

Сверла с твердосплавными головками

YESTOOL Co., LTD

Южная Корея



ТОВ "ФРАКТАЛЬНІСТЬ"

Наші контакти:

вул. Машинобудівна, 46, 03067, Київ

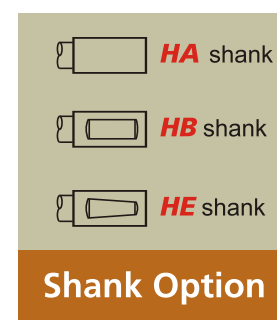
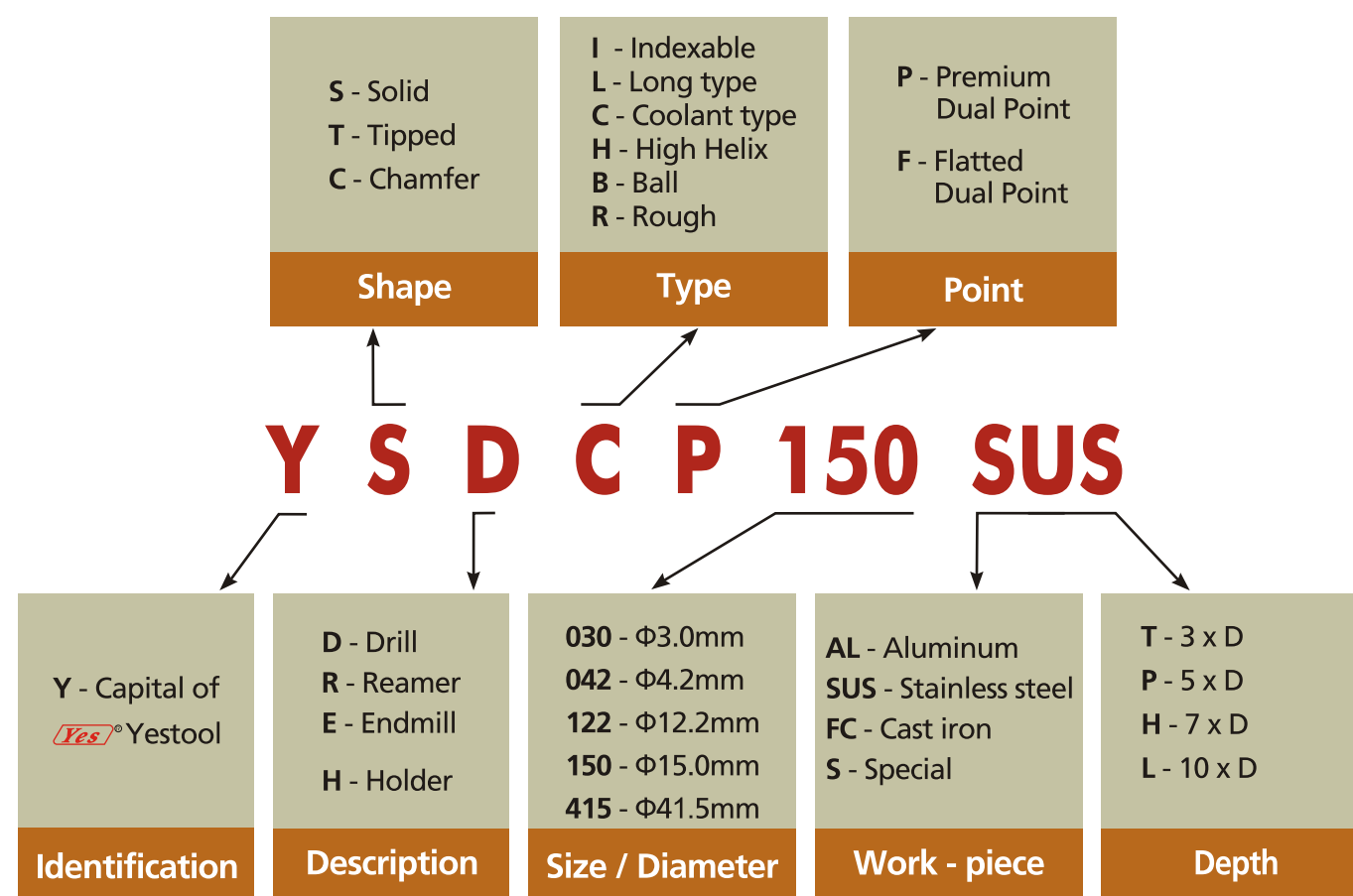
тел.: +38 044 227-57-73

факс: +38 044 394-80-94

e-mail: office@fractalnost.com.ua

www.fractalnost.com.ua

Ordering information and identification system



Yestool's product has different shank style each model.
If requesting different shank style, please specify required shank on the left.

- KRUZ-FSL IDP, IDP, IDP KRUZ-FSL Drill(Flange Type) Body & Carbide Insert
- New KRUZ-FH IDPH, IDPH, IDH KRUZ "H" series flange+high helix body & carbide insert
- KRUZ-SLK IDPK, IDPK KRUZ "K" series drill body & carbide insert for structural
- New DMH DM Drilling & Milling tool holder & carbide drill
- New MT MT shank side lock holder
- New STH SD Scribing tool holder & scribing drill
- ISO45 HSK ISO 45 & HSK Extension holder for Structural
- EXT Extension socket
- New RSL Reduction sleeve
- New Extra-long Drill Indexable Extra-long Drill (15xD, 20xD, 30xD)
- Special KRUZ KRUZ Combination Step Drill Body
- YTDI/DB DBI "One Pass" Indexable Drilling & Deburring Body & Insert
- YTRI IR,IBR Indexable Reamer Body & Carbide Insert Reamer
- New YCHR KRUZ combination chamfer ring
- YTD Carbide Brazed Tipped Drills
- YTDL Carbide Brazed Tipped Drills, Long series

Indexable, Coolant Drill Series



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

KRUZ-FSL

- ▶ Locking with dual screws(set & cap screw)
- ▶ Flanged body construction to reduce vibration
- ▶ Reinforced clamping power with bigger screws

KRUZ-FH

▶ "H" series body & insert available upon request only

- ▶ Higher helix flute to reduce machine load
- ▶ Locking with dual screws(set & cap screw)
- ▶ Flanged body construction to reduce vibration

IDP

- ▶ Deep hole & general purpose
- ▶ Patented dual point 130° + 150°
- ▶ Coated with newest <Y+> coated
- ▶ Designed for deep hole and tough job

IDF

- ▶ Thin plate & shallow depth
- ▶ Optimum geometry for structural beams
- ▶ Dual point 140° + 170° side edge
- ▶ Alternative solution for interrupted hole

ID

- ▶ General purpose
- ▶ Conventional 140° single point

IDPH

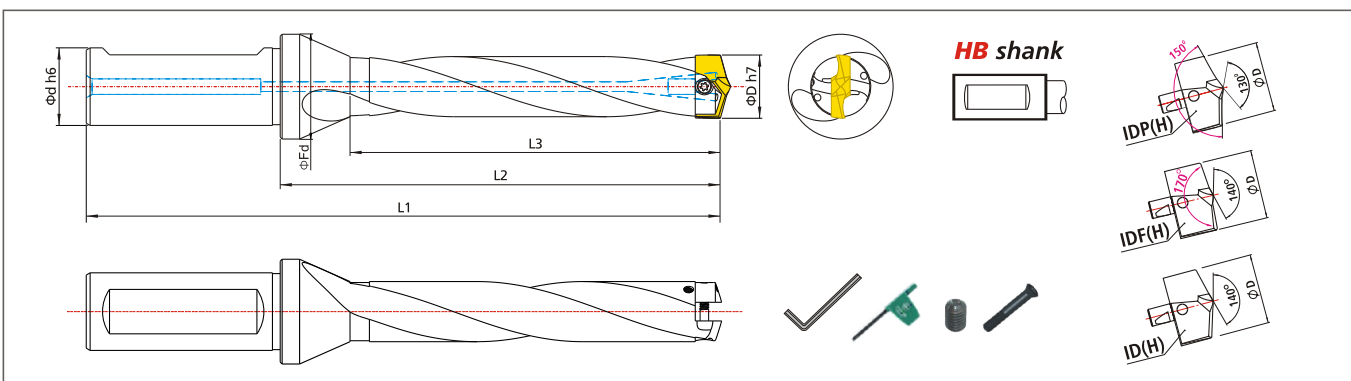
- ▶ Higher helix flute to fit in "H" series body
- ▶ Deep hole & general purpose
- ▶ Patented dual point 130° + 150°
- ▶ Coated with newest <Y+> coated
- ▶ Designed for deep hole and tough job

IDFH

- ▶ 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

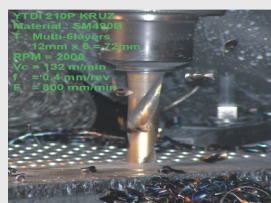
IDH

- ▶ Higher helix flute to fit in "H" series body
- ▶ General purpose
- ▶ Conventional 140° single point



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



KRUZ drill delivers outstanding 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 $\Phi 8.0$ to 50.4mm by 0.1mm inclusive from stock

Standard and optional geometry for different material

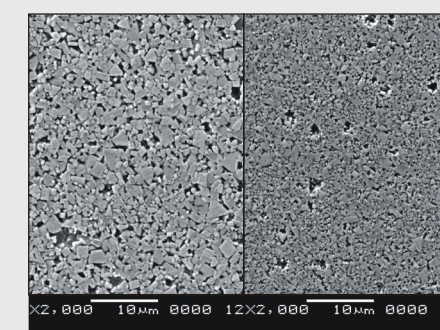
- ID & IDF coated with <TiAlN>, IDP coated with <Y+> as standard
- AL : for Aluminum, made-to-order, uncoated but polished
- SUS : for Stainless steel or Titanium, made-to-order
- FC : for Cast iron, made-to-order

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

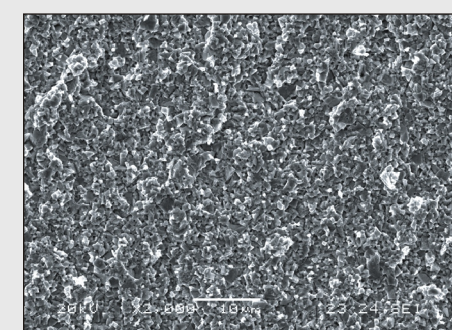
Carbide material substrate

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.



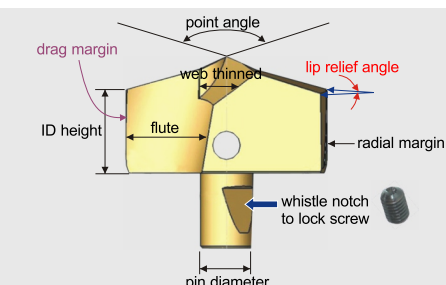
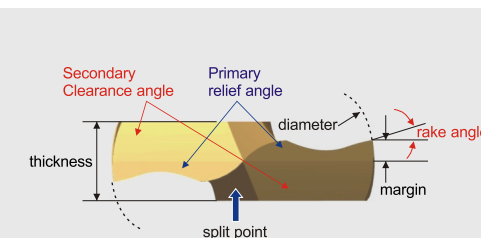
Conventional Carbide

Yestool's standard carbide



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

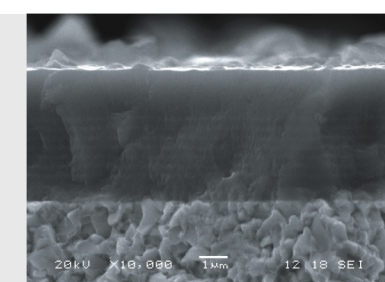
Nomenclature of Carbide Insert



Y+ coated insert



Coated surface



Coated layers

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



KRUZ-FSL

IDP

IDF

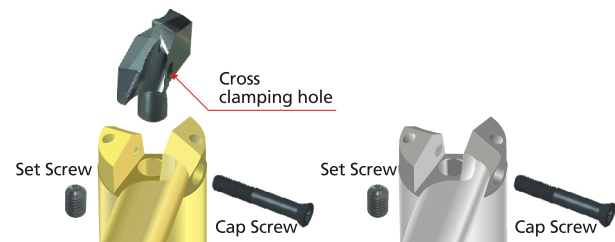
ID

Insert selection

Deep hole & general purpose

Thin plate & shallow depth

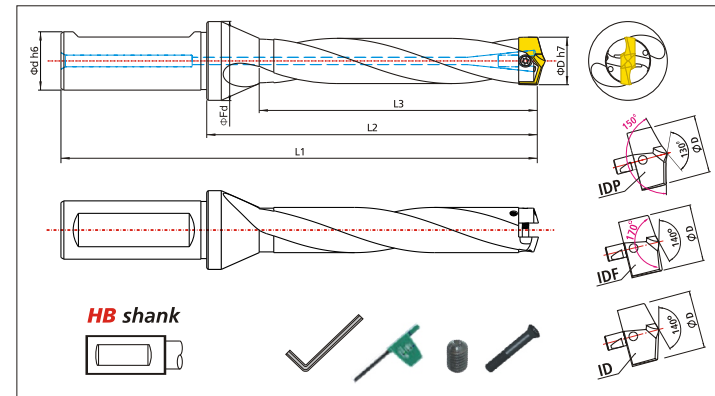
General purpose



KRUZ-FSL body

YTDI-FSL body

- ▶ Rugged flange type body to decrease vibration or chattering
- ▶ Interchangeable <IDP>, <IDF>, <ID> carbide drill inserts
- ▶ Drill body consists of premium tool steel with heat treatment
- ▶ Increased tool life by less vibration
- ▶ Internal coolant fed design



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

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ8.0 ~Φ8.4	YTDI 080 ☐ FSL KRUZ 080 ☐ FSL	10.0 (HA)	T(3xD) P(5xD) H(7xD)	87 103 119	42 58 74	32 48 64	18	IDP 080, IDP 081, IDP 082, IDP 083, IDP 084 IDF 080, IDF 081, IDF 082, IDF 083, IDF 084 ID 080, ID 081, ID 082, ID 083, ID 084	CS 080 -095 SL	Torque 0.6Nm (Max)	None	None
Φ8.5 ~Φ8.9	YTDI 085 ☐ FSL KRUZ 085 ☐ FSL		T(3xD) P(5xD) H(7xD)	89 106 123	44 61 78	34 51 68		IDP 085, IDP 086, IDP 087, IDP 088, IDP 089 IDF 085, IDF 086, IDF 087, IDF 088, IDF 089 ID 085, ID 086, ID 087, ID 088, ID 089				
Φ9.0 ~Φ9.4	YTDI 090 ☐ FSL KRUZ 090 ☐ FSL		T(3xD) P(5xD) H(7xD)	92 110 128	47 65 83	36 54 72		IDP 090, IDP 091, IDP 092, IDP 093, IDP 094 IDF 090, IDF 091, IDF 092, IDF 093, IDF 094 ID 090, ID 091, ID 092, ID 093, ID 094				
Φ9.5 ~Φ9.9	YTDI 095 ☐ FSL KRUZ 095 ☐ FSL	12.0 (HA)	T(3xD) P(5xD) H(7xD)	97 116 135	49 68 87	38 57 76	18	IDP 095, IDP 096, IDP 097, IDP 098, IDP 099 IDF 095, IDF 096, IDF 097, IDF 098, IDF 099 ID 095, ID 096, ID 097, ID 098, ID 099	CS 100 -115 SL	Torque 0.6Nm (Max)	None	None
Φ10.0 ~Φ10.4	YTDI 100 ☐ FSL KRUZ 100 ☐ FSL		T(3xD) P(5xD) H(7xD)	99 119 139	51 71 91	40 60 80		IDP 100, IDP 101, IDP 102, IDP 103, IDP 104 IDF 100, IDF 101, IDF 102, IDF 103, IDF 104 ID 100, ID 101, ID 102, ID 103, ID 104				
Φ10.5 ~Φ10.9	YTDI 105 ☐ FSL KRUZ 105 ☐ FSL		T(3xD) P(5xD) H(7xD)	102 123 144	54 75 96	42 63 84		IDP 105, IDP 106, IDP 107, IDP 108, IDP 109 IDF 105, IDF 106, IDF 107, IDF 108, IDF 109 ID 105, ID 106, ID 107, ID 108, ID 109				
Φ11.0 ~Φ11.4	YTDI 110 ☐ FSL KRUZ 110 ☐ FSL	16.0	T(3xD) P(5xD) H(7xD) L(10xD)	104 126 148 181	56 78 100 133	44 66 88 121	21	IDP 110, IDP 111, IDP 112, IDP 113, IDP 114 IDF 110, IDF 111, IDF 112, IDF 113, IDF 114 ID 110, ID 111, ID 112, ID 113, ID 114	CS 120 -135 SL	M2.5x4	1.3mm	
Φ11.5 ~Φ11.9	YTDI 115 ☐ FSL KRUZ 115 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	107 130 153 188	59 82 105 140	46 69 92 127		IDP 115, IDP 116, IDP 117, IDP 118, IDP 119 IDF 115, IDF 116, IDF 117, IDF 118, IDF 119 ID 115, ID 116, ID 117, ID 118, ID 119				
Φ12.0 ~Φ12.4	YTDI 120 ☐ FSL KRUZ 120 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	109 133 157 193	61 85 109 145	48 72 96 132		IDP 120, IDP 121, IDP 122, IDP 123, IDP 124 IDF 120, IDF 121, IDF 122, IDF 123, IDF 124 ID 120, ID 121, ID 122, ID 123, ID 124				

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ12.5 ~Φ12.9	YTDI 125 ☐ FSL KRUZ 125 ☐ FSL	16.0	T(3xD) P(5xD) H(7xD) L(10xD)	111 136 161 199	63 88 113 151	50 75 100 138	21	IDP 125, IDP 126, IDP 127, IDP 128, IDP 129 IDF 125, IDF 126, IDF 127, IDF 128, IDF 129 ID 125, ID 126, ID 127, ID 128, ID 129	CS 120 -135 SL	Torque 0.6Nm (Max)		
Φ13.0 ~Φ13.4	YTDI 130 ☐ FSL KRUZ 130 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	114 140 166 205	66 92 118 157	52 78 104 143		IDP 130, IDP 131, IDP 132, IDP 133, IDP 134 IDF 130, IDF 131, IDF 132, IDF 133, IDF 134 ID 130, ID 131, ID 132, ID 133, ID 134				
Φ13.5 ~Φ13.9	YTDI 135 ☐ FSL KRUZ 135 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	116 143 170 211	68 95 122 163	54 81 108 149		IDP 135, IDP 136, IDP 137, IDP 138, IDP 139 IDF 135, IDF 136, IDF 137, IDF 138, IDF 139 ID 135, ID 136, ID 137, ID 138, ID 139				
Φ14.0 ~Φ14.4	YTDI 140 ☐ FSL KRUZ 140 ☐ FSL	20.0	T(3xD) P(5xD) H(7xD) L(10xD)	119 147 175 217	71 99 127 169	56 84 112 154	27	IDP 140, IDP 141, IDP 142, IDP 143, IDP 144 IDF 140, IDF 141, IDF 142, IDF 143, IDF 144 ID 140, ID 141, ID 142, ID 143, ID 144	CS 140 -155 SL	Torque 0.9Nm (Max)	M2.5x4	1.3mm
Φ14.5 ~Φ14.9	YTDI 145 ☐ FSL KRUZ 145 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	123 152 181 225	73 102 131 175	58 87 116 160		IDP 145, IDP 146, IDP 147, IDP 148, IDP 149 IDF 145, IDF 146, IDF 147, IDF 148, IDF 149 ID 145, ID 146, ID 147, ID 148, ID 149				
Φ15.0 ~Φ15.4	YTDI 150 ☐ FSL KRUZ 150 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	127 157 187 232	77 107 137 182	60 90 120 165		IDP 150, IDP 151, IDP 152, IDP 153, IDP 154 IDF 150, IDF 151, IDF 152, IDF 153, IDF 154 ID 150, ID 151, ID 152, ID 153, ID 154				
Φ15.5 ~Φ15.9	YTDI 155 ☐ FSL KRUZ 155 ☐ FSL	25.0	T(3xD) P(5xD) H(7xD) L(10xD)	130 161 192 239	80 111 142 189	62 93 124 171	32	IDP 155, IDP 156, IDP 157, IDP 158, IDP 159 IDF 155, IDF 156, IDF 157, IDF 158, IDF 159 ID 155, ID 156, ID 157, ID 158, ID 159	CS 160 -175 SL	Torque 1.5Nm (Max)	M3x6	1.5mm
Φ16.0 ~Φ16.4	YTDI 160 ☐ FSL KRUZ 160 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	132 164 196 244	82 114 146 194	64 96 128 176		IDP 160, IDP 161, IDP 162, IDP 163, IDP 164 IDF 160, IDF 161, IDF 162, IDF 163, IDF 164 ID 160, ID 161, ID 162, ID 163, ID 164				
Φ16.5 ~Φ16.9	YTDI 165 ☐ FSL KRUZ 165 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	135 168 201 251	85 118 151 201	66 99 132 182		IDP 165, IDP 166, IDP 167, IDP 168, IDP 169 IDF 165, IDF 166, IDF 167, IDF 168, IDF 169 ID 165, ID 166, ID 167, ID 168, ID 169				
Φ17.0 ~Φ17.4	YTDI 170 ☐ FSL KRUZ 170 ☐ FSL	32	T(3xD) P(5xD) H(7xD) L(10xD)	137 171 205 256	87 121 155 206	68 102 136 187	32	IDP 170, IDP 171, IDP 172, IDP 173, IDP 174 IDF 170, IDF 171, IDF 172, IDF 173, IDF 174 ID 170, ID 171, ID 172, ID 173, ID 174	CS 180 -195 SL	Torque 1.5Nm (Max)	M3x6	1.5mm
Φ17.5 ~Φ17.9	YTDI 175 ☐ FSL KRUZ 175 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	139 174 209 262	89 124 159 212	70 105 140 193		IDP 175, IDP 176, IDP 177, IDP 178, IDP 179 IDF 175, IDF 176, IDF 177, IDF 178, IDF 179 ID 175, ID 176, ID 177, ID 178, ID 179				
Φ18.0 ~Φ18.4	YTDI 180 ☐ FSL KRUZ 180 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	142 178 214 268	92 128 164 218	72 108 144 198		IDP 180, IDP 181, IDP 182, IDP 183, IDP 184 IDF 180, IDF 181, IDF 182, IDF 183, IDF 184 ID 180, ID 181, ID 182, ID 183, ID 184				
Φ18.5 ~Φ18.9	YTDI 185 ☐ FSL KRUZ 185 ☐ FSL	32	T(3xD) P(5xD) H(7xD) L(10xD)	144 181 218 274	94 131 168 224	74 111 148 204	32	IDP 185, IDP 186, IDP 187, IDP 188, IDP 189 IDF 185, IDF 186, IDF 187, IDF 188, IDF 189 ID 185, ID 186, ID 187, ID 188, ID 189	CS 200 -215 SL			
Φ19.0 ~Φ19.4	YTDI 190 ☐ FSL KRUZ 190 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	147 185 223 280	97 135 173 230	76 114 152 209		IDP 190, IDP 191, IDP 192, IDP 193, IDP 194 IDF 190, IDF 191, IDF 192, IDF 193, IDF 194 ID 190, ID 191, ID 192, ID 193, ID 194				
Φ19.5 ~Φ19.9	YTDI 195 ☐ FSL KRUZ 195 ☐ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	149 188 227 286	99 138 177 236	78 117 156 215		IDP 195, IDP 196, IDP 197, IDP 198, IDP 199 IDF 195, IDF 196, IDF 197, IDF 198, IDF 199 ID 195, ID 196, ID 197, ID 198, ID 199				
Φ20.0 ~Φ20.4	YTDI 200 ☐ FSL KRUZ 200 ☐ FSL	32	T(3xD) P(5xD) H(7xD) L(10xD)	157 197 237 297	101 141 181 241	80 120 160 220		IDP 200, IDP 201, IDP 202, IDP 203, IDP 204 IDF 200, IDF 201, IDF 202, IDF 203, IDF 204 ID 200, ID 201, ID 202, ID 203, ID 204				

Continued ▶▶

www.fractalnost.com.ua

Continued ▶▶

Indexable, Coolant Drill Series

13

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ20.5 ~Φ20.9	YTDI 205 □ FSL KRUZ 205 □ FSL	25.0	T(3xD) P(5xD) H(7xD) L(10xD)	160 201 242 304	104 145 186 248	82 123 164 226	32	IDP 205, IDP 206, IDP 207, IDP 208, IDP 209 IDF 205, IDF 206, IDF 207, IDF 208, IDF 209 ID 205, ID 206, ID 207, ID 208, ID 209	CS 200 ~215 SL		Torque 1.5Nm (Max)	M3x6 1.5mm
Φ21.0 ~Φ21.4	YTDI 210 □ FSL KRUZ 210 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	162 204 246 309	106 148 190 253	84 126 168 231		IDP 210, IDP 211, IDP 212, IDP 213, IDP 214 IDF 210, IDF 211, IDF 212, IDF 213, IDF 214 ID 210, ID 211, ID 212, ID 213, ID 214				
Φ21.5 ~Φ21.9	YTDI 215 □ FSL KRUZ 215 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	165 208 251 316	109 152 195 260	86 129 172 237		IDP 215, IDP 216, IDP 217, IDP 218, IDP 219 IDF 215, IDF 216, IDF 217, IDF 218, IDF 219 ID 215, ID 216, ID 217, ID 218, ID 219				
Φ22.0 ~Φ22.4	YTDI 220 □ FSL KRUZ 220 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	167 211 255 321	111 155 199 265	88 132 176 242		IDP 220, IDP 221, IDP 222, IDP 223, IDP 224 IDF 220, IDF 221, IDF 222, IDF 223, IDF 224 ID 220, ID 221, ID 222, ID 223, ID 224				
Φ22.5 ~Φ22.9	YTDI 225 □ FSL KRUZ 225 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	169 214 259 327	113 158 203 271	90 135 180 248		IDP 225, IDP 226, IDP 227, IDP 228, IDP 229 IDF 225, IDF 226, IDF 227, IDF 228, IDF 229 ID 225, ID 226, ID 227, ID 228, ID 229				
Φ23.0 ~Φ23.4	YTDI 230 □ FSL KRUZ 230 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	172 218 264 333	116 162 208 277	92 138 184 253		IDP 230, IDP 231, IDP 232, IDP 233, IDP 234 IDF 230, IDF 231, IDF 232, IDF 233, IDF 234 ID 230, ID 231, ID 232, ID 233, ID 234				
Φ23.5 ~Φ23.9	YTDI 235 □ FSL KRUZ 235 □ FSL	32.0	T(3xD) P(5xD) H(7xD) L(10xD)	174 221 268 339	118 165 212 283	94 141 188 259	39	IDP 235, IDP 236, IDP 237, IDP 238, IDP 239 IDF 235, IDF 236, IDF 237, IDF 238, IDF 239 ID 235, ID 236, ID 237, ID 238, ID 239	CS 220 ~235 SL		Torque 1.5Nm (Max)	M3x6 1.5mm
Φ24.0 ~Φ24.4	YTDI 240 □ FSL KRUZ 240 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	181 229 277 349	121 169 217 289	96 144 192 264		IDP 240, IDP 241, IDP 242, IDP 243, IDP244 IDF 240, IDF 241, IDF 242, IDF 243, IDF244 ID 240, ID 241, ID 242, ID 243, ID 244				
Φ24.5 ~Φ24.9	YTDI 245 □ FSL KRUZ 245 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	183 232 281 355	123 172 221 295	98 147 196 270		IDP 245, IDP 246, IDP 247, IDP 248, IDP 249 IDF 245, IDF 246, IDF 247, IDF 248, IDF 249 ID 245, ID 246, ID 247, ID 248, ID 249				
Φ25.0 ~Φ25.4	YTDI 250 □ FSL KRUZ 250 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	185 235 285 360	125 175 225 300	100 150 200 275		IDP 250, IDP 251, IDP 252, IDP 253, IDP 254 IDF 250, IDF 251, IDF 252, IDF 253, IDF 254 ID 250, ID 251, ID 252, ID 253, ID 254				
Φ25.5 ~Φ25.9	YTDI 255 □ FSL KRUZ 255 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	188 239 290 367	128 179 230 307	102 153 204 281		IDP 255, IDP 256, IDP 257, IDP 258, IDP 259 IDF 255, IDF 256, IDF 257, IDF 258, IDF 259 ID 255, ID 256, ID 257, ID 258, ID 259				
Φ26.0 ~Φ26.4	YTDI 260 □ FSL KRUZ 260 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	190 242 294 372	130 182 234 312	104 156 208 286		IDP 260, IDP 261, IDP 262, IDP 263, IDP 264 IDF 260, IDF 261, IDF 262, IDF 263, IDF 264 ID 260, ID 261, ID 262, ID 263, ID 264				
Φ26.5 ~Φ26.9	YTDI 265 □ FSL KRUZ 265 □ FSL	32.0	T(3xD) P(5xD) H(7xD) L(10xD)	193 246 299 379	133 186 239 319	106 159 212 292	39	IDP 265, IDP 266, IDP 267, IDP 268, IDP 269 IDF 265, IDF 266, IDF 267, IDF 268, IDF 269 ID 265, ID 266, ID 267, ID 268, ID 269	CS 260 ~275 SL		Torque 3.5Nm (Max)	M4x8 2.0mm
Φ27.0 ~Φ27.4	YTDI 270 □ FSL KRUZ 270 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	195 249 303 384	135 189 243 324	108 162 216 297		IDP 270, IDP 271, IDP 272, IDP 273, IDP 274 IDF 270, IDF 271, IDF 272, IDF 273, IDF 274 ID 270, ID 271, ID 272, ID 273, ID 274				
Φ27.5 ~Φ27.9	YTDI 275 □ FSL KRUZ 275 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	197 252 307 390	137 192 247 330	110 165 220 303		IDP 275, IDP 276, IDP 277, IDP 278, IDP 279 IDF 275, IDF 276, IDF 277, IDF 278, IDF 279 ID 275, ID 276, ID 277, ID 278, ID 279				
Φ28.0 ~Φ28.4	YTDI 280 □ FSL KRUZ 280 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	200 256 312 396	140 196 252 336	112 168 224 308		IDP 280, IDP 281, IDP 282, IDP 283, IDP 284 IDF 280, IDF 281, IDF 282, IDF 283, IDF 284 ID 280, ID 281, ID 282, ID 283, ID 284				

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ28.5 ~Φ28.9	YTDI 285 □ FSL KRUZ 285 □ FSL	32.0	T(3xD) P(5xD) H(7xD) L(10xD)	202 259 316 402	142 199 256 342	114 171 228 314	39	IDP 285, IDP 286, IDP 287, IDP 288, IDP 289 IDF 285, IDF 286, IDF 287, IDF 288, IDF 289 ID 285, ID 286, ID 287, ID 288, ID 289	CS 280 ~295 SL		Torque 3.5Nm (Max)	M4x8 2.0mm
Φ29.0 ~Φ29.4	YTDI 290 □ FSL KRUZ 290 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	205 263 321 408	145 203 261 348	116 174 232 319		IDP 290, IDP 291, IDP 292, IDP 293, IDP 294 IDF 290, IDF 291, IDF 292, IDF 293, IDF 294 ID 290, ID 291, ID 292, ID 293, ID 294				
Φ29.5 ~Φ29.9	YTDI 295 □ FSL KRUZ 295 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	207 266 325 414	147 206 265 354	118 177 236 325		IDP 295, IDP 296, IDP 297, IDP 298, IDP 299 IDF 295, IDF 296, IDF 297, IDF 298, IDF 299 ID 295, ID 296, ID 297, ID 298, ID 299				
Φ30.0 ~Φ30.4	YTDI 300 □ FSL KRUZ 300 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	209 269 329 419	149 209 269 359	120 180 240 330		IDP 300, IDP 301, IDP 302, IDP 303, IDP 304 IDF 300, IDF 301, IDF 302, IDF 303, IDF 304 ID 300, ID 301, ID 302, ID 303, ID 304				
Φ30.5 ~Φ30.9	YTDI 305 □ FSL KRUZ 305 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	212 273 334 426	152 213 274 366	122 183 244 336		IDP 305, IDP 306, IDP 307, IDP 308, IDP 309 IDF 305, IDF 306, IDF 307, IDF 308, IDF 309 ID 305, ID 306, ID 307, ID 308, ID 309				
Φ31.0 ~Φ31.4	YTDI 310 □ FSL KRUZ 310 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	214 276 338 431	154 216 278 371	124 186 248 341		IDP 310, IDP 311, IDP 312, IDP 313, IDP 314 IDF 310, IDF 311, IDF 312, IDF 313, IDF 314 ID 310, ID 311, ID 312, ID 313, ID 314				
Φ31.5 ~Φ31.9	YTDI 315 □ FSL KRUZ 315 □ FSL	40.0	T(3xD) P(5xD) H(7xD) L(10xD)	217 280 343 438	157 220 283 378	126 189 252 347	55	IDP 315, IDP 316, IDP 317, IDP 318, IDP 319 IDF 315, IDF 316, IDF 317, IDF 318, IDF 319 ID 315, ID 316, ID 317, ID 318, ID 319	CS 300 ~315 SL		Torque 4.0Nm (Max)	M5x10 2.5mm
Φ32.0 ~Φ32.4	YTDI 320 □ FSL KRUZ 320 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	219 283 347 443	159 223 287 383	128 192 256 352		IDP 320, IDP 321, IDP 322, IDP 323, IDP 324 IDF 320, IDF 321, IDF 322, IDF 323, IDF 324 ID 320, ID 321, ID 322, ID 323, ID 324				
Φ32.5 ~Φ32.9	YTDI 325 □ FSL KRUZ 325 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	221 286 351 449	161 226 291 389	130 195 260 358		IDP 325, IDP 326, IDP 327, IDP 328, IDP 329 IDF 325, IDF 326, IDF 327, IDF 328, IDF 329 ID 325, ID 326, ID 327, ID 328, ID 329				
Φ33.0 ~Φ33.4	YTDI 330 □ FSL KRUZ 330 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	224 290 356 455	164 230 296 395	132 198 264 363		IDP 330, IDP 331, IDP 332, IDP 333, IDP 334 IDF 330, IDF 331, IDF 332, IDF 333, IDF 334 ID 330, ID 331, ID 332, ID 333, ID 334				
Φ33.5 ~Φ33.9	YTDI 335 □ FSL KRUZ 335 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	226 293 360 461	166 233 300 401	134 201 268 369		IDP 335, IDP 336, IDP 337, IDP 338, IDP 339 IDF 335, IDF 336, IDF 337, IDF 338, IDF 339 ID 335, ID 336, ID 337, ID 338, ID 339				
Φ34.0 ~Φ34.4	YTDI 340 □ FSL KRUZ 340 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	239 307 375 477	169 237 305 407	136 204 272 374		IDP 340, IDP 341, IDP 342, IDP 343, IDP 344 IDF 340, IDF 341, IDF 342, IDF 343, IDF 344 ID 340, ID 341, ID 342, ID 343, ID 344				
Φ34.5 ~Φ34.9	YTDI 345 □ FSL KRUZ 345 □ FSL	40.0	T(3xD) P(5xD) H(7xD) L(10xD)	241 310 379 483	171 240 309 413	138 207 276 380	55	IDP 345, IDP 346, IDP 347, IDP 348, IDP 349 IDF 345, IDF 346, IDF 347, IDF 348, IDF 349 ID 345, ID 346, ID 347, ID 348, ID 349	CS 320 ~355 SL		Torque 4.0Nm (Max)	M5x10 2.5mm
Φ35.0 ~Φ35.4	YTDI 350 □ FSL KRUZ 350 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	243 313 383 488	173 243 313 418	140 210 280 385		IDP 350, IDP 351, IDP 352, IDP 353, IDP 354 IDF 350, IDF 351, IDF 352, IDF 353, IDF 354 ID 350, ID 351, ID 352, ID 353, ID 354				
Φ35.5 ~Φ35.9	YTDI 355 □ FSL KRUZ 355 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	246 317 388 495	176 247 318 425	142 213 284 391		IDP 355, IDP 356, IDP 357, IDP 358, IDP 359 IDF 355, IDF 356, IDF 357, IDF 358, IDF 359 ID 355, ID 356, ID 357, ID 358, ID 359				
Φ36.0 ~Φ36.4	YTDI 360 □ FSL KRUZ 360 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	248 320 392 500	178 250 322 430	144 216 288 396		IDP 360, IDP 361, IDP 362, IDP 363, IDP 364 IDF 360, IDF 361, IDF 362, IDF 363, IDF 364 ID 360, ID 361, ID 362, ID 363, ID 364				

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ36.5 ~Φ36.9	YTDI 365 □ FSL KRUZ 365 □ FSL	40.0	T(3xD) P(5xD) H(7xD) L(10xD)	251 324 397 507	181 254 327 437	146 219 292 402	55	IDP 365, IDP 366, IDP 367, IDP 368, IDP 369 IDF 365, IDF 366, IDF 367, IDF 368, IDF 369 ID 365, ID 366, ID 367, ID 368, ID 369	CS 360 ~395 SL			
Φ37.0 ~Φ37.4	YTDI 370 □ FSL KRUZ 370 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	253 327 401 512	183 257 331 442	148 222 296 407		IDP 370, IDP 371, IDP 372, IDP 373, IDP 374 IDF 370, IDF 371, IDF 372, IDF 373, IDF 374 ID 370, ID 371, ID 372, ID 373, ID 374				
Φ37.5 ~Φ37.9	YTDI 375 □ FSL KRUZ 375 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	255 330 405 518	185 260 335 448	150 225 300 413		IDP 375, IDP 376, IDP 377, IDP 378, IDP 379 IDF 375, IDF 376, IDF 377, IDF 378, IDF 379 ID 375, ID 376, ID 377, ID 378, ID 379				
Φ38.0 ~Φ38.4	YTDI 380 □ FSL KRUZ 380 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	258 334 410 524	188 264 340 454	152 228 304 418		IDP 380, IDP 381, IDP 382, IDP 383, IDP 384 IDF 380, IDF 381, IDF 382, IDF 383, IDF 384 ID 380, ID 381, ID 382, ID 383, ID 384				
Φ38.5 ~Φ38.9	YTDI 385 □ FSL KRUZ 385 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	260 337 414 530	196 267 344 460	154 231 308 424		IDP 385, IDP 386, IDP 387, IDP 388, IDP 389 IDF 385, IDF 386, IDF 387, IDF 388, IDF 389 ID 385, ID 386, ID 387, ID 388, ID 389				
Φ39.0 ~Φ39.4	YTDI 390 □ FSL KRUZ 390 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	263 341 419 536	193 271 349 466	156 234 312 429		IDP 390, IDP 391, IDP 392, IDP 393, IDP 394 IDF 390, IDF 391, IDF 392, IDF 393, IDF 394 ID 390, ID 391, ID 392, ID 393, ID 394				
Φ39.5 ~Φ39.9	YTDI 395 □ FSL KRUZ 395 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	265 344 423 542	195 274 353 472	158 237 316 435		IDP 395, IDP 396, IDP 397, IDP 398, IDP 399 IDF 395, IDF 396, IDF 397, IDF 398, IDF 399 ID 395, ID 396, ID 397, ID 398, ID 399				
Φ40.0 ~Φ40.4	YTDI 400 □ FSL KRUZ 400 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	267 347 427 547	197 277 357 477	160 240 320 440		IDP 400, IDP 401, IDP 402, IDP 403, IDP 404 IDF 400, IDF 401, IDF 402, IDF 403, IDF 404 ID 400, ID 401, ID 402, ID 403, ID 404		T20 Torque 4.0Nm (Max)		
Φ40.5 ~Φ40.9	YTDI 405 □ FSL KRUZ 405 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	270 351 432 554	200 281 362 484	162 243 324 446		IDP 405, IDP 406, IDP 407, IDP 408, IDP 409 IDF 405, IDF 406, IDF 407, IDF 408, IDF 409 ID 405, ID 406, ID 407, ID 408, ID 409				
Φ41.0 ~Φ41.4	YTDI 410 □ FSL KRUZ 410 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	272 354 436 559	202 284 366 489	164 246 328 451		IDP 410, IDP 411, IDP 412, IDP 413, IDP 414 IDF 410, IDF 411, IDF 412, IDF 413, IDF 414 ID 410, ID 411, ID 412, ID 413, ID 414				
Φ41.5 ~Φ41.9	YTDI 415 □ FSL KRUZ 415 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	275 358 441 566	205 288 371 496	166 249 332 457		IDP 415, IDP 416, IDP 417, IDP 418, IDP 419 IDF 415, IDF 416, IDF 417, IDF 418, IDF 419 ID 415, ID 416, ID 417, ID 418, ID 419				
Φ42.0 ~Φ42.4	YTDI 420 □ FSL KRUZ 420 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	277 361 445 571	207 291 375 501	168 252 336 462		IDP 420, IDP 421, IDP 422, IDP 423, IDP 424 IDF 420, IDF 421, IDF 422, IDF 423, IDF 424 ID 420, ID 421, ID 422, ID 423, ID 424				
Φ42.5 ~Φ42.9	YTDI 425 □ FSL KRUZ 425 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	279 364 449 577	209 294 379 507	170 255 340 468		IDP 425, IDP 426, IDP 427, IDP 428, IDP 429 IDF 425, IDF 426, IDF 427, IDF 428, IDF 429 ID 425, ID 426, ID 427, ID 428, ID 429				
Φ43.0 ~Φ43.4	YTDI 430 □ FSL KRUZ 430 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	282 368 454 583	212 298 384 513	172 258 344 473		IDP 430, IDP 431, IDP 432, IDP 433, IDP 434 IDF 430, IDF 431, IDF 432, IDF 433, IDF 434 ID 430, ID 431, ID 432, ID 433, ID 434				
Φ43.5 ~Φ43.9	YTDI 435 □ FSL KRUZ 435 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	284 371 458 589	214 301 388 519	174 261 348 479		IDP 435, IDP 436, IDP 437, IDP 438, IDP 439 IDF 435, IDF 436, IDF 437, IDF 438, IDF 439 ID 435, ID 436, ID 437, ID 438, ID 439				
Φ44.0 ~Φ44.4	YTDI 440 □ FSL KRUZ 440 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	287 375 463 595	217 305 393 525	176 264 352 484		IDP 440, IDP 441, IDP 442, IDP 443, IDP 444 IDF 440, IDF 441, IDF 442, IDF 443, IDF 444 ID 440, ID 441, ID 442, ID 443, ID 444				

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ44.5 ~Φ44.9	YTDI 445 □ FSL KRUZ 445 □ FSL	40.0	T(3xD) P(5xD) H(7xD) L(10xD)	289 378 467 601	219 308 397 531	178 267 356 490	55	IDP 445, IDP 446, IDP 447, IDP 448, IDP 449 IDF 445, IDF 446, IDF 447, IDF 448, IDF 449 ID 445, ID 446, ID 447, ID 448, ID 449	CS 400 ~445 SL			
Φ45.0 ~Φ45.4	YTDI 450 □ FSL KRUZ 450 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	291 381 471 606	221 311 401 536	180 270 360 495		IDP 450, IDP 451, IDP 452, IDP 453, IDP 454 IDF 450, IDF 451, IDF 452, IDF 453, IDF 454 ID 450, ID 451, ID 452, ID 453, ID 454				
Φ45.5 ~Φ45.9	YTDI 455 □ FSL KRUZ 455 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	294 385 476 613	224 315 406 543	182 273 364 501		IDP 455, IDP 456, IDP 457, IDP 458, IDP 459 IDF 455, IDF 456, IDF 457, IDF 458, IDF 459 ID 455, ID 456, ID 457, ID 458, ID 459				
Φ46.0 ~Φ46.4	YTDI 460 □ FSL KRUZ 460 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	296 388 480 618	226 318 410 548	184 276 368 506		IDP 460, IDP 461, IDP 462, IDP 463, IDP 464 IDF 460, IDF 461, IDF 462, IDF 463, IDF 464 ID 460, ID 461, ID 462, ID 463, ID 464				
Φ46.5 ~Φ46.9	YTDI 465 □ FSL KRUZ 465 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	299 392 485 625	229 322 415 555	186 279 372 512		IDP 465, IDP 466, IDP 467, IDP 468, IDP 469 IDF 465, IDF 466, IDF 467, IDF 468, IDF 469 ID 465, ID 466, ID 467, ID 468, ID 469				
Φ47.0 ~Φ47.4	YTDI 470 □ FSL KRUZ 470 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	301 395 489 630	231 325 419 560	188 282 376 517		IDP 470, IDP 471, IDP 472, IDP 473, IDP 474 IDF 470, IDF 471, IDF 472, IDF 473, IDF 474 ID 470, ID 471, ID 472, ID 473, ID 474		T20 Torque 4.0Nm (Max)	M6x12	3.0mm
Φ47.5 ~Φ47.9	YTDI 475 □ FSL KRUZ 475 □ F SL		T(3xD) P(5xD) H(7xD) L(10xD)	303 398 493 636	233 328 423 566	190 285 380 523		IDP 475, IDP 476, IDP 477, IDP 478, IDP 479 IDF 475, IDF 476, IDF 477, IDF 478, IDF 479 ID 475, ID 476, ID 477, ID 478, ID 479				
Φ48.0 ~Φ48.4	YTDI 480 □ F SL KRUZ 480 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	306 402 498 642	236 332 428 572	192 288 384 528		IDP 480, IDP 481, IDP 482, IDP 483, IDP 484 IDF 480, IDF 481, IDF 482, IDF 483, IDF 484 ID 480, ID 481, ID 482, ID 483, ID 484				
Φ48.5 ~Φ48.9	YTDI 485 □ FSL KRUZ 485 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	308 405 502 648	238 335 432 578	194 291 388 534		IDP 485, IDP 486, IDP 487, IDP 488, IDP 489 IDF 485, IDF 486, IDF 487, IDF 488, IDF 489 ID 485, ID 486, ID 487, ID 488, ID 489				
Φ49.0 ~Φ49.4	YTDI 490 □ FSL KRUZ 490 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	311 409 507 654	241 339 437 584	196 294 392 539		IDP 490, IDP 491, IDP 492, IDP 493, IDP 494 IDF 490, IDF 491, IDF 492, IDF 493, IDF 494 ID 490, ID 491, ID 492, ID 493, ID 494				
Φ49.5 ~Φ49.9	YTDI 495 □ FSL KRUZ 495 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	313 412 511 660	243 342 441 590	198 297 396 545		IDP 495, IDP 496, IDP 497, IDP 498, IDP 499 IDF 495, IDF 496, IDF 497, IDF 498, IDF 499 ID 495, ID 496, ID 497, ID 498, ID 499				
Φ50.0 ~Φ50.4	YTDI 500 □ FSL KRUZ 500 □ FSL		T(3xD) P(5xD) H(7xD) L(10xD)	315 415 515 665	245 345 445 595	200 300 400 550		IDP 500, IDP 501, IDP 502, IDP 503, IDP 504 IDF 500, IDF 501, IDF 502, IDF 503, IDF 504 ID 500, ID 501, ID 502, ID 503, ID 504				

KRUZ-FSL Drills, Cutting Speed Recommendation

Drill Dia. Condition Material Group	Φ8~16mm		Φ16~25mm		Φ25~32mm		Φ32~40mm		Φ40~50mm	
	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)	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 .

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

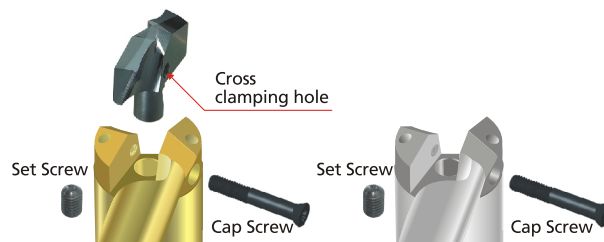
Caution >> "H" series insert should use only with "H" series body to avoid drilling failure.



Insert selection
IDPH Deep hole & general purpose

IDFH Thin plate & shallow depth

IDH General purpose



KRUZ-FH body

YTDI-FH body

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

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ12.0 ~Φ12.4	YTDI 120 ☐ FH KRUZ 120 ☐ FH	16.0	T(3xD) P(5xD) H(7xD) L(10xD)	109 133 157 193	61 85 109 145	48 72 96 132	21	IDPH 120, IDPH 121, IDPH 122, IDPH 123, IDPH 124 IDFH 120, IDFH 121, IDFH 122, IDFH 123, IDFH 124 IDH 120, IDH 121, IDH 122, IDH 123, IDH 124	CS120 ~135 SL		M2.5x4	1.3mm
Φ12.5 ~Φ12.9	YTDI 125 ☐ FH KRUZ 125 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	111 136 161 199	63 88 113 151	50 75 100 138		IDPH 125, IDPH 126, IDPH 127, IDPH 128, IDPH 129 IDFH 125, IDFH 126, IDFH 127, IDFH 128, IDFH 129 IDH 125, IDH 126, IDH 127, IDH 128, IDH 129				
Φ13.0 ~Φ13.4	YTDI 130 ☐ FH KRUZ 130 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	114 140 166 205	66 92 118 157	52 78 104 143		IDPH 130, IDPH 131, IDPH 132, IDPH 133, IDPH 134 IDFH 130, IDFH 131, IDFH 132, IDFH 133, IDFH 134 IDH 130, IDH 131, IDH 132, IDH 133, IDH 134				
Φ13.5 ~Φ13.9	YTDI 135 ☐ FH KRUZ 135 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	116 143 170 211	68 95 122 163	54 81 108 149		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				
Φ14.0 ~Φ14.4	YTDI 140 ☐ FH KRUZ 140 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	119 147 175 217	71 99 127 169	56 84 112 154		IDPH 140, IDPH 141, IDPH 142, IDPH 143, IDPH 144 IDFH 140, IDFH 141, IDFH 142, IDFH 143, IDFH 144 IDH 140, IDH 141, IDH 142, IDH 143, IDH 144				
Φ14.5 ~Φ14.9	YTDI 145 ☐ FH KRUZ 145 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	123 152 181 225	73 102 131 175	58 87 116 160		IDPH 145, IDPH 146, IDPH 147, IDPH 148, IDPH 149 IDFH 145, IDFH 146, IDFH 147, IDFH 148, IDFH 149 IDH 145, IDH 146, IDH 147, IDH 148, IDH 149				
Φ15.0 ~Φ15.4	YTDI 150 ☐ FH KRUZ 150 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	127 157 187 232	77 107 137 182	60 90 120 165		IDPH 150, IDPH 151, IDPH 152, IDPH 153, IDPH 154 IDFH 150, IDFH 151, IDFH 152, IDFH 153, IDFH 154 IDH 150, IDH 151, IDH 152, IDH 153, IDH 154				
Φ15.5 ~Φ15.9	YTDI 155 ☐ FH KRUZ 155 ☐ FH	20.0	T(3xD) P(5xD) H(7xD) L(10xD)	130 161 192 239	80 111 142 189	62 93 124 171	27	IDPH 155, IDPH 156, IDPH 157, IDPH 158, IDPH 159 IDFH 155, IDFH 156, IDFH 157, IDFH 158, IDFH 159 IDH 155, IDH 156, IDH 157, IDH 158, IDH 159	CS 140 ~155 SL		M2.5x4	1.3mm
Φ16.0 ~Φ16.4	YTDI 160 ☐ FH KRUZ 160 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	132 164 196 244	82 114 146 194	64 96 128 176		IDPH 160, IDPH 161, IDPH 162, IDPH 163, IDPH 164 IDFH 160, IDFH 161, IDFH 162, IDFH 163, IDFH 164 IDH 160, IDH 161, IDH 162, IDH 163, IDH 164				
Φ16.5 ~Φ16.9	YTDI 165 ☐ FH KRUZ 165 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	135 168 201 251	85 118 151 201	66 99 132 182		IDPH 165, IDPH 166, IDPH 167, IDPH 168, IDPH 169 IDFH 165, IDFH 166, IDFH 167, IDFH 168, IDFH 169 IDH 165, IDH 166, IDH 167, IDH 168, IDH 169				
Φ17.0 ~Φ17.4	YTDI 170 ☐ FH KRUZ 170 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	137 171 205 256	87 121 155 206	68 102 136 187		IDPH 170, IDPH 171, IDPH 172, IDPH 173, IDPH 174 IDFH 170, IDFH 171, IDFH 172, IDFH 173, IDFH 174 IDH 170, IDH 171, IDH 172, IDH 173, IDH 174				
Φ17.5 ~Φ17.9	YTDI 175 ☐ FH KRUZ 175 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	139 174 209 262	89 124 159 212	70 105 140 193		IDPH 175, IDPH 176, IDPH 177, IDPH 178, IDPH 179 IDFH 175, IDFH 176, IDFH 177, IDFH 178, IDFH 179 IDH 175, IDH 176, IDH 177, IDH 178, IDH 179				
Φ18.0 ~Φ18.4	YTDI 180 ☐ FH KRUZ 180 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	142 178 214 268	92 128 164 218	72 108 144 198		IDPH 180, IDPH 181, IDPH 182, IDPH 183, IDPH 184 IDFH 180, IDFH 181, IDFH 182, IDFH 183, IDFH 184 IDH 180, IDH 181, IDH 182, IDH 183, IDH 184				
Φ18.5 ~Φ18.9	YTDI 185 ☐ FH KRUZ 185 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	144 181 218 274	94 131 168 224	74 111 148 204		IDPH 185, IDPH 186, IDPH 187, IDPH 188, IDPH 189 IDFH 185, IDFH 186, IDFH 187, IDFH 188, IDFH 189 IDH 185, IDH 186, IDH 187, IDH 188, IDH 189				
Φ19.0 ~Φ19.4	YTDI 190 ☐ FH KRUZ 190 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	147 185 223 280	97 135 173 230	76 114 152 209		IDPH 190, IDPH 191, IDPH 192, IDPH 193, IDPH 194 IDFH 190, IDFH 191, IDFH 192, IDFH 193, IDFH 194 IDH 190, IDH 191, IDH 192, IDH 193, IDH 194				
Φ19.5 ~Φ19.9	YTDI 195 ☐ FH KRUZ 195 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	149 188 227 286	99 138 177 236	78 117 156 215		IDPH 195, IDPH 196, IDPH 197, IDPH 198, IDPH 199 IDFH 195, IDFH 196, IDFH 197, IDFH 198, IDFH 199 IDH 195, IDH 196, IDH 197, IDH 198, IDH 199				
Φ20.0 ~Φ20.4	YTDI 200 ☐ FH KRUZ 200 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	157 197 237 297	101 141 181 241	80 120 160 220		IDPH 200, IDPH 201, IDPH 202, IDPH 203, IDPH 204 IDFH 200, IDFH 201, IDFH 202, IDFH 203, IDFH 204 IDH 200, IDH 201, IDH 202, IDH 203, IDH 204				
Φ20.5 ~Φ20.9	YTDI 205 ☐ FH KRUZ 205 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	160 201 242 304	104 145 186 248	82 123 164 226		IDPH 205, IDPH 206, IDPH 207, IDPH 208, IDPH 209 IDFH 205, IDFH 206, IDFH 207, IDFH 208, IDFH 209 IDH 205, IDH 206, IDH 207, IDH 208, IDH 209				
Φ21.0 ~Φ21.4	YTDI 210 ☐ FH KRUZ 210 ☐ FH	25.0	T(3xD) P(5xD) H(7xD) L(10xD)	162 204 246 309	106 148 190 253	84 126 168 231	32	IDPH 210, IDPH 211, IDPH 212, IDPH 213, IDPH 214 IDFH 210, IDFH 211, IDFH 212, IDFH 213, IDFH 214 IDH 210, IDH 211, IDH 212, IDH 213, IDH 214	CS 200 ~215 SL		M3x6	1.5mm
Φ21.5 ~Φ21.9	YTDI 215 ☐ FH KRUZ 215 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	165 208 251 316	109 152 195 260	86 129 172 237		IDPH 215, IDPH 216, IDPH 217, IDPH 218, IDPH 219 IDFH 215, IDFH 216, IDFH 217, IDFH 218, IDFH 219 IDH 215, IDH 216, IDH 217, IDH 218, IDH 219				
Φ22.0 ~Φ22.4	YTDI 220 ☐ FH KRUZ 220 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	167 211 255 321	111 155 199 265	88 132 176 242		IDPH 220, IDPH 221, IDPH 222, IDPH 223, IDPH 224 IDFH 220, IDFH 221, IDFH 222, IDFH 223, IDFH 224 IDH 220, IDH 221, IDH 222, IDH 223, IDH 224				
Φ22.5 ~Φ22.9	YTDI 225 ☐ FH KRUZ 225 ☐ FH		T(3xD) P(5xD) H(7xD) L(10xD)	169 214 259 327	113 158 203 271	90 135 180 248		IDPH 225, IDPH 226, IDPH 227, IDPH 228, IDPH 229 IDFH 225, IDFH 226, IDFH 227, IDFH 228, IDFH 229 IDH 225, IDH 226, IDH 227, IDH 228, IDH 229				

Hole size range	Body Code No.	Shank Size(Φd)	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	
Φ15.5 ~Φ15.9	YTDI 155 □ FH KRUZ 155 □ FH	20.0	T(3xD) P(5xD) H(7xD) L(10xD)	130 161 192 239	80 111 142 189	62 93 124 171	27	IDPH 155, IDPH 156, IDPH 157, IDPH 158, IDPH 159 IDFH 155, IDFH 156, IDFH 157, IDFH 158, IDFH 159 IDH 155, IDH 156, IDH 157, IDH 158, IDH 159	CS 140 -155 SL	 Torque 0.9Nm (Max)	M2.5x4	1.3mm		
Φ16.0 ~Φ16.4	YTDI 160 □ FH KRUZ 160 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	132 164 196 244	82 114 146 194	64 96 128 176		IDPH 160, IDPH 161, IDPH 162, IDPH 163, IDPH 164 IDFH 160, IDFH 161, IDFH 162, IDFH 163, IDFH 164 IDH 160, IDH 161, IDH 162, IDH 163, IDH 164	CS 160 -175 SL					
Φ16.5 ~Φ16.9	YTDI 165 □ FH KRUZ 165 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	135 168 201 251	85 118 151 201	66 99 132 182		IDPH 165, IDPH 166, IDPH 167, IDPH 168, IDPH 169 IDFH 165, IDFH 166, IDFH 167, IDFH 168, IDFH 169 IDH 165, IDH 166, IDH 167, IDH 168, IDH 169						
Φ17.0 ~Φ17.4	YTDI 170 □ FH KRUZ 170 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	137 171 205 256	87 121 155 206	68 102 136 187		IDPH 170, IDPH 171, IDPH 172, IDPH 173, IDPH 174 IDFH 170, IDFH 171, IDFH 172, IDFH 173, IDFH 174 IDH 170, IDH 171, IDH 172, IDH 173, IDH 174						
Φ17.5 ~Φ17.9	YTDI 175 □ FH KRUZ 175 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	139 174 209 262	89 124 159 212	70 105 140 193		IDPH 175, IDPH 176, IDPH 177, IDPH 178, IDPH 179 IDFH 175, IDFH 176, IDFH 177, IDFH 178, IDFH 179 IDH 175, IDH 176, IDH 177, IDH 178, IDH 179						
Φ18.0 ~Φ18.4	YTDI 180 □ FH KRUZ 180 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	142 178 214 268	92 128 164 218	72 108 144 198		IDPH 180, IDPH 181, IDPH 182, IDPH 183, IDPH 184 IDFH 180, IDFH 181, IDFH 182, IDFH 183, IDFH 184 IDH 180, IDH 181, IDH 182, IDH 183, IDH 184					CS 180 -195 SL	
Φ18.5 ~Φ18.9	YTDI 185 □ FH KRUZ 185 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	144 181 218 274	94 131 168 224	74 111 148 204		IDPH 185, IDPH 186, IDPH 187, IDPH 188, IDPH 189 IDFH 185, IDFH 186, IDFH 187, IDFH 188, IDFH 189 IDH 185, IDH 186, IDH 187, IDH 188, IDH 189						
Φ19.0 ~Φ19.4	YTDI 190 □ FH KRUZ 190 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	147 185 223 280	97 135 173 230	76 114 152 209		IDPH 190, IDPH 191, IDPH 192, IDPH 193, IDPH 194 IDFH 190, IDFH 191, IDFH 192, IDFH 193, IDFH 194 IDH 190, IDH 191, IDH 192, IDH 193, IDH 194						
Φ19.5 ~Φ19.9	YTDI 195 □ FH KRUZ 195 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	149 188 227 286	99 138 177 236	78 117 156 215		IDPH 195, IDPH 196, IDPH 197, IDPH 198, IDPH 199 IDFH 195, IDFH 196, IDFH 197, IDFH 198, IDFH 199 IDH 195, IDH 196, IDH 197, IDH 198, IDH 199						
Φ20.0 ~Φ20.4	YTDI 200 □ FH KRUZ 200 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	157 197 237 297	101 141 181 241	80 120 160 220		IDPH 200, IDPH 201, IDPH 202, IDPH 203, IDPH 204 IDFH 200, IDFH 201, IDFH 202, IDFH 203, IDFH 204 IDH 200, IDH 201, IDH 202, IDH 203, IDH 204						CS 200 -215 SL
Φ20.5 ~Φ20.9	YTDI 205 □ FH KRUZ 205 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	160 201 242 304	104 145 186 248	82 123 164 226		IDPH 205, IDPH 206, IDPH 207, IDPH 208, IDPH 209 IDFH 205, IDFH 206, IDFH 207, IDFH 208, IDFH 209 IDH 205, IDH 206, IDH 207, IDH 208, IDH 209						
Φ21.0 ~Φ21.4	YTDI 210 □ FH KRUZ 210 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	162 204 246 309	106 148 190 253	84 126 168 231	IDPH 210, IDPH 211, IDPH 212, IDPH 213, IDPH 214 IDFH 210, IDFH 211, IDFH 212, IDFH 213, IDFH 214 IDH 210, IDH 211, IDH 212, IDH 213, IDH 214								
Φ21.5 ~Φ21.9	YTDI 215 □ FH KRUZ 215 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	165 208 251 316	109 152 195 260	86 129 172 237	IDPH 215, IDPH 216, IDPH 217, IDPH 218, IDPH 219 IDFH 215, IDFH 216, IDFH 217, IDFH 218, IDFH 219 IDH 215, IDH 216, IDH 217, IDH 218, IDH 219								
Φ22.0 ~Φ22.4	YTDI 220 □ FH KRUZ 220 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	167 211 255 321	111 155 199 265	88 132 176 242	IDPH 220, IDPH 221, IDPH 222, IDPH 223, IDPH 224 IDFH 220, IDFH 221, IDFH 222, IDFH 223, IDFH 224 IDH 220, IDH 221, IDH 222, IDH 223, IDH 224	CS 220 -235 SL							
Φ22.5 ~Φ22.9	YTDI 225 □ FH KRUZ 225 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	169 214 259 327	113 158 203 271	90 135 180 248	IDPH 225, IDPH 226, IDPH 227, IDPH 228, IDPH 229 IDFH 225, IDFH 226, IDFH 227, IDFH 228, IDFH 229 IDH 225, IDH 226, IDH 227, IDH 228, IDH 229								

Hole size range	Body Code No.	Shank Size(Φd)	Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia.(ΦFd)	Insert Code No. to fit in body	 IDPH  IDFH  IDH	Cap Screw	Torx driver 	Set Screw 	L-wrench 	
Φ23.0 ~Φ23.4	YTDI 230 □ FH KRUZ 230 □ FH	25.0	T(3xD) P(5xD) H(7xD) L(10xD)	172 218 264 333	116 162 208 277	92 138 184 253	32	IDPH 230, IDPH 231, IDPH 232, IDPH 233, IDPH 234 IDFH 230, IDFH 231, IDFH 232, IDFH 233, IDFH 234 IDH 230, IDH 231, IDH 232, IDH 233, IDH 234	CS 220 -235 SL	 Torque 1.5Nm (Max)				
Φ23.5 ~Φ23.9	YTDI 235 □ FH KRUZ 235 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	174 221 268 339	118 165 212 283	94 141 188 259		IDPH 235, IDPH 236, IDPH 237, IDPH 238, IDPH 239 IDFH 235, IDFH 236, IDFH 237, IDFH 238, IDFH 239 IDH 235, IDH 236, IDH 237, IDH 238, IDH 239						
Φ24.0 ~Φ24.4	YTDI 240 □ FH KRUZ 240 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	181 229 277 349	121 169 217 289	96 144 192 264		IDPH 240, IDPH 241, IDPH 242, IDPH 243, IDPH 244 IDFH 240, IDFH 241, IDFH 242, IDFH 243, IDFH 244 IDH 240, IDH 241, IDH 242, IDH 243, IDH 244						
Φ24.5 ~Φ24.9	YTDI 245 □ FH KRUZ 245 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	183 232 281 355	123 172 221 295	98 147 196 270		IDPH 245, IDPH 246, IDPH 247, IDPH 248, IDPH 249 IDFH 245, IDFH 246, IDFH 247, IDFH 248, IDFH 249 IDH 245, IDH 246, IDH 247, IDH 248, IDH 249						
Φ25.0 ~Φ25.4	YTDI 250 □ FH KRUZ 250 □ FH	32.0	T(3xD) P(5xD) H(7xD) L(10xD)	185 235 285 360	125 175 225 300	100 150 200 275	39	IDPH 250, IDPH 251, IDPH 252, IDPH 253, IDPH 254 IDFH 250, IDFH 251, IDFH 252, IDFH 253, IDFH 254 IDH 250, IDH 251, IDH 252, IDH 253L, IDH 254	CS 240 -255 SL	 Torque 3.5Nm (Max)	M3x6	1.5mm		
Φ25.5 ~Φ25.9	YTDI 255 □ FH KRUZ 255 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	188 239 290 367	128 179 230 307	102 153 204 281		IDPH 255, IDPH 256, IDPH 257, IDPH 258, IDPH 259 IDFH 255, IDFH 256, IDFH 257, IDFH 258, IDFH 259 IDH 255, IDH 256, IDH 257, IDH 258, IDH 259						
Φ26.0 ~Φ26.4	YTDI 260 □ FH KRUZ 260 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	190 242 294 372	130 182 234 312	104 156 208 286		IDPH 260, IDPH 261, IDPH 262, IDPH 263, IDPH 264 IDFH 260, IDFH 261, IDFH 262, IDFH 263, IDFH 264 IDH 260, IDH 261, IDH 262, IDH 263, IDH 264						
Φ26.5 ~Φ26.9	YTDI 265 □ FH KRUZ 265 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	193 246 299 379	133 186 239 319	106 159 212 292		IDPH 265, IDPH 266, IDPH 267, IDPH 268, IDPH 269 IDFH 265, IDFH 266, IDFH 267, IDFH 268, IDFH 269 IDH 265, IDH 266, IDH 267, IDH 268, IDH 269						
Φ27.0 ~Φ27.4	YTDI 270 □ FH KRUZ 270 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	195 249 303 384	135 189 243 324	108 162 216 297		IDPH 270, IDPH 271, IDPH 272, IDPH 273, IDPH 274 IDFH 270, IDFH 271, IDFH 272, IDFH 273, IDFH 274 IDH 270, IDH 271, IDH 272, IDH 273, IDH 274						
Φ27.5 ~Φ27.9	YTDI 275 □ FH KRUZ 275 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	197 252 307 390	137 192 247 330	110 165 220 303		IDPH 275, IDPH 276, IDPH 277, IDPH 278, IDPH 279 IDFH 275, IDFH 276, IDFH 277, IDFH 278, IDFH 279 IDH 275, IDH 276, IDH 277, IDH 278, IDH 279						
Φ28.0 ~Φ28.4	YTDI 280 □ FH KRUZ 280 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	200 256 312 396	140 196 252 336	112 168 224 308		IDPH 280, IDPH 281, IDPH 282, IDPH 283, IDPH 284 IDFH 280, IDFH 281, IDFH 282, IDFH 283, IDFH 284 IDH 280, IDH 281, IDH 282, IDH 283, IDH 284						
Φ28.5 ~Φ28.9	YTDI 285 □ FH KRUZ 285 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	202 259 316 402	142 199 256 342	114 171 228 314		IDPH 285, IDPH 286, IDPH 287, IDPH 288, IDPH 289 IDFH 285, IDFH 286, IDFH 287, IDFH 288, IDFH 289 IDH 285, IDH 286, IDH 287, IDH 288, IDH 289						
Φ29.0 ~Φ29.4	YTDI 290 □ FH KRUZ 290 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	205 263 321 408	145 203 261 348	116 174 232 319		IDPH 290, IDPH 291, IDPH 292, IDPH 293, IDPH 294 IDFH 290, IDFH 291, IDFH 292, IDFH 293, IDFH 294 IDH 290, IDH 291, IDH 292, IDH 293, IDH 294						
Φ29.5 ~Φ29.9	YTDI 295 □ FH KRUZ 295 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	207 266 325 414	147 206 265 354	118 177 236 325		IDPH 295, IDPH 296, IDPH 297, IDPH 298, IDPH 299 IDFH 295, IDFH 296, IDFH 297, IDFH 298, IDFH 299 IDH 295, IDH 296, IDH 297, IDH 298, IDH 299						
Φ30.0 ~Φ30.4	YTDI 300 □ FH KRUZ 300 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	209 269 329 419	149 209 269 359	120 180 240 330		IDPH 300, IDPH 301, IDPH 302, IDPH 303, IDPH 304 IDFH 300, IDFH 301, IDFH 302, IDFH 303, IDFH 304 IDH 300, IDH 301, IDH 302, IDH 303, IDH 304			CS 260 -275 SL	M4x8	2.0mm	

Hole size range	Body Code No.	Shank Size(Φd)	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
Φ30.5 ~Φ30.9	YTDI 305 □ FH KRUZ 305 □ FH	32.0	T(3xD) P(5xD) H(7xD) L(10xD)	212 273 334 426	152 213 274 366	122 183 244 336	39	IDPH 305, IDPH 306, IDPH 307, IDPH 308, IDPH 309 IDFH 305, IDFH 306, IDFH 307, IDFH 308, IDFH 309 IDH 305, IDH 306, IDH 307, IDH 308, IDH 309	CS 300 -315 SL	 Torque 4.0Nm (Max)	M4x8	2.0mm
Φ31.0 ~Φ31.4	YTDI 310 □ FH KRUZ 310 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	214 276 338 431	154 216 278 371	124 186 248 341		IDPH 310, IDPH 311, IDPH 312, IDPH 313, IDPH 314 IDFH 310, IDFH 311, IDFH 312, IDFH 313, IDFH 314 IDH 310, IDH 311, IDH 312, IDH 313, IDH 314				
Φ31.5 ~Φ31.9	YTDI 315 □ FH KRUZ 315 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	217 280 343 438	157 220 283 378	126 189 252 347		IDPH 315, IDPH 316, IDPH 317, IDPH 318, IDPH 319 IDFH 315, IDFH 316, IDFH 317, IDFH 318, IDFH 319 IDH 315, IDH 316, IDH 317, IDH 318, IDH 319				
Φ32.0 ~Φ32.4	YTDI 320 □ FH KRUZ 320 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	219 283 347 443	159 223 287 383	128 192 256 352		IDPH 320, IDPH 321, IDPH 322, IDPH 323, IDPH 324 IDFH 320, IDFH 321, IDFH 322, IDFH 323, IDFH 324 IDH 320, IDH 321, IDH 322, IDH 323, IDH 324				
Φ32.5 ~Φ32.9	YTDI 325 □ FH KRUZ 325 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	221 286 351 449	161 226 291 389	130 195 260 358		IDPH 325, IDPH 326, IDPH 327, IDPH 328, IDPH 329 IDFH 325, IDFH 326, IDFH 327, IDFH 328, IDFH 329 IDH 325, IDH 326, IDH 327, IDH 328, IDH 329				
Φ33.0 ~Φ33.4	YTDI 330 □ FH KRUZ 330 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	224 290 356 455	164 230 296 395	132 198 264 363		IDPH 330, IDPH 331, IDPH 332, IDPH 333, IDPH 334 IDFH 330, IDFH 331, IDFH 332, IDFH 333, IDFH 334 IDH 330, IDH 331, IDH 332, IDH 333, IDH 334				
Φ33.5 ~Φ33.9	YTDI 335 □ FH KRUZ 335 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	226 293 360 461	166 233 300 401	134 201 268 369		IDPH 335, IDPH 336, IDPH 337, IDPH 338, IDPH 339 IDFH 335, IDFH 336, IDFH 337, IDFH 338, IDFH 339 IDH 335, IDH 336, IDH 337, IDH 338, IDH 339	CS 320 -355 SL			
Φ34.0 ~Φ34.4	YTDI 340 □ FH KRUZ 340 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	239 307 375 477	169 237 305 407	136 204 272 374		IDPH 340, IDPH 341, IDPH 342, IDPH 343, IDPH 344 IDFH 340, IDFH 341, IDFH 342, IDFH 343, IDFH 344 IDH 340, IDH 341, IDH 342, IDH 343, IDH 344				
Φ34.5 ~Φ34.9	YTDI 345 □ FH KRUZ 345 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	241 310 379 483	171 240 309 413	138 207 276 380		IDPH 345, IDPH 346, IDPH 347, IDPH 348, IDPH 349 IDFH 345, IDFH 346, IDFH 347, IDFH 348, IDFH 349 IDH 345, IDH 346, IDH 347, IDH 348, IDH 349				
Φ35.0 ~Φ35.4	YTDI 350 □ FH KRUZ 350 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	243 313 383 488	173 243 313 418	140 210 280 385		IDPH 350, IDPH 351, IDPH 352, IDPH 353, IDPH 354 IDFH 350, IDFH 351, IDFH 352, IDFH 353, IDFH 354 IDH 350, IDH 351, IDH 352, IDH 353, IDH 354				
Φ35.5 ~Φ35.9	YTDI 355 □ FH KRUZ 355 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	246 317 388 495	176 247 318 425	142 213 284 391		IDPH 355, IDPH 356, IDPH 357, IDPH 358, IDPH 359 IDFH 355, IDFH 356, IDFH 357, IDFH 358, IDFH 359 IDH 355, IDH 356, IDH 357, IDH 358, IDH 359				
Φ36.0 ~Φ36.4	YTDI 360 □ FH KRUZ 360 □ FH		T(3xD) P(5xD) H(7xD) L(10xD)	248 320 392 500	178 250 322 430	144 216 288 396		IDPH 360, IDPH 361, IDPH 362, IDPH 363, IDPH 364 IDFH 360, IDFH 361, IDFH 362, IDFH 363, IDFH 364 IDH 360, IDH 361, IDH 362, IDH 363, IDH 364			CS 360 -395 SL	
Φ36.5 ~Φ36.9	YTDI 365 □ FH KRUZ 365 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	251 324 397 507	181 254 327 437	146 219 292 402	IDPH 365, IDPH 366, IDPH 367, IDPH 368, IDPH 369 IDFH 365, IDFH 366, IDFH 367, IDFH 368, IDFH 369 IDH 365, IDH 366, IDH 367, IDH 368, IDH 369						
Φ37.0 ~Φ37.4	YTDI 370 □ FH KRUZ 370 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	253 327 401 512	183 257 331 442	148 222 296 407	IDPH 370, IDPH 371, IDPH 372, IDPH 373, IDPH 374 IDFH 370, IDFH 371, IDFH 372, IDFH 373, IDFH 374 IDH 370, IDH 371, IDH 372, IDH 373, IDH 374						
Φ37.5 ~Φ37.9	YTDI 375 □ FH KRUZ 375 □ FH	T(3xD) P(5xD) H(7xD) L(10xD)	255 330 405 518	185 260 335 448	150 225 300 413	IDPH 375, IDPH 376, IDPH 377, IDPH 378, IDPH 379 IDFH 375, IDFH 376, IDFH 377, IDFH 378, IDFH 379 IDH 375, IDH 376, IDH 377, IDH 378, IDH 379						

22
Yes

www.fracta1nost.com.ua

23
Yes®

Material Group	Drill Dia.	Φ8~16mm		Φ16~25mm		Φ25~32mm		Φ32~40mm		Φ40~50mm	
	Condition	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)	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

☞ 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 .

New

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

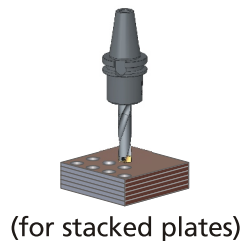
- Carbide insert completely grinded by CNC program
- Patented 140°+170° dual angle flat bottom point
- TiAlN coated insert offers wear resistance and higher feed rate
- Designed exclusively for structural beam, angle or single plate drilling



New

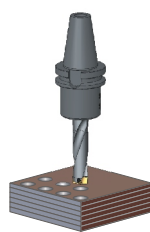
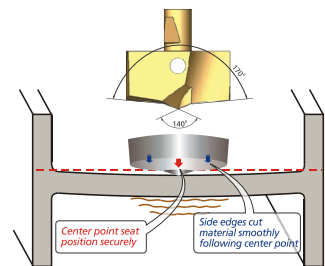
IDPK Carbide insert

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

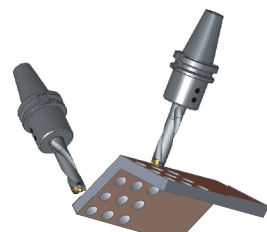


KRUZ-SLK Drill body

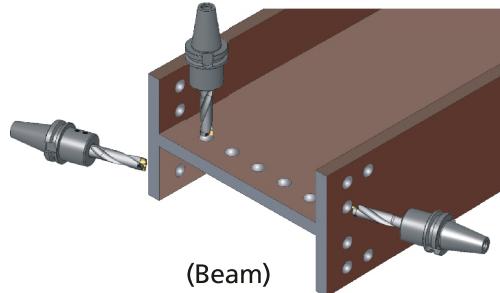
- Rigid drill body made of special premium steel and heat treated
- TiN coated body to enable longer tool life and higher lubricity
- Special flute design to increase faster chip's ejection rate
- Enabling to mount 0.5mm inclusive both IDFK & IDPK inserts
- Stubby length to perform maximum drilling ability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



(Plate)



(Angle)

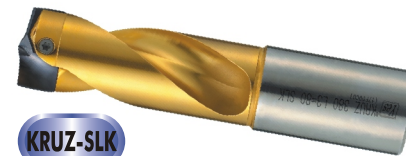


(Beam)



New

KRUZ "K" series drill body & insert, Metric



KRUZ-SLK



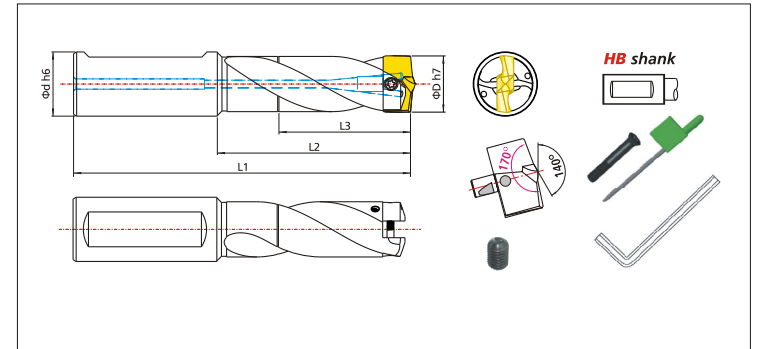
IDFK



IDPK

for beam, angle, single plate

for stacked plate



Exclusively designed for Structural machining

Hole (Φ) mm	Body Code	Shank (Φd)	Dimension			Insert IDFK	Insert IDPK	Cap Screw	Torx driver	Set Screw	L-wrench
			L1	L2	L3						
14.0~14.4	KRUZ 140 L3=50 SLK	16	110	62		IDFK 140, IDFK 141, IDFK 142, IDFK 143, IDFK 144 IDPK 140, IDPK 141, IDPK 142, IDPK 143, IDPK 144		CS 140 -155 SL	T7 Torque 0.9Nm (Max)	M2.5x4	1.3mm
14.5~14.9	KRUZ 145 L3=50 SLK					IDFK 145, IDFK 146, IDFK 147, IDFK 148, IDFK 149 IDPK 145, IDPK 146, IDPK 147, IDPK 148, IDPK 149					
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					
15.5~15.9	KRUZ 155 L3=50 SLK	20	115	65		IDFK 155, IDFK 156, IDFK 157, IDFK 158, IDFK 159 IDPK 155, IDPK 156, IDPK 157, IDPK 158, IDPK 159		CS 160 -175 SL	T7 Torque 0.9Nm (Max)	M2.5x4	1.3mm
16.0~16.4	KRUZ 160 L3=50 SLK					IDFK 160, IDFK 161, IDFK 162, IDFK 163, IDFK 164 IDPK 160, IDPK 161, IDPK 162, IDPK 163, IDPK 164					
16.5~16.9	KRUZ 165 L3=50 SLK					IDFK 165, IDFK 166, IDFK 167, IDFK 168, IDFK 169 IDPK 165, IDPK 166, IDPK 167, IDPK 168, IDPK 169					
17.0~17.4	KRUZ 170 L3=50 SLK	20	118	68		IDFK 170, IDFK 171, IDFK 172, IDFK 173, IDFK 174 IDPK 170, IDPK 171, IDPK 172, IDPK 173, IDPK 174		CS 180 -195 SL	T7 Torque 0.9Nm (Max)	M2.5x4	1.3mm
17.5~17.9	KRUZ 175 L3=50 SLK					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 180 L3=50 SLK					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 185 L3=50 SLK	25	130	74	50	IDFK 185, IDFK 186, IDFK 187, IDFK 188, IDFK 189 IDPK 185, IDPK 186, IDPK 187, IDPK 188, IDPK 189		CS 200 -215 SL	T8 Torque 1.5Nm (Max)	M3x6	1.5mm
19.0~19.4	KRUZ 190 L3=50 SLK					IDFK 190, IDFK 191, IDFK 192, IDFK 193, IDFK 194 IDPK 190, IDPK 191, IDPK 192, IDPK 193, IDPK 194					
19.5~19.9	KRUZ 195 L3=50 SLK					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 200 L3=50 SLK	25	130	74	50	IDFK 200, IDFK 201, IDFK 202, IDFK 203, IDFK 204 IDPK 200, IDPK 201, IDPK 202, IDPK 203, IDPK 204		CS 200 -215 SL	T8 Torque 1.5Nm (Max)	M3x6	1.5mm
20.5~20.9	KRUZ 205 L3=50 SLK					IDFK 205, IDFK 206, IDFK 207, IDFK 208, IDFK 209 IDPK 205, IDPK 206, IDPK 207, IDPK 208, IDPK 209					
21.0~21.4	KRUZ 210 L3=50 SLK					IDFK 210, IDFK 211, IDFK 212, IDFK 213, IDFK 214 IDPK 210, IDPK 211, IDPK 212, IDPK 213, IDPK 214					
21.5~21.9	KRUZ 215 L3=50 SLK	32	136	76		IDFK 215, IDFK 216, IDFK 217, IDFK 218, IDFK 219 IDPK 215, IDPK 216, IDPK 217, IDPK 218, IDPK 219		CS 220 -235 SL	T8 Torque 1.5Nm (Max)	M3x6	1.5mm
22.0~22.4	KRUZ 220 L3=50 SLK					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					
23.0~23.4	KRUZ 230 L3=50 SLK	32	136	76		IDFK 230, IDFK 231, IDFK 232, IDFK 233, IDFK 234 IDPK 230, IDPK 231, IDPK 232, IDPK 233, IDPK 234		CS 240 -255 SL	T8 Torque 1.5Nm (Max)	M3x6	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					
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	32	136	76		IDFK 245, IDFK 246, IDFK 247, IDFK 248, IDFK 249 IDPK 245, IDPK 246, IDPK 247, IDPK 248, IDPK 249		CS 240 -255 SL	T8 Torque 1.5Nm (Max)	M3x6	1.5mm
25.0~25.4	KRUZ 250 L3=50 SLK					IDFK 250, IDFK 251, IDFK 252, IDFK 253, IDFK 254 IDPK 250, IDPK 251, IDPK 252, IDPK 253, IDPK 254					
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	32	136	76		IDFK 260, IDFK 261, IDFK 262, IDFK 263, IDFK 264 IDPK 260, IDPK 261, IDPK 262, IDPK 263, IDPK 264		CS 260 -275 SL	T15 Torque 3.5Nm (Max)	M4x8	2.0mm
26.5~26.9	KRUZ 265 L3=50 SLK					IDFK 265, IDFK 266, IDFK 267, IDFK 268, IDFK 269 IDPK 265, IDPK 266, IDPK 267, IDPK 268, IDPK 269					
27.0~27.4	KRUZ 270 L3=50 SLK					IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDPK 270, IDPK 271, IDPK 272, IDPK 273, IDPK 274					
27.5~27.9	KRUZ 275 L3=50 SLK	140	140	80		IDFK 275, IDFK 276, IDFK 277, IDFK 278, IDFK 279 IDPK 275, IDPK 276, IDPK 277, IDPK 278, IDPK 279		CS 280 -295 SL	T15 Torque 3.5Nm (Max)	M4x8	2.0mm
28.0~28.4	KRUZ 280 L3=50 SLK					IDFK 280, IDFK 281, IDFK 282, IDFK 283, IDFK 284 IDPK 280, IDPK 281, IDPK 282, IDPK 283, IDPK 284					
28.5~28.9	KRUZ 285 L3=50 SLK					IDFK 285, IDFK 286, IDFK 287, IDFK 288, IDFK 289 IDPK 285, IDPK 286, IDPK 287, IDPK 288, IDPK 289					
29.0~29.4	KRUZ 290 L3=50 SLK	140	140	80		IDFK 290, IDFK 291, IDFK 292, IDFK 293, IDFK 294 IDPK 290, IDPK 291, IDPK 292, IDPK 293, IDPK 294		CS 280 -295 SL	T15 Torque 3.5Nm (Max)	M4x8	2.0mm
29.5~29.9	KRUZ 295 L3=50 SLK					IDFK 295, IDFK 296, IDFK 297, IDFK 298, IDFK 299 IDPK 295, IDPK 296, IDPK 297, IDPK 298, IDPK 299					

Size not shown on above is available upon request.

Exclusively designed for Structural machining

Hole (Φ) mm	Body Code	Shank (Φd)	Dimension			Insert IDFK	 IDFK	Insert IDPK	 IDPK			Set Screw	
			L1	L2	L3								
30.0~30.4	KRUZ 300 L3=70 SLK	32	155	95	70	IDFK 300, IDFK 301, IDFK 302, IDFK 303, IDFK 304 IDPK 300, IDPK 301, IDPK 302, IDPK 303, IDPK 304		CS 300 -315 SL		M4x8	2.0mm		
30.5~30.9	KRUZ 305 L3=70 SLK					IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDPK 305, IDPK 306, IDPK 307, IDPK 308, IDPK 309							
31.0~31.4	KRUZ 310 L3=70 SLK					IDFK 310, IDFK 311, IDFK 312, IDFK 313, IDFK 314 IDPK 310, IDPK 311, IDPK 312, IDPK 313, IDPK 314							
31.5~31.9	KRUZ 315 L3=70 SLK					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 320 L3=70 SLK					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 325 L3=70 SLK					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 330 L3=70 SLK					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 335 L3=70 SLK					IDFK 335, IDFK 336, IDFK 337, IDFK 338, IDFK 339 IDPK 335, IDPK 336, IDPK 337, IDPK 338, IDPK 339							
34.0~34.4	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							
34.5~34.9	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							
35.0~35.4	KRUZ 350 L3=80 SLK	180	110		IDFK 350, IDFK 351, IDFK 352, IDFK 353, IDFK 354 IDPK 350, IDPK 351, IDPK 352, IDPK 353, IDPK 354		CS 320 -355 SL		M5x10	2.5mm			
35.5~35.9	KRUZ 355 L3=80 SLK				IDFK 355, IDFK 356, IDFK 357, IDFK 358, IDFK 359 IDPK 355, IDPK 356, IDPK 357, IDPK 358, IDPK 359								
36.0~36.4	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								
36.5~36.9	KRUZ 365 L3=80 SLK				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 370 L3=80 SLK				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 375 L3=80 SLK				IDFK 375, IDFK 376, IDFK 377, IDFK 378, IDFK 379 IDPK 375, IDPK 376, IDPK 377, IDPK 378, IDPK 379								
38.0~38.4	KRUZ 380 L3=80 SLK				IDFK 380, IDFK 381, IDFK 382, IDFK 383, IDFK 384 IDPK 380, IDPK 381, IDPK 382, IDPK 383, IDPK 384								
38.5~38.9	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								
39.0~39.4	KRUZ 390 L3=80 SLK				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 395 L3=80 SLK				IDFK 395, IDFK 396, IDFK 397, IDFK 398, IDFK 399 IDPK 395, IDPK 396, IDPK 397, IDPK 398, IDPK 399								
40.0~40.4	KRUZ 400 L3=80 SLK	40			IDFK 400, IDFK 401, IDFK 402, IDFK 403, IDFK 404 IDPK 400, IDPK 401, IDPK 402, IDPK 403, IDPK 404		CS 360 -395 SL		T20 	Torque 4.0Nm (Max)			
40.5~40.9	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								
41.0~41.4	KRUZ 410 L3=80 SLK				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 415 L3=80 SLK				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 420 L3=80 SLK				IDFK 420, IDFK 421, IDFK 422, IDFK 423, IDFK 424 IDPK 420, IDPK 421, IDPK 422, IDPK 423, IDPK 424								
42.5~42.9	KRUZ 425 L3=80 SLK				IDFK 425, IDFK 426, IDFK 427, IDFK 428, IDFK 429 IDPK 425, IDPK 426, IDPK 427, IDPK 428, IDPK 429								
43.0~43.4	KRUZ 430 L3=80 SLK				IDFK 430, IDFK 431, IDFK 432, IDFK 433, IDFK 434 IDPK 430, IDPK 431, IDPK 432, IDPK 433, IDPK 434								
43.5~43.9	KRUZ 435 L3=80 SLK				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 440 L3=80 SLK				IDFK 440, IDFK 441, IDFK 442, IDFK 443, IDFK 444 IDPK 440, IDPK 441, IDPK 442, IDPK 443, IDPK 444								
44.5~44.9	KRUZ 445 L3=80 SLK				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 450 L3=80 SLK	185	115		IDFK 450, IDFK 451, IDFK 452, IDFK 453, IDFK 454 IDPK 450, IDPK 451, IDPK 452, IDPK 453, IDPK 454		CS 400 -445 SL		M6x12	3.0mm			
45.5~45.9	KRUZ 455 L3=80 SLK				IDFK 455, IDFK 456, IDFK 457, IDFK 458, IDFK 459 IDPK 455, IDPK 456, IDPK 457, IDPK 458, IDPK 459								
46.0~46.4	KRUZ 460 L3=80 SLK				IDFK 460, IDFK 461, IDFK 462, IDFK 463, IDFK 464 IDPK 460, IDPK 461, IDPK 462, IDPK 463, IDPK 464								
46.5~46.9	KRUZ 465 L3=80 SLK				IDFK 465, IDFK 466, IDFK 467, IDFK 468, IDFK 469 IDPK 465, IDPK 466, IDPK 467, IDPK 468, IDPK 469								
47.0~47.4	KRUZ 470 L3=80 SLK				IDFK 470, IDFK 471, IDFK 472, IDFK 473, IDFK 474 IDPK 470, IDPK 471, IDPK 472, IDPK 473, IDPK 474								
47.5~47.9	KRUZ 475 L3=80 SLK				IDFK 475, IDFK 476, IDFK 477, IDFK 478, IDFK 479 IDPK 475, IDPK 476, IDPK 477, IDPK 478, IDPK 479								
48.0~48.4	KRUZ 480 L3=80 SLK				IDFK 480, IDFK 481, IDFK 482, IDFK 483, IDFK 484 IDPK 480, IDPK 481, IDPK 482, IDPK 483, IDPK 484								
48.5~48.9	KRUZ 485 L3=80 SLK				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 490 L3=80 SLK				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 495 L3=80 SLK				IDFK 495, IDFK 496, IDPK 497, IDPK 498, IDPK 499 IDPK 495, IDPK 496, IDPK 497, IDPK 498, IDPK 499								
50.0~50.4	KRUZ 500 L3=90 SLK	200	130	90	IDFK 500, IDFK 501, IDFK 502, IDFK 503, IDFK 504 IDPK 500, IDPK 501, IDPK 502, IDPK 503, IDPK 504		CS 450 -500 SL						



KRUZ-SLK



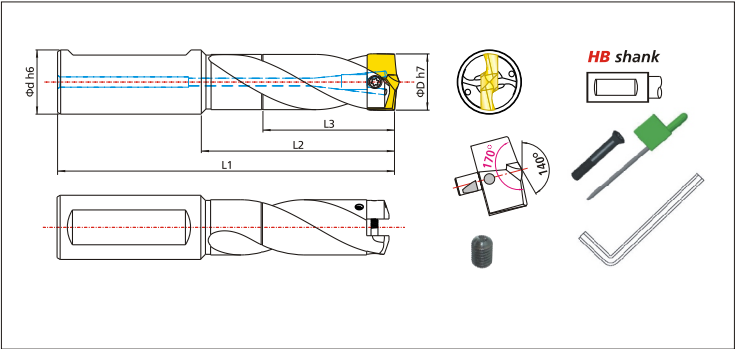
IDFK



IDPK

for beam, angle, single plate

for stacked plate



Exclusively designed for Structural machining

Hole (Φ) decimal	Body Code	Shank (Φd)	Dimension			Insert IDFK 	Insert IDPK 	Alternative Metric body
			L1	L2	L3			
.5512~.5705	KRUZ .5512-SLK	5/8 (15.875mm)	4.3307 (70mm)	2.4409 (62mm)	1.9685 (50mm)	IDFK-9/16"(14.29mm)	IDPK-9/16"(14.29mm)	KRUZ 140 L3=50 SLK
.5709~.5902	KRUZ .5709-SLK					IDFK-37/64"(14.68mm)	IDPK-37/64"(14.68mm)	KRUZ 145 L3=50 SLK
.5906~.6098	KRUZ .5906-SLK	4.5276 (115mm)	2.5591 (65mm)	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			IDFK-5/8"(15.88mm)		IDPK-5/8"(15.88mm)	KRUZ 155 L3=50 SLK	
.6299~.6492	KRUZ .6299-SLK			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			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							IDFK-45/64"(17.86mm)
.7087~.7280	KRUZ .7087-SLK	4.6457 (118mm)	2.6772 (68mm)	IDFK-23/32"(18.26mm)		IDPK-23/32"(18.26mm)	KRUZ 180 L3=50 SLK	
.7283~.7476	KRUZ .7283-SLK			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	1" (25.4mm)	5.1181 (130mm)	2.9134 (74mm)		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					IDFK-27/32"(21.43mm)	IDPK-27/32"(21.43mm)	KRUZ 210 L3=50 SLK
.8465~.8657	KRUZ .8465-SLK					IDFK-55/64"(21.83mm)	IDPK-55/64"(21.83mm)	KRUZ 215 L3=50 SLK
.8661~.8854	KRUZ .8661-SLK					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	1 1/4 (31.75mm)	5.3543 (136mm)	2.9921 (76mm)	IDFK-31/32"(24.61mm)	IDPK-31/32"(24.61mm)	KRUZ 245 L3=50 SLK	
.9843~1.0035	KRUZ .9843-SLK				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		5.5118 (140mm)	3.1496 (80mm)	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				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				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				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				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				6.1024 (155mm)	3.7402 (95mm)	2.7559 (70mm)	IDFK-1 3/16"(30.16mm)
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		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	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 (180mm)	4.3307 (110mm)	3.1496 (80mm)				IDFK-1 11/32"(34.13mm)
1.3583~1.3776	KRUZ 1.3583-SLK				IDFK-1 3/8"(34.93mm)	IDPK-1 3/8"(34.93mm)	KRUZ 345 L3=80 SLK	

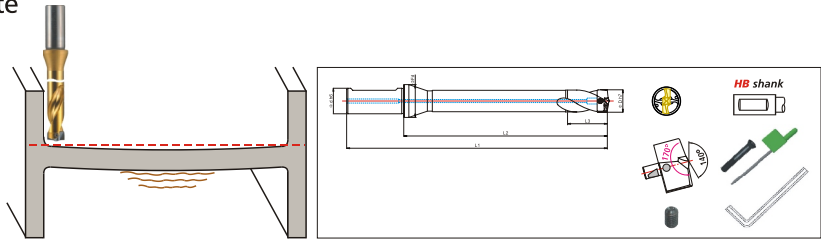
KRUZ-FSLK Flanged body (7xD), IDFK & IDPK insert



IDFK for beam, angle, single plate

IDPK for stacked plate

- ▶ When requires longer drill length, select this ideal drill body
- ▶ Drilling closer to flange part
- ▶ Minimized flute design with longer cylindrical neck
- ▶ Increased drill's rigidity than ordinary 7xDia drill length
- ▶ Internal coolant fed design
- ▶ Flanged shank to reduce chattering or vibrating



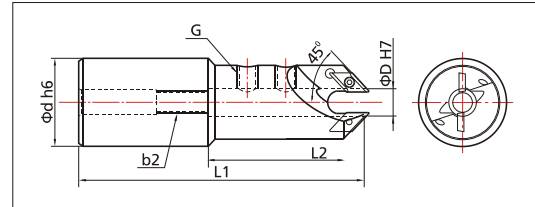
Exclusively designed for Structural machining

Hole (Φ) mm	Body Code	Shank (Φd)	Dimension			Flanged dia.(ΦFd)	Insert IDFK	Insert IDPK	Cap Screw	Torx driver	Set Screw	L-wrench
			L1	L2	L3							
14.0~14.4	KRUZ 140H FL50 FSLK	16	175	127	50	21	IDFK 140, IDFK 141, IDFK 142, IDFK 143, IDFK 144 IDPK 140, IDPK 141, IDPK 142, IDPK 143, IDPK 144	CS 140 -155 SL	T7	M2.5x4	1.3mm	
14.5~14.9	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					
15.0~15.4	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					
15.5~15.9	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					
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					
16.5~16.9	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					
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	CS 160 -175 SL				
17.5~17.9	KRUZ 175H FL50 FSLK		209	159			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 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					
18.5~18.9	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					
19.0~19.4	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	CS 180 -195 SL				
19.5~19.9	KRUZ 195H FL50 FSLK		227	177		IDFK 195, IDFK 196, IDFK 197, IDFK 198, IDFK 199 IDPK 195, IDPK 196, IDPK 197, IDFK 198, IDPK 199						
20.0~20.4	KRUZ 200H FL50 FSLK		237	181		IDFK 200, IDFK 201, IDFK 202, IDFK 203, IDFK 204 IDPK 200, IDPK 201, IDPK 202, IDPK 203, IDPK 204	CS 200 -215 SL					
20.5~20.9	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						
21.0~21.4	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						
21.5~21.9	KRUZ 215H FL50 FSLK		251	195		IDFK 215, IDFK 216, IDFK 217, IDFK 218, IDFK 219 IDPK 215, IDPK 216, IDPK 217, IDPK 218, IDPK 219						
22.0~22.4	KRUZ 220H FL50 FSLK	25	255	199	50	32	IDFK 220, IDFK 221, IDFK 222, IDFK 223, IDFK 224 IDPK 220, IDPK 221, IDPK 222, IDPK 223, IDPK 224	CS 220 -235 SL				
22.5~22.9	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					
23.0~23.4	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					
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					
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					
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					
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					
26.0~26.4	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					
26.5~26.9	KRUZ 265H FL50 FSLK		299	239			IDFK 265, IDFK 266, IDFK 267, IDFK 268, IDFK 269 IDPK 265, IDPK 266, IDPK 267, IDPK 268, IDPK 269					
27.0~27.4	KRUZ 270H FL50 FSLK		303	243	70		IDFK 270, IDFK 271, IDFK 272, IDFK 273, IDFK 274 IDPK 270, IDPK 271, IDPK 272, IDPK 273, IDPK 274	CS 260 -275 SL				
27.5~27.9	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					
28.0~28.4	KRUZ 280H FL50 FSLK	32	312	252		39	IDFK 280, IDFK 281, IDFK 282, IDFK 283, IDFK 284 IDPK 280, IDPK 281, IDPK 282, IDPK 283, IDPK 284					
28.5~28.9	KRUZ 285H FL50 FSLK		316	256			IDFK 285, IDFK 286, IDFK 287, IDFK 288, IDFK 289 IDPK 285, IDFK 286, IDPK 287, IDPK 288, IDPK 289					
29.0~29.4	KRUZ 290H FL50 FSLK		321	261			IDFK 290, IDFK 291, IDFK 292, IDFK 293, IDFK 294 IDPK 290, IDPK 291, IDPK 292, IDPK 293, IDPK 294					
29.5~29.9	KRUZ 295H FL50 FSLK		325	265			IDFK 295, IDFK 296, IDFK 297, IDFK 298, IDFK 299 IDPK 295, IDPK 296, IDPK 297, IDPK 298, IDPK 299					
30.0~30.4	KRUZ 300H FL70 FSLK		329	269			IDFK 300, IDFK 301, IDFK 302, IDFK 303, IDFK 304 IDPK 300, IDPK 301, IDPK 302, IDPK 303, IDPK 304					
30.5~30.9	KRUZ 305H FL70 FSLK		334	274			IDFK 305, IDFK 306, IDFK 307, IDFK 308, IDFK 309 IDPK 305, IDPK 306, IDPK 307, IDPK 308, IDPK 309					
31.0~31.4	KRUZ 310H FL70 FSLK		338	278			IDFK 310, IDFK 311, IDFK 312, IDFK 313, IDFK 314 IDPK 310, IDPK 311, IDPK 312, IDPK 313, IDPK 314					
31.5~31.9	KRUZ 315H FL70 FSLK		343	283			IDFK 315, IDFK 316, IDFK 317, IDFK 318, IDFK 319 IDPK 315, IDFK 316, IDPK 317, IDPK 318, IDPK 319					
32.0~32.4	KRUZ 320H FL70 FSLK		347	287		IDFK 320, IDFK 321, IDFK 322, IDFK 323, IDFK 324 IDPK 320, IDFK 321, IDPK 322, IDPK 323, IDPK 324	CS 320 -355 SL	T20	M5x10	2.5mm		

Size not shown on above is available upon request.

Drilling & Milling tool

DMH

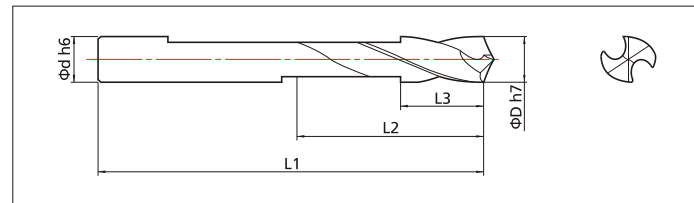


- ▶ Interchangeable carbide drillmill & XCGX insert mounted in the holder
- ▶ Specially designed carbide drillmill(TiAlN) with milling functioned flute
- ▶ Carbide chamfer insert XCGX 1102 with two corner edges
- ▶ Rigid heat-treated tool steel holder with side locking system
- ▶ Drilling, milling and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

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

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

DM



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

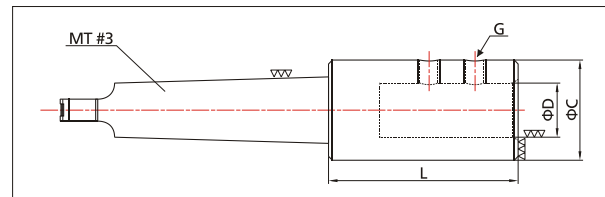
DM drill is to use max. 14mm hole depth. If requires deeper hole, ask us separately stating necessary hole depth

MT shank side lock holder

MT



- ▶ 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	#3	16	95	33	M12
MT3S-SLA20-70		20	70	37	
MT3S-SLA25-70		25		40	
MT3S-SLA32-70		32		42	
MT3S-SLA40-80		40	80	52	

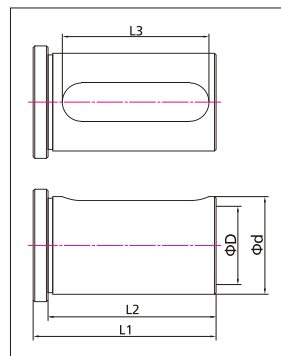
MT#2, MT#4 is available upon request.



Reduction sleeve



RSL



- ▶ RSL designed to use smaller drill shank in bigger holder
- ▶ 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	32	16	65	59	50
RSL 32-20		20			
RSL 32-25		25			
RSL 40-32	40	32	75	69	60
RSL 1 1/4-16	1 1/4"	16	65	59	50
RSL 1 1/4-20		20			
RSL 1 1/4-25		25			
RSL 1 1/2-32	1 1/2"	32			

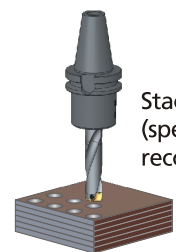
Technical tip for structural steel machining

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

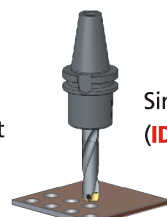
When the drilling spindle feed down toward the structural, the part will have a tendency of bending, deformation, chattering or vibrating that is not visible.

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.
- ☞ 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.
- ☞ Reduction sleeve also helps 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.)

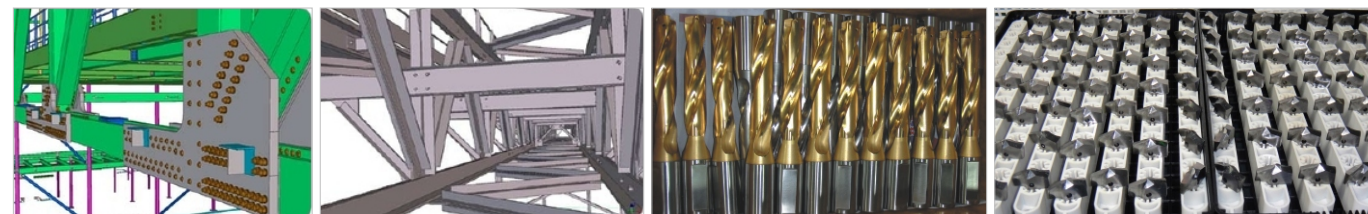


Stacked plate
(special IDPK insert recommended)



Single plate
(IDFK recommended)

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



Cutting Parameter table (for structural steel)

KRUZ SLK body + Carbide IDFK insert

Step	Drill Dia		RPM	Feed rate		Surface speed		Forward speed/min.		Power (KW)	Thrust (KGF)	Stability	Tool life	Speed
	Metric	Inch		f(mm/rev.)	IPR(inch/rev.)	V(m/min.)	SFM(feet/min.)	F(mm)	IPM(inch)					
Step 1	14.0	9/16"	760	0.20	0.008	33	110	152	6.0	1.7	331	stable	longer	slower
	16.0	41/64"	740	0.21	0.008	37	122	155	6.1	2.2	387			
	17.5	45/64"	720	0.22	0.009	40	130	158	6.3	2.6	434			
	18.0	23/32"	700	0.22	0.009	40	130	154	6.1	2.6	445			
	21.5	55/64"	620	0.24	0.009	42	137	149	5.8	3.3	556			
	22.0	7/8"	600	0.24	0.009	41	136	144	5.6	3.3	568			
	24.0	15/16"	570	0.26	0.010	43	141	148	5.8	3.9	648			
	24.5	31/32"	550	0.26	0.010	42	139	143	5.6	3.9	661			
	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	124	116	4.6	4.1	856			
40.0	1-37/64"	300	0.29	0.011	38	124	87	3.4	5.0	1126				
Step 2	14.0	9/16"	970	0.21	0.008	43	140	204	8.1	2.3	341			
	16.0	41/64"	950	0.22	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			
	18.0	23/32"	900	0.24	0.009	51	167	216	8.5	3.8	470			
	21.5	55/64"	800	0.26	0.010	54	177	208	8.2	4.8	584			
	22.0	7/8"	780	0.26	0.010	54	177	203	8.0	4.9	597			
	24.0	15/16"	710	0.28	0.011	54	175	199	7.8	5.3	678			
	24.5	31/32"	690	0.28	0.011	53	174	193	7.6	5.4	692			
	26.0	1-1/32"	640	0.30	0.012	52	171	192	7.6	5.7	763			
	26.5	1-3/64"	630	0.30	0.012	52	172	189	7.4	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				
Step 3	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			
	17.5	45/64"	1,140	0.26	0.010	63	205	296	11.6	5.0	480			
	18.0	23/32"	1,100	0.26	0.010	62	204	286	11.2	5.1	493			
	21.5	55/64"	980	0.28	0.011	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			
	24.0	15/16"	850	0.30	0.012	64	210	255	10.0	7.0	707			
	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	1-1/16"	720	0.32	0.013	61	200	230	9.1	7.4	823			
	30.0	1-3/16"	600	0.32	0.013	57	185	192	7.6	7.2	909			
40.0	1-37/64"	400	0.32	0.013	50	165	128	5.0	7.6	1195				
Step 4	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			
	21.5	55/64"	1,100	0.30	0.012	74	244	330	13.0	7.8	637			
	22.0	7/8"	1,080	0.30	0.012	75	245	324	12.7	8.0	651			
	24.0	15/16"	930	0.32	0.013	70	230	298	11.7	8.2	736			
	24.5	31/32"	910	0.32	0.013	70	230	291	11.5	8.3	750			
	26.0	1-1/32"	850	0.34	0.013	69	228	289	11.4	8.8	824			
	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			
	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				
Step 5	14.0	9/16"	1,800	0.24	0.009	79	260	432	16.9	5.6	370			
	16.0	41/64"	1,780	0.25	0.010	89	293	445	17.4	7.3	431			
	17.5	45/64"	1,760	0.30	0.012	97	317	528	20.8	9.5	524			
	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			
	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	1-1/32"	1,120	0.36	0.014	91	300	403	15.9	12.9	853			
	26.5	1-3/64"	1,070	0.36	0.014	89	292	385	15.2	12.7	868			
	27.0	1-1/16"	1,020	0.36	0.014	86	284	367	14.5	12.4	884			
	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				
Step 6	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	23/32"	1,900	0.31	0.012	107	352	589	23.2	11.3	549			
	21.5	55/64"	1,700	0.33	0.013	115	376	561	22.1	14.4	675			
	22.0	7/8"	1,650	0.33	0.013	114	374	545	21.5	14.5	690			
	24.0	15/16"	1,400	0.35	0.014	106	346	490	19.3	14.5	777			
	24.5	31/32"	1,360	0.35	0.014	105	343	476	18.8	14.5	792			
	26.0	1-1/32"	1,250	0.37	0.015	102	335	463	18.3	15.1	867			
	26.5	1-3/64"	1,200	0.37	0.015	100	328	444	17.5	14.9	883			
	27.0	1-1/16"	1,170	0.37	0.015	99	325	433	17.1	15.0	899			
	30.0	1-3/16"	900	0.37	0.015	85	278	333	13.1	13.2	994			
40.0	1-37/64"	550	0.37	0.015	69	227	204	8.0	12.3	1306	unstable	shorter	faster	

