0	15/16"	710	0.28	0.011	54	175	199	7.8	5.3	678			
	24.5 26.0	31/32" 1-1/32"	690 640	0.28	0.011	53 52	174 171	193 192	7.6 7.6	5.4 5.7	692 763			
	26.5	1-1/32	630	0.30	0.012	52	171	189	7.6	5.8	777			
	27.0	1-1/16"	610	0.30	0.012	52	170	183	7.2	5.8	791			
	30.0	1-3/16"	500	0.30	0.012	47	154	150	5.9	5.5	874			
	40.0	1-37/64"	350	0.31	0.012	44	144	109	4.3	6.3	1172			
	14.0	9/16"	1,180	0.22	0.009	52	170	260	10.3	3.1	351			
	16.0	41/64"	1,160	0.23	0.009	58	191	267	10.6	4.0	409			1
	17.5 18.0	45/64" 23/32"	1,140 1,100	0.26 0.26	0.010 0.010	63 62	205 204	296 286	11.6 11.2	5.0 5.1	480 493	- :		
	21.5	55/64"	980	0.28	0.010	66	217	274	10.8	6.5	611	-		
	22.0	7/8"	960	0.28	0.011	66	218	269	10.6	6.6	624			
tep 3	24.0	15/16"	850	0.30	0.012	64	210	255	10.0	7.0	707		i	
	24.5	31/32"	830	0.30	0.012	64	209	249	9.8	7.1	721			:
	26.0	1-1/32"	760	0.32	0.013	62	204	243	9.6	7.4	794			;
	26.5	1-3/64"	750	0.32	0.013	62	205	240	9.5	7.5	808			
	27.0 30.0	1-1/16" 1-3/16"	720 600	0.32 0.32	0.013	61 57	200 185	230 192	9.1 7.6	7.4 7.2	823 909	-		
	40.0	1-37/64"	400	0.32	0.013	50	165	128	5.0	7.6	1195		!	!
	14.0	9/16"	1,330	0.23	0.009	58	192	306	12.1	3.7	360			;
	16.0	41/64"	1,310	0.24	0.009	66	216	314	12.3	4.8	420			
	17.5	45/64"	1,290	0.28	0.011	71	233	361	14.2	6.2	502			
	18.0	23/32"	1,240	0.28	0.011	70	230	347	13.6	6.2	516	. /	A CONTRACTOR OF THE PARTY OF TH	
	21.5	55/64"	1,100	0.30	0.012	74	244	330	13.0	7.8	637	/ 1		
tep 4	22.0 24.0	7/8" 15/16"	1,080 930	0.30 0.32	0.012 0.013	75 70	245 230	324 298	12.7 11.7	8.0 8.2	651 736			
тер ч	24.5	31/32"	910	0.32	0.013	70	230	291	11.5	8.3	750	444		
	26.0	1-1/32"	850	0.34	0.013	69	228	289	11.4	8.8	824		1	
	26.5	1-3/64"	810	0.34	0.013	67	221	275	10.9	8.6	839			
	27.0	1-1/16"	800	0.34	0.013	68	222	272	10.7	8.8	854		i	
	30.0	1-3/16"	700	0.34	0.013	66	216	238	9.4	9.1	944			
	40.0	1-37/64"	450	0.34	0.013	57	185	153	6.0	9.1	1240	- :		
	14.0 16.0	9/16" 41/64"	1,800 1,780	0.24 0.25	0.009	79 89	260 293	432 445	16.9 17.4	5.6 7.3	370 431	!		
	17.5	45/64"	1,760	0.25	0.010	97	317	528	20.8	9.5	524	1 :		
	18.0	23/32"	1,660	0.30	0.012	94	308	498	19.6	9.3	538			
	21.5	55/64"	1,500	0.32	0.013	101	332	480	18.9	12.1	663]		
	22.0	7/8"	1,440	0.32	0.013	99	326	461	18.1	12.0	677			
tep 5	24.0	15/16"	1,250	0.34	0.013	94	309	425	16.8	12.3	763	- :		
	24.5	31/32"	1,190	0.34	0.013	92	300	405	16.0	12.0	778			
	26.0 26.5	1-1/32" 1-3/64"	1,120 1,070	0.36 0.36	0.014	91 89	300 292	403 385	15.9 15.2	12.9 12.7	853 868	1 1		
	27.0	1-3/64	1,070	0.36	0.014	86	284	367	14.5	12.7	884	- 1	i	
	30.0	1-3/16"	800	0.36	0.014	75	247	288	11.4	11.2	977			
	40.0	1-37/64"	500	0.36	0.014	63	206	180	7.1	10.8	1284		1	
	14.0	9/16"	2,040	0.25	0.010	90	294	510	20.0	6.7	379			
	16.0	41/64"	2,020	0.26	0.010	101	333	525	20.6	8.8	441			
	17.5	45/64"	2,000	0.31	0.012	110	360	620	24.4	11.4	535	!	!	:
	18.0 21.5	23/32" 55/64"	1,900 1,700	0.31	0.012	107 115	352 376	589 561	23.2	11.3 14.4	549 675			
	22.0	7/8"	1,700	0.33	0.013	114	374	545	21.5	14.4	690	!		
		15/16"	1,400	0.35	0.013	106	346	490	19.3	14.5	777			
tep 6	24.0											1		
tep 6	24.0 24.5	31/32"	1,360	0.35	0.014	105	343	476	18.8	14.5	792			
tep 6	24.5 26.0	1-1/32"	1,250	0.37	0.015	102	335	463	18.3	15.1	867		1	
tep 6	24.5 26.0 26.5	1-1/32" 1-3/64"	1,250 1,200	0.37 0.37	0.015 0.015	102 100	335 328	463 444	18.3 17.5	15.1 14.9	867 883			
tep 6	24.5 26.0	1-1/32"	1,250	0.37	0.015	102	335	463	18.3	15.1	867	-		

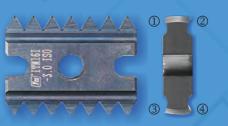
- 1. Input<Tool Length>before drilling.(Tool length=Holder length+Drill length)
- 2. Input cutting condition from step 1 to step 6 in consideration of productivity or stability.
- 3. Use previous step condition if you find a vibration or unstable result at faster step.
- 4. If you use other size of drill, please ask us about cutting condition via E-mail"yestool@yestool.co.kr"





ITM multi-4 flutes indexable thread mill

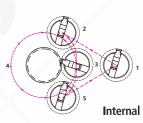
- Economical 4 threading edges

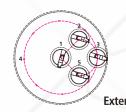


- ▶ Precision ground by YESTOOL's own design technology
- ▶ Strong rigidity to clamp carbide insert in the pocket
- ▶ Internal coolant fed design
- ▶ Internal & external threading available









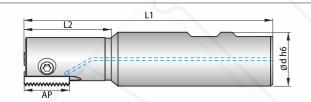
Indexable, Thread mill Series

YITM Thread milling holder





- ▶ Strong tool rigidity to clamp carbide thread mill insert in insert pocket and locking by cap screw
- ▶ Economical 4 thread edges by YESTOOL's own development (except ITM080 which has 2 thread edges)
- ▶ Interchangeable carbide thread milling insert after 4 edge use
- ▶ Internal coolant fed tool body
- ▶ Weldon shank body(HA, HE available on request)



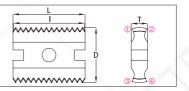


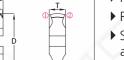
Holder Code	ØD	L1	L2	АР	Shank size Ø d	Cap Screw	Torx key	Insert
YITM090	9.0	85	14	12	20		Т7	
YITM095	9.5	85	14	12	20	M2.5	Torque 0.9Nm (Max)	ITM080□
YITM100	10.0	85	16	12	20		(IVIax)	
YITM115	11.5	88	18	14	20			
YITM125	12.5	90	20	14	20		T8 Torque 1.5Nm (Max)	ITM100□
YITM140	14.0	94	25	14	20	M3		
YITM150	15.0	95	25	16	20			ITM130□
YITM170	17.0	98	30	16	20			
YITM190	19.0	95	30	21	20		T15	/5
YITM210	21.0	115	40	21	25	M4	Torque 3.5Nm (Max)	ITM160□
YITM250	25.0	115	40	21	25		(IVIax)	
YITM285	28.5	140	50	30	25			
YITM310	31.0	140	50	30	25	M6	T20	ITM220□
YITM380	38.0	160	60	30	32		Torque 4.0Nm (Max)	
YITM420	42.0	170	65	40	40	M8	(IVIdX)	ITM280□
YITM460	46.0	170	65	40	40	IVIO		I I IVIZOU



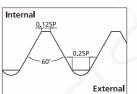








- ▶ Multi 4 flutes thread edges
- ▶ Precision ground carbide insert
- ▶ Strong clamping by cap screw and insert pocket
- ► TiAlN coated insert(standard)



ISO	Internal
130	mittina

ISO Internal			External				
Insert Code	Pitch	1/		D	Т	Cutting edges	Tool Holder
ITM080I-0.50 ISO	0.5	12					
ITM080I-0.75 ISO	0.75	12					YITM090
ITM080I-1.00 ISO	1	12	12	6.5	2.4	2	YITM095
ITM080I-1.25 ISO	1.25	11.25) /	YITM100
ITM080I-1.50 ISO	1.5	12					
ITM100I-0.75 ISO	0.75	13.5					
ITM100I-1.00 ISO	1	14	14 9.5			VITRAGE	
ITM100I-1.25 ISO	1.25	13.75		٥٦	2.6	4	YITM115
ITM100I-1.50 ISO	1.5	13.5	14	9.5	2.6	4	YITM125 YITM140
ITM100I-1.75 ISO	1.75	14					11111140
ITM100I-2.00 ISO	2	14					
ITM130I-1.00 ISO	1	16					
ITM130I-1.25 ISO	1.25	15	16	12.5	3.6	4	
ITM130I-1.50 ISO	1.5	15					YITM150
ITM130I-1.75 ISO	1.75	15.75					YITM170
ITM130I-2.00 ISO	2	16					
ITM130I-2.50 ISO	2.5	15					
ITM160I-1.00 ISO	1	21					
ITM160I-1.75 ISO	1.75	21	21				
ITM160I-2.00 ISO	2	20		1.5	4.0		YITM190
ITM160I-2.50 ISO	2.5	20		16	4.8	4	YITM210
ITM160I-3.00 ISO	3	21					YITM250
ITM160I-3.50 ISO	3.5	21					
ITM220I-1.50 ISO	1.5	30					
ITM2201-2.00 ISO	2	30					
ITM220I-3.00 ISO	3	30					YITM285
ITM220I-3.50 ISO	3.5	28	30	22	5.6	4	YITM310
ITM220I-4.00 ISO	4	28					YITM380
ITM220I-4.50 ISO	4.5	27					
ITM220I-5.00 ISO	5	30					
ITM280I-1.50 ISO	1.5	39					
ITM280I-2.00 ISO	2	40					
ITM280I-3.00 ISO	3	39					
ITM280I-3.50 ISO	3.5	38.5					
ITM2801-4.00 ISO	4	40	40	28	6.4	4	YITM420
ITM280I-4.50 ISO	4.5	36					YITM460
ITM280I-5.00 ISO	5	40					
ITM280I-5,50 ISO	5.5	38.5					
ITM280I-6.00 ISO	6	36					
	J	50					

ITM Carbide Thread mill inserts, ISO External



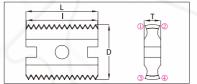


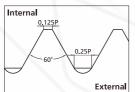




ISO External







- ▶ Multi 4 flutes thread edges
- ▶ Precision ground carbide insert
- ▶ Strong clamping by cap screw and insert pocket
- ► TiAlN coated insert(standard)

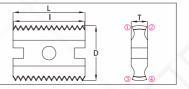
Insert Code	Pitch	I	L	D	Т	Cutting edges	Tool Holder			
ITM100E-0.75 ISO	0.75	13.5								
ITM100E-1.00 ISO	1	14								
ITM100E-1.25 ISO	1.25	13.75	1.4	0.5		4	YITM115			
ITM100E-1.50 ISO	1.5	13.5	14	9.5 3	4	YITM125 YITM140				
ITM100E-1.75 ISO	0.75	14								
ITM100E-2.00 ISO	2	14								
ITM130E-1.00 ISO	1	16								
ITM130E-1.25 ISO	1.25	15								
ITM130E-1.50 ISO	1.5	15	16	12.5	3.6	4	YITM150			
ITM130E-1.75 ISO	1.75	15.75	16	12.5	3.6	6 4	YITM170			
ITM130E-2.00 ISO	2	16								
ITM130E-2.50 ISO	2.5	15								
ITM160E-1.00 ISO	1	21					YITM190			
ITM160E-1.50 ISO	1.5	21								
ITM160E-2.00 ISO	2	20	21	16	4.8	4.8 4	YITM210			
ITM160E-2.50 ISO	2.5	20					YITM250			
ITM160E-3.00 ISO	3	21								
ITM220E-1.50 ISO	1.5	30								
ITM220E-2.00 ISO	2	30					YITM285			
ITM220E-3.00 ISO	3	30	30	22	5.6	4	YITM310			
ITM220E-3.50 ISO	3.5	28					YITM380			
ITM220E-4.00 ISO	4	28								
ITM280E-1.50 ISO	1.5	39								
ITM280E-2.00 ISO	2	40								
ITM280E-3.00 ISO	3	39	40	20			YITM420			
ITM280E-4.00 ISO	4	40	40 28	40 28 6.4	6.4 4	6.4 4	28 6.4 4	4	YITM460	
ITM280E-5.00 ISO	5	40								
ITM280E-6.00 ISO	6	36								

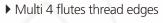




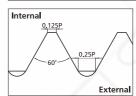








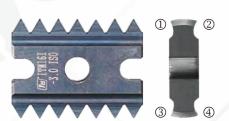
- ▶ Precision ground carbide insert
- ▶ Strong clamping by cap screw and insert pocket
- ► TiAIN coated insert(standard)



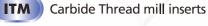
UN Interna	UN	Interna
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Insert Code	TPI	1		D	Т	Cutting edges	Tool Holder
ITM080I-32UN	32	11.91					
ITM080I-28UN	28	11.79					YITM090
ITM080I-24UN	24	11.64	12	6.5	2.4	2	
ITM080I-20UN	20	11.25	12	6.5	2.4	2	YITM095
ITM080I-18UN	18	11.43					YITM100
ITM080I-16UN	18	11.11					
ITM100I-32UN	32	13.49					
ITM100I-28UN	28	13.61					
ITM100I-27UN	27	14.11					
ITM100I-24UN	24	13.76					YITM115
ITM100I-20UN	20	13.97	14	9.5	3	4	YITM125
ITM100I-18UN	18	14.11] 5.5			
ITM100I-16UN	16	12.7					YITM140
ITM100I-14UN	14	12.7					
ITM100I-12UN	12	12.7					
ITM100I-11UN	11	13.85					
ITM130I-32UN	32	15.88					
ITM130I-28UN	28	15.42					
ITM130I-27UN	27	15.99					
ITM130I-24UN	24	15.88					
ITM130I-20UN	20	15.24	1.0	12.5	2.6	4	YITM150
ITM130I-18UN	18 16	15.52	16	12.5	3.6	4	YITM170
ITM130I-16UN		15.88					
ITM130I-14UN ITM130I-12UN	14	14.51 14.82					
ITM130I-120N	11	16.16					
ITM130I-110N	10	15.24					
ITM150I-100N	24	20.11					
ITM160I-20UN	20	20.32					
ITM160I-18UN	18	19.76			16 4.8		
ITM160I-16UN	16	20.64					YITM190
ITM160I-14UN	14	19.96	21	16		4	YITM210 YITM250
ITM160I-12UN	12	21.17					
ITM160I-10UN	10	20.32					
ITM160I-8UN	8	19.05					
ITM160I-7UN	7	21.77					
ITM220I-20UN	20	29.21					
ITM220I-18UN	18	29.63					
ITM220I-16UN	16	28.58					VITRADOF
ITM220I-14UN	14	29.03					YITM285
ITM220I-12UN	12	29.63	30	22	5.6	4	YITM310
ITM220I-10UN	10	27.94		h			YITM380
ITM220I-8UN	8	28.58					
ITM220I-6UN	6	29.63					
ITM220I-5UN	5	30.48					
ITM280I-16UN	16	39.69					
ITM280I-14UN	14	39.91					
ITM280I-12UN	12	38.1					VITMAZO
ITM280I-10UN	10	38.1	40	28	6.4	4	YITM420
ITM280I-8UN	8	38.1					YITM460
ITM280I-6UN	6	38.1					
ITM280I-4.5UN	4.5	39.51					

ITM Carbide Thread mill inserts, UN External







TPI

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Insert Code

ITM100E-32UN

ITM100E-28UN

ITM100E-24UN

ITM100E-20UN

ITM100E-18UN

ITM100E-16UN

ITM100E-14UN

ITM100E-12UN

ITM130E-32UN

ITM130E-28UN

ITM130E-27UN

ITM130E-24UN

ITM130E-20UN

ITM130E-18UN

ITM130E-16UN

ITM130E-14UN

ITM130E-12UN

ITM130E-11UN

ITM130E-10UN

ITM160E-24UN

ITM160E-20UN

ITM160E-18UN

ITM160E-16UN

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ITM220E-14UN

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ITM220E-6UN

ITM280E-16UN

ITM280E-14UN

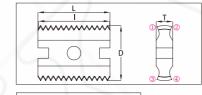
ITM280E-12UN

ITM280E-10UN

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ITM280E-6UN

UN External



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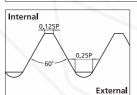
3

3.6

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5.6

6.4



13.49

13.61

13.76

13.97

14.11

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12.7

15.88

15.42

15.99

15,88

15.24

15.52

15.88

14.52 14.82

16.16

15.24

20.11

20,32

19.76

20.64

19.96

21.17

20.32

29,21

29,63

28.58

29.03

29.63

27.94

28.58

29.63

39.69

39.91

38.1

38.1

38.1

38.1

- ▶ Multi 4 flutes thread edges
- ▶ Precision ground carbide insert
- ▶ Strong clamping by cap screw and insert pocket
- ► TiAIN coated insert(standard)

Cutting

edges

4

4

4

4

Tool Holder

YITM115

YITM125

YITM140

YITM150

YITM170

YITM190

YITM210

YITM250

YITM285

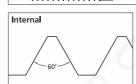
YITM310

YITM380

YITM420

YITM460





ITM Carbide Thread mill inserts, NPS, NPSF Internal, External

- ▶ Multi 4 flutes thread edges
- ▶ Precision ground carbide insert
- ▶ Strong clamping by cap screw and insert pocket
- ► TiAIN coated insert(standard)

NPS,	NPSF	Internal	, Externa
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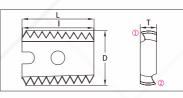
ITM Carbide Thread mill inserts

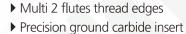
Insert Code	Pitch	1	L	D	Т	Cutting edges	Tool Holder
ITM080-18NPS	18	11.29	12	6.5	2.4	4	YITM090 / YITM095 / YITM100
ITM100-18NPS	18	12.7	14	9.5	2.6	4	YITM115 / YITM125 / YITM140
ITM100-14NPS	14	12.7	14	9.5	2.0	4	111101113 / 111101123 / 111101140
ITM130-18NPS	18	15.52					
ITM130-14NPS	14	14.51	16	12.5	3.6	4	YITM150 / YITM170
ITM130-11.5NPS	11.5	15.46					
ITM160-14NPS	14	19.96	21	16	4.8	4	YITM190 / YITM210 / YITM250
ITM160-11.5NPS	11.5	19.88	21	10	4.0	4	TITIVITEO / TITIVIZTO / TITIVIZEO
ITM220-11.5NPS	11.5	28.71	30	22	5.6	4	YITM285 / YITM310 / YITM380
ITM220-8NPS	8	28.58	30		5.0	4	1111V1203 / 1111V131U / 1111V130U
ITM280-11.5NPS	11.5	39.76	40	28	6.1	1	YITM420 / YITM460
ITM280-8NPS	8	38.1	40	28	6.4	4	111W42U / 111W40U

ITM Carbide Thread mill inserts, NPT, NPTF Internal, External









- ▶ Strong clamping by cap screw and insert pocket
- ► TiAIN coated insert(standard)

Internal	
30° 30°	1°47'
	Externa l

NPT, NPTF Internal, External

ivi i, ivi ii iliterilai, Exterilai							
Insert Code	Pitch	1	L	D	Т	Cutting edges	Tool Holder
ITM080-18NPT	18	11.29	12	6.5	2.4	2	YITM090 / YITM095 / YITM100
ITM100-18NPT	18	12.7	14	9.5	2.6	2	YITM115 / YITM125 / YITM140
ITM100-14NPT	14	12.7	14	9.5	2.0	2	11110111371111011237111101140
ITM130-18NPT	18	15.52					
ITM130-14NPT	14	14.51	16	12.5	3.6	2	YITM150 / YITM170
ITM130-11.5NPT	11.5	15.46					
ITM160-14NPT	14	19.96	21	16	4.8	2	YITM190 / YITM210 / YITM250
ITM160-11.5NPT	11.5	19.88	21	10	4,0		TITIVITOU / TITIVIZ TU / TITIVIZ SU
ITM220-11.5NPT	11.5	28.71	30	22	5.6	2	YITM285 / YITM310 / YITM380
ITM220-8NPT	8	28.58	30	22	0.0	2	111101200 / 111101510 / 111101500
ITM280-11.5NPT	11.5	39.76	40	20	6.4	2	YITM420 / YITM460
ITM280-8NPT	8	38.1	40	28	0.4	2	T111VI42U / Y111VI46U

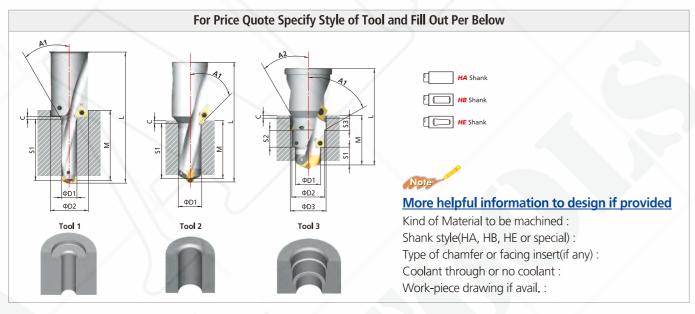
43

KRUZ special step drill body

Combination drill bodies (Perform multiple operations with one tool)



- ▶ Helically fluted drill body with through spindle coolant for easy chip evacuation.
- ▶ Special bodies use standard YESTOOL drill inserts(ID, IDP, IDF). Uses ISO standard facing & chamfering inserts.
- ▶ All inserts lock from the side-no removing body to replace
- ▶ Reduced cycle times result in higher productivity at reduced



Easy torque driver

- ▶ Easier to tighten cap screw when assembly carbide insert
- ▶ Ideally protect over-torque by click sound
- ▶ To avoid torx screw damage by exessive tigtening of conventional driver





Item		C	Order cod	e	7										
T-Handle		TPK-H01													
Torx bit	T6	T7	T8	T15	T20										
Adapter	TX6	TX7	TX8	TX15	TX20										
Max. torque	0.6Nm	0.9Nm	1.5Nm	3.5Nm	5.0Nm										

"One-Pass" Indexable Drilling & Deburring system

YESTOOL's new patented strong sheet spring design



"One-Pass" Indexable Drilling & Deburing bodies







Carbide Deburring Insert 45° (TiN, TiAlN available)









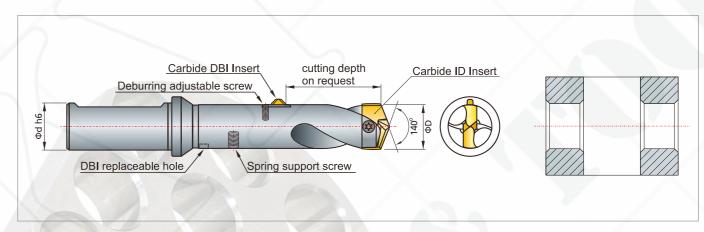


Standard Carbide ID Insert (TiN, TiAIN available)

* Note: Fixed chamfer length(like C=1.0) is not available, but chamfer approximately

- ▶ Enables drilling & deburring of both top and bottom of hole in one operation
- ▶ Drill body uses standard replaceable YESTOOL drilling insert
- ▶ Cutting tension adjustable by screw
- ▶ "DBI" deburring insert replaceable by removing square bar
- ▶ Inserts can be replaced without removing the drill body from
- ▶ Can be designed for different depth and chamfer angle





Reduce machining cost and increase productivity with YESTOOL "One-Pass" drilling system.

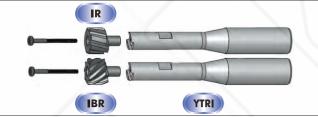


DBI insert remove the burr on the front and back side of hole. The insert retracts automatically when the tool passes through the hole.

Indexable, Coolant Drill Series

YTRI Indexable Reamer





- ▶ Interchangeable Carbide Reamer insert
- ▶ Economical usage for large size over 15mm
- ▶ Locking by center head cap-screw
- ▶ IR : Right helix spiral multi-flutes
- ▶ IBR : Left helix broach reamer insert
- ▶ Speedy reaming available with H7 tolerance

8			-	
	L3			
	L2	L1		

Please make required cutting depth in the ☐ like T, P.

Body code No.	Shank	c	T	(3 x Dia	ı.)	P	(5 x Dia	ı.)	Applicable IR, IBR	Cap screw	No. of flute
body code No.	d	3	L1	L2	L3	L1	L2	L3	Applicable III, IBI	M	No. of flute
YTRI 150-174 □		7.4	114	64	53	148	98	87	IR 150~174, IBR 150~174	M2.5x30	6
YTRI 175-199 □	20	9.4	125	75	61	165	115	101	IR 175~199, IBR 175~199	M2.5x30	0
YTRI 200-224 □		9.3	136	86	69	180	130	113	IR 200~224, IBR 200~224	M3x35	8
YTRI 225-249 □	25	10.6	153	97	75	203	147	125	IR 225~249, IBR 225~249	M4x40	0
YTRI 250-274 □	23	10.4	158	102	82	213	157	137	IR 250~274, IBR 250~274	M5x45	
YTRI 275-299 □		12.2	177	117	90	237	177	150	IR 275~299, IBR 275~299	M5x45	10
YTRI 300-324 □	32	13.1	183	123	96	248	188	161	IR 300~324, IBR 300~324	M6x40	10
YTRI 325-349 □		13.8	190	130	103	260	200	173	IR 325~349, IBR 325~349	M6x45	
YTRI 350-374 □	40	14.6	215	145	110	290	220	185	IR 350~374, IBR 350~374	M8x50	12
YTRI 375-400 □	7 40	15.4	222	152	117	302	232	197	IR 375~400, IBR 375~400	M8x50	12

* Note: Bottom edge geometry for blind hole is available as special



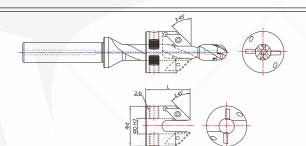
Indexable, Coolant Drill Series

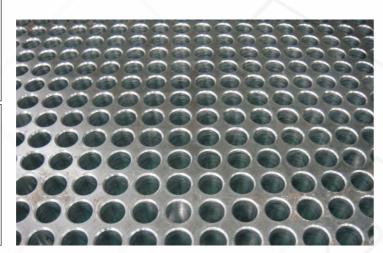
KRUZ Combination Chamfer Tool



- ▶ Combination chamfer ring to fit in modified standard KRUZ body
- ▶ YCHR chamfer ring with two XCGX 1102 chamfer inserts
- ▶ Two set screws supported on the KRUZ body flute part
- ▶ Available size from KRUZ body dia.8.0~50.0mm
- ▶ Special made to order after hearing cutting depth requirement

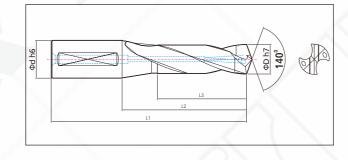






Carbide Tipped Drill, Metric





Model: YTD

- ▶ Carbide Brazed Tipped drill, HB shank, Internal coolant
- ▶ 140° self-centering point for accurate hole positioning. Regular helix angle: 25°.
- ▶ Drill body consists of heat-treated tool steel and cutting edge is brazed with carbide tip.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN & TiAlN coated.

- ▶ To perform heavy drilling operation and ideal for high productivity.
- ▶ Specially designed for powerful machine. Effective cutting
- ▶ Broad range application from general to tough material.

Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YTD 135	13.5				\ \	YTD 166	16.6					YTD 197	19.7				
YTD 136	13.6				\ \	YTD 167	16.7)		YTD 198	19.8				
YTD 137	13.7					YTD 168	16.8					YTD 199	19.9				
YTD 138	13.8					YTD 169	16.9					YTD 200	20.0				
YTD 139	13.9					YTD 170	17.0					YTD 201	20.1				
YTD 140	14.0	16.0	115	67	48	YTD 171	17.1					YTD 202	20.2				
YTD 141	14.1					YTD 172	17.2					YTD 203	20.3				
YTD 142	14.2					YTD 173	17.3					YTD 204	20.4				
YTD 143	14.3					YTD 174	17.4					YTD 205	20.5				
YTD 144	14.4					YTD 175	17.5	20.0	140	90	66	YTD 206	20.6		155	99	73
YTD 145	14.5					YTD 176	17.6	20.0	140	90	00	YTD 207	20.7				
YTD 146	14.6					YTD 177	17.7					YTD 208	20.8				
YTD 147	14.7					YTD 178	17.8					YTD 209	20.9				
YTD 148	14.8					YTD 179	17.9					YTD 210	21.0				
YTD 149	14.9					YTD 180	18.0					YTD 211	21.1				
YTD 150	15.0					YTD 181	18.1					YTD 212	21.2	25.0			
YTD 151	15.1					YTD 182	18.2					YTD 213	21.3				
YTD 152	15.2	1				YTD 183	18.3					YTD 214	21.4				
YTD 153	15.3					YTD 184	18.4					YTD 215	21.5				
YTD 154	15.4					YTD 185	18.5					YTD 216	21.6				
YTD 155	15.5	20.0	130	80	59	YTD 186	18.6					YTD 217	21.7				
YTD 156	15.6	20.0	150			YTD 187	18.7					YTD 218	21.8				
YTD 157	15.7					YTD 188	18.8					YTD 219	21.9				
YTD 158	15.8					YTD 189	18.9					YTD 220	22.0				
YTD 159	15.9					YTD 190	19.0					YTD 221	22.1		160	104	76
YTD 160	16.0					YTD 191	19.1	25.0	155	99	73	YTD 222	22.2		100		, 0
YTD 161	16.1					YTD 192	19.2					YTD 223	22.3				
YTD 162	16.2					YTD 193	19.3					YTD 224	22.4				
YTD 163	16.3					YTD 194	19.4					YTD 225	22.5				
YTD 164	16.4					YTD 195	19.5					YTD 226	22.6				
YTD 165	16.5					YTD 196	19.6					YTD 227	22.7				

YTD	

Carbide Tipped Drill, Inch

9d h¢		140° (140°)
	u	

* Inch YTD available upon request only.

Code No.	D	d	L1	L2	L3
YTD .5310	0.531				
YTD .5460	0.546	0.625	4.52	2.63	1.88
YTD .5620	0.562	0.625	4.52	2.03	1.00
YTD .5780	0.578				
YTD .5930	0.593				
YTD .6090	0.609		5.11	3.14	2.32
YTD .6250	0.625		5.11	3.14	2.32
YTD .6400	0.640				
YTD .6560	0.656	0.750) /	
YTD .6710	0.671				
YTD .6870	0.687		5.51	3.54	2.59
YTD .7030	0.703				
YTD .7180	0.718				
YTD .7340	0.734				
YTD .7500	0.750				
YTD .7650	0.765				
YTD .7810	0.781				
YTD .7960	0.796		6.10	3.89	2.87
YTD .8120	0.812				
YTD .8280	0.828	1.000			
YTD .8430	0.843				
YTD .8590	0.859				
YTD .8750	0.875				
YTD .8900	0.890		6.29	4.09	2.99
YTD .9060	0.906		0.29	4.09	2.33
YTD .9210	0.921				

Model: YTD

- ▶ Carbide Brazed Tipped drill, HB shank, Internal coolant
- ▶ 140° self-centering point for accurate hole positioning. Regular helix angle: 25°.
- ▶ Drill body consists of heat-treated tool steel and cutting edge is brazed with carbide tip.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN & TiAlN coated.

- ▶ To perform heavy drilling operation and ideal for high
- ▶ Specially designed for powerful machine. Effective cutting
- ▶ Broad range application from general to tough material.

Code No.	D	d	L1	L2	L3
YTD .9370	0.937				
YTD .9530	0.953				
YTD .9680	0.968		6.69	4.33	3.11
YTD .9840	0.984				
YTD1 .0000	1.000				
YTD1 .0150	1.015		1		
YTD1 .0310	1.031				
YTD1 .0460	1.046		6.88	4.52	3.26
YTD1 .0620	1.062	1.250			
YTD1 .0780	1.078				
YTD1 .0930	1.093				
YTD1 .1090	1.109				
YTD1 .1250	1.125				
YTD1 .1400	1.140		7.28	4.92	3.62
YTD1 .1560	1.156				
YTD1 .1710	1.171				
YTD1 .1870	1.187				
YTD1 .2500	1.250		8.26	5.51	3.85
YTD1 .3120	1.312		0.66	F 00	4.00
YTD1 .3430	1.343		8.66	5.90	4.09
YTD1 .3750	1.375				
YTD1 .4210	1.421	1.500	9.05	6.29	4.44
YTD1 .4370	1.437				
YTD1 .5000	1.500		9.44	6.69	4.68
YTD1 .5620	1.562		0.04	7.00	4.00
YTD1 .6250	1.625		9.84	7.08	4.80

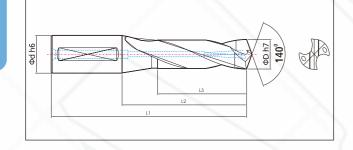
Code No.	D	d	L1	L2	L3	Code No.	D	d
YTD 228	22.8					YTD 291	29.1	
YTD 229	22.9					YTD 292	29.2	-
YTD 230	23.0					YTD 293	29.3	
YTD 231	23.1					YTD 294	29.4	
YTD 232	23.2	25.0	160	104	76	YTD 295	29.5	
YTD 233	23.3					YTD 296	29.6	
YTD 234	23.4					YTD 297	29.7	
YTD 235	23.5					YTD 298	29.8	32.0
YTD 236	23.6					YTD 299	29.9	
YTD 237	23.7					YTD 300	30.0	
YTD 238	23.8					YTD 301	30.1	
YTD 239	23.9					YTD 302	30.2	
YTD 240	24.0					YTD 303	30.3	
YTD 241	24.1					YTD 304	30.4	
YTD 242	24.2					YTD 305	30.5	
YTD 243	24.3					YTD 306	30.6	
YTD 244	24.4					YTD 307	30.7	
YTD 245	24.5					YTD 308	30.8	
YTD 246	24.6		170	110	79	YTD 309	30.9	
YTD 247	24.7					YTD 310	31.0	
YTD 248	24.8					YTD 311	31.1	
YTD 249	24.9					YTD 312	31.2	
YTD 250	25.0					YTD 313	31.3	
YTD 250	25.1					YTD 314	31.4	
YTD 251	25.2					YTD 315	31.5	
YTD 252	25.3					YTD 316	31.6	
YTD 253							_	
	25.4 25.5				1	YTD 317	31.7	
YTD 255			\leftarrow			YTD 318	31.8	
YTD 256	25.6		\ \ \)	YTD 319	31.9	
YTD 257 YTD 258	25.7		١.			YTD 320	32.0	
	25.8		/			YTD 321	32.1	
YTD 259	25.9					YTD 322	32.2	
YTD 260	26.0					YTD 323	32.3	
YTD 261	26.1					YTD 324 YTD 325	32.4	
YTD 262	26.2	22.0					32.5	
YTD 263	26.3	32.0				YTD 326	32.6	
YTD 264	26.4					YTD 327	32.7	
YTD 265	26.5		175	115	83	YTD 328	32.8	
YTD 266	26.6					YTD 329	32.9	40.0
YTD 267	26.7					YTD 330	33.0	
YTD 268	26.8					YTD 331	33.1	
YTD 269	26.9					YTD 332	33.2	
YTD 270	27.0					YTD 333	33.3	
YTD 271	27.1					YTD 334	33.4	
YTD 272	27.2					YTD 335	33.5	
YTD 273	27.3					YTD 336	33.6	
YTD 274	27.4					YTD 337	33.7	
YTD 275	27.5					YTD 338	33.8	
YTD 276	27.6					YTD 339	33.9	
YTD 277	27.7					YTD 340	34.0	
YTD 278	27.8					YTD 341	34.1	
YTD 279	27.9					YTD 342	34.2	
YTD 280	28.0					YTD 343	34.3	
YTD 281	28.1					YTD 344	34.4	
YTD 282	28.2					YTD 345	34.5	
YTD 283	28.3		185	125	92	YTD 346	34.6	
YTD 284	28.4					YTD 347	34.7	
YTD 285	28.5					YTD 348	34.8	
YTD 286	28.6					YTD 349	34.9	
YTD 287	28.7					YTD 350	35.0	
YTD 288	28.8					YTD 351	35.1	
YTD 289	28.9					YTD 352	35.2	
YTD 290	29.0					YTD 353	35.3	

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L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
			YTD 291	29.1					YTD 354	35.4				
			YTD 292	29.2					YTD 355	35.5				
			YTD 293	29.3					YTD 356	35.6				
160	104	76	YTD 294	29.4					YTD 357	35.7				
			YTD 295	29.5					YTD 358	35.8				
			YTD 296	29.6					YTD 359	35.9				
			YTD 297	29.7	22.0	105	125	02	YTD 360	36.0				
			YTD 298	29.8	32.0	185	125	92	YTD 361	36.1	-			
			YTD 299	29.9					YTD 362	36.2				
			YTD 300	30.0					YTD 363	36.3				
			YTD 301 YTD 302	30.1					YTD 364	36.4		230	160	113
			YTD 302	30.2					YTD 365	36.5				
			YTD 303	30.4					YTD 366	36.6				
			YTD 304	30.5					YTD 367	36.7				
			YTD 306	30.5					YTD 368	36.8				
			YTD 307	30.7	-				YTD 369	36.9				
			YTD 308	30.8					YTD 370	37.0				
170	110	79	YTD 309	30.9					YTD 371	37.1				
			YTD 310	31.0					YTD 372	37.2				
			YTD 311	31.1					YTD 373	37.3				
			YTD 312	31.2					YTD 374	37.4				
			YTD 313	31.3					YTD 375	37.5				
			YTD 314	31.4	-				YTD 376	37.6				
			YTD 315	31.5					YTD 377	37.7				
			YTD 316	31.6	1	210	140	98	YTD 378	37.8				
			YTD 317	31.7					YTD 379	37.9				
			YTD 318	31.8	1				YTD 380	38.0				
$\overline{}$			YTD 319	31.9					YTD 381	38.1				
)	YTD 320	32.0					YTD 382	38.2				
			YTD 321	32.1					YTD 383	38.3				
/			YTD 322	32.2					YTD 384	38.4	40.0			
			YTD 323	32.3					YTD 385	38.5		240	170	119
			YTD 324	32.4					YTD 386	38.6				
			YTD 325	32.5					YTD 387	38.7				
			YTD 326	32.6					YTD 388	38.8				
			YTD 327	32.7					YTD 389	38.9				
175	115	83	YTD 328	32.8					YTD 390	39.0				
1/3	113	03	YTD 329	32.9	40.0				YTD 391	39.1				
			YTD 330	33.0	40.0				YTD 392	39.2				
			YTD 331	33.1					YTD 393	39.3				
			YTD 332	33.2					YTD 394	39.4				
			YTD 333	33.3					YTD 395	39.5				
			YTD 334	33.4					YTD 396 YTD 397	39.6	-			
			YTD 335	33.5		220	150	104	YTD 397	39.7 39.8	-			
			YTD 336	33.6	-				YTD 398	39.8				
			YTD 337	33.7	-				YTD 400	40.0				
			YTD 338	33.8					YTD 400	40.0				
			YTD 339	33.9					YTD 401	40.1				
			YTD 340	34.0					YTD 402	40.2				
			YTD 341	34.1	-				YTD 404	40.4				
			YTD 342	34.2	-				YTD 404	40.4				
			YTD 343	34.3	1				YTD 405	40.5		250	180	122
			YTD 344	34.4					YTD 407	40.7				
105	125	02	YTD 345	34.5	-				YTD 408	40.7				
185	125	92	YTD 346 YTD 347	34.6	-				YTD 409	40.8				
			YTD 347	34.7					YTD 410	41.0				
			YTD 348	34.8					YTD 411	41.1	-	/ /		
			YTD 349	35.0	1	230	160	113	YTD 411	41.2				
			YTD 350	35.1	-				YTD 413	41.3	-			
			YTD 351	35.1					YTD 414	41.4	-		\ \	
			YTD 352	35.3					YTD 414	41.4	-			
	I	1	כנכ טוו ן	ر.د ا					110413	71.3	I			1

Carbide Tipped Drill, Long Series, Metric



Indexable, Coolant Drill Series



Model: YTDL

- ▶ Carbide Brazed Tipped drill, HB shank, Internal coolant hole, long series.
- ▶ 140° self-centering point for accurate hole positioning. Regular helix angle: 25°.
- ▶ Drill body consists of heat-treated tool steel and cutting edge is brazed with carbide tip.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN & TiAIN coated.

- ▶ To perform heavy drilling operation and ideal for high
- ▶ Specially designed for powerful machine. Effective cutting
- ▶ Broad range application from general to tough material.

	-						_						<u> </u>				
Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YTDL 135	13.5					YTDL 166	16.6					YTDL 197	19.7				
YTDL 136	13.6					YTDL 167	16.7					YTDL 198	19.8				
YTDL 137	13.7		\ \			YTDL 168	16.8					YTDL 199	19.9				
YTDL 138	13.8					YTDL 169	16.9					YTDL 200	20.0				
YTDL 139	13.9					YTDL 170	17.0					YTDL 201	20.1				
YTDL 140	14.0	16.0	145	97	73	YTDL 171	17.1					YTDL 202	20.2				
YTDL 141	14.1					YTDL 172	17.2					YTDL 203	20.3				
YTDL 142	14.2					YTDL 173	17.3					YTDL 204	20.4				
YTDL 143	14.3					YTDL 174	17.4					YTDL 205	20.5				
YTDL 144	14.4					YTDL 175	17.5	20.0	175	125	101	YTDL 206	20.6		195	139	112
YTDL 145	14.5					YTDL 176	17.6					YTDL 207	20.7				
YTDL 146	14.6					YTDL 177	17.7					YTDL 208	20.8				
YTDL 147	14.7					YTDL 178	17.8					YTDL 209	20.9				
YTDL 148	14.8					YTDL 179	17.9					YTDL 210	21.0				
YTDL 149	14.9					YTDL 180	18.0					YTDL 211	21.1				
YTDL 150	15.0					YTDL 181	18.1					YTDL 212	21.2	25.0			
YTDL 151	15.1					YTDL 182	18.2					YTDL 213	21.3				
YTDL 152	15.2					YTDL 183	18.3					YTDL 214	21.4				
YTDL 153	15.3					YTDL 184	18.4					YTDL 215	21.5				
YTDL 154	15.4					YTDL 185	18.5					YTDL 216	21.6				
YTDL 155	15.5	20.0	165	115	94	YTDL 186	18.6					YTDL 217	21.7				
YTDL 156	15.6	20.0	103	113		YTDL 187	18.7					YTDL 218	21.8				
YTDL 157	15.7					YTDL 188	18.8					YTDL 219	21.9				
YTDL 158	15.8					YTDL 189	18.9					YTDL 220	22.0				
YTDL 159	15.9					YTDL 190	19.0					YTDL 221	22.1		210	154	124
YTDL 160	16.0					YTDL 191	19.1	25.0	195	139	112	YTDL 222	22.2		210	154	124
YTDL 161	16.1					YTDL 192	19.2					YTDL 223	22.3		\ \		
YTDL 162	16.2					YTDL 193	19.3					YTDL 224	22.4			111	
YTDL 163	16.3					YTDL 194	19.4					YTDL 225	22.5				
YTDL 164	16.4					YTDL 195	19.5					YTDL 226	22.6			\ \	
YTDL 165	16.5					YTDL 196	19.6					YTDL 227	22.7				

Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YTDL 228	22.8					YTDL 291	29.1					YTDL 354	35.4	1			
YTDL 229	22.9					YTDL 292	29.2					YTDL 355	35.5				
YTDL 230	23.0					YTDL 293	29.3		245	185	148	YTDL 356	35.6				
YTDL 231	23.1					YTDL 294	29.4					YTDL 357	35.7				
YTDL 232	23.2	25.0	210	154	124	YTDL 295	29.5					YTDL 358	35.8				
YTDL 233	23.3					YTDL 296	29.6					YTDL 359	35.9				
YTDL 234	23.4					YTDL 297	29.7					YTDL 360	36.0		300	230	183
YTDL 235	23.5					YTDL 298	29.8	32.0				YTDL 361	36.1				
YTDL 236	23.6					YTDL 299	29.9					YTDL 362	36.2) \(\lambda\)		
YTDL 237	23.7					YTDL 300	30.0					YTDL 363	36.3				
YTDL 238	23.8					YTDL 301	30.1		255	195	157		36.4				
YTDL 239	23.9					YTDL 302	30.2					YTDL 364	36.5				
YTDL 240	24.0					YTDL 303	30.3					YTDL 365	36.6		-/		
YTDL 241	24.1					YTDL 304	30.4					YTDL 366					
YTDL 242	24.2					YTDL 305	30.5					YTDL 367	36.7				
YTDL 243	24.3					YTDL 306	30.6					YTDL 368	36.8				
YTDL 244	24.4					YTDL 307	30.7					YTDL 369	36.9				
YTDL 245	24.5					YTDL 308	30.8					YTDL 370	37.0				
YTDL 246	24.6		225	165	133	YTDL 309	30.9					YTDL 371	37.1				
YTDL 247	24.7					YTDL 310	31.0					YTDL 372	37.2				
YTDL 248	24.8					YTDL 311	31.1					YTDL 373	37.3				
YTDL 249	24.9					YTDL 312	31.2					YTDL 374	37.4				
YTDL 250	25.0					YTDL 313	31.3					YTDL 375	37.5		315	245	193
YTDL 251	25.1		1			YTDL 313	31.4					YTDL 376	37.6				
YTDL 252	25.2					YTDL 314	31.5					YTDL 377	37.7				
YTDL 252	25.2					YTDL 315	31.6		280	210	172	YTDL 378	37.8				
YTDL 253	25.4				\ \	YTDL 316	31.7					YTDL 379	37.9				
YTDL 255	25.5					YTDL 317	31.8			/ /		YTDL 380	38.0				
YTDL 256	25.6					YTDL 318	31.9					YTDL 381	38.1				
YTDL 257	25.7					YTDL 319	32.0					YTDL 382	38.2				
YTDL 258	25.8					YTDL 320	32.1					YTDL 383	38.3				
YTDL 259	25.9					YTDL 321	32.1					YTDL 384	38.4	40.0			
YTDL 260	26.0					YTDL 323	32.3					YTDL 385	38.5	40.0			
YTDL 260	26.1					YTDL 323	32.4					YTDL 386	38.6				
YTDL 261	26.2					YTDL 324	32.5					YTDL 387	38.7				
YTDL 263	26.3	32.0				YTDL 325	32.6					YTDL 388	38.8				
YTDL 264	26.4	32.0				YTDL 327	32.7					YTDL 389	38.9				
YTDL 265	26.5						32.8					YTDL 390	39.0				
YTDL 266			235	175	141	YTDL 328 YTDL 329						YTDL 391	39.1				
	26.7					YTDL 329	33.0	40.0				YTDL 392	39.2				
YTDL 267 YTDL 268	_					YTDL 330	33.1					YTDL 393	39.3				
YTDL 269	26.8					YTDL 331	33.2					YTDL 394	39.4				
YTDL 270)	YTDL 332	_					YTDL 395	39.5				
YTDL 270	27.0					YTDL 333	33.3					YTDL 396	39.6				
YTDL 271	27.1					YTDL 334	33.5					YTDL 397	39.7				
YTDL 272	27.2					YTDL 336	33.6		290	220	177	YTDL 398	39.8				
	_					YTDL 337	_					YTDL 399	39.9				
YTDL 274 YTDL 275	27.4					YTDL 337	33.7					YTDL 400	40.0				
	_						_					YTDL 401	40.1		325	255	203
YTDL 276	27.6					YTDL 339	33.9					YTDL 402	40.2				
YTDL 277	27.7					YTDL 340 YTDL 341	34.0					YTDL 403	40.3				
YTDL 278	27.8						34.1					YTDL 404	40.4				
YTDL 279 YTDL 280	27.9					YTDL 342 YTDL 343	34.2					YTDL 405	40.5				
	_						_					YTDL 406	40.6				
YTDL 281	28.1					YTDL 344	34.4					YTDL 400	40.7				
YTDL 282	28.2		245	105	140	YTDL 345	34.5					YTDL 407	40.7				
YTDL 283	28.3		245	185	148	YTDL 346	34.6										
YTDL 284	28.4					YTDL 347	34.7					YTDL 409	40.9				
YTDL 285	28.5					YTDL 348	34.8					YTDL 410	41.0				
YTDL 286	28.6					YTDL 349	34.9		300	230	183	YTDL 411	41.1				
YTDL 287	28.7					YTDL 350	35.0					YTDL 412	41.2				
YTDL 288	28.8					YTDL 351	35.1					YTDL 413	41.3				
YTDL 289	28.9					YTDL 352	35.2					YTDL 414	41.4				
YTDL 290	29.0					YTDL 353	35.3					YTDL 415	41.5				

Carbide Tipped Drill, Long Series, Inch



YSDF YSDLF Solid Carbide "F"(flat bottom) point Drill

YSDP YSDLP Solid Carbide "P"(Premium) point Drill

Solid Carbide Drill, Step Drill YSD YSSD

Solid Carbide Long series Drill YSDL

Solid Carbide Coolant Drill, HA shank YSDC YSDCF YSDCP

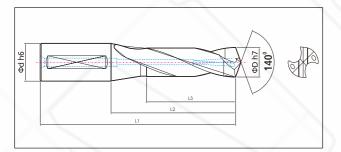
YSDC,D5 YSDCF,D5 YSDCP,D5 Solid Carbide Coolant Drill, 5xD, HE shank

YSDC,D8 YSDCF,D8 YSDCP,D8 Solid Carbide Coolant Drill, Long series 8xD, HE shank

YCD **Solid Carbide Chamfer Drill**

YCH **Chamfer Holder for YCD**





* Inch YTD available upon request only.

Inch Size

Code No.	D	d	L1	L2	L3
YTDL .5310	0.531				
YTDL .5460	0.546	0.625	5.70	3.81	2.87
YTDL .5620	0.562	0.023	3.70	3.61	2.07
YTDL .5780	0.578				
YTDL .5930	0.593				
YTDL .6090	0.609		6.49	4.52	3.70
YTDL .6250	0.625		0.45		3.70
YTDL .6400	0.640				
YTDL .6560	0.656	0.750			
YTDL .6710	0.671				
YTDL .6870	0.687		6.88	4.92	3.97
YTDL .7030	0.703				
YTDL .7180	0.718				
YTDL .7340	0.734				
YTDL .7500	0.750				
YTDL .7650	0.765				
YTDL .7810	0.781		7.67	5.47	4.40
YTDL .7960	0.796		7.107		
YTDL .8120	0.812				
YTDL .8280	0.828	1.000			
YTDL .8430	0.843				
YTDL .8590	0.859				
YTDL .8750	0.875				
YTDL .8900	0.890		8.26	6.06	4.88
YTDL .9060	0.906				
YTDL .9210	0.921				

Model: YTDL

- ▶ Carbide Brazed Tipped drill, HB shank, Internal coolant
- ▶ 140° self-centering point for accurate hole positioning. Regular helix angle: 25°.
- ▶ Drill body consists of heat-treated tool steel and cutting edge is brazed with carbide tip.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN & TiAIN coated.

Application

- ▶ To perform heavy drilling operation and ideal for high
- ▶ Specially designed for powerful machine. Effective cutting
- ▶ Broad range application from general to tough material.

L1

L2

L3

Inch Size Code No.

D

YTDL .9370	0.937					
YTDL .9530	0.953					
YTDL .9680	0.968		8.85	6.49	5.23	
YTDL .9840	0.984					
YTDL 1.0000	1.000					
YTDL 1.0150	1.015					
YTDL 1.0310	1.031					
YTDL 1.0460	1.046		9.25	6.88	5.55	
YTDL 1.0620	1.062	1.250				
YTDL 1.0780	1.078					
YTDL 1.0930	1.093					
YTDL 1.1090	1.109					
YTDL 1.1250	1.125		9.46	7.28	5.82	
YTDL 1.1400	1.140					
YTDL 1.1560	1.156					
YTDL 1.1710	1.171		10.03	7.67	6.18	
YTDL 1.1870	1.187		10.03	7.07	0.10	
YTDL 1.2500	1.250		11.02	8.26	6.77	
YTDL 1.3120	1.312		11.41	8.66	6.96	
YTDL 1.3430	1.343		11.41	8.00	0.90	
YTDL 1.3750	1.375					
YTDL 1.4210	1.421	1.500	11.81	9.05	7.20	
YTDL 1.4370	1.437					
YTDL 1.5000	1.500		12.40	9.64	7.59	
YTDL 1.5620	1.562		12.79	10.03	7.99	
YTDL 1.6250	1.625		12.73	10.03	7.55	

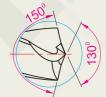
Solid Carbide Series

Yes *YESTOOL Co., Ltd.

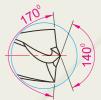




Standard Point



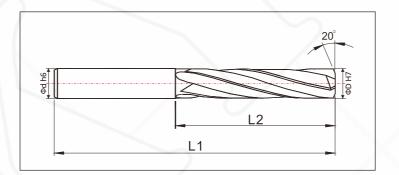
"P" Premium Point



"F" Flatted Point

Solid Carbide "Speedy" Reamer





- ▶ 15° right helix spiral, 20° chamfer(standard) for high speed reaming
- ▶ Standard H7 tolerance, special point & tolerance or corner radius available on demand
- ▶ Speedy reaming Vc = 40~80m/min., f = 0.1mm/rev.per flute, TiN & TiAlN coated.
- ▶ Best combination if use with our standard YSD Solid carbide drill.

YSR Solid Carbide "Speedy" Reamer.

YSR Solid Ca	rbide "Spe	edy" R	eamer.		
Code No.	D	d	L1	L2	Number of Flute
YSR 030 ~ 035	3.0 ~ 3.5	4.0	F.4	19	7
YSR 036 ~ 041	3.6 ~ 4.1	4.0	54	24	
YSR 042 ~ 051	4.2 ~ 5.1	5.0	61	31	
YSR 052 ~ 061	5.2 ~ 6.1	6.0	65	35	3
YSR 062 ~ 071	6.2 ~ 7.1	7.0	73	41	
YSR 072 ~ 081	7.2 ~ 8.1	8.0	78	45	
YSR 082 ~ 091	8.2 ~ 9.1	9.0	82	48	
YSR 092 ~ 101	9.2 ~ 10.1	10.0	87	51	
YSR 102 ~ 111	10.2 ~ 11.1	11.0	93	53	
YSR 112 ~ 121	11.2 ~ 12.1	12.0	100	60	
YSR 122 ~ 131	12.2 ~ 13.1	13.0	100	00	
YSR 132 ~ 141	13.2 ~ 14.1	14.0	105	62	
YSR 142 ~ 151	14.2 ~ 15.1	15.0	108	64	4
YSR 152 ~ 161	15.2 ~ 16.1	16.0	112	66	
YSR 162 ~ 171	16.2 ~ 17.1	17.0	116	68	
YSR 172 ~ 181	17.2 ~ 18.1	18.0	120	71	
YSR 182 ~ 191	18.2 ~ 19.1	19.0	124	73	
YSR 192 ~ 200	19.2 ~ 20.0	20.0	128	77	

YSRL Solid Carbide Speedy Reamer, Long series

	Code No.	D	d	L1	L2	Number of Flute
	YSRL 030 ~ 035	3.0 ~ 3.5	4.0			
	YSRL 036 ~ 041	3.6 ~ 4.1	4.0	79	44	
	YSRL 042 ~ 051	4.2 ~ 5.1	5.0			
	YSRL 052 ~ 061	5.2 ~ 6.1	6.0	82	49	3
	YSRL 062 ~ 071	6.2 ~ 7.1	7.0	84	52	
	YSRL 072 ~ 081	7.2 ~ 8.1	8.0	89	57	
1	YSRL 082 ~ 091	8.2 ~ 9.1	9.0	96	62	
	YSRL 092 ~ 101	9.2 ~ 10.1	10.0	103	66	
	YSRL 102 ~ 111	10.2 ~ 11.1	11.0	108	71	
	YSRL 112 ~ 121	11.2 ~ 12.1	12.0	118	78	
	YSRL 122 ~ 131	12.2 ~ 13.1	13.0	135	88	4
	YSRL 132 ~ 141	13.2 ~ 14.1	14.0	145	94	
	YSRL 142 ~ 151	14.2 ~ 15.1	15.0	150	97	4
	YSRL 152 ~ 161	15.2 ~ 16.1	16.0			
	YSRL 162 ~ 171	16.2 ~ 17.1	17.0			
	YSRL 172 ~ 181	17.2 ~ 18.1	18.0	157	109	
	YSRL 182 ~ 191	18.2 ~ 19.1	19.0			
	YSRL 192 ~ 200	19.2 ~ 20.0	20.0			

Machining case of YSR

▶ Company : "M" Automotive

▶ Applied Carbide Speedy Reamer : YSR120-R0.6
 ▶ Kind of machine : Machining center, Vertical spindle
 ▶ Work-piece : SCM420H, EPS Pinion shaft, HRC27~31

(See reamed work-piece photo)

▶ Cutting speed : 1200rpm, Vc = 45m/min., f = 0.2mm/rev.

▶ Pre-drilling : Ф11.8mm, cut-off : 0.1mm(one side)

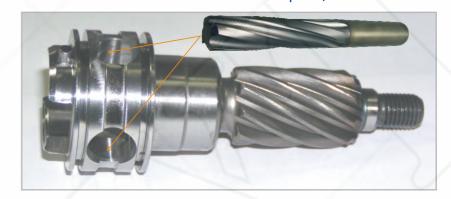
▶ Coolant : External soluble oil

Resulted in great performance

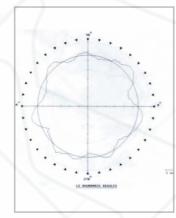
▶ Roundness : O=1.80μm,▶ Roughness : Ra = 0.14μm

▶ Cycle time 650% increase

Photo illustrates the reamed actual work-piece, EPS Pinion shaft.

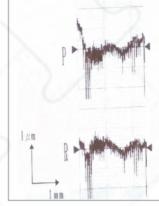


Roundness measures



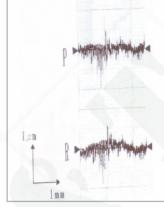
Measuring : External $O = 1.80 \mu m$

Roughness for hole mouth



P: Polarity R: Round measure Ra = 0.14 μm Rmax = 3.18 μm Rz = 1.58 μm

Roughness for hole end



P: Polarity R: Round measure Ra = 0.10µm Rmax = 1.46µm Rz = 0.94µm

❖ YSR Speedy reamer ran at faster cycle time, higher speed & feed, longer tool life along with greater roundness and roughness.

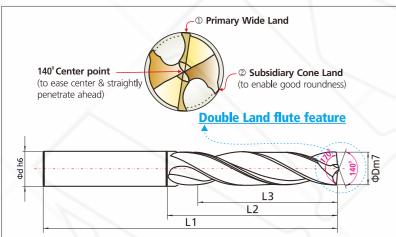
Note

All the dimension is similar to YSD drills.

Recommended pre-drilling size -0.2mm.

Solid Carbide "F"(flat bottom) point drills





"F" point test photo as below

Drill: YSDLF 100 TiAIN Material: SCM440(42CrMo4)

rpm: 2,000

f: 0.2mm/rev (**F**: 400mm/min)



YSDF - Solid Carbide "F" Point Drill

Code No.	D	d	L1	L2	L3	
YSDF 030-035	3.0-3.5	4	55	20	15	
YSDF 036-041	3.6-4.1	4	55	25	19	
YSDF 042-051	4.2-5.1	5	62	32	25	
YSDF 052-061	5.2-6.1	6	66	36	27	
YSDF 062-071	6.2-7.1	7	74	42	32	
YSDF 072-081	7.2-8.1	8	79	46	34	
YSDF 082-091	8.2-9.1	9	84	50	37	
YSDF 092-101	9.2-10.1	10	89	53	38	
YSDF 102-111	10.2-11.1	11	95	55	40	
YSDF 112-121	11.2-12.1	12	102	62	44	
YSDF 122-131	12.2-13.1	13	102	02	42	
YSDF 132-141	13.2-14.1	14	107	64	43	
YSDF 142-151	14.2-15.1	15	111	67	45	
YSDF 152-161	15.2-16.1	16	115	69	43	
YSDF 162-171	16.2-17.1	17	119	71	46	
YSDF 172-181	17.2-18.1	18	123	74	47	
YSDF 182-191	18.2-19.1	19	127	76	48	
YSDF 192-200	19.2-20.0	20	131	80	50	

(YSDLF) - Solid Carbide "F" Point Long Drill

Code No.	D	d	L1	L2	L3
YSDLF 030-035	3.0-3.5	4			40
YSDLF 036-041	3.6-4.1	4	80	45	39
YSDLF 042-051	4.2-5.1	5			38
YSDLF 052-061	5.2-6.1	6	83	50	41
YSDLF 062-071	6.2-7.1	7	85	53	43
YSDLF 072-081	7.2-8.1	8	90	58	46
YSDLF 082-091	8.2-9.1	9	98	64	51
YSDLF 092-101	9.2-10.1	10	105	68	53
YSDLF 102-111	10.2-11.1	11	110	73	57
YSDLF 112-121	11.2-12.1	12	120	80	62
YSDLF 122-131	12.2-13.1	13	137	90	71
YSDLF 132-141	13.2-14.1	14	147	96	75
YSDLF 142-151	14.2-15.1	15	153	100	78
YSDLF 152-161	15.2-16.1	16			88
YSDLF 162-171	16.2-17.1	17			87
YSDLF 172-181	17.2-18.1	18	160	112	85
YSDLF 182-191	18.2-19.1	19			84
YSDLF 192-200	19.2-20.0	20			82

Application example.











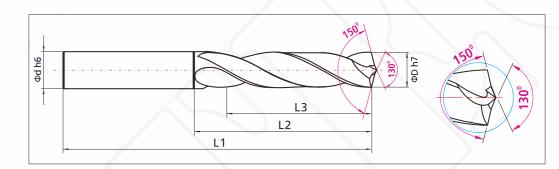


Slant(slope)

Solid Carbide "P"(Premium) point Drill



YSDLP



- ▶ New premium dual point design (130° center+150° side edges)
- ▶ Enables Deep hole drilling
- Minimized vibration
- ▶ Higher penetration
- ▶ Faster chip evacuation rate
- ▶ Available with newest coating "Y+" to increase tool life

YSDP - Solid Carbide "P" Point Drill

Code No.	D	d	L1	L2	L3
YSDP 030-035	3.0-3.5	4	55	20	15
YSDP 036-041	3.6-4.1	4	33	25	19
YSDP 042-051	4.2-5.1	5	62	32	25
YSDP 052-061	5.2-6.1	6	66	36	27
YSDP 062-071	6.2-7.1	7	74	42	32
YSDP 072-081	7.2-8.1	8	79	46	34
YSDP 082-091	8.2-9.1	9	84	50	37
YSDP 092-101	9.2-10.1	10	89	53	38
YSDP 102-111	10.2-11.1	11	95	55	40
YSDP 112-121	11.2-12.1	12	102	62	44
YSDP 122-131	12.2-13.1	13	102	02	42
YSDP 132-141	13.2-14.1	14	107	64	43
YSDP 142-151	14.2-15.1	15	111	67	45
YSDP 152-161	15.2-16.1	16	115	69	40
YSDP 162-171	16.2-17.1	17	119	71	46
YSDP 172-181	17.2-18.1	18	123	74	47
YSDP 182-191	18.2-19.1	19	127	76	48
YSDP 192-200	19.2-20.0	20	131	80	50

- Note: "P" point drill is available on request.

YSDLP - Solid Carbide "P" Point Long Drill

Code No.	D	d	L1	L2	L3
YSDLP 030-035	3.0-3.5	4			40
YSDLP 036-041	3.6-4.1	4	80	45	39
YSDLP 042-051	4.2-5.1	5			38
YSDLP 052-061	5.2-6.1	6	83	50	41
YSDLP 062-071	6.2-7.1	7	85	53	43
YSDLP 072-081	7.2-8.1	8	90	58	46
YSDLP 082-091	8.2-9.1	9	98	64	51
YSDLP 092-101	9.2-10.1	10	105	68	53
YSDLP 102-111	10.2-11.1	11	110	73	57
YSDLP 112-121	11.2-12.1	12	120	80	62
YSDLP 122-131	12.2-13.1	13	137	90	71
YSDLP 132-141	13.2-14.1	14	147	96	75
YSDLP 142-151	14.2-15.1	15	153	100	78
YSDLP 152-161	15.2-16.1	16			88
YSDLP 162-171	16.2-17.1	17			87
YSDLP 172-181	17.2-18.1	18	160	112	85
YSDLP 182-191	18.2-19.1	19			84
YSDLP 192-200	19.2-20.0	20			82

⁻ Note: "F" point drill is available on request,

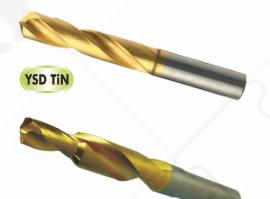
74

76

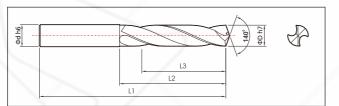
80

L2 L3

Solid Carbide Drill, Metric







Model: YSD

YSSD TiN ❖ Made-to-order

- ▶ Solid Carbide drill, Yes standard length, Plain cylindrical HA shank.
- ▶ Effective cutting depth 3xDia. Whistle notch HE shank available on request)
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.
- ▶ High performance carbide drill and re-sharpening & re-conditioning available

Carbide substrate

▶ Ultra-fine Micro Grain, PVD TiN, TiAlN coated as standard stock.

Application

- ▶ To eliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

Code No.	D	d	L1	L2	L3	
YSD 030	3.0					
YSD 031	3.1					Ì
YSD 032	3.2			20	15	
YSD 033	3.3			20	13	
YSD 034	3.4					
YSD 035	3.5	4.0	55			
YSD 036	3.6	4.0))			
YSD 037	3.7					ŀ
YSD 038	3.8			25	19	
YSD 039	3.9			25	19	
YSD 040	4.0					
YSD 041	4.1					

Code No.	D	d	L1	L2	L3
YSD 042	4.2				
YSD 043	4.3				
YSD 044	4.4				
YSD 045	4.5				
YSD 046	4.6	5.0	62	32	25
YSD 047	4.7	3.0	02	32	23
YSD 048	4.8				
YSD 049	4.9				
YSD 050	5.0				
YSD 051	5.1				

YSD 052	5.2				
YSD 053	5.3				
YSD 054	5.4				
YSD 055	5.5				
YSD 056	5.6	6.0	66	36	27
YSD 057	5.7	0.0	00	30	21
YSD 058	5.8				
YSD 059	5.9				
YSD 060	6.0				
YSD 061	6.1				

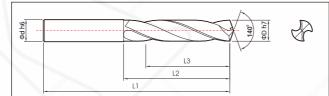
Code No. D d L1 L2 L3

Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	
YSD 062	6.2					YSD 112	11.2					YSD 162	16.2			
YSD 063	6.3					YSD 113	11.3									
YSD 064	6.4					YSD 114	11.4					YSD 163	16.3			
YSD 065	6.5					YSD 115	11.5					YSD 164	16.4			
YSD 066	6.6	7.0	74	12	32	YSD 116	11.6	12.0			44	YSD 165	16.5			
YSD 067	6.7	7.0	74	42	32	YSD 117	11.7	12.0			44	YSD 166	16.6			
YSD 068	6.8					YSD 118	11.8					YSD 167	16.7	17.0	119	
YSD 069	6.9					YSD 119	11.9									
YSD 070	7.0					YSD 120	12.0					YSD 168	16.8			
YSD 071	7.1					YSD 121	12.1		102	62		YSD 169	16.9			
YSD 072	7.2	_				YSD 122	12.2					YSD 170	17.0			
YSD 073	7.3					YSD 123	12.3					YSD 171	17.1			
YSD 074	7.4	-				YSD 124	12.4									
YSD 075	7.5					YSD 125	12.5					YSD 172	17.2			
YSD 076	7.6	8.0	79	46	34		YSD 126 12.6 13.0			42	YSD 173	17.3				
YSD 077 YSD 078	7.7	<u> </u>) >	YSD 127	12.7					YSD 174	17.4			
YSD 079	7.8					YSD 128 YSD 129	12.8					YSD 175	17.5			
YSD 080	8.0		1			YSD 130	13.0									
YSD 081	8.1					YSD 131	13.1					YSD 176	17.6	18.0	123	
YSD 082	8.2				\ \	YSD 132	13.2					YSD 177	17.7			
YSD 083	8.3	_				YSD 133	13.3			7.		YSD 178	17.8			
YSD 084	8.4	-				YSD 134	13.4					YSD 179	17.9			
YSD 085	8.5	-				YSD 135	13.5					YSD 180	18.0			
YSD 086	8.6					YSD 136	13.6									
YSD 087	8.7	9.0	84	50	37	YSD 137	13.7	14.0	107	64	43	YSD 181	18.1			
YSD 088	8.8					YSD 138	13.8					YSD 182	18.2			
YSD 089	8.9					YSD 139	13.9					YSD 183	18.3			
YSD 090	9.0					YSD 140	14.0					YSD 184	18.4			
YSD 091	9.1					YSD 141	14.1									
YSD 092	9.2					YSD 142	14.2				YSD 185	18.5				
YSD 093	9.3					YSD 143	14.3					YSD 186	18.6	19.0	127	
YSD 094	9.4					YSD 144	14.4					YSD 187	18.7			
YSD 095	9.5				/	YSD 145	14.5					YSD 188	18.8			
YSD 096	9.6	10.0	89	53	38	YSD 146	14.6	15.0	111	67	45	YSD 189	10 0			
YSD 097	9.7					YSD 147	14.7						18.9			
YSD 098	9.8					YSD 148	14.8					YSD 190	19.0			
YSD 099	9.9					YSD 149	14.9					YSD 191	19.1			
YSD 100	10.0					YSD 150	15.0					YSD 192	19.2			
YSD 101	10.1					YSD 151	15.1					YSD 193	19.3			
YSD 102 YSD 103	10.2					YSD 152 YSD 153	15.2 15.3									
YSD 103	10.3					YSD 154	15.4					YSD 194	19.4			
YSD 104	10.4	-				YSD 155	15.5					YSD 195	19.5	20.0	124	
YSD 106	10.5	-				YSD 156	15.6					YSD 196	19.6	20.0	131	
YSD 107	10.7	11.0	95	55	40	YSD 157	15.7	16.0	115	69	45	YSD 197	19.7			
YSD 108	10.8					YSD 158	15.8									
YSD 109	10.9					YSD 159	15.9				YSD 198	19.8				
YSD 110	11.0					YSD 160	16.0					YSD 199	19.9			
YSD 111	11.1					YSD 161	16.1					YSD 200	20.0			

Solid Carbide Drill, Inch







Model: YSD

- ▶ Solid Carbide drill, Yes standard length, Plain cylindrical HA shank.
- ▶ Effective cutting depth 3xDia. Whistle notch HE shank available on request)
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.
- ▶ High performance carbide drill and re-sharpening & re-conditioning available

Carbide substrate

▶ Ultra-fine Micro Grain, PVD TiN, TiAlN coated as standard stock.

Application

- ▶ To eliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

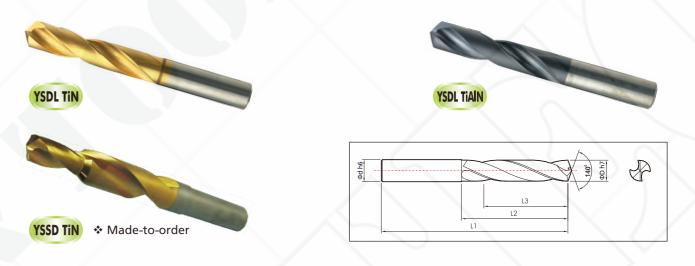
Inch Size

Code No.	D	d	L1	L2	L3
YSD .1250	1/8		2.16	0.78	0.59
YSD .1562	5/32	3/16	2.44	1.25	1
YSD .1875	3/16		2.44	1.23	'
YSD .2188	7/32	1/4	2.91	1.65	1.25
YSD .2500	1/4	1/4	2.91	1.05	1.23
YSD .2656	17/64				
YSD .2812	9/32	5/16	3.11	1.81	1.33
YSD .2969	19/64	3/10	3.11	1.01	1.55
YSD .3125	5/16				
YSD .3281	21/64				
YSD .3438	11/32	3/8	3.5	2.08	1.5
YSD .3594	23/64	3/0	3.3	2.00	ر.۱
YSD .3750	3/8				

Inch Size

Code No.	D	d	L1	L2	L3
YSD .3906	25/64				
YSD .4062	13/32	7/16	2.74	2.16	1.57
YSD .4219	27/64	//16	3.74	2.16	1.57
YSD .4375	7/16				
YSD .4531	29/64				
YSD .4688	15/32	1/2	4.01	2.44	1.65
YSD .4844	31/64	1/2	4.01	2.44	1.05
YSD .5000	1/2				
YSD .5625	9/16	9/16	4.37	2.63	1.77
YSD .6250	5/8	5/8	4.52	2.71	1.77
YSD .6875	11/16	11/16	4.84	2.91	1.85
YSD .7500	3/4	3/4	5	2.99	1.88

Solid Carbide Drill, Long Series, Metric



Model: YSDL

- ▶ Solid Carbide drill, Yes standard length, Plain cylindrical HA shank.
- ▶ Effective cutting depth 5xDia. Whistle notch HE shank available on request)
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.
- ▶ High performance carbide drill and re-sharpening & re-conditioning available

Carbide substrate

▶ Ultra-fine Micro Grain, PVD TiN, TiAlN coated as standard stock.

- ▶ To eliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

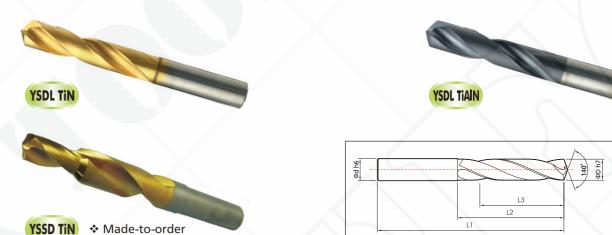
Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDL 030	3.0					YSDL 042	4.2					YSDL 052	5.2				
YSDL 031	3.1					YSDL 043	4.3					YSDL 053	5.3				
YSDL 032	3.2				40	VCDI 044	4.4					VCDI OFA	F 4				
YSDL 033	3.3				40	YSDL 044	4.4					YSDL 054	5.4				
YSDL 034	3.4	5				YSDL 045	4.5					YSDL 055	5.5				
YSDL 035	3.5					YSDL 046	4.6					YSDL 056	5.6				
YSDL 036	3.6	4.0	80	45		YSDL 047	4.7	5.0	80	45	38	YSDL 057	5.7	6.0	83	50	41
YSDL 037	3.7					YSDL 048	4.8					YSDL 058	5.8				
YSDL 038	3.8				39	VCDI 040	4.0					VCDI 0F0	5.9			/	
YSDL 039	3.9				39	YSDL 049	4.9					YSDL 059	5.9				
YSDL 040	4.0					YSDL 050	5.0					YSDL 060	6.0				
YSDL 041	4.1					YSDL 051	5.1					YSDL 061	6.1				

Solid Carbide Drill, Long Series, Metric

Code No. O d I 1 13 13 Code No. D d L 13 YSDL 063 6.3 YSDL 063 6.4 YSDL 066 6.6 YSDL 066 6.6 YSDL 066 6.6 YSDL 066 6.6 YSDL 067 6.7 YSDL 067 6.6 YSDL 070 7.0 YSDL 070 7.0 YSDL 070 7.0 YSDL 070 7.0 YSDL 070 7.0												
YSDL 063 6.3 YSDL 064 6.4 YSDL 065 6.5 YSDL 066 6.6 YSDL 067 6.7 YSDL 077 YSDL 077 YSDL 077 YSDL 077 YSDL 073 YSD	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDL 064 6.4 YSDL 065 6.5 YSDL 066 6.6 YSDL 066 6.7 YSDL 066 6.6 YSDL 067 7.7 YSDL 066 6.8 YSDL 077 7.0 YSDL 077 7.0 YSDL 077 7.1 YSDL 077 7.1 YSDL 111 11.1 11.0 12.0 12.0 12.0 12.0 12.0 8.0 62 YSDL 073 7.3 YSDL 076 7.6 YSDL 077 7.7 YSDL 077 7.7 YSDL 118 11.0 12.0 </td <th>YSDL 062</th> <th>6.2</th> <td></td> <td></td> <td></td> <td></td> <th>YSDL 108</th> <td>10.8</td> <td></td> <td></td> <td></td> <td></td>	YSDL 062	6.2					YSDL 108	10.8				
YSDL 066 6.4 YSDL 066 6.5 YSDL 066 6.5 YSDL 066 6.6 YSDL 066 6.6 YSDL 066 6.6 YSDL 068 6.8 YSDL 070 7.0 YSDL 071 7.1 YSDL 073 7.3 YSDL 073 7.3 YSDL 073 7.3 YSDL 074 7.4 YSDL 075 7.5 YSDL 077 7.7 YSDL 078 8.0 YSDL 078 7.5 YSDL 079 7.9 YSDL 080 8.0 YSDL 081 8.1 YSDL 082 8.2 YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 088 8.8 YSDL 089 8.9 YSDL 089 9.0 <th>YSDL 063</th> <th>6.3</th> <td></td> <td></td> <td></td> <td></td> <th>YSDL 109</th> <td>10.9</td> <td></td> <td></td> <td></td> <td></td>	YSDL 063	6.3					YSDL 109	10.9				
YSDL 066 6.6 (YSDL 067) 7.0 (AS) 85 (AS) 53 (AS) 43 (YSDL 113) 11.3 (YSDL 114) 11.4 (YSDL 115) 11.5 (YSDL 116) 11.5 (YSDL 116) 11.5 (YSDL 116) 11.5 (YSDL 117) 11.5 (YSDL	YSDL 064	6.4					YSDL 110	11.0	11.0	110	73	57
YSDL 066 6.7 7.0 85 53 43 YSDL 113 11.3 43 YSDL 114 11.4 44 YSDL 115 11.5 45 45 YSDL 115 11.5 45 45 45 YSDL 116 11.6 45	YSDL 065	6.5					YSDL 111	11.1				
YSDL 067 6.7 6.8 YSDL 068 6.8 YSDL 070 7.0 YSDL 070 7.1 YSDL 071 11.0 YSDL 118 11.3 11.0 YSDL 070 7.0 YSDL 120 12.0 <th>YSDL 066</th> <th>6.6</th> <td></td> <td></td> <td></td> <td></td> <th>YSDL 112</th> <td>11.2</td> <td></td> <td></td> <td></td> <td></td>	YSDL 066	6.6					YSDL 112	11.2				
YSDL 068 6.8 CAN TO COME TO C	YSDL 067	6.7	7.0	85	53	43	YSDL 113	11.3				
YSDL 069 6.9 6.9 YSDL 070 7.0 YSDL 070 7.0 YSDL 071 11.5 YSDL 1715 11.5 PSDL 071 7.0 PSDL 072 7.2 YSDL 073 7.3 YSDL 073 7.3 YSDL 074 7.4 YSDL 075 7.5 YSDL 075 7.5 YSDL 075 7.5 YSDL 075 7.5 YSDL 075 7.7 YSDL 120 12.0 PSDL 172 12.0 PSDL 172 12.0 PSDL 075 PSDL 075 7.5 YSDL 172 12.0 PSDL 172 PSDL 172 <th>YSDL 068</th> <th>6.8</th> <td></td> <td></td> <td></td> <td></td> <th>YSDL 114</th> <td>11.4</td> <td></td> <td></td> <td></td> <td></td>	YSDL 068	6.8					YSDL 114	11.4				
YSDL 070 7.0 YSDL 071 7.1 YSDL 071 7.1 YSDL 172 1.2 12.0							YSDL 115					
YSDL 071 7.1 YSDL 177 11.7 12.0 12.0 80 62 YSDL 072 7.2 YSDL 073 7.3 YSDL 074 7.4 YSDL 075 7.5 YSDL 075 7.5 YSDL 076 7.6 YSDL 077 7.7 YSDL 077 7.7 YSDL 080 8.0 YSDL 122 12.2 YSDL 122		7.0						11.6				
YSDL 072 7.2 7.2 7.3 7.3 7.3 7.4 7.4 7.4 7.5 7.									12.0	120	80	62
YSDL 073 7.3 7.4 7.4 7.4 7.5 7.											~_	
YSDL 074 7.4 7.5 7.											/	
YSDL 075 7.5 8.0 90 58 46 YSDL 121 12.1 0 0 0 12.1 0												
YSDL 076 7.6 8.0 90 58 46 YSDL 122 12.2 75DL 123 12.3 75DL 123 12.3 75DL 124 12.4 75DL 124 12.4 75DL 125 12.5 75DL 126 12.6 75DL 127 12.7												
YSDL 077 7.7 8.0 90 58 46 YSDL 123 12.3												
YSDL 078 7.8 YSDL 079 7.9 YSDL 080 8.0 YSDL 081 8.1 YSDL 082 8.2 YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 086 8.6 YSDL 087 8.7 YSDL 088 8.8 YSDL 089 8.9 YSDL 099 9.0 YSDL 090 9.0 YSDL 091 9.1 YSDL 092 9.2 YSDL 093 9.3 YSDL 094 9.4 YSDL 095 9.5 YSDL 096 9.6 YSDL 097 9.7 YSDL 098 9.8 YSDL 099 9.9 YSDL 090 9.0 YSDL 131 13.0 YSDL 132 13.2 YSDL 133 13.3 YSDL 139 13.9 YSDL 141 14.0 YSDL 141 14.0 YSDL 141 14.1			8.0	90	58	46						
YSDL 079 7.9 YSDL 080 8.0 YSDL 081 8.1 YSDL 082 8.2 YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 086 8.6 YSDL 087 8.7 YSDL 088 8.8 YSDL 098 8.9 YSDL 099 9.0 YSDL 091 9.1 YSDL 092 9.2 YSDL 093 9.3 YSDL 094 9.4 YSDL 095 9.5 YSDL 096 9.6 YSDL 1097 9.7 YSDL 1096 9.6 YSDL 1097 9.7 YSDL 1096 9.6 YSDL 1097 9.7 YSDL 1097 9.7 YSDL 1098 9.8 YSDL 1096 9.6 YSDL 1097 9.7 YSDL 1097 9.7 YSDL 1097 9.7 YSDL 1098 9.8 YSDL 1099 9.9<												
YSDL 080 8.0 YSDL 081 8.1 YSDL 081 8.1 YSDL 127 12.7 13.0 137 90 71 YSDL 081 8.1 YSDL 128 12.8 YSDL 128 12.8 12.8 YSDL 129 12.9 1					>							
YSDL 081 8.1 YSDL 082 8.2 YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 086 8.6 YSDL 087 8.7 YSDL 088 8.8 YSDL 089 8.9 YSDL 090 9.0 YSDL 091 9.1 YSDL 093 9.3 YSDL 094 9.4 YSDL 095 9.5 YSDL 096 9.6 YSDL 097 9.7 YSDL 098 9.8 YSDL 099 9.9 YSDL 130 13.0 YSDL 133 13.3 YSDL 136 13.6 YSDL 137 13.7 YSDL 138 13.8 YSDL 139 13.9 YSDL 139 13.9 YSDL 140 14.0 YSDL 141 14.1 YSDL 141 14.1 YSDL 144 14.4 YSDL 144 14.4 YSDL 144 14.5<			\ \									
YSDL 082 8.2 YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 086 8.6 YSDL 087 8.7 YSDL 088 8.8 YSDL 089 8.9 YSDL 090 9.0 YSDL 091 9.1 YSDL 092 9.2 YSDL 093 9.3 YSDL 094 9.4 YSDL 095 9.5 YSDL 096 9.6 YSDL 097 9.7 YSDL 098 9.8 YSDL 100 10.0 YSDL 101 10.1 YSDL 102 10.2 YSDL 103 10.3 YSDL 104 14.0 YSDL 144 14.1 YSDL 145 14.5 YSDL 146 14.6 YSDL 150 15.0 YSDL 103 10.3 YSDL 104 14.0 YSDL 165 15.0 YSDL 175 15.0 YSDL 160 10.6									13.0	137	90	71
YSDL 083 8.3 YSDL 084 8.4 YSDL 085 8.5 YSDL 086 8.6 YSDL 087 8.7 YSDL 088 8.8 YSDL 089 8.9 YSDL 089 8.9 YSDL 090 9.0 YSDL 091 9.1 YSDL 092 9.2 YSDL 093 9.3 YSDL 094 9.4 YSDL 095 9.5 YSDL 096 9.6 YSDL 097 9.7 YSDL 098 9.8 YSDL 100 10.0 YSDL 101 10.1 YSDL 102 10.2 YSDL 103 13.3 YSDL 141 14.0 YSDL 141 14.0 YSDL 141 14.1 YSDL 142 14.2 YSDL 143 14.3 YSDL 144 14.4 YSDL 145 14.5 YSDL 144 14.6 YSDL 151 15.0 YSDL 160 10.6												
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YSDL 096 9.6 YSDL 097 9.7 YSDL 098 9.8 YSDL 100 10.0 YSDL 101 10.1 YSDL 102 10.2 YSDL 103 10.3 YSDL 104 10.4 YSDL 105 10.5 YSDL 106 10.6		9.4					YSDL 140	14.0				
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YSDL 101 10.1 YSDL 102 10.2 YSDL 103 10.3 YSDL 104 10.4 YSDL 105 10.5 YSDL 106 10.6 YSDL 147 14.7 YSDL 148 14.8 YSDL 149 14.9 YSDL 150 15.0 YSDL 151 15.1 YSDL 152 15.2 16.0 160 112 88	YSDL 100	10.0					YSDL 146	14.6	15.0	153	100	78
YSDL 103 10.3 YSDL 104 10.4 YSDL 105 10.5 YSDL 106 10.6 YSDL 149 14.9 YSDL 150 15.0 YSDL 151 15.1 YSDL 152 15.2 16.0 160 112 88	YSDL 101	10.1					YSDL 147	14.7				
YSDL 104 10.4 YSDL 105 10.5 YSDL 106 10.6 YSDL 150 15.0 YSDL 151 15.1 YSDL 152 15.2 16.0 160 11.0 11.0 11.0 11.0 73 57 YSDL 150 15.1 YSDL 152 15.2 16.0 16.0 16.0 112 88	YSDL 102	10.2					YSDL 148	14.8				
YSDL 105 10.5 YSDL 106 10.6 11.0 110 73 57 YSDL 151 15.1 YSDL 152 15.2 16.0 160 112 88	YSDL 103	10.3					YSDL 149	14.9				
YSDL 105 10.5 YSDL 106 10.6 YSDL 151 15.1 YSDL 152 15.2 16.0 16.0 16.0 16.0 16.0 112 88	YSDL 104	10.4	11 0	110	73	57	YSDL 150	15.0				
16.0 16.0 11.2 88	YSDL 105	10.5	11.0	' ' '	/3	"	YSDL 151	15.1				
YSDL 107 10.7 YSDL 153 15.3 10.0 100 112 88	YSDL 106	10.6					YSDL 152	15.2	16.0	160	117	22
	YSDL 107	10.7					YSDL 153	15.3	10.0	100	112	00

Code No.	D	d	L1	L2	L3
YSDL 154	15.4				
YSDL 155	15.5				
YSDL 156	15.6				
YSDL 157	15.7				
YSDL 158	15.8	16.0			88
YSDL 159	15.9				
YSDL 160	16.0				
YSDL 161	16.1				
YSDL 162	16.2				
YSDL 163	16.3				
YSDL 164	16.4				
YSDL 165	16.5				
YSDL 166	16.6	17.0			87
YSDL 167	16.7	17.0			0,
YSDL 168	16.8				
YSDL 169	16.9				
YSDL 170	17.0				
YSDL 171	17.1				
YSDL 172	17.2				
YSDL 173	17.3				
YSDL 174	17.4				
YSDL 175	17.5				
YSDL 176	17.6	18.0			85
YSDL 177	17.7		160	112	
YSDL 178	17.8				
YSDL 179	17.9				
YSDL 180	18.0				
YSDL 181	18.1				
YSDL 182	18.2				
YSDL 183	18.3				
YSDL 184	18.4				
YSDL 185	18.5				
YSDL 186	18.6	19.0			84
YSDL 187	18.7				
YSDL 188	18.8				
YSDL 189 YSDL 190	19.0				
YSDL 190	19.1				
YSDL 191	19.1				
YSDL 193	19.2				
YSDL 193	19.4				
YSDL 194 YSDL 195	19.4				
YSDL 195 YSDL 196	19.5	20.0			82
YSDL 196	19.7	20.0			OZ.
YSDL 197 YSDL 198	19.7				
YSDL 198	19.9				
YSDL 200	20.0			/ /	
1 3DL 200	20.0				

Solid Carbide Drill, Long Series, Inch



Model: YSDL

- ▶ Solid Carbide drill, Yes standard length, Plain cylindrical HA shank.
- ▶ Effective cutting depth 5xDia. Whistle notch HE shank available on request)
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.
- ▶ High performance carbide drill and re-sharpening & re-conditioning available

Carbide substrate

▶ Ultra-fine Micro Grain, PVD TiN, TiAlN coated as standard stock.

Application

- ▶ To eliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

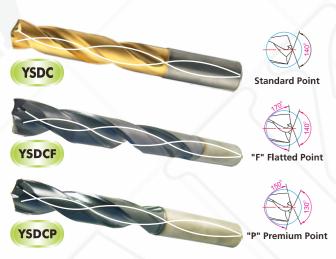
Inch Size

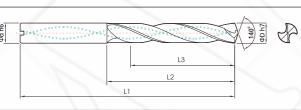
Code No.	D	d	L1	L2	L3
YSDL .1250	1/8				
YSDL .1562	5/32	3/16	3.15	1.77	1.57
YSDL .1875	3/16				
YSDL .2188	7/32	4.44	2.26	2.00	1.60
YSDL .2500	1/4	1/4	3.26	2.08	1.69
YSDL .2656	17/64				
YSDL .2812	9/32	5/16	3.54	2.28	1.81
YSDL .2969	19/64	3/10	3.54	2.20	1.01
YSDL .3125	5/16				
YSDL .3281	21/64				
YSDL .3438	11/32	3/8	4.13	2.67	2.08
YSDL .3594	23/64	3/6	4.13	2.07	2.06
YSDL .3750	3/8				

Inch Size

	Code No.	D	d	L1	L2	L3
	YSDL .3906	25/64				
	YSDL .4062	13/32	7/16	4.33	2.87	2.24
	YSDL .4219	27/64	//16	4.33	2.87	2.24
	YSDL .4375	7/16				
	YSDL .4531	29/64				
	YSDL .4688	15/32	1/2	5.39	3.54	2.79
	YSDL .4844	31/64	1/2	5.39	3.54	2.79
	YSDL .5000	1/2				
	YSDL .5625	9/16	9/16	5.78	3.77	2.95
	YSDL .6250	5/8	5/8		1	
	YSDL .6875	11/16	11/16	6.29	4.4	3.46
	YSDL .7500	3/4	3/4			
'						

Solid Carbide Coolant Drill, Metric





Model · VSDC

- ▶ Solid Carbide Coolant hole drill, HA shank
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.

Carbide substrate:

▶ Micro Grain Carbide, TiN & TiAlN

- ▶ High productivity. Coolant fed design efficiently cools the workpiece and provides good chip removal.
- ▶ To elliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.

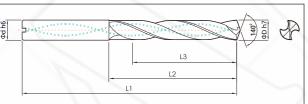
Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDC 050	5.0	5.0			35	YSDC 061	6.1	6.0	72	42	33	YSDC 072	7.2				
YSDC 051	5.1	5.0			35	YSDC 062	6.2					YSDC 073	7.3				
YSDC 052	5.2					YSDC 063	6.3					YSDC 074	7.4				
YSDC 053	5.3					YSDC 064	6.4					YSDC 075	7.5				
YSDC 054	5.4					YSDC 065	6.5					YSDC 076	7.6				
YSDC 055	5.5		72	42		YSDC 066	6.6					1300 076	7.0	8.0	97	60	48
YSDC 056	5.6	6.0			33	YSDC 067	6.7	7.0	97	60	50	YSDC 077	7.7				
YSDC 057	5.7					YSDC 068	6.8					YSDC 078	7.8				
YSDC 058	5.8					YSDC 069	6.9					YSDC 079	7.9				
YSDC 059	5.9					YSDC 070	7.0					YSDC 080	8.0				
YSDC 060	6.0					YSDC 071	7.1					YSDC 081	8.1				

- ❖ Available small dia. below 5.0 and special step coolant drill on request.
- ❖ YSDCP & YSDCF available upon request only

Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDC 082	8.2					YSDC 122	12.2					YSDC 162	16.2				
YSDC 083	8.3					YSDC 123	12.3					YSDC 163	16.3				
YSDC 084	8.4					YSDC 124	12.4					YSDC 164	16.4				
YSDC 085	8.5					YSDC 125	12.5					YSDC 165	16.5				
YSDC 086	8.6				47	YSDC 126	12.6	42.0			00	YSDC 166	16.6			$ \overline{} $	
YSDC 087	8.7	9.0			47	YSDC 127	12.7	13.0			83	YSDC 167	16.7	17.0			79
YSDC 088	8.8					YSDC 128	12.8					YSDC 168	16.8				
YSDC 089	8.9					YSDC 129	12.9					YSDC 169	16.9				
YSDC 090	9.0					YSDC 130	13.0)		YSDC 170	17.0				
YSDC 091	9.1		07	60		YSDC 131	13.1					YSDC 171	17.1				
YSDC 092	9.2		97	60		YSDC 132	13.2					YSDC 172	17.2				
YSDC 093	9.3					YSDC 133	13.3					YSDC 173	17.3				
YSDC 094	9.4					YSDC 134	13.4					YSDC 174	17.4				
YSDC 095	9.5					YSDC 135	13.5					YSDC 175	17.5	_			
YSDC 096	9.6	10.0	1		45	YSDC 136	13.6	14.0			81	YSDC 176	17.6				
YSDC 097	9.7	10.0			45	YSDC 137	13.7	14.0	\setminus		01	YSDC 177	17.7	18.0			7
YSDC 098	9.8				\ \	YSDC 138	13.8					YSDC 178	17.8				
YSDC 099	9.9					YSDC 139	13.9					YSDC 179	17.9				
YSDC 100	10.0					YSDC 140	14.0					YSDC 180	18.0				
YSDC 101	10.1					YSDC 141	14.1		143	102		YSDC 181	18.1				
YSDC 102	10.2					YSDC 142	14.2		113	102		YSDC 182	18.2		146	104	
YSDC 103	10.3					YSDC 143	14.3					YSDC 183	18.3				
YSDC 104	10.4					YSDC 144	14.4										
YSDC 105	10.5					YSDC 145	14.5					YSDC 184	18.4				
YSDC 106	10.6	11.0			84	YSDC 146	14.6	15.0			80	YSDC 185	18.5				
YSDC 107	10.7					YSDC 147	14.7					YSDC 186	18.6	19.0			7
YSDC 108	10.8					YSDC 148	14.8					YSDC 187	18.7				
YSDC 109	10.9					YSDC 149	14.9					YSDC 188	18.8				
YSDC 110	11.0					YSDC 150	15.0					YSDC 189	18.9				
YSDC 111	11.1		140	100		YSDC 151	15.1					YSDC 190	19.0				
YSDC 112	11.2					YSDC 152	15.2					YSDC 191	19.1				
YSDC 113	11.3					YSDC 153	15.3					YSDC 192	19.2				
YSDC 114	11.4					YSDC 154	15.4					YSDC 193	19.3				
YSDC 115	11.5					YSDC 155	15.5					YSDC 194	19.4				
YSDC 116	11.6	12.0			82	YSDC 156	15.6	16.0			78	YSDC 195	19.5				
YSDC 117	11.7					YSDC 157	15.7					YSDC 196	19.6	20.0		1	7.
YSDC 118	11.8					YSDC 158	15.8					YSDC 197	19.7				
YSDC 119	11.9					YSDC 159	15.9					YSDC 198	19.8				
YSDC 120	12.0					YSDC 160	16.0					YSDC 199	19.9				
YSDC 121	12.1					YSDC 161	16.1					YSDC 200	20.0				

Solid Carbide Coolant Drill, Inch





Inch Size

Code No.	D	d	L1	L2	L3
YSDC .1875	3/16	3/16	3.22		1.54
YSDC .2188	7/32	1/4	2.22	1.73	1.24
YSDC .2500	1/4	1/4	3.23		1.34
YSDC .2656	17/64				
YSDC .2812	9/32	5/16	3.58	2.08	1.61
YSDC .2969	19/64	3/10	3.36	2.00	1.01
YSDC .3125	5/16				
YSDC .3281	21/64				
YSDC .3438	11/32	3/8	4.05	2.4	1.81
YSDC .3594	23/64	5/8	4.05	2.4	1.81
YSDC .3750	3/8				

Model: YSDC

- ▶ Solid Carbide Coolant hole drill, HA shank
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle: 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.

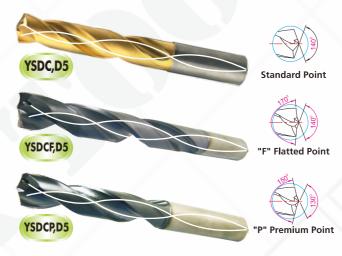
Micro Grain Carbide, TiN & TiAlN

- ▶ High productivity. Coolant fed design efficiently cools the workpiece and provides good chip removal.
- ▶ To elliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.

Inch Size

Code No.	D	d	L1	L2	L3
YSDC .3906	25/64				
YSDC .4062	13/32	7/16	4.37	2.63	2
YSDC .4219	27/64	//16	4.57	2.03	2
YSDC .4375	7/16				
YSDC .4531	29/64				\times
YSDC .4688	15/32	1/2	4.64	2.79	2.05
YSDC .4844	31/64	1/2	4.04	2.79	2.03
YSDC .5000	1/2				
YSDC .5625	9/16	9/16	4.88	3.03	2.17
YSDC .6250	5/8	5/8	5.23	3.26	2.32
YSDC .6875	11/16	11/16	5.62	3.66	2.6
YSDC .7500	3/4	3/4	6.02	3.97	2.86

Solid Carbide Coolant Drill, Reinforced Shank





Model: YSDC, D5

- ▶ Solid Carbide Coolant hole drill, Whistle notch DIN6535 HE shank, effective cutting depth 5xDia.
- ▶ Cylindrical HA shank is available on request.
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle: 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.

Carbide substrate:

▶ Micro Grain Carbide , TiN & TiAlN

- ▶ High productivity. Coolant fed design efficiently cools the workpiece and provides good chip removal.
- ▶ To elliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.

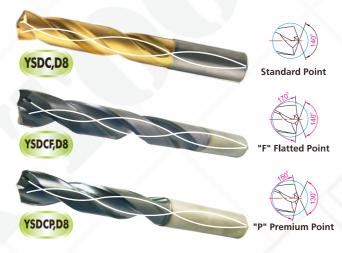
Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDC 050D5	5.0					YSDC 066D5	6.6					YSDC 082D5	8.2				
YSDC 051D5	5.1					YSDC 067D5	6.7					YSDC 083D5	8.3				
YSDC 052D5	5.2					YSDC 068D5	6.8				43	YSDC 084D5	8.4				
YSDC 053D5	5.3					YSDC 069D5	6.9					YSDC 085D5	8.5				
YSDC 054D5	5.4				\geq	YSDC 070D5	7.0					YSDC 086D5	8.6				48
YSDC 055D5	5.5	6.0	82	44	35	YSDC 071D5	7.1					YSDC 087D5	8.7				
YSDC 056D5	5.6		<			YSDC 072D5	7.2					YSDC 088D5	8.8	-			
YSDC 057D5	5.7)	YSDC 073D5	7.3	8.0	91	53		YSDC 089D5	8.9	10.0	102	61	
YSDC 058D5	5.8					YSDC 074D5	7.4					YSDC 090D5	9.0	10.0	103	61	
YSDC 059D5	5.9	5				YSDC 075D5	7.5				41	YSDC 091D5	9.1				
YSDC 060D5	6.0					YSDC 076D5	7.6				41	YSDC 092D5	9.2				
YSDC 061D5	6.1					YSDC 077D5	7.7					YSDC 093D5	9.3				
YSDC 062D5	6.2					YSDC 078D5	7.8					YSDC 094D5	9.4				46
YSDC 063D5	6.3	8.0	91	53	43	YSDC 079D5	7.9					YSDC 095D5	9.5				
YSDC 064D5	6.4					YSDC 080D5	8.0					YSDC 096D5	9.6				
YSDC 065D5	6.5					YSDC 081D5	8.1	10.0	103	61	48	YSDC 097D5	9.7				

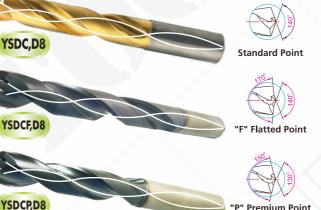
Solid Carbide Coolant Drill, Reinforced Shank

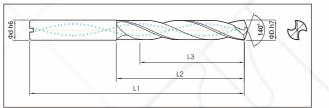
Code No.	D	d	L1	L2	L3		Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDC 098D5	9.8				46		YSDC 132D5	13.2					YSDC 166D5	16.6				
YSDC 099D5	9.9	10.0	103	61			YSDC 133D5	13.3					YSDC 167D5	16.7				68
YSDC 100D5	10.0						YSDC 134D5	13.4	5				YSDC 168D5	16.8				00
YSDC 101D5	10.1						YSDC 135D5	13.5					YSDC 169D5	16.9				
YSDC 102D5	10.2						YSDC 136D5	13.6		124	77	7 56	YSDC 170D5	17.0				
YSDC 103D5	10.3						YSDC 137D5	13.7					YSDC 171D5	17.1				
YSDC 104D5	10.4						YSDC 138D5	13.8					YSDC 172D5 YSDC 173D5	17.2			93	
YSDC 105D5	10.5						YSDC 139D5	13.9	13.9 14.0 14.1 14.2 14.3 14.4		7			17.3	18.0	143		
YSDC 106D5	10.6				55		YSDC 140D5	14.0)		YSDC 174D5	17.4				
YSDC 107D5	10.7						YSDC 141D5	14.1					YSDC 175D5	17.5		4		66
YSDC 108D5	10.8						YSDC 142D5	14.2					YSDC 176D5	17.6				
YSDC 109D5	10.9						YSDC 143D5	14.3					YSDC 177D5	17.7				
YSDC 110D5	11.0						YSDC 144D5	14.4					YSDC 178D5	17.8				
YSDC 111D5	11.1	12.0	118	71		1	YSDC 145D5	14.5					YSDC 179D5	17.9				
YSDC 112D5	11.2						YSDC 146D5	14.6				55	YSDC 180D5	18.0				
YSDC 113D5	11.3						YSDC 147D5	14.7	16.0				YSDC 181D5	18.1				
YSDC 114D5	11.4		///).		YSDC 148D5	14.8					YSDC 182D5	18.2				
YSDC 115D5	11.5						YSDC 149D5	14.9					YSDC 183D5	18.3				
YSDC 116D5	11.6				53		YSDC 150D5	15.0					YSDC 184D5	18.4				
YSDC 117D5	11.7						YSDC 151D5	15.1		133	83		YSDC 185D5	18.5				65
YSDC 118D5	11.8						YSDC 152D5	15.2					YSDC 186D5	18.6				
YSDC 119D5	11.9						YSDC 153D5	15.3					YSDC 187D5	18.7				
YSDC 120D5	12.0						YSDC 154D5	15.4					YSDC 188D5	18.8				
YSDC 121D5	12.1						YSDC 155D5	15.5					YSDC 189D5	18.9				
YSDC 122D5	12.2						YSDC 156D5	15.6				53	YSDC 190D5	19.0	20.0	153	101	
YSDC 123D5	12.3						YSDC 157D5	15.7					YSDC 191D5	19.1				
YSDC 124D5	12.4						YSDC 158D5	15.8					YSDC 192D5	19.2				
YSDC 125D5	12.5						YSDC 159D5	15.9					YSDC 193D5	19.3				
YSDC 126D5	12.6	14.0	124	77	58		YSDC 160D5	16.0					YSDC 194D5	19.4				
YSDC 127D5	12.7	14.0	124	,,			YSDC 161D5	16.1					YSDC 195D5	19.5				63
YSDC 128D5	12.7						YSDC 162D5	16.2		143	93		YSDC 196D5	19.6				
YSDC 129D5	12.9						YSDC 163D5	16.3	18.0			68	YSDC 197D5	19.7				
YSDC 130D5	13.0						YSDC 164D5	16.4	18.0	1+3			YSDC 198D5	19.8				>
					56								YSDC 200D5	19.9				
YSDC 131D5	13.1				56		YSDC 165D5	16.5					YSDC 200D5	20.0				

- ❖ Available small dia. below 5.0mm & coolant step drill on request.
- * YSDC, D5 with plain cylindrical HA shank available on request.

Solid Carbide Coolant Drill, Long series (8x1)







Model: YSDC, D8

- ▶ Solid Carbide Coolant hole drill, Whistle notch DIN6535 HE shank, effective cutting depth 8xDia.
- ▶ Cylindrical HA shank is available on request.
- ▶ 140° self-centering point for accurate hole positioning. regular helix angle : 28° ~ 30°.
- ▶ Manufactured with heavy duty construction and excellent chip evacuation.

Carbide substrate:

▶ Micro Grain Carbide , TiN & TiAlN

- ▶ High productivity. Coolant fed design efficiently cools the workpiece and provides good chip removal.
- ▶ To elliminate the need for center drilling and partially reaming. Highest hole quality and tolerance.
- ▶ Specially designed for machining center or CNC application.

Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
YSDC 050D8	5.0					YSDC 066D8	6.6					YSDC 082D8	8.2				
YSDC 051D8	5.1					YSDC 067D8	6.7					YSDC 083D8	8.3				
YSDC 052D8	5.2					YSDC 068D8	6.8				66	YSDC 084D8	8.4				
YSDC 053D8	5.3					YSDC 069D8	6.9					YSDC 085D8	8.5				
YSDC 054D8	5.4					YSDC 070D8	7.0					YSDC 086D8	8.6				82
YSDC 055D8	5.5	6.0	95	57	48	YSDC 071D8	7.1					YSDC 087D8	8.7				
YSDC 056D8	5.6		<			YSDC 072D8	7.2					YSDC 088D8	8.8	-			
YSDC 057D8	5.7					YSDC 073D8	7.3	8.0	114	76		YSDC 089D8	8.9	100	127	95	
YSDC 058D8	5.8					YSDC 074D8	7.4					YSDC 090D8	9.0	10.0	137	95	
YSDC 059D8	5.9					YSDC 075D8	7.5				64	YSDC 091D8	9.1				
YSDC 060D8	6.0					YSDC 076D8	7.6				64	YSDC 092D8	9.2				
YSDC 061D8	6.1					YSDC 077D8	7.7					YSDC 093D8	9.3				
YSDC 062D8	6.2					YSDC 078D8	7.8					YSDC 094D8	9.4				80
YSDC 063D8	6.3	8.0	114	76	66	YSDC 079D8	7.9					YSDC 095D8	9.5				
YSDC 064D8	6.4					YSDC 080D8	8.0					YSDC 096D8	9.6				
YSDC 065D8	6.5					YSDC 081D8	8.1	10.0	137	95	82	YSDC 097D8	9.7				

Solid Carbide Coolant Drill, Long series (8xD)

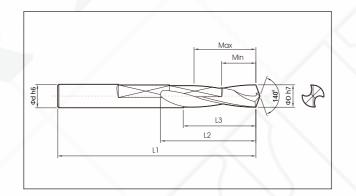
	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3	Code No.	D	d	L1	L2	L3
	YSDC 098D8	9.8					YSDC 132D8	13.2					YSDC 166D8	16.6				
	YSDC 099D8	9.9	10.0	137	95	80	YSDC 133D8	13.3					YSDC 167D8	16.7				146
	YSDC 100D8	10.0					YSDC 134D8	13.4					YSDC 168D8	16.8				140
	YSDC 101D8	10.1					YSDC 135D8	13.5					YSDC 169D8	16.9				
	YSDC 102D8	10.2					YSDC 136D8	13.6	14.0	180	133	112	YSDC 170D8 YSDC 171D8 YSDC 172D8	17.0				
	YSDC 103D8	10.3					YSDC 137D8	13.7						17.1				
	YSDC 104D8	10.4					YSDC 138D8	13.8						17.2				
	YSDC 105D8	10.5					YSDC 139D8	13.9			7		YSDC 173D8	17.3	18.0	221	171	
	YSDC 106D8	10.6				98	YSDC 140D8	14.0			\mathcal{L}		YSDC 174D8	17.4				
	YSDC 107D8	10.7					YSDC 141D8	14.1					YSDC 175D8	17.5				144
	YSDC 108D8	10.8					YSDC 142D8	14.2					YSDC 176D8	17.6				
	YSDC 109D8	10.9					YSDC 143D8	14.3	.4 .5 .6 .7 .8 .9 .0 .1				YSDC 177D8	17.7				
	YSDC 110D8	11.0					YSDC 144D8	14.4					YSDC 178D8	17.8				
	YSDC 111D8	11.1	12.0	161	114		YSDC 145D8	14.5					YSDC 179D8	17.9				
	YSDC 112D8	11.2					YSDC 146D8	14.6				124	YSDC 180D8	18.0				
	YSDC 113D8	11.3					YSDC 147D8	14.7					YSDC 181D8	18.1				
	YSDC 114D8	11.4		//).	YSDC 148D8	14.8					YSDC 182D8	18.2				
	YSDC 115D8	11.5					YSDC 149D8	14.9		202			YSDC 183D8	18.3				
	YSDC 116D8	11.6				96	YSDC 150D8	15.0					YSDC 184D8	18.4				
f	YSDC 117D8	11.7					YSDC 151D8	15.1			152		YSDC 185D8	18.5				154
ŀ	YSDC 118D8	11.8					YSDC 152D8	15.2					YSDC 186D8	18.6				
	YSDC 119D8	11.9					YSDC 153D8	15.3					YSDC 187D8	18.7				
	YSDC 120D8	12.0					YSDC 154D8	15.4					YSDC 188D8	18.8				
	YSDC 121D8	12.1					YSDC 155D8	15.5					YSDC 189D8	18.9				
	YSDC 122D8	12.2					YSDC 156D8	15.6				122	YSDC 190D8	19.0	20.0	242	190	
	YSDC 123D8	12.3					YSDC 157D8	15.7					YSDC 191D8	19.1				
-	YSDC 124D8	12.4					YSDC 158D8	15.8					YSDC 192D8	19.2				
	YSDC 125D8	12.5					YSDC 159D8	15.9					YSDC 193D8	19.3				
\perp	YSDC 126D8		14.0	180	133	114	YSDC 160D8	16.0					YSDC 194D8	19.4				
\vdash	YSDC 127D8	12.7					YSDC 161D8	16.1					YSDC 195D8 YSDC 196D8	19.5				152
\vdash	YSDC 128D8						YSDC 162D8	16.2					YSDC 197D8	19.7				
+	YSDC 129D8						YSDC 163D8	16.3	18.0	221	171	146	YSDC 198D8	19.8				
\vdash	YSDC 130D8						YSDC 164D8	16.4	. 3.3		.,,		YSDC 199D8	19.9				
	YSDC 131D8					112	YSDC 165D8	16.5					YSDC 200D8					
	1300 13108	13.1				112	1300 10308	10.5					1300 20008	20.0				

- ❖ Available small dia. below 5.0mm & coolant step drill on request.
- Plain cylindrical HA shank available on request.

Solid Carbide Chamfer Drill, Metric



(The above picture illustrate YCD + YCH complete kit.)



- ▶ Solid Carbide Chamfer drill, Plain cylindrical shank with flat grinding to fit YCH holder.
- ▶ 140° self-centering point for accurate hole positioning. Slow helix angle: 15° spiral(to adjust cutting depth).
- ▶ YCD is used with combination YCH chamfer holder and carbide insert XCGX1102.
- ▶ Holder can be moved back and forth by one locking screw to adjust cutting depth.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN(standard stock), TiAlN

- ▶ Economically drilling and chamfering(or countersinking)
- ▶ To elliminate the need for center drilling and partially reaming. Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

					\wedge	Hole	depth	A
Code No.	D	d	L1	L2	L3	Min	Max	Applicable Holder
YCD 051	5.1				_	1		
YCD 052	5.2							
YCD 053	5.3							
YCD 054	5.4							
YCD 055	5.5	6.0	66	30	24	9	20	YCH 060
YCD 056	5.6	0.0	00	30	24	9	20	1011000
YCD 057	5.7							
YCD 058	5.8							
YCD 059	5.9							
YCD 060	6.0							
YCD 061	6.1	5						
YCD 062	6.2	5						
YCD 063	6.3							
YCD 064	6.4							
YCD 065	6.5	7.0	74	37	30	11	25	YCH 070
YCD 066	6.6		, -					1 2.11 07 0
YCD 067	6.7							
YCD 068	6.8			1				
YCD 069	6.9							
YCD 070	7.0							

ole	Code No.	D	d	L1	L2	L3	Hole	depth	Applicable
r	Code No.	U	a	LI	LZ	L3	Min	Max	Holder
	YCD 071	7.1							
	YCD 072	7.2							
	YCD 073	7.3							
	YCD 074	7.4							
0	YCD 075	7.5	8.0	79	41	33	12	28	YCH 080
)	YCD 076	7.6	8.0	75		33	12	20	1011000
	YCD 077	7.7							
	YCD 078	7.8							
	YCD 079	7.9							
	YCD 080	8.0							
	YCD 081	8.1							
	YCD 082	8.2							
	YCD 083	8.3							
	YCD 084	8.4							
0	YCD 085	8.5	9.0	84	45	36	14	31	YCH 090
	YCD 086	8.6	3.0	01	13	30			1 211 030
	YCD 087	8.7							
	YCD 088	8.8							
	YCD 089	8.9							
	YCD 090	9.0							

Solid Carbide Chamfer Drill, Metric

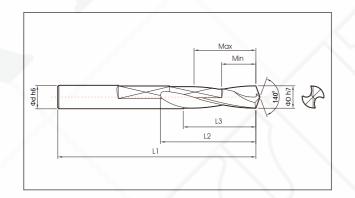
Code No.	D	d	L1	L2	L3		depth	, the procure	Code N
	9.1					Min	Max	Holder	
YCD 091 YCD 092	9.1	-					/		YCD 14
YCD 092	9.3	1						\ \ \ \ \	YCD 14
YCD 093	9.4								YCD 14
YCD 095	9.5								YCD 15
YCD 096	9.6	10.0	89	49	39	16	34	YCH 100	YCD 15
YCD 097	9.7	1							YCD 15
YCD 098	9.8	1							YCD 15
YCD 099	9.9								YCD 15
YCD 100	10.0								YCD 15
YCD 101	10.1								YCD 15
YCD 102	10.2								YCD 15
YCD 103	10.3								YCD 15
YCD 104	10.4								YCD 15
YCD 105	10.5	110	0.5	47	26	47	24	V611 440	YCD 16
YCD 106	10.6	11.0	95	47	36	17	31	YCH 110	YCD 16
YCD 107	10.7							Y	YCD 16
YCD 108	10.8								YCD 16
YCD 109	10.9								YCD 16
YCD 110	11.0								YCD 16
YCD 111	11.1				^				YCD 16
YCD 112	11.2		11						YCD 16
YCD 113	11.3								YCD 16
YCD 114	11.4		$\langle \ \ \rangle$						YCD 16
YCD 115	11.5	12.0	102	53	41	19	35	YCH 120	YCD 17
YCD 116	11.6								YCD 17
YCD 117	11.7	-	/						YCD 17
YCD 118	11.8	-							YCD 17
YCD 119	11.9						4		YCD 17
YCD 120 YCD 121	12.0								YCD 17 YCD 17
YCD 121	12.1								YCD 17
YCD 123	12.3								YCD 17
YCD 124	12.4								YCD 17
YCD 125	12.5								YCD 18
YCD 126	12.6	13.0	102	54	41	19	35	YCH 130	YCD 18
YCD 127	12.7								YCD 18
YCD 128	12.8								YCD 18
YCD 129	12.9								YCD 18
YCD 130	13.0								YCD 18
YCD 131	13.1								YCD 18
YCD 132	13.2								YCD 18
YCD 133	13.3								YCD 18
YCD 134	13.4								YCD 18
YCD 135	13.5	14.0	107	58	44	20	38	YCH 140	YCD 19
YCD 136	13.6	-							YCD 19
YCD 137	13.7								YCD 19
YCD 138	13.8	-							YCD 19
YCD 139	13.9	-							YCD 19
YCD 140	14.0								YCD 19
YCD 141	14.1	-							YCD 19
YCD 142 YCD 143	14.2	15.0	111	62	47	24	41	YCH 150	YCD 19
YCD 143 YCD 144	14.4	13.0	111	02	4/	24	41	100 130	YCD 19
YCD 144 YCD 145	14.4	-							YCD 19
נדו עטי	1 .7.5			L					10020

	Code No.	D	d	L1	L2	L3	Hole	depth	Applicable
	Code No.	0	u	-	LZ	L	Min	Max	Holder
	YCD 146	14.6							
	YCD 147	14.7							
	YCD 148	14.8	15.0	111	62	47	24	41	YCH 150
	YCD 149	14.9							
	YCD 150	15.0							
	YCD 151	15.1							
	YCD 152	15.2							
	YCD 153	15.3							
	YCD 154	15.4							
	YCD 155	15.5	16.0	115	65	49	25	43	YCH 160
	YCD 156	15.6							
	YCD 157	15.7							
	YCD 158	15.8							
	YCD 159	15.9						_	
	YCD 160	16.0							
	YCD 161	16.1							
	YCD 162	16.2							
	YCD 163	16.3							
	YCD 164	16.4							
	YCD 165	16.5	17.0	119	69	52	26	46	YCH 170
	YCD 166	16.6							
	YCD 167	16.7							
	YCD 168	16.8							
	YCD 169 YCD 170	16.9 17.0							
	YCD 170	17.1							
	YCD 172	17.1							
	YCD 172	17.2							
	YCD 174	17.4							
	YCD 175	17.5							
1	YCD 176	17.6	18.0	123	73	55	27	48	YCH 180
	YCD 177	17.7							
	YCD 178	17.8							
	YCD 179	17.9							
	YCD 180	18.0							
	YCD 181	18.1							
	YCD 182	18.2							
	YCD 183	18.3							
	YCD 184	18.4							
	YCD 185	18.5	100	127	7.0		20	F0	VCII 100
	YCD 186	18.6	19.0	127	76	57	28	50	YCH 190
	YCD 187	18.7							
	YCD 188	18.8							
	YCD 189	18.9							
	YCD 190	19.0							
	YCD 191	19.1							
	YCD 192	19.2							
	YCD 193	19.3							
	YCD 194	19.4							
	YCD 195	19.5	20.0	131	80	60	30	53	YCH 200
	YCD 196	19.6	20.0	'5'	30		50	ادر	1 C11 200
	YCD 197	19.7							
	YCD 198	19.8							
	YCD 199	19.9							

Solid Carbide Chamfer Drill, Inch



(The above picture illustrate YCD + YCH complete kit.)



- ▶ Solid Carbide Chamfer drill, Plain cylindrical shank with flat grinding to fit YCH holder.
- ▶ 140° self-centering point for accurate hole positioning. Slow helix angle: 15° spiral(to adjust cutting depth).
- ▶ YCD is used with combination YCH chamfer holder and carbide insert XCGX1102.
- ▶ Holder can be moved back and forth by one locking screw to adjust cutting depth.

Carbide substrate:

▶ Ultra-fine Micro Grain, TiN(standard stock), TiAlN

- ▶ Economically drilling and chamfering(or countersinking)
- ▶ To elliminate the need for center drilling and partially reaming. Specially designed for machining center or CNC application.
- ▶ Broad range application from general to tough material.

Inch Size

Code No.	D	d	L1	L2	L3	Hole	depth	Applicable
Code No.	D	u	LI	LZ	L	Min	Max	Holder
YCD .2010	#7		2.59	1.18	0.94	0.35	0.78	
YCD .2130	#3	1/4	2.33	1.10	0.94	0.55	0.76	YCH.2500
YCD .2570	F	174	2.91	1.45	1.18	0.43	0.98	1011.2300
YCD .2720	I							
YCD .3125	5/16	5/16	3.11	1.61	1.29	0.47	1.1	YCH.3125
YCD .3320	Q							
YCD .3680	U	3/8	3.5	1.92	1.53	0.62	1.33	YCH.3750
YCD .3906	25/64	3/0	5.5	1.52	1.55		1.55	1 (11.57 30
YCD .4219	25/64	7/16	3.74	1.85	1.41	0.66	1.22	YCH.4375

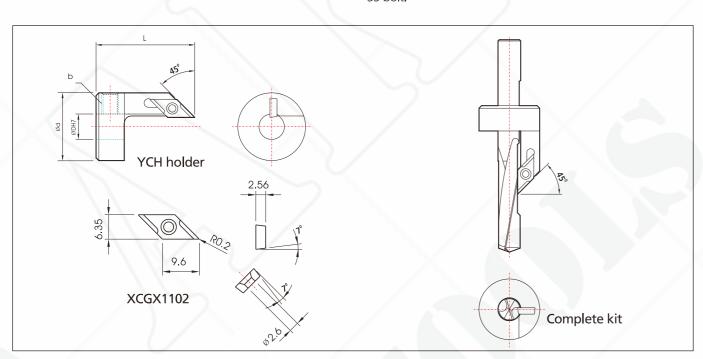
Inch Size

le	Codo No	D	d	L1	L2	L3	Hole	depth	Applicable
	Code No.	J	u	LI	LZ	L3	Min	Max	Holder
	YCD .4531	29/64	7/16	3.74	1.85	1.41	0.66	1.22	YCH.4375
10	YCD .4844	31/64	1/2	4.01	2.12	1.61	0.74	1.37	YCH.5000
	YCD .5156	33/64	1/2	4.01	2.12	1.01	0.74	1.34	TC11.3000
	YCD .5312	17/32	9/16	4.21	2.28	1.73	0.78	1.49	YCH.5625
.5	YCD .5781	37/64	3/10	7.21	2.20	1.73	0.76	1.43	1011.3023
.5	YCD .6562	21/32	11/16	4.68	2.71	2.04	1.02	1.81	YCH.6875
0	YCD .6875	11/16	11,10	1.00	2., 1	2.01	1.02	1.01	7 (11.007)
2	YCD .7656	49/64	3/4	5.15	3.14	2.36	1.18	2.08	YCH.7500
5	YCD .8125	13/16	314	5.15	5.14	2.50	1.10	2.00	1 211.7 300



Model: YCH

- ▶ Specially designed to work with Solid Chamfer Drill (**YCD**) & Insert XCGX1102.
- ▶ Drilling and chamfering in one operation economically.
- ▶ Carbide Insert **XCGX1102** has two cutting edges for economic use.
- ▶ Holder moveable back and forth to adjust cutting depth by SS bolt.



Code No.	D	d	L	Socket Screw Bolt size (b)	Applicable size range(YCD model)
YCH 060	6.0	21	29		YCD 051~060
YCH 070	7.0	22	32	M6 x 1.0P	YCD 061~070
YCH 080	8.0	23	34	IVIO X 1.UF	YCD 071~080
YCH 090	9.0	24	35		YCD 081~090
YCH 100	10.0	25	36		YCD 091~100
YCH 110	11.0	26	34		YCD 101~110
YCH 120	12.0	27	36	M8 x 1.25P	YCD 111~120
YCH 130	13.0	28	36		YCD 121~130
YCH 140	14.0	29	38		YCD 131~140
YCH 150	15.0	30	39		YCD 141~150
YCH 160	16.0	31	40		YCD 151~160
YCH 170	17.0	32	42	M10 :: 1 FD	YCD 161~170
YCH 180	18.0	33	43	M10 x 1.5P	YCD 171~180
YCH 190	19.0	34	44		YCD 181~190
YCH 200	20.0	35	45		YCD 191~200

❖ See page 61 of applicable YCD drill together with this model.

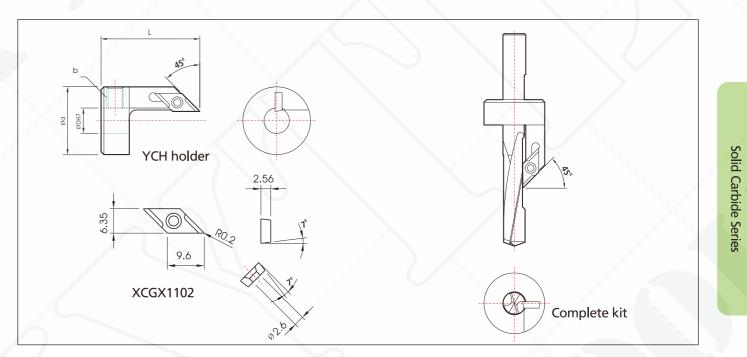






Model: YCH

- ▶ Specially designed to work with Solid Chamfer Drill (**YCD**) & Insert XCGX1102.
- ▶ Drilling and chamfering in one operation economically.
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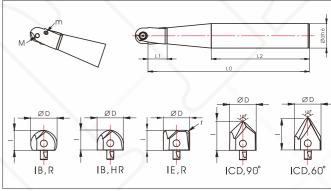


Code No.	D	d	L	Socket Screw Bolt size (b)	Applicable size range(YCD model)
YCH .2500	.2500	0.83	1.14	M6 x 1.0P	YCD .2010~.2720
YCH .3125	.3125	0.91	1.34	1010 X 1.0F	YCD .3125~.3320
YCH .3750	.3750	0.98	1.42	100	YCD .3680~.3906
YCH .4375	.4375	1.02	1.34	M0 :: 1 25D	YCD .4219~.4531
YCH .5000	.5000	1.1	1.42	M8 x 1.25P	YCD .4844~.5156
YCH .5625	.5625	1.14	1.5		YCD .5312~.5781
YCH .6875	.6875	1.26	1.65	M40 - 1 FD	YCD .6562~.6875
YCH .7500	.7500	1.34	1.73	M10 x 1.5P	YCD .7656~.8125

❖ See page 63 of applicable YCD drill together with this model.

▶ Higher speed & feed available than conventional end mills.

▶ Dual purpose of roughing & finishing job



Indexable "ECO-Cutter" system

(YTEI) Indexable "ECO-Cutter" system

(IB,R) Carbide Ball radius Inserts

(B,HR) Carbide Ball half-radius Inserts

(IE,R) Carbide End mill Inserts

Carbide Center drill Inserts, 60°, 90°

(YSET) Solid Carbide End Mills

(YSEL) Solid Carbide End Mills, Long series

YSET/HH) Solid Carbide High Helix End Mills

(YSER) Solid Carbide Roughing End Mills

(YSEB) Solid Carbide Ball End Mills

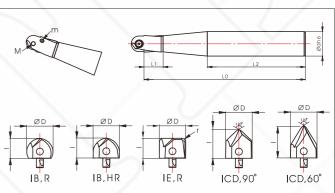
(YSEBL) Solid Carbide Ball End Mills, Long series

YSEBG Solid Carbide Ball End Mills for Graphite

Carbide End Mills and Cutters

Model: YTEI

- ▶ 5 Different insert cutters interchangeable in YTEI body
- ▶ Strong clamping with two locking screws
- ▶ New design with center stem(pin) on the insert to keep better centralization and run-out
- ▶ All carbide inserts ground completely by CNC & TiAlN
- ▶ Ball radius IB insert has precise helical fluted marginal cutting edge like drill to enable copy milling smoothly.



ECO-Cutter recommended cutting data

"ECO-Cutter" Long Body

(IB, R) Ball radius 2 flute insert with round(oval)

(B,HR) Ball radius 2 flute insert with half round

(CD,90° Center & chamfer drill insert with 90° point (dual point with 120°+ 90° for safer centering)

Center & chamfer drill insert with 60° point

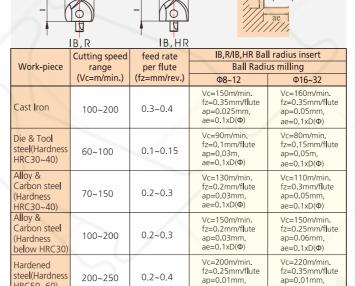
(dual point with 120°+ 60° for safer centering)

ap=depth of cut

ae=0.02xD(Φ)

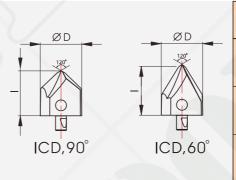
(E, R) 2 flute end mill with corner radius

YTEI,S "ECO-Cutter" Short Body



 $ae=0.1xD(\Phi)$

		Ť Ψ IE,	R	
Work-piece	Cutting speed range	feed rate per flute	IE Flat mil Slot & Shou	ling insert Ider milling
	(Vc=m/min.)	(fz=mm/rev.)	Ф8~20	Φ25~32
Alloy & Carbon steel (Hardness below HRC40)	50~130	0.08~0.15	Vc=90m/min. fz=0.12mm/flute ap=0.5mm, ae=0.6xD(Φ)	Vc=90m/min. fz=0.12mm/flute ap=0.5mm, ae=0.6xD(Φ)
Alloy & Carbon steel (Hardness below HRC30)	arbon steel ardness 60~160		Vc=130m/min. fz=0.2mm/flute ap=0.5mm, ae=0.6xD(Φ)	Vc=130m/min. fz=0.2mm/flute ap=0.5mm, ae=0.6xD(Φ)
Normal Mild steel(Hardness below HB 200)	70~200	0.1~0.15	Vc=150m/min. fz=0.2mm/flute ap=1mm, ae=0.6xD(Φ)	Vc=150m/min. fz=0.2mm/flute ap=1mm, ae=0.6xD(Φ)



HRC50~60)

	Cutting speed		ICD Centering &	Chamfering insert		
Work-piece	range	Centering	(Spotting)	Chamfering		
	(Vc=m/min.)	Ф8~20	Φ25~32	Ф8~20	Φ25~32	
Alloy & Carbon steel (Hardness below HRC40)	40~60	Vc=50m/min. f=0.1~0.15 mm/rev.	Vc=50m/min. f=0.1~0.15 mm/rev.	Vc=50m/min. fz=0.05mm/ flute	Vc=50m/min. fz=0.1mm/ flute	
Alloy & Carbon steel (Hardness below HRC30)	50~80	Vc=70m/min f=0.1~0.2 mm/rev.	Vc=70m/min f=0.1~0.2 mm/rev.	Vc=70m/min fz=0.1mm/ flute	Vc=70m/min fz=0.12mm/ flute	
Normal Mild steel(Hardness pelow HB 200)	80~200	Vc=120m/min f=0.1~0.3 mm/rev.	Vc=120m/min f=0.1~0.3 mm/rev.	Vc=120m/min fz=0.1mm/ flute	Vc=120m/min fz=0.15mm/ flute	

"ECO-Cutter" Long Body system 🚐 🛒

Body	Insert	ФД	Фф	LO	L1	L2		R	r	M	m
body	Insert IB 080 R	Ψυ	Ψα	LU	LI	LZ		K		IVI	m
	IB 080 HR						6.19	4.0	-		
YTEI 080	IE 080	8.0	10	94	12	60	6.19	-	0.5/1.0	M2	
1121080	ICD 080-90	8.0	10	34	12	00	9.08	(0.3/1.0	IVIZ	
	ICD 080-90							_	_		
	IB 100 R						10.10	_	_		m2.
	IB 100 K						7.86	5.0	-		
YTEI 100	IE 100 HK	10.0	12	107	12	70	7.86	_	0.5/1.0	M2.5	
Y 1 E1 100	ICD 100-90	10.0	12	107	12	70		-	0.5/1.0	IVIZ.5	
							11.40	_	-		
	ICD 100-60						12.64		-//		
	IB 120 R						9.16	6.0	-		
CTEL 420	IB 120 HR	12.0	16	121	1.1	00	0.46	-	0.5/4.0		
YTEI 120	IE 120	12.0	16	131	11	90	9.16	_	0.5/1.0	M3	
	ICD 120-90			/			13.61	_	-		
	ICD 120-60						15.12	-	-		m
	IB 160 R						12.13	8.0	-		
	IB 160 HR	160		450	4.0	0.5					
/TEI 160	IE 160	16.0	20	158	18	95	12.13	-	1.0/3.0	M4	
	ICD 160-90						18.88	-	-		
	ICD 160-60						20.14	-	-		
	IB 200 R						15.10	10.0	-		
	IB 200 HR										
YTEI 200	IE 200	20.0	25	165	20	100	15.10	-	1.0/3.0	M5	
	ICD 200-90						22.69		-		
	ICD 200-60						25.22	-	-		m
	IB 250 R						18.71	12.5	-		
	IB 250 HR										
YTEI 250	IE 250	25.0		191	21	110	18.71	-	1.0/3.0	M6	
	ICD 250-90						28.32	-	-		
	ICD 250-60						31.47	-	-/		
	IB 300 R						22.74	15.0	-		
	IB 300 HR										
YTEI 300	IE 300	30.0	32	227	32	120	22.74	-	1.0/3.0		m
	ICD 300-90						34.12	-	-		
	ICD 300-60						37.89	-	-	M8	
	IB 320 R						24.01	16.0	_\	1410	
	IB 320 HR						24.01	10.0			
/TEI 320	IE 320	32.0		326	32	250	24.01	-	1.0/3.0		m
	ICD 320-90						36.55	-	-		
	ICD 320-60						40.59	-	-		





Body	Insert	ФD	Фф	LO	L1	L2	I	R	r	М	m
	IB 080 R IB 080 HR						6.19	4.0	_\		
YTEI 080S	IE 080	8	8	74	12	50	6.19	_	0.5/1.0		
	ICD 080-90 ICD 080-60						9.08	_	_		
	IB 090 R						6.83			M2	
VTEL 000C	IB 090 HR	9		93	1.2	C.F.	6.83	4.5	- 0 F/1 0		
YTEI 090S	IE 090 ICD 090-90	9		93	13	65	10.18	_	0.5/1.0		
	ICD 090-60		10				11.33	\ -\	-		m2.5
	IB 100 R IB 100 HR						7.86	5.0	-		
YTEI 100S	IE 100	10		92	12	65	7.86	-	0.5/1.0		
<u> </u>	ICD 100-90 ICD 100-60						11.40	_	_		
	IB 110 R						8.51	5.5		M2.5	
YTEI 110S	IB 110 HR IE 110	11		99	16	68	8.51	J.J	0.5/1.0		
11111103	ICD 110-90				10		12.50	_	0.3/1.0		
	ICD 110-60 IB 120 R		12				13.88		-		
	IB 120 HR						9.16	6.0	-		
YTEI 120S	IE 120	12		99	16	68	9.16	-	0.5/1.0		
	ICD 120-90 ICD 120-60		\				13.61 15.12	_	_		
	IB 130 R	1					9.80	6.5	_		
YTEI 130S	IB 130 HR IE 130	13		98	15	68	9.80	-	0.5/1.0		
11111303	ICD 130-90		\sim	30	13		14.71	_	0.3/1.0		
	ICD 130-60	1	-				16.35	_	_	M3	
	IB 140 R IB 140 HR	-					10.43	7.0	_		
YTEI 140S	IE 140	14		98	15	68	10.43	_	1.0/2.0		
	ICD 140-90 ICD 140-60						15.80 17.57	_	_		
	IB 150 R		16				11.49	7.5	/		
YTEI 150S	IB 150 HR IE 150	15		109	19	75		7.5	1.0/2.0		
1 IEI 1505	ICD 150-90	15		109	19	/5	11.49	_	1.0/2.0		
	ICD 150-60						18.97	<u> </u>	-		m3
	IB 160 R IB 160 HR	_					12.13	8.0	-		
YTEI 160S	IE 160	16		108	18	75	12.13	_	1.0/3.0		
	ICD 160-90 ICD 160-60						18.14	_	_		
	IB 170 R						12.77				
VTEL 4706	IB 170 HR	17		107	17	70		8.5	- 1.0/2.0		
YTEI 170S	IE 170 ICD 170-90	17		107	17	70	12.77 19.24	_	1.0/3.0	M4	
	ICD 170-60						21.37	_	-		
	IB 180 R IB 180 HR	_					13.82	9.0	-		
YTEI 180S	IE 180	18		106	21	70	13.82	_	1.0/3.0		
	ICD 180-90 ICD 180-60	_					20.05	_	_		
	IB 190 R		20				14.46		_		1
VTFI 1005	IB 190 HR	10		106	21	70		9.5			
YTEI 190S	IE 190 ICD 190-90	19		106	21	70	14.46	_	1.0/3.0		
	ICD 190-60						23.99	_		M5	
	IB 200 R IB 200 HR						15.10	10.0	_		
YTEI 200S	IE 200	20		105	20	70	15.10	_	1.0/3.0		
_	ICD 200-90 ICD 200-60	_					22.69 25.22		_		
	IB 250 R								_		m4
VITEL SEAS	IB 250 HR	2.5	2.5	1.11	2.1	105	18.71	12.5			
YTEI 250S	IE 250 ICD 250-90	25	25	141	21	105	18.71	_	1.0/3.0	M6	
	ICD 250-60						31.47	_	-		
	IB 300 R IB 300 HR						22.74	15.0	_		
YTEI 300S	IE 300	30		137	32	90	22.74	_	1.0/3.0		m5
	ICD 300-90 ICD 300-60						34.12	_	-		
			22			1	37.89	_	- //	140	
			32				2404			M8	
	IB 320 R IB 320 HR		32				24.01	16.0	-	IVIO	
YTEI 320S	IB 320 R	32	32	136	31	90	24.01 24.01 36.55	16.0	1.0/3.0	IVI8	m6

Solid Carbide End Mills







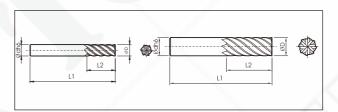
Model: YSET, YSEL

- ► Standard length(YSET) & Long length(YSEL)
- ▶ Extra fine Micro grain carbide, PVD TiAIN coated to provide strength, lubricity, wear resistance and freer cutting action.
- ▶ 30° regular helix spiral, square end, 2 & 4 flutes configuration
- ▶ Suitable for high performance and high productivity machining
- ▶ Applicable to wide range materials
- * Ordering: Please mark number of flutes in the square blank.

Code No.	ФD	Фф	L1	L2	Available flutes
* Standard Length 2F, 4	1F		//		
YSET 2020	2.0		40	6	
YSET 2025	2.5		40	8	2
YSET 2030	3.0	6.0	45	10	2
YSET 2040	4.0	0.0	45	12	
YSET □050	5.0		50	15	2, 4
YSET □060	6.0		50	15	2,4
YSET 2070	7.0	8.0	60		2
YSET □080	8.0	8.0	00	20	2, 4
YSET 2090	9.0	10.0	70		2
YSET □100	10.0	10.0	/0	25	2, 4
YSET 2110	11.0	12.0	75		2
YSET □120	12.0	12.0	/5	30	
YSET □140	14.0		80	35	
YSET □150	15.0	16.0	80	33	2, 4
YSET □160	16.0		90	40	2,4
YSET □180	18.0	20.0	100	40	
YSET □200	20.0	20.0	105	45	
* Long Length 2F, 4F		- X			
YSEL 2060	6.0	6.0	70	30	2
YSEL 2080	8.0	8.0	80	35	2
YSEL 4100	10.0	10.0	108	40	
YSEL 4120	12.0	12.0	100	45	
YSEL 4160	16.0	16.0	120	55	4
YSEL 4200	20.0	20.0	120	60	7 / /
YSEL 4250	25.0	25.0	160	70	

Carbide High Helix End Mills





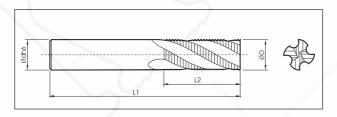
Model: YSET, Multi-flutes

- ▶ Standard length, High helix 40°, multi-flutes 6F & 8F configuration
- ▶ Extra fine Micro grain carbide, PVD TiAlN coated to
- ▶ provide strength, lubricity, wear resistance and freer cutting
- ▶ Finish milling operation
- ▶ Suitable for high performance and high productivity
- ▶ Applicable to wide range of material up to HRc60

Code No.	ФД	Фф	L1	L2	Number of flute
YSET 6060	6.0	6.0	50	15	
YSET 6080	8.0	8.0	60	20	
YSET 6100	10.0	10.0	70	25	6
YSET 6120	12.0	12.0	75	30	
YSET 6140	14.0	16.0	80	35	
YSET 8160	16.0	10.0	90	40	
YSET 8200	20.0	20.0	105	45	8
YSET 8250	25.0	25.0	130	50	
YSET 8320	32.0	32.0	150	65	

Carbide Roughing End Mills





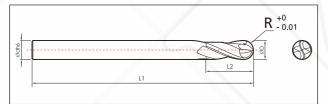
Model: YSER

- ▶ Standard length, Regular helix 30°, 3, 4, 6 flute configuration
- ▶ Extra fine Micro grain carbide, PVD TiAIN coated to provide strength, lubricity, wear resistance and freer cutting action.
- ▶ Strongest cutting edge and smooth operation
- ▶ Applicable high feed rate in shoulder milling and slotting

Code No.	ФD	Фф	L1	L2	Number of flute
YSER 3060	6.0	6.0	50	15	
YSER 3080	8.0	8.0	60	20	3
YSER 3100	10.0	10.0	70	25	
YSER 4120	12.0	12.0	75	30	7/4
YSER 4140	14.0	16.0	80	35	4
YSER 4160	16.0	16.0	90	40	
YSER 6200	20.0	20.0	105	45	
YSER 6250	25.0	25.0	130	50	6

Carbide Ball End Mills





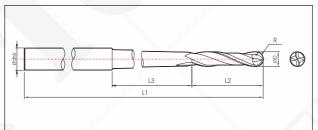
Model: YSEB, YSEBL

- ▶ Ball nose End Mill, Standard length(YSEB) & Long/Extra Long length(YSEBL)
- ▶ Extra fine Micro grain carbide, PVD TiAlN coated to Provide Strength, lubricity, wear resistance and freer cutting action
- ▶ 30° regular helix spiral, 2 flutes configuration
- ▶ Special geometry with eccentric cutting edge, high tolerance radius +0 ~ 0.01 mm
- ▶ Applicable to wide range of material up to HRc60
- ▶ Suitable for high performance and high productivity machining (unit : mm)

					(unit : m
Code No.	D	R	d	L1	L2
Standard Length					
YSEB 1.0R	2.0	1.0			5
YSEB 1.5R	3.0	1.5		60	7
YSEB 2.0R	4.0	2.0	6		8
YSEB 2.5R	5.0	2.5	1	70	10
YSEB 3.0R	6.0	3.0		70	16
YSEB 3.5R	7.0	3.5		00	18
YSEB 4.0R	8.0	4.0	- 8	80	20
YSEB 4.5R	9.0	4.5	10	90	22
YSEB 5.0R	10.0	5.0	10	100	25
YSEB 6.0R	12.0	6.0	12	100	30
YSEB 7.0R	14.0	7.0		108	32
YSEB 8.0R	16.0	8.0	16		35
YSEB 10.0R	20.0	10.0	20	120	40
YSEB 12.5R	25.0	12.5	25	1.00	50
YSEB 16.0R	32.0	16.0	32	160	60
Long/Extra long Length					
YSEBL 3.0R110				110	20
YSEBL 3.0R160	6.0	3.0	6	150	25
YSEBL 4.0R160				160	30
YSEBL 4.0R200	8.0	4.0	8	200	35
YSEBL 5.0R160				160	40
YSEBL 5.0R200	10.0	5.0	10	200	45
YSEBL 6.0R160				160	50
YSEBL 6.0R200	12.0	6.0	12	200	55
YSEBL 8.0R160				160	60
YSEBL 8.0R200	16.0	8.0	16	200	65
YSEBL 10.0R160				160	70
YSEBL 10.0R200	20.0	10.0	20		75
YSEBL 12.5R200	25.0	12.5	25	200	85
YSEBL 16.0R200	32.0	16.0	32	1	95

Carbide Long Ball End Mills For graphite





Model: YSEBG

- ▶ Ball nose End Mill, Long length exclusively used for Graphite material
- ▶ Extra fine Micro grain carbide, PVD TiAIN coated to provide strength, lubricity, wear resistance and freer cutting action.
- ▶ 30° regular helix spiral, 2 flutes configuration
- ▶ Special geometry with eccentric cutting edge, high tolerance radius +0 ~ 0.01mm
- ▶ Suitable for high performance and high productivity machining
- ▶ High stength TRS 4,300N/mm

(unit · mm)

						(dilit : IIIII
Code No.	D	R	d	L1	L2	L3
YSEBG 1.0R160	2.0	1.0	6.0		6	95
YSEBG 1.5R160	3.0	1.5	6.0	160	8	80
YSEBG 2.0R160	4.0	2.0	8.0	160	10	85
YSEBG 3.0R160	6.0	3.0	10.0		20	80
YSEBG 3.0R200				200		
YSEBG 4.0R160	8.0	4.0		160	30	70
YSEBG 4.0R200	5		12.0	200		
YSEBG 5.0R160	10.0	5.0	12.0	160	40	55
YSEBG 5.0R200	10.0	5.0		200	40	F0
YSEBG 6.0R160	12.0	6.0	45.0	160	50	50
YSEBG 6.0R200	12.0	6.0	16.0	200	50	80
YSEBG 8.0R200	16.0	8.0	20.0	200	60	85

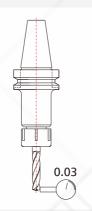
Technical Data

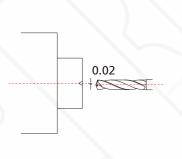
Description	Page
Concentricity	85
Collant supply	85
Cutting Data for YTDI, YTD	86
Cutting Data for YSD, YSDC(D5)	87
Cutting Data for YSET	88
Cutting Data for YSET/HH, YSER	89
Speed Formula	90
Drilling for Stacked Plate	90
Chip Formation	90
Speed examples	91
Maximum Wear	91
Power Requirment	92
Trouble Shooting	93
Resharpening Guide	94
Test Report Form (English)	96
Test Report Form (Korean)	97

Concentricity, Coolant supply

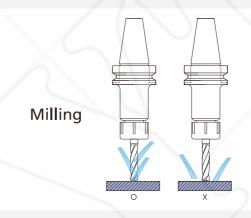
Concentricity

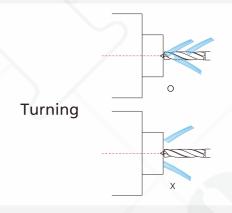
▶ To achieve the tolerance required or elliminate trouble, total run out between the center line of tool and workpiece must not exceed the below value.



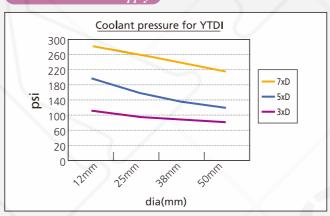


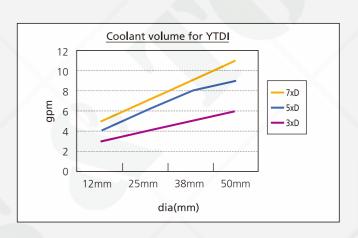
External coolant supply





Internal Coolant supply





Coolant Pressure(psi) for YTDI drill

	12mm	25mm	38mm	50mm
3xD	116	109	102	94
5xD	218	210	203	196
7xD	290	276	260	247

Coolant Volume(gpm) for YTDI drill

	12mm	25mm	38mm	50mm
3xD	3	4	5	6
5xD	4	6	8	9
7xD	5	7	9	11

Recommended Cutting Data

▶ Feeds and Speed for starting point only. It is recommended to use these values as a starting point until optimal results are obtained.

YTDI Indexable Drills, Metric

Drill Dia.	Dia. 8~16mm		16~	16~25mm		25~32mm		32~40mm		40~50mm	
Condition Material Group	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	
Grey cast iron (FC)	50~70	0.20~0.30	50~70	0.25~0.45	50~80	0.35~0.55	60~90	0.34~0.58	80~100	0.38~0.60	
Nodular cast iron (FCD)	40~65	0.15~0.25	40~65	0.22~0.45	45~75	0.32~0.52	50~80	0.35~0.62	70~100	0.38~0.60	
Carbon steel (S45C)	55~70	0.15~0.30	55~70	0.16~0.40	60~85	0.20~0.40	70~90	0.22~0.48	75~95	0.25~0.54	
Alloy steel (SCM440)	50~75	0.15~0.30	50~75	0.15~0.40	55~80	0.18~0.40	60~90	0.25~0.47	65~95	0.27~0.52	
Hardened steel (SKD11)	40~50	0.10~0.20	40~50	0.12~0.28	40~50	0.16~0.35	40~60	0.20~0.38	40~60	0.22~0.42	
Stainless steel (SUS)	30~40	0.10~0.20	35~50	0.10~0.22	35~50	0.15~0.28	40~55	0.18~0.30	40~55	0.22~0.32	
Aluminum 130HB (AL)	80~100	0.20~0.30	80~100	0.25~0.40	90~110	0.30~0.45	90~110	0.30~0.45	90~120	0.30~0.50	

[▶] The data is recommended for 3xDia. and should be silghtly reduced for 5xD & 7xD drills.

YTDI Indexable Drills, Inches

Drill Dia3150~.		~.6299	.6299~.9843		.9843	~1.2598	1.2598	3~1.5 74 8	1.5748~1.9685	
Condition Material Group	Speed (SFM)	Feed (IPR)	Speed (SFM)	Feed (IPR)	Speed (SFM)	Feed (IPR)	Speed (SFM)	Feed (IPR)	Speed (SFM)	Feed (IPR)
Grey cast iron (FC)	160~230	0.008~0.012	160~230	0.010~0.018	160~260	0.014~0.022	200~300	0.013~0.023	260~330	0.015~0.024
Nodular cast iron (FCD)	130~210	0.006~0.010	130~210	0.009~0.018	150~240	0.013~0.021	160~260	0.014~0.025	230~330	0.015~0.024
Carbon steel (S45C)	180~230	0.006~0.012	180~230	0.006~0.016	200~280	0.008~0.016	230~300	0.009~0.019	240~310	0.010~0.021
Alloy steel (SCM440)	160~240	0.006~0.012	160~240	0.006~0.016	180~260	0.007~0.016	200~300	0.010~0.009	210~310	0.011~0.021
Hardened steel (SKD11)	130~160	0.004~0.008	130~160	0.005~0.011	130~160	0.006~0.014	130~200	0.008~0.015	130~200	0.009~0.017
Stainless steel (SUS)	100~130	0.004~0.008	110~160	0.004~0.009	110~160	0.006~0.011	130~160	0.007~0.012	130~180	0.009~0.013
Aluminum 130HB (AL)	260~330	0.008~0.01	260~330	0.010~0.016	300~360	0.012~0.018	300~360	0.012~0.018	300~390	0.012~0.020

YTD Carbide Brazed Tipped Drills, Metric

Drill Dia.	13.5~	15.0mm	~20	0.0mm	~41.5mm		
Condition Material Group	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	Speed (m/min)	Feed (mm/rev)	
Grey cast iron (FC)	50~80	0.20~0.35	50~80	0.20~0.40	50~80	0.25~0.50	
Nodular cast iron (FCD)	50~70	0.20~0.35	50~70	0.20~0.40	50~70	0.25~0.50	
Carbon steel (S45C)	40~65	0.15~0.30	40~65	0.20~0.40	40~65	0.20~0.45	
Alloy steel (SCM440)	40~60	0.10~0.25	40~60	0.15~0.35	40~60	0.20~0.40	
Hardened steel (SKD11)	30~40	0.10~0.25	30~40	0.15~0.30	30~40	0.20~0.35	
Stainless steel (SUS)	30~40	0.10~0.20	30~40	0.15~0.25	30~40	0.20~0.30	

YSD, YSDF, YSDP, YCD Solid Carbide Drills

Drill Dia. 3~5mm		5~8	mm	8~10	Omm	10~12mm		12~14mm		14~20mm		
Condition Material Group	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed
Grey cast iron	80~	0.1~	80~	0.2~	85~	0.2~	90~	0.2~	90~	0.2~	95~	0.2~
(FC)	85	0.25	90	0.3	95	0.35	95	0.4	100	0.4	100	0.5
Nodular cast iron	80~	0.1~	80~	0.2~	80~	0.2~	80~	0.2~	80~	0.2~	80~	0.2~
(FCD)	85	0.25	85	0.3	85	0.35	90	0.4	90	0.4	90	0.5
Carbon steel	60~	0.1~	65~	0.15~	70~	0.15~	70~	0.2~	70~	0.25~	75~	0.3~
(S45C)	65	0.2	70	0.25	75	0.25	80	0.3	80	0.3	80	0.4
Alloy steel	50~	0.1~	55~	0.15~	60~	0.15~	60~	0.2~	65~	0.25~	65~	0.3~
(SCM440)	55	0.25	60	0.25	65	0.3	70	0.35	70	0.35	70	0.45
Hardened steel	25~	0.06~	25~	0.1~	30~	0.1~	30~	0.1~	30~	0.1~	30~	0.1~
(SKD11)	30	0.12	30	0.15	35	0.2	35	0.25	35	0.25	35	0.25
Stainless steel	20~	0.05~	20~	0.1~	25~	0.1~	25~	0.1~	25~	0.1~	25~	0.1~
(SUS)	25	0.1	25	0.15	30	0.2	30	0.25	30	0.25	30	0.25

YSDC(D5), YSDCF(D5), YSDCP(D5) Solid Coolant Hole Drills

		speed (V)		Feed rate in dia.					
IVIa	terials	(m/min)	3~8mm	8~12mm	12~16mm	16~20mm			
	Carbon < 0.25%	80~100	0.1~0.2	0.15~0.25	0.2~0.4	0.25~0.5			
Unallayed steel	Carbon : 0.25~0.55%	80~100	0.1~0.2	0.15~0.25	0.2~0.4	0.25~0.5			
Unalloyed steel	High Carbon & Carbon tool steel	80~100	0.1~0.2	0.15~0.25	0.2~0.4	0.25~0.5			
Low alloyed steel	Non hardened HB 150~260	70~100	0.1~0.2	0.2~0.3	0.2~0.35	0.25~0.4			
High alloyed steel	Annealed HSS HB 150~270	40~70	0.08~0.15	0.12~0.22	0.2~0.4	0.25~0.4			
Stainless steel	Austenitic Ni>8%, C=18~25%	35~50	0.08~0.15	0.12~0.25	0.15~0.3	0.2~0.35			
na Haalda aad taa	Ferritic	80~100	0.15~0.3	0.25~0.35	0.3~0.4	0.3~0.45			
Malleable cast iron	Pearlitic	70~90	0.1~0.25	0.2~0.4	0.25~0.4	0.25~0.5			
Grov sost iron	Low tensile strength	80~100	0.1~0.25	0.25~0.35	0.3~0.45	0.35~0.55			
Grey cast iron	High tensile strength	70~90	0.1~0.22	0.2~0.33	0.3~0.4	0.35~0.5			

- 1. YES Carbide drill is not recommended to operate in low powered equipment.
- 2. Check spindle, machine and fixture rigidity before operation.
- 3. Make sure that coincide drill point with the center of material when lathe operation.
- 4. Feed enough cutting fluids.

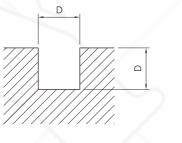
Recommended Cutting Data

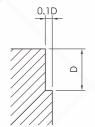
YSET Carbide End Mills

	Material		Carbon steel (S50 (Speed = 40m/mi			steel (SCM, SKE Speed = 30m/mi	
Diameter	Condition	W 10 100	Feed(n	nm/min)	***	Feed(r	mm/min)
(mm)	Flutes	rpm	Slot	Shoulder	rpm	Slot	Shoulder
2.0	2	5,600	80	200	4,800	60	150
2.5	2	4,500	80	200	3,800	60	150
3.0	2	3,700	80	200	3,200	60	150
4.0	2	2,800	80	200	2,400	60	150
F 0	2	2 200	80	200	1.000	60	150
5.0	4	2,200		300	1,900	-	230
	2	4.000	80	200	4.500	60	150
6.0	4	1,900	<u>-</u>	300	1,600	-	230
7.0	2	1,600	80	200	1,400	60	150
	2		80	200		60	150
8.0	4	1,400	-	300	1,200	-	230
9.0	2	1,200	80	200	1,100	60	150
	2	/	80	200		60	150
10.0	4	1,100	\ <u> </u>	300	950	-	230
11.0	2	1,000	80	200	870	60	150
	2		80	200	/	60	150
12.0	4	930	-	300	800	-	230
	2		80	200		60	150
14.0	4	800	-	300	680	-	230
	2		80	200	\	60	150
15.0	4	750	-	300	640	-	230
46.5	2	700	80	200		60	150
16.0	4	700	-	300	600	1	230
	2	630	80	200		60	150
18.0	4	620	-	300	530	-	230
	2		80	200		60	150
20.0	4	560	-	300	480	-	230

YSET Carbide Roughing End Mills

Material		Carbon steel (S50C) (Speed = 40m/min)			Alloy steel (SCM, SKD, SUS) (Speed = 30m/min)			
Condition	rpm _	Feed(mm/min)		rpm	Feed(mm/min)			
Condition Diameter	, p	Slot	Shoulder	Tpill	Slot	Shoulder		
6	2100	120	300	1600	100	250		
8	1600	120	300	1200	100	250		
10	1300	120	300	950	100	250		
12	1100	120	300	800	100	250		
14	900	120	300	680	100	250		
16	800	120	300	600	100	250		
20	640	100	250	480	80	200		
25	510	100	250	380	80	200		





Slot Milling

Shoulder Milling

YSET/HH Carbide High Helix End Mills

Material	HRC v=25r	55 n/min	HRC v=20	: 60 m/min	HRC v=15i	65 m/min	HRC v=12i	70 n/min
Condition	rpm	Feed	rpm	Feed	rpm	Feed	rpm	Feed
6	1300	200	1100	160	800	120	640	100
8	1000	200	800	160	600	120	480	100
10	800	200	640	160	480	120	380	100
12	600	200	530	160	400	120	320	100
16	500	200	400	160	300	120	240	100
20	400	200	320	160	240	120	200	100
25	320	200	250	160	190	120	150	100
32	270	200	210	160	160	120	130	100

$$V = \frac{\pi \times D \times N}{1000} (m/min)$$

- V : Cutting speed (m/min)

- D : Drill diameter (mm)

- N : Revolution per minute (rpm)

- π : Circular constant (3.14)

Feed

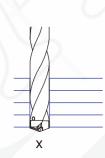
$$f = \frac{F}{N}$$
 (mm/rev)

- f : Feed rate (mm/rev)

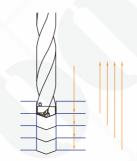
- F: Depth of cut per minute (mm/min)

- N : Revolution per minute (rpm)

Recommended application for stacked plate by Yes Carbide Drills

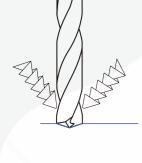


One operation is possible subject to closly tightend stacked plate without any room.



"Woodpecker" method recommended in case of certain aperture in the stacked plate.

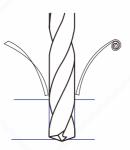
Good chip formation



(initial drilling)



(drilling through)

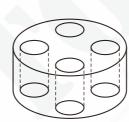


(bottoming)



(long Stringy chip)

Cutting speed examples for different workpieces by Yes Carbide drills



Φ13 x depth 10mm

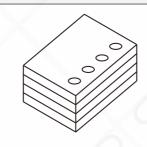
FCD45 **YCD 130** N=1592rpm

V=65m/min F=318mm/min f=0.2mm/rev



S50C YTDI 200 P

N=876rpm V=55m/min F=263mm/min f=0.3mm/rev

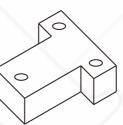


Φ24 x depth 63mm

SS41 YTDI 240 T

N=796rpm V=60m/min F=239mm/min

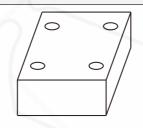
f=0.3mm/rev



Φ12 x depth 12mm



N=1194rpm V=45m/min F=179mm/min f=0.15mm/rev

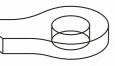


Φ10 x depth 15mm

SUS304 YSDC 100

N=1115rpm V=35m/min F=112mm/min

f=0.1mm/rev



Ф15 x depth 8mm

YTD 150 N=1592rpm V=75m/min F=557mm/min f=0.35mm/rev

FC25

How to find maximum wear

- 1. When long and stringy chip formation without broken chip, require to change new tool or regrinding
- 2. Below pictures show the time of regrinding



Need to change new tool or regrinding



Excessive wear

Power requirement for YES Carbide Drill

Power reguirement for YES Carbide Drills

Power(P) =
$$\frac{D \times f \times V \times ks}{24,480 \times 0.7}$$
 (kw)

- D = drill diameter (mm)

ex)

- f = feed (mm/rev)

- V = cutting speed (m/min)

- ks = specific cutting force (kg/mm)

Power(P) =
$$\frac{11.5 \times 0.2 \times 60 \times 230}{24,480 \times 0.7}$$
 = 1.852kw

- η = constants of performance(0.7~0.85)

Specific cutting force (ks)

	Material	Condition	НВ	ks(kg/mm)
		C = 0.15%	100~150	195
	Unalloyed steel	C = 0.35%	120~180	215
	1 0	C = 0.60%	200~250	230
		Non hardened	120~200	215
	Low alloy steel	Hardened & Tempered	250~300	265
		Hardened & Tempered	300~350	290
6. 1	I Bala alla anta al	Annealed	150~250	265
Steel	High alloy steel	Hardened	300~350	290
		Martensitic/ ferritic	175~225	235
	Stainless steel	Austenitic	150~200	250
		Unalloyed	150~200	205
	Steel casting	Low alloyed	175~225	255
		High a ll oyed	200~250	275
	Hard steel	Hardened steel	HRc 55	460
	Cray resting iven	Low tensile strength	150~225	110
	Grey casting iron	High tensile strength	200~300	150
Malleable cast iron		110~250	115	
Cast iron		Ferritic	125~200	115
	Nodular cast iron	Pearlitic	200~300	185
	Chilled cast iron		350~450	310
	Al	Non heat treatable	40~80	50
Alumii	Aluminium alloys	Heat treatable	80~120	80
	Aluminium allum Cont	Non heat treatable	50~100	80
Non ferrous	Aluminium alloys,Cast	Heat treatable	65~115	95
	Communities	Brass	65~115	80
	Copper alloys	Bronze	75~115	180

Trouble Shooting Guide for YES Carbide Drill

Pr	oblem	Cause	Remedy	
	Flank wear	Excessive cutting speed	Reduce cutting speed	
		Vibration or chattering in machine tool, holder or component	Check and adjust machine and tool alignment	
	Edan shinning	Deflection of tool, part, fixture or machine	Check all rigidity	
Edge chipping	Eage chipping	Excessive cutting speed	Reduce cutting speed	
		Off center set up	Check concentricity not to exceed 0.02mm TIR	
	Corner chinning	Excessive cutting speed	Reduce cutting speed	
	Corner chipping	Insufficient coolant supply	Increase coolant pressure	
Cutting edge wear		Insufficient cutting speed	Increase cutting speed	
	Built up edge	Insufficient coolant supply	Increase coolant pressure	
	\sim	Worn cutting edge	Regrind or replace new drill	
		Improper seating of tool	Check and adjust machine spindle, and fixture	
		Rough or angled entry/exit of hole	Reduce feed	
	Margin	Chip dogging or jamming	Increase coolant pressure and adjust feed to optimize chip-formation	
		Insufficient coolant supply	Increase coolant pressure	
		Excessive cutting speed	Reduce cutting speed	
Long s	tringy chips	Improper speed and feed	Adjust spped and feed	
Tool li	fe too short	Flank wear increase too fast	Reduce cutting speed	
Duill	husahana	Off center set up	Check set up rigidity of machine, tool, and fixture	
Drill breakage		Improper cutting condition	Check cutting parameters, possibly reduce feed	
Bur	rs on exit	Excessive axial force	Reduce the width of edge preparation	
Oversize hole		Improper cutting condition	Check cutting data, increase cutting spee	
		Clamping chuck	Check fit and clamping of tool	
,		Tool cooling	Check coolant fluid	
Undersize hole		Improper cutting condition	Reduce cutting speed, increase feed	

Technical Data

Resharpening Guide for YES Carbide Drills

Yes brand Carbide drill can be resharpened by CNC 5 axis machine or Universal tool grinder with our own special attachment. The below procedure is to regrind by Universal tool grinder, while follow "S"point program in case of CNC machine.

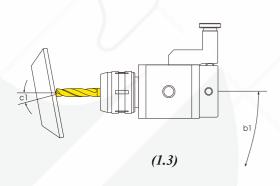
Removal of worn section

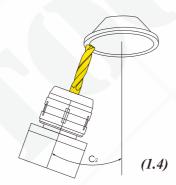
Remove all of the worn or chipped section before regrinding.

Regrinding drill point



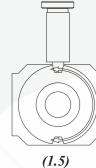
- 1. Put the drill point horizontally on the stopper.(see 1.1)
- 2. Set dial gauge on <a> and turn the drill to coincide central line of point. Then, tighten the collect chuck securely.(see 1.2)





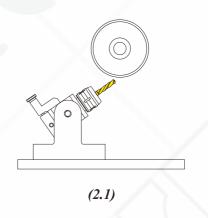
(1.2)

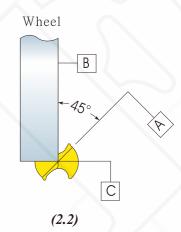
- 3. Set the cutting edge toward grinding wheel to the point angle <c1, 8°> as shown (1.3). Then, keep the angle $\langle c2, 20^{\circ} \rangle$ as shown (1.4).
- 4. Grind the flank up and down repeatedly as shown <b1>.



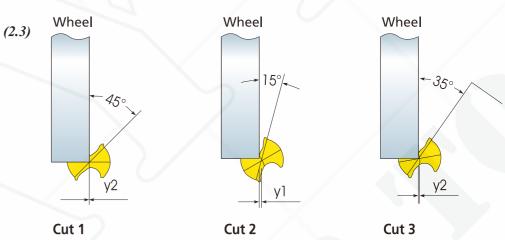
- 5. Move forawrd the grinding wheel and grind the cutting lips, after keeping the attachment horizontally.
- 6. Rotate the attachment at 180° toward <c3> and grind other cutting edge by the same procedure as NO.4, 5.(see 1.5) Make sure that both cutting lips should be equal or symmetrical.

Web thinning





- 1. Set the drill at 30° or 35° in the drill attachment.(see 2.1) (In case of drill for AL, FC material, keep 30°, while others at 35°.)
- 2. Align the "B" face of wheel at center line of drill.(see 2.2)
- 3. Set the "B" face of wheel at 45° from cetral line of the drill.



- 4. Grind as procedure <cut 1>,<cut 2>, <cut3>.(see 2.3)
- 5. Rotate the attachment at 180° and grind other facet by NO.4 procedure. Note that the shape of the thinning should be such that it does not interfer with chip flow.



If you have any difficulty to regrind in your shop, you may use our factory expert service which is being serviced at reasonable cost in one week returning delivery Contact ours.



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 ❖ e-mail: yestool@yestool.co.kr
 ❖ www.yestool.com

COMPANY AND LOCATION	PHONE	DATE	ENGINEER NAME	
CUSTOMER NAME	PHONE	MATERIAL TYPE AND CONDITION		HARDNESS
				RC BRN
PART DESCRIPTION		THROUGH OR FLOOD COOLANT	DRILLING POSITION	
			HORIZONTAL VERTICA	L 🔲
MACHINE AND TYPE		COOLANT TYPE BRAND	COOLANT PRESSURE	COOLANT FLOW
			PSI	GPM
MACHINE CONDITION		HP	HOLE PURPOSE	
			TAPPED CLEARANCE	ROUGH HOLE BORING
OPERATION				

PERFORMANCE, TECHNICAL, AND COST DATA	YES INDEXABLE DRILL	COMPETITOR'S
DRILL BRAND		
DRILL TYPE & DIAMETER		
TOOLHOLDING DEVICE		
INSERT OR BLADE		
INSERT GRADE & BRAND		
HOLE DIAMETER AND TOLERANCE(ROUGH)		
HOLE DIAMETER AND TOLERANCE(FINISH)		
HOLE DEPTH BLIND YES NO		
RPM		
SPEED (V: m/min)		
FEED RATE (f: mm/rev)		
FEED (F: mm/min)		
CUTTING TIME PER HOLE IN MINUTES		
CHIP CONTROL		
SURFACE FINISH		
NUMBER OF HOLES PER EDGE		
LINEAR METERS DRILLED PER EDGE		
REASON FOR CHANGING DRILL		
INSERT (BLADES) PER DRILL		X
INDEXES PER INSERT		
INSERT COST		
PROJECTED RECONDITIONS PER BLADE		
RECONDITION COST		
MACHINE COST PER HOUR		
HOLES PER PART		11/1
ESTIMATED PARTS PER YEAR		7





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 ❖ Fax: 031-494-7619

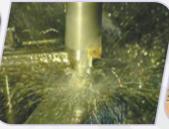
 ❖ e-mail: yestool@yestool.co.kr
 ❖ www.yestool.com

회사및공장	전화	일시		담당기사			
고객명	전화	가공재질및특성			\ \ \	경도	
						RC BRN	
제품명		내부절삭유공급 외탁	부절삭유	드릴링형태			
				수평형	수직형		
기계명		절삭유	제품명	절삭유압력		절삭유량	
				PSI		GPM	
기계상태		마력(HP)		홀작업사유		1	
				탭전드릴 🗌	정삭홀작업	황삭홀작입	=
기계의작동							

PERFORMANCE, TECHNICAL, AND COST DATA	YES INDEXABLE DRILL	타사제품
드릴 제조회사		~
드릴의 종류 및 직경		
피삭재 고정방법		
인서트형 드릴 또는 솔리드 드릴		
인서트 종류 및 제조원		
황삭가공 경 및 공차		
정삭가공 경 및 공차		
홀 깊이 막힌홀 관통홀		
회전수(rpm)	/	
절삭 속도 V (m/분)		
이송량 f (mm/rev)		
분당 이송량 F (mm/분)		
홀당 가공시간(분)	X	
칩형성 모양		
홀 거칠기		
드릴당 가공 홀 수		
드릴당 가공 거리(수명)		
드릴의 교체 사유		
드릴당 인서트 교체수량		
INDEXES PER INSERT		
인서트 비용		
드릴의 재연마 계획		
재연마 재코팅 비용		
시간당 기계 비용		
제품당 소요되는 홀의 수		
연간 제품 소요량		























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