



Indexable Drilling Line
by SKAELING LLC

FANG INSERTS & HOLDERS

- Features

Secure and accurate seating resulting in accurate repeatability and concentricity.

FANG Drill General

For most steels materials

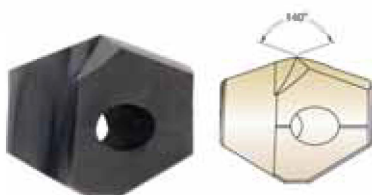
FANG Drill INOX

For tough, ductile materials and stainless steels

Light, sharp cutting edge

Soft cutting action

Minimize cutting forces



Special Alloy Steels that maintains its hardness and toughness under high temperatures.

Innovative surface treatment that improves wear resistance and reduces corrosion.

High Performance flute design allowing maximum chip evacuation and minimum interference.

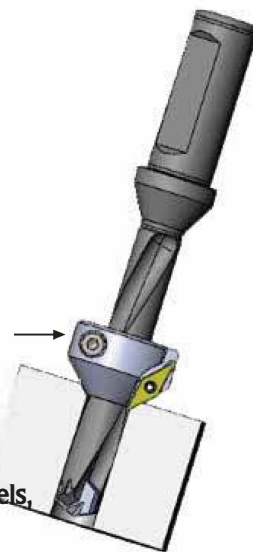


Series Range (mm)	INSERT		Flute Overall				
	Code	dia. (mm)	Drill dia.	Product	Shaft dia.	Length L1 L3 Ref.	SCREW
A Ø 12.00 to Ø 13.99	YA1A1200	12.00	3D	ZH12003020	20	52	121
	YA1A1210	12.10		ZH12005020		77	146
	YA1A1220	12.20		ZH12007020		101	170
	YA1A1230	12.30					
	YA1A1250	12.50	3D	ZH12503020	20	54	122
	YA1A1260	12.60		ZH12505020		80	148
	YA1A1270	12.70		ZH12507020		106	174
	YA1A1280	12.80					
	YA1A1290	12.90	3D	ZH13003020	20	56	124
	YA1A1300	13.00		ZH13005020		83	151
	YA1A1310	13.10		ZH13007020		110	178
	YA1A1320	13.20					
	YA1A1349	13.49	3D	ZH13503020	20	57	125
	YA1A1350	13.50		ZH13505020		85	153
	YA1A1360	13.60		ZH13507020		113	181
	YA1A1370	13.70					
	YA1A1380	13.80	7D				
	YA1A1389	13.89					
B Ø 14.00 to Ø 15.99	YB1A1400	14.00	3D	ZH14003020	20	59	126
	YB1A1410	14.10		ZH14005020		88	155
	YB1A1420	14.20		ZH14007020		117	184
	YB1A1429	14.29					
	YB1A1430	14.30	3D	ZH14503020	20	61	128
	YB1A1440	14.40		ZH14505020		91	158
	YB1A1450	14.50		ZH14507020		121	188
	YB1A1460	14.60					
	YB1A1468	14.68	7D				
	YB1A1480	14.80					
	YB1A1500	15.00					
	YB1A1508	15.08					
	YB1A1510	15.10	3D	ZH15003020	20	63	130
	YB1A1520	15.20		ZH15005020		94	161
	YB1A1530	15.30		ZH15007020		125	192
	YB1A1548	15.48					
	YB1A1550	15.50	3D	ZH15503020	20	65	131
	YB1A1560	15.60		ZH15505020		97	163
	YB1A1570	15.70		ZH15507020		128	194
	YB1A1580	15.80					
	YB1A1587	15.87	7D				

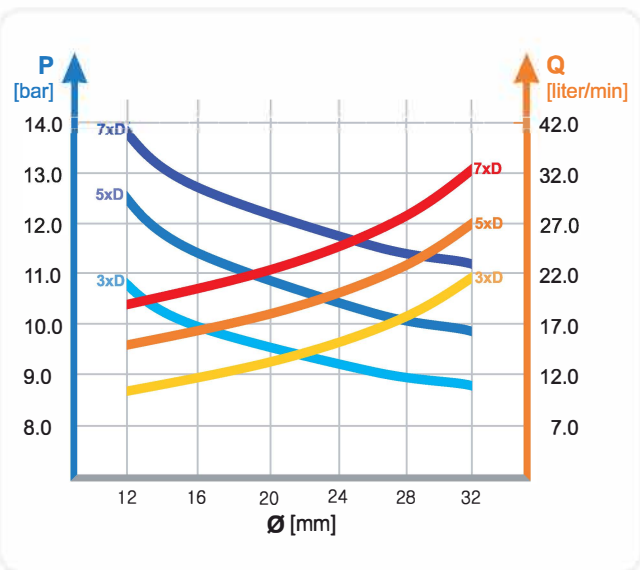
Series Range (mm)	INSERT		Flute Overall				
	Code	dia. (mm)	Drill dia.	Product	Shaft dia.	Length L1 L3 Ref.	SCREW
C Ø 16.00 to Ø 17.99	YC1A1600	16.00	3D	ZH16003020	20	65	131
	YC1A1609	16.09		ZH16005020		98	164
	YC1A1620	16.20		ZH16007020		131	197
	YC1A1627	16.27					
	YC1A1630	16.30	3D	ZH16503020	20	67	133
	YC1A1650	16.50		ZH16505020		101	167
	YC1A1667	16.67		ZH16507020		134	200
	YC1A1680	16.80					
	YC1A1700	17.00	3D	ZH17003020	20	69	134
	YC1A1707	17.07		ZH17005020		104	169
	YC1A1746	17.46		ZH17007020		139	204
	YC1A1750	17.50					
D Ø 18.00 to Ø 19.99	YD1A1800	18.00	3D	ZH18003025	25	72	149
	YD1A1826	18.26		ZH18005025		109	186
	YD1A1850	18.50		ZH18007025		146	223
	YD1A1865	18.65					
	YD1A1880	18.80	3D	ZH18503025	25	74	150
	YD1A1895	18.95		ZH18505025		112	188
	YD1A1900	19.00		ZH18507025		150	226
	YD1A1905	19.05					
	YD1A1927	19.27	3D	ZH19003025	25	76	152
	YD1A1945	19.45		ZH19005025		115	191
	YD1A1950	19.50		ZH19007025		154	230
	YD1A1980	19.80					
E Ø 20.00 to Ø 21.99	YE1A2000	20.00	3D	ZH20003025	25	77	152
	YE1A2024	20.24		ZH20005025		118	193
	YE1A2050	20.50		ZH20007025		159	234
	YE1A2064	20.64					
	YE1A2070	20.70	3D	ZH20503025	25	79	154
	YE1A2100	21.00		ZH20505025		121	196
	YE1A2103	21.03		ZH20507025		163	238
	YE1A2143	21.43					
	YE1A2150	21.50	3D	ZH21003025	25	81	156
	YE1A2170	21.70		ZH21005025		124	199
	YE1A2183	21.83		ZH21007025		167	242
				ZH21503025		83	157
TX2021T20			3D	ZH21505025	25	126	200
				ZH21507025		170	244

Seri Aralığı	Uç Kodu	Uç Çapı	Delme Boyu	Takım Kodu	Şaft Çapı	Kanal Boyu	Tam Boy	Uç Bağlama Vidası
(mm)	Çelik Kalite	h7			SD	L1	L3 Ref.	
F Ø 22.00 to Ø 23.99	YF1A2200	22.00	3D	ZH22003025		85	159	TX2223T20
			5D	ZH22005025	25	129	203	
	YF1A2223	22.23	7D	ZH22007025		174	248	
	YF1A2250	22.50	3D	ZH22503025		86	159	
	YF1A2262	22.62	5D	ZH22505025	25	132	205	
	YF1A2270	22.70	7D	ZH22507025		178	251	
	YF1A2300	23.00	3D	ZH23003025		88	161	
	YF1A2302	23.02	5D	ZH23005025	25	135	208	
	YF1A2342	23.42	7D	ZH23007025		182	255	
	YF1A2350	23.50	3D	ZH23503025		90	163	
G Ø 24.00 to Ø 25.99	YG1A2400	24.00	3D	ZH24003032		91	172	TX2425T20
			5D	ZH24005032	32	140	221	
	YG1A2421	24.21	7D	ZH24007032		189	270	
	YG1A2450	24.50	3D	ZH24503032		93	173	
	YG1A2461	24.61	5D	ZH24505032	32	143	223	
	YG1A2470	24.70	7D	ZH24507032		193	273	
	YG1A2500	25.00	3D	ZH25003032		95	175	
			5D	ZH25005032	32	146	226	
	YG1A2540	25.40	7D	ZH25007032		197	277	
	YG1A2550	25.50	3D	ZH25503032		97	177	
H Ø 26.00 to Ø 27.99	YH1A2600	26.00	3D	ZH26003032		98	177	TX2627T25
			5D	ZH26005032	32	150	229	
	YH1A2619	26.19	7D	ZH26007032		202	281	
	YH1A2650	26.50	3D	ZH26503032		99	178	
	YH1A2659	26.59	5D	ZH26505032	32	152	231	
	YH1A2699	26.99	7D	ZH26507032		205	284	
			3D	ZH27003032		101	180	
	YH1A2700	27.00	5D	ZH27005032	32	155	234	
			7D	ZH27007032		209	288	
	YH1A2750	27.50	3D	ZH27503032		103	181	
			5D	ZH27505032	32	159	237	
	YH1A2778	27.78	7D	ZH27507032		214	292	

Seri Aralığı	Uç Kodu	Uç Çapı	Delme Boyu	Takım Kodu	Şaft Çapı	Kanal Boyu	Tam Boy	Uç Bağlama Vidası
(mm)	Çelik Kalite	h7			SD	L1	L3 Ref.	
I Ø 28.00 to Ø 29.99	YI1A2800	28.00	3D	ZH28003032		105	183	TX2829T25
			5D	ZH28005032	32	161	239	
	YI1A2818	28.18	7D	ZH28007032		217	295	
	YI1A2850	28.50	3D	ZH28503032		106	184	
			5D	ZH28505032	32	163	241	
	YI1A2858	28.58	7D	ZH28507032		220	298	
	YI1A2900	29.00	3D	ZH29003032		109	186	
			5D	ZH29005032	32	168	245	
	YI1A2937	29.37	7D	ZH29007032		226	303	
	YI1A2950	29.50	3D	ZH29503032		110	187	
J Ø 30.00 to Ø 31.99			5D	ZH29505032	32	170	247	
	YI1A2977	29.77	7D	ZH29507032		229	306	
	YJ1A3000	30.00	3D	ZH30003032		112	189	TX3031T25
			5D	ZH30005032	32	172	249	
	YJ1A3016	30.16	7D	ZH30007032		232	309	
	YJ1A3050	30.50	3D	ZH30503032		114	190	
			5D	ZH30505032	32	176	252	
	YJ1A3056	30.56	7D	ZH30507032		238	314	
	YJ1A3096	30.96	3D	ZH31003032		115	191	
			5D	ZH31005032	32	177	253	
	YJ1A3100	31.00	7D	ZH31007032		239	315	
	YJ1A3150	31.50	3D	ZH31503032		118	194	
			5D	ZH31505032	32	182	258	
	YJ1A3175	31.75	7D	ZH31507032		246	322	



RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING



- Recommended emulsion mix is 6% - 8%.
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- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
- Dry drilling is possible for 1-2xD drilling. But not recommended.

	Nonalloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRC234 (~HB250)	~HRC28 (~HB275)	HRC28~ (~HB275~)	~HRC28 (~HB275)	HRC28~ (~HB275~)	~HRC37 (~HB350)	HRC37~ (~HB350~)	~HRC2 (~HB250)	HRC24~ (~HB250~)	~HRC13 (~HB200)	HRC13~ (~HB200~)	~HRC28 (~HB275)	~HRC19 (~HB220)	HRC19~ (~HB220~)	~HRC8 (~HB180)	~HB110
Y=1A	○	○	○	○	○	○	○	○	○	○	○		○	○		
Y=2C	○	○		○				○		○		○			○	○

METRIC

Materia Werkstück		Tensile Strength	Hardness		Cutting Speed	Feed [mm/rev]				
		[N/mm ²]	HB	HRC	Vc [M/min]	Ø 12.0 - Ø 14.9	Ø 15.0 - Ø 17.9	Ø 18.0 - Ø 21.9	Ø 22.0 - Ø 26.9	Ø 27.0 - Ø 31.9
Non-alloyed steels, Cast steels Free-machining steels	9SMn28, 9SMnPb28,	~ 500	100-150		95-120	0.16-0.28	0.21-0.35	0.27-0.40	0.34-0.52	0.37-0.55
	10SPb20 etc	500-850	150-250	~ 24	80-105	0.14-0.24	0.21-0.35	0.27-0.40	0.34-0.52	0.37-0.55
Low-alloyed steels, Cast steels (<5%) Carbon steels	C15, C22, 20Mn5, Ck45, C45 etc	~ 450	85-125		90-115	0.14-0.25	0.20-0.33	0.25-0.39	0.31-0.47	0.34-0.50
		450-755	125-225	~ 19	70-90	0.12-0.20	0.17-0.82	0.22-0.32	0.30-0.46	0.33-0.49
		755-900	225-265	19-27	60-80	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.33-0.49
		900-1200	265-355	27-37	55-70	0.10-0.1	0.15-0.52	0.21-0.30	0.25-0.38	0.29-0.43
Alloyed steels for	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	~ 600	125-175	~ 7	80-100	0.14-0.24	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
		600-800	175-235	7-22	70-90	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
		800-950	235-280	22-92	60-80	0.12-0.20	0.15-0.25	0.22-0.32	0.30-0.46	0.34-0.50
		950-1110	280-330	29-35	55-70	0.10-0.16	0.13-0.21	0.21-0.30	0.25-0.38	0.29-0.43
		1110-1230	330-360	35-39	45-60	0.08-0.12	0.13-0.21	0.21-0.30	0.25-0.38	0.29-0.48
High-alloyed steels	36CrNiMo4, 41CrAlMo7 etc	600-1020	225-300	19-32	45-60	0.12-0.02	0.15-0.52	0.21-0.30	0.20-0.31	0.24-0.35
		1020-120	300-355	32-38	40-55	0.10-0.16	0.11-0.18	0.21-0.30	0.20-0.31	0.24-0.35
		1200-1330	355-390	38-42	40-50	0.08-0.12	0.09-0.14	0.18-0.26	0.19-0.29	0.23-0.34
Structural steels	St33, St37-2, St44-2, St52, St60 etc	350-500	100-150		75-95	0.14-0.24	0.21-0.35	0.27-0.39	0.29-0.44	0.32-0.47
		500-850	150-250	~ 42	60-75	0.12-0.20	0.20-0.33	0.22-0.32	0.25-0.33	0.29-0.43
Tool steels	102Cr6, 105WCr6, C75W etc	850-1200	250-355	24-38	50-65	0.10-0.16	0.17-0.28	0.21-0.30	0.21-0.32	0.26-0.38
		500-705	150-210	~ 16	50-65	0.10-0.16	0.13-0.21	0.18-0.26	0.20-0.31	0.24-0.35
Grey cast iron	Pearlitic, Ferritic Pearlitic	705-950	210-280	16-29	40-50	0.10-0.16	0.13-0.21	0.18-0.26	0.20-0.31	0.24-0.35
		500-700	150-210	~ 16	100-125	0.15-0.26	0.20-0.37	0.27-0.42	0.36-0.51	0.40-0.55
Cast iron nodular	Ferritic Pearlitic	700-850	210-250	16-24	75-95	0.11-0.20	0.16-0.29	0.20-0.30	0.25-0.35	0.29-0.40
		540	165	4	95-120	0.13-0.22	0.17-0.31	0.21-0.32	0.28-0.40	0.32-0.44
Malleable cast iron	Ferritic Pearlitic	850	250	24	75-95	0.11-0.20	0.14-0.26	0.19-0.29	0.25-0.35	0.29-0.40
		450	125		100-125	0.13-0.22	0.17-0.31	0.21-0.32	0.28-0.40	0.32-0.44
Aluminum alloys (Wrought)	not heat treatable hardened	780	230	21	75-95	0.11-0.18	0.14-0.26	0.19-0.29	0.25-0.35	0.29-0.40
			65		250-330	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55	0.50-0.60
Aluminum alloys (Cast)	≤12% Si, not heat treatable ≤12% Si, hardened >12% Si, not heat treatable		150		200-250	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55	0.50-0.60
			75		200-50	0.25-0.35	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55
			90		150-220	0.25-0.35	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55
Copper alloys	Free machining(Pb>1%) Brass Electrolytic copper		130		100-200	0.20-0.30	0.25-0.35	0.30-0.40	0.35-0.45	0.40-0.50
			110		115-145	0.16-0.28	0.23-0.36	0.29-0.36	0.37-0.45	0.41-0.48
			90		145-185	0.17-0.29	0.24-0.37	0.30-0.38	0.38-0.46	0.42-0.49
Non ferrous material	Duroplastics Fiber plastics Hard rubber		100		95-120	0.06-0.09	0.09-0.13	0.11-0.13	0.15-0.18	0.19-0.22
Stainless steels	Austenitic and Austenitic/ferritic									
		450-610	135-185	~ 9	45-60	0.10-0.16	0.12-0.18	0.14-0.20	0.15-0.26	0.18-0.28
		610-930	185-257	9-28	30-45	0.08-0.14	0.09-0.15	0.10-0.16	0.12-0.20	0.14-0.22

*Formulas :

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

$$\begin{aligned} \text{M/min} &= \frac{(\text{RPM}) \cdot \pi \cdot (\text{DIA.})}{1000} \\ \text{mm/min} &= \frac{(\text{RPM}) \cdot (\text{mm/rev})}{1} \\ \text{RPM} &= \frac{(\text{M/min}) \cdot 1000}{(\pi) \cdot (\text{DIA.})} \end{aligned}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

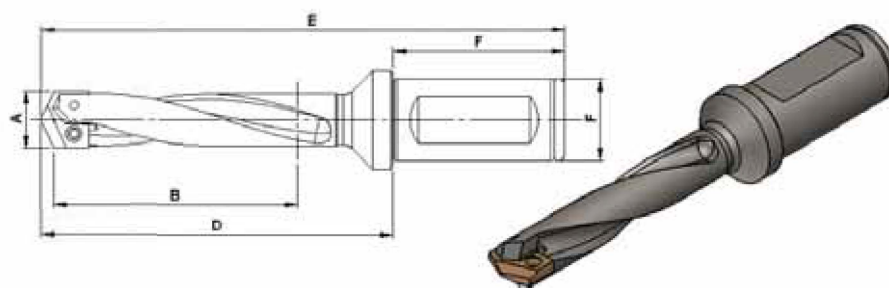
Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

Recommend you to reduce the feed rate to 85%,70% when you use 5xD,7xD holders.

For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140 point angle to min. 2/3 cutting diameter.

The use of the centering pre-hole improves hole location , roundness and surface finish.

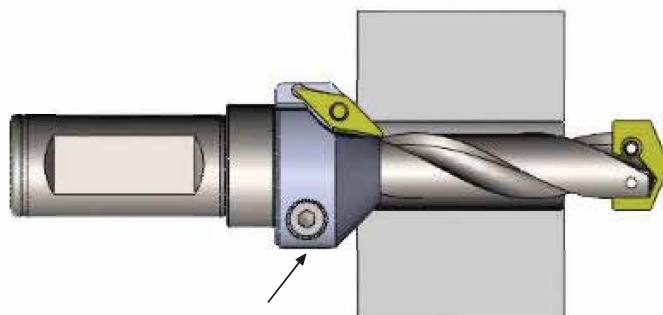
Spade Drill Holders



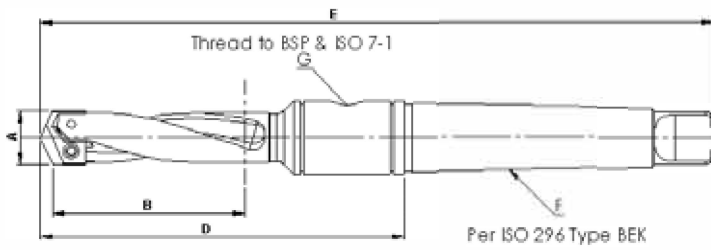
Spiral Flute

- Weldon Shank (Metric)

Series	Edp No	Drill Insert Range	Max. Drill Depth	Ref. Length	Overall Length	Shank		Screw
						Dia	Length	
		A	B	D	E	F		
Y	HYG 3DH 0095 0110 V20	9,5~11,0	33	58,5	100,4	20	41.9	J7Y001
	HYG 5DH 0095 0110 V20		55	80,5	122,4			
Z	HYG 3DH 0115 0125 V20	11,5~12,5	37.5	67,5	109,4	20	41.9	J07Z0110
	HYG 5DH 0115 0125 V20		62.5	92,5	134,4			
0	HYG 3DH 0130 0175 V20	13,0~17,5	52.5	86	127,9	20	41.9	J0800210
	HYG 5DH 0130 0175 V20		87.5	120	161,9			
1	HYG 3DH 0180 0240 V25	18,0~24,0	72	103	156,1	25	53.1	J091041
	HYG 5DH 0180 0240 V25		120	151	204,1			
	HYG 8DH 0180 0240 V25		192	223	276,1			
	HYG 10DH 0180 0240 V25		240	271	324,1			
2	HYG 3DH 0250 0350 V32	25,0~35,0	105	143	200,9	32	57.9	JB2061
	HYG 5DH 0250 0350 V32		175	213	270,9			
	HYG 8DH 0250 0350 V32		280	318	375,9			
	HYG 10DH 0250 0350 V32		350	388	445,9			
3	HYG 3DH 0360 0470 V40	36,0~47,0	141	186	256,1	40	70.1	JC3081
	HYG 5DH 0360 0470 V40		235	280	350,1			
	HYG 8DH 0360 0470 V40		376	421	491,1			
	HYG 10DH 0360 0470 V40		470	515	585,1			
4	HYG 3DH 0480 0650 V40	48,0~65,0	195	245	315,1	40	70.1	JC3081
	HYG 5DH 0480 0650 V40		325	375	445,1			
	HYG 8DH 0480 0650 V40		520	570	640,1			

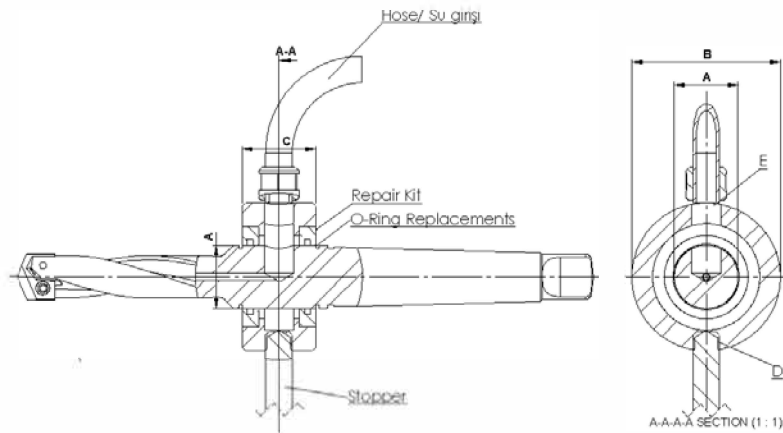


Spade Drill Holders



Spiral Flute (Metric)

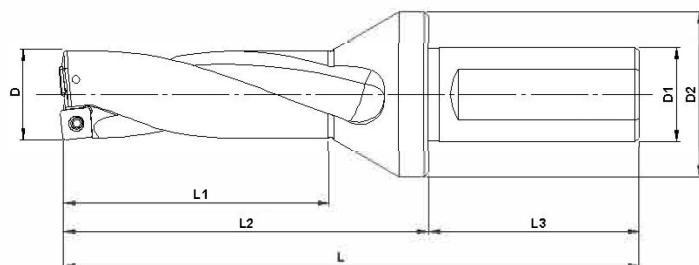
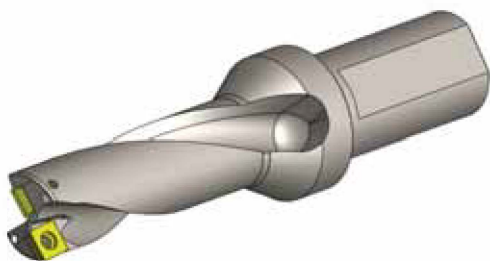
Series	Edp No	Drill Insert Range	Max. Drill Depth	Ref. Length	Overall Length	MT	Pipe	Repair Kit RCA	Screw
		A	B	D	E	F	G	H	
Y	HYG 3DH 0095 0110 MT2	9,5~11,0	33	85	165	#2	1/8"	2T-2SRM	J7Y001
	HYG 5DH 0095 0110 MT2		55	107	187				
Z	HYG 3DH 0115 0125 MT2	11,5~12,5	37,5	83,5	163,5	#2	1/8"	2T-2SRM	J07Z0110
	HYG 5DH 0115 0125 MT2		62,5	108,5	188,5				
0	HYG 3DH 0130 0175 MT2	13,0~17,5	52,5	103,5	183,5	#2	1/8"	2T-2SRM	J0800210
	HYG 5DH 0130 0175 MT2		87,5	138,5	218,5				
1	HYG 3DH 0180 0240 MT3	18,0~24,0	72	131	230	#3	1/8"	2T-3SRM	J091041
	HYG 5DH 0180 0240 MT3		120	179	278				
	HYG 8DH 0180 0240 MT3		192	251	350				
2	HYG 3DH 0250 0350 MT4	25,0~35,0	105	170	294	#4	1/8"	2T-3SRM	JB2061
	HYG 5DH 0250 0350 MT4		175	240	364				
	HYG 8DH 0250 0350 MT4		280	345	469				
3	HYG 3DH 0360 0470 MT4	36,0~47,0	141	209	333,5	#4	1/4"	2T-4SRM	JC3081
	HYG 5DH 0360 0470 MT4		235	303,5	427,5				
4	HYG 3DH 0480 0650 MT5	48,0~65,0	195	275	431	#5	1/4"	2T-5SRM	JC3081
	HYG 5DH 0480 0650 MT5		325	405	561				
5	HYG 3DH 0640 0880 MT5	64,0~88,0	264	354	510	#5	1/2"	2T-6SRM	JD5091
	HYG 5DH 0640 0880 MT5		440	530	686				
7	HYG 3DH 0900 1140 MT5	90,0~114,0	342	442	598	#5	1/2"	2T-6SRM	JD5091
	HYG 5DH 0900 1140 MT5		570	670	829				



External Coolant Supplier

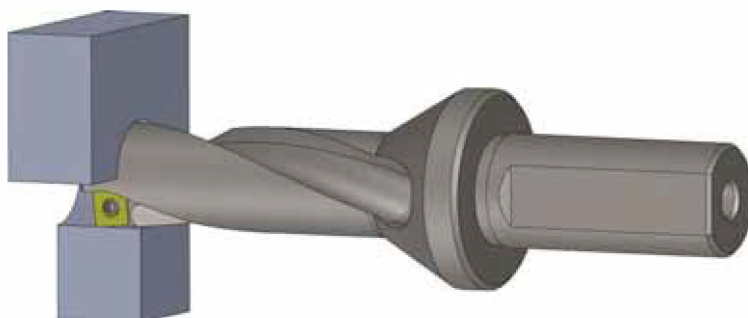
Edp No	LD.	O.D.	Length	Thread For Driving Rod	Pipe Tap
	A	B	C	D	E
2T-2SRM	19.05	44.45	22.23	M8x1.25	1/8"
2T-3SRM	25.4	53.97	28.57	M8x1.25	1/8"
2T-4SRM	31.75	63.5	34.92	M10x1.5	1/4"
2T-5SRM	44.45	76.2	34.92	M10x1.5	1/4"
2T-6SRM	57.15	95.27	44.45	M12x1.75	1/2"

T Drill Type - Indexable Drills

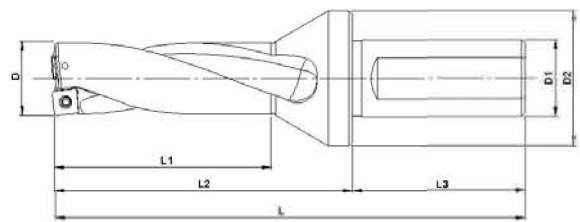
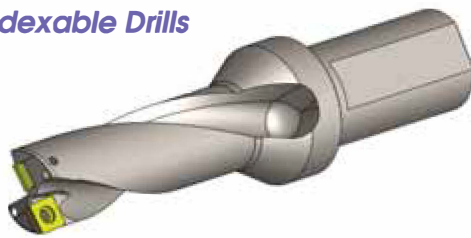


Drilling depth: 2 x Diameter

Order Code	D	D1	D2	L3	L2	L1	L	Insert	Screw	Torx Key	Torque (N.cm)
HTDR2160-25T2-06	16.0	25	32	56	52	32	108	SPMG 060204	HSV 2205 (TS 220521/HG)	T 07	80-100
HTDR2170-25T2-06	17.0				54	34	110				
HTDR2180-25T2-06	18.0				57	36	113				
HTDR2190-25T2-06	19.0				59	38	115				
HTDR2200-25T2-06	20.0				63	40	119				
HTDR2210-25T2-06	21.0	25	32	56	65	42	121	SPMG 07T308	HSV 2507 (TS 250641)	T 08	100-120
HTDR2220-25T2-07	22.0				67	44	123				
HTDR2230-25T2-07	23.0				71	46	127				
HTDR2240-25T2-07	24.0				74	48	130				
HTDR2250-25T2-07	25.0				77	50	133				
HTDR2260-25T2-07	26.0	32	44	60	79	52	135	SPMG090408	HSV3509 (TS 350881) (T10)	T15	300-340
HTDR2270-25T2-07	27.0				81	54	137				
HTDR2280-32T2-09	28.0				84	56	144				
HTDR2290-32T2-09	29.0				86	58	146				
HTDR2300-32T2-09	30.0				91	60	151				
HTDR2310-32T2-09	31.0	32	54	60	94	62	154	SPMG110408	HSV 4010 (TS 400931)	T15	450-520
HTDR2320-32T2-09	32.0				96	64	156				
HTDR2330-32T2-09	33.0				99	66	159				
HTDR2340-32T2-11	34.0				101	68	161				
HTDR2350-32T2-11	35.0				104	70	164				
HTDR2360-32T2-11	36.0	40	58	70	107	72	167	SPMG 140512	HSV 5010 (S 0500901)	T 20	800-1000
HTDR2370-40T2-11	37.0				110	74	180				
HTDR2380-40T2-11	38.0				113	76	183				
HTDR2390-40T2-11	39.0				115	78	185				
HTDR2400-40T2-11	40.0				118	80	188				
HTDR2410-40T2-11	41.0	40	58	70	121	82	191	SPMG 140512	HSV 5010 (S 0500901)	T 20	800-1000
HTDR2420-40T2-14	42.0				123	84	193				
HTDR2430-40T2-14	43.0				126	86	196				
HTDR2440-40T2-14	44.0				128	88	198				
HTDR2450-40T2-14	45.0				132	90	202				
HTDR2460-40T2-14	46.0	40	58	70	135	92	205	SPMG 140512	HSV 5010 (S 0500901)	T 20	800-1000
HTDR2470-40T2-14	47.0				137	94	207				
HTDR2480-40T2-14	48.0				140	96	210				
HTDR2490-40T2-14	49.0				142	98	212				
HTDR2500-40T2-14	50.0				145	100	215				



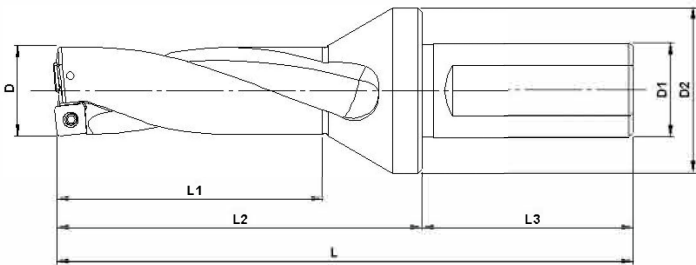
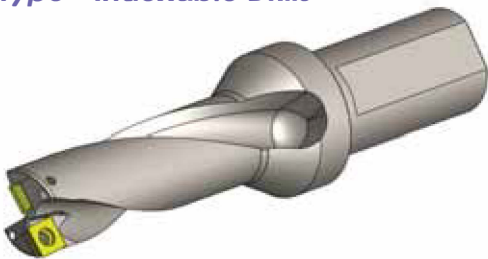
T Drill Type - Indexable Drills



Drilling depth: 3 x Diameter

Order Code	D	D1	D2	L3	L2	L1	L	Insert	Screw	Torx Key	Torque (N.cm)					
HTDR3155-25T2-06	15.5	25	32	56	68	48	124	SPMG 060204	HSV 2205 (TS 22052 1/HG)	T07	80-100					
HTDR3160-25T2-06	16.0				68	48	124									
HTDR3165-25T2-06	16.5				71	51	127									
HTDR3170-25T2-06	17.0				71	51	127									
HTDR3175-25T2-06	17.5				75	54	131									
HTDR3180-25T2-06	18.0				75	54	131									
HTDR3185-25T2-06	18.5				78	57	134									
HTDR3190-25T2-06	19.0				78	57	134									
HTDR3195-25T2-06	19.5				83	60	139									
HTDR3200-25T2-06	20.0				83	60	139									
HTDR3205-25T2-06	20.5				86	63	142									
HTDR3210-25T2-06	21.0				86	63	142									
HTDR3215-25T2-06	21.5				89	66	145									
HTDR3220-25T2-07	22.0	25	32	56	89	66	145	SPMG 07T308	HSV 2507 (TS 25064 1)	T08	100-130					
HTDR3225-25T2-07	22.5		44		94	69	150									
HTDR3230-25T2-07	23.0				94	69	150									
HTDR3235-25T2-07	23.5				98	72	154									
HTDR3240-25T2-07	24.0				98	72	154									
HTDR3245-25T2-07	24.5				102	75	158									
HTDR3250-25T2-07	25.0				102	75	158									
HTDR3255-25T2-07	25.5				105	78	161									
HTDR3260-25T2-07	26.0				105	78	161									
HTDR3265-25T2-07	26.5				108	81	164									
HTDR3270-25T2-07	27.0				108	81	164									
HTDR3275-25T2-07	27.5				112	84	168									
HTDR3280-32T2-09	28.0		32		44	60	112					84	172	SPMG 090408	HSV3509 (TS 35088 1) (T10)	T15??
HTDR3285-32T2-09	28.5	115		87			175									
HTDR3290-32T2-09	29.0	115		87			175									
HTDR3295-32T2-09	29.5	121		90			181									
HTDR3300-32T2-09	30.0	54		54	121		90	181	SPMG 110408	HSV 4010 (TS 40093 1)	T15	450-520				
HTDR3305-32T2-09	30.5				125		93	185								
HTDR3310-32T2-09	31.0				125		93	185								
HTDR3315-32T2-09	31.5				128		96	188								
HTDR3320-32T2-09	32.0				128		96	188								
HTDR3325-32T2-09	32.5				132		99	192								
HTDR3330-32T2-09	33.0				132		99	192								
HTDR3340-32T2-11	34.0				135		102	195								
HTDR3350-32T2-11	35.0	40		58	70		139	105	199	SPMG 140512	HSV 5010 (S 0500900 1)	T 20	800-1000			
HTDR3360-32T2-11	36.0		143			108	203									
HTDR3370-40T2-11	37.0		147			111	217									
HTDR3380-40T2-11	38.0		151			114	221									
HTDR3390-40T2-11	39.0		154			117	224									
HTDR3400-40T2-11	40.0		158			120	228									
HTDR3410-40T2-11	41.0		162			123	232									
HTDR3420-40T2-14	42.0	40	58	70	165	126	235	SPMG 140512	HSV 5010 (S 0500900 1)	T 20	800-1000					
HTDR3430-40T2-14	43.0				169	129	239									
HTDR3440-40T2-14	44.0				172	132	242									
HTDR3450-40T2-14	45.0				177	135	247									
HTDR3460-40T2-14	46.0				181	138	251									
HTDR3470-40T2-14	47.0				184	141	254									
HTDR3480-40T2-14	48.0				188	144	258									
HTDR3490-40T2-14	49.0				191	147	261									
HTDR3500-40T2-14	50.0				195	150	265									

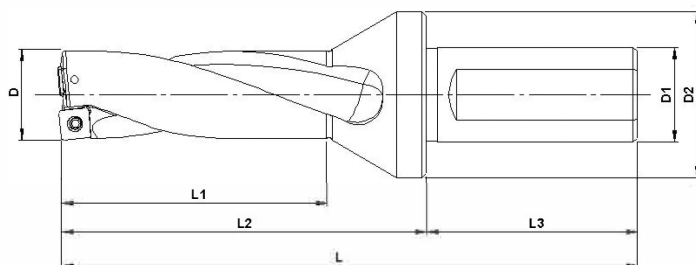
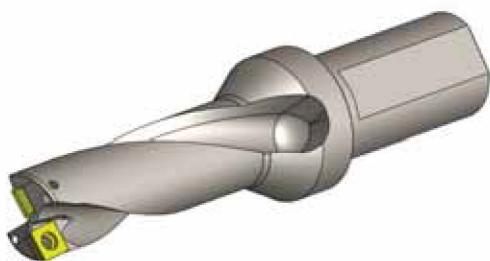
T Drill Type - Indexable Drills



Drilling depth: 4 x Diameter

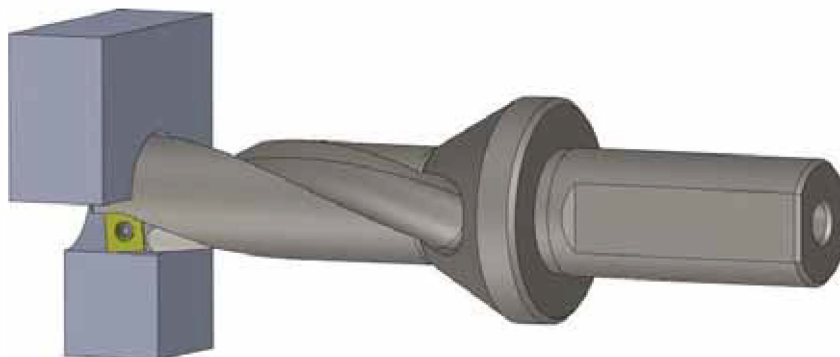
Order Code	D	D1	D2	L3	L2	L1	L	Insert	Screw	Torx Key	Torque (N.cm)
HTDR4160-25T2-06	16.0	25	32	56	84	64	140	SPMG 060204	HSV 2205 (TS 22052 I/HG)	T07	80-100
HTDR4170-25T2-06	17.0				88	68	144				
HTDR4175-25T2-06	17.5				93	72	149				
HTDR4180-25T2-06	18.0				93	72	149				
HTDR4185-25T2-06	18.5				97	76	153				
HTDR4190-25T2-06	19.0				97	76	153				
HTDR4195-25T2-06	19.5				103	80	159				
HTDR4200-25T2-06	20.0				103	80	159				
HTDR4205-25T2-06	20.5				107	84	163				
HTDR4210-25T2-06	21.0				107	84	163				
HTDR4215-25T2-06	21.5				111	88	167				
HTDR4220-25T2-07	22.0	25	32	56	111	88	167	SPMG 07T308	HSV 2507 (TS 25064 I)	T08	100-130
HTDR4225-25T2-07	22.5				117	92	173				
HTDR4230-25T2-07	23.0				117	92	173				
HTDR4235-25T2-07	23.5				122	96	178				
HTDR4240-25T2-07	24.0				122	96	178				
HTDR4245-25T2-07	24.5				127	100	183				
HTDR4250-25T2-07	25.0				127	100	183				
HTDR4255-25T2-07	25.5				131	104	187				
HTDR4260-25T2-07	26.0				131	104	187				
HTDR4265-25T2-07	26.5				135	108	191				
HTDR4270-25T2-07	27.0				135	108	191				
HTDR4275-25T2-07	27.5				140	112	196				
HTDR4280-32T2-09	28.0	32	45	60	140	112	200	SPMG 090408	HSV3509 (TS 35088 I) (T10)	T15	300-340
HTDR4285-32T2-09	28.5				144	116	204				
HTDR4290-32T2-09	29.0				144	116	204				
HTDR4295-32T2-09	29.5				151	120	211				
HTDR4300-32T2-09	30.0				151	120	211				
HTDR4305-32T2-09	30.5				156	124	216				
HTDR4310-32T2-09	31.0				156	124	216				
HTDR4315-32T2-09	31.5				160	128	220				
HTDR4320-32T2-09	32.0				160	128	220				
HTDR4325-32T2-09	32.5				165	132	225				
HTDR4330-32T2-09	33.0				165	132	225				
HTDR4335-32T2-11	33.5	32	55	60	169	136	229	SPMG 110408	HSV 4010 (TS 40093 I)	T15	450-520
HTDR4340-32T2-11	34.0				169	136	229				
HTDR4350-32T2-11	35.0				174	140	234				
HTDR4360-32T2-11	36.0				179	144	239				
HTDR4370-40T2-11	37.0				184	148	244				
HTDR4380-40T2-11	38.0				189	152	259				
HTDR4390-40T2-11	39.0				193	156	263				
HTDR4400-40T2-11	40.0				198	160	268				
HTDR4410-40T2-11	41.0				203	164	273				
HTDR4420-40T2-14	42.0				207	168	277				
HTDR4430-40T2-14	43.0				212	172	282				
HTDR4440-40T2-14	44.0				216	176	286				
HTDR4450-40T2-14	45.0	40	60	70	222	180	292	SPMG140512	HSV 5010 (S 050090 I)	T20	800-1000
HTDR4460-40T2-14	46.0				227	184	297				
HTDR4470-40T2-14	47.0				231	188	301				
HTDR4480-40T2-14	48.0				236	192	306				
HTDR4490-40T2-14	49.0				240	196	310				
HTDR4500-40T2-14	50.0				245	200	315				

T Drill Type - Indexable Drills

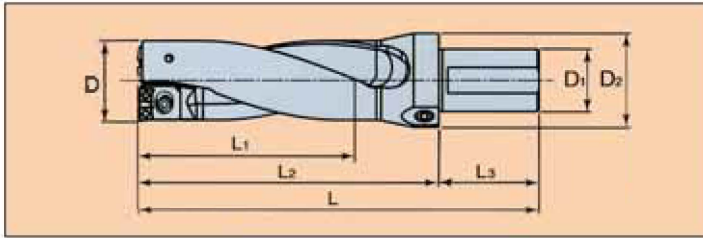


Drilling depth: 5 x Diameter

Order Code	D	D1	D2	L3	L2	L1	L	Insert	Screw	Torx Key	Torque (N.cm)
HTDR5160-25T2-06	16.0	25	32	56	100	80	156	SPMG 060204	HSV 2205 (TS 220521/HG)	T07	80-100
HTDR5170-25T2-06	17.0				105	85	161				
HTDR5180-25T2-06	18.0				111	90	167				
HTDR5190-25T2-06	19.0				116	95	172				
HTDR5200-25T2-06	20.0				123	100	179				
HTDR5210-25T2-06	21.0				128	105	184				
HTDR5220-25T2-07	22.0	25	32	56	133	110	189	SPMG 07T308	HSV 2507 (TS 250641)	T08	100-130
HTDR5230-32T2-07	23.0	32	44	60	140	115	200				
HTDR5240-32T2-07	24.0				146	120	206				
HTDR5250-32T2-07	25.0				152	125	212				
HTDR5260-32T2-07	26.0				157	130	217				
HTDR5270-32T2-07	27.0				162	135	222				
HTDR5280-32T2-09	28.0	32	44	60	168	140	228	SPMG 090408	HSV3509 (TS 350881) (T10)	T15	300-340
HTDR5290-32T2-09	29.0				173	145	233				
HTDR5300-32T2-09	30.0				181	150	241				
HTDR5310-32T2-09	31.0		54		187	155	247				
HTDR5320-32T2-09	32.0				192	160	252				
HTDR5330-32T2-09	33.0				198	165	258				
HTDR5340-40T2-11	34.0	40	54	70	203	170	273	SPMG 110408	HSV 4010 (TS 400931)	T15	450-520
HTDR5350-40T2-11	35.0				209	175	279				
HTDR5360-40T2-11	36.0				215	180	285				
HTDR5370-40T2-11	37.0				221	185	291				
HTDR5380-40T2-11	38.0				227	190	297				
HTDR5390-40T2-11	39.0				232	195	302				
HTDR5400-40T2-11	40.0				238	200	308				



INDEXABLE DRILL TYPE



HTDR 25□□-□□-50T2-□□CA



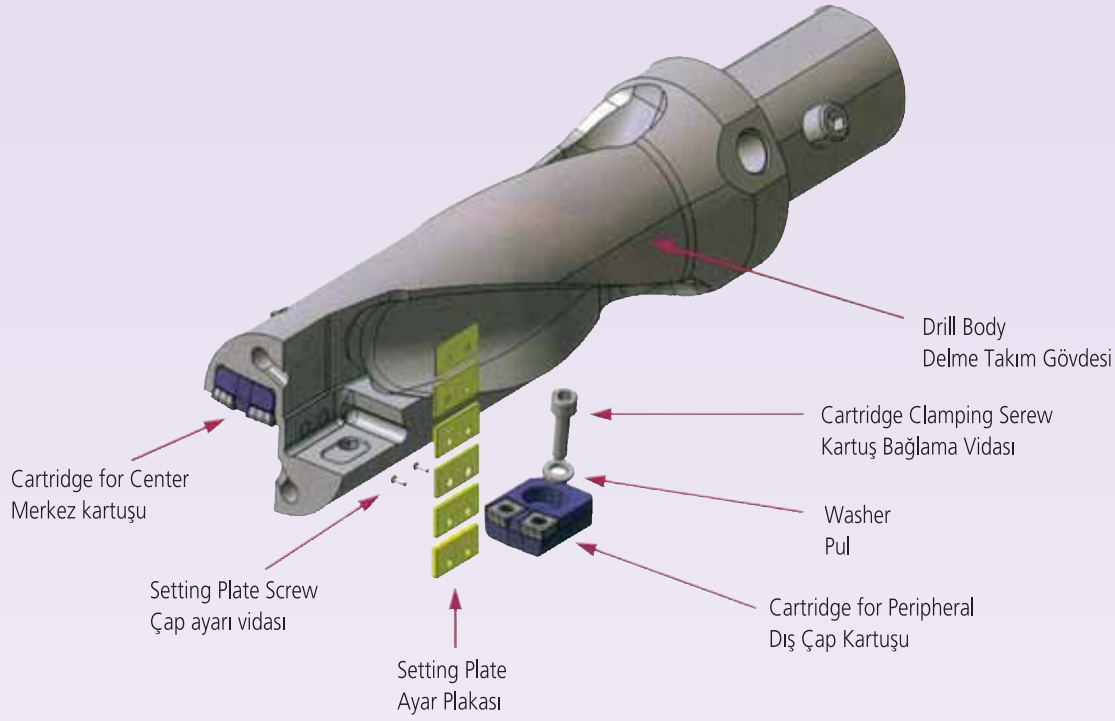
• Drilling depth: 2.5x Diameter

DESIGNATION	DIMENSION (mm) ÖLÇÜLER							INSERT		SPARE PARTS				TORQUE (N.cm)
	D	D1	D2	L1	L2	L3	L	INSERT	SCREW	CARTRIDGE FOR PERIPHERAL	CARTRIDGE FOR CENTER	SETTING PLATE	SETTING PLATE SCREW	
HTDR 2551-53-50T2-07CA	51	50	75	133	170	80	250	SPMG 07T308 DG/DA/DK	HSV 2507 TS25064 I	HTDR 07CA-P1	HTDR 07CA-C1	HTDP-0701 HTDP-0702	TS 20043I /HG-P	100-130
	52				170	80	250							
	53				170	80	250							
HTDR 2554-56-50T2-07CA	54	50	75	140	180	80	260	SPMG 07T308 DG/DA/DK	HSV 2507 TS25064 I	HTDR 07CA-P2	HTDR 07CA-C2	HTDP-0701 HTDP-0702	TS 20043I /HG-P	100-130
	55				180	80	260							
	56				180	80	260							
HTDR 2557-62-50T2-09CA	57	50	75	155	201	80	281	SPMG 090408 DG/DA/DK	HSV 3509 TS35088 I T10	HTDR 09CA-P1	HTDR 09CA-C1	HTDP-0901 HTDP-0902 HTDP-0903 HTDP-0904 HTDP-0905	SO 30055I	300-340
	58				201	80	281							
	59				201	80	281							
	60				201	80	281							
	61				201	80	281							
HTDR 2563-66-50T2-09CA	62				201	80	281							
	63	50	75	165	215	80	295	SPMG 090408 DG/DA/DK	HSV 3509 TS35088 I T10	HTDR 09CA-P2	HTDR 09CA-C2	HTDP-0901 HTDP-0902 HTDP-0903	SO 30055I	300-340
	64				215	80	295							
	65				215	80	295							
	66				215	80	295							
HTDR 2567-73-50T2-11CA	67	50	75	183	240	80	320	SPMG 110408 DG/DA/DK	HSV 4010 TS40093 I	HTDR 11CA-P1	HTDR 11CA-C1	HTDP-1101 HTDP-1102 HTDP-1103 HTDP-1104 HTDP-1105 HTDP-1106	SO 30055I	450-520
	68				240	80	320							
	69				240	80	320							
	70				240	80	320							
	71				240	80	320							
	72				240	80	320							
HTDR 2574-79-50T2-11CA-1	73				240	80	320							
	74	50	80	200	240	80	320	SPMG 110408 DG/DA/DK	HSV 4010 TS40093 I	HTDR 11CA-1-D	HTDR 11CA-1-M	HTDP-0901 HTDP-0902	SO 30055I	300-340
	79				240	80	320							
HTDR 2580-85-50T2-14CA	80	50	84	213	253	80	333	SPMG 140512 DG/DA/DK	HSV 5010	HTDR 14CA-D	HTDR 14CA-M	HTDP-0901 HTDP-0902	SO 30055I	300-340
	85				253	80	333							
HTDR 2585-90-60T2-14CA-1	85	60	89	225	265	100	345	SPMG 140512 DG/DA/DK	HSV 5010	HTDR 14CA-1-D	HTDR 14CA-1-M	HTDP-0901 HTDP-0902	SO 30055I	300-340
	90				265	100	345							
HTDR 2590-95-60T2-11CA-2	90	60	94	235	275	100	355	SPMG 110408 DG/DA/DK	HSV 4010	HTDR 11CA-2-D	HTDR 11CA-2-M	HTDP-1101 HTDP-1102	SO 30055I	450-520
	95				275	100	355							
HTDR 2596-100-60T2-11CA-3	96	60	99	248	288	100	388	SPMG 110408 DG/DA/DK	HSV 4010	HTDR 11CA-3-D	HTDR 11CA-3-M	HTDP-1101 HTDP-1102	SO 30055I	450-520
	100				288	100	388							
HTDR 25101-105-60T2-11CA-4	101	60	104	260	300	100	400	SPMG 110408 DG/DA/DK	HSV 4010	HTDR 11CA-4-D	HTDR 11CA-4-M	HTDP-1101 HTDP-1102	SO 30055I	450-520
	105				300	100	400							
HTDR 25106-111-60T2-14CA-2	106	60	109	273	413	100	413	SPMG 140512 DG/DA/DK	HSV 5010	HTDR 14CA-2-D	HTDR 14CA-2-M	HTDP-1101 HTDP-1102	SO 30055I	450-520
	111				413	100	413							
HTDR 25112-117-60T2-14CA-3	112	60	114	285	425	100	425	SPMG 140512 DG/DA/DK	HSV 5010	HTDR 14CA-3-D	HTDR 14CA-3-M	HTDP-1101 HTDP-1102	SO 30055I	450-520
	117				425	100	425							

SPARE PARTS FOR CARTRIDGE / KARTUŞ YEDEK PARÇALARI

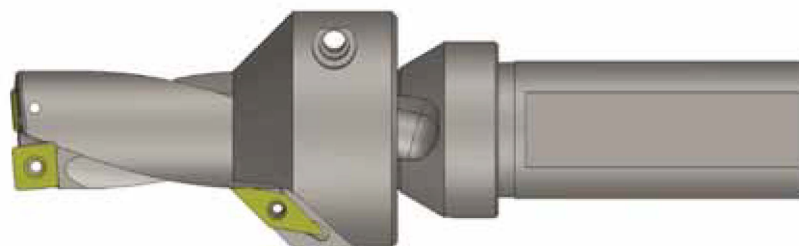
CARTRIDGE	CARTRIDGE CLAMPING SCREW	WASHER	SETTING PLATE SCREW
HTDR 07CA-P1	SH M4X0.7X16	MW 4.3X8	TS 20043I/HG-P
HTDR 07CA-C1			-
HTDR 07CA-P2	SH M4X0.7X16	MW 4.3X8	TS 20043I/HG-P
HTDR 07CA-C2			-
HTDR 09CA-P1	SH M5X0.8X16	MW 5.5X10	SO 30055I
HTDR 09CA-C1			-
HTDR 09CA-P2	SH M5X0.8X16	MW 5.5X10	SO 30055I
HTDR 09CA-C2			-
HTDR 11CA-P1	SH M5X1X16	MW 6.4X12	SO 30055I
HTDR 11CA-C1			-

ASSEMBLY OF T-DRILL IN LARGE DAIMETER



- Ayar Plakaları Bilyası
- Information of setting plates.

THICKNESS (mm)	DIAMETER ADJUSMENT	SETTING PLATE		
		For TDR 07CA	For TDR 09CA	For TDR 11CA
0.5	1.0	HTDP-0701	HTDP-0901	HTDP-1101
1.0	2.0	HTDP-0702	HTDP-0902	HTDP-1102
1.5	3.0	-	HTDP-0903	HTDP-1103
2.0	4.0	-	HTDP-0904	HTDP-1104
2.5	5.0	-	HTDP-0905	HTDP-1105
3.0	6.0	-	-	HTDP-1106

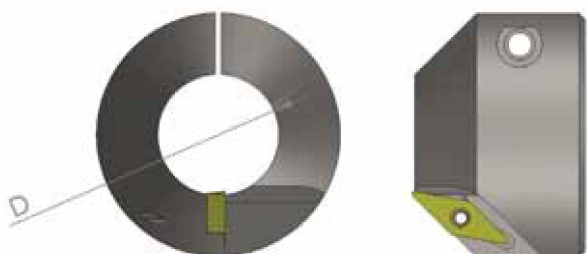


ASSAMBLY EXAMPLE

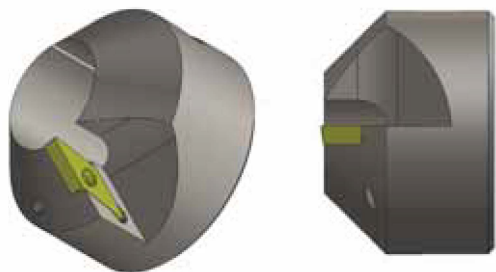


Axial movement way

ADJUSTABLE BACK and FORTH

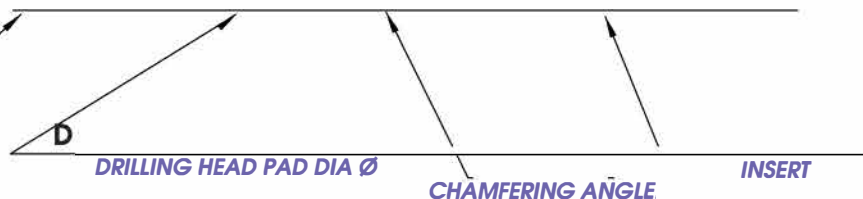


**ADJUSTABLE CHAMFERING RING ADAPTABLE
ON U-DRILL I-DREAM DRILL AND DRILLS**



HD-PR $\emptyset$...-45D VCMT

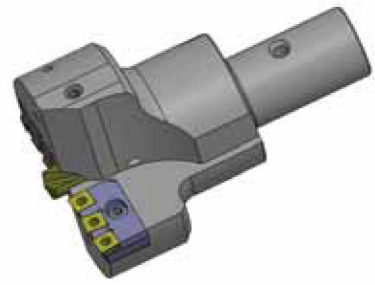
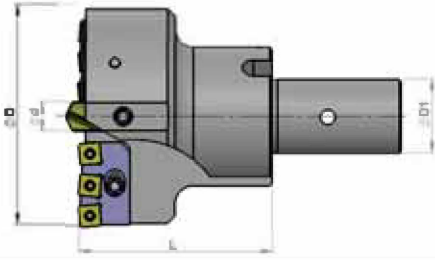
CODE DEFINITION



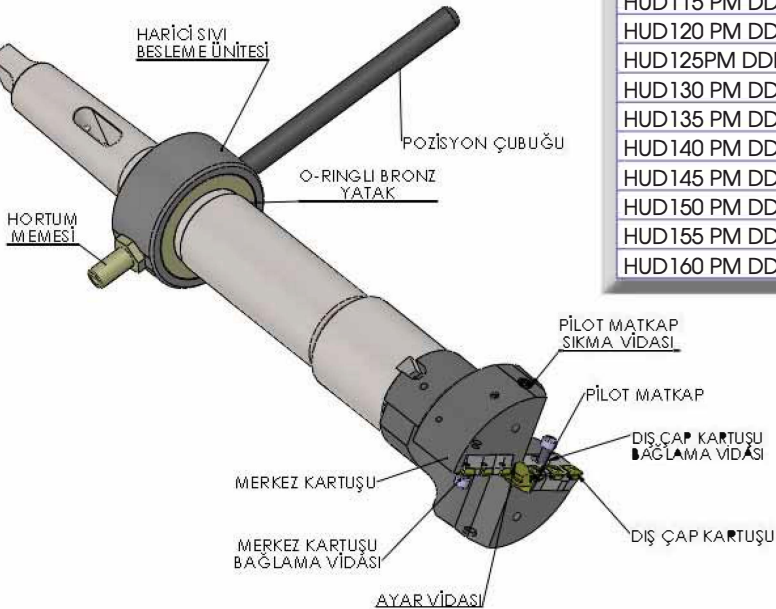
ORDERING EXAMPLE

HD-PR 22-45D VCMT

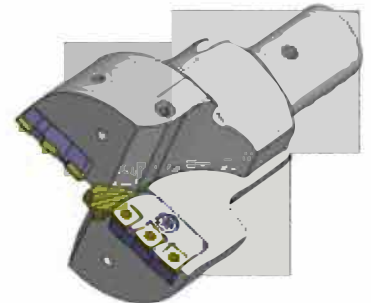
PILOT MATKAPLI DELME KAFASI *Drilling Head With Pilot Drill*



Order Code	D	d	D1	L	Diam. Cartridge	Center Cartridge	Cartridge Screw	Allen Allen Key	Allen Key Pilot Screw	Allen Allen Key
HUD 70PM-DK	70	16	32	100	HUD70 PM DDK	HUD70 PM MDK	M6X20 İMB	HA 5	M10X20 SETSKUR	HA 5
HUD 75PM-DK	75				HUD75 PM DDK	HUD75 PM MDK			M10X25 SETSKUR	
HUD 80PM-DK	80				HUD80 PM DDK	HUD80 PM MDK			M10X30 SETSKUR	
HUD 85PM-DK	85				HUD85 PM DDK	HUD85 PM MDK			M12X35 SETSKUR	HA 6
HUD 90PM-DK	90				HUD90 PM DDK	HUD90 PM MDK			M12X40 SETSKUR	
HUD 95PM-DK	95	20	42	105	HUD95 PM DDK	HUD95 PM MDK	M6X30 İMB	HA 5	M12X50 SETSKUR	
HUD 100PM-DK	100				HUD100 PM DDK	HUD100 PM MDK				
HUD 105PM-DK	105				HUD105 PM DDK	HUD105 PM MDK				
HUD 110PM-DK	110				HUD110 PM DDK	HUD110 PM MDK				
HUD 115PM-DK	115				HUD115 PM DDK	HUD115 PM MDK				
HUD 120PM-DK	120	20	50	105	HUD120 PM DDK	HUD120 PM MDK	M6X30 İMB	HA 5		HA 6
HUD 125PM-DK	125				HUD125PM DDK	HUD125PM MDK				
HUD 130PM-DK	130				HUD130 PM DDK	HUD130 PM MDK				
HUD 135PM-DK	135				HUD135 PM DDK	HUD135 PM MDK				
HUD 140PM-DK	140				HUD140 PM DDK	HUD140 PM MDK				
HUD 145PM-DK	145	20	50	105	HUD145 PM DDK	HUD145 PM MDK	M6X30 İMB	HA 5		HA 6
HUD 150PM-DK	150				HUD150 PM DDK	HUD150 PM MDK				
HUD 155PM-DK	155				HUD155 PM DDK	HUD155 PM MDK				
HUD 160PM-DK	160				HUD160 PM DDK	HUD160 PM MDK				



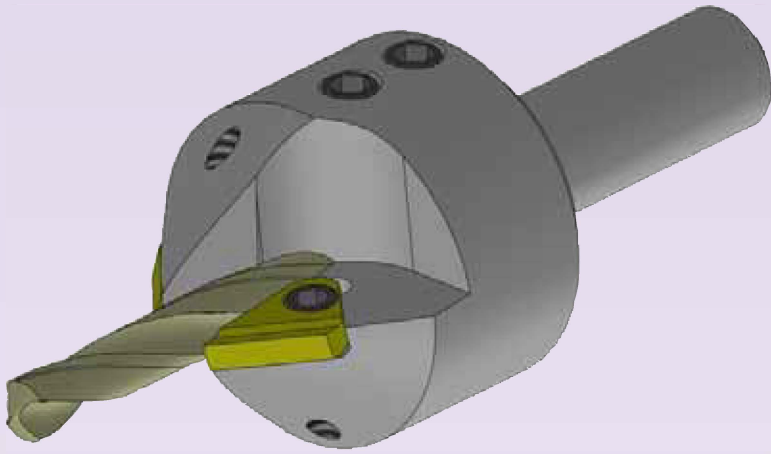
Cartridge Code		Insert	Screw	Torx
Diam. Cartridge	Center Cartridge			
HUD70 PM DDK	HUD70 PM MDK	SPMG 090408	HSV 3509 (TS 35088I/T10)	T15
HUD75 PM DDK	HUD75 PM MDK			
HUD80 PM DDK	HUD80 PM MDK			
HUD85 PM DDK	HUD85 PM MDK			
HUD90 PM DDK	HUD90 PM MDK			
HUD95 PM DDK	HUD95 PM MDK	SPMG 110408	HSV 4010 (TS 40093I)	T15
HUD100 PM DDK	HUD100 PM MDK			
HUD105 PM DDK	HUD105 PM MDK			
HUD110 PM DDK	HUD110 PM MDK			
HUD115 PM DDK	HUD115 PM MDK			
HUD120 PM DDK	HUD120 PM MDK	SPMG 120408	HSV 4512	T15
HUD125PM DDK	HUD125PM MDK			
HUD130 PM DDK	HUD130 PM MDK			
HUD135 PM DDK	HUD135 PM MDK			
HUD140 PM DDK	HUD140 PM MDK			
HUD145 PM DDK	HUD145 PM MDK	SPMG 140512	HSV 5010	T20
HUD150 PM DDK	HUD150 PM MDK			
HUD155 PM DDK	HUD155 PM MDK			
HUD160 PM DDK	HUD160 PM MDK			



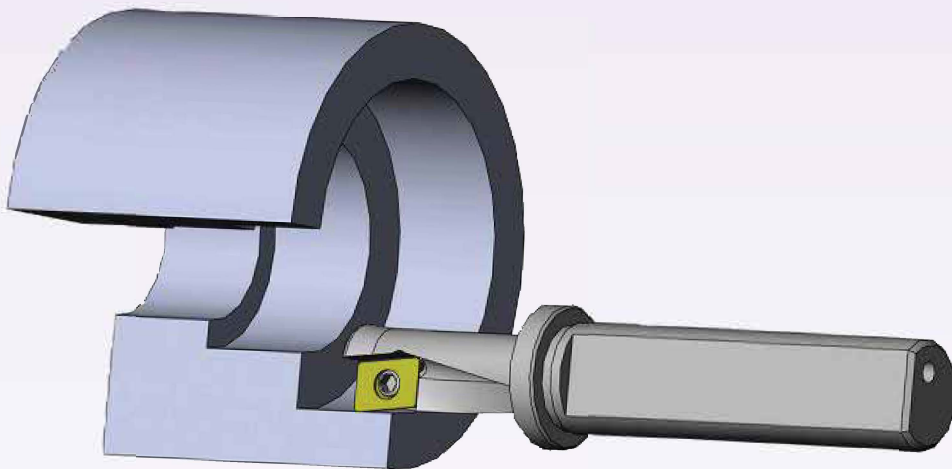
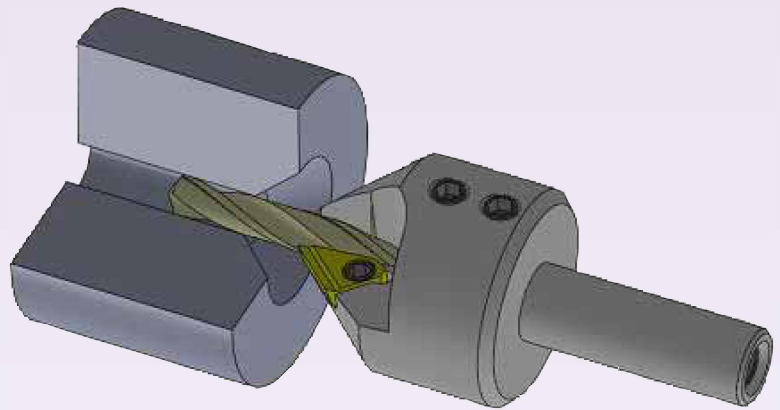
MODULAR DRILLING AND CHAMFERING HOLDER



T-CHAMFERING has two chamfering inserts which provide a balanced and smooth cut during the chamfering operation for blind, as well as trough hole applications. Operation of drilling and chamfering A constant speed and feed can be maintained during both operations, resulting in highly quality of boat the hole and the chamfering. The projection of the drill inserted info the T-CHAMFERING can be a justed for varios drilling depths in blind and trough hole applications for standart 30°-45° and 60° chamfers.



Quick Tools Drilling & Chamfering Line
DRILL AND CHAMFER at once

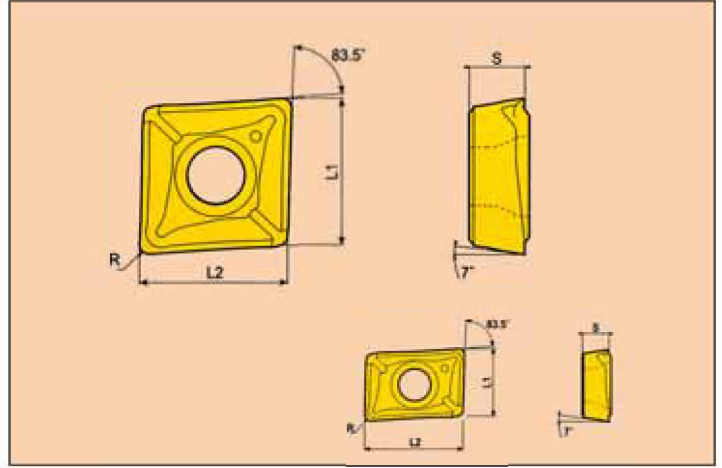


Quick Tools Drilling & Eco Drill

DRILLING AND TURNING INSERT



Right Hand Shown (XCMT 0401)

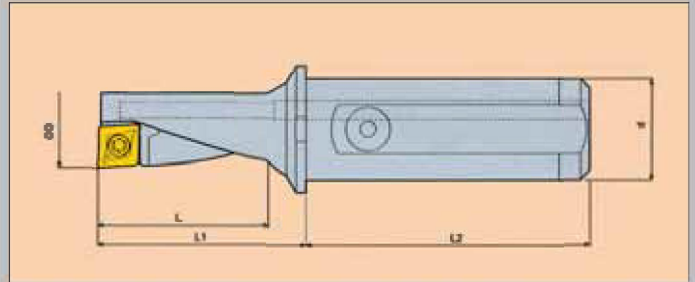


DESIGNATION TANIMLAMA	STOCK STOK		DIMENSION (mm)			
	TT 9030	TT 8020	L1	L2	S	R
XCMT 040104R TC	•	•	4.4	6.4	1.70	0.4
XCMT 040104L TC	•	•	4.4	6.4	1.70	0.4
XCMT 050204 TC	•	•	5.6	5.6	2.10	0.4
XCMT 060204 TC	•	•	6.4	6.4	2.38	0.4
XCMT 070304 TC	•	•	7.5	7.5	3.18	0.4
XCMT 080304 TC	•	•	8.4	8.4	3.18	0.4
XCMT 10T304 TC	•	•	10.5	10.5	3.97	0.4

DRILLING and TURNING



Right Hand Shown



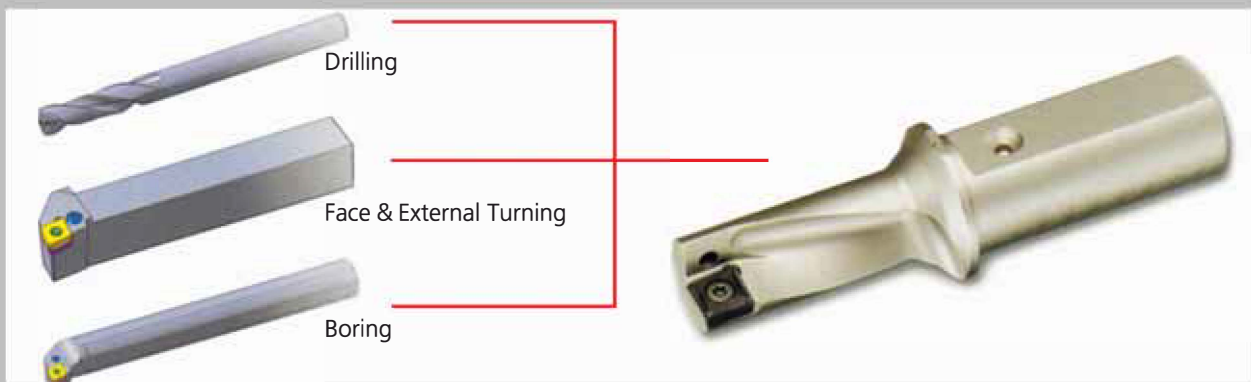
DESIGNATION TANIMLAMA	STOCK		DIMENSION (mm) ÖLÇÜLER					İNŞERT (KESİCİ UÇLAR)	SPARE PARTS (YEDEK PARÇALAR)	
	R	L	ØD	Ød	L	L1	L2		SCREW (VİDA)	WRENCH (ANAHTAR)
HTCAP 08R/L-2.25D			8	10	18	22	38	XCMT 0401 □□	HSV 1803	T 6
HTCAP 10R/L-2.25D			10	12	22.5	27.5	42	XCMT 0502 □□	HSV 2003	T 6
HTCAP 12R/L-2.25D			12	16	27	33	45	XCMT 0602 □□	HSV 2205	T 7
HTCAP 14R/L-2.25D			14	16	31.5	38.5	45	XCMT 0703 □□	HSV 2506	T 8
HTCAP 16R/L-2.25D			16	20	36	44	50	XCMT 0803 □□	HSV 3008	TD 9
HTCAP 20R/L-2.25D			20	25	45	55	56	XCMT 10T3 □□	HSV 3508	TD 10

■ MULTI-FUNCTION SYSTEM

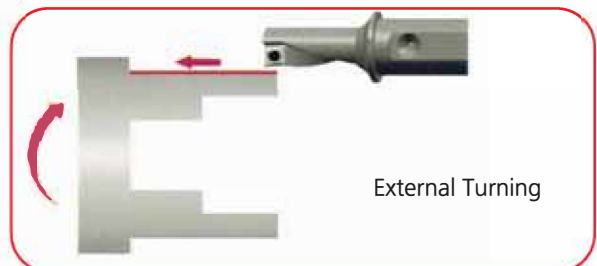
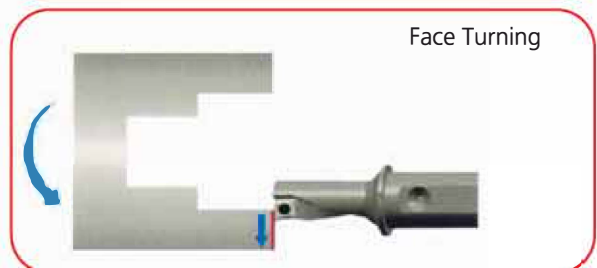
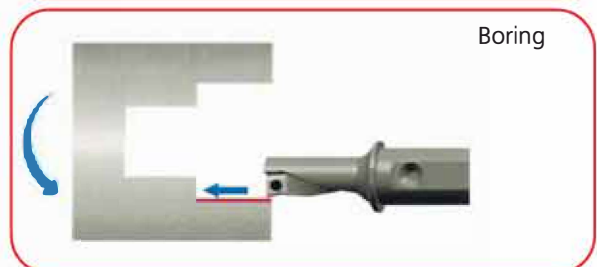
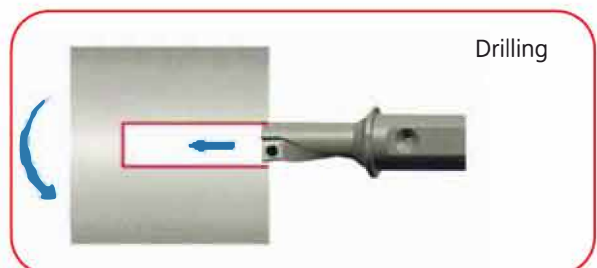
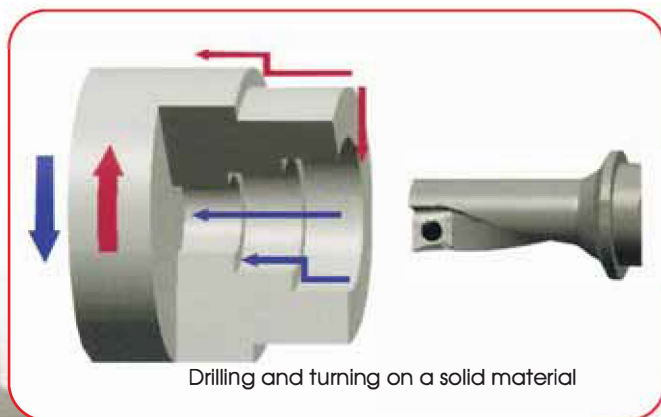
- Turning, boring and drilling with one tool
- Short set-up and cycle time
- Minimized tool positions and reduced tooling cost

■ APPLICATION

- Conventional



■ T-ECO CUT LINE



RECOMMENDED CUTTING CONDITION - T -DRILL

MATERIAL	Vc (m/min)	Feed (mm/rev)								
		Ø12.5-Ø15	Ø15.5-Ø21.5	Ø22-Ø27.5	Ø28-Ø33	Ø34-Ø41	Ø42-Ø50	Ø51-Ø56	Ø57-Ø66	Ø67-Ø73
Low Carbon Steel (-0.3% C)	180-250	0.05-0.08	0.06-0.10	0.06-0.12	0.07-0.13	0.08-0.15	0.08-0.16	0.06-0.12	0.08-0.12	0.08-0.12
Carbon Steel (-0.3% C)	160-220	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25	0.10-0.15	0.12-0.18	0.12-0.18
Low Alloy Steel (-HB300)	150-220	0.06-0.12	0.08-0.14	0.10-0.18	0.12-0.22	0.12-0.23	0.13-0.24	0.08-0.15	0.10-0.18	0.10-0.18
High alloy Steel (-HB300)	130-180	0.06-0.10	0.08-0.15	0.10-0.20	0.12-0.23	0.12-0.24	0.13-0.25	0.08-0.15	0.10-0.15	0.10-0.15
Stainless Steel	170-240	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.19	0.06-0.12	0.08-0.15	0.08-0.15
Cast iron	180-250	0.06-0.12	0.08-0.16	0.12-0.20	0.15-0.25	0.16-0.28	0.18-0.30	0.12-0.20	0.15-0.22	0.15-0.22
Ductile cast iron	130-200	0.06-0.10	0.08-0.15	0.10-0.18	0.12-0.20	0.15-0.23	0.16-0.25	0.10-0.15	0.10-0.20	0.10-0.20
Aluminum	330-380	0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26	0.15-0.22	0.15-0.25	0.15-0.25
Ti Alloy (Ti 6Al)	30-60	0.06-0.10	0.06-0.14	0.08-0.18	0.10-0.22	0.14-0.23	0.15-0.24	0.10-0.15	0.12-0.16	0.12-0.16

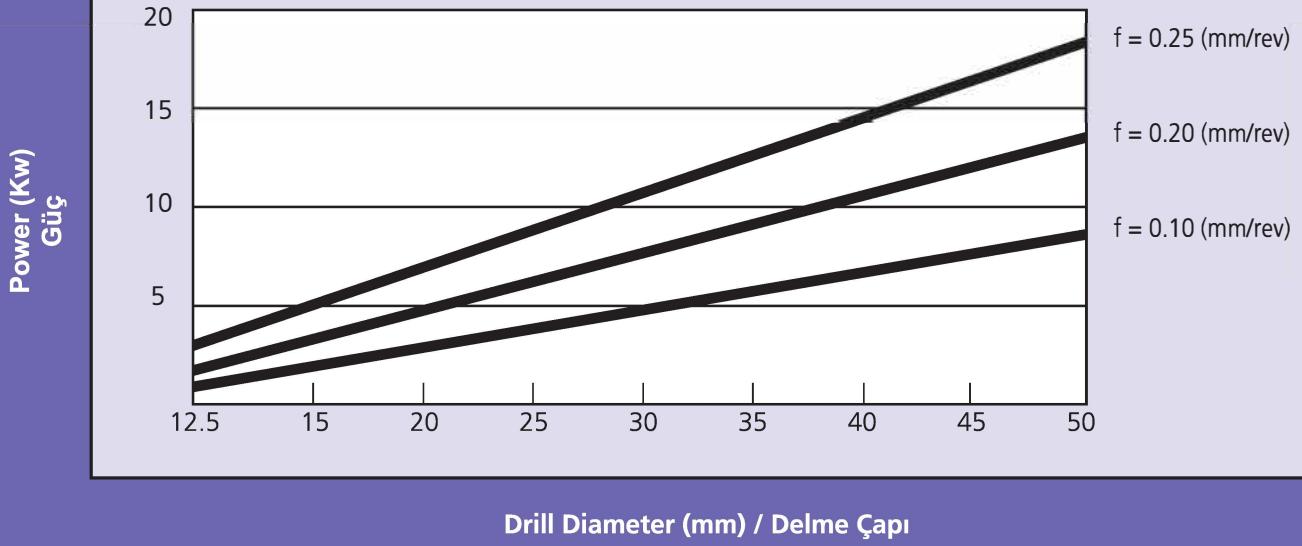
USER GUIDE

Coolant Supply

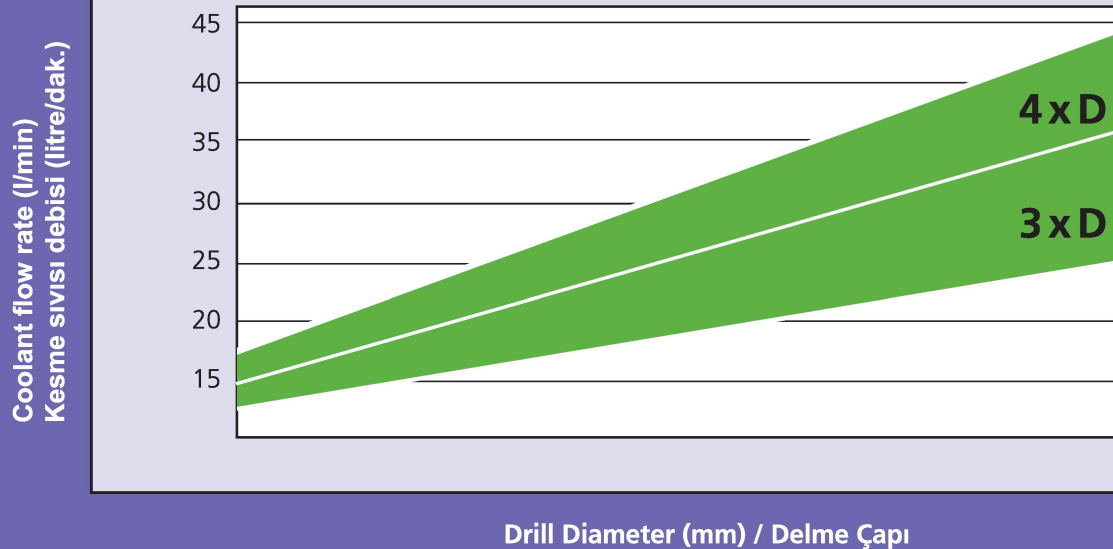
It is important to ensure that the recommended coolant pressure is applied

- Low pressure can cause vibration and reduced tool life
- The recommended minimum pressure is 4kg/cm² for 2xD and 3xD T-Drill and for the 4xD T-Drill the minimum pressure recommended is 5 kg/cm²

Net Power Consumption

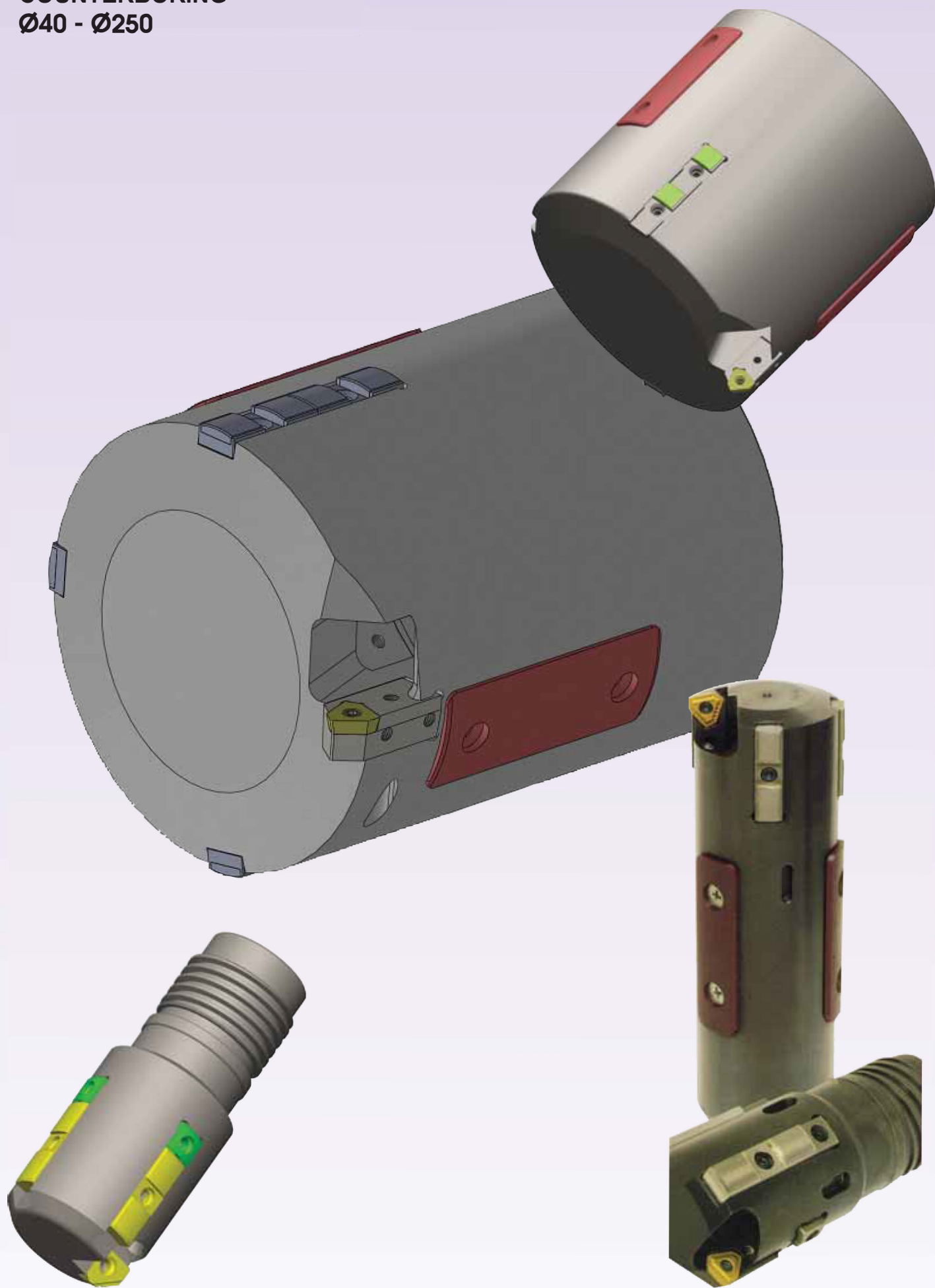


Coolant



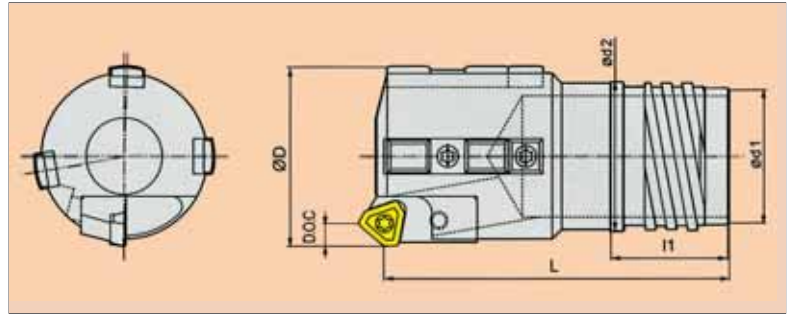
COUNTERBORING

Ø40 - Ø250



DERİN DELİK DELME KAFALARI

SINGLE TUBE SYSTEM

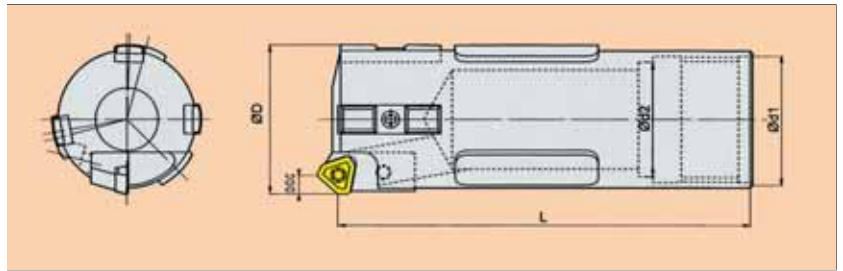


DESIGNATION TANIMLAMA	DIAMETER (mm)	D.O.C (mm)	DIMENSION (mm)			
			L	l1	d1	d2
HTBTA-R-xxx.xxSE4-36	40.00 - 43.00	5	90	30.5	30	33
HTBTA-R-xxx.xxSE4-39	43.01 - 47.00	5	95	30.5	33	36
HTBTA-R-xxx.xxSE4-43	47.01 - 51.70	5	100	30.5	36	39
HTBTA-R-xxx.xxSE4-47	51.71 - 56.20	5/6	100	34.5	39.5	43
HTBTA-R-xxx.xxSE4-51	56.21 - 60.60	6	105	34.5	43.5	47
HTBTA-R-xxx.xxSE4-56	60.61 - 65.00	6	110	34.5	47.5	51
HTBTA-R-xxx.xxSE4-56	65.00 - 66.99	6	150	62	47	52
HTBTA-R-xxx.xxSE4-62	67.00 - 72.99	8	150	62	53	58
HTBTA-R-xxx.xxSE4-68	73.00 - 79.99	8	150	62	58	63
HTBTA-R-xxx.xxSE4-75	80.00 - 86.99	8	180	82	64	70
HTBTA-R-xxx.xxSE4-82	87.00 - 99.99	8	180	82	71	77

NOT : DERİN DELME KAFALARI 250 mm ÇAPA KADAR ÜRETİLİR.

INDEXABLE COUNTERBORING HEAD / INNER SINGLE START THREAD

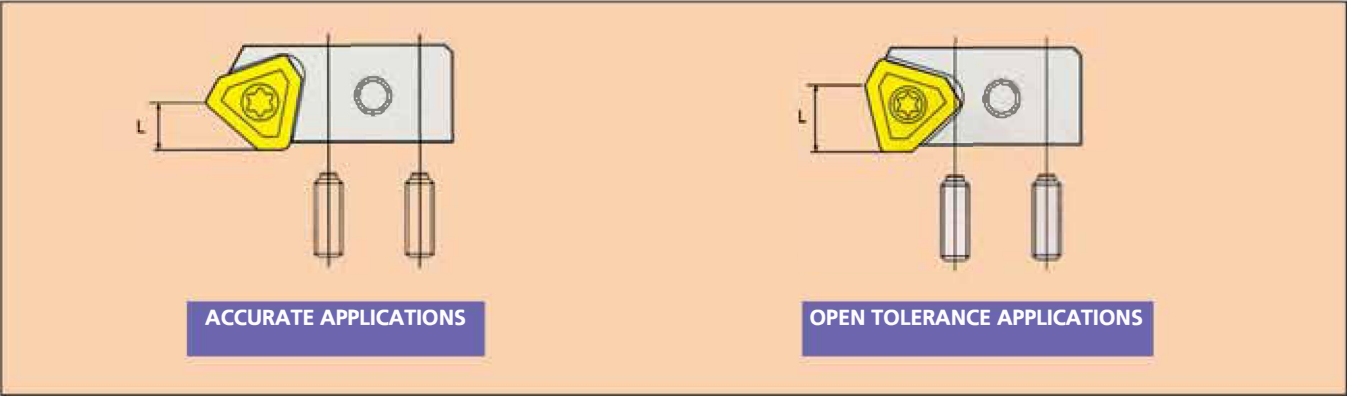
SINGLE TUBE SYSTEM



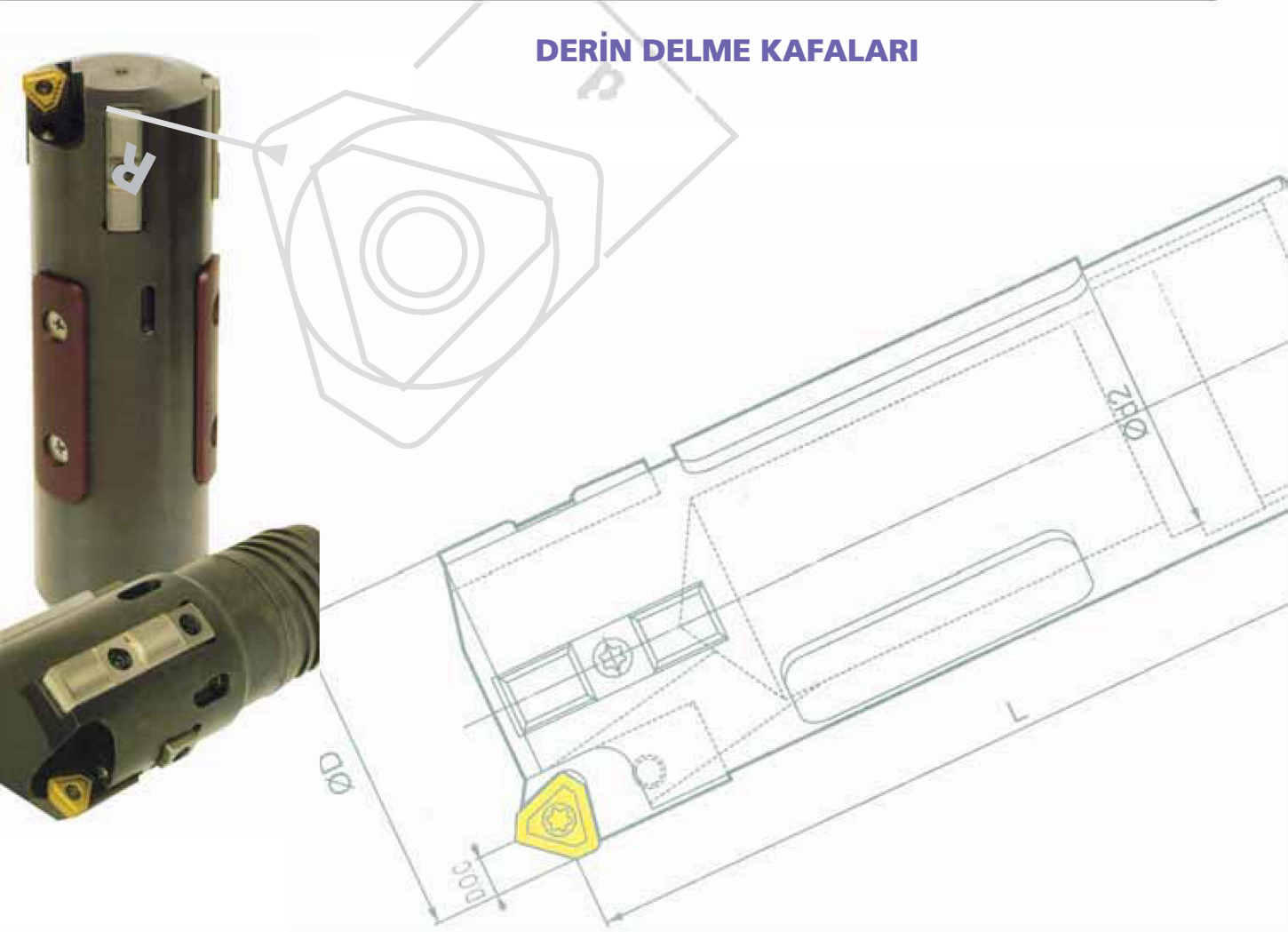
DESIGNATION TANIMLAMA	DIAMETER (mm)	D.O.C (mm)	DIMENSION (mm)			
			L	l1	d1	d2
HTBTA-R-xxx.xxSI1-36	40.00 - 43.99	2.5	135	40	33	30
HTBTA-R-xxx.xxSI1-39	44.00 - 46.99	2.5	135	40	37	34
HTBTA-R-xxx.xxSI1-43	47.00 - 51.99	2.5	145	40	41	37
HTBTA-R-xxx.xxSI1-47	52.00 - 56.99	4	145	40	44	40
HTBTA-R-xxx.xxSI1-51	57.00 - 60.99	4	170	40	49	45
HTBTA-R-xxx.xxSI1-56	61.00 - 67.99	4/5	170	40	53	49
HTBTA-R-xxx.xxSI1-62	68.00 - 74.99	5	170	40	59	54
HTBTA-R-xxx.xxSI1-68	75.00 - 80.99	5	205	70	65	60
HTBTA-R-xxx.xxSI1-75	81.00 - 90.99	5	205	70	71	66
HTBTA-R-xxx.xxSI1-82	91.00 - 98.99	5	215	70	79	74
HTBTA-R-xxx.xxSI1-94	99.00 - 110.99	5	215	70	90	85

NOT : DERİN DELME KAFALARI 250 mm ÇAPA KADAR ÜRETİLİR.

INDEXABLE COUNTERBORING HEAD CARTRIDGE



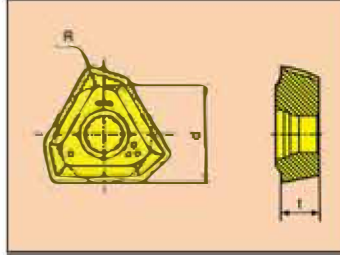
DESIGNATION /		L (mm)	ADJUST SCREW	WRENCH	LOCK SCREW	WRENCH	INSERT
ACCURATE TOLERANCE APPLICATIONS	PERC-P04R	5	AS0004-8	H2	HSV 1803.5RH	H2.5	TPMX1403 LG
	PERC-P32R	6	AS0005-10	H2.5	HSV 1805RH	H3	TPMX1704 LG
	PERC-P43R	8	AS0005-15	H2.5	HSV 1806RH	H4	TPMX2405 LG
OPEN TOLERANCE APPLICATIONS	PERC-402-04	8	AS0004-8	H2	HSV 1803.5RH	H2.5	TPMX1403 LG
	PERC-402-32	9	AS0005-10	H2.5	HSV 1805RH	H3	TPMX1704 LG
	PERC-402-43	13	AS0005-15	H2.5	HSV 1806RH	H4	TPMX2405 LG



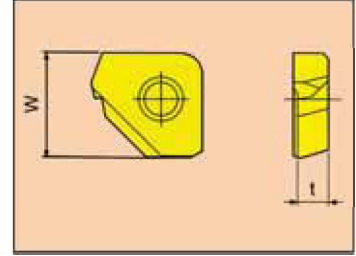
INDEXABLE COUNTERBORING HEAD

INSERT

TPMX

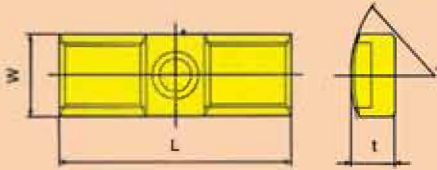


XPMT



DESIGNATION	DIMENSION (mm) ÖLÇÜLER								SCREW
	d	t	R	W	Center	Inner	Outer	TT9030	
TPMX 1403LG	8.45	3.50	0.8	-			○		
TPMX 1704LG	10.30	4.00	0.8	-			○		
TPMX 2405LG	14.20	5.50	1.2	-			○		
XPMT 16002-45	-	2.70	-	9.5			○		

PAD



GUIDE PAD
KLAVUZ YATAK

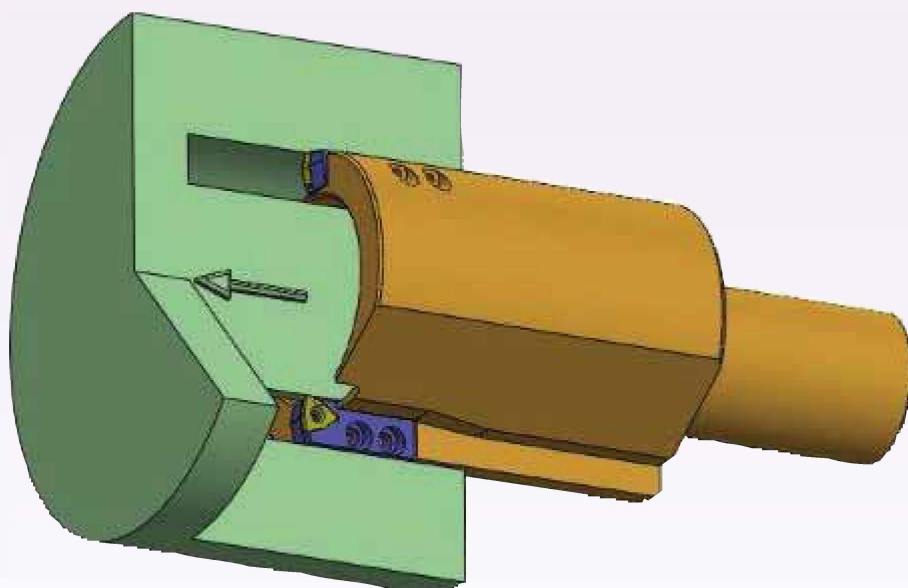
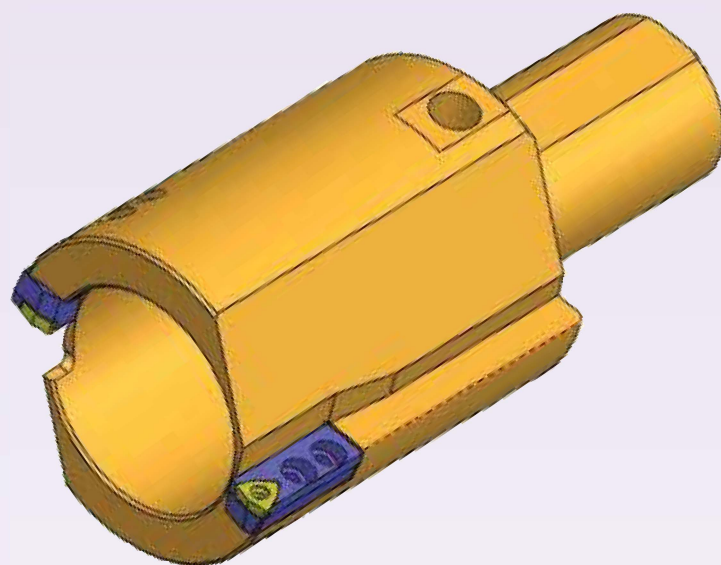
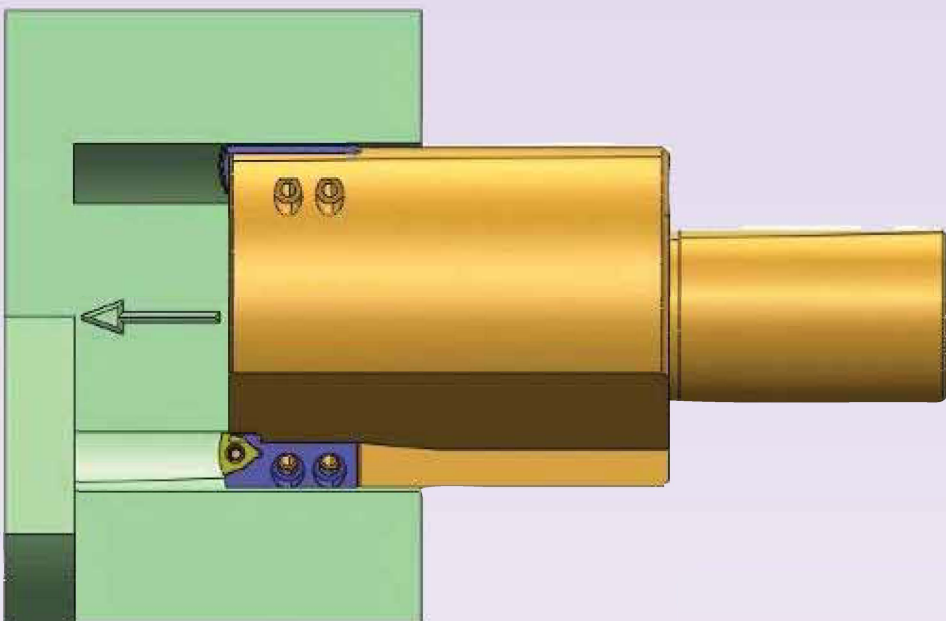


RESIN GUIDE PAD
FİBER KLAVUZ YATAK

TYPE	DESIGNATION	DIMENSION (mm) ÖLÇÜLER				SCREW
		W	t	L	r	
GUIDE PAD	PAD-GC08-120	8	4.4	25	17.5	CSTB3S
	PAD-GC08	8	4.5	25	17.5	CSTB3S
	PAD-GC10	10	6.0	35	20	CSTB4S
	PAD-GC14	14	7.5	40	25	CSTA5S
	PAD-GC18	18	9.0	40	30	LS1206S
RESIN GUIDE PAD	PAD-R10	10	4.0	40	-	LS0902.5-6
	PAD-R12	12	5.0	45	-	LS0903-8
	PAD-R15	15	5.8	50	-	LS0904-10
	PAD-R20	20	7.5	70	-	LS0905-12
	PAD-R30	30	12.5	80	-	LS0906-15
	PAD-R35	35	15.5	100	-	LS0906-15

TREPANNING DRILLS

Ø 70 - 300



TASARRUF EDİLEN PARÇA *SAVED MATERIAL*

DELİNEN PARÇA *DRILLED WORKPIECE*

INTERNAL DRILL CARTRIDGE

KARTUS: TDC 06 T3 TNW

HTRP DRILLING HEAD

SHANK TYPE MORS TAPER

SHANK TYPE :VELDON

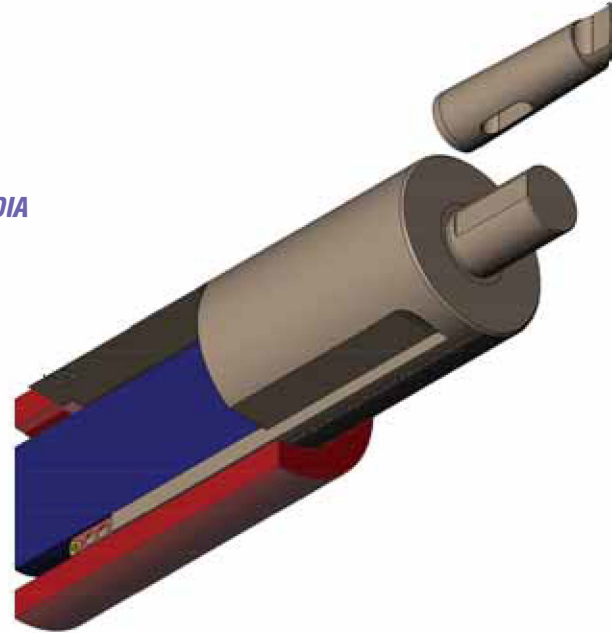
KARTUS: TDC 06 T3 TW

EXTERNAL DRILL CARTRIDGE

TREPANING DRILLS

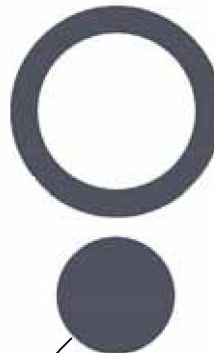
ORDERING EXAMPLE

HTRP	150	-	L350	V50
<u>HTRP</u>	<u>150</u>	-	<u>L150</u>	<u>MK5</u>
<i>DRILLING TOOL TYPE</i>	<i>DRILLING DIA</i>		<i>DELME BOYU</i> <i>DRILLING LENGTH</i>	<i>SHANK DIA</i> <i>SHANK TYPE</i>



You will save part, which is 35 mm. less then drilling dia. Great save in drilling time.

DELİNİŞ PARÇA
DRILLED PART



SAVED PART

NOTE:

- 1) You must use internal coolant presure 3-10 bar
- 2) For long drills, the drilling body needs carbide pads
- 3) Please dont use vertical machines, suitable to use in horizontal machines