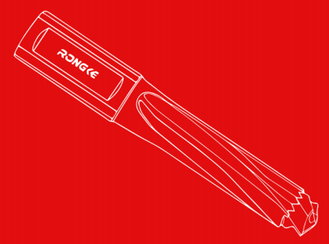
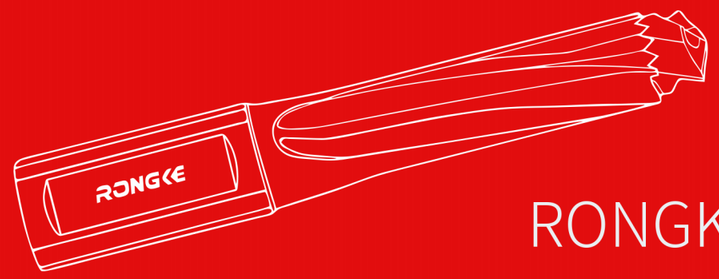
专注于孔钻加工领域
Focus On Drilling Hole Processing Field

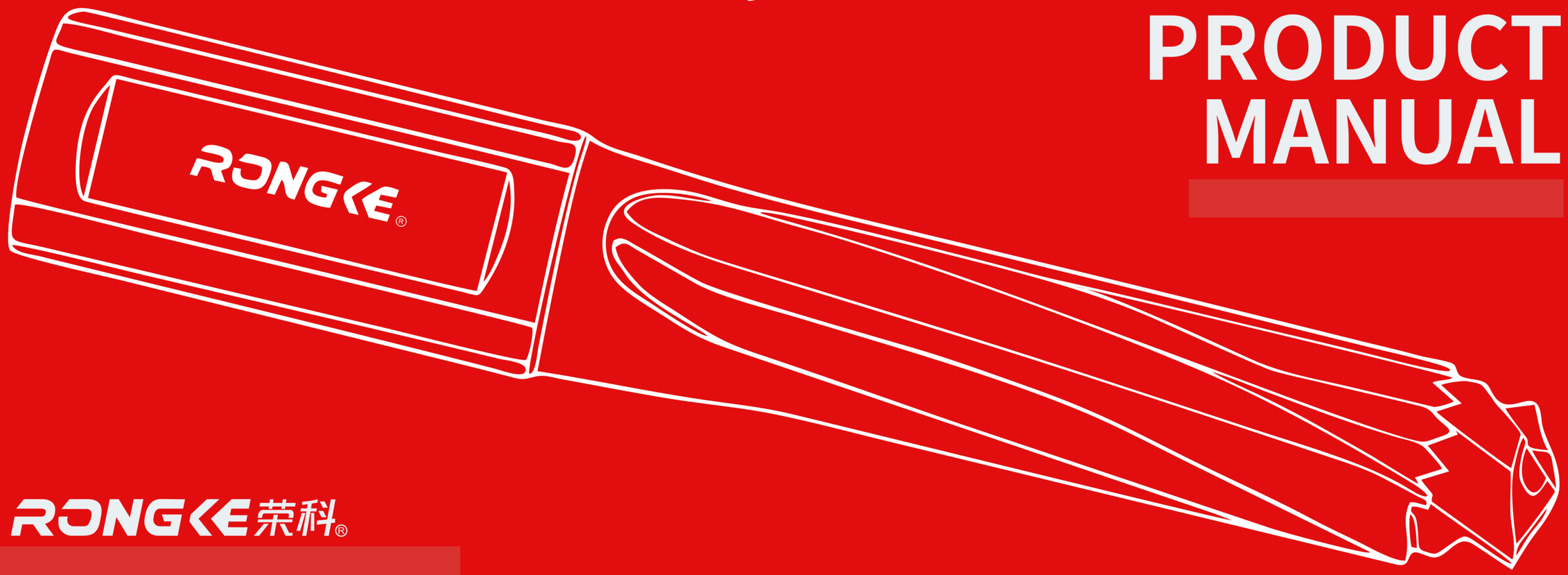
国家高新技术企业
国家机械行业标准起草制定单位





RONGKE MAITE NC TOOL

PRODUCT MANUAL



RONGKE荣科®

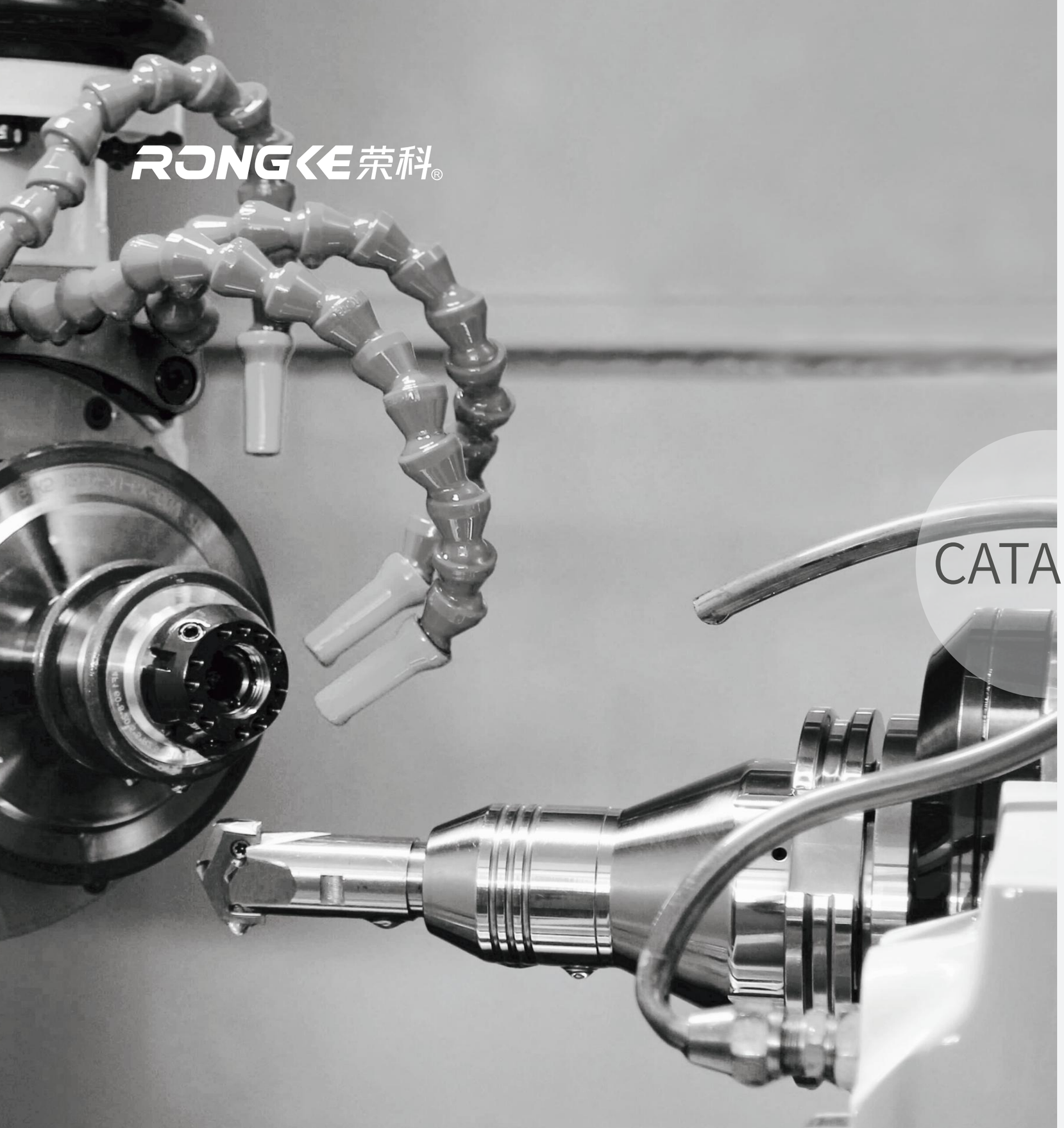
ZHEJIANG RONGKE XIANGYUAN MANCHINERY TECHNOLOGY CO., LTD

NO. 399, HAOHAI ROAD, BINHAI NEW AREA, ECONOMIC DEVELOPMENT ZON E,
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RONGKE荣科®

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CATALOG

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COMPANY INTRODUCE



Zhejiang Rongke Xiangyuan Manchinery Technology Co., Ltd is a young national high-tech enterprise。Company has been concentrating on researching and producing hole making tools,we have technology cooperation with many universities。

Every year we invest large research funds continuously in improving tools' quality and developing more new hole making tools。Until now our products include U drills, modular deep hole drills, spade drills and inserts, detachable head drills and so on which keep improving constantly。Meanwhile increase investing in equipments, only high precision producing equipments and inspecting devices, and capable staffs can make high quality products。At present we have plenty of HAAS machining centers, five axis grinding centers and special inspecting instruments etc.。We believe in spirit of craftsman, do our best for more professional、excellent and stronger, let our tools instead of imports。Company lead formalizing industry standards of modular indexable insert deep hole drill, we own six national invention patents and many utility patents, contribute our share to improving domestic cutting tools industry。

National High-tech Enterprise

High end production equipment investment

6 National Invention patent

10 years exp

Craftsman spirit

Coporation with university



Corporate mission

Create value for customers
create happiness for staffs,
create wealth for society

Corporate vision

Become reliable famous brand
of hole making tools

Core value

Constant innovation,
pursue excellence,
fortitude,
courage to undertake

荣者:荣华,欣欣向荣也,草木丛生,繁花似锦之谓也。

科者:窠也,大道若水,居于其中。

荣科者:取荣辱不惊,盈科而进,奋斗不止,砥砺前行之意也。

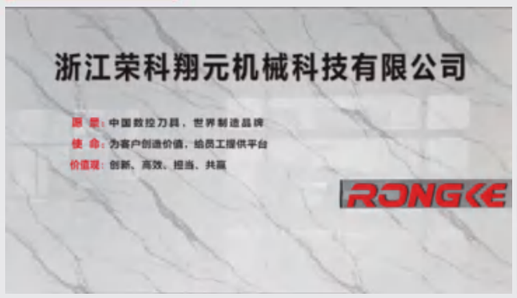




设备&环境
EQUIPMENT AND ENVIRONMENT











荣科人经过十年的不懈专研与努力
在数控刀具领域取得了国标与行业的一致认可
荣科人将继续遵循匠人精神
兢兢业业努力成为行业标杆知名企业

Rongke people after ten years of unremitting research and efforts
In the numerical control tool field has obtained the national standard and the industry's consistent recognition
Rongke people will continue to follow the spirit of craftsmen
Conscientiously and strive to become the industry benchmark well-known enterprises













PRODUCT **COMPARISON**

Rongke drill Comparison chart				
Product name	U drill wc/sp	Spade drill	Sword tooth drill	MDD big drill
Structure	All-in-one	All-in-one	All-in-one	Split type
Diameter range	13-60	13-114	12-33.5	45-200
Machining accuracy	±0.2	under Φ35 +0.1, -0.03 above Φ35 +0.1,-0.03	-0.01~+0.05	±0.2
Machining machine	CNC machine	CNC machine,Common bench drill radial drilling machine etc.	High-quality Vertical and horizontal CNC machine	horizontal machine
Hole wall finish	3.2	3.2	3.2	3.2
Length range	2-5 Multiple diameter	Under 20 Multiple diameter	3.5-8 Multiple diameter	Use 100-400 Connecting rod
Characteristic	It is suitable for most machine tools,Economical and practical. Compare with traditional twist drill, advantage in cost and time	Spade drill can use arc inserts, Flat bottom inserts, drill hole inserts in the drill holder. Good generality, When processing cross hole, installing guide bar can process product better	Compare with nomal drill, advantage in Accuracy and finish. The processing speed and precision are also much higher than ordinary inserts	Large diameter deep hole machining,depend on different deep hole, use corresponding connecting rod, more flexible



U drill wc/sp



Spade drill



Sword tooth drill



MDD big drill

1.Inserts Diameter range 12-33.5mm, deep1.5、 3、5、8、12 Multiple diameter

2.Inserts reserve 1.5mm-3mm Regrinding allowance, reduce the cost of drill

3.Changeable Cemented carbide inserts High rigidity carbide drill holder,
The processing speed and precision are much higher.

4.Inserts and holder use vertical tooth design,high-precision and high strength

5.Do not need to take the holder out of the machine , more convinet

6.One holder can fit different diameter range inserts, reduce the cost.

7.The optimized screw design can improve the cutting control of soft materials

8.Enhanced blade design greatly improves machining life

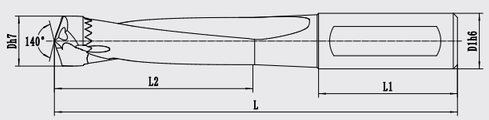
9.The handle design is suitable for a variety of toolholder systems

10.Inner cooling design with hole makes drilling cold enough, tool life longer and chip removal smoother

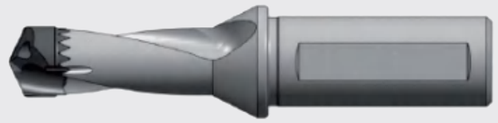
SWORD TOOTH DRILL

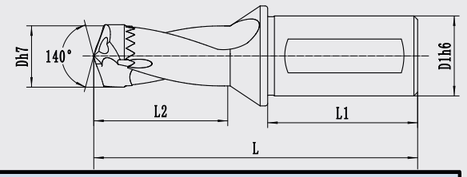






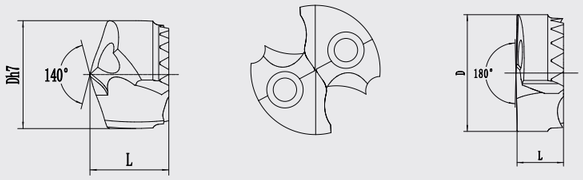
sword tooth drill holder's model and size													
Diamter	3D			5D			8D			Suitable for drill holder		Screw	Spanner
	Model	Size		Model	Size		Model	Size		Size			
		L2	L		L2	L		L2	L	L1	D1		
12.0-12.49	TC03-120-XP16	46	107	TC05-120-XP16	71	132	-	-	-	48	16	M2.2*8	T6
12.5-13.49	TC03-130-XP16	49	112	TC05-130-XP16	76	142	-	-	-				
13.5-14.5	TC03-140-XP16	55	119	TC05-140-XP16	84	149	TC08-140-XP16	127	194				
14.51-15.5	TC03-150-XP20	58	129	TC05-150-XP20	89	159	TC08-150-XP20	136	204				
15.51-16.5	TC03-160-XP20	62	134	TC05-160-XP20	95	169	TC08-160-XP20	144	214	50	20	M2.5*9	T8
16.51-17.5	TC03-170-XP20	66	140	TC05-170-XP20	101	175	TC08-170-XP20	154	225				
17.51-18.5	TC03-180-XP20	70	145	TC05-180-XP20	107	180	TC08-180-XP20	162	230				
18.51-19.5	TC03-190-XP25	73	160	TC05-190-XP25	112	195	TC08-190-XP25	171	255	56	25	M3.0*11	
19.51-20.5	TC03-200-XP25	77	160	TC05-200-XP25	118	200	TC08-200-XP25	179	270				
20.51-21.5	TC03-210-XP25	80	160	TC05-210-XP25	123	200	TC08-210-XP25	188	266				
21.51-22.8	TC03-220-XP25	84	165	TC05-220-XP25	129	205	TC08-220-XP25	196	275			M3.5*12	T15
22.81-23.8	TC03-230-XP25	81	165	TC05-230-XP25	134	215	TC08-230-XP25	205	285				
23.81-24.8	TC03-240-XP32	91	175	TC05-240-XP32	140	225	TC08-240-XP32	213	300	60	32		
24.81-25.8	TC03-250-XP32	93	175	TC05-250-XP32	145	230	TC08-250-XP32	222	305			M4.0*14	
25.81-26.8	TC03-260-XP32	97	180	TC05-260-XP32	151	235	TC08-260-XP32	230	315				
26.81-27.8	TC03-270-XP32	99	180	TC05-270-XP32	156	245	TC08-270-XP32	239	325				
27.81-28.8	TC03-280-XP32	102	185	TC05-280-XP32	162	245	TC08-280-XP32	247	330			M4.5*15	
28.81-29.8	TC03-290-XP32	105	190	TC05-290-XP32	167	250	TC08-290-XP32	256	340				
29.81-30.8	TC03-300-XP32	110	191	TC05-300-XP32	173	261	TC08-300-XP32	265	351				
30.81-32.0	TC03-320-XP32	116	201	TC05-320-XP32	181	266	TC08-320-XP32	276	361				
32.01-33.5	TC03-330-XP32	121	206	TC05-330-XP32	191	276	TC08-330-XP32	291	376				





sword tooth drill holder's model and size											
Diamter	1.5D			12D			Suitable for drill holder		Screw	Spanner
	Model	Size		Model	Size		Size			
		L2	L		L2	L	L1	D1		
12.0-12.49	TC1.5-120-XP16	28	91	-	-	-	48	16	M2.2*8	T6
12.5-13.49	TC1.5-130-XP16	30	92	-	-	-				
13.5-14.5	TC1.5-140-XP16	34	96	TC12-140-XP16	171	239				
14.51-15.5	TC1.5-150-XP20	35	100	TC12-150-XP20	183	253				
15.51-16.5	TC1.5-160-XP20	38	103	TC12-160-XP20	195	266	50	20	M2.5*9	T8
16.51-17.5	TC1.5-170-XP20	39	105	TC12-170-XP20	207	278				
17.51-18.5	TC1.5-180-XP20	43	107	TC12-180-XP20	219	291				
18.51-19.5	TC1.5-190-XP25	44	115	TC12-190-XP25	232	309	56	25	M3.0*11	
19.51-20.5	TC1.5-200-XP25	47	118	TC12-200-XP25	244	321				
20.51-21.5	TC1.5-210-XP25	48	119	TC12-210-XP25	256	334				
21.51-22.8	TC1.5-220-XP25	51	121	TC12-220-XP25	268	347			M3.5*12	T15
22.81-23.8	TC1.5-230-XP25	51	122	TC12-230-XP25	280	359				
23.81-24.8	TC1.5-240-XP32	54	129	TC12-240-XP32	292	376	60	32		
24.81-25.8	TC1.5-250-XP32	54	129	TC12-250-XP32	305	388			M4.0*14	
25.81-26.8	TC1.5-260-XP32	57	132	-	-	-				
26.81-27.8	TC1.5-270-XP32	58	133	-	-	-				
27.81-28.8	TC1.5-280-XP32	60	135	-	-	-			M4.5*15	
28.81-29.9	TC1.5-290-XP32	61	136	-	-	-				
29.81-30.8	TC1.5-300-XP32	64	139	-	-	-				

SWORD TOOTH DRILL TIP



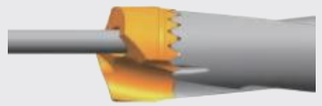
- TCEA suit for mild steel,greysteel, stainless steel,cast iron. Compare with low steel equipment
- TCPA suit for nomal steel
- TCFA are Flat bottom bit

sword tooth drill tip's model and size					
Blade diamter	Model	Model	L	Model	L
12.0	TCEA-1200	TCPA-1200	9.1	TCFA-1200	7.1
12.5	TCEA-1250	TCPA-1250	9.4	TCFA-1250	7.2
13.0	TCEA-1300	TCPA-1300	9.7	TCFA-1300	7.5
13.5	TCEA-1350	TCPA-1350	10.3	TCFA-1350	7.9
14.0	TCEA-1400	TCPA-1400		TCFA-1400	
14.5	TCEA-1450	TCPA-1450		TCFA-1450	
15.0	TCEA-1500	TCPA-1500	11.0	TCFA-1500	8.3
15.5	TCEA-1550	TCPA-1550		TCFA-1550	
16.0	TCEA-1600	TCPA-1600	11.6	TCFA-1600	8.8
16.5	TCEA-1650	TCPA-1650		TCFA-1650	
17.0	TCEA-1700	TCPA-1700	12.3	TCFA-1700	9.3
17.5	TCEA-1750	TCPA-1750		TCFA-1750	
18.0	TCEA-1800	TCPA-1800	12.9	TCFA-1800	9.8
18.5	TCEA-1850	TCPA-1850		TCFA-1850	
19.0	TCEA-1900	TCPA-1900	13.6	TCFA-1900	10.2
19.5	TCEA-1950	TCPA-1950		TCFA-1950	
20.0	TCEA-2000	TCPA-2000	14.1	TCFA-2000	10.7
20.5	TCEA-2050	TCPA-2050		TCFA-2050	
21.0	TCEA-2100	TCPA-2100	14.8	TCFA-2100	11.2
21.5	TCEA-2150	TCPA-2150		TCFA-2150	
22.0	TCEA-2200	TCPA-2200	15.0	TCFA-2200	
22.5	TCEA-2250	TCPA-2250		TCFA-2250	
23.0	TCEA-2300	TCPA-2300	15.2	TCFA-2300	
23.5	TCEA-2350	TCPA-2350		TCFA-2350	
24.0	TCEA-2400	TCPA-2400	15.4	TCFA-2400	11.3
24.5	TCEA-2450	TCPA-2450		TCFA-2450	
25.0	TCEA-2500	TCPA-2500	15.9	TCFA-2500	11.7
25.5	TCEA-2550	TCPA-2550		TCFA-2550	
26.0	TCEA-2600	TCPA-2600	16.5	TCFA-2600	12.2
26.5	TCEA-2650	TCPA-2650		TCFA-2650	
27.0	TCEA-2700	TCPA-2700	17.2	TCFA-2700	12.7
27.5	TCEA-2750	TCPA-2750		TCFA-2750	
28.0	TCEA-2800	TCPA-2800	17.8	TCFA-2800	13.2
28.5	TCEA-2850	TCPA-2850		TCFA-2850	
29.0	TCEA-2900	TCPA-2900	18.4	TCFA-2900	13.6
29.5	TCEA-2950	TCPA-2950		TCFA-2950	
30.0	TCEA-3000	TCPA-3000	19.0	TCFA-3000	14.1
30.5	TCEA-3050	TCPA-3050		TCFA-3050	
31.0	TCEA-3100	TCPA-3100	21.0		
31.5	TCEA-3150	TCPA-3150			
32.0	TCEA-3200	TCPA-3200			
32.5	TCEA-3250	TCPA-3250			
33.0	TCEA-3300	TCPA-3300			
33.5	TCEA-3350	TCPA-3350			

ESSENTIALS OF CHANGE SWORD TOOTH DRILL TIP







① Please remove the worn ends,use air gun clean the foreign matter between holder and tip

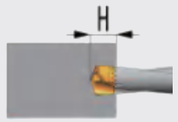
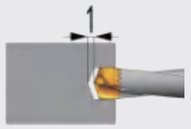
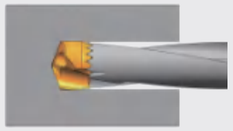
② If air gun can not clean it, use metal to clean the foreign matter

③ Attention, If the wrench shakes when tightening the screw, tip hole may broken

④ Screw should be changed before it worn and deformation

⑤ Tighten the screws evenly to the end

KEY POINTS FOR DRILLING HIGH MULTIPLE DIAMETER DEEP HOLE

① use 1.5D or 3D sword tooth drill to process guide hole	③ Speed up the speed to setting speed start cutting feeed
● Use 1.5D or 3D sword tooth drill to Process guide hole, guide hole depth is aperture's 1 to 1.5 times	
	
② insert 8D and above sword tooth hold and inserts to guide hole in low speed	④ Process over, decrease the speed, pullout from the cut material
● rotate speed:500r/min ● feed speed:1000-2000mm/min	● rotate speed:500r/min ● feed speed:1000-2000mm/min
 Insert 1mm from the bottom of guide hole	
IF use setting cutting speed insert different hole, drill Peripheral beating may damage drill's shoulder. Insert 1mm from the bottom of guide hole	If pull out the drill from high speed rotate, may cause drill beating damage the shoulder

1.Spade drill is the update product compare with traditonal twist drill, can use in CNC and traditonal equipment, like Upright drilling machine、Radial drill.
2.Processing different material of workpiece use different material of spade drill to process, spade drill inserts have 3 different texture: cemented carbide, powder high speed steel and HSS-Co, three different texture can insert in one spade drill hold, custumer can decrease the cost of buy hold
3.HSS and powder HSS inserts are be recommand used in Upright drilling machine、Radial drill, we do not suggest use cemented carbide inserts , the rotate speed of machine is low,Poor rigidity ,Clearance is big, maybe cause cemented carbide inserts tipping
4.All spade drill inserts have center Drainage holes, we are recommand to use high presss cooling fluid, it will enhance inserts working age, and more conducive to chipremoval
5.All spade drill inserts have Chip breaker groove, process scrap iron are small scrap, compare with twist drill process long scrap, small debris are more easy to removal,and do not need to fallback chip breaker, can through the workpiece , this will decrease the work time, increase the work effective.
6.Spade drill inserts have since the centering function,The uniform stress double symmetry. suitable for deep hole processing
7.Inserts diamter range from 9.5mm to114mm.



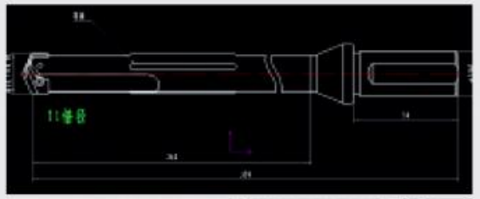
SPADE DRILL PROCESS PARAMETER CALCULATION



HSS spade drill inserts and powder HSS spade drill inserts line speed is 20-40 meters/min, cemented carbide inserts line speed is 60-80 meters/min
Caculation of rotate speed formula is： S=Vc*1000/3.14/Dc(S is rotate speed, Vc is line speed,Dc inserts diameter)
Feed caculate formation is Vf=Fr*S(Vf is feed, Fr is feed per revolution, S is rotate speed)spade drill inserts every rotate feed can reach every rotation 0.2-0.6mm.
Hole processing time formula is Tc=H/Vf*60(Tc is working time, H is hole's depth,Vf is feed rate)
Processing rotate speed, feed caculation fomula:
Processing diameter 20mm, depth 100mm, chose powder HSS, Line speed is 40 meters.
s=40*1000/33.14/20≈636（recommand rotate speed is 600-650）
Vf=0.2*636≈127（recommand feed is around 110-130）
Tc=100/127*60≈47（processing time is around 55 seconds）
Processing rotate speed and feed should adjust based on customer's processing envirment. If you have any problem please call our company, our company will give the suggestion based on customer's actual situation.

A FORMAL CASE SHOW

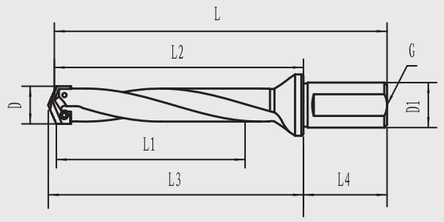
Processing 20Cr（forgings，surface uneven），HRC25. Diameter 22.7mm, depth 540mm,DouShan Horizontal machine tool, S400rev/min/Fr0.1mm/rev(This kind of parameter are conservative parameter, nomally processing parameter will be enhanced) Spadedrill effective machining depth is 260mm(11 times diameter),processing way is two head process. Machining error is 0.1mm.easy to through the pin. Use powder HSS(without plating) Machining 60 hole, maching 32 meters until the drill worn.Customer use other company spade drill error can reach over 5mm






SIDE FIXED SPADE DIRLL HOLDER



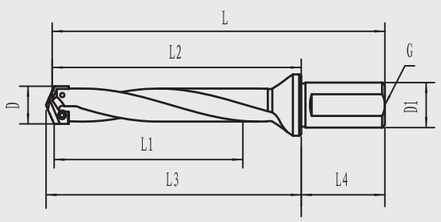


Y0 Series（φ9.5-φ11.0）				
Model	L1	L2	L3	L
SDY0H-19-XP16	19	47.6	50	95.6
SDY0H-32-XP20	32	61.1	63.5	111.1
SDY0H-60-XP20	60	89.7	92.1	139.7
SDY0H-111-XP20	111	140.5	142.9	190.5
SDY0H-222-XP20	222	251.7	254.1	301.7
SDY0H-290-XP20	290	319.9	322.3	369.9
00 Series（φ13.0-φ17.5）				
Model	L1	L2	L3	L
SD00H-23-XP20	22	47.6	50.4	97.6
SD00H-35-XP20	35	63.5	66.3	113.5
SD00H-64-XP20	63	92.1	94.9	142.1
SD00H-114-XP20	114	142.9	145.7	192.9
SD00H-178-XP20	178	206.4	209.1	256.4
SD00H-240-XP20	240	268.6	271.3	318.6
SD00H-295-XP20	295	323.9	326.7	373.9
SD00H-387-XP20	387	416	418.8	466
10 Series（φ17.6-φ24.4）				
Model	L1	L2	L3	L
SD10H-48-XP25	48	75.8	79.4	131.8
SD10H-67-XP25	67	107.2	110.7	163.1
SD10H-118-XP25	118	154.8	158.4	210.8
SD10H-168-XP25	168	205.6	209.2	261.6
SD10H-218-XP25	218	255.3	258.9	311.3
SD10H-270-XP25	270	307.2	310.8	363.2
SD10H-365-XP25	365	402.2	405.8	458.2
SD10H-457-XP25	457	494.5	498.1	550.5
SD10H-569-XP25	569	602.5	606.1	658.5
20 Series（φ24.5-φ35.0）				
Model	L1	L2	L3	L
SD20H-57-XP32	57	88.5	92.1	148.5
SD20H-86-XP32	86	128.6	132.2	188.6
SD20H-137-XP32	137	179.4	183	239.4
SD20H-187-XP32	187	230.2	233.8	290.2
SD20H-237-XP32	237	279.9	283.5	339.9
SD20H-289-XP32	289	331.8	335.4	391.8
SD20H-400-XP32	400	442.8	446.4	502.8
SD20H-400-XP32	400	442.8	446.4	502.8
SD20H-511-XP32	511	554.1	557.7	614.1
SD20H-692-XP32	692	735.1	738.7	795.1

Z0 Series（φ11.1-φ12.9）				
Model	L1	L2	L3	L
SDZ0H-19-XP16	19	47.6	50	95.6
SDZ0H-32-XP20	32	61.1	63.5	111.1
SDZ0H-60-XP20	60	89.7	92.1	139.7
SDZ0H-111-XP20	111	140.5	142.9	190.5
SDZ0H-222-XP20	222	251.7	254.1	301.7
SDZ0H-290-XP20	290	319.9	322.3	369.9
05 Series（φ15.5-φ17.5）				
Model	L1	L2	L3	L
SD05H-23-XP20	22	47.6	50.4	97.6
SD05H-35-XP20	35	63.5	66.3	113.5
SD05H-64-XP20	63	92.1	94.9	142.1
SD05H-114-XP20	114	142.9	145.7	192.9
SD05H-178-XP20	178	206.4	209.1	256.4
SD05H-240-XP20	240	268.6	271.3	318.6
SD05H-295-XP20	295	323.9	326.7	373.9
SD05H-387-XP20	387	416	418.8	466
15 Series（φ22.0-φ24.4）				
Model	L1	L2	L3	L
SD15H-57-XP25	57	88.5	92.1	144.5
SD15H-67-XP25	67	107.2	110.7	163.1
SD15H-118-XP25	118	154.8	158.4	210.8
SD15H-168-XP25	168	205.6	209.2	261.6
SD15H-218-XP25	218	255.3	258.9	311.3
SD15H-270-XP25	270	307.2	310.8	363.2
SD15H-365-XP25	365	402.2	405.8	458.2
SD15H-457-XP25	457	494.5	498.1	550.5
SD15H-569-XP25	569	602.5	606.1	658.5
25 Series（φ30.0-φ35.0）				
Model	L1	L2	L3	L
SD25H-92-XP32	92	123.4	127	183.4
SD25H-86-XP32	86	128.6	132.2	188.6
SD25H-137-XP32	137	179.4	183	239.4
SD25H-187-XP32	187	230.2	233.8	290.2
SD25H-237-XP32	237	279.9	283.5	339.9
SD25H-289-XP32	289	331.8	335.4	391.8
SD25H-400-XP32	400	442.8	446.4	502.8
SD25H-400-XP32	400	442.8	446.4	502.8
SD25H-511-XP32	511	554.1	557.7	614.1
SD25H-692-XP32	692	735.1	738.7	795.1

SIDE FIXED SPADE DIRLL HOLDER





30 Series（φ35.1-φ47.9）				
Model	L1	L2	L3	L
SD30H-76-XP40	76	125	129.8	195
SD30H-121-XP40	121	173	177.8	243
SD30H-165-XP40	165	217.5	222.3	287.5
SD30H-210-XP40	210	261.9	266.7	331.9
SD30H-260-XP40	260	312.3	317.1	382.3
SD30H-349-XP40	349	401.6	406.4	471.6
SD30H-349-XP40	349	401.6	406.4	471.6
SD30H-559-XP40	559	611.1	615.9	681.1
SD30H-787-XP40	787	839.7	844.5	909.7
40 Series（φ48.0-φ65.28）				
Model	L1	L2	L3	L
SD40H-130-XP40	130	179.4	184.2	249.4
SD40H-232-XP40	232	281	285.8	351
SD40H-350-XP40	350	399.2	404	469.2
SD40H-350-XP40	350	399.2	404	469.2
SD40H-422-XP40	422	471.5	476.3	541.5
SD40H-422-XP40	422	471.5	476.3	541.5
SD40H-525-XP40	525	574.2	579	644.2
SD40H-625-XP40	625	674.7	679.5	744.7
SD40H-879-XP40	879	928.7	933.5	998.7
50 Series（φ65.3-φ89.08）				
Model	L1	L2	L3	L
SD50H-171-XP50	171	235	240	315
SD50H-350-XP50	350	414	419	494
SD50H-660-XP50	660	724	729	804

35 Series（φ42.0-φ47.9）				
Model	L1	L2	L3	L
SD35H-76-XP40	76	125	129.8	195
SD35H-121-XP40	121	173	177.8	243
SD35H-165-XP40	165	217.5	222.3	287.5
SD35H-210-XP40	210	261.9	266.7	331.9
SD35H-260-XP40	260	312.3	317.1	382.3
SD35H-349-XP40	349	401.6	406.4	471.6
SD35H-349-XP40	349	401.6	406.4	471.6
SD35H-559-XP40	559	611.1	615.9	681.1
SD35H-787-XP40	787	839.7	844.5	909.7
45 Series（φ56.0-φ65.28）				
Model	L1	L2	L3	L
SD45H-130-XP40	130	179.4	184.2	249.4
SD45H-232-XP40	232	281	285.8	351
SD45H-350-XP40	350	399.2	404	469.2
SD45H-350-XP40	350	399.2	404	469.2
SD45H-422-XP40	422	471.5	476.3	541.5
SD45H-422-XP40	422	471.5	476.3	541.5
SD45H-525-XP40	525	574.2	579	644.2
SD45H-625-XP40	625	674.7	679.5	744.7
SD45H-879-XP40	879	928.7	933.5	998.7
70 Series（φ89.1-φ114.48）				
Model	L1	L2	L3	L
SD70H-200-XP50	200	275	280	355
SD70H-400-XP50	400	475	480	555
SD70H-800-XP50	800	875	880	955

SIDE FIXED SPADE DIRLL HOLDER

SD 10 H -168 -XP 32

The rules of holder named	
SD	Spade drill holder

Series	
Like	10、15、20、25、

Groove shape	
H	Spiral groove
S	Straight groove

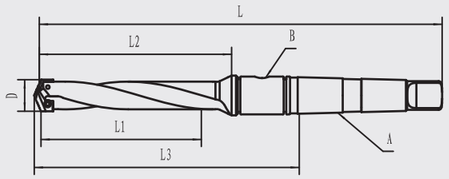
Holde effective machining depth
Like:118、168、218

Petiole type	
XP	Side fixed
MT	Moshi

Petiole size（mm）	
XP	25、32、0、50
MT	2、3、4、5

SPADE DRILL MOSHI HOLD



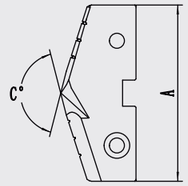


Y0 Series（φ 9.5-φ11.0）				
Model	L1	L2	L3	L
SDY0H-32-MT2	32	51.5	88	160.3
SDY0H-60-MT2	60	80.2	116.7	188.9
SDY0H-111-MT2	111	130.9	167.4	239.7
00 Series（φ13.0-φ17.5）				
Model	L1	L2	L3	L
SD00H-35-MT2	35	55.5	95.4	167.3
SD00H-63-MT2	63	84.1	124	195.9
SD00H-114-MT2	114	135	174.8	246.7
SD00H-178-MT2	178	198.5	238.3	310.2
10 Series（φ17.6-φ24.4）				
Model	L1	L2	L3	L
SD10H-70-MT3	70	98.4	149	239
SD10H-121-MT3	121	149.2	199.8	289.8
SD10H-171-MT3	171	200	250.6	340.7
SD10H-222-MT3	222	250.5	301.1	391.2
SD10H-273-MT3	273	301.6	352.2	442.3
20 Series（φ24.5-φ35.0）				
Model	L1	L2	L3	L
SD20H-86-MT4	86	114.3	172.9	286.3
SD20H-137-MT4	137	165.1	223.7	337.1
SD20H-187-MT4	187	215.9	274.5	387.9
SD20H-237-MT4	237	265.6	324.2	437.6
SD20H-289-MT4	289	317.5	376.1	489.5
SD20H-400-MT4	400	428.5	487.1	600
SD20H-400-MT4	400	428.5	487.1	600
30 Series（φ35.1-φ47.9）				
Model	L1	L2	L3	L
SD30H-121-MT4	121	152.4	211.7	324.4
SD30H-165-MT4	165	196.9	256.2	368.9
SD30H-209-MT4	209	241.3	300.6	413.3
SD30H-260-MT4	260	291.8	351.1	463.8
SD30H-349-MT4	349	381	440.3	553
SD30H-349-MT4	349	381	440.3	553
SD30H-559-MT4	559	590.6	649.9	762.5
SD30H-787-MT4	787	819.2	878.5	991.1
40 Series（φ48.0-φ65.28）				
Model	L1	L2	L3	L
SD40H-130-MT5	130	165.1	225	369.4
SD40H-232-MT5	232	266.7	326.6	471
SD40H-350-MT5	350	384.9	444.8	589.2
SD40H-350-MT5	350	384.9	444.8	589.2
SD40H-422-MT5	422	457.2	517.1	661.5
SD40H-422-MT5	422	457.2	517.1	661.5
SD40H-625-MT5	625	660.4	720.3	864.7
SD40H-879-MT5	879	914.4	974.3	1118.7
50 Series（φ65.3-φ89.08）				
Model	L1	L2	L3	L
SD50H-171-MT5	171	215.9	287.3	430.2
SD50H-273-MT5	273	317.5	388.9	531.8
SD50H-464-MT5	464	508	579.4	722.3
SD50H-660-MT5	660	704.8	776.2	919.1
SD50H-889-MT5	889	933.4	1004.8	1147.7

Z0 Series（φ11.1-φ12.9）				
Model	L1	L2	L3	L
SDZ0H-32-MT2	32	51.5	88	160.3
SDZ0H-60-MT2	60	80.2	116.7	188.9
SDZ0H-111-MT2	111	130.9	167.4	239.7
05 Series（φ15.5-φ17.5）				
Model	L1	L2	L3	L
SD05H-35-MT2	35	55.5	95.4	167.3
SD05H-63-MT2	63	84.1	124	195.9
SD05H-114-MT2	114	135	174.8	246.7
SD05H-178-MT2	178	198.5	238.3	310.2
15 Series（φ22.0-φ24.4）				
Model	L1	L2	L3	L
SD15H-70-MT3	70	98.4	149	239
SD15H-121-MT3	121	149.2	199.8	289.8
SD15H-171-MT3	171	200	250.6	340.7
SD15H-222-MT3	222	250.5	301.1	391.2
SD15H-273-MT3	273	301.6	352.2	442.3
25 Series（φ30.0-φ35.0）				
Model	L1	L2	L3	L
SD25H-86-MT4	86	114.3	172.9	286.3
SD25H-137-MT4	137	165.1	223.7	337.1
SD25H-187-MT4	187	215.9	274.5	387.9
SD25H-237-MT4	237	265.6	324.2	437.6
SD25H-289-MT4	289	317.5	376.1	489.5
SD25H-400-MT4	400	428.5	487.1	600
SD25H-400-MT4	400	428.5	487.1	600
35 Series（φ42.0-φ47.9）				
Model	L1	L2	L3	L
SD35H-121-MT4	121	152.4	211.7	324.4
SD35H-165-MT4	165	196.9	256.2	368.9
SD35H-209-MT4	209	241.3	300.6	413.3
SD35H-260-MT4	260	291.8	351.1	463.8
SD35H-349-MT4	349	381	440.3	553
SD35H-349-MT4	349	381	440.3	553
SD35H-559-MT4	559	590.6	649.9	762.5
SD35H-787-MT4	787	819.2	878.5	991.1
45 Series（φ56.0-φ65.28）				
Model	L1	L2	L3	L
SD45H-130-MT5	130	165.1	225	369.4
SD45H-232-MT5	232	266.7	326.6	471
SD45H-350-MT5	350	384.9	444.8	589.2
SD45H-350-MT5	350	384.9	444.8	589.2
SD45H-422-MT5	422	457.2	517.1	661.5
SD45H-422-MT5	422	457.2	517.1	661.5
SD45H-625-MT5	625	660.4	720.3	864.7
SD45H-879-MT5	879	914.4	974.3	1118.7
70 Series（φ89.1-φ114.48）				
Model	L1	L2	L3	L
SD70H-171-MT5	171	225.4	296.8	439.7
SD70H-273-MT5	273	327	398.5	541.3
SD70H-556-MT5	556	609.6	681.1	823.9
SD70H-685-MT5	685	739.7	811.2	954
SD70H-939-MT5	939	993.7	1065.2	1208

SPADE DRILL INSERTS







Inserts diameter range	Thickness	Angulus parietalis	Different texture								
			HSS Containing cobalt			Powder HSS			Cemented carbide		
φ9.5-φ12.5	2.38	132°	S2STA	S2DTH	S2DTP	S6STA	S6DTH	S6DTP	G2STA	G2DTH	G2DTP
φ13.0-φ17.5	3.18										
φ18.0-φ24.0	3.97										
φ24.5-φ35.0	4.76										
φ35.5-φ47.5	6.35		S2STA	S2DTH	S2DTP				G2STA	G2DTH	G2DTP
φ48.0-φ65.0	7.94										
φ65.5-φ89.0	11.11	144°									
φ90.0-φ114.0											

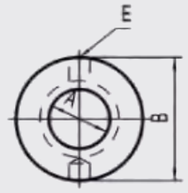
SPADE DRILL INSERTS NAMED RULES

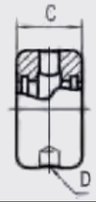
50.00mm S2 ST A

- 50.00mm → Size
- S2 → Texture: ST General type; DT(general type + chamfering)
- A → Coating: A H P D

COOLING RING







Model	Inner diameter (A)	Outer diameter (B)	Thickness (C)	Retaining screw rod (D)	Cooling nozzle thread (E)
RK-MT2R	19.4	49	22.5	M8*1.25	1/8″
RK-MT3R	25.5	53	30	M8*1.25	1/8″
RK-MT4R	32.5	63	36	M10*1.5	1/4″
RK-MT5R	48.5	76	36	M10*1.5	1/4″
RK-MT5R2	60.1	95.3	44.5	M12*1.75	1/2″

DEEP HOLE PROCESS STEPS

8 times diameter and above drill holder use sultion		
① Guide hole machining		● Use the diameter short drill holder same as deep holeddiameter,open a depth at least reach 2 times diameter hole ● Use front angle same as deep hole drill, or use deephole drill large angle inserts
② Insert of deep hole drill		● Rotate speed maxium is 50 PRM, feed is maintance F=300mm/min, close the coolant fluid, though the above conditions will put the deep hole drill to guide hole 1-3 mm.
③ Blind hole processing		● Speed and feed is settting as 100% of recom-mand numerical, when process deep hole, comfirm Chip discharge status and machine's Load factor. Please do not use sectional feeding to process
※ If in the actual processing, can not cut the cuttings, please use sections feed. While the section feed, start with 4mm, increase section length.		
※ If machine load rate drastic change, maybe because cutting blocking.In order to prevent drill, please pause the processing, retrial cutting suitation and shape of inserts		
④ While through-hole processing		● Before the inserts tip appear, please setting the speed at 50% of recommand, feed is 75% of recommand ● If the through-hole is Oblique hole,please do the same setting before the inserts appear Drill inserts have to appear at least 3mm, then the drill can be pull out
⑤ The way to pull out the drill		● When the dirll pull out, Max rotate speed is 50 RPM
Matters need to attention when use spade drill		
1, Please rotate the tight bolt equl between left and right	 Do not tighten only one side	② Temporarily tighten ④ Formate tighten ⑥ Enhance tighten  ① Temporarily tighten ③ Formate tighten ⑤ Enhance tighten
The wrong way		The right way
2, While processing please do not touch the tip		
3, Please according spade drill processing parameter, comform the cutting speed and processing feed		

METHOD OF USE 8 TIMES DIAMETER AND ABOVE SPADE DRILL HOLD

Vertical type and Horizontal type

① Use short holder processing guide hole, use 8 times diameter and above same as holder's inserts to comfirm cuttings

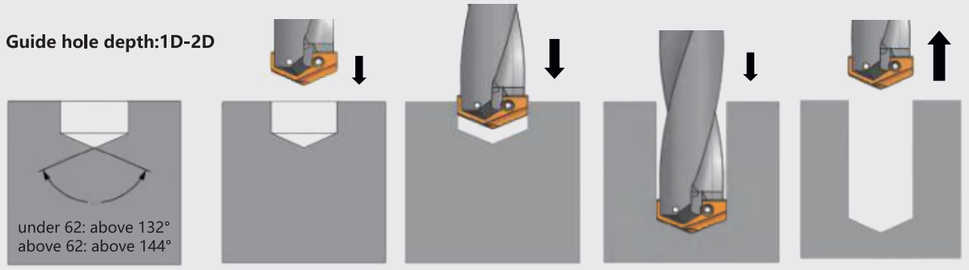
② Use guide drill tip diameter same 8 times diameter and above drill holder to rotate in a low speed, fast feed to open coolant insert guide hole

③ In advance 1-2mm start cutting rotate, start feed processing

④ Cutting discharge, comfirm manchine load table to start cutting

⑤ Low speed rotate, fast to return orginal position

Guide hole depth:1D-2D



※ Please drill 1D-2D guide hole when use 8 times diameter and above spade drill holder

※ Please prepare enough coolant fluid

When vibrate in processing, may cause bolt looseness. When start processing please check the bolt.

SPADE DRILL ACCESSORIES

Series	Screw	Spanner
SaY0 series-Z0 serieseries	M2. 0*5	T6
00 series-05 series	M2. 5*6	T8
10 series-15 series	M3*8	
20 series-25 series	M3. 5*10	T15
30 series-35 series	M5*10	T20
40 series-45 series	M5*15	
50 series-70 series	M6*15	T25

PROCESSING PARAMETERS OF CEMENTED CARBIDE

Cemented carbide coating products								
By cutting texture	Hardness (HB)	Cutting speed(m/min)		Cutting feed(mm/rev)				
		A	H	Φ9.5～Φ12.9	Φ13.0～Φ17.5	Φ17.6～Φ24.4	Φ24.5～Φ35.0	Φ35.1～Φ47.9
Free-cutting steel	100～150	82	93	0.13	0.19	0.24	0.29	0.34
	150～200	70	80	0.11	0.18	0.22	0.26	0.3
	200～250	67	76	0.1	0.16	0.21	0.24	0.27
Low-carbon steel	85～125	77	87	0.13	0.16	0.21	0.27	0.3
	125～175	67	76	0.11	0.16	0.21	0.26	0.29
	175～225	61	69	0.1	0.14	0.19	0.24	0.27
	225～275	54	60	0.08	0.14	0.19	0.24	0.27
Medium carbon steel	125～175	67	76	0.11	0.16	0.21	0.26	0.29
	175～225	61	69	0.1	0.14	0.19	0.24	0.27
	225～275	54	60	0.1	0.14	0.19	0.24	0.27
	275～325	45	51	0.08	0.13	0.18	0.22	0.26
Alloy steel	125～175	64	73	0.11	0.16	0.21	0.26	0.29
	175～225	59	67	0.1	0.14	0.19	0.24	0.27
	225～275	54	60	0.1	0.14	0.19	0.24	0.27
	275～325	49	55	0.08	0.13	0.18	0.22	0.26
	325～375	43	50	0.06	0.11	0.16	0.21	0.24
High hardness alloy steel	225～300	39	46	0.1	0.13	0.16	0.19	0.24
	300～350	35	39	0.08	0.13	0.14	0.14	0.22
	350～400	32	35	0.06	0.11	0.13	0.16	0.19
Constructional steel	100～150	61	69	0.13	0.18	0.22	0.26	0.29
	150～250	49	55	0.1	0.16	0.19	0.22	0.26
	250～350	45	51	0.08	0.14	0.18	0.19	0.22
High temperature alloy	140～220	21	22	0.06	0.11	0.14	0.18	0.21
	220～310	17	18	0.06	0.1	0.13	0.16	0.19
Stainless steel	135～185	42	46	0.11	0.14	0.19	0.22	0.26
	185～275	32	35	0.1	0.13	0.18	0.19	0.22
Chisel tool steel	150～200	43	50	0.06	0.11	0.14	0.18	0.21
	200～250	34	38	0.06	0.11	0.14	0.18	0.21
Aluminium alloy	30	294	-	0.16	0.24	0.29	0.32	0.35
	180	196	-	0.14	0.21	0.26	0.29	0.32
Cast iron	120～150	90	97	0.13	0.19	0.24	0.3	0.37
	150～200	78	93	0.11	0.18	0.21	0.27	0.34
	200～220	70	83	0.1	0.14	0.19	0.24	0.29
	220～260	61	72	0.08	0.13	0.18	0.21	0.24
	260～320	54	65	0.08	0.11	0.16	0.18	0.21

Different length drill holder recommand cutting condition			
Drill diameter	Diameter		
9.5-24.4	10	17	22
24.5-65.28	7	11	18
65.3-114.48	5	7	9
	Suggest processing speed*0.85	Suggest processing speed*0.8	Suggest processing speed*.75
	suggest processing speed*0.95	Suggest processing speed*0.9	Suggest processing speed*0.9

HSS PROCESSING PARAMETERS

High speed steel coating										
By cutting texture	Hardness (HB)	Cutting speed(m/min)		Cutting feed(mm/rev)						
		A	H	Φ9.5 ～Φ12.9	Φ13.0 ～Φ17.5	Φ17.6～Φ24.4	Φ24.5～Φ35.0	Φ35.1～Φ47.9	Φ48.0 ～Φ65.28	Φ65.3 ～Φ114.48
Free-cutting steel	100～150	55	64	0.12	0.16	0.21	0.26	0.33	0.38	0.46
	150～200	51	59	0.12	0.16	0.22	0.26	0.33	0.38	0.46
	200～250	47	54	0.1	0.16	0.22	0.26	0.33	0.38	0.46
Low-carbon steel	85～125	49	57	0.1	0.15	0.19	0.25	0.31	0.38	0.45
	125～175	47	54	0.1	0.15	0.19	0.25	0.31	0.34	0.39
	175～225	45	51	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	225～275	42	48	0.09	0.13	0.16	0.23	0.3	0.31	0.36
Medium carbon steel	125～175	47	54	0.1	0.15	0.19	0.25	0.31	0.38	0.45
	175～225	45	51	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	225～275	42	48	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	275～325	38	45	0.06	0.12	0.15	0.19	0.26	0.31	0.36
Alloy steel	125～175	42	47	0.1	0.13	0.16	0.23	0.28	0.31	0.36
	175～225	38	45	0.09	0.13	0.16	0.23	0.28	0.31	0.36
	225～275	35	42	0.09	0.12	0.16	0.23	0.28	0.31	0.36
	275～325	34	38	0.06	0.1	0.15	0.19	0.25	0.28	0.33
	325～375	30	35	0.06	0.1	0.15	0.19	0.25	0.28	0.33
High hardness alloy steel	225～300	22	24	0.09	0.12	0.15	0.16	0.23	0.28	0.33
	300～350	17	19	0.06	0.12	0.15	0.16	0.23	0.28	0.33
	350～400	14	16	0.06	0.1	0.13	0.15	0.19	0.25	0.3
Constructional steel	100～150	39	46	0.1	0.16	0.19	0.23	0.3	0.34	0.42
	150～250	26	38	0.09	0.15	0.16	0.19	0.26	0.31	0.39
	250～350	28	31	0.06	0.13	0.15	0.16	0.23	0.28	0.33
High temperature alloy	140～220	8	9	0.06	0.12	0.13	0.16	0.19	0.25	0.28
	220～310	7	8	0.06	0.1	0.12	0.13	0.16	0.19	0.23
Stainless steel	135～185	21	23	0.1	0.13	0.15	0.18	0.23	0.26	0.33
	185～275	18	20	0.09	0.12	0.13	0.16	0.19	0.23	0.3
Chisel tool steel	150～200	22	24	0.06	0.1	0.13	0.16	0.19	0.25	0.28
	200～250	18	20	0.06	0.1	0.13	0.16	0.19	0.25	0.28
Aluminium alloy	30	166	-	0.13	0.22	0.26	0.32	0.36	0.42	0.42
	180	89	-	0.13	0.22	0.26	0.3	0.36	0.42	0.42
Cast iron	120～150	49	57	0.12	0.19	0.26	0.33	0.39	0.45	0.49
	150～200	45	51	0.1	0.18	0.23	0.3	0.36	0.42	0.46
	200～220	38	45	0.1	0.15	0.19	0.26	0.3	0.34	0.39
	220～260	32	38	0.09	0.12	0.15	0.19	0.23	0.28	0.33
	260～320	26	30	0.06	0.1	0.12	0.15	0.19	0.23	0.26

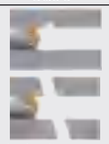
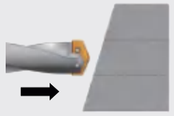
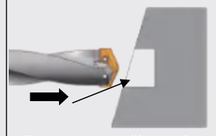
Different length drill holder recommand cutting condition			
Drill diameter	Diameter		
9.5-24.4	10	17	22
24.5-65.28	7	11	18
65.3-114.48	5	7	9
	Suggest processing speed*0.85	Suggest processing speed*0.8	Suggest processing speed*.75
	suggest processing speed*0.95	Suggest processing speed*0.9	Suggest processing speed*0.9

WATER PRESSURE AND WATER FLOW

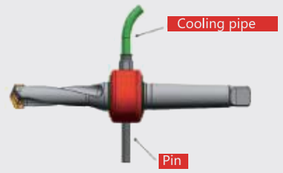
■ suggestion coolant fluid pressure and coolant fluid measure　　upside: collant fluid pressure downside: coolant fluid measure

By cutting texture	Hardness (HB)	Different size drill inserts										
		High speed steel coating							Cemented carbide coating			
		Φ9.5～Φ12.9	Φ13.0～Φ17.5	Φ17.6～Φ24.4	Φ24.5～Φ35.0	Φ35.1～Φ47.9	Φ48～Φ	Φ65.3～Φ114.0	Φ9.5～Φ12.9	Φ13.0～Φ17.5	Φ17.6～Φ24.4	Φ24.5～Φ35.0
Free-cutting steel	100～250	1.4	1.3	0.8	1	0.8	0.4	0.6	1.4	1	1.1	1
		10	10	11	20	30	125	167	10	13	21	34
Low-carbon steel	85～275	1.3	1.2	0.6	0.7	0.6	0.3	0.5	1.3	0.7	0.7	0.8
		10	10	10	16	27	114	114	10	11	17	30
Medium carbon steel	125～325	1.2	1.1	0.6	0.6	0.5	0.3	0.5	1.2	0.7	0.6	0.7
		10	9	10	16	23	114	144	10	11	16	27
Alloy steel	125～375	1.1	1.1	0.5	0.6	0.5	0.2	0.4	1.1	0.6	0.7	0.5
		9	9	9	15	23	106	125	9	10	16	23
High temperature alloy	225～400	1.1	1.1	0.4	0.4	0.2	0.2	0.2	1.1	0.5	0.4	0.3
		9	9	8	12	19	87	98	9	9	12	19
Constructional steel	100～350	1.2	1.1	0.6	0.6	0.4	0.2	0.4	1.2	0.8	0.7	0.5
		10	9	10	15	23	98	125	10	11	17	23
High temperature alloy	140～310	1.2	1.1	0.5	0.4	0.2	0.2	—	1.2	0.7	0.7	0.7
		10	9	9	12	19	98	—	10	11	16	27
Stainless steel	135～275	1.5	1.2	0.6	0.5	0.4	0.2	0.3	1.5	1	1	0.9
		11	10	10	15	23	98	117	11	13	22	34
Chisel tool steel	150～250	1.1	1.1	0.4	0.4	0.2	0.2	0.2	1.1	0.4	0.4	0.3
		9	9	8	12	19	87	98	9	8	12	19
Aluminium alloy	30～180	2.2	1.5	1.2	1.6	1.1	0.4	0.6	2.2	1.9	2.1	1.7
		13	10	14	23	34	125	159	13	18	29	46
Cast iron	120～320	1.1	1.1	0.5	0.4	0.3	0.2	0.2	1.1	0.5	0.5	0.4
		9	9	9	13	19	98	106	9	9	13	19

CASE THAT NEED TO ATTENTION AND THE WAY TO SOLVE IT

		Case	Question point	Countermeasure
Those case may cause this kind of problem, please attention	Out oil	 Out oil processing over 1.5D Type in the longitudinal over 3D in Horizontal	Over 1.5D for type in the longitudina, over 3D in horizontal processing may cause cutting blocking worn the drill	Can use in inner oil machine
		Drying machine fog type machine	Tip no cool down, swarf removal not complet Thoroughly clogging, inserts start worn, may cause drill broken	
		Case	Question point	Countermeasure
Those case may can not processing stand shape	Cross hole(include horizontal hole)	 Cross hole diameter large than edge length	When the edge touch the workpiece，may happen Vibration and hole turnup may worn	Suggest use conducting bar unstand spade drill
	Inlet slope	 Drill shoulder touch workpicce before top	Edge support single crush, may cause virbration,and hole turnup may worn	 First use end mill to stright, then use drill processing
	Outer slope	Retract inclination angle is large, edge prop up cause single side crush	Edge single side crush, may cause crush.and hole turn up may worn	First use end mill to stright, then use drill processing
	Eccentric hole	 Excursion of deep hole is above 0.2mm		Some times can use flat base construction to processin

MOSHI TAPER SHANK COOLING RING INSTALLATION INSTRUCTION



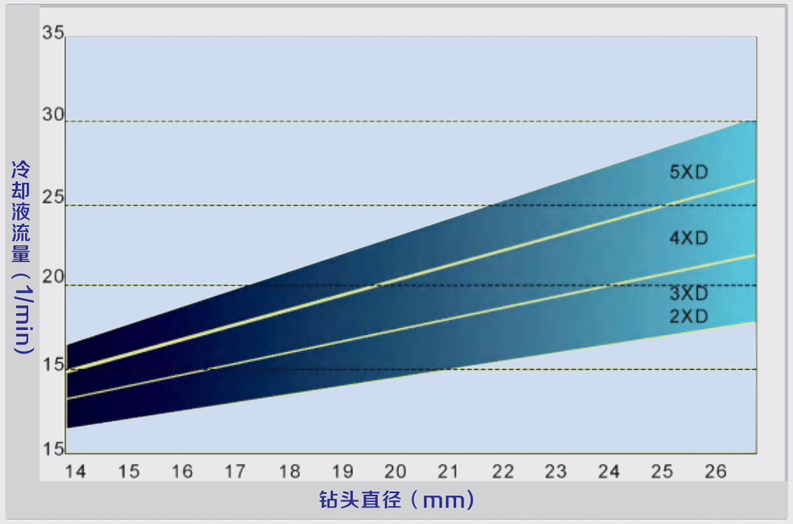




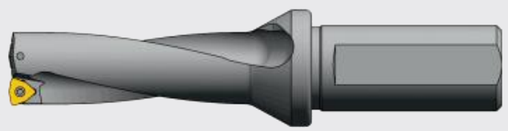
FAST DRILL

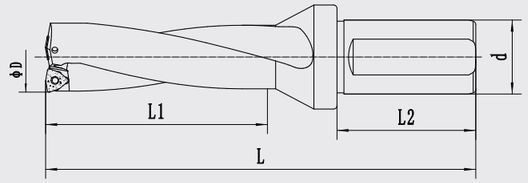


COOLANT FLOW



2D WC FAST DRILL

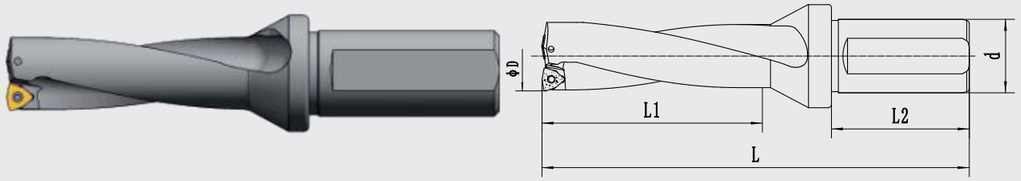




Product specifications	D	L1	L	L2	d
ZD02-14.0-XP25-WC03-02	14	28	106	56	25
ZD02-14.5-XP25-WC03-02	14.5	29	107		
ZD02-15.0-XP25-WC03-02	15	30	108		
ZD02-15.5-XP25-WC03-02	15.5	31	109		
ZD02-16.0-XP25-WC03-02	16	32	110		
ZD02-16.5-XP25-WC03-02	16.5	33	111		
ZD02-17.0-XP25-WC03-02	17	34	112		
ZD02-17.5-XP25-WC03-02	17.5	35	113		
ZD02-18.0-XP25-WC03-02	18	36	114		
ZD02-18.5-XP25-WC03-02	18.5	37	115		
ZD02-19.0-XP25-WC03-02	19	38	116		
ZD02-19.5-XP25-WC03-02	19.5	39	117		
ZD02-20.0-XP25-WC03-02	20	40	119		
ZD02-20.5-XP25-WC03-02	20.5	41	120		
ZD02-21.0-XP25-WC04-02	21	42	121		
ZD02-21.5-XP25-WC04-02	21.5	43	122		
ZD02-22.0-XP25-WC04-02	22	44	123		
ZD02-22.5-XP25-WC04-02	22.5	45	124		
ZD02-23.0-XP25-WC04-02	23	46	125		
ZD02-23.5-XP25-WC04-02	23.5	47	126		
ZD02-24.0-XP25-WC04-02	24	48	127		
ZD02-24.5-XP25-WC04-02	24.5	49	128		
ZD02-25.0-XP32-WC05-02	25	50	141	60	32
ZD02-25.5-XP32-WC05-02	25.5	51	142		
ZD02-26.0-XP32-WC05-02	26	52	143		
ZD02-26.5-XP32-WC05-02	26.5	53	144		
ZD02-27.0-XP32-WC05-02	27	54	145		
ZD02-27.5-XP32-WC05-02	27.5	55	146		
ZD02-28.0-XP32-WC05-02	28	56	147		
ZD02-28.5-XP32-WC05-02	28.5	57	148		
ZD02-29.0-XP32-WC05-02	29	58	149		
ZD02-29.5-XP32-WC05-02	29.5	59	150		
ZD02-30.0-XP32-WC05-02	30	60	151		
ZD02-30.5-XP32-WC05-02	30.5	61	152		
ZD02-31.0-XP32-WC05-02	31	62	153		
ZD02-31.5-XP32-WC05-02	31.5	63	154		
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Product specifications	D	L1	L	L2	d
ZD02-32.0-XP32-WC06-02	32	64	155	60	32
ZD02-32.5-XP32-WC06-02	32.5	65	156		
ZD02-33.0-XP32-WC06-02	33	66	157		
ZD02-33.5-XP32-WC06-02	33.5	67	158		
ZD02-34.0-XP32-WC06-02	34	68	159		
ZD02-34.5-XP32-WC06-02	34.5	69	160		
ZD02-35.0-XP32-WC06-02	35	70	161		
ZD02-35.5-XP32-WC06-02	35.5	71	162		
ZD02-36.0-XP32-WC06-02	36	72	163		
ZD02-36.5-XP32-WC06-02	36.5	73	164		
ZD02-37.0-XP32-WC06-02	37	74	165		
ZD02-37.5-XP32-WC06-02	37.5	75	166		
ZD02-38.0-XP32-WC06-02	38	76	167		
ZD02-38.5-XP32-WC06-02	38.5	77	168		
ZD02-39.0-XP32-WC06-02	39	78	169		
ZD02-39.5-XP32-WC06-02	39.5	79	170		
ZD02-40.0-XP32-WC06-02	40	80	171		
ZD02-41.0-XP32-WC06-02	41	82	173		
ZD02-42.0-XP32-WC06-02	42	84	175		
ZD02-43.0-XP40-WC08-02	43	86	186	65	40
ZD02-44.0-XP40-WC08-02	44	88	188		
ZD02-45.0-XP40-WC08-02	45	90	190		
ZD02-46.0-XP40-WC08-02	46	92	192		
ZD02-47.0-XP40-WC08-02	47	94	194		
ZD02-48.0-XP40-WC08-02	48	96	196		
ZD02-49.0-XP40-WC08-02	49	98	198		
ZD02-50.0-XP40-WC08-02	50	100	200		
ZD02-51.0-XP40-WC08-02	51	102	202		
ZD02-52.0-XP40-WC08-02	52	104	204		
ZD02-53.0-XP40-WC08-02	53	106	206		
ZD02-54.0-XP40-WC08-02	54	108	208		
ZD02-55.0-XP40-WC08-02	55	110	210		
ZD02-56.0-XP40-WC08-02	56	112	212		
ZD02-57.0-XP40-WC08-02	57	114	214		
ZD02-58.0-XP40-WC06-04	58	116	216		
ZD02-59.0-XP40-WC06-04	59	118	218		
ZD02-60.0-XP40-WC06-04	60	120	220		

3D WC FAST DRILL

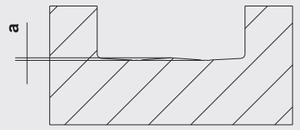


Product specifications	D	L1	L	L2	d
ZD03-14.0-XP25-WC03-02	14	42	120	56	25
ZD03-14.5-XP25-WC03-02	14.5	43.5	122		
ZD03-15.0-XP25-WC03-02	15	45	123		
ZD03-15.5-XP25-WC03-02	15.5	46.5	124		
ZD03-16.0-XP25-WC03-02	16	48	126		
ZD03-16.5-XP25-WC03-02	16.5	49.5	127		
ZD03-17.0-XP25-WC03-02	17	51	129		
ZD03-17.5-XP25-WC03-02	17.5	52.5	130		
ZD03-18.0-XP25-WC03-02	18	54	132		
ZD03-18.5-XP25-WC03-02	18.5	55.5	133		
ZD03-19.0-XP25-WC03-02	19	57	135		
ZD03-19.5-XP25-WC03-02	19.5	58.5	135		
ZD03-20.0-XP25-WC03-02	20	60	139		
ZD03-20.5-XP25-WC03-02	20.5	61.5	140		
ZD03-21.0-XP25-WC04-02	21	63	142		
ZD03-21.5-XP25-WC04-02	21.5	64.5	143		
ZD03-22.0-XP25-WC04-02	22	66	145		
ZD03-22.5-XP25-WC04-02	22.5	67.5	148		
ZD03-23.0-XP25-WC04-02	23	69	148		
ZD03-23.5-XP25-WC04-02	23.5	70.5	149		
ZD03-24.0-XP25-WC04-02	24	72	151		
ZD03-24.5-XP25-WC04-02	24.5	73.5	152		
ZD03-25.0-XP32-WC05-02	25	75	166	60	32
ZD03-25.5-XP32-WC05-02	25.5	76.5	167		
ZD03-26.0-XP32-WC05-02	26	78	169		
ZD03-26.5-XP32-WC05-02	26.5	79.5	170		
ZD03-27.0-XP32-WC05-02	27	81	172		
ZD03-27.5-XP32-WC05-02	27.5	82.5	173		
ZD03-28.0-XP32-WC05-02	28	84	175		
ZD03-28.5-XP32-WC05-02	28.5	85.5	176		
ZD03-29.0-XP32-WC05-02	29	87	178		
ZD03-29.5-XP32-WC05-02	29.5	88.5	179		
ZD03-30.0-XP32-WC05-02	30	90	181		
ZD03-30.5-XP32-WC05-02	30.5	91.5	182		
ZD03-31.0-XP32-WC05-02	31	93	184		
ZD03-31.5-XP32-WC05-02	31.5	94.5	185		
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Product specifications	D	L1	L	L2	d
ZD03-32.0-XP32-WC06-02	32	96	187	60	32
ZD03-32.5-XP32-WC06-02	32.5	97.5	188		
ZD03-33.0-XP32-WC06-02	33	99	190		
ZD03-33.5-XP32-WC06-02	33.5	100.5	191		
ZD03-34.0-XP32-WC06-02	34	102	193		
ZD03-34.5-XP32-WC06-02	34.5	103.5	194		
ZD03-35.0-XP32-WC06-02	35	105	196		
ZD03-35.5-XP32-WC06-02	35.5	106.5	197		
ZD03-36.0-XP32-WC06-02	36	108	199		
ZD03-36.5-XP32-WC06-02	36.5	109.5	200		
ZD03-37.0-XP32-WC06-02	37	111	202		
ZD03-37.5-XP32-WC06-02	37.5	112.5	203		
ZD03-38.0-XP32-WC06-02	38	114	205		
ZD03-38.5-XP32-WC06-02	38.5	115.5	206		
ZD03-39.0-XP32-WC06-02	39	117	206		
ZD03-39.5-XP32-WC06-02	39.5	118.5	209		
ZD03-40.0-XP32-WC06-02	40	120	211		
ZD03-41.0-XP32-WC06-02	41	123	214		
ZD03-42.0-XP32-WC06-02	42	126	217		
ZD03-43.0-XP40-WC08-02	43	129	229	65	40
ZD03-44.0-XP40-WC08-02	44	132	232		
ZD03-45.0-XP40-WC08-02	45	135	235		
ZD03-46.0-XP40-WC08-02	46	138	238		
ZD03-47.0-XP40-WC08-02	47	141	241		
ZD03-48.0-XP40-WC08-02	48	144	244		
ZD03-49.0-XP40-WC08-02	49	147	247		
ZD03-50.0-XP40-WC08-02	50	150	250		
ZD03-51.0-XP40-WC08-02	51	153	253		
ZD03-52.0-XP40-WC08-02	52	156	256		
ZD03-53.0-XP40-WC08-02	53	159	259		
ZD03-54.0-XP40-WC08-02	54	162	262		
ZD03-55.0-XP40-WC08-02	55	165	265		
ZD03-56.0-XP40-WC08-02	56	168	268		
ZD03-57.0-XP40-WC08-02	57	171	271		
ZD03-58.0-XP40-WC06-04	58	174	274		
ZD03-59.0-XP40-WC06-04	59	177	277		
ZD03-60.0-XP40-WC06-04	60	180	280		

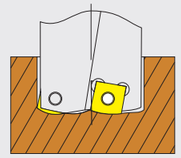
BLIND HOLE UNDERSIDE SIZE DESCRIPTION

sp inserts shape

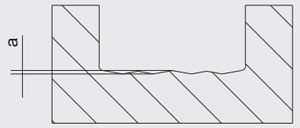


INSERTS SPECIFICATION	WAVE ALTITUDE
SPMG050204	0.30mm
SPMG060204	0.40mm
SPMG07T308	0.50mm
SPMG090408	0.70mm
SPMG0110408	0.80mm
SPMG140512	0.90mm

Quadrilateral blade short-hole drill

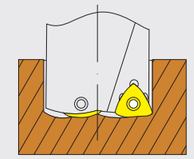


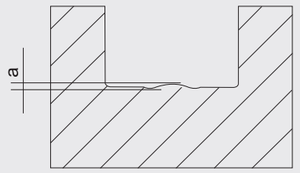
WC inserts shape



INSERTS SPECIFICATION	WAVE ALTITUDE
WCMT030208	0.5mm
WCMT040208	0.6mm
WCMT050308	0.8mm
WCMT060308	0.95mm
WCMT080412	1.25mm

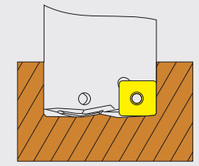
Scalene hexagon short- hole drill





INSERTS SPECIFICATION	WAVE ALTITUDE
WCMT030208 SPMG050204	0.40mm
WCMT030208 SPMG060204	0.40mm
WCMT040208 SPMG060204	0.50mm
WCMT050308 SPMG070308	0.70mm
WCMT050308 SPMG090408	0.70mm
WCMT060308 SPMG110408	0.90mm
WCMT080412 SPMG140512	1.20mm

quadrangle and hexagon combo inserts short-hole drill



BLIND HOLE UNDERSIDE SIZE DESCRIPTION

DRILL TIP DRILLING RATE

$n = \frac{Vc \times 1000}{\pi \times Dc}$

Vc(m/min): line speed
Dc(mm): drill
n（rev/min): rotate speed

SAMPLE
inserts line speed is 100/min, drill diameter is 20mm,其钻头转速： $n = \frac{100 \times 1000}{3.14 \times 20} = 1600$ rev/min

FEED SPEED

Vf= Fr x n

Vf(mm/min): line speed
Fr(mm/rev): feed every rotate
n(rev/min): main axis

SAMPLE
main axis rotate speed is 1600re/min, every rotate feed is 0.1mm/rev,
feed speed is vf=Fr Xn=1600*0.1=160mm/min

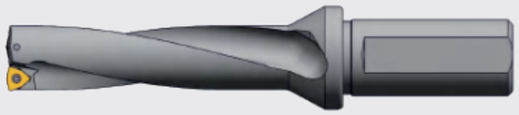
HOLE PROCESSING TIME

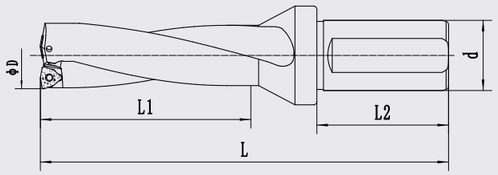
$Tc = \frac{H}{Vf} \times 60$

Tc(s): processing time
H(mm): drilling hole depth

SAMPLE
drilling a diameter is 20mm, depth hole is 40mm, feed speed is 140mm/min: $Tc = \frac{H}{Vf} \times 60 = \frac{40}{140} \times 60 = 17s$

4D WC FAST DRILL



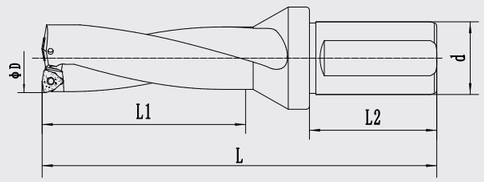


Product specifications	D	L1	L	L2	d
ZD04-14.0-XP25-WC03-02	14	56	134	56	25
ZD04-14.5-XP25-WC03-02	14.5	58	136		
ZD04-15.0-XP25-WC03-02	15	60	138		
ZD04-15.5-XP25-WC03-02	15.5	62	140		
ZD04-16.0-XP25-WC03-02	16	64	142		
ZD04-16.5-XP25-WC03-02	16.5	66	144		
ZD04-17.0-XP25-WC03-02	17	68	146		
ZD04-17.5-XP25-WC03-02	17.5	70	148		
ZD04-18.0-XP25-WC03-02	18	72	150		
ZD04-18.5-XP25-WC03-02	18.5	74	152		
ZD04-19.0-XP25-WC03-02	19	76	154		
ZD04-19.5-XP25-WC03-02	19.5	78	155		
ZD04-20.0-XP25-WC03-02	20	80	159		
ZD04-20.5-XP25-WC03-02	20.5	82	161		
ZD04-21.0-XP25-WC04-02	21	84	163		
ZD04-21.5-XP25-WC04-02	21.5	86	165		
ZD04-22.0-XP25-WC04-02	22	88	167		
ZD04-22.5-XP25-WC04-02	22.5	90	169		
ZD04-23.0-XP25-WC04-02	23	92	171		
ZD04-23.5-XP25-WC04-02	23.5	94	173		
ZD04-24.0-XP25-WC04-02	24	96	175		
ZD04-24.5-XP25-WC04-02	24.5	98	177		
ZD04-25.0-XP32-WC05-02	25	100	191	60	32
ZD04-25.5-XP32-WC05-02	25.5	102	193		
ZD04-26.0-XP32-WC05-02	26	104	195		
ZD04-26.5-XP32-WC05-02	26.5	106	197		
ZD04-27.0-XP32-WC05-02	27	108	199		
ZD04-27.5-XP32-WC05-02	27.5	110	201		
ZD04-28.0-XP32-WC05-02	28	112	203		
ZD04-28.5-XP32-WC05-02	28.5	114	205		
ZD04-29.0-XP32-WC05-02	29	116	207		
ZD04-29.5-XP32-WC05-02	29.5	118	209		
ZD04-30.0-XP32-WC05-02	30	120	211		
ZD04-30.5-XP32-WC05-02	30.5	122	213		
ZD04-31.0-XP32-WC05-02	31	124	215		
ZD04-31.5-XP32-WC05-02	31.5	126	217		
-	-	-	-	-	-

Product specifications	D	L1	L	L2	d
ZD04-32.0-XP32-WC06-02	32	128	219	60	32
ZD04-32.5-XP32-WC06-02	32.5	130	221		
ZD04-33.0-XP32-WC06-02	33	132	223		
ZD04-33.5-XP32-WC06-02	33.5	134	225		
ZD04-34.0-XP32-WC06-02	34	136	227		
ZD04-34.5-XP32-WC06-02	34.5	138	229		
ZD04-35.0-XP32-WC06-02	35	140	231		
ZD04-35.5-XP32-WC06-02	35.5	142	233		
ZD04-36.0-XP32-WC06-02	36	144	235		
ZD04-36.5-XP32-WC06-02	36.5	146	237		
ZD04-37.0-XP32-WC06-02	37	148	239		
ZD04-37.5-XP32-WC06-02	37.5	150	241		
ZD04-38.0-XP32-WC06-02	38	152	243		
ZD04-38.5-XP32-WC06-02	38.5	154	245		
ZD04-39.0-XP32-WC06-02	39	156	247		
ZD04-39.5-XP32-WC06-02	39.5	158	249		
ZD04-40.0-XP32-WC06-02	40	160	251		
ZD04-41.0-XP32-WC06-02	41	164	255		
ZD04-42.0-XP32-WC06-02	42	168	259		
ZD04-43.0-XP40-WC08-02	43	172	272	65	40
ZD04-44.0-XP40-WC08-02	44	176	276		
ZD04-45.0-XP40-WC08-02	45	180	280		
ZD04-46.0-XP40-WC08-02	46	184	284		
ZD04-47.0-XP40-WC08-02	47	188	288		
ZD04-48.0-XP40-WC08-02	48	192	292		
ZD04-49.0-XP40-WC08-02	49	196	296		
ZD04-50.0-XP40-WC08-02	50	200	300		
ZD04-51.0-XP40-WC08-02	51	204	304		
ZD04-52.0-XP40-WC08-02	52	208	308		
ZD04-53.0-XP40-WC08-02	53	212	312		
ZD04-54.0-XP40-WC08-02	54	216	316		
ZD04-55.0-XP40-WC08-02	55	220	320		
ZD04-56.0-XP40-WC08-02	56	224	324		
ZD04-57.0-XP40-WC08-02	57	228	328		
ZD04-58.0-XP40-WC06-04	58	232	332		
ZD04-59.0-XP40-WC06-04	59	236	336		
ZD04-60.0-XP40-WC06-04	60	240	340		

5D WC FAST DRILL



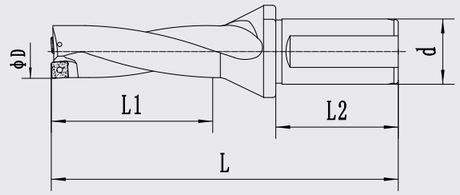


Product specifications	D	L1	L	L2	d
ZD05-14.0-XP25-WC03-02	14	70	148	56	25
ZD05-14.5-XP25-WC03-02	14.5	72.5	150		
ZD05-15.0-XP25-WC03-02	15	75	153		
ZD05-15.5-XP25-WC03-02	15.5	77.5	155		
ZD05-16.0-XP25-WC03-02	16	80	158		
ZD05-16.5-XP25-WC03-02	16.5	82.5	160		
ZD05-17.0-XP25-WC03-02	17	85	163		
ZD05-17.5-XP25-WC03-02	17.5	87.5	165		
ZD05-18.0-XP25-WC03-02	18	90	168		
ZD05-18.5-XP25-WC03-02	18.5	92.5	170		
ZD05-19.0-XP25-WC03-02	19	95	173		
ZD05-19.5-XP25-WC03-02	19.5	97.5	175		
ZD05-20.0-XP25-WC03-02	20	100	179		
ZD05-20.5-XP25-WC03-02	20.5	102.5	181		
ZD05-21.0-XP25-WC04-02	21	105	184		
ZD05-21.5-XP25-WC04-02	21.5	107.5	186		
ZD05-22.0-XP25-WC04-02	22	110	189		
ZD05-22.5-XP25-WC04-02	22.5	112.5	193		
ZD05-23.0-XP25-WC04-02	23	115	194		
ZD05-23.5-XP25-WC04-02	23.5	117.5	196		
ZD05-24.0-XP25-WC04-02	24	120	199		
ZD05-24.5-XP25-WC04-02	24.5	122.5	201		
ZD05-25.0-XP32-WC05-02	25	125	216	60	32
ZD05-25.5-XP32-WC05-02	25.5	127.5	218		
ZD05-26.0-XP32-WC05-02	26	130	221		
ZD05-26.5-XP32-WC05-02	26.5	132.5	223		
ZD05-27.0-XP32-WC05-02	27	135	226		
ZD05-27.5-XP32-WC05-02	27.5	137.5	228		
ZD05-28.0-XP32-WC05-02	28	140	231		
ZD05-28.5-XP32-WC05-02	28.5	142.5	233		
ZD05-29.0-XP32-WC05-02	29	145	236		
ZD05-29.5-XP32-WC05-02	29.5	147.5	238		
ZD05-30.0-XP32-WC05-02	30	150	241		
ZD05-30.5-XP32-WC05-02	30.5	152.5	243		
ZD05-31.0-XP32-WC05-02	31	155	246		
ZD05-31.5-XP32-WC05-02	31.5	157.5	248		
ZD05-32.0-XP32-WC06-02	32	160	251		

Product specifications	D	L1	L	L2	d
ZD05-32.5-XP32-WC06-02	32.5	162.5	253	60	32
ZD05-33.0-XP32-WC06-02	33	165	256		
ZD05-33.5-XP32-WC06-02	33.5	167.5	258		
ZD05-34.0-XP32-WC06-02	34	170	261		
ZD05-34.5-XP32-WC06-02	34.5	172.5	263		
ZD05-35.0-XP32-WC06-02	35	175	266	60	32
ZD05-35.5-XP32-WC06-02	35.5	177.5	268		
ZD05-36.0-XP32-WC06-02	36	180	271		
ZD05-36.5-XP32-WC06-02	36.5	182.5	273		
ZD05-37.0-XP32-WC06-02	37	185	276		
ZD05-37.5-XP32-WC06-02	37.5	187.5	278		
ZD05-38.0-XP32-WC06-02	38	190	281		
ZD05-38.5-XP32-WC06-02	38.5	192.5	283		
ZD05-39.0-XP32-WC06-02	39	195	284		
ZD05-39.5-XP32-WC06-02	39.5	197.5	288		
ZD05-40.0-XP32-WC06-02	40	200	291		
ZD05-41.0-XP32-WC06-02	41	205	296		
ZD05-42.0-XP32-WC06-02	42	210	301		
ZD05-43.0-XP40-WC08-02	43	215	315	65	40
ZD05-44.0-XP40-WC08-02	44	220	320		
ZD05-45.0-XP40-WC08-02	45	225	325		
ZD05-46.0-XP40-WC08-02	46	230	330		
ZD05-47.0-XP40-WC08-02	47	235	335		
ZD05-48.0-XP40-WC08-02	48	240	340		
ZD05-49.0-XP40-WC08-02	49	245	345		
ZD05-50.0-XP40-WC08-02	50	250	350		
ZD05-51.0-XP40-WC08-02	51	255	355		
ZD05-52.0-XP40-WC08-02	52	260	360		
ZD05-53.0-XP40-WC08-02	53	265	365		
ZD05-54.0-XP40-WC08-02	54	270	370		
ZD05-55.0-XP40-WC08-02	55	275	375		
ZD05-56.0-XP40-WC08-02	56	280	380		
ZD05-57.0-XP40-WC08-02	57	285	385		
ZD05-58.0-XP40-WC06-04	58	290	390		
ZD05-59.0-XP40-WC06-04	59	295	395		
ZD05-60.0-XP40-WC06-04	60	300	400		

2D SP FAST DRILL





Product specifications	D	L1	L	L2	d
ZD02-13.0-XP25-SP05-02	13	26	104	56	25
ZD02-13.5-XP25-SP05-02	13.5	27	105		
ZD02-14.0-XP25-SP05-02	14	28	106		
ZD02-14.5-XP25-SP05-02	14.5	29	107		
ZD02-15.0-XP25-SP05-02	15	30	108		
ZD02-15.5-XP25-SP06-02	15.5	31	109		
ZD02-16.0-XP25-SP06-02	16	32	110		
ZD02-16.5-XP25-SP06-02	16.5	33	111		
ZD02-17.0-XP25-SP06-02	17	34	112		
ZD02-17.5-XP25-SP06-02	17.5	35	113		
ZD02-18.0-XP25-SP06-02	18	36	114		
ZD02-18.5-XP25-SP06-02	18.5	37	115		
ZD02-19.0-XP25-SP06-02	19	38	116		
ZD02-19.5-XP25-SP06-02	19.5	39	117		
ZD02-20.0-XP25-SP06-02	20	40	119		
ZD02-20.5-XP25-SP06-02	20.5	41	120		
ZD02-21.0-XP25-SP06-02	21	42	121		
ZD02-21.5-XP25-SP06-02	21.5	43	122		
ZD02-22.0-XP25-SP07-02	22	44	123		
ZD02-22.5-XP25-SP07-02	22.5	45	124		
ZD02-23.0-XP25-SP07-02	23	46	125		
ZD02-23.5-XP25-SP07-02	23.5	47	126		
ZD02-24.0-XP25-SP07-02	24	48	127		
ZD02-24.5-XP25-SP07-02	24.5	49	128		
ZD02-25.0-XP32-SP07-02	25	50	141	60	32
ZD02-25.5-XP32-SP07-02	25.5	51	142		
ZD02-26.0-XP32-SP07-02	26	52	143		
ZD02-26.5-XP32-SP07-02	26.5	53	144		
ZD02-27.0-XP32-SP07-02	27	54	145		
ZD02-27.5-XP32-SP09-02	27.5	55	146		
ZD02-28.0-XP32-SP09-02	28	56	147		
ZD02-28.5-XP32-SP09-02	28.5	57	148		
ZD02-29.0-XP32-SP09-02	29	58	149		
ZD02-29.5-XP32-SP09-02	29.5	59	150		
ZD02-30.0-XP32-SP09-02	30	60	151		
ZD02-30.5-XP32-SP09-02	30.5	61	152		
ZD02-31.0-XP32-SP09-02	31	62	153		
-	-	-	-	-	-

Product specifications	D	L1	L	L2	d
ZD02-31.5-XP32-SP09-02	31.5	63	154	60	32
ZD02-32.0-XP32-SP09-02	32	64	155		
ZD02-32.5-XP32-SP09-02	32.5	65	156		
ZD02-33.0-XP32-SP09-02	33	66	157		
ZD02-33.5-XP32-SP11-02	33.5	67	158		
ZD02-34.0-XP32-SP11-02	34	68	159		
ZD02-34.5-XP32-SP11-02	34.5	69	160		
ZD02-35.0-XP32-SP11-02	35	70	161		
ZD02-35.5-XP32-SP11-02	35.5	71	162		
ZD02-36.0-XP32-SP11-02	36	72	163		
ZD02-36.5-XP32-SP11-02	36.5	73	164		
ZD02-37.0-XP32-SP11-02	37	74	165		
ZD02-37.5-XP32-SP11-02	37.5	75	166		
ZD02-38.0-XP32-SP11-02	38	76	167		
ZD02-38.5-XP32-SP11-02	38.5	77	168		
ZD02-39.0-XP32-SP11-02	39	78	169		
ZD02-39.5-XP32-SP11-02	39.5	79	170		
ZD02-40.0-XP32-SP11-02	40	80	171		
ZD02-41.0-XP32-SP14-02	41	82	173		
ZD02-42.0-XP32-SP14-02	42	84	175		
ZD02-43.0-XP40-SP14-02	43	86	186	65	40
ZD02-44.0-XP40-SP14-02	44	88	188		
ZD02-45.0-XP40-SP14-02	45	90	190		
ZD02-46.0-XP40-SP14-02	46	92	192		
ZD02-47.0-XP40-SP14-02	47	94	194		
ZD02-48.0-XP40-SP14-02	48	96	196		
ZD02-49.0-XP40-SP14-02	49	98	198		
ZD02-50.0-XP40-SP14-02	50	100	200		
ZD02-51.0-XP40-SP14-02	51	102	202		
ZD02-52.0-XP40-SP09-04	52	104	204		
ZD02-53.0-XP40-SP09-04	53	106	206		
ZD02-54.0-XP40-SP09-04	54	108	208		
ZD02-55.0-XP40-SP09-04	55	110	210		
ZD02-56.0-XP40-SP09-04	56	112	212		
ZD02-57.0-XP40-SP09-04	57	114	214		
ZD02-58.0-XP40-SP09-04	58	116	216		
ZD02-59.0-XP40-SP09-04	59	118	218		
ZD02-60.0-XP40-SP09-04	60	120	220		

MODEL NAMED RULES

ZD | **03** | **–30.0** | **–XP** | **32** | **–W** | **C** | **05** | **–02**

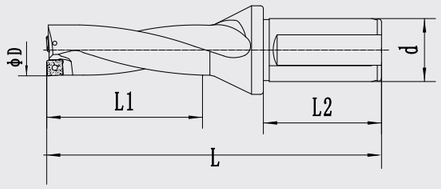
- **ZD** — drill type: code ZD = short-hole drill
- **03** — draw ratio: 02、03、04、05
- **–30.0** — drill diameter: range 14.0-60.0 / 16mm-58mm
- **–XP** — drill type: code XP = weldon drill
- **32** — drill set place (mm): 25、32、40
- **–W** — drill shape: W = ◇, S = □
- **C** — inserts clearance angle: C = 7°, P = 11°
- **05** — cutting edge length (mm):

code	edge W	edge S
03	3.8	-
04	4.3	-
05	5.4	-
06	6.5	6.35
08	8.7	8.0
09	-	9.925
12	-	12.7

- **–02** — install drill number

3D SP FAST DRILL



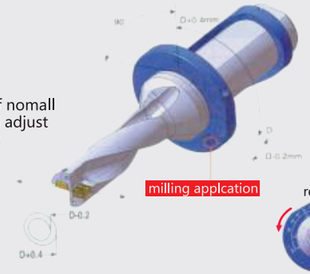


Product specifications	D	L1	L	L2	d
ZD03-13.0-XP25-SP05-02	13	39	117	56	25
ZD03-13.5-XP25-SP05-02	13.5	40.5	118		
ZD03-14.0-XP25-SP05-02	14	42	120		
ZD03-14.5-XP25-SP05-02	14.5	43.5	122		
ZD03-15.0-XP25-SP05-02	15	45	123		
ZD03-15.5-XP25-SP06-02	15.5	46.5	124		
ZD03-16.0-XP25-SP06-02	16	48	126		
ZD03-16.5-XP25-SP06-02	16.5	19.5	127		
ZD03-17.0-XP25-SP06-02	17	51	129		
ZD03-17.5-XP25-SP06-02	17.5	52.5	130		
ZD03-18.0-XP25-SP06-02	18	54	132		
ZD03-18.5-XP25-SP06-02	18.5	55.5	133		
ZD03-19.0-XP25-SP06-02	19	57	135		
ZD03-19.5-XP25-SP06-02	19.5	58.5	135		
ZD03-20.0-XP25-SP06-02	20	60	139		
ZD03-20.5-XP25-SP06-02	20.5	61.5	140		
ZD03-21.0-XP25-SP06-02	21	63	142		
ZD03-21.5-XP25-SP06-02	21.5	64.5	143		
ZD03-22.0-XP25-SP07-02	22	66	145		
ZD03-22.5-XP25-SP07-02	22.5	67.5	148		
ZD03-23.0-XP25-SP07-02	23	69	148		
ZD03-23.5-XP25-SP07-02	23.5	70.5	149		
ZD03-24.0-XP25-SP07-02	24	72	151		
ZD03-24.5-XP25-SP07-02	24.5	73.5	152		
ZD03-25.0-XP32-SP07-02	25	75	166	60	32
ZD03-25.5-XP32-SP07-02	25.5	76.5	167		
ZD03-26.0-XP32-SP07-02	26	78	169		
ZD03-26.5-XP32-SP07-02	26.5	79.5	170		
ZD03-27.0-XP32-SP07-02	27	81	172		
ZD03-27.5-XP32-SP09-02	27.5	82.5	173		
ZD03-28.0-XP32-SP09-02	28	84	175		
ZD03-28.5-XP32-SP09-02	28.5	85.5	176		
ZD03-29.0-XP32-SP09-02	29	87	178		
ZD03-29.5-XP32-SP09-02	29.5	88.5	179		
ZD03-30.0-XP32-SP09-02	30	90	181		
ZD03-30.5-XP32-SP09-02	30.5	91.5	182		
ZD03-31.0-XP32-SP09-02	31	93	184		
-	-	-	-	-	-

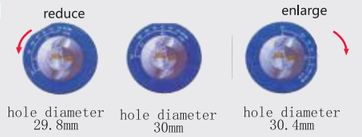
Product specifications	D	L1	L	L2	d
ZD03-31.5-XP32-SP09-02	31.5	94.5	185	60	32
ZD03-32.0-XP32-SP09-02	32	96	187		
ZD03-32.5-XP32-SP09-02	32.5	97.5	188		
ZD03-33.0-XP32-SP09-02	33	99	190		
ZD03-33.5-XP32-SP11-02	33.5	100.5	191		
ZD03-34.0-XP32-SP11-02	34	102	193		
ZD03-34.5-XP32-SP11-02	34.5	103.5	194		
ZD03-35.0-XP32-SP11-02	35	105	196		
ZD03-35.5-XP32-SP11-02	35.5	106.5	197		
ZD03-36.0-XP32-SP11-02	36	108	199		
ZD03-36.5-XP32-SP11-02	36.5	109.5	200		
ZD03-37.0-XP32-SP11-02	37	111	202		
ZD03-37.5-XP32-SP11-02	37.5	112.5	203		
ZD03-38.0-XP32-SP11-02	38	114	205		
ZD03-38.5-XP32-SP11-02	38.5	115.5	206		
ZD03-39.0-XP32-SP11-02	39	117	206		
ZD03-39.5-XP32-SP11-02	39.5	118.5	209		
ZD03-40.0-XP32-SP11-02	40	120	211		
ZD03-41.0-XP32-SP14-02	41	123	214		
ZD03-42.0-XP32-SP14-02	42	126	217		
ZD03-43.0-XP40-SP14-02	43	129	229	65	40
ZD03-44.0-XP40-SP14-02	44	132	232		
ZD03-45.0-XP40-SP14-02	45	135	235		
ZD03-46.0-XP40-SP14-02	46	138	238		
ZD03-47.0-XP40-SP14-02	47	141	241		
ZD03-48.0-XP40-SP14-02	48	144	244		
ZD03-49.0-XP40-SP14-02	49	147	247		
ZD03-50.0-XP40-SP14-02	50	150	250		
ZD03-51.0-XP40-SP14-02	51	153	253		
ZD03-52.0-XP40-SP09-04	52	156	256		
ZD03-53.0-XP40-SP09-04	53	159	259		
ZD03-54.0-XP40-SP09-04	54	162	262		
ZD03-55.0-XP40-SP09-04	55	165	265		
ZD03-56.0-XP40-SP09-04	56	168	268		
ZD03-57.0-XP40-SP09-04	57	171	271		
ZD03-58.0-XP40-SP09-04	58	174	274		
ZD03-59.0-XP40-SP09-04	59	177	277		
ZD03-60.0-XP40-SP09-04	60	180	280		

MILLING APPLCATION

While milling machine, if diameter of nomall processing hole need to change, can adjust eccentric locking collar axial position

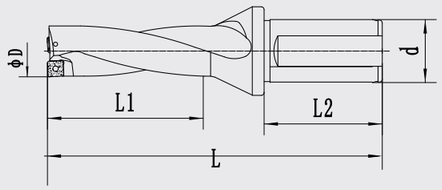


If you want to enlarge hole diameter,clockwise rotate sleeve, if wish to reduce hole diameter,anticlockwise rotate sleeve, concreteness: drill diameter: 30mm



4D SP FAST DRILL





Product specifications	D	L1	L	L2	d
ZD04-13.0-XP25-SP05-02	13	52	130	56	25
ZD04-13.5-XP25-SP05-02	13.5	54	132		
ZD04-14.0-XP25-SP05-02	14	56	134		
ZD04-14.5-XP25-SP05-02	14.5	58	136		
ZD04-15.0-XP25-SP05-02	15	60	138		
ZD04-15.5-XP25-SP06-02	15.5	62	140		
ZD04-16.0-XP25-SP06-02	16	64	142		
ZD04-16.5-XP25-SP06-02	16.5	66	144		
ZD04-17.0-XP25-SP06-02	17	68	146		
ZD04-17.5-XP25-SP06-02	17.5	70	148		
ZD04-18.0-XP25-SP06-02	18	72	150		
ZD04-18.5-XP25-SP06-02	18.5	74	152		
ZD04-19.0-XP25-SP06-02	19	76	154		
ZD04-19.5-XP25-SP06-02	19.5	78	155		
ZD04-20.0-XP25-SP06-02	20	80	159		
ZD04-20.5-XP25-SP06-02	20.5	82	161		
ZD04-21.0-XP25-SP06-02	21	84	163		
ZD04-21.5-XP25-SP06-02	21.5	86	165		
ZD04-22.0-XP25-SP07-02	22	88	167		
ZD04-22.5-XP25-SP07-02	22.5	90	169		
ZD04-23.0-XP25-SP07-02	23	92	171		
ZD04-23.5-XP25-SP07-02	23.5	94	173		
ZD04-24.0-XP25-SP07-02	24	96	175		
ZD04-24.5-XP25-SP07-02	24.5	98	177		
ZD04-25.0-XP32-SP07-02	25	100	191	60	32
ZD04-25.5-XP32-SP07-02	25.5	102	193		
ZD04-26.0-XP32-SP07-02	26	104	195		
ZD04-26.5-XP32-SP07-02	26.5	106	197		
ZD04-27.0-XP32-SP07-02	27	108	199		
ZD04-27.5-XP32-SP09-02	27.5	110	201		
ZD04-28.0-XP32-SP09-02	28	112	203		
ZD04-28.5-XP32-SP09-02	28.5	114	205		
ZD04-29.0-XP32-SP09-02	29	116	207		
ZD04-29.5-XP32-SP09-02	29.5	118	209		
ZD04-30.0-XP32-SP09-02	30	120	211		
ZD04-30.5-XP32-SP09-02	30.5	122	213		
ZD04-31.0-XP32-SP09-02	31	124	215		
–	–	–	–	–	–

Product specifications	D	L1	L	L2	d
ZD04-31.5-XP32-SP09-02	31.5	126	217	60	32
ZD04-32.0-XP32-SP09-02	32	128	219		
ZD04-32.5-XP32-SP09-02	32.5	130	221		
ZD04-33.0-XP32-SP09-02	33	132	223		
ZD04-33.5-XP32-SP11-02	33.5	134	225		
ZD04-34.0-XP32-SP11-02	34	136	227		
ZD04-34.5-XP32-SP11-02	34.5	138	229		
ZD04-35.0-XP32-SP11-02	35	140	231		
ZD04-35.5-XP32-SP11-02	35.5	142	233		
ZD04-36.0-XP32-SP11-02	36	144	235		
ZD04-36.5-XP32-SP11-02	36.5	146	237		
ZD04-37.0-XP32-SP11-02	37	148	239		
ZD04-37.5-XP32-SP11-02	37.5	150	241		
ZD04-38.0-XP32-SP11-02	38	152	243		
ZD04-38.5-XP32-SP11-02	38.5	154	245		
ZD04-39.0-XP32-SP11-02	39	156	247		
ZD04-39.5-XP32-SP11-02	39.5	158	249		
ZD04-40.0-XP32-SP11-02	40	160	251		
ZD04-41.0-XP32-SP14-02	41	164	255		
ZD04-42.0-XP32-SP14-02	42	168	259		
ZD04-43.0-XP40-SP14-02	43	172	272	65	40
ZD04-44.0-XP40-SP14-02	44	176	276		
ZD04-45.0-XP40-SP14-02	45	180	280		
ZD04-46.0-XP40-SP14-02	46	184	284		
ZD04-47.0-XP40-SP14-02	47	188	288		
ZD04-48.0-XP40-SP14-02	48	192	292		
ZD04-49.0-XP40-SP14-02	49	196	296		
ZD04-50.0-XP40-SP14-02	50	200	300		
ZD04-51.0-XP40-SP14-02	51	204	304		
ZD04-52.0-XP40-SP09-04	52	208	308		
ZD04-53.0-XP40-SP09-04	53	212	312		
ZD04-54.0-XP40-SP09-04	54	216	316		
ZD04-55.0-XP40-SP09-04	55	220	320		
ZD04-56.0-XP40-SP09-04	56	224	324		
ZD04-57.0-XP40-SP09-04	57	228	328		
ZD04-58.0-XP40-SP09-04	58	232	332		
ZD04-59.0-XP40-SP09-04	59	236	336		
ZD04-60.0-XP40-SP09-04	60	240	340		

TURNING APPLICATION

Turning machine, eccentric bushing can adjust drill aix and main aix face contact



Turning application

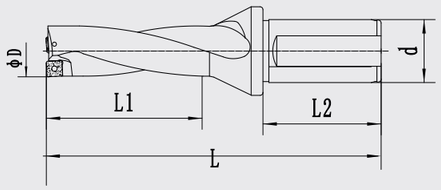
eccentric bushing can face contact in 0.2mm range (anticlockwise rotate eccentric bushing to enlarge hole diameter)



Normall hole diameter D Tool and turret axis coincide

5D SP FAST DRILL





Product specifications	D	L1	L	L2	d
ZD05-14.0-XP25-SP05-02	14	70	148	56	25
ZD05-14.5-XP25-SP05-02	14.5	72.5	150		
ZD05-15.0-XP25-SP05-02	15	75	153		
ZD05-15.5-XP25-SP06-02	15.5	77.5	155		
ZD05-16.0-XP25-SP06-02	16	80	158		
ZD05-16.5-XP25-SP06-02	16.5	82.5	160		
ZD05-17.0-XP25-SP06-02	17	85	163		
ZD05-17.5-XP25-SP06-02	17.5	87.5	165		
ZD05-18.0-XP25-SP06-02	18	90	168		
ZD05-18.5-XP25-SP06-02	18.5	92.5	170		
ZD05-19.0-XP25-SP06-02	19	95	173		
ZD05-19.5-XP25-SP06-02	19.5	97.5	175		
ZD05-20.0-XP25-SP06-02	20	100	179		
ZD05-20.5-XP25-SP06-02	20.5	102.5	181		
ZD05-21.0-XP25-SP06-02	21	105	184		
ZD05-21.5-XP25-SP06-02	21.5	107.5	186		
ZD05-22.0-XP25-SP07-02	22	110	189		
ZD05-22.5-XP25-SP07-02	22.5	112.5	193		
ZD05-23.0-XP25-SP07-02	23	115	194		
ZD05-23.5-XP25-SP07-02	23.5	117.5	196		
ZD05-24.0-XP25-SP07-02	24	120	199		
ZD05-24.5-XP25-SP07-02	24.5	122.5	201		
ZD05-25.0-XP32-SP07-02	25	125	216	60	32
ZD05-25.5-XP32-SP07-02	25.5	127.5	218		
ZD05-26.0-XP32-SP07-02	26	130	221		
ZD05-26.5-XP32-SP07-02	26.5	132.5	223		
ZD05-27.0-XP32-SP07-02	27	135	226		
ZD05-27.5-XP32-SP09-02	27.5	137.5	228		
ZD05-28.0-XP32-SP09-02	28	140	231		
ZD05-28.5-XP32-SP09-02	28.5	142.5	233		
ZD05-29.0-XP32-SP09-02	29	145	236		
ZD05-29.5-XP32-SP09-02	29.5	147.5	238		
ZD05-30.0-XP32-SP09-02	30	150	241		
ZD05-30.5-XP32-SP09-02	30.5	152.5	243		
ZD05-31.0-XP32-SP09-02	31	155	246		
ZD05-31.5-XP32-SP09-02	31.5	157.5	248		
ZD05-32.0-XP32-SP09-02	32	160	251		

Product specifications	D	L1	L	L2	d
ZD05-32.5-XP32-SP09-02	32.5	162.5	253	60	32
ZD05-33.0-XP32-SP09-02	33	165	256		
ZD05-33.5-XP32-SP11-02	33.5	167.5	258		
ZD05-34.0-XP32-SP11-02	34	170	261		
ZD05-34.5-XP32-SP11-02	34.5	172.5	263		
ZD05-35.0-XP32-SP11-02	35	175	266	60	32
ZD05-35.5-XP32-SP11-02	35.5	177.5	268		
ZD05-36.0-XP32-SP11-02	36	180	271		
ZD05-36.5-XP32-SP11-02	36.5	182.5	273		
ZD05-37.0-XP32-SP11-02	37	185	276		
ZD05-37.5-XP32-SP11-02	37.5	187.5	278		
ZD05-38.0-XP32-SP11-02	38	190	281		
ZD05-38.5-XP32-SP11-02	38.5	192.5	283		
ZD05-39.0-XP32-SP11-02	39	195	284		
ZD05-39.5-XP32-SP11-02	39.5	197.5	288		
ZD05-40.0-XP32-SP11-02	40	200	291		
ZD05-41.0-XP32-SP14-02	41	205	296		
ZD05-42.0-XP32-SP14-02	42	210	301		
ZD05-43.0-XP40-SP14-02	43	215	315	65	40
ZD05-44.0-XP40-SP14-02	44	220	320		
ZD05-45.0-XP40-SP14-02	45	225	325		
ZD05-46.0-XP40-SP14-02	46	230	330		
ZD05-47.0-XP40-SP14-02	47	235	335		
ZD05-48.0-XP40-SP14-02	48	240	340		
ZD05-49.0-XP40-SP14-02	49	245	345		
ZD05-50.0-XP40-SP14-02	50	250	350		
ZD05-51.0-XP40-SP14-02	51	255	355		
ZD05-52.0-XP40-SP09-04	52	260	360		
ZD05-53.0-XP40-SP09-04	53	265	365		
ZD05-54.0-XP40-SP09-04	54	270	370		
ZD05-55.0-XP40-SP09-04	55	275	375		
ZD05-56.0-XP40-SP09-04	56	280	380		
ZD05-57.0-XP40-SP09-04	57	285	385		
ZD05-58.0-XP40-SP09-04	58	290	390		
ZD05-59.0-XP40-SP09-04	59	295	395		
ZD05-60.0-XP40-SP09-04	60	300	400		

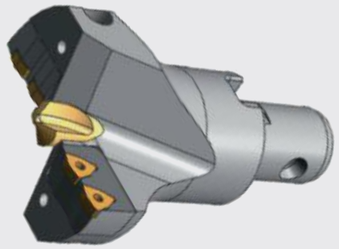
FAST DRILL INSTRUCTION OF SCREW AND SPANNER

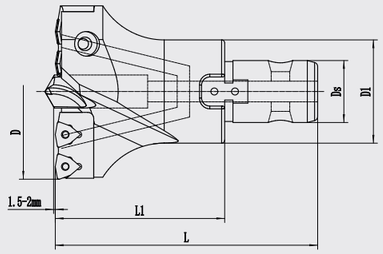
fast drill accessories instruction		
diameter	WC	
	screw	spanner
14.0-24.5	M2.5*6.5	T8
25.0-31.5	M3*7	
32.0-42.0	M3.5*8	T15
43.0-57.0	M4*10	
58.0-60.0	M3.5*8	



fast drill accessories instruction		
diameter	SP	
	screw	spanner
13.0-15.0	M2*5	T6
15.5-21.5	M2.2*5	
22.0-27.0	M2.5*6	T8
27.5-33.0	M3.5*8	T15
33.5-40.0	M4*10	
41.0-51.0	M5*10	T20
52.0-60.0	M3.5*8	T15

MDD INDEXABLE BIG DRILL

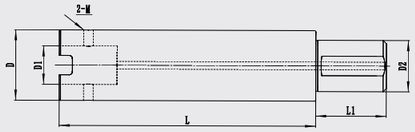




Model	D	DS	D1	L1	L	Outer edge	Inner edge	Suitable guide drill	Inserts	The blade number
MDD-045050	45-50	16	30	60	95	VMC-045050T	VNC-045050N	HPD-1035C-H	WC03	4
MDD-050055	50-55					VMC-050055T	VNC-050055N	HPD-1035C-H	WC04	4
MDD-055060	55-60					VMC-055060T	VNC-055060N	HPD-1238C-H	WC04	4
MDD-060065	60-65	25	45	82	127	VMC-060065T	VNC-060065N	HPD-1238C-H	WC05	4
MDD-065070	65-70					VMC-065070T	VNC-065070N	HPD-1238C-H	WC05	4
MDD-070075	70-75					VMC-070075T	VNC-070075N	HPD-1238C-H	WC06	4
MDD-075080	75-80					VMC-075080T	VNC-075080N	HPD-1645C-H	WC06	4
MDD-080085	80-85					VMC-080085T	VNC-080085N	HPD-1645C-H	WC06	4
MDD-085090	85-90	30	50			VMC-085090T	VNC-085090N	HPD-1645C-H	WC06	4
MDD-090095	90-95					VMC-090095T	VNC-090095N	HPD-1645C-H	WC06	4
MDD-095100	95-100					VMC-095100T	VNC-095100N	HPD-1645C-H	WC05	6
MDD-100105	100-105	32	58	94	139	VMC-100105T	VNC-100105N	HPD-2045C-H	WC05	6
MDD-105110	105-110					VMC-105110T	VNC-105110N	HPD-2045C-H	WC05	6
MDD-110115	110-115					VMC-110115T	VNC-110115N	HPD-2045C-H	WC06	6
MDD-115120	115-120	40	70	104	154	VMC-115120T	VNC-115120N	HPD-2045C-H	WC06	6
MDD-120125	120-125					VMC-120125T	VNC-120125N	HPD-2556C-H	WC06	6
MDD-125130	125-130					VMC-125130T	VNC-125130N	HPD-2556C-H	WC06	6
MDD-130135	130-135					VMC-130135T	VNC-130135N	HPD-2556C-H	WC06	6
MDD-135140	135-140					VMC-135140T	VNC-135140N	HPD-2556C-H	WC06	8
MDD-140145	140-145	50	80	116	176	VMC-140145T	VNC-140145N	HPD-2556C-H	WC06	8
MDD-145150	145-150					VMC-145150T	VNC-145150N	HPD-2556C-H	WC08	6
MDD-150155	150-155					VMC-150155T	VNC-150155N	HPD-2556C-H	WC08	6
MDD-155160	155-160					VMC-155160T	VNC-155160N	HPD-2556C-H	WC08	6
MDD-160165	160-165					VMC-160165T	VNC-160165N	HPD-2556C-H	WC06	10
MDD-165170	165-170					VMC-165170T	VNC-165170N	HPD-2556C-H	WC06	10
MDD-170175	170-175					VMC-170175T	VNC-170175N	HPD-2556C-H	WC08	8
MDD-175180	175-180					VMC-175180T	VNC-175180N	HPD-2556C-H	WC08	8
MDD-180185	180-185					VMC-180185T	VNC-180185N	HPD-2556C-H	WC08	8
MDD-185190	185-190					VMC-185190T	VNC-185190N	HPD-2556C-H	WC08	8
MDD-190195	190-195					VMC-190195T	VNC-190195N	HPD-2556C-H	WC08	8
MDD-195200	195-200					VMC-195200T	VNC-195200N	HPD-2556C-H	WC08	10

MDD CONNECTING ROD



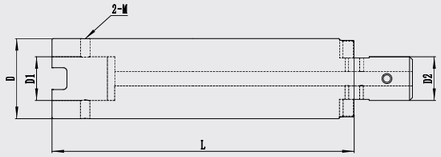


Model	D	D1	D2	L	L1	Suitable hole diameter
DXZ-301632100	30	16	32	100	65	φ45-φ55
DXZ-301632150	30	16	32	150	65	
DXZ-301632200	30	16	32	200	65	
DXZ-301632250	30	16	32	250	65	
DXZ-301632300	30	16	32	300	65	
DXZ-301632350	30	16	32	350	65	
DXZ-301632400	30	16	32	400	65	
DXZ-301632450	30	16	32	450	65	
DXZ-452540100	45	25	40	100	75	φ60-φ80
DXZ-452540150	45	25	40	150	75	
DXZ-452540200	45	25	40	200	75	
DXZ-452540250	45	25	40	250	75	
DXZ-452540300	45	25	40	300	75	
DXZ-452540350	45	25	40	350	75	
DXZ-452540400	45	25	40	400	75	
DXZ-452540450	45	25	40	450	75	
DXZ-503040100	50	30	40	100	75	φ85-φ95
DXZ-503040150	50	30	40	150	75	
DXZ-503040200	50	30	40	200	75	
DXZ-503040250	50	30	40	250	75	
DXZ-503040300	50	30	40	300	75	
DXZ-503040350	50	30	40	350	75	
DXZ-503040400	50	30	40	400	75	
DXZ-503040450	50	30	40	450	75	

Model	D	D1	D2	L	L1	Suitable hole diameter
DXZ-583240100	58	32	40	100	75	φ100-φ110
DXZ-583240150	58	32	40	150	75	
DXZ-583240200	58	32	40	200	75	
DXZ-583240250	58	32	40	250	75	
DXZ-583240300	58	32	40	300	75	
DXZ-583240350	58	32	40	350	75	
DXZ-583240400	58	32	40	400	75	
DXZ-583240450	58	32	40	450	75	
DXZ-704050100	70	40	50	100	80	φ115-φ135
DXZ-704050150	70	40	50	150	80	
DXZ-704050200	70	40	50	200	80	
DXZ-704050250	70	40	50	250	80	
DXZ-704050300	70	40	50	300	80	
DXZ-704050350	70	40	50	350	80	
DXZ-704050400	70	40	50	400	80	
DXZ-704050400	70	40	50	450	80	
DXZ-805050100	80	50	50	100	80	φ140-φ195
DXZ-805050150	80	50	50	150	80	
DXZ-805050200	80	50	50	200	80	
DXZ-805050250	80	50	50	250	80	
DXZ-805050300	80	50	50	300	80	
DXZ-805050350	80	50	50	350	80	
DXZ-805050400	80	50	50	400	80	
DXZ-805050450	80	50	50	450	80	
DXZ-805050500	80	50	50	500	80	

MDD EXTENSION ROD

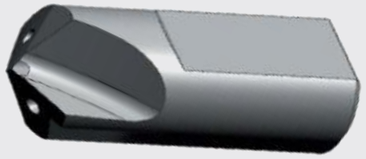


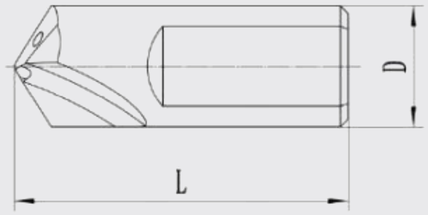


Model	D	D1	L	Suitable drill diameter
YXZ-3016300	30	16	300	φ45-φ55
YXZ-3016400	30	16	400	
YXZ-3016500	30	16	500	
YXZ-4525300	45	25	300	φ60-φ80
YXZ-4525400	45	25	400	
YXZ-4525500	45	25	500	
YXZ-5030300	50	30	300	φ85-φ95
YXZ-5030400	50	30	400	
YXZ-5030500	50	30	500	

Model	D	D1	L	Suitable drill diameter
YXZ-5832300	58	32	300	φ100-φ110
YXZ-5832400	58	32	400	
YXZ-5832500	58	32	500	
YZX-7040300	70	40	300	φ115-φ135
YZX-7040400	70	40	400	
YZX-7040500	70	40	500	
YXZ-8050300	80	50	300	φ140-φ195
YXZ-8050400	80	50	400	
YXZ-8050500	80	50	500	

HIGH SPEED STEEL GUIDE DRILL

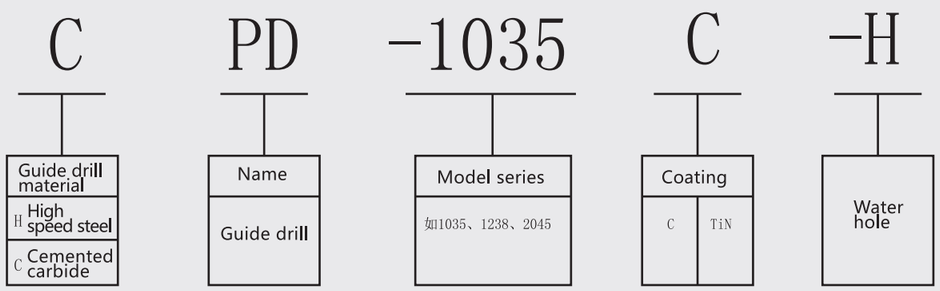




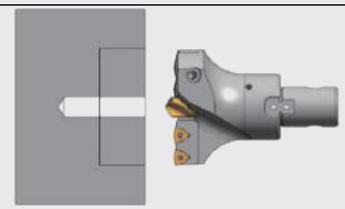
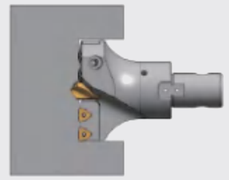
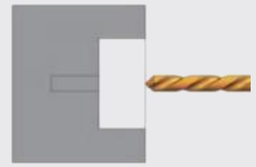
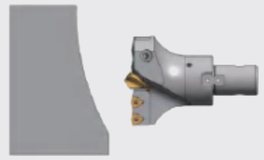
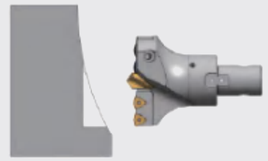
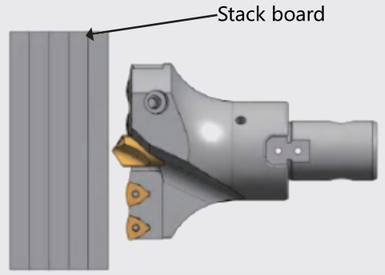
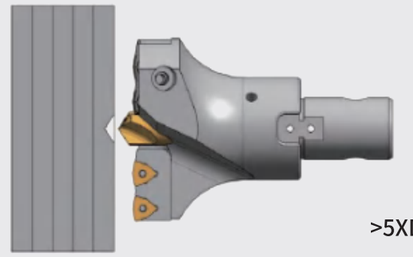
High speed steel guide drill model	D	L
HPD-1035C-H	10	35
HPD-1238C-H	12	38
HPD-1645C-H	16	45
HPD-2045C-H	20	45
HPD-2556C-H	25	56
HPD-3068C-H	30	68

Cemented carbide guide drill model	D	L
CPD-1035C-H	10	35
CPD-1238C-H	12	38
CPD-1645C-H	16	45
CPD-2045C-H	20	45
CPD-2556C-H	25	56

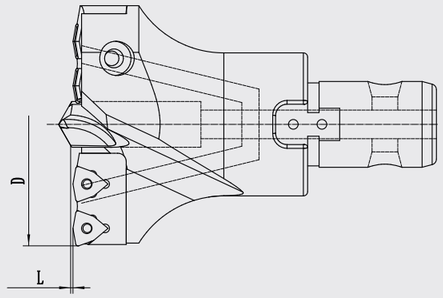
GUIDE DRILL MODEL AND NAMED RULES



MDD INSTRUCTIONS

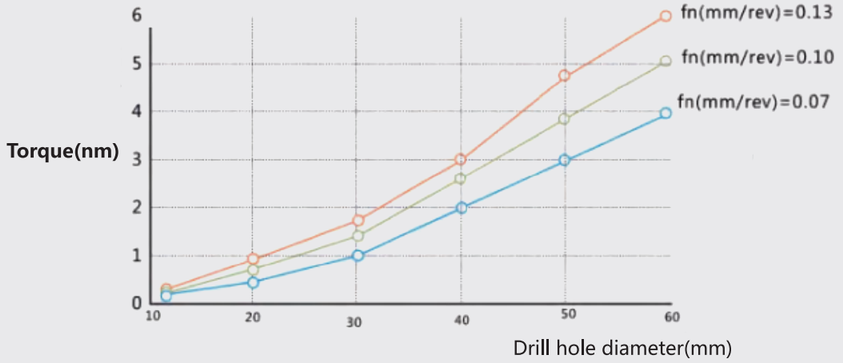
NOT RECOMMAND	SOLUTION 1	SOLUTION 2
		
		
		

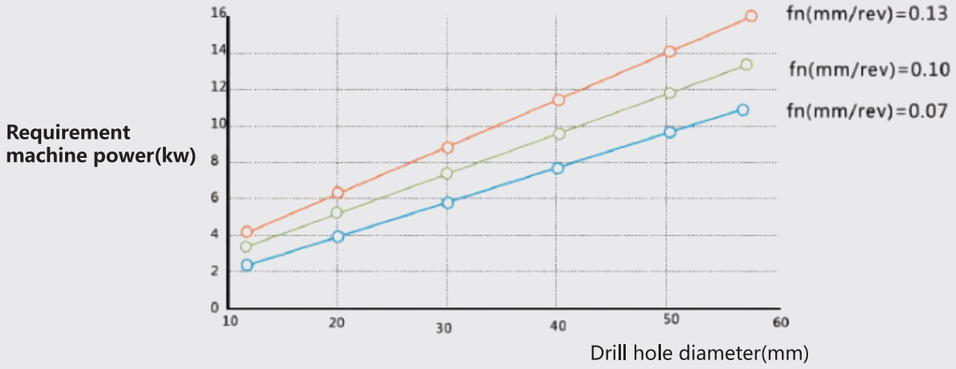
GUIDE DRILL EXTEND DISTANT L



Outer diameter	L		
	2-4XD	4-6XD	6-8XD
45-55	1.6	1.8	2.0
55-75	1.8	2.0	2.2
75-100	2.2	2.5	2.8
100-120	2.4	2.8	3.2
120-170	3.2	3.6	4.0
170-180	3.5	3.9	4.3

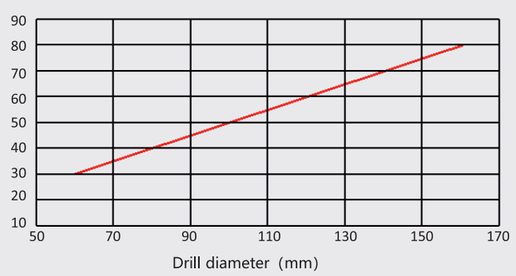
U DRILL PROCESSING POWER REQUIREMENT



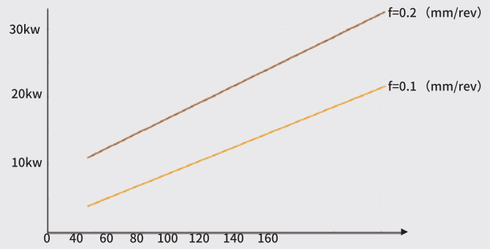


MDD WATER FLUID

Coolant fluid flow requirement (升/min)



MDD MACHINE POWER



RONGKE MDD INDEXABLE BIG DRILL SIGNIFICANTLY IMPROVE WORK EFFICIENCY



DRILL SPEED

$$S=\frac{Vc\times 100}{3.14\times Dc}$$

Vc= line speed 100m/min
Dc (mm) : drill
S= main aix rotate speed

SAMPLE: use drill insert 100 as a sample

$$S=\frac{100\times 1000}{3.14\times 100}=318 rev/min$$

Crafts	Crafts process	Speed	Feed	ProcessTime	Total Time
Traditional Crafts	① ⌀60 twistdrill	80	16	1h 10min	150min
	② roughboringtool1	200	30	40 min	
	③ roughboringtool2	200	30	40min	
New Crafts	MDD indexabledrill ⌀105	280	45	18min	18min

FEED SPEED

$$Vf=Fr\times S$$

Vf= feed speed
Fr= every feed rotate
S= main aix rotate speed

SAMPLE: use drill insert 100 as a sample
every rotate feed is 0.15/rev

$$Vf=0.15\times 318=47.7 mm/min$$

DRILLING TIME

$$Tc=\frac{H}{Vf}\times 60$$

Tc (a) : processing time
H= hole depth

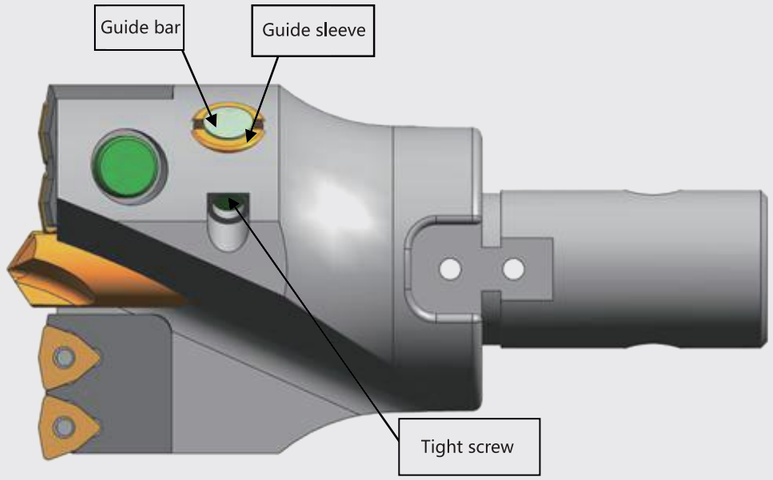
SAMPLE: use drill insert 100 as asample
hole processing depth is 100mm

$$Tc=\frac{100\times 60}{\quad}=126(s)$$

Machining 105m depth 550mm, material 42Crmo, HB220
In the oil, coal and other machine industries, as oversize hole machining becomes more
And more common, the application of MDD indexable drill can greatly improve the
Machining efficiency.
The bright spot of MDD indexable drill:

① Using the structure of center guide drill with better centering effect to make sure hole site a good straightness.
② Internal and External cutter edge is applied to the structure of replaceable clamp tool. In practical using, the most vulnerable is external edge clamp. Replacing clamp can avoid the drill scrapped to save the tool cost.
③ Adjusting external clamp, the dimension of drill maching can vary within 0-5mm
④ Cutter head and shank are modular structure. Only change different length shank during processing the different depth of the hole.
⑤ Drill with center water hole can cool insert better, extend insert life and accelerate chip evacuation.
⑥ Using indexable carbide insert cutting with high speed and feed, surface finish has greatly improved.
⑦ In the process, security is greatly improved as chip is breaker not slender twining of traditional twist drill
⑧ In processing, automatic continuous feed, do not need to return every time, the efficiency is greatly improved

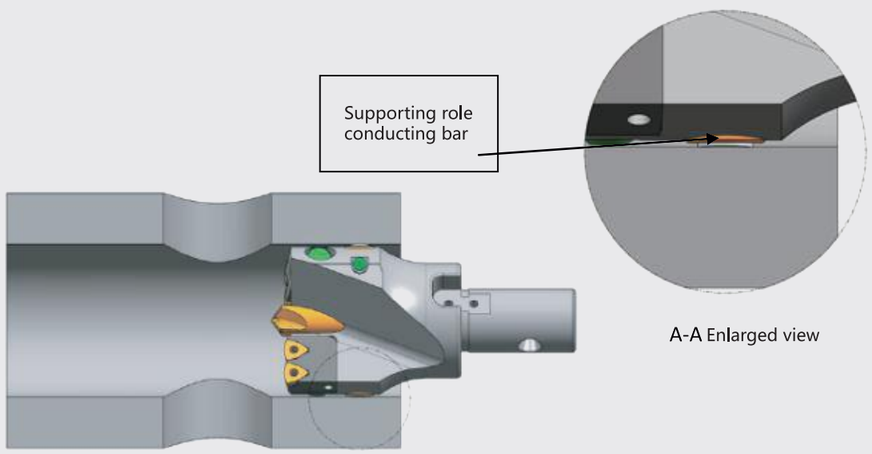
MDD INDEXABLE BIG DRILL



① MDD series enhance changeable conduction, can quick adjust based on conducting bar

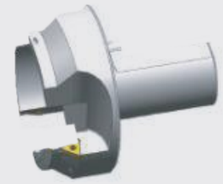
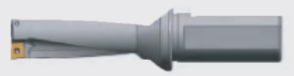
② Conduction prop up can enahance the stability of drilling and improve processing hole quility

③ Conducting bar prop up can control processing through- hole and drlling through vibration

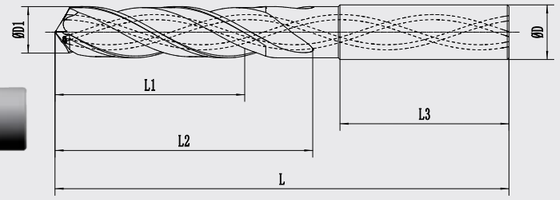


A-A Enlarged view

UNSTAND CUSTOMIZATION DRILL

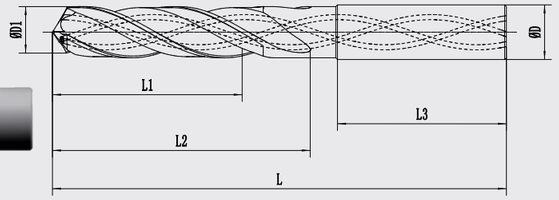
Unstand customization drill	Deseription	Construction	Application
	trepanning drill	Inner and outter blade perferct match up, arrangement according to space size, high quality alloy steel texture with accurate design. Drilling and chamfering complete once time, achieve perfert performance of big hole diametere processing	When use large diameter processing the effentive is high, cost is low and the requirement to machine power is low. Core material is the raw material of other workpiece , huge improve the utilization of material.
	spade drill	The combination of spade drill and chambering hole drill, give full play to spade drill requirement of deep hole processing(can reach above 8D)	Can easily achieve the large diameter stable processing
	fast drill with guide bar	Middle guide hole(adjustable) and On both sides of the machine clamp to achieve perfect blade, compare normal drill huge improve cutting speed and feed rate, inner hole surface quilty is better. High inside coolant fluid with Spiral chip discharging groove make the processing more effective.	Suitable for varity equpiment, achieve high effective processing in a mount of material
	saber tooth drill	The combination of spade drill and charming hole drill Composite chip removal groove the whole carbide carbide tips have more worl time,	Slove the requirement of drill's effective, high precision and high requiremnent of surface
	spade drill with guide bar	Accurate arrangement and application of carbide guide bars, can improve the stability of tips while processing	Can achieve stable processing while do not change feed rate when drill though the work piece, also can achieve stable processing
	expanding drill	Double edge symmetrical cutting	Suitable for processing prepare hole work piece, based on previous hole to enlarge diameter



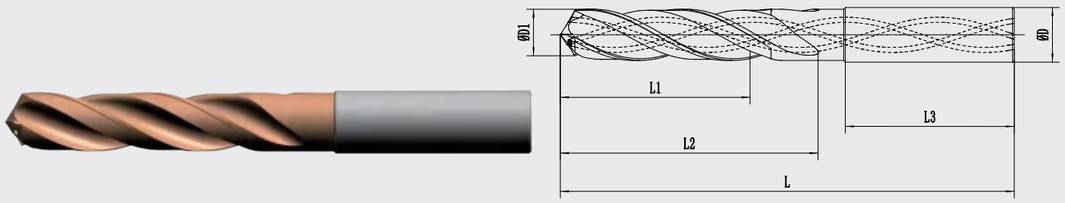


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
3.0	20	14	6	36	62	DH203C030006P/ D3.0x20xd6x36x62L
3.1	20	14	6	36	62	DH203C031006P/ D3.1x20xd6x36x62L
3.2	20	14	6	36	62	DH203C032006P/ D3.2x20xd6x36x62L
3.3	20	14	6	36	62	DH203C033006P/ D3.3x20xd6x36x62L
3.4	20	14	6	36	62	DH203C034006P/ D3.4x20xd6x36x62L
3.5	20	14	6	36	62	DH203C035006P/ D3.5x20xd6x36x62L
3.6	20	14	6	36	62	DH203C036006P/ D3.6x20xd6x36x62L
3.7	20	14	6	36	62	DH203C037006P/ D3.7x20xd6x36x62L
3.8	24	20	6	36	66	DH203C038006P/ D3.8x24xd6x36x66L
3.9	24	20	6	36	66	DH203C039006P/ D3.9x24xd6x36x66L
4.0	24	20	6	36	66	DH203C040006P/ D4.0x24xd6x36x66L
4.1	24	20	6	36	66	DH203C041006P/ D4.1x24xd6x36x66L
4.2	24	20	6	36	66	DH203C042006P/ D4.2x24xd6x36x66L
4.3	24	20	6	36	66	DH203C043006P/ D4.3x24xd6x36x66L
4.4	24	20	6	36	66	DH203C044006P/ D4.4x24xd6x36x66L
4.5	24	20	6	36	66	DH203C045006P/ D4.5x24xd6x36x66L
4.6	24	20	6	36	66	DH203C046006P/ D4.6x24xd6x36x66L
4.7	24	20	6	36	66	DH203C047006P/ D4.7x24xd6x36x66L
4.8	28	20	6	36	66	DH203C048006P/ D4.8x28xd6x36x66L

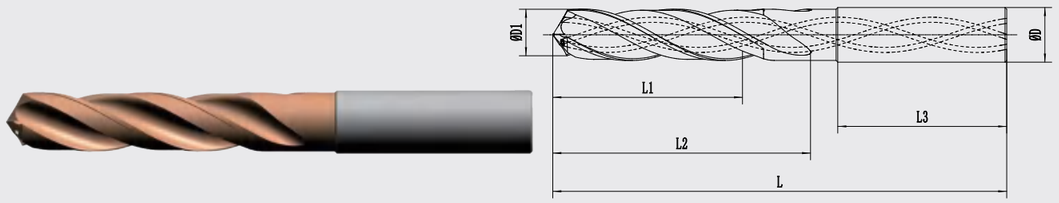




ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
4.9	28	20	6	36	66	DH203C049006P/ D4.9x28xd6x36x66L
5.0	28	20	6	36	66	DH203C050006P/ D5.0x28xd6x36x66L
5.1	28	20	6	36	66	DH203C051006P/ D5.1x28xd6x36x66L
5.2	28	20	6	36	66	DH203C052006P/ D5.2x28xd6x36x66L
5.3	28	20	6	36	66	DH203C053006P/ D5.3x28xd6x36x66L
5.4	28	20	6	36	66	DH203C054006P/ D5.4x28xd6x36x66L
5.5	28	20	6	36	66	DH203C055006P/ D5.5x28xd6x36x66L
5.6	28	20	6	36	66	DH203C056006P/ D5.6x28xd6x36x66L
5.7	28	20	6	36	66	DH203C057006P/ D5.7x28xd6x36x66L
5.8	28	20	6	36	66	DH203C058006P/ D5.8x28xd6x36x66L
5.9	28	20	6	36	66	DH203C059006P/ D5.9x28xd6x36x66L
6.0	28	20	6	36	66	DH203C060006P/ D6.0x28xd6x36x66L
6.1	34	24	8	36	79	DH203C061008P/ D6.1x34xd8x36x79L
6.2	34	24	8	36	79	DH203C062008P/ D6.2x34xd8x36x79L
6.3	34	24	8	36	79	DH203C063008P/ D6.3x34xd8x36x79L
6.4	34	24	8	36	79	DH203C064008P/ D6.4x34xd8x36x79L
6.5	34	24	8	36	79	DH203C065008P/ D6.5x34xd8x36x79L
6.6	34	24	8	36	79	DH203C066008P/ D6.6x34xd8x36x79L
6.7	34	24	8	36	79	DH203C067008P/ D6.7x34xd8x36x79L

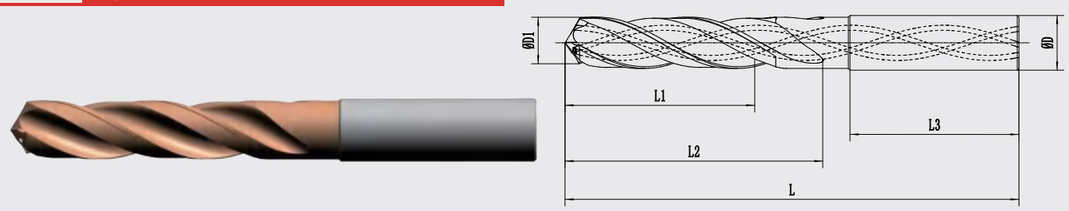


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
6.8	34	24	8	36	79	DH203C068008P/ D6.8x34xd8x36x79L
6.9	34	24	8	36	79	DH203C069008P/ D6.9x34xd8x36x79L
7.0	34	24	8	36	79	DH203C070008P/ D7.0x34xd8x36x79L
7.1	41	29	8	36	79	DH203C071008P/ D7.1x41xd8x36x79L
7.2	41	29	8	36	79	DH203C072008P/ D7.2x41xd8x36x79L
7.3	41	29	8	36	79	DH203C073008P/ D7.3x41xd8x36x79L
7.4	41	29	8	36	79	DH203C074008P/ D7.4x41xd8x36x79L
7.5	41	29	8	36	79	DH203C075008P/ D7.5x41xd8x36x79L
7.6	41	29	8	36	79	DH203C076008P/ D7.6x41xd8x36x79L
7.7	41	29	8	36	79	DH203C077008P/ D7.7x41xd8x36x79L
7.8	41	29	8	36	79	DH203C078008P/ D7.8x41xd8x36x79L
7.9	41	29	8	36	79	DH203C079008P/ D7.9x41xd8x36x79L
8.0	41	29	8	36	79	DH203C080008P/ D8.0x41xd8x36x79L
8.1	47	34	10	40	89	DH203C081010P/ D8.1x47xd10x40x89L
8.2	47	34	10	40	89	DH203C082010P/ D8.2x47xd10x40x89L
8.3	47	34	10	40	89	DH203C083010P/ D8.3x47xd10x40x89L
8.4	47	34	10	40	89	DH203C084010P/ D8.4x47xd10x40x89L
8.5	47	34	10	40	89	DH203C085010P/ D8.5x47xd10x40x89L
8.6	47	34	10	40	89	DH203C086010P/ D8.6x47xd10x40x89L



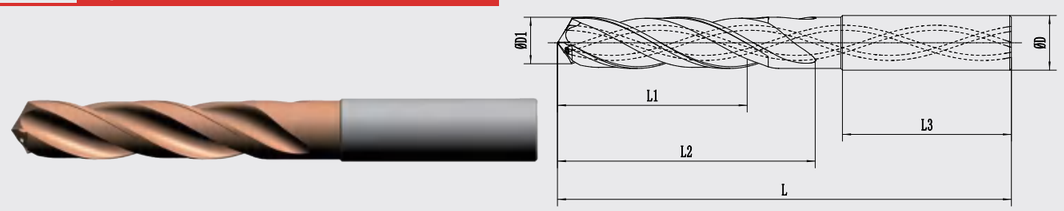
ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
8.7	47	34	10	40	89	DH203C087010P/ D8.7x47xd10x40x89L
8.8	47	34	10	40	89	DH203C088010P/ D8.8x47xd10x40x89L
8.9	47	34	10	40	89	DH203C089010P/ D8.9x47xd10x40x89L
9.0	47	34	10	40	89	DH203C090010P/ D9.0x47xd10x40x89L
9.1	47	34	10	40	89	DH203C091010P/ D9.1x47xd10x40x89L
9.2	47	34	10	40	89	DH203C092010P/ D9.2x47xd10x40x89L
9.3	47	34	10	40	89	DH203C093010P/ D9.3x47xd10x40x89L
9.4	47	34	10	40	89	DH203C094010P/ D9.4x47xd10x40x89L
9.5	47	34	10	40	89	DH203C095010P/ D9.5x47xd10x40x89L
9.6	47	34	10	40	89	DH203C096010P/ D9.6x47xd10x40x89L
9.7	47	34	10	40	89	DH203C097010P/ D9.7x47xd10x40x89L
9.8	47	34	10	40	89	DH203C098010P/ D9.8x47xd10x40x89L
9.9	47	34	10	40	89	DH203C099010P/ D9.9x47xd10x40x89L
10.0	47	34	10	40	89	DH203C100010P/ D10.0x47xd10x40x89L
10.1	55	39	12	45	102	DH203C101012P/ D10.1x55xd12x45x102L
10.2	55	39	12	45	102	DH203C102012P/ D10.2x55xd12x45x102L
10.3	55	39	12	45	102	DH203C103012P/ D10.3x55xd12x45x102L
10.4	55	39	12	45	102	DH203C104012P/ D10.1x55xd12x45x102L
10.5	55	39	12	45	102	DH203C105012P/ D10.5x55xd12x45x102L

3 QUINTUPLE DIAMETER STAND COMMON DRILL



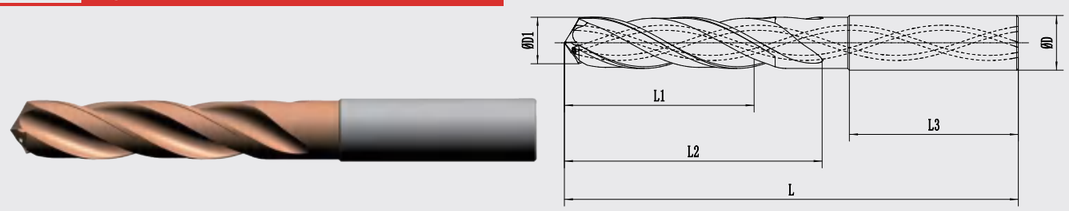
ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
10.6	55	39	12	45	102	DH203C106012P/ D10.6x55xd12x45x102L
10.7	55	39	12	45	102	DH203C107012P/ D10.7x55xd12x45x102L
10.8	55	39	12	45	102	DH203C108012P/ D10.8x55xd12x45x102L
10.9	55	39	12	45	102	DH203C109012P/ D10.9x55xd12x45x102L
11.0	55	39	12	45	102	DH203C110012P/ D11.0x55xd12x45x102L
11.1	55	39	12	45	102	DH203C111012P/ D11.1x55xd12x45x102L
11.2	55	39	12	45	102	DH203C112012P/ D11.2x55xd12x45x102L
11.3	55	39	12	45	102	DH203C113012P/ D11.3x55xd12x45x102L
11.4	55	39	12	45	102	DH203C114012P/ D11.4x55xd12x45x102L
11.5	55	39	12	45	102	DH203C115012P/ D11.5x55xd12x45x102L
11.6	55	39	12	45	102	DH203C116012P/ D11.6x55xd12x45x102L
11.7	55	39	12	45	102	DH203C117012P/ D11.7x55xd12x45x102L
11.8	55	39	12	45	102	DH203C118012P/ D11.8x55xd12x45x102L
11.9	55	39	12	45	102	DH203C119012P/ D11.9x55xd12x45x102L
12.0	55	39	12	45	102	DH203C120012P/ D12.0x55xd12x45x102L

5 QUINTUPLE DIAMETER STAND COMMON DRILL



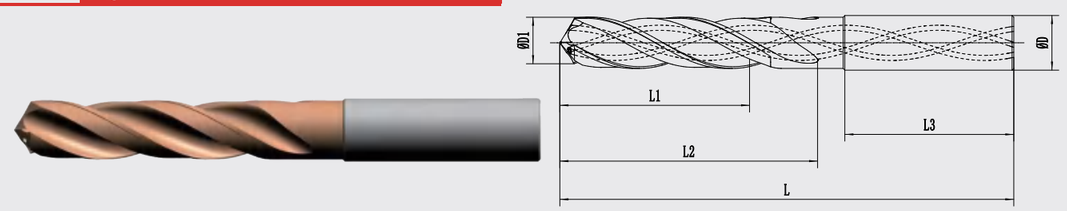
ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
3.0	28	23	6	36	66	DH205C030006P/ D3.0x28xd6x36x66L
3.1	28	23	6	36	66	DH205C031006P/ D3.1x28xd6x36x66L
3.2	28	23	6	36	66	DH205C032006P/ D3.2x28xd6x36x66L
3.3	28	23	6	36	66	DH205C033006P/ D3.3x28xd6x36x66L
3.4	28	23	6	36	66	DH205C034006P/ D3.4x28xd6x36x66L
3.5	28	23	6	36	66	DH205C035006P/ D3.5x28xd6x36x66L
3.6	28	23	6	36	66	DH205C036006P/ D3.6x28xd6x36x66L
3.7	28	23	6	36	66	DH205C037006P/ D3.7x28xd6x36x66L
3.8	36	29	6	36	74	DH205C038006P/ D3.8x36xd6x36x74L
3.9	36	29	6	36	74	DH205C039006P/ D3.9x36xd6x36x74L
4.0	36	29	6	36	74	DH205C040006P/ D4.0x36xd6x36x74L
4.1	36	29	6	36	74	DH205C041006P/ D4.1x36xd6x36x74L
4.2	36	29	6	36	74	DH205C042006P/ D4.2x36xd6x36x74L
4.3	36	29	6	36	74	DH205C043006P/ D4.3x36xd6x36x74L
4.4	36	29	6	36	74	DH205C044006P/ D4.4x36xd6x36x74L
4.5	36	29	6	36	74	DH205C045006P/ D4.5x36xd6x36x74L
4.6	36	29	6	36	74	DH205C046006P/ D4.6x36xd6x36x74L
4.7	36	29	6	36	74	DH205C047006P/ D4.7x36xd6x36x74L
4.8	44	35	6	36	82	DH205C048006P/ D4.8x44xd6x36x82L

5 QUINTUPLE DIAMETER STAND COMMON DRILL

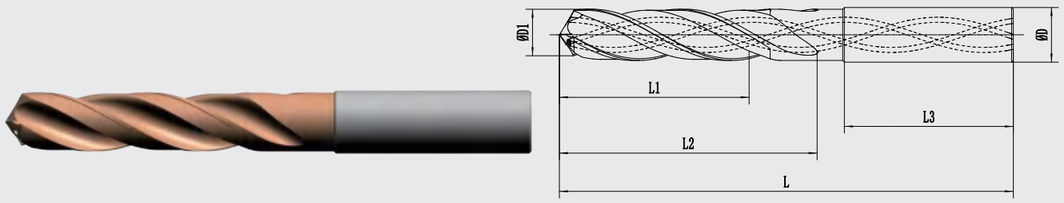


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
4.9	44	35	6	36	82	DH205C049006P/ D4.9x44xd6x36x82L
5.0	44	35	6	36	82	DH205C050006P/ D5.0x44xd6x36x82L
5.1	44	35	6	36	82	DH205C051006P/ D5.1x44xd6x36x82L
5.2	44	35	6	36	82	DH205C052006P/ D5.2x44xd6x36x82L
5.3	44	35	6	36	82	DH205C053006P/ D5.3x44xd6x36x82L
5.4	44	35	6	36	82	DH205C054006P/ D5.4x44xd6x36x82L
5.5	44	35	6	36	82	DH205C055006P/ D5.5x44xd6x36x82L
5.6	44	35	6	36	82	DH205C056006P/ D5.6x44xd6x36x82L
5.7	44	35	6	36	82	DH205C057006P/ D5.7x44xd6x36x82L
5.8	44	35	6	36	82	DH205C058006P/ D5.8x44xd6x36x82L
5.9	44	35	6	36	82	DH205C059006P/ D5.9x44xd6x36x82L
6.0	44	35	6	36	82	DH205C060006P/ D6.0x44xd6x36x82L
6.1	53	43	8	36	91	DH205C061008P/ D6.1x53xd8x36x91L
6.2	53	43	8	36	91	DH205C062008P/ D6.2x53xd8x36x91L
6.3	53	43	8	36	91	DH205C063008P/ D6.3x53xd8x36x91L
6.4	53	43	8	36	91	DH205C064008P/ D6.4x53xd8x36x91L
6.5	53	43	8	36	91	DH205C065008P/ D6.5x53xd8x36x91L
6.6	53	43	8	36	91	DH205C066008P/ D6.6x53xd8x36x91L
6.7	53	43	8	36	91	DH205C067008P/ D6.7x53xd8x36x91L

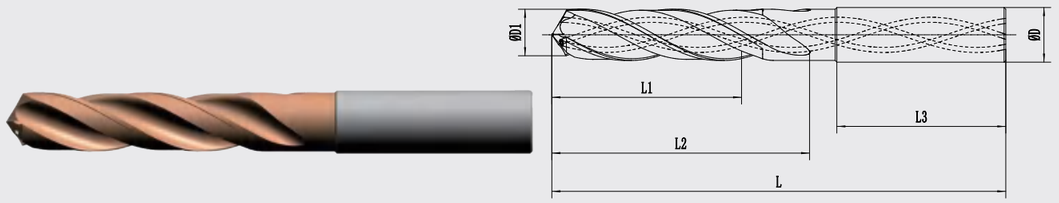
5 QUINTUPLE DIAMETER STAND COMMON DRILL



ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
6.8	53	43	8	36	91	DH205C068008P/ D6.8x53xd8x36x91L
6.9	53	43	8	36	91	DH205C069008P/ D6.9x53xd8x36x91L
7.0	53	43	8	36	91	DH205C070008P/ D7.0x53xd6x36x91L
7.1	53	43	8	36	91	DH205C071008P/ D7.1x53xd8x36x91L
7.2	53	43	8	36	91	DH205C072008P/ D7.2x53xd8x36x91L
7.3	53	43	8	36	91	DH205C073008P/ D7.3x53xd8x36x91L
7.4	53	43	8	36	91	DH205C074008P/ D7.4x53xd8x36x91L
7.5	53	43	8	36	91	DH205C075008P/ D7.5x53xd8x36x91L
7.6	53	43	8	36	91	DH205C076008P/ D7.6x53xd8x36x91L
7.7	53	43	8	36	91	DH205C077008P/ D7.7x53xd8x36x91L
7.8	53	43	8	36	91	DH205C078008P/ D7.8x53xd8x36x91L
7.9	53	43	8	36	91	DH205C079008P/ D7.9x53xd8x36x91L
8.0	53	43	8	36	91	DH205C080008P/ D8.0x53xd8x36x91L
8.1	61	48	10	40	103	DH205C081010P/ D8.1x61xd10x40x103L
8.2	61	48	10	40	103	DH205C082010P/ D8.2x61xd10x40x103L
8.3	61	48	10	40	103	DH205C083010P/ D8.3x61xd10x40x103L
8.4	61	48	10	40	103	DH205C084010P/ D8.4x61xd10x40x103L
8.5	61	48	10	40	103	DH205C085010P/ D8.5x61xd10x40x103L
8.6	61	48	10	40	103	DH205C086010P/ D8.6x61xd10x40x103L

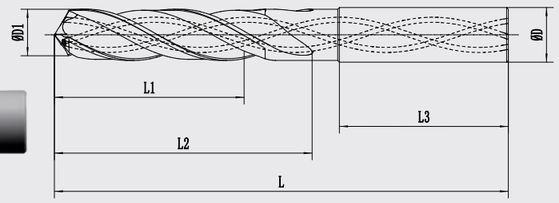


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
8.7	61	48	10	40	103	DH205C087010P/ D8.7x61xd10x40x103L
8.8	61	48	10	40	103	DH205C088010P/ D8.8x61xd10x40x103L
8.9	61	48	10	40	103	DH205C089010P/ D8.9x61xd10x40x103L
9.0	61	48	10	40	103	DH205C090010P/ D9.0x61xd10x40x103L
9.1	61	48	10	40	103	DH205C091010P/ D9.1x61xd10x40x103L
9.2	61	48	10	40	103	DH205C092010P/ D9.2x61xd10x40x103L
9.3	61	48	10	40	103	DH205C093010P/ D9.3x61xd10x40x103L
9.4	61	48	10	40	103	DH205C094010P/ D9.4x61xd10x40x103L
9.5	61	48	10	40	103	DH205C095010P/ D9.5x61xd10x40x103L
9.6	61	48	10	40	103	DH205C096010P/ D9.6x61xd10x40x103L
9.7	61	48	10	40	103	DH205C097010P/ D9.7x61xd10x40x103L
9.8	61	48	10	40	103	DH205C098010P/ D9.8x61xd10x40x103L
9.9	61	48	10	40	103	DH205C099010P/ D9.9x61xd10x40x103L
10.0	61	48	10	40	103	DH205C100010P/ D10.0x61xd10x40x103L
10.1	71	55	12	45	118	DH205C101012P/ D10.1x71xd12x45x118L
10.2	71	55	12	45	118	DH205C102012P/ D10.2x71xd12x45x118L
10.3	71	55	12	45	118	DH205C103012P/ D10.3x71xd12x45x118L
10.4	71	55	12	45	118	DH205C104012P/ D10.4x71xd12x45x118L
10.5	71	55	12	45	118	DH205C105012P/ D10.5x71xd12x45x118L



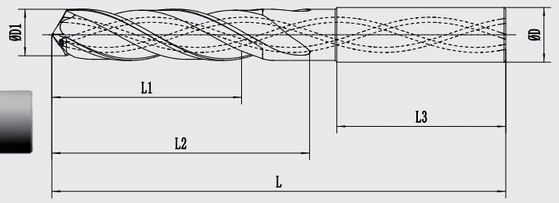
ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
10.6	71	55	12	45	118	DH205C106012P/ D10.6x71xd12x45x118L
10.7	71	55	12	45	118	DH205C107012P/ D10.7x71xd12x45x118L
10.8	71	55	12	45	118	DH205C108012P/ D10.8x71xd12x45x118L
10.9	71	55	12	45	118	DH205C109012P/ D10.9x71xd12x45x118L
11.0	71	55	12	45	118	DH205C110012P/ D11.0x71xd12x45x118L
11.1	71	55	12	45	118	DH205C111012P/ D11.1x71xd12x45x118L
11.2	71	55	12	45	118	DH205C112012P/ D11.2x71xd12x45x118L
11.3	71	55	12	45	118	DH205C113012P/ D11.3x71xd12x45x118L
11.4	71	55	12	45	118	DH205C114012P/ D11.4x71xd12x45x118L
11.5	71	55	12	45	118	DH205C115012P/ D11.5x71xd12x45x118L
11.6	71	55	12	45	118	DH205C116012P/ D11.6x71xd12x45x118L
11.7	71	55	12	45	118	DH205C117012P/ D11.7x71xd12x45x118L
11.8	71	55	12	45	118	DH205C118012P/ D11.8x71xd12x45x118L
11.9	71	55	12	45	118	DH205C119012P/ D11.9x71xd12x45x118L
12.0	71	55	12	45	118	DH205C120012P/ D12.0x71xd12x45x118L



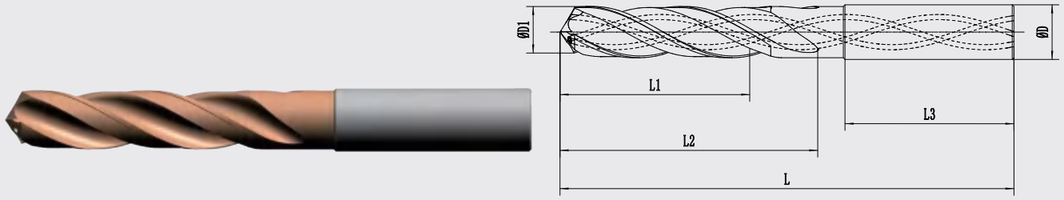


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
3.0	30	25	6	36	70	DH208C030006P/ D3.0x30xd6x36x70L
3.1	30	25	6	36	70	DH208C031006P/ D3.1x30xd6x36x70L
3.2	30	25	6	36	70	DH208C032006P/ D3.2x30xd6x36x70L
3.3	30	25	6	36	70	DH208C033006P/ D3.3x30xd6x36x70L
3.4	35.5	30	6	36	75	DH208C034006P/ D3.4x35.5xd6x36x75L
3.5	35.5	30	6	36	75	DH208C035006P/ D3.5x35.5xd6x36x75L
3.6	35.5	30	6	36	75	DH208C036006P/ D3.6x35.5xd6x36x75L
3.7	35.5	30	6	36	75	DH208C037006P/ D3.7x35.5xd6x36x75L
3.8	42	36	6	36	83	DH208C038006P/ D3.8x42xd6x36x83L
3.9	42	36	6	36	83	DH208C039006P/ D3.9x42xd6x36x83L
4.0	42	36	6	36	83	DH208C040006P/ D4.0x42xd6x36x83L
4.1	50	42	6	36	90	DH208C041006P/ D4.1x50xd6x36x90L
4.2	50	42	6	36	90	DH208C042006P/ D4.2x50xd6x36x90L
4.3	50	42	6	36	90	DH208C043006P/ D4.3x50xd6x36x90L
4.4	50	42	6	36	90	DH208C044006P/ D4.4x50xd6x36x90L
4.5	50	42	6	36	90	DH208C045006P/ D4.5x50xd6x36x90L
4.6	50	42	6	36	90	DH208C046006P/ D4.6x50xd6x36x90L
4.7	50	42	6	36	90	DH208C047006P/ D4.7x50xd6x36x90L
4.8	50	42	6	36	90	DH208C048006P/ D4.8x50xd6x36x90L

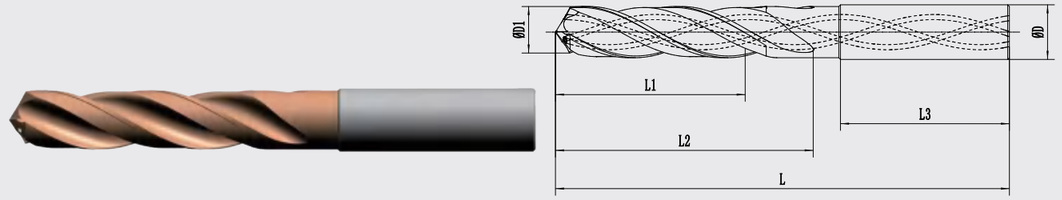




ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
4.9	50	42	6	36	90	DH208C049006P/ D4.9x50xd6x36x90L
5.0	50	42	6	36	90	DH208C050006P/ D5.0x50xd6x36x90L
5.1	57	48	6	36	97	DH208C051006P/ D5.1x57xd6x36x97L
5.2	57	48	6	36	97	DH208C052006P/ D5.2x57xd6x36x97L
5.3	57	48	6	36	97	DH208C053006P/ D5.3x57xd6x36x97L
5.4	57	48	6	36	97	DH208C054006P/ D5.4x57xd6x36x97L
5.5	57	48	6	36	97	DH208C055006P/ D5.5x57xd6x36x97L
5.6	57	48	6	36	97	DH208C056006P/ D5.6x57xd6x36x97L
5.7	57	48	6	36	97	DH208C057006P/ D5.7x57xd6x36x97L
5.8	57	48	6	36	97	DH208C058006P/ D5.8x57xd6x36x97L
5.9	57	48	6	36	97	DH208C059006P/ D5.9x57xd6x36x97L
6.0	57	48	6	36	97	DH208C060006P/ D6.0x57xd6x36x97L
6.1	66	56	8	36	106	DH208C061008P/ D6.1x66xd8x36x106L
6.2	66	56	8	36	106	DH208C062008P/ D6.2x66xd8x36x106L
6.3	66	56	8	36	106	DH208C063008P/ D6.3x66xd8x36x106L
6.4	66	56	8	36	106	DH208C064008P/ D6.4x66xd8x36x106L
6.5	66	56	8	36	106	DH208C065008P/ D6.5x66xd8x36x106L
6.6	66	56	8	36	106	DH208C066008P/ D6.6x66xd8x36x106L
6.7	66	56	8	36	106	DH208C067008P/ D6.7x66xd8x36x106L



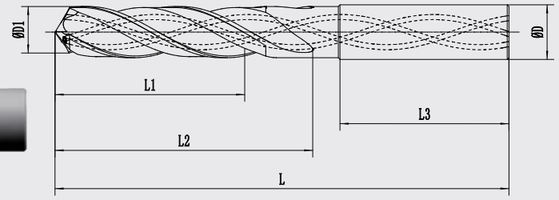
ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
6.8	66	56	8	36	106	DH208C068008P/ D6.8x66xd8x36x106L
6.9	66	56	8	36	106	DH208C069008P/ D6.9x66xd8x36x106L
7.0	66	56	8	36	106	DH208C070008P/ D7.0x66xd8x36x106L
7.1	76	64	8	36	116	DH208C071008P/ D7.1x76xd8x36x116L
7.2	76	64	8	36	116	DH208C072008P/ D7.2x76xd8x36x116L
7.3	76	64	8	36	116	DH208C073008P/ D7.3x76xd8x36x116L
7.4	76	64	8	36	116	DH208C074008P/ D7.4x76xd8x36x116L
7.5	76	64	8	36	116	DH208C075008P/ D7.5x76xd8x36x116L
7.6	76	64	8	36	116	DH208C076008P/ D7.6x76xd8x36x116L
7.7	76	64	8	36	116	DH208C077008P/ D7.7x76xd8x36x116L
7.8	76	64	8	36	116	DH208C078008P/ D7.8x76xd8x36x116L
7.9	76	64	8	36	116	DH208C079008P/ D7.9x76xd8x36x116L
8.0	76	64	8	36	116	DH208C080008P/ D8.0x76xd8x36x116L
8.1	87	74	10	40	131	DH208C081010P/ D8.1x87xd10x40x131L
8.2	87	74	10	40	131	DH208C082010P/ D8.2x87xd10x40x131L
8.3	87	74	10	40	131	DH208C083010P/ D8.3x87xd10x40x131L
8.4	87	74	10	40	131	DH208C084010P/ D8.4x87xd10x40x131L
8.5	87	74	10	40	131	DH208C085010P/ D8.5x87xd10x40x131L
8.6	87	74	10	40	131	DH208C086010P/ D8.6x87xd10x40x131L



ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
8.7	87	74	10	40	131	DH208C087010P/ D8.7x87xd10x40x131L
8.8	87	74	10	40	131	DH208C088010P/ D8.8x87xd10x40x131L
8.9	87	74	10	40	131	DH208C089010P/ D8.9x87xd10x40x131L
9.0	87	74	10	40	131	DH08C090010P/ D9.0x87xd10x40x131L
9.1	95	81	10	40	139	DH208C091010P/ D9.1x95xd10x40x139L
9.2	95	81	10	40	139	DH208C092010P/ D9.2x95xd10x40x139L
9.3	95	81	10	40	139	DH208C093010P/ D9.3x95xd10x40x139L
9.4	95	81	10	40	139	DH208C094010P/ D9.4x95xd10x40x139L
9.5	95	81	10	40	139	DH208C095010P/ D9.5x95xd10x40x139L
9.6	95	81	10	40	139	DH208C096010P/ D9.6x95xd10x40x139L
9.7	95	81	10	40	139	DH208C097010P/ D9.7x95xd10x40x139L
9.8	95	81	10	40	139	DH208C098010P/ D9.8x95xd10x40x139L
9.9	95	81	10	40	139	DH208C099010P/ D9.9x95xd10x40x139L
10.0	95	81	10	40	139	DH208C100010P/ D10.0x95xd10x40x139L
10.1	106	90	12	45	155	DH208C101012P/ D10.1x106xd12x45x155L
10.2	106	90	12	45	155	DH208C102012P/ D10.2x106xd12x45x155L
10.3	106	90	12	45	155	DH208C103012P/ D10.3x106xd12x45x155L
10.4	106	90	12	45	155	DH208C104012P/ D10.4x106xd12x45x155L
10.5	106	90	12	45	155	DH208C105012P/ D10.5x106xd12x45x155L

8 QUINTUPLE DIAMETER STAND COMMON DRILL



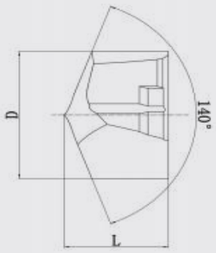


ϕdc toleracne m7	Slot length lf	max drill depth ld	holder diamater ds toleracne h6	shank length ls	total length lo	order number/size
10.6	106	90	12	45	155	DH208C106012P/ D10.6x106xd12x45x155L
10.7	106	90	12	45	155	DH208C107012P/ D10.7x106xd12x45x155L
10.8	106	90	12	45	155	DH208C108012P/ D10.8x106xd12x45x155L
10.9	106	90	12	45	155	DH208C109012P/ D10.9x106xd12x45x155L
11.0	106	90	12	45	155	DH208C110012P/ D11.0x106xd12x45x155L
11.1	114	97	12	45	163	DH208C111012P/ D11.1x114xd12x45x163L
11.2	114	97	12	45	163	DH208C112012P/ D11.2x114xd12x45x163L
11.3	114	97	12	45	163	DH208C113012P/ D11.3x114xd12x45x163L
11.4	114	97	12	45	163	DH208C114012P/ D11.4x114xd12x45x163L
11.5	114	97	12	45	163	DH208C115012P/ D11.5x114xd12x45x163L
11.6	114	97	12	45	163	DH208C116012P/ D11.6x114xd12x45x163L
11.7	114	97	12	45	163	DH208C117012P/ D11.7x114xd12x45x163L
11.8	114	97	12	45	163	DH208C118012P/ D11.8x114xd12x45x163L
11.9	114	97	12	45	163	DH208C119012P/ D11.9x114xd12x45x163L
12.0	114	97	12	45	163	DH208C120012P/ D12.0x114xd12x45x163L

PHOENIX DRILL





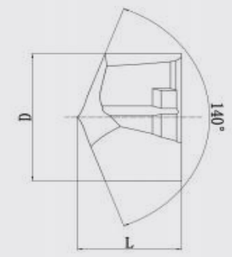


凤凰钻通用刀片型号规格	D	L
PDPA-1250	12.5	9.6
PDPA-1300	13	
PDPA-1350	13.5	
PDPA-1400	14	10.1
PDPA-1450	14.5	
PDPA-1500	15	10.6
PDPA-1550	15.5	
PDPA-1600	16	11.6
PDPA-1650	16.5	
PDPA-1700	17	
PDPA-1750	17.5	
PDPA-1800	18	
PDPA-1850	18.5	12.6
PDPA-1900	19	
PDPA-1950	19.5	
PDPA-2000	20	13.6
PDPA-2050	20.5	
PDPA-2100	21	
PDPA-2150	21.5	
PDPA-2200	22	
PDPA-2250	22.5	14.6
PDPA-2300	23	
PDPA-2350	23.5	
PDPA-2400	24	
PDPA-2450	24.5	15.6
PDPA-2500	25	
PDPA-2550	25.5	
PDPA-2600	26	

PHOENIX DRILL







凤凰钻通用刀片型号规格	D	L
PDPA-2650	26.5	16.6
PDPA-2700	27	
PDPA-2750	27.5	
PDPA-2800	28	
PDPA-2850	28.5	17.6
PDPA-2900	29	
PDPA-2950	29.5	
PDPA-3000	30	
PDPA-3050	30.5	18.6
PDPA-3100	31	
PDPA-3150	31.5	
PDPA-3200	32	
PDPA-3250	32.5	20.6
PDPA-3300	33	
PDPA-3350	33.5	
PDPA-3400	34	
PDPA-3450	34.5	
PDPA-3500	35	
PDPA-3550	35.5	
PDPA-3600	36	
PDPA-3650	36.5	22.6
PDPA-3700	37	
PDPA-3750	37.5	
PDPA-3800	38	
PDPA-3850	38.5	
PDPA-3900	39	
PDPA-3950	39.5	
PDPA-4000	40	

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