

-Hole making No.1-

“X” Series

-Hole making No.1-

- ▶ Smooth centering & penetration by conical helix design
- ▶ Patented conical helix point geometry to reduce cutting load
- ▶ Effectively use for tough material like stainless, titanium
- ▶ 20~30% machine load reduction than ordinary drill insert

★ **Born to be never experienced performance!** ★



“X” Series

-More Perfect

-More Powerful

-More Performance

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“X” Series (Excellent)

-More Perfect

-More Powerful

-More Performance



“X” Series

Multi-tasking in single drill

- ▶ Smooth centering
- ▶ Higher straightness
- ▶ Super penetrations
- ▶ Super chip's ejection
- ▶ Minimizing built-up edge by helical cutting edge design



Yes[®] YESTOOL Co., Ltd.



X-series +higher helix & carbide insert



Insert selection

XD

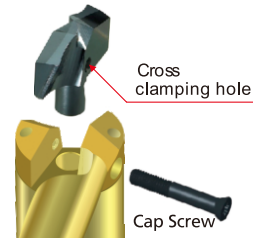


General purpose

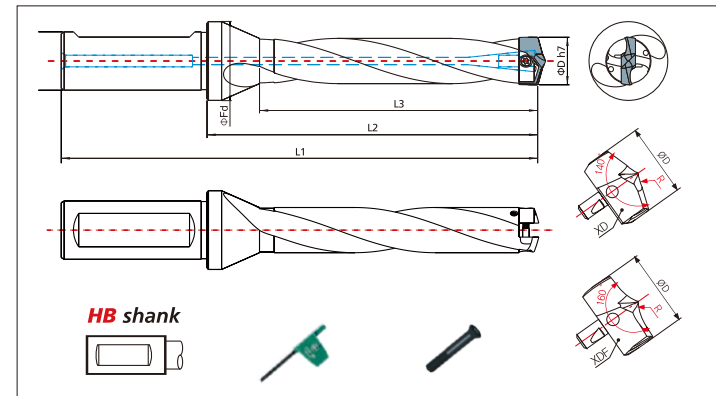
XDF



Thin plate & shallow depth



- ▶ Higher helix flute to reduce machine load and faster chip ejection
- ▶ Rugged flange type to decrease vibration or chattering
- ▶ Interchangeable <XD>, <XDF>
- ▶ Drill consists of premium tool steel with heat treatment
- ▶ Increased tool life by less vibration
- ▶ Internal coolant fed design
- ▶ "X" series and insert available upon request only
- ▶ Single lock clamping



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

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x Φ D)	L1	L2	L3	Flanged dia.(Φ Fd)	Insert Code No. to fit in body	 XD	 XDF	 Cap Screw	 Torx driver
Φ12.0 ~Φ12.4	X-120 □	16.0 (48)	T(3xD)	109	61	48	21	XD 120, XD 121, XD 122, XD 123, XD 124 XDF 120, XDF 121, XDF 122, XDF 123, XDF 124	 CS120 -135 SL	 T6 Torque 0.6Nm (Max)		
			P(5xD)	133	85	72						
			H(7xD)	157	109	96						
			L(10xD)	193	145	132						
Φ12.5 ~Φ12.9	X-125 □		T(3xD)	111	63	50		XD 125, XD 126, XD 127, XD 128, XD 129 XDF 125, XDF 126, XDF 127, XDF 128, XDF 129				
			P(5xD)	136	88	75						
			H(7xD)	161	113	100						
			L(10xD)	199	151	138						
Φ13.0 ~Φ13.4	X-130 □		T(3xD)	114	66	52		21			XD 130, XD 131, XD 132, XD 133, XD 134 XDF 130, XDF 131, XDF 132, XDF 133, XDF 134	
			P(5xD)	140	92	78						
			H(7xD)	166	118	104						
			L(10xD)	205	157	143						
Φ13.5 ~Φ13.9	X-135 □		T(3xD)	116	68	54	XD 135, XD 136, XD 137, XD 138, XD 139 XDF 135, XDF 136, XDF 137, XDF 138, XDF 139					
			P(5xD)	143	95	81						
			H(7xD)	170	122	108						
			L(10xD)	211	163	149						
Φ14.0 ~Φ14.4	X-140 □	T(3xD)	119	71	56	21	XD 140, XD 141, XD 142, XD 143, XD 144 XDF 140, XDF 141, XDF 142, XDF 143, XDF 144					
		P(5xD)	147	99	84							
		H(7xD)	175	127	112							
		L(10xD)	217	169	154							
Φ14.5 ~Φ14.9	X-145 □	20.0 (50)	T(3xD)	123	73		58	27	XD 145, XD 146, XD 147, XD 148, XD 149 XDF 145, XDF 146, XDF 147, XDF 148, XDF 149	 CS140 -155 SL	 T7 Torque 0.9Nm (Max)	
			P(5xD)	152	102		87					
			H(7xD)	181	131		116					
			L(10xD)	225	175		160					
Φ15.0 ~Φ15.4	X-150 □		T(3xD)	127	77		60		XD 150, XD 151, XD 152, XD 153, XD 154 XDF 150, XDF 151, XDF 152, XDF 153, XDF 154			
			P(5xD)	157	107		90					
			H(7xD)	187	137		120					
			L(10xD)	232	182		165					

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x ΦD)	L1	L2	L3	Flanged dia. (ΦFd)	Insert Code No. to fit in body	 XD	 XDF	 Cap Screw	 Torx driver
Φ15.5 ~Φ15.9	X-155 □	20.0 (50)	T(3xD)	130	80	62	27	XD 155, XD 156, XD 157, XD 158, XD 159 XDF 155, XDF 156, XDF 157, XDF 158, XDF 159			CS 140 -155 SL	 Torque 0.9Nm (Max)
Φ16.0 ~Φ16.4	X-160 □		P(5xD)	161	111	93		XD 160, XD 161, XD 162, XD 163, XD 164 XDF 160, XDF 161, XDF 162, XDF 163, XDF 164			CS 160 -175 SL	
			H(7xD)	192	142	124						
			L(10xD)	239	189	171						
			T(3xD)	132	82	64						
Φ16.5 ~Φ16.9	X-165 □		P(5xD)	164	114	96		XD 165, XD 166, XD 167, XD 168, XD 169 XDF 165, XDF 166, XDF 167, XDF 168, XDF 169			CS 160 -175 SL	
			H(7xD)	196	146	128						
			L(10xD)	244	194	176						
			T(3xD)	135	85	66						
Φ17.0 ~Φ17.4	X-170 □		P(5xD)	168	118	99		XD 170, XD 171, XD 172, XD 173, XD 174 XDF 170, XDF 171, XDF 172, XDF 173, XDF 174			CS 160 -175 SL	
			H(7xD)	201	151	132						
			L(10xD)	251	201	182						
			T(3xD)	137	87	68						
Φ17.5 ~Φ17.9	X-175 □		P(5xD)	171	121	102		XD 175, XD 176, XD 177, XD 178, XD 179 XDF 175, XDF 176, XDF 177, XDF 178, XDF 179			CS 160 -175 SL	
			H(7xD)	205	155	136						
			L(10xD)	256	206	187						
			T(3xD)	139	89	70						
Φ18.0 ~Φ18.4	X-180 □		P(5xD)	174	124	105		XD 180, XD 181, XD 182, XD 183, XD 184 XDF 180, XDF 181, XDF 182, XDF 183, XDF 184			CS 180 -195 SL	
			H(7xD)	209	159	140						
			L(10xD)	262	212	193						
			T(3xD)	142	92	72						
Φ18.5 ~Φ18.9	X-185 □		P(5xD)	178	128	108		XD 185, XD 186, XD 187, XD 188, XD 189 XDF 185, XDF 186, XDF 187, XDF 188, XDF 189			CS 180 -195 SL	
			H(7xD)	214	164	144						
			L(10xD)	268	218	198						
		T(3xD)	144	94	74							
Φ19.0 ~Φ19.4	X-190 □	P(5xD)	181	131	111	XD 190, XD 191, XD 192, XD 193, XD 194 XDF 190, XDF 191, XDF 192, XDF 193, XDF 194	CS 180 -195 SL					
		H(7xD)	218	168	148							
		L(10xD)	274	224	204							
		T(3xD)	147	97	76							
Φ19.5 ~Φ19.9	X-195 □	P(5xD)	185	135	114	XD 195, XD 196, XD 197, XD 198, XD 199 XDF 195, XDF 196, XDF 197, XDF 198, XDF 199	CS 180 -195 SL					
		H(7xD)	223	173	152							
		L(10xD)	280	230	209							
		T(3xD)	149	99	78							
Φ20.0 ~Φ20.4	X-200 □	P(5xD)	188	138	117	XD 200, XD 201, XD 202, XD 203, XD 204 XDF 200, XDF 201, XDF 202, XDF 203, XDF 204	CS 200 -215 SL					
		H(7xD)	227	177	156							
		L(10xD)	286	236	215							
		T(3xD)	157	101	80							
Φ20.5 ~Φ20.9	X-205 □	P(5xD)	197	141	120	XD 205, XD 206, XD 207, XD 208, XD 209 XDF 205, XDF 206, XDF 207, XDF 208, XDF 209	CS 200 -215 SL					
		H(7xD)	237	181	160							
		L(10xD)	297	241	220							
		T(3xD)	160	104	82							
Φ21.0 ~Φ21.4	X-210 □	P(5xD)	201	145	123	XD 210, XD 211, XD 212, XD 213, XD 214 XDF 210, XDF 211, XDF 212, XDF 213, XDF 214	CS 200 -215 SL					
		H(7xD)	242	186	164							
		L(10xD)	304	248	226							
		T(3xD)	162	106	84							
Φ21.5 ~Φ21.9	X-215 □	P(5xD)	204	148	126	XD 215, XD 216, XD 217, XD 218, XD 219 XDF 215, XDF 216, XDF 217, XDF 218, XDF 219	CS 200 -215 SL					
		H(7xD)	246	190	168							
		L(10xD)	309	253	231							
		T(3xD)	165	109	86							
Φ22.0 ~Φ22.4	X-220 □	P(5xD)	208	152	129	XD 220, XD 221, XD 222, XD 223, XD 224 XDF 220, XDF 221, XDF 222, XDF 223, XDF 224	CS 220 -235 SL					
		H(7xD)	251	195	172							
		L(10xD)	316	260	237							
		T(3xD)	167	111	88							
Φ22.5 ~Φ22.9	X-225 □	P(5xD)	211	155	132	XD 225, XD 226, XD 227, XD 228, XD 229 XDF 225, XDF 226, XDF 227, XDF 228, XDF 229	CS 220 -235 SL					
		H(7xD)	255	199	176							
		L(10xD)	321	265	242							
		T(3xD)	169	113	90							
Φ22.5 ~Φ22.9	X-225 □	P(5xD)	214	158	135	XD 225, XD 226, XD 227, XD 228, XD 229 XDF 225, XDF 226, XDF 227, XDF 228, XDF 229	CS 220 -235 SL					
		H(7xD)	259	203	180							
		L(10xD)	327	271	248							
		T(3xD)	169	113	90							

New

X-series +higher helix & carbide insert

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x Φ D)	L1	L2	L3	Flanged dia.(Φ Fd)	Insert Code No. to fit in body	 XD	 XDF	Cap Screw	Torx driver
Φ23.0 ~Φ23.4	X-230 □	25.0 (56)	T(3xD)	172	116	92	32	XD 230, XD 231, XD 232, XD 233, XD 234 XDF 230, XDF 231, XDF 232, XDF 233, XDF 234			CS 220 -235 SL	 Torque 1.5Nm (Max)
Φ23.5 ~Φ23.9	X-235 □		P(5xD)	218	162	138		XD 235, XD 236, XD 237, XD 238, XD 239 XDF 235, XDF 236, XDF 237, XDF 238, XDF 239				
			H(7xD)	264	208	184						
			L(10xD)	333	277	253						
			T(3xD)	174	118	94						
			P(5xD)	221	165	141						
			H(7xD)	268	212	188						
Φ24.0 ~Φ24.4	X-240 □		L(10xD)	339	283	259		XD 240, XD 241, XD 242, XD 243, XD 244 XDF 240, XDF 241, XDF 242, XDF 243, XDF 244				
		Φ24.5 ~Φ24.9	X-245 □	T(3xD)	181	121	96		XD 245, XD 246, XD 247, XD 248, XD 249 XDF 245, XDF 246, XDF 247, XDF 248, XDF 249			
				P(5xD)	229	169	144					
				H(7xD)	277	217	192					
L(10xD)	349			289	264							
Φ25.0 ~Φ25.4	X-250 □	T(3xD)	183	123	98	XD 250, XD 251, XD 252, XD 253, XD 254 XDF 250, XDF 251, XDF 252, XDF 253, XDF 254						
		Φ25.5 ~Φ25.9	X-255 □	P(5xD)	232		172	147	XD 255, XD 256, XD 257, XD 258, XD 259 XDF 255, XDF 256, XDF 257, XDF 258, XDF 259			
				H(7xD)	281		221	196				
				L(10xD)	355		295	270				
Φ26.0 ~Φ26.4	X-260 □			T(3xD)	185	125	100	XD 260, XD 261, XD 262, XD 263, XD 264 XDF 260, XDF 261, XDF 262, XDF 263, XDF 264				
		Φ26.5 ~Φ26.9	X-265 □	P(5xD)	235	175	150		XD 265, XD 266, XD 267, XD 268, XD 269 XDF 265, XDF 266, XDF 267, XDF 268, XDF 269			
				H(7xD)	285	225	200					
				L(10xD)	360	300	275					
Φ27.0 ~Φ27.4	X-270 □			T(3xD)	188	128	102	XD 270, XD 271, XD 272, XD 273, XD 274 XDF 270, XDF 271, XDF 272, XDF 273, XDF 274				
		Φ27.5 ~Φ27.9	X-275 □	P(5xD)	239	179	153		XD 275, XD 276, XD 277, XD 278, XD 279 XDF 275, XDF 276, XDF 277, XDF 278, XDF 279			
				H(7xD)	290	230	204					
				L(10xD)	367	307	281					
Φ28.0 ~Φ28.4	X-280 □			T(3xD)	190	130	104	XD 280, XD 281, XD 282, XD 283, XD 284 XDF 280, XDF 281, XDF 282, XDF 283, XDF 284				
		Φ28.5 ~Φ28.9	X-285 □	P(5xD)	242	182	156		XD 285, XD 286, XD 287, XD 288, XD 289 XDF 285, XDF 286, XDF 287, XDF 288, XDF 289			
				H(7xD)	294	234	208					
				L(10xD)	372	312	286					
Φ29.0 ~Φ29.4	X-290 □			T(3xD)	193	133	106	XD 290, XD 291, XD 292, XD 293, XD 294 XDF 290, XDF 291, XDF 292, XDF 293, XDF 294				
		Φ29.5 ~Φ29.9	X-295 □	P(5xD)	246	186	159		XD 295, XD 296, XD 297, XD 298, XD 299 XDF 295, XDF 296, XDF 297, XDF 298, XDF 299			
				H(7xD)	299	239	212					
				L(10xD)	379	319	292					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	195	135	108	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	249	189	162		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	303	243	216					
				L(10xD)	384	324	297					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	197	137	110	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	252	192	165		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	307	247	220					
				L(10xD)	390	330	303					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	200	140	112	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	256	196	168		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	312	252	224					
				L(10xD)	396	336	308					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	202	142	114	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	259	199	171		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	316	256	228					
				L(10xD)	402	342	314					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	205	145	116	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	263	203	174		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	321	261	232					
				L(10xD)	408	348	319					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	207	147	118	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	266	206	177		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	325	265	236					
				L(10xD)	414	354	325					
Φ30.0 ~Φ30.4	X-300 □			T(3xD)	209	149	120	XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304				
		Φ30.0 ~Φ30.4	X-300 □	P(5xD)	269	209	180		XD 300, XD 301, XD 302, XD 303, XD 304 XDF 300, XDF 301, XDF 302, XDF 303, XDF 304			
				H(7xD)	329	269	240					
				L(10xD)	419	359	330					

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x Φ D)	L1	L2	L3	Flanged dia.(ΦFd)	Insert Code No. to fit in body	 XD  XDF	Cap Screw 	Torx driver 
Φ30.5 ~Φ30.9	X-305 □	32.0 (60)	T(3xD)	212	152	122	39	XD 305, XD 306, XD 307, XD 308, XD 309 XDF 305, XDF 306, XDF 307, XDF 308, XDF 309	CS 300 -315 SL	 Torque 5.0Nm (Max)	
			P(5xD)	273	213	183					
			H(7xD)	334	274	244					
			L(10xD)	426	366	336					
Φ31.0 ~Φ31.4	X-310 □		T(3xD)	214	154	124		XD 310, XD 311, XD 312, XD 313, XD 314 XDF 310, XDF 311, XDF 312, XDF 313, XDF 314			
			P(5xD)	276	216	186					
			H(7xD)	338	278	248					
			L(10xD)	431	371	341					
Φ31.5 ~Φ31.9	X-315 □		T(3xD)	217	157	126		XD 315, XD 316, XD 317, XD 318, XD 319 XDF 315, XDF 316, XDF 317, XDF 318, XDF 319			
			P(5xD)	280	220	189					
			H(7xD)	343	283	252					
			L(10xD)	438	378	347					
Φ32.0 ~Φ32.4	X-320 □		T(3xD)	219	159	128		XD 320, XD 321, XD 322, XD 323, XD 324 XDF 320, XDF 321, XDF 322, XDF 323, XDF 324			
			P(5xD)	283	223	192					
			H(7xD)	347	287	256					
			L(10xD)	443	383	352					
Φ32.5 ~Φ32.9	X-325 □		T(3xD)	221	161	130		XD 325, XD 326, XD 327, XD 328, XD 329 XDF 325, XDF 326, XDF 327, XDF 328, XDF 329			
			P(5xD)	286	226	195					
			H(7xD)	351	291	260					
			L(10xD)	449	389	358					
Φ33.0 ~Φ33.4	X-330 □		T(3xD)	224	164	132		XD 330, XD 331, XD 332, XD 333, XD 334 XDF 330, XDF 331, XDF 332, XDF 333, XDF 334			
			P(5xD)	290	230	198					
			H(7xD)	356	296	264					
			L(10xD)	455	395	363					
Φ33.5 ~Φ33.9	X-335 □		T(3xD)	226	166	134		XD 335, XD 336, XD 337, XD 338, XD 339 XDF 335, XDF 336, XDF 337, XDF 338, XDF 339			
			P(5xD)	293	233	201					
			H(7xD)	360	300	268					
			L(10xD)	461	401	369					
Φ34.0 ~Φ34.4	X-340 □	40.0 (70)	T(3xD)	239	169	136	55	XD 340, XD 341, XD 342, XD 343, XD 344 XDF 340, XDF 341, XDF 342, XDF 343, XDF 344	CS 320 -355 SL		
			P(5xD)	307	237	204					
			H(7xD)	375	305	272					
			L(10xD)	477	407	374					
Φ34.5 ~Φ34.9	X-345 □		T(3xD)	241	171	138		XD 345, XD 346, XD 347, XD 348, XD 349 XDF 345, XDF 346, XDF 347, XDF 348, XDF 349			
			P(5xD)	310	240	207					
			H(7xD)	379	309	276					
			L(10xD)	483	413	380					
Φ35.0 ~Φ35.4	X-350 □		T(3xD)	243	173	140		XD 350, XD 351, XD 352, XD 353, XD 354 XDF 350, XDF 351, XDF 352, XDF 353, XDF 354			
			P(5xD)	313	243	210					
			H(7xD)	383	313	280					
			L(10xD)	488	418	385					
Φ35.5 ~Φ35.9	X-355 □		T(3xD)	246	176	142		XD 355, XD 356, XD 357, XD 358, XD 359 XDF 355, XDF 356, XDF 357, XDF 358, XDF 359			
			P(5xD)	317	247	213					
			H(7xD)	388	318	284					
			L(10xD)	495	425	391					
Φ36.0 ~Φ36.4	X-360 □		T(3xD)	248	178	144		XD 360, XD 361, XD 362, XD 363, XD 364 XDF 360, XDF 361, XDF 362, XDF 363, XDF 364			
			P(5xD)	320	250	216					
			H(7xD)	392	322	288					
			L(10xD)	500	430	396					
Φ36.5 ~Φ36.9	X-365 □		T(3xD)	251	181	146		XD 365, XD 366, XD 367, XD 368, XD 369 XDF 365, XDF 366, XDF 367, XDF 368, XDF 369			
			P(5xD)	324	254	219					
			H(7xD)	397	327	292					
			L(10xD)	507	437	402					
Φ37.0 ~Φ37.4	X-370 □		T(3xD)	253	183	148		XD 370, XD 371, XD 372, XD 373, XD 374 XDF 370, XDF 371, XDF 372, XDF 373, XDF 374			
			P(5xD)	327	257	222					
			H(7xD)	401	331	296					
			L(10xD)	512	442	407					
Φ37.5 ~Φ37.9	X-375 □	T(3xD)	255	185	150	XD 375, XD 376, XD 377, XD 378, XD 379 XDF 375, XDF 376, XDF 377, XDF 378, XDF 379					
		P(5xD)	330	260	225						
		H(7xD)	405	335	300						
		L(10xD)	518	448	413						

New

X-series +higher helix & carbide insert

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x Φ D)	L1	L2	L3	Flanged dia.(Φ Fd)	Insert Code No. to fit in body	 XD	 XDF	 Cap Screw	 Torx driver		
Φ38.0 ~Φ38.4	X-380 □	40.0 (70)	T(3xD)	258	188	152	55	XD 380, XD 381, XD 382, XD 383, XD 384 XDF 380, XDF 381, XDF 382, XDF 383, XDF 384			CS 360 ~395 SL	 		
Φ38.5 ~Φ38.9	X-385 □		P(5xD)	334	264	228		XD 385, XD 386, XD 387, XD 388, XD 389 XDF 385, XDF 386, XDF 387, XDF 388, XDF 389						
			H(7xD)	410	340	304		XD 390, XD 391, XD 392, XD 393, XD 394 XDF 390, XDF 391, XDF 392, XDF 393, XDF 394						
			L(10xD)	524	454	418								
			T(3xD)	260	196	154							XD 395, XD 396, XD 397, XD 398, XD 399 XDF 395, XDF 396, XDF 397, XDF 398, XDF 399	
P(5xD)	337		267	231	XD 400, XD 401, XD 402, XD 403, XD 404 XDF 400, XDF 401, XDF 402, XDF 403, XDF 404									
H(7xD)	414		344	308		XD 405, XD 406, XD 407, XD 408, XD 409 XDF 405, XDF 406, XDF 407, XDF 408, XDF 409								
L(10xD)	530		460	424				XD 410, XD 411, XD 412, XD 413, XD 414 XDF 410, XDF 411, XDF 412, XDF 413, XDF 414						
Φ39.0 ~Φ39.4	X-390 □		T(3xD)	263									193	156
Φ39.5 ~Φ39.9	X-395 □		P(5xD)	341	271								234	XD 420, XD 421, XD 422, XD 423, XD 424 XDF 420, XDF 421, XDF 422, XDF 423, XDF 424
			H(7xD)	419	349	312							XD 425, XD 426, XD 427, XD 428, XD 429 XDF 425, XDF 426, XDF 427, XDF 428, XDF 429	
			L(10xD)	536	466	429		XD 430, XD 431, XD 432, XD 433, XD 434 XDF 430, XDF 431, XDF 432, XDF 433, XDF 434						
			T(3xD)	265	195	158								
P(5xD)	344		274	237	XD 440, XD 441, XD 442, XD 443, XD 444 XDF 440, XDF 441, XDF 442, XDF 443, XDF 444									
H(7xD)	423		353	316		XD 445, XD 446, XD 447, XD 448, XD 449 XDF 445, XDF 446, XDF 447, XDF 448, XDF 449								
L(10xD)	542		472	435				XD 450, XD 451, XD 452, XD 453, XD 454 XDF 450, XDF 451, XDF 452, XDF 453, XDF 454						
Φ40.0 ~Φ40.4	X-400 □		T(3xD)	267							197		160	XD 455, XD 456, XD 457, XD 458, XD 459 XDF 455, XDF 456, XDF 457, XDF 458, XDF 459
Φ40.5 ~Φ40.9	X-405 □		P(5xD)	347	277						240		XD 460, XD 461, XD 462, XD 463, XD 464 XDF 460, XDF 461, XDF 462, XDF 463, XDF 464	
			H(7xD)	427	357	320					XD 465, XD 466, XD 467, XD 468, XD 469 XDF 465, XDF 466, XDF 467, XDF 468, XDF 469			
			L(10xD)	547	477	440		XD 470, XD 471, XD 472, XD 473, XD 474 XDF 470, XDF 471, XDF 472, XDF 473, XDF 474						
			T(3xD)	270	200	162								XD 475, XD 476, XD 477, XD 478, XD 479 XDF 475, XDF 476, XDF 477, XDF 478, XDF 479
P(5xD)	351		281	243	XD 480, XD 481, XD 482, XD 483, XD 484 XDF 480, XDF 481, XDF 482, XDF 483, XDF 484									
H(7xD)	432		362	324		XD 485, XD 486, XD 487, XD 488, XD 489 XDF 485, XDF 486, XDF 487, XDF 488, XDF 489								
L(10xD)	554		484	446				XD 490, XD 491, XD 492, XD 493, XD 494 XDF 490, XDF 491, XDF 492, XDF 493, XDF 494						
Φ41.0 ~Φ41.4	X-410 □		T(3xD)	272							202		164	XD 495, XD 496, XD 497, XD 498, XD 499 XDF 495, XDF 496, XDF 497, XDF 498, XDF 499
Φ41.5 ~Φ41.9	X-415 □		P(5xD)	354	284						246		XD 500, XD 501, XD 502, XD 503, XD 504 XDF 500, XDF 501, XDF 502, XDF 503, XDF 504	
			H(7xD)	436	366	328					XD 505, XD 506, XD 507, XD 508, XD 509 XDF 505, XDF 506, XDF 507, XDF 508, XDF 509			
			L(10xD)	559	489	451		XD 510, XD 511, XD 512, XD 513, XD 514 XDF 510, XDF 511, XDF 512, XDF 513, XDF 514						
			T(3xD)	275	205	166								XD 515, XD 516, XD 517, XD 518, XD 519 XDF 515, XDF 516, XDF 517, XDF 518, XDF 519
P(5xD)	358		288	249	XD 520, XD 521, XD 522, XD 523, XD 524 XDF 520, XDF 521, XDF 522, XDF 523, XDF 524									
H(7xD)	441		371	332		XD 525, XD 526, XD 527, XD 528, XD 529 XDF 525, XDF 526, XDF 527, XDF 528, XDF 529								
L(10xD)	566		496	457				XD 530, XD 531, XD 532, XD 533, XD 534 XDF 530, XDF 531, XDF 532, XDF 533, XDF 534						
Φ42.0 ~Φ42.4	X-420 □		T(3xD)	277							207		168	XD 535, XD 536, XD 537, XD 538, XD 539 XDF 535, XDF 536, XDF 537, XDF 538, XDF 539
Φ42.5 ~Φ42.9	X-425 □		P(5xD)	361	291						252		XD 540, XD 541, XD 542, XD 543, XD 544 XDF 540, XDF 541, XDF 542, XDF 543, XDF 544	
			H(7xD)	445	375	336					XD 545, XD 546, XD 547, XD 548, XD 549 XDF 545, XDF 546, XDF 547, XDF 548, XDF 549			
			L(10xD)	571	501	462		XD 550, XD 551, XD 552, XD 553, XD 554 XDF 550, XDF 551, XDF 552, XDF 553, XDF 554						
			T(3xD)	279	209	170								XD 555, XD 556, XD 557, XD 558, XD 559 XDF 555, XDF 556, XDF 557, XDF 558, XDF 559
P(5xD)	364		294	255	XD 560, XD 561, XD 562, XD 563, XD 564 XDF 560, XDF 561, XDF 562, XDF 563, XDF 564									
H(7xD)	449		379	340		XD 565, XD 566, XD 567, XD 568, XD 569 XDF 565, XDF 566, XDF 567, XDF 568, XDF 569								
L(10xD)	577		507	468				XD 570, XD 571, XD 572, XD 573, XD 574 XDF 570, XDF 571, XDF 572, XDF 573, XDF 574						
Φ43.0 ~Φ43.4	X-430 □		T(3xD)	282							212		172	XD 575, XD 576, XD 577, XD 578, XD 579 XDF 575, XDF 576, XDF 577, XDF 578, XDF 579
Φ43.5 ~Φ43.9	X-435 □		P(5xD)	368	298						258		XD 580, XD 581, XD 582, XD 583, XD 584 XDF 580, XDF 581, XDF 582, XDF 583, XDF 584	
			H(7xD)	454	384	344					XD 585, XD 586, XD 587, XD 588, XD 589 XDF 585, XDF 586, XDF 587, XDF 588, XDF 589			
			L(10xD)	583	513	473		XD 590, XD 591, XD 592, XD 593, XD 594 XDF 590, XDF 591, XDF 592, XDF 593, XDF 594						
			T(3xD)	284	214	174								XD 595, XD 596, XD 597, XD 598, XD 599 XDF 595, XDF 596, XDF 597, XDF 598, XDF 599
P(5xD)	371		301	261	XD 600, XD 601, XD 602, XD 603, XD 604 XDF 600, XDF 601, XDF 602, XDF 603, XDF 604									
H(7xD)	458		388	348		XD 605, XD 606, XD 607, XD 608, XD 609 XDF 605, XDF 606, XDF 607, XDF 608, XDF 609								
L(10xD)	589		519	479				XD 610, XD 611, XD 612, XD 613, XD 614 XDF 610, XDF 611, XDF 612, XDF 613, XDF 614						
Φ44.0 ~Φ44.4	X-440 □		T(3xD)	287							217		176	XD 615, XD 616, XD 617, XD 618, XD 619 XDF 615, XDF 616, XDF 617, XDF 618, XDF 619
Φ44.5 ~Φ44.9	X-445 □		P(5xD)	375	305						264		XD 620, XD 621, XD 622, XD 623, XD 624 XDF 620, XDF 621, XDF 622, XDF 623, XDF 624	
			H(7xD)	463	393	352					XD 625, XD 626, XD 627, XD 628, XD 629 XDF 625, XDF 626, XDF 627, XDF 628, XDF 629			
			L(10xD)	595	525	484		XD 630, XD 631, XD 632, XD 633, XD 634 XDF 630, XDF 631, XDF 632, XDF 633, XDF 634						
			T(3xD)	289	219	178								XD 635, XD 636, XD 637, XD 638, XD 639 XDF 635, XDF 636, XDF 637, XDF 638, XDF 639
P(5xD)	378		308	267	XD 640, XD 641, XD 642, XD 643, XD 644 XDF 640, XDF 641, XDF 642, XDF 643, XDF 644									
H(7xD)	467		397	356		XD 645, XD 646, XD 647, XD 648, XD 649 XDF 645, XDF 646, XDF 647, XDF 648, XDF 649								
L(10xD)	601		531	490				XD 650, XD 651, XD 652, XD 653, XD 654 XDF 650, XDF 651, XDF 652, XDF 653, XDF 654						
Φ45.0 ~Φ45.4	X-450 □	T(3xD)	291	221			180		XD 655, XD 656, XD 657, XD 658, XD 659 XDF 655, XDF 656, XDF 657, XDF 658, XDF 659					
P(5xD)	381	311	270	XD 660, XD 661, XD 662, XD 663, XD 664 XDF 660, XDF 661, XDF 662, XDF 663, XDF 664										
	H(7xD)	471	401		360	XD 665, XD 666, XD 667, XD 668, XD 669 XDF 665, XDF 666, XDF 667, XDF 668, XDF 669								
	L(10xD)	606	536		495		XD 670, XD 671, XD 672, XD 673, XD 674 XDF 670, XDF 671, XDF 672, XDF 673, XDF 674							
T(3xD)	291	221	180		XD 675, XD 676, XD 677, XD 678, XD 679 XDF 675, XDF 676, XDF 677, XDF 678, XDF 679									
P(5xD)	381	311	270	XD 680, XD 681, XD 682, XD 683, XD 684 XDF 680, XDF 681, XDF 682, XDF 683, XDF 684										
H(7xD)	471	401	360			XD 685, XD 686, XD 687, XD 688, XD 689 XDF 685, XDF 686, XDF 687, XDF 688, XDF 689								
L(10xD)	606	536	495		XD 690, XD 691, XD 692, XD 693, XD 694 XDF 690, XDF 691, XDF 692, XDF 693, XDF 694									
T(3xD)	291	221	180	XD 695, XD 696, XD 697, XD 698, XD 699 XDF 695, XDF 696, XDF 697, XDF 698, XDF 699										
P(5xD)	381	311	270			XD 700, XD 701, XD 702, XD 703, XD 704 XDF 700, XDF 701, XDF 702, XDF 703, XDF 704								
H(7xD)	471	401	360		XD 705, XD 706, XD 707, XD 708, XD 709 XDF 705, XDF 706, XDF 707, XDF 708, XDF 709									
L(10xD)	606	536	495	XD 710, XD 711, XD 712, XD 713, XD 714 XDF 710, XDF 711, XDF 712, XDF 713, XDF 714										
T(3xD)	291	221	180			XD 715, XD 716, XD 717, XD 718, XD 719 XDF 715, XDF 716, XDF 717, XDF 718, XDF 719								
P(5xD)	381	311	270		XD 720, XD 721, XD 722, XD 723, XD 724 XDF 720, XDF 721, XDF 722, XDF 723, XDF 724									
H(7xD)	471	401	360	XD 725, XD 726, XD 727, XD 728, XD 729 XDF 725, XDF 726, XDF 727, XDF 728, XDF 729										
L(10xD)	606	536	495			XD 730, XD 731, XD 732, XD 733, XD 734 XDF 730, XDF 731, XDF 732, XDF 733, XDF 734								
T(3xD)	291	221	180		XD 735, XD 736, XD 737, XD 738, XD 739 XDF 735, XDF 736, XDF 737, XDF 738, XDF 739									
P(5xD)	381	311	270	XD 740, XD 741, XD 742, XD 743, XD 744 XDF 740, XDF 741, XDF 742, XDF 743, XDF 744										
H(7xD)	471	401	360			XD 745, XD 746, XD 747, XD 748, XD 749 XDF 745, XDF 746, XDF 747, XDF 748, XDF 749								
L(10xD)	606	536	495		XD 750, XD 751, XD 752, XD 753, XD 754 XDF 750, XDF 751, XDF 752, XDF 753, XDF 754									
T(3xD)	291	221	180	XD 755, XD 756, XD 757, XD 758, XD 759 XDF 755, XDF 756, XDF 757, XDF 758, XDF 759										
P(5xD)	381	311	270			XD 760, XD 761, XD 762, XD 763, XD 764 XDF 760, XDF 761, XDF 762, XDF 763, XDF 764								
H(7xD)	471	401	360		XD 765, XD 766, XD 767, XD 768, XD 769 XDF 765, XDF 766, XDF 767, XDF 768, XDF 769									
L(10xD)	606	536	495	XD 770, XD 771, XD 772, XD 773, XD 774 XDF 770, XDF 771, XDF 772, XDF 773, XDF 774										
T(3xD)	291	221	180			XD 775, XD 776, XD 777, XD 778, XD 779 XDF 775, XDF 776, XDF 777, XDF 778, XDF 779								
P(5xD)	381	311	270		XD 780, XD 781, XD 782, XD 783, XD 784 XDF 780, XDF 781, XDF 782, XDF 783, XDF 784									
H(7xD)	471	401	360	XD 785, XD 786, XD 787, XD 788, XD 789 XDF 785, XDF 786, XDF 787, XDF 788, XDF 789										
L(10xD)	606	536	495			XD 790, XD 791, XD 792, XD 793, XD 794 XDF 790, XDF 791, XDF 792, XDF 793, XDF 794								
T(3xD)	291	221	180		XD 795, XD 796, XD 797, XD 798, XD 799 XDF 795, XDF 796, XDF 797, XDF 798, XDF 799									
P(5xD)	381	311	270	XD 800, XD 801, XD 802, XD 803, XD 804 XDF 800, XDF 801, XDF 802, XDF 803, XDF 804										
H(7xD)	471	401	360			XD 805, XD 806, XD 807, XD 808, XD 809 XDF 805, XDF 806, XDF 807, XDF 808, XDF 809								
L(10xD)	606	536	495		XD 810, XD 811, XD 812, XD 813, XD 814 XDF 810, XDF 811, XDF 812, XDF 813, XDF 814									
T(3xD)	291	221	180	XD 815, XD 816, XD 817, XD 818, XD 819 XDF 815, XDF 816, XDF 817, XDF 818, XDF 819										
P(5xD)	381	311	270			XD 820, XD 821, XD 822, XD 823, XD 824 XDF 820, XDF 821, XDF 822, XDF 823, XDF 824								
H(7xD)	471	401	360		XD 825, XD 826, XD 827, XD 828, XD 829 XDF 825, XDF 826, XDF 827, XDF 828, XDF 829									
L(10xD)	606	536	495	XD 830, XD 831, XD 832, XD 833, XD 834 XDF 830, XDF 831, XDF 832, XDF 833, XDF 834										
T(3xD)	291	221	180			XD 835, XD 836, XD 837, XD 838, XD 839 XDF 835, XDF 836, XDF 837, XDF 838, XDF 839								
P(5xD)	381	311	270		XD 840, XD 841, XD 842, XD 843, XD 844 XDF 840, XDF 841, XDF 842, XDF 843, XDF 844									
H(7xD)	471	401	360	XD 845, XD 846, XD 847, XD 848, XD 849 XDF 845, XDF 846, XDF 847, XDF 848, XDF 849										
L(10xD)	606	536	495			XD 850, XD 851, XD 852, XD 853, XD 854 XDF 850, XDF 851, XDF 852, XDF 853, XDF 854								
T(3xD)	291	221	180		XD 855, XD 856, XD 857, XD 858, XD 859 XDF 855, XDF 856, XDF 857, XDF 858, XDF 859									
P(5xD)	381	311	270	XD 860, XD 861, XD 862, XD 863, XD 864 XDF 860, XDF 861, XDF 862, XDF 863, XDF 864										
H(7xD)	471	401	360			XD 865, XD 866, XD 867, XD 868, XD 869 XDF 865, XDF 866, XDF 867, XDF 868, XDF 869								
L(10xD)	606	536	495		XD 870, XD 871, XD 872, XD 873, XD 874 XDF 870, XDF 871, XDF 872, XDF 873, XDF 874									
T(3xD)	291	221	180	XD 875, XD 876, XD 877, XD 878, XD 879 XDF 875, XDF 876, XDF 877, XDF 878, XDF 879										
P(5xD)	381	311	270			XD 880, XD 881, XD 882, XD 883, XD 884 XDF 880, XDF 881, XDF 882, XDF 883, XDF 884								
H(7xD)	471	401	360		XD 885, XD 886, XD 887, XD 888, XD 889 XDF 885, XDF 886, XDF 887, XDF 888, XDF 889									
L(10xD)	606	536	495	XD 890, XD 891, XD 892, XD 893, XD 894 XDF 890, XDF 891, XDF 892, XDF 893, XDF 894										
T(3xD)	291	221	180			XD 895, XD 896, XD 897, XD 898, XD 899 XDF 895, XDF 896, XDF 897, XDF 898, XDF 899								
P(5xD)	381	311	270		XD 900, XD 901, XD 902, XD 903, XD 904 XDF 900, XDF 901, XDF 902, XDF 903, XDF 904									
H(7xD)	471													

Hole size range	Code No.	Shank Φ d / (L)	Cutting depth (Length x Φ D)	L1	L2	L3	Flanged dia. (Φ Fd)	Insert Code No. to fit in body	 XD	 XDF	 Cap Screw	 Torx driver
Φ45.5 ~Φ45.9	X-455 □	40.0 (70)	T(3xD)	294	224	182	55	XD 455, XD 456, XD 457, XD 458, XD 459 XDF 455, XDF 456, XDF 457, XDF 458, XDF 459	 XD	 XDF	CS 450 -500 SL	T20  Torque 5.0Nm (Max)
			P(5xD)	385	315	273						
			H(7xD)	476	406	364						
			L(10xD)	613	543	501						
Φ46.0 ~Φ46.4	X-460 □		T(3xD)	296	226	184		XD 460, XD 461, XD 462, XD 463, XD 464 XDF 460, XDF 461, XDF 462, XDF 463, XDF 464				
			P(5xD)	388	318	276						
			H(7xD)	480	410	368						
			L(10xD)	618	548	506						
Φ46.5 ~Φ46.9	X-465 □		T(3xD)	299	229	186		XD 465, XD 466, XD 467, XD 468, XD 469 XDF 465, XDF 466, XDF 467, XDF 468, XDF 469				
			P(5xD)	392	322	279						
			H(7xD)	485	415	372						
			L(10xD)	625	555	512						
Φ47.0 ~Φ47.4	X-470 □		T(3xD)	301	231	188		XD 470, XD 471, XD 472, XD 473, XD 474 XDF 470, XDF 471, XDF 472, XDF 473, XDF 474				
			P(5xD)	395	325	282						
			H(7xD)	489	419	376						
			L(10xD)	630	560	517						
Φ47.5 ~Φ47.9	X-475 □		T(3xD)	303	233	190		XD 475, XD 476, XD 477, XD 478, XD 479 XDF 475, XDF 476, XDF 477, XDF 478, XDF 479				
			P(5xD)	398	328	285						
			H(7xD)	493	423	380						
			L(10xD)	636	566	523						
Φ48.0 ~Φ48.4	X-480 □		T(3xD)	306	236	192		XD 480, XD 481, XD 482, XD 483, XD 484 XDF 480, XDF 481, XDF 482, XDF 483, XDF 484				
		P(5xD)	402	332	288							
		H(7xD)	498	428	384							
		L(10xD)	642	572	528							
Φ48.5 ~Φ48.9	X-485 □	T(3xD)	308	238	194	XD 485, XD 486, XD 487, XD 488, XD 489 XDF 485, XDF 486, XDF 487, XDF 488, XDF 489						
		P(5xD)	405	335	291							
		H(7xD)	502	432	388							
		L(10xD)	648	578	534							
Φ49.0 ~Φ49.4	X-490 □	T(3xD)	311	241	196	XD 490, XD 491, XD 492, XD 493, XD 494 XDF 490, XDF 491, XDF 492, XDF 493, XDF 494						
		P(5xD)	409	339	294							
		H(7xD)	507	437	392							
		L(10xD)	654	584	539							
Φ49.5 ~Φ49.9	X-495 □	T(3xD)	313	243	198	XD 495, XD 496, XD 497, XD 498, XD 499 XDF 495, XDF 496, XDF 497, XDF 498, XDF 499						
		P(5xD)	412	342	297							
		H(7xD)	511	441	396							
		L(10xD)	660	590	545							
Φ50.0 ~Φ50.4	X-500 □	T(3xD)	315	245	200	XD 500, XD 501, XD 502, XD 503, XD 504 XDF 500, XDF 501, XDF 502, XDF 503, XDF 504						
		P(5xD)	415	345	300							
		H(7xD)	515	445	400							
		L(10xD)	665	595	550							