



CONVERTIBLE DRILLS

可换式钻头



High Efficiency Convertible Drills

高效可换式钻头

Drills holder/Cutting parameters 钻杆/切削参数	P221
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Drills tip 钻尖	P231
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SPADE DRILLS CONVERTIBLE DRILLS

铲钻可换式钻头

Drills holder/Cutting parameters 钻杆/切削参数	P239
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Drills tip 钻尖	P251
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Convertible Drill Holder

刀片材质介绍

Item	Code	Illustrate
1	DTX	Suitable for processing steel, cast iron, stainless steel, titanium alloy, nickel-based materials, and other superalloys, more suitable to process hardness HRC30-55, high-speed processing, DTX coating has high oxidation, high red hardness and high thermal stability; 主要是适合加工钢, 铸铁, 不锈钢, 钛合金, 镍基材料, 等高温合金, 加工硬度在HRC30-55比较适合, 高速加工, DTX涂层有氧化性, 高红硬性和高热稳定性;
2	DPK	Mainly for ordinary steel, free cutting steel, cast iron, non-ferrous metal, stainless steel; 主要是普通钢, 易切削钢, 铸铁, 有色金属, 不锈钢;
3	DMP	Mainly for hardened steel, stainless steel, titanium alloy, and other difficult-to-process materials, suitable for processing HRC50-70 high hardness materials, high-speed cutting; 主要淬火钢, 不锈钢, 钛合金, 等难加工材料, 适合加工HRC50-70高硬度材料, 高速切削;

Tools holder

刀杆介绍

Diameter from D10.0 - 40.0;
直径从D10.0 - D40.0;

High performance drill rod and bit, with high efficiency and high feed processing;
高性能钻杆、钻头能高效率高进给加工;

The drills depth from 1.5D - 12D, can process holes of different depths;
钻头有1.5D - 12D的深度, 可加工不同深度的孔;

刀杆表面经过镍处理有效提高刀杆寿命、和提高耐磨程度;
The surface of tools holder treat by Nickel, which had improved the service life and wear resistance;

Processing graphics

Times of diameter
直径倍数

Rotation direction
旋转方向

The way of internal cooling
内部冷却方式

The way of side fixed
侧面固定方式

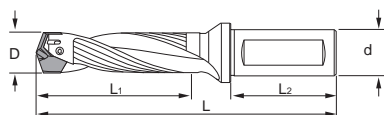
VHM
Cemented carbide material
硬质合金材料

HSS
High-quality powder metallurgical high-speed steel
优质粉末高速钢

AITiN
Surface coating
表面涂层

Convertible Drills Holder

可换式钻刀杆/1.5D



Processing graphics



Deep hole processing, different effective cutting length, could meet different customer request;
深孔加工, 不同的有效刃长, 满足不同的客户需求;

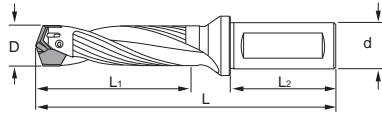
Special surface treatment, excellent wear resistance, reduce friction, easier to cut;
特殊的表面处理, 有优异的耐磨性, 减少摩擦, 更容易排屑;

Suitable for different environments, the processing process ensures accuracy and stability;
适合不同的环境, 加工过程保证精度, 稳定;

Code No.	D	L1	L2	L	d
2015.1000	10.00 ~ 10.40	16.00	48.00	75	16.00
2015.1050	10.50 ~ 10.90	16.00	48.00	76	16.00
2015.1100	11.00 ~ 11.40	17.00	48.00	77	16.00
2015.1150	11.50 ~ 11.90	18.00	48.00	79	16.00
2015.1200	12.00 ~ 12.40	19.00	48.00	80	16.00
2015.1250	12.50 ~ 12.90	19.00	48.00	81	16.00
2015.1300	13.00 ~ 13.40	20.00	48.00	82	16.00
2015.1350	13.50 ~ 13.90	21.00	48.00	83	16.00
2015.1400	14.00 ~ 14.40	22.00	50.00	84	20.00
2015.1450	14.50 ~ 14.90	22.00	50.00	85	20.00
2015.1500	15.00 ~ 15.90	24.00	50.00	91	20.00
2015.1600	16.00 ~ 16.90	25.00	50.00	93	20.00
2015.1700	17.00 ~ 17.90	27.00	50.00	95	20.00
2015.1800	18.00 ~ 18.90	28.00	56.00	103	25.00
2015.1900	19.00 ~ 19.90	30.00	56.00	106	25.00
2015.2000	20.00 ~ 20.90	31.00	56.00	108	25.00
2015.2100	21.00 ~ 21.90	33.00	56.00	111	25.00
2015.2200	22.00 ~ 22.90	34.00	56.00	113	25.00
2015.2300	23.00 ~ 23.90	36.00	56.00	115	25.00
2015.2400	24.00 ~ 24.90	37.00	60.00	122	32.00
2015.2500	25.00 ~ 25.90	39.00	60.00	125	32.00
2015.2600	26.00 ~ 26.90	40.00	60.00	127	32.00
2015.2700	27.00 ~ 27.90	42.00	60.00	129	32.00
2015.2800	28.00 ~ 28.90	43.00	60.00	132	32.00
2015.2900	29.00 ~ 29.90	45.00	60.00	134	32.00
2015.3000	30.00 ~ 30.90	46.00	60.00	136	32.00
2015.3100	31.00 ~ 31.90	48.00	60.00	139	32.00
2015.3200	32.00 ~ 32.90	49.00	60.00	141	32.00
2015.3300	33.00 ~ 33.90	51.00	60.00	143	32.00
2015.3400	34.00 ~ 34.90	52.00	70.00	156	40.00
2015.3500	35.00 ~ 35.90	54.00	70.00	159	40.00
2015.3600	36.00 ~ 36.90	55.00	70.00	161	40.00
2015.3700	37.00 ~ 37.90	57.00	70.00	163	40.00
2015.3800	38.00 ~ 38.90	58.00	70.00	166	40.00
2015.3900	39.00 ~ 40.00	60.00	70.00	170	40.00

Convertible Drill Holder

可换式钻刀杆/3D



Processing graphics



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深孔加工，不同的有效刃长，满足不同的客户需求;

Special surface treatment, excellent wear resistance, reduce friction, easier to cut;
特殊的表面处理，有优异的耐磨性，减少摩擦，更容易排削;

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2030.1000	10.00~10.40	31.00	48.00	96	16.00
2030.1050	10.50~10.90	33.00	48.00	98	16.00
2030.1100	11.00~11.40	34.00	48.00	100	16.00
2030.1150	11.50~11.90	36.00	48.00	103	16.00
2030.1200	12.00~12.40	37.00	48.00	105	16.00
2030.1250	12.50~12.90	39.00	48.00	107	16.00
2030.1300	13.00~13.40	40.00	48.00	109	16.00
2030.1350	13.50~13.90	42.00	48.00	111	16.00
2030.1400	14.00~14.40	43.00	50.00	113	20.00
2030.1450	14.50~14.90	45.00	50.00	115	20.00
2030.1500	15.00~15.90	48.00	50.00	123	20.00
2030.1600	16.00~16.90	51.00	50.00	127	20.00
2030.1700	17.00~17.90	54.00	50.00	131	20.00
2030.1800	18.00~18.90	57.00	56.00	140	25.00
2030.1900	19.00~19.90	60.00	56.00	146	25.00
2030.2000	20.00~20.90	63.00	56.00	150	25.00
2030.2100	21.00~21.90	66.00	56.00	155	25.00
2030.2200	22.00~22.90	69.00	56.00	159	25.00
2030.2300	23.00~23.90	72.00	56.00	163	25.00
2030.2400	24.00~24.90	75.00	60.00	172	32.00
2030.2500	25.00~25.90	78.00	60.00	177	32.00
2030.2600	26.00~26.90	81.00	60.00	181	32.00
2030.2700	27.00~27.90	84.00	60.00	185	32.00
2030.2800	28.00~28.90	87.00	60.00	190	32.00
2030.2900	29.00~29.90	90.00	60.00	194	32.00
2030.3000	30.00~30.90	93.00	60.00	198	32.00
2030.3100	31.00~31.90	96.00	60.00	203	32.00
2030.3200	32.00~32.90	99.00	60.00	207	32.00
2030.3300	33.00~33.90	102.00	60.00	211	32.00
2030.3400	34.00~34.90	105.00	70.00	226	40.00
2030.3500	35.00~35.90	108.00	70.00	231	40.00
2030.3600	36.00~36.90	111.00	70.00	235	40.00
2030.3700	37.00~37.90	114.00	70.00	239	40.00
2030.3800	38.00~38.90	117.00	70.00	244	40.00
2030.3900	39.00~40.00	120.00	70.00	252	40.00



Recommended cutting parameters for convertible drills

可换式钻头推荐切削参数

2015 series 1.5D 2015系列 1.5D

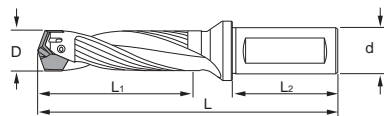
2030 series 3.0D 2030系列 3.0D

D (mm)	Feed (mm/rev)Code groups						
	A	B	C	D	E	F	G
10.00	0.090	0.100	0.120	0.130	0.140	0.155	0.175
15.00	0.100	0.125	0.130	0.140	0.150	0.017	0.200
18.00	0.120	0.130	0.140	0.160	0.170	0.185	0.215
21.00	0.130	0.140	0.150	0.170	0.185	0.200	0.230
23.00	0.140	0.150	0.160	0.180	0.190	0.215	0.245
26.00	0.150	0.160	0.170	0.200	0.210	0.230	0.260
29.00	0.160	0.170	0.180	0.200	0.220	0.245	0.275
34.00	0.170	0.180	0.190	0.215	0.230	0.250	0.290
40.00	0.200	0.220	0.230	0.240	0.250	0.270	0.300

Material	JIS	Mpa (N/mm ²)	DPK		DMP		DTX		
			Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	
P	general structural steel	SS330, SM400, SPV450, SG295 SS500, STKM14A, SEV245	≤500 >500-850	110-130	E			100-120	D
	free-machining steel	SUM22L, SUM25, SUM42 SUM41, SUM43	≤850 850-1000	110-130	F			100-120	E
	Non-alloy tempered steel	S20C, S30C S45C, S48C S55C, S58C	≤700 700-850 850-1000	120-140	E			110-130	D
	alloy tempered steel	SCSiMn2, SCr430, SCr435, SMn438 SNC236, SCr440, SCM440, SMnC443	850-≤1000 1000-1200	90-110	E			80-100	D
	quenched and tempered steel	SCr435, SNC815, SMnC415, SCM420	850-≤1000 1000-1200	70-100	E			70-90	D
	Nitriding steel	(34CrA16) SACM645	≥850-≤1000 >1000-1200	70-100	D			70-90	C
	tool steel	SK75, SUJ2, (29CrMoV9) SKD1, SKS31, SKT6	≤850 >850-1000	50-65	C			50-65	C
	high speed steel	SKH51, SKH52, SKH55	≥650-1000	45-55	C			45-55	C
M	stainless steel	SUS416, SUS430, SUS430F, SUS303 SUS304, SUS316Ti, SUS321 SUS431, SUS420J1, SUS444	≤850 ≤850 ≤850			35-55	B	30-45	B
K	Gray cast iron	FC100, FC200 FC250, FC350	850-≤1000 1000-1200	60-80	D	70-90	D	60-80	D
	constant temperature fireball ductile iron	FCAD800(ADI800), FCAD1000(ADI1000), FCAD1200(ADI1200), FCAD1400(ADI1400)	800-1000 1200-1400	50-70	D	55-85	D	50-70	D
N	Aluminum and aluminium alloys	A1050, A5005, A6060	≤400					170-190	F
	Forged aluminium alloy	A6012, A2017, A6061, A7075	≤450					160-180	F
	Cast aluminium alloy < 10% Si > 10% Si	AC2A, AC2B, AC4B, ADC10 ADC1, ADC2, ACBA	≤600 ≤600					110-140	F
	magnesium alloy	M1, MB2, MB3	≤450					150-170	F
	copper (Cu)	C1030, C5191, BC6	≤400					60-80	E
	Brass short	C3604, C3713, C3800, C2400, C2680, C3350	≤600 ≤600					40-70	E
s	Special Alloys, Super Heat Resistant Alloys	SUH, NCF, NW(Nimonic, Inconel, Monel, Hastelloy)	≤1200			25-30	A	25-30	A
	Titanium and Titanium Alloys	Ti99.5, TiA15Sn2.5, TiCu2 TiA16Zr5, TiA16V4, TiA14Mo4Sn2.5, TiA18Mo1V1	≤850 >850-1200			30-40	A	30-35	A

Convertible Drill Holder

可换式钻刀杆/5D



Processing graphics



Deep hole processing, different effective cutting length, could meet different customer request;
深孔加工，不同的有效刃长，满足不同的客户需求;

Special surface treatment, excellent wear resistance, reduce friction, easier to cut;
特殊的表面处理，有优异的耐磨性，减少摩擦，更容易排削;

Suitable for different environments, the processing process ensures accuracy and stability;
适合不同的环境，加工过程保证精度，稳定;

Code No.	D	L1	L2	L	d
2050.1000	10.00~10.40	52.00	48.00	117	16.00
2050.1050	10.50~10.90	55.00	48.00	120	16.00
2050.1100	11.00~11.40	57.00	48.00	123	16.00
2050.1150	11.50~11.90	60.00	48.00	127	16.00
2050.1200	12.00~12.40	62.00	48.00	130	16.00
2050.1250	12.50~12.90	65.00	48.00	133	16.00
2050.1300	13.00~13.40	67.00	48.00	136	16.00
2050.1350	13.50~13.90	70.00	48.00	139	16.00
2050.1400	14.00~14.40	72.00	50.00	142	20.00
2050.1450	14.50~14.90	75.00	50.00	145	20.00
2050.1500	15.00~15.90	80.00	50.00	155	20.00
2050.1600	16.00~16.90	85.00	50.00	161	20.00
2050.1700	17.00~17.90	90.00	50.00	167	20.00
2050.1800	18.00~18.90	95.00	56.00	176	25.00
2050.1900	19.00~19.90	100.00	56.00	186	25.00
2050.2000	20.00~20.90	105.00	56.00	192	25.00
2050.2100	21.00~21.90	110.00	56.00	199	25.00
2050.2200	22.00~22.90	115.00	56.00	205	25.00
2050.2300	23.00~23.90	120.00	56.00	211	25.00
2050.2400	24.00~24.90	125.00	60.00	222	32.00
2050.2500	25.00~25.90	130.00	60.00	229	32.00
2050.2600	26.00~26.90	135.00	60.00	235	32.00
2050.2700	27.00~27.90	140.00	60.00	241	32.00
2050.2800	28.00~28.90	145.00	60.00	248	32.00
2050.2900	29.00~29.90	150.00	60.00	254	32.00
2050.3000	30.00~30.90	155.00	60.00	260	32.00
2050.3100	31.00~31.90	160.00	60.00	267	32.00
2050.3200	32.00~32.90	165.00	60.00	273	32.00
2050.3300	33.00~33.90	170.00	60.00	279	32.00
2050.3400	34.00~34.90	175.00	70.00	296	40.00
2050.3500	35.00~35.90	180.00	70.00	303	40.00
2050.3600	36.00~36.90	185.00	70.00	309	40.00
2050.3700	37.00~37.90	190.00	70.00	315	40.00
2050.3800	38.00~38.90	195.00	70.00	322	40.00
2050.3900	39.00~40.00	200.00	70.00	334	40.00



Recommended cutting parameters for convertible drills

可换式钻头推荐切削参数

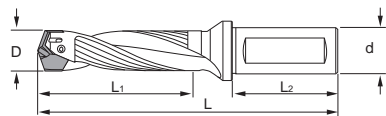
2050 series 5D 2050系列 5D

D (mm)	Feed (mm/rev)Code groups						
	A	B	C	D	E	F	G
10.00	0.090	0.100	0.120	0.130	0.140	0.155	0.175
15.00	0.100	0.125	0.130	0.140	0.150	0.017	0.200
18.00	0.120	0.130	0.140	0.160	0.170	0.185	0.215
21.00	0.130	0.140	0.150	0.170	0.185	0.200	0.230
23.00	0.140	0.150	0.160	0.180	0.190	0.215	0.245
26.00	0.150	0.160	0.170	0.200	0.210	0.230	0.260
29.00	0.160	0.170	0.180	0.200	0.220	0.245	0.275
34.00	0.170	0.180	0.190	0.215	0.230	0.250	0.290
40.00	0.200	0.220	0.230	0.240	0.250	0.270	0.300

Material	JIS	Mpa (N/mm ²)	DPK		DMP		DTX		
			Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	
P	general structural steel	SS330, SM400, SPV450, SG295 SS500, STKM14A, SEV245	≤500 >500-850	100-120	E			100-120	D
	free-machining steel	SUM22L, SUM25, SUM42 SUM41, SUM43	≤850 850-1000	100-120	F			100-120	E
	Non-alloy tempered steel	S20C, S30C S45C, S48C S55C, S58C	≤700 700-850 850-1000	90-110	E			110-130	D
	alloy tempered steel	SCSiMn2, SCr430, SCr435, SMn438 SNC236, SCr440, SCM440, SMnC443	850-≤1000 1000-1200	85-110	E			80-100	D
	quenched and tempered steel	SCr435, SNC815, SMnC415, SCM420	850-≤1000 1000-1200	70-110	E			70-90	D
	Nitriding steel	(34CrA16) SACM645	≥850-≤1000 > 1000-1200	70-110	D			70-90	C
	tool steel	SK75, SUJ2, (29CrMoV9) SKD1, SKS31, SKT6	≤850 >850-1000	50-60	C			50-65	C
	high speed steel	SKH51, SKH52, SKH55	≥650-1000	45-55	C			45-55	C
M	stainless steel	SUS416, SUS430, SUS430F, SUS303 SUS304, SUS316Ti, SUS321 SUS431, SUS420J1, SUS444	≤850 ≤850 ≤850			35-55	B	30-45	B
K	Gray cast iron	FC100, FC200 FC250, FC350	850-≤1000 1000-1200	60-70	C	70-90	D	60-80	D
	constant temperature fireball ductile iron	FCAD800(ADI800), FCAD1000(ADI1000), FCAD1200(ADI1200), FCAD1400(ADI1400)	800-1000 1200-1400	45-65	C	55-85	D	50-70	D
N	Aluminum and aluminium alloys	A1050, A5005, A6060	≤400					170-190	F
	Forged aluminium alloy	A6012, A2017, A6061, A7075	≤450					160-180	F
	Cast aluminium alloy < 10% Si > 10% Si	AC2A, AC2B, AC4B, ADC10 ADC1, ADC2, ACBA	≤600 ≤600					110-140	F
	magnesium alloy	M1, MB2, MB3	≤450					150-170	F
	copper (Cu)	C1030, C5191, BC6	≤400					60-80	E
	Brass short	C3604, C3713, C3800, C2400, C2680, C3350	≤600 ≤600					40-70	E
s	Special Alloys, Super Heat Resistant Alloys	SUH, NCF, NW(Nimonic, Inconel, Monel, Hastelloy)	≤1200			25-30	A	25-30	A
	Titanium and Titanium Alloys	Ti99.5, TiA15Sn2.5, TiCu2 TiA16Zr5, TiA16V4, TiA14Mo4Sn2.5, TiA18Mo1V1	≤850 >850-1200			30-40	A	30-35	A

Convertible Drill Holder

可换式钻刀杆/8D



Processing graphics

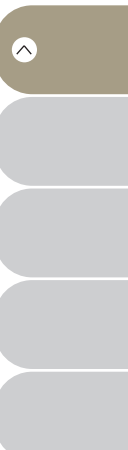


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2080.1250	12.50~12.90	103.00	48.00	171	16.00
2080.1300	13.00~13.40	107.00	48.00	176	16.00
2080.1350	13.50~13.90	111.00	48.00	181	16.00
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2080.1500	15.00~15.90	127.00	50.00	202	20.00
2080.1600	16.00~16.90	135.00	50.00	211	20.00
2080.1700	17.00~17.90	143.00	50.00	221	20.00
2080.1800	18.00~18.90	151.00	56.00	232	25.00
2080.1900	19.00~19.90	159.00	56.00	246	25.00
2080.2000	20.00~20.90	167.00	56.00	255	25.00
2080.2100	21.00~21.90	175.00	56.00	265	25.00
2080.2200	22.00~22.90	183.00	56.00	274	25.00
2080.2300	23.00~23.90	191.00	56.00	284	25.00
2080.2400	24.00~24.90	199.00	60.00	297	32.00
2080.2500	25.00~25.90	207.00	60.00	307	32.00
2080.2600	26.00~26.90	215.00	60.00	316	32.00
2080.2700	27.00~27.90	223.00	60.00	326	32.00
2080.2800	28.00~28.90	231.00	60.00	335	32.00
2080.2900	29.00~29.90	239.00	60.00	345	32.00
2080.3000	30.00~30.90	247.00	60.00	354	32.00
2080.3100	31.00~31.90	255.00	60.00	364	32.00
2080.3200	32.00~32.90	263.00	60.00	373	32.00
2080.3300	33.00~33.90	271.00	60.00	383	32.00
2080.3400	34.00~34.90	279.00	70.00	402	40.00
2080.3500	35.00~35.90	287.00	70.00	412	40.00
2080.3600	36.00~36.90	295.00	70.00	421	40.00
2080.3700	37.00~37.90	303.00	70.00	431	40.00
2080.3800	38.00~38.90	311.00	70.00	440	40.00
2080.3900	39.00~40.00	320.00	70.00	459	40.00



Recommended cutting parameters for convertible drills

可换式钻头推荐切削参数

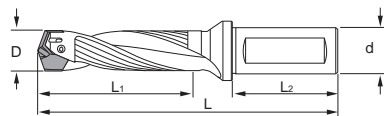
2080 series 8D 2080系列 8D

D (mm)	Feed (mm/rev)Code groups						
	A	B	C	D	E	F	G
10.00	0.090	0.100	0.120	0.130	0.140	0.155	0.175
15.00	0.100	0.125	0.130	0.140	0.150	0.017	0.200
18.00	0.120	0.130	0.140	0.160	0.170	0.185	0.215
21.00	0.130	0.140	0.150	0.170	0.185	0.200	0.230
23.00	0.140	0.150	0.160	0.180	0.190	0.215	0.245
26.00	0.150	0.160	0.170	0.200	0.210	0.230	0.260
29.00	0.160	0.170	0.180	0.200	0.220	0.245	0.275
34.00	0.170	0.180	0.190	0.215	0.230	0.250	0.290
40.00	0.200	0.220	0.230	0.240	0.250	0.270	0.300

Material	JIS	Mpa (N/mm ²)	DPK		DMP		DTX		
			Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	
P	general structural steel	SS330, SM400, SPV450, SG295 SS500, STKM14A, SEV245	≤500 >500-850	90-110	E			90-110	D
	free-machining steel	SUM22L, SUM25, SUM42 SUM41, SUM43	≤850 850-1000	90-110	F			90-110	E
	Non-alloy tempered steel	S20C, S30C S45C, S48C S55C, S58C	≤700 700-850 850-1000	80-100	E			80-100	D
	alloy tempered steel	SCSiMn2, SCr430, SCr435, SMn438 SNC236, SCr440, SCM440, SMnC443	850-≤1000 1000-1200	80-100	E			80-100	D
	quenched and tempered steel	SCr435, SNC815, SMnC415, SCM420	850-≤1000 1000-1200	80-100	E			80-100	D
	Nitriding steel	(34CrA16) SACM645	≥850-≤1000 > 1000-1200	80-100	D			80-100	C
	tool steel	SK75, SUJ2, (29CrMoV9) SKD1, SKS31, SKT6	≤850 >850-1000	45-55	C			45-55	C
	high speed steel	SKH51, SKH52, SKH55	≥650-1000	40-50	C			40-50	C
M	stainless steel	SUS416, SUS430, SUS430F, SUS303 SUS304, SUS316Ti, SUS321 SUS431, SUS420J1, SUS444	≤850 ≤850 ≤850			35-55	B	30-45	B
K	Gray cast iron	FC100, FC200 FC250, FC350	850-≤1000 1000-1200	50-60	C	70-90	D	60-80	D
	constant temperature fireball ductile iron	FCAD800(ADI800), FCAD1000(ADI1000), FCAD1200(ADI1200), FCAD1400(ADI1400)	800-1000 1200-1400	40-50	C	55-85	D	50-70	D
N	Aluminum and aluminium alloys	A1050, A5005, A6060	≤400					170-190	E
	Forged aluminium alloy	A6012, A2017, A6061, A7075	≤450					160-180	E
	Cast aluminium alloy < 10% Si > 10% Si	AC2A, AC2B, AC4B, ADC10 ADC1, ADC2, ACBA	≤600 ≤600					110-140	E
	magnesium alloy	M1, MB2, MB3	≤450					150-170	E
	copper (Cu)	C1030, C5191, BC6	≤400					60-80	D
	Brass short	C3604, C3713, C3800, C2400, C2680, C3350	≤600 ≤600					40-70	D
s	Special Alloys, Super Heat Resistant Alloys	SUH, NCF, NW (Nimonic, Inconel, Monel, Hastelloy)	≤1200			25-30	A	25-30	A
	Titanium and Titanium Alloys	Ti99.5, TiA15Sn2.5, TiCu2 TiA16Zr5, TiA16V4, TiA14Mo4Sn2.5, TiA18Mo1V1	≤850 >850-1200			30-40	A	30-35	A

Convertible Drill Holder

可换式钻刀杆/10D



Processing graphics

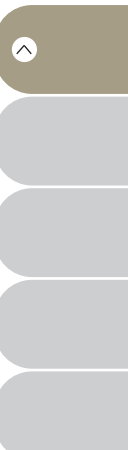


Deep hole processing, different effective cutting length, could meet different customer request;
深孔加工，不同的有效刃长，满足不同的客户需求;

Special surface treatment, excellent wear resistance, reduce friction, easier to cut;
特殊的表面处理，有优异的耐磨性，减少摩擦，更容易排削;

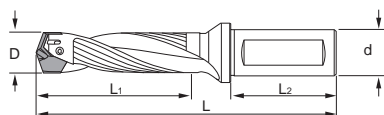
Suitable for different environments, the processing process ensures accuracy and stability;
适合不同的环境，加工过程保证精度，稳定;

Code No.	D	L1	L2	L	d
2100.1000	10.00~10.40	104.00	48.00	169	16.00
2100.1050	10.50~10.90	109.00	48.00	174	16.00
2100.1100	11.00~11.40	114.00	48.00	180	16.00
2100.1150	11.50~11.90	119.00	48.00	186	16.00
2100.1200	12.00~12.40	124.00	48.00	192	16.00
2100.1250	12.50~12.90	129.00	48.00	197	16.00
2100.1300	13.00~13.40	134.00	48.00	203	16.00
2100.1350	13.50~13.90	139.00	48.00	209	16.00
2100.1400	14.00~14.40	144.00	50.00	215	20.00
2100.1450	14.50~14.90	149.00	50.00	220	20.00
2100.1500	15.00~15.90	159.00	50.00	234	20.00
2100.1600	16.00~16.90	169.00	50.00	245	20.00
2100.1700	17.00~17.90	179.00	50.00	257	20.00
2100.1800	18.00~18.90	189.00	56.00	269	25.00
2100.1900	19.00~19.90	199.00	56.00	286	25.00
2100.2000	20.00~20.90	209.00	56.00	297	25.00
2100.2100	21.00~21.90	219.00	56.00	309	25.00
2100.2200	22.00~22.90	229.00	56.00	320	25.00
2100.2300	23.00~23.90	239.00	56.00	332	25.00
2100.2400	24.00~24.90	249.00	60.00	347	32.00
2100.2500	25.00~25.90	259.00	60.00	359	32.00
2100.2600	26.00~26.90	269.00	60.00	370	32.00
2100.2700	27.00~27.90	279.00	60.00	382	32.00
2100.2800	28.00~28.90	289.00	60.00	393	32.00
2100.2900	29.00~29.90	299.00	60.00	405	32.00
2100.3000	30.00~30.90	309.00	60.00	416	32.00
2100.3100	31.00~31.90	319.00	60.00	428	32.00
2100.3200	32.00~32.90	329.00	60.00	439	32.00
2100.3300	33.00~33.90	339.00	60.00	451	32.00
2100.3400	34.00~34.90	349.00	70.00	472	40.00
2100.3500	35.00~35.90	359.00	70.00	484	40.00
2100.3600	36.00~36.90	369.00	70.00	495	40.00
2100.3700	37.00~37.90	379.00	70.00	507	40.00
2100.3800	38.00~38.90	389.00	70.00	518	40.00
2100.3900	39.00~40.00	400.00	70.00	541	40.00



Convertible Drill Holder

可换式钻刀杆/12D



Processing graphics



Deep hole processing, different effective cutting length, could meet different customer request;
深孔加工, 不同的有效刃长, 满足不同的客户需求;

Special surface treatment, excellent wear resistance, reduce friction, easier to cut;
特殊的表面处理, 有优异的耐磨性, 减少摩擦, 更容易排屑;

Suitable for different environments, the processing process ensures accuracy and stability;
适合不同的环境, 加工过程保证精度, 稳定;

Code No.	D	L1	L2	L	d
2120.1000	10.00 ~ 10.40	125.00	48.00	190	16.00
2120.1050	10.50 ~ 10.90	131.00	48.00	196	16.00
2120.1100	11.00 ~ 11.40	137.00	48.00	203	16.00
2120.1150	11.50 ~ 11.90	143.00	48.00	210	16.00
2120.1200	12.00 ~ 12.40	149.00	48.00	217	16.00
2120.1250	12.50 ~ 12.90	155.00	48.00	223	16.00
2120.1300	13.00 ~ 13.40	161.00	48.00	230	16.00
2120.1350	13.50 ~ 13.90	167.00	48.00	237	16.00
2120.1400	14.00 ~ 14.40	173.00	50.00	244	20.00
2120.1450	14.50 ~ 14.90	179.00	50.00	250	20.00
2120.1500	15.00 ~ 15.90	191.00	50.00	266	20.00
2120.1600	16.00 ~ 16.90	203.00	50.00	279	20.00
2120.1700	17.00 ~ 17.90	215.00	50.00	293	20.00
2120.1800	18.00 ~ 18.90	227.00	56.00	306	25.00
2120.1900	19.00 ~ 19.90	239.00	56.00	326	25.00
2120.2000	20.00 ~ 20.90	251.00	56.00	339	25.00
2120.2120	21.00 ~ 21.90	263.00	56.00	353	25.00
2120.2200	22.00 ~ 22.90	275.00	56.00	366	25.00
2120.2300	23.00 ~ 23.90	287.00	56.00	380	25.00
2120.2400	24.00 ~ 24.90	299.00	60.00	397	32.00
2120.2500	25.00 ~ 25.90	311.00	60.00	411	32.00
2120.2600	26.00 ~ 26.90	323.00	60.00	424	32.00
2120.2700	27.00 ~ 27.90	335.00	60.00	438	32.00
2120.2800	28.00 ~ 28.90	347.00	60.00	451	32.00
2120.2900	29.00 ~ 29.90	359.00	60.00	465	32.00
2120.3000	30.00 ~ 30.90	371.00	60.00	478	32.00
2120.3100	31.00 ~ 31.90	383.00	60.00	492	32.00
2120.3200	32.00 ~ 32.90	395.00	60.00	505	32.00
2120.3300	33.00 ~ 33.90	407.00	60.00	519	32.00
2120.3400	34.00 ~ 34.90	419.00	70.00	542	40.00
2120.3500	35.00 ~ 35.90	431.00	70.00	556	40.00
2120.3600	36.00 ~ 36.90	443.00	70.00	569	40.00
2120.3700	37.00 ~ 37.90	455.00	70.00	583	40.00
2120.3800	38.00 ~ 38.90	467.00	70.00	596	40.00
2120.3900	39.00 ~ 40.00	480.00	70.00	623	40.00

Recommended cutting parameters for convertible drills

可换式钻头推荐切削参数

2100 series 10D 2100系列 10D

2120 series 12D 2120系列 12D

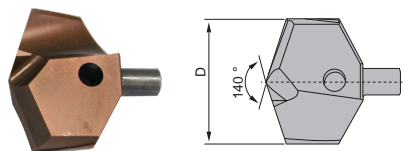
D (mm)	Feed (mm/rev)Code groups						
	A	B	C	D	E	F	G
10.00	0.090	0.100	0.120	0.130	0.140	0.155	0.175
15.00	0.100	0.125	0.130	0.140	0.150	0.17	0.200
18.00	0.120	0.130	0.140	0.160	0.170	0.185	0.215
21.00	0.130	0.140	0.150	0.170	0.185	0.200	0.230
23.00	0.140	0.150	0.160	0.180	0.190	0.215	0.245
26.00	0.150	0.160	0.170	0.200	0.210	0.230	0.260
29.00	0.160	0.170	0.180	0.200	0.220	0.245	0.275
34.00	0.170	0.180	0.190	0.215	0.230	0.250	0.290
40.00	0.200	0.220	0.230	0.240	0.250	0.270	0.300

Material	JIS	Mpa (N/mm ²)	DPK		DMP		DTX		
			Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	
P	general structural steel	SS330, SM400, SPV450, SG295 SS500, STKM14A, SEV245	≤500 >500-850	80-100	E			90-110	D
	free-machining steel	SUM22L, SUM25, SUM42 SUM41, SUM43	≤850 850-1000	80-100	F			90-110	E
	Non-alloy tempered steel	S20C, S30C S45C, S48C S55C, S58C	≤700 700-850 850-1000	70-90	E			80-100	D
	alloy tempered steel	SCSiMn2, SCr430, SCr435, SMn438 SNC236, SCr440, SCM440, SMnC443	850-≤1000 1000-1200	70-90	E			80-100	D
	quenched and tempered steel	SCr435, SNC815, SMnC415, SCM420	850-≤1000 1000-1200	70-90	E			80-100	D
	Nitriding steel	(34CrA16) SACM645	≥850-≤1000 >1000-1200	70-90	D			80-100	C
	tool steel	SK75, SUJ2, (29CrMoV9) SKD1, SKS31, SKT6	≤850 >850-1000	40-50	C			45-55	C
	high speed steel	SKH51, SKH52, SKH55	≥650-1000	40-50	C			40-50	C
M	stainless steel	SUS416, SUS430, SUS430F, SUS303 SUS304, SUS316Ti, SUS321 SUS431, SUS420J1, SUS444	≤850 ≤850 ≤850			35-55	B	30-40	B
K	Gray cast iron	FC100, FC200 FC250, FC350	850-≤1000 1000-1200	45-50	B	70-80	B	60-70	B
	constant temperature fireball ductile iron	FCAD800(ADI800), FCAD1000(ADI1000), FCAD1200(ADI1200), FCAD1400(ADI1400)	800-1000 1200-1400	40-45	B	50-70	B	50-60	B
N	Aluminum and aluminium alloys	A1050, A5005, A6060	≤400					130-150	D
	Forged aluminium alloy	A6012, A2017, A6061, A7075	≤450					130-150	D
	Cast aluminium alloy <10% Si >10% Si	AC2A, AC2B, AC4B, ADC10 ADC1, ADC2, ACBA	≤600 ≤600					90-120	D
	magnesium alloy	M1, MB2, MB3	≤450					130-140	D
	copper (Cu)	C1030, C5191, BC6	≤400					50-60	C
	Brass short	C3604, C3713, C3800, C2400, C2680, C3350	≤600 ≤600					40-50	C
S	Special Alloys, Super Heat Resistant Alloys	SUH, NCF, NW(Nimonic, Inconel, Monel, Hastelloy)	≤1200			25-30	A	25-30	A
	Titanium and Titanium Alloys	Ti99.5, TiA15Sn2.5, TiCu2 TiA16Zr5, TiA16V4, TiA14Mo4Sn2.5, TiA18Mo1V1	≤850 >850-1200			30-40	A	30-35	A



Convertible Drill Insert

可换式钻头



Processing graphics



Suitable for steel, stainless steel, cast iron, hard-to-process materials, high hardness materials;
适合钢, 不锈钢, 铸铁, 难加工材料, 高硬度材料;

Three special coatings to meet customers requirements;
三种特殊的涂层, 满足客户要求;

With Good finishing;
有较好的光洁度;

Order demonstration:
A20.1200.DPK

Code No.	D (mm)	Processing graphics			
		VHM	AlTiN	R	
		P	●	●	○
		M	●	○	●
		K	●	●	○
		N	●	○	
		H	○		●
		S	○	○	●
Code No.	D (mm)	DTX	DPK	DMP	
A20.1200	12.00	●	●	●	
A20.1210	12.10	●	●	●	
A20.1220	12.20	●	●	●	
A20.1230	12.30	●	●	●	
A20.1240	12.40	●	●	●	
A20.1250	12.50	●	●	●	
A20.1260	12.60	●	●	●	
A20.1270	12.70	●	●	●	
A20.1280	12.80	●	●	●	
A20.1290	12.90	●	●	●	
A20.1300	13.00	●	●	●	
A20.1310	13.10	●	●	●	
A20.1320	13.20	●	●	●	
A20.1330	13.30	●	●	●	
A20.1340	13.40	●	●	●	
A20.1350	13.50	●	●	●	
A20.1360	13.60	●	●	●	
A20.1370	13.70	●	●	●	
A20.1380	13.80	●	●	●	
A20.1390	13.90	●	●	●	
A20.1400	14.00	●	●	●	
A20.1410	14.10	●	●	●	
A20.1420	14.20	●	●	●	
A20.1430	14.30	●	●	●	
A20.1440	14.40	●	●	●	
A20.1450	14.50	●	●	●	

Convertible Drill Insert

可换式钻头

Code No.	D (mm)	DTX	DPK	DMP
A20.1460	14.60	•	•	•
A20.1470	14.70	•	•	•
A20.1480	14.80	•	•	•
A20.1490	14.90	•	•	•
A20.1500	15.00	•	•	•
A20.1510	15.10	•	•	•
A20.1520	15.20	•	•	•
A20.1530	15.30	•	•	•
A20.1540	15.40	•	•	•
A20.1550	15.50	•	•	•
A20.1560	15.60	•	•	•
A20.1570	15.70	•	•	•
A20.1580	15.80	•	•	•
A20.1590	15.90	•	•	•
A20.1600	16.00	•	•	•
A20.1610	16.10	•	•	•
A20.1620	16.20	•	•	•
A20.1630	16.30	•	•	•
A20.1640	16.40	•	•	•
A20.1650	16.50	•	•	•
A20.1660	16.60	•	•	•
A20.1670	16.70	•	•	•
A20.1680	16.80	•	•	•
A20.1690	16.90	•	•	•
A20.1700	17.00	•	•	•
A20.1710	17.10	•	•	•
A20.1720	17.20	•	•	•
A20.1730	17.30	•	•	•
A20.1740	17.40	•	•	•
A20.1750	17.50	•	•	•
A20.1760	17.60	•	•	•
A20.1770	17.70	•	•	•
A20.1780	17.80	•	•	•
A20.1790	17.90	•	•	•
A20.1800	18.00	•	•	•
A20.1810	18.10	•	•	•
A20.1820	18.20	•	•	•
A20.1830	18.30	•	•	•
A20.1840	18.40	•	•	•
A20.1850	18.50	•	•	•
A20.1860	18.60	•	•	•
A20.1870	18.70	•	•	•
A20.1880	18.80	•	•	•
A20.1890	18.90	•	•	•
A20.1900	19.00	•	•	•
A20.1910	19.10	•	•	•
A20.1920	19.20	•	•	•
A20.1930	19.30	•	•	•



Convertible Drill Insert

可换式钻头

Code No.	D (mm)	DTX	DPK	DMP
A20.1940	19.40	•	•	•
A20.1950	19.50	•	•	•
A20.1960	19.60	•	•	•
A20.1970	19.70	•	•	•
A20.1980	19.80	•	•	•
A20.1990	19.90	•	•	•
A20.2000	20.00	•	•	•
A20.2010	20.10	•	•	•
A20.2020	20.20	•	•	•
A20.2030	20.30	•	•	•
A20.2040	20.40	•	•	•
A20.2050	20.50	•	•	•
A20.2060	20.60	•	•	•
A20.2070	20.70	•	•	•
A20.2080	20.80	•	•	•
A20.2090	20.90	•	•	•
A20.2100	21.00	•	•	•
A20.2110	21.10	•	•	•
A20.2120	21.20	•	•	•
A20.2130	21.30	•	•	•
A20.2140	21.40	•	•	•
A20.2150	21.50	•	•	•
A20.2160	21.60	•	•	•
A20.2170	21.70	•	•	•
A20.2180	21.80	•	•	•
A20.2190	21.90	•	•	•
A20.2200	22.00	•	•	•
A20.2210	22.10	•	•	•
A20.2220	22.20	•	•	•
A20.2230	22.30	•	•	•
A20.2240	22.40	•	•	•
A20.2250	22.50	•	•	•
A20.2260	22.60	•	•	•
A20.2270	22.70	•	•	•
A20.2280	22.80	•	•	•
A20.2290	22.90	•	•	•
A20.2300	23.00	•	•	•
A20.2310	23.10	•	•	•
A20.2320	23.20	•	•	•
A20.2330	23.30	•	•	•
A20.2340	23.40	•	•	•
A20.2350	23.50	•	•	•
A20.2360	23.60	•	•	•
A20.2370	23.70	•	•	•
A20.2380	23.80	•	•	•
A20.2390	23.90	•	•	•
A20.2400	24.00	•	•	•
A20.2410	24.10	•	•	•

Convertible Drill Insert

可换式钻尖

Code No.	D (mm)	DTX	DPK	DMP
A20.2420	24.20	•	•	•
A20.2430	24.30	•	•	•
A20.2440	24.40	•	•	•
A20.2450	24.50	•	•	•
A20.2460	24.60	•	•	•
A20.2470	24.70	•	•	•
A20.2480	24.80	•	•	•
A20.2490	24.90	•	•	•
A20.2500	25.00	•	•	•
A20.2510	25.10	•	•	•
A20.2520	25.20	•	•	•
A20.2530	25.30	•	•	•
A20.2540	25.40	•	•	•
A20.2550	25.50	•	•	•
A20.2560	25.60	•	•	•
A20.2570	25.70	•	•	•
A20.2580	25.80	•	•	•
A20.2590	25.90	•	•	•
A20.2600	26.00	•	•	•
A20.2610	26.10	•	•	•
A20.2620	26.20	•	•	•
A20.2630	26.30	•	•	•
A20.2640	26.40	•	•	•
A20.2650	26.50	•	•	•
A20.2660	26.60	•	•	•
A20.2670	26.70	•	•	•
A20.2680	26.80	•	•	•
A20.2690	26.90	•	•	•
A20.2700	27.00	•	•	•
A20.2710	27.10	•	•	•
A20.2720	27.20	•	•	•
A20.2730	27.30	•	•	•
A20.2740	27.40	•	•	•
A20.2750	27.50	•	•	•
A20.2760	27.60	•	•	•
A20.2770	27.70	•	•	•
A20.2780	27.80	•	•	•
A20.2790	27.90	•	•	•
A20.2800	28.00	•	•	•
A20.2810	28.10	•	•	•
A20.2820	28.20	•	•	•
A20.2830	28.30	•	•	•
A20.2840	28.40	•	•	•
A20.2850	28.50	•	•	•
A20.2860	28.60	•	•	•
A20.2870	28.70	•	•	•
A20.2880	28.80	•	•	•
A20.2890	28.90	•	•	•



Convertible Drill Insert

可换式钻头

Code No.	D (mm)	DTX	DPK	DMP
A20.2900	29.00	•	•	•
A20.2910	29.10	•	•	•
A20.2920	29.20	•	•	•
A20.2930	29.30	•	•	•
A20.2940	29.40	•	•	•
A20.2950	29.50	•	•	•
A20.2960	29.60	•	•	•
A20.2970	29.70	•	•	•
A20.2980	29.80	•	•	•
A20.2990	29.90	•	•	•
A20.3000	30.00	•	•	•
A20.3010	30.10	•	•	•
A20.3020	30.20	•	•	•
A20.3030	30.30	•	•	•
A20.3040	30.40	•	•	•
A20.3050	30.50	•	•	•
A20.3060	30.60	•	•	•
A20.3070	30.70	•	•	•
A20.3080	30.80	•	•	•
A20.3090	30.90	•	•	•
A20.3100	31.00	•	•	•
A20.3110	31.10	•	•	•
A20.3120	31.20	•	•	•
A20.3130	31.30	•	•	•
A20.3140	31.40	•	•	•
A20.3150	31.50	•	•	•
A20.3160	31.60	•	•	•
A20.3170	31.70	•	•	•
A20.3180	31.80	•	•	•
A20.3190	31.90	•	•	•
A20.3200	32.00	•	•	•
A20.3210	32.10	•	•	•
A20.3220	32.20	•	•	•
A20.3230	32.30	•	•	•
A20.3240	32.40	•	•	•
A20.3250	32.50	•	•	•
A20.3260	32.60	•	•	•
A20.3270	32.70	•	•	•
A20.3280	32.80	•	•	•
A20.3290	32.90	•	•	•
A20.3300	33.00	•	•	•
A20.3310	33.10	•	•	•
A20.3320	33.20	•	•	•
A20.3330	33.30	•	•	•
A20.3340	33.40	•	•	•
A20.3350	33.50	•	•	•
A20.3360	33.60	•	•	•
A20.3370	33.70	•	•	•

Convertible Drill Insert

可换式钻头

Code No.	D (mm)	DTX	DPK	DMP
A20.3380	33.80	•	•	•
A20.3390	33.90	•	•	•
A20.3400	34.00	•	•	•
A20.3410	34.10	•	•	•
A20.3420	34.20	•	•	•
A20.3430	34.30	•	•	•
A20.3440	34.40	•	•	•
A20.3450	34.50	•	•	•
A20.3460	34.60	•	•	•
A20.3470	34.70	•	•	•
A20.3480	34.80	•	•	•
A20.3490	34.90	•	•	•
A20.3500	35.00	•	•	•
A20.3510	35.10	•	•	•
A20.3520	35.20	•	•	•
A20.3530	35.30	•	•	•
A20.3540	35.40	•	•	•
A20.3550	35.50	•	•	•
A20.3560	35.60	•	•	•
A20.3570	35.70	•	•	•
A20.3580	35.80	•	•	•
A20.3590	35.90	•	•	•
A20.3600	36.00	•	•	•
A20.3610	36.10	•	•	•
A20.3620	36.20	•	•	•
A20.3630	36.30	•	•	•
A20.3640	36.40	•	•	•
A20.3650	36.50	•	•	•
A20.3660	36.60	•	•	•
A20.3670	36.70	•	•	•
A20.3680	36.80	•	•	•
A20.3690	36.90	•	•	•
A20.3700	37.00	•	•	•
A20.3710	37.10	•	•	•
A20.3720	37.20	•	•	•
A20.3730	37.30	•	•	•
A20.3740	37.40	•	•	•
A20.3750	37.50	•	•	•
A20.3760	37.60	•	•	•
A20.3770	37.70	•	•	•
A20.3780	37.80	•	•	•
A20.3790	37.90	•	•	•
A20.3800	38.00	•	•	•
A20.3810	38.10	•	•	•
A20.3820	38.20	•	•	•
A20.3830	38.30	•	•	•
A20.3840	38.40	•	•	•
A20.3850	38.50	•	•	•



Convertible Drill Insert

可换式钻头

Code No.	D (mm)	DTX	DPK	DMP
A20.3860	38.60	•	•	•
A20.3870	38.70	•	•	•
A20.3880	38.80	•	•	•
A20.3890	38.90	•	•	•
A20.3900	39.00	•	•	•
A20.3910	39.10	•	•	•
A20.3920	39.20	•	•	•
A20.3930	39.30	•	•	•
A20.3940	39.40	•	•	•
A20.3950	39.50	•	•	•
A20.3960	39.60	•	•	•
A20.3970	39.70	•	•	•
A20.3980	39.80	•	•	•
A20.3990	39.90	•	•	•
A20.4000	40.00	•	•	•

Convertible Drill Holder

刀片材质介绍

Item	Code	Illustrate
1	NTX	Suitable for processing steel, cast iron, stainless steel, titanium alloy, nickel-based materials, and other superalloys, more suitable to process hardness HRC30-55, high-speed processing, NTX coating has high oxidation, high red hardness and high thermal stability ; 主要是适合加工钢, 铸铁, 不锈钢, 钛合金, 镍基材料, 等高温合金, 加工硬度在HRC30-55比较适合, 高速加工, NTX涂层有氧化性, 高红硬性和高热稳定性 ;
2	NPK	Mainly for ordinary steel, free cutting steel, cast iron, non-ferrous metal, stainless steel ; 主要是普通钢, 易切削钢, 铸铁, 有色金属, 不锈钢 ;
3	NMP	Mainly for hardened steel, stainless steel, titanium alloy, and other difficult-to-process materials, suitable for processing HRC50-70 high hardness materials, high-speed cutting ; 主要淬火钢, 不锈钢, 钛合金, 等难加工材料, 适合加工HRC50-70高硬度材料, 高速切削 ;

Drill pipe introduction

钻杆介绍

Diameter from D9.5 - D114.0;
直径从D9.5 - D114.0;

High performance drill pipe and bit with high efficiency, high feed processing;
高性能钻杆、钻头能高效率高进给加工;

Drills pipe of helix and straight groove, taper shank and straight shank, can process holes of different depths;
钻杆螺旋和直槽, 锥柄和直柄, 可加工不同深度的孔;

The tool holder surface after treatment by Nickel can improve the service life and wear resistance;
刀杆表面经过镍处理有效提高刀杆寿命、和提高耐磨程度;

Type description of tools holder

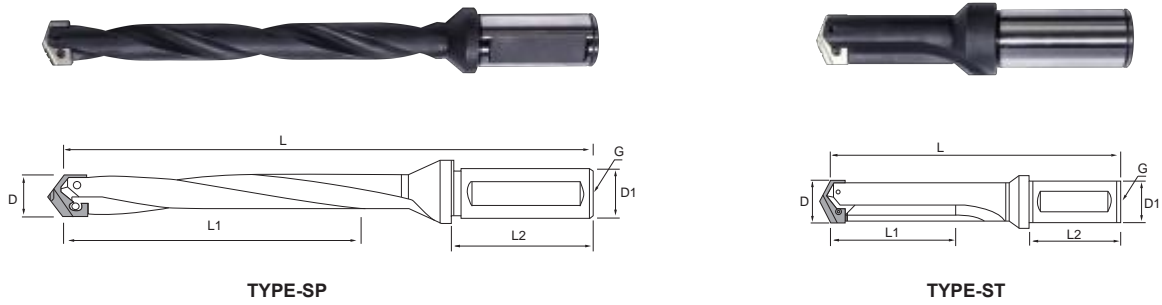
刀杆编码型号说明

1		2		3		4	
SP	spiral	1010	9.5-11.0	Flutes	32mm	SD20	D20
ST	Straight groove	1011	11.1-12.7			MT2	MT2
		1012	12.8-17.5				
		1013	17.6-24.0				
		1014	24.1-35.0				
		1015	35.1-47.6				
		1016	47.7-65.0				
		1017	65.1-76.2				
		1018	76.3-88.9				
		1019	89.0-101.6				
		1020	101.7-114.0				



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



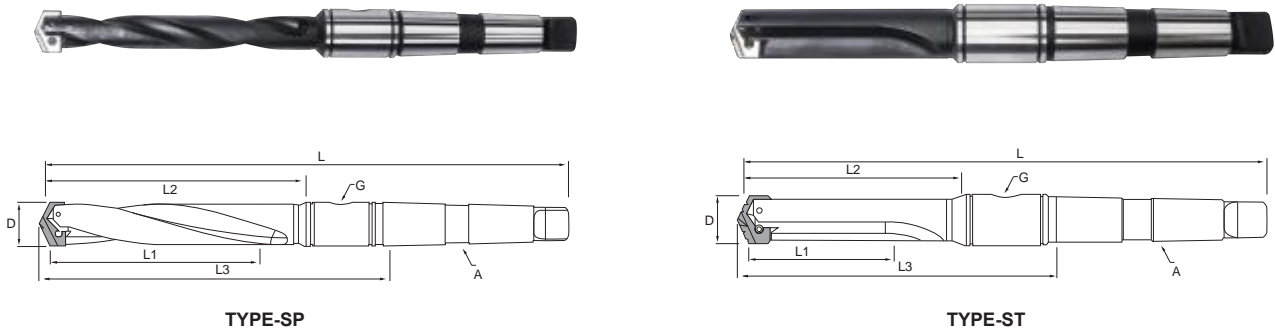
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1010.019.ZD16	SP1010.019.ZD16	9.50-11.0	19.0	48.0	96.0	16.0	1/8	LD047	BS018
ST1010.032.ZD20	SP1010.032.ZD20	9.50-11.0	32.0	50.0	111.0	20.0	1/8	LD047	BS018
ST1010.060.ZD20	SP1010.060.ZD20	9.50-11.0	60.0	50.0	189.0	20.0	1/8	LD047	BS018
ST1010.111.ZD20	SP1010.111.ZD20	9.50-11.0	111.0	50.0	240.0	20.0	1/8	LD047	BS018
ST1010.222.ZD20	SP1010.222.ZD20	9.50-11.0	222.0	50.0	310.0	20.0	1/8	LD047	BS018
ST1010.290.ZD20	SP1010.290.ZD16	9.50-11.0	290.0	50.0	370.0	20.0	1/8	LD047	BS018

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆



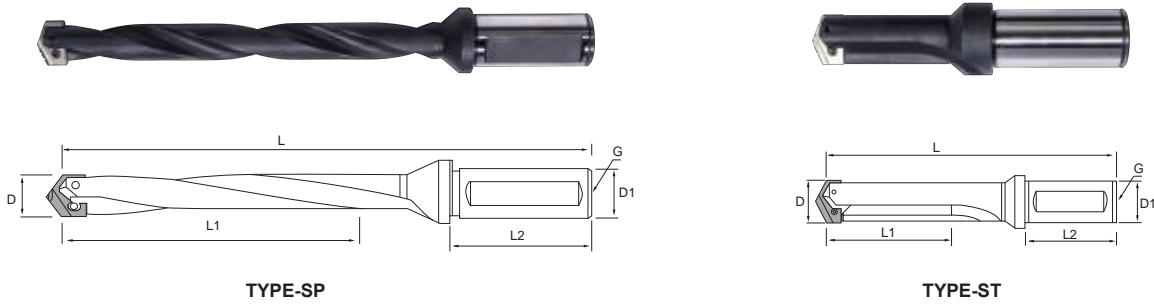
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1010.032.MT20	SP1010.032.MT20	9.50-11.0	32.0	52.0	88.0	160.0	MT2	1/16	SH-1905R	LD047	BS018
ST1010.060.MT20	SP1010.060.MT20	9.50-11.0	60.0	80.0	117.0	189.0	MT2	1/16	SH-1905R	LD047	BS018
ST1010.111.MT20	SP1010.111.MT20	9.50-11.0	111.0	140.0	168.0	240.0	MT2	1/16	SH-1905R	LD047	BS018

Convertible Straight Shank Drill bit

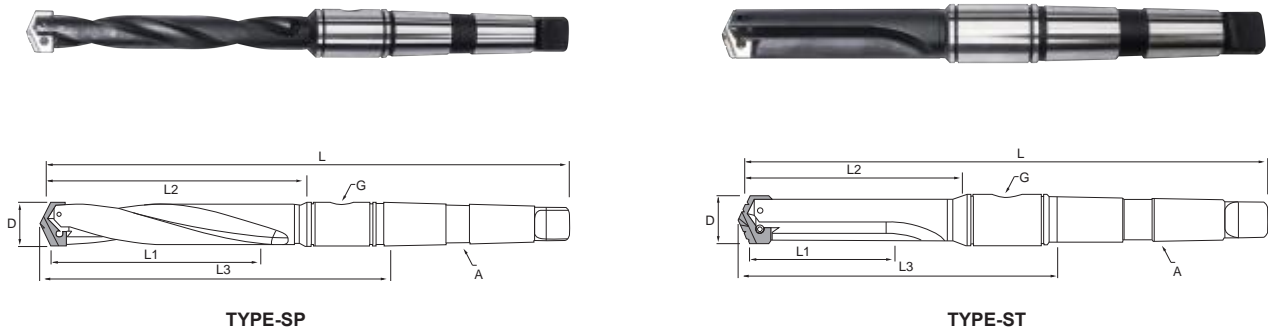
可换式直柄铲钻刀杆



Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1011.019.ZD16	SP1011.019.ZD16	11.50-12.5	19.0	48.0	96.0	16.0	1/8	LD048	BS018
ST1011.032.ZD20	SP1011.032.ZD20	11.50-12.5	32.0	50.0	111.0	20.0	1/8	LD048	BS018
ST1011.060.ZD20	SP1011.060.ZD20	11.50-12.5	60.0	50.0	189.0	20.0	1/8	LD048	BS018
ST1011.111.ZD20	SP1011.111.ZD20	11.50-12.5	111.0	50.0	240.0	20.0	1/8	LD048	BS018
ST1011.222.ZD20	SP1011.222.ZD20	11.50-12.5	222.0	50.0	310.0	20.0	1/8	LD048	BS018
ST1011.290.ZD20	SP1011.290.ZD20	11.50-12.5	290.0	50.0	370.0	20.0	1/8	LD048	BS018

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆

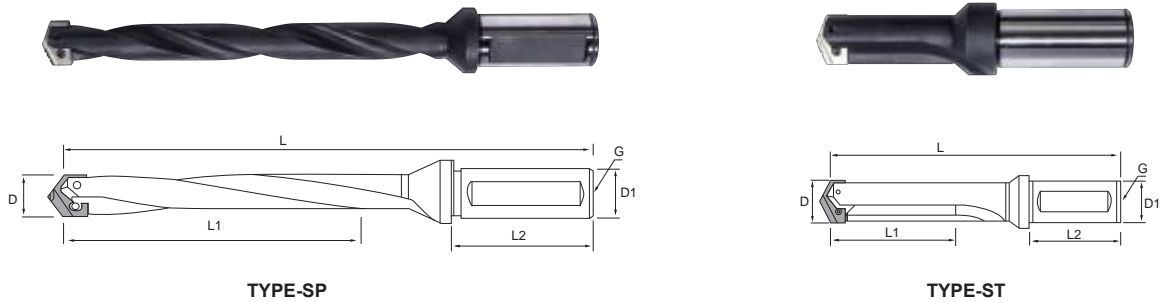


Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1011.032.MT20	SP1011.032.MT20	11.50-12.5	32.0	52.0	88.0	160.0	MT2	1/16	SH-1905R	LD048	BS018
ST1011.060.MT20	SP1011.060.MT20	11.50-12.5	60.0	80.0	117.0	189.0	MT2	1/16	SH-1905R	LD048	BS018
ST1011.111.MT20	SP1011.111.MT20	11.50-12.5	111.0	130.0	168.0	240.0	MT2	1/16	SH-1905R	LD048	BS018



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



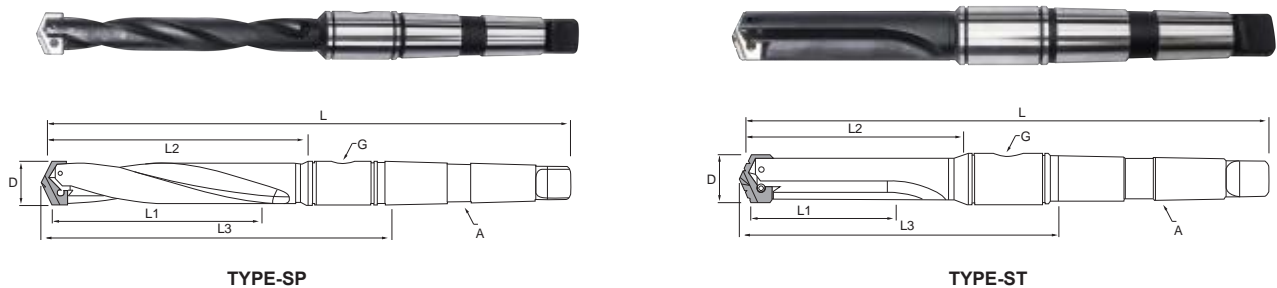
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1012.022.ZD16	SP1012.022.ZD16	12.8-17.5	22.0	50.0	98.0	20.0	1/8	LD046	BS017
ST1012.035.ZD20	SP1012.035.ZD20	12.8-17.5	35.0	50.0	114.0	20.0	1/8	LD046	BS017
ST1012.064.ZD20	SP1012.064.ZD20	12.8-17.5	64.0	50.0	193.0	20.0	1/8	LD046	BS017
ST1012.114.ZD20	SP1012.114.ZD20	12.8-17.5	114.0	50.0	244.0	20.0	1/8	LD046	BS017
ST1012.178.ZD20	SP1012.178.ZD20	12.8-17.5	178.0	50.0	257.0	20.0	1/8	LD046	BS017
ST1012.295.ZD20	SP1012.295.ZD20	12.8-17.5	295.0	50.0	374.0	20.0	1/8	LD046	BS017
ST1012.387.ZD20	SP1012.387.ZD20	12.8-17.5	387.0	50.0	466.0	20.0	1/8	LD046	BS017

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆



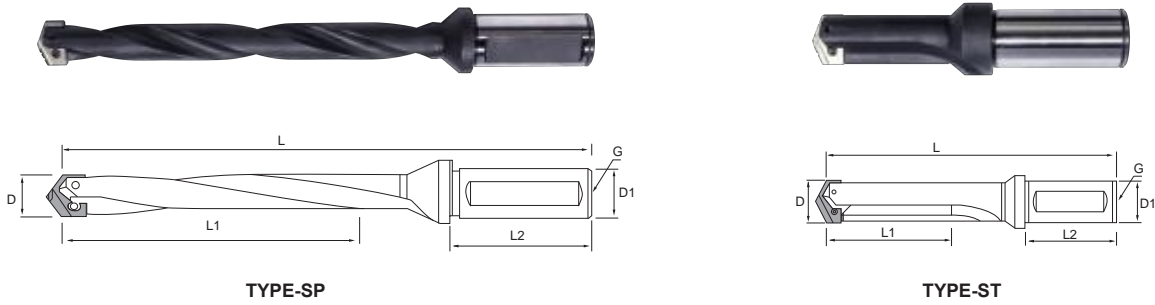
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1012.035.MT20	SP1012.035.MT20	12.8-17.5	35.0	56.0	92.0	164.0	MT2	1/16	SH-1905R	LD046	BS017
ST1012.064.MT20	SP1012.064.MT20	12.8-17.5	64.0	84.0	121.0	193.0	MT2	1/16	SH-1905R	LD046	BS017
ST1012.114.MT20	SP1012.114.MT20	12.8-17.5	114.0	135.0	172.0	248.0	MT2	1/16	SH-1905R	LD046	BS017
ST1012.178.MT20	SP1012.178.MT20	12.8-17.5	178.0	199.0	235.0	307.0	MT2	1/16	SH-1905R	LD046	BS017

Convertible Straight Shank Drill bit

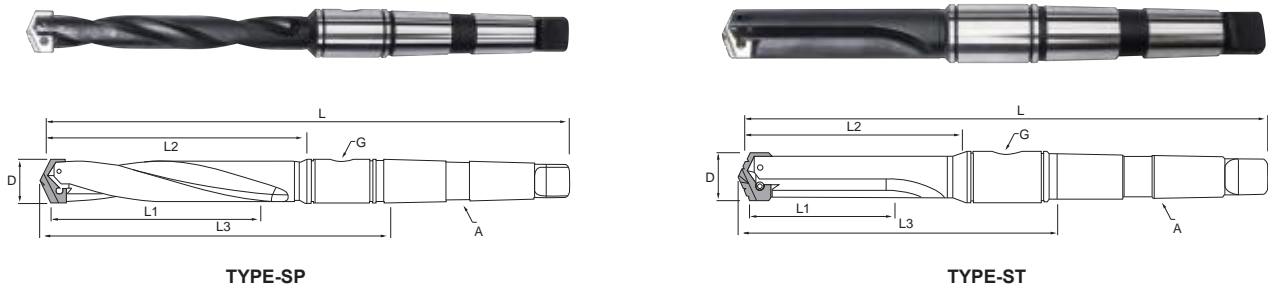
可换式直柄铲钻刀杆



Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1013.048.ZD25	SP1013.048.ZD25	17.6-24.0	48.0	56.0	132.0	25.0	1/8	LD049	BS016
ST1013.067.ZD25	SP1013.067.ZD25	17.6-24.0	67.0	56.0	163.0	25.0	1/8	LD049	BS016
ST1013.121.ZD25	SP1013.121.ZD25	17.6-24.0	121.0	56.0	283.0	25.0	1/8	LD049	BS016
ST1013.172.ZD25	SP1013.172.ZD25	17.6-24.0	172.0	56.0	334.0	25.0	1/8	LD049	BS016
ST1013.273.ZD25	SP1013.273.ZD25	17.6-24.0	273.0	56.0	436.0	25.0	1/8	LD049	BS016
ST1013.457.ZD25	SP1013.457.ZD25	17.6-24.0	457.0	56.0	551.0	25.0	1/8	LD049	BS016
ST1013.569.ZD25	SP1013.569.ZD25	17.6-24.0	569.0	56.0	659.0	25.0	1/8	LD049	BS016

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆

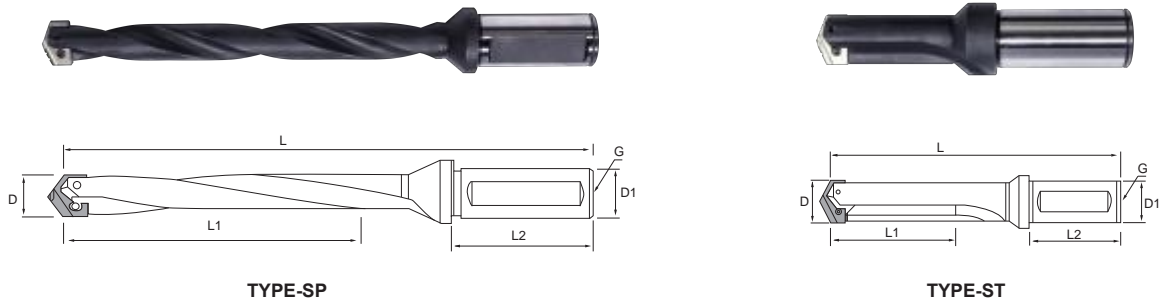


Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1013.070.MT30	SP1013.070.MT30	17.6-24.0	70.0	98.0	143.0	233.0	MT3	1/8	SH-2540R	LD049	BS016
ST1013.121.MT30	SP1013.121.MT30	17.6-24.0	121.0	150.0	193.0	283.0	MT3	1/8	SH-2540R	LD049	BS016
ST1013.172.MT30	SP1013.172.MT30	17.6-24.0	172.0	200.0	244.0	334.0	MT3	1/8	SH-2540R	LD049	BS016
ST1013.273.MT30	SP1013.273.MT30	17.6-24.0	273.0	302.0	346.0	436.0	MT3	1/8	SH-2540R	LD049	BS016



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



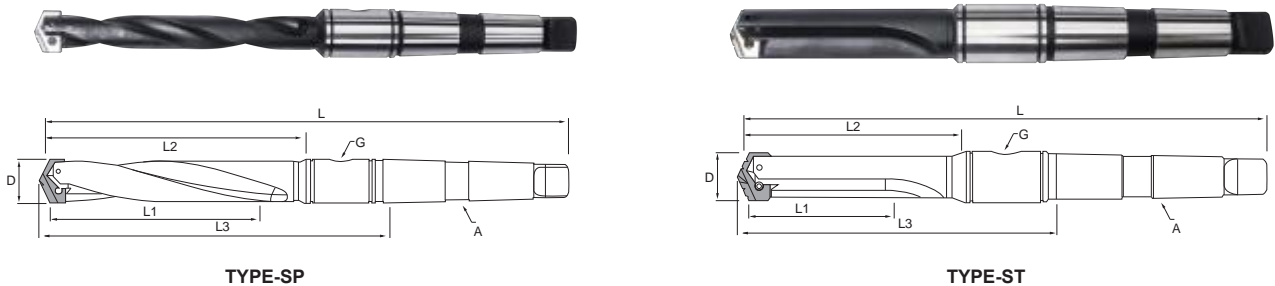
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1014.057.ZD32	SP1014.057.ZD32	24.1-35.0	57.0	60.0	149.0	32.0	1/4	LD045	BS020
ST1014.086.ZD32	SP1014.086.ZD32	24.1-35.0	86.0	60.0	189.0	32.0	1/4	LD045	BS020
ST1014.137.ZD32	SP1014.137.ZD32	24.1-35.0	137.0	60.0	332.0	32.0	1/4	LD045	BS020
ST1014.187.ZD32	SP1014.187.ZD32	24.1-35.0	187.0	60.0	383.0	32.0	1/4	LD045	BS020
ST1014.289.ZD32	SP1014.289.ZD32	24.1-35.0	289.0	60.0	484.0	32.0	1/4	LD045	BS020
ST1014.511.ZD32	SP1014.511.ZD32	24.1-35.0	511.0	60.0	614.0	32.0	1/4	LD045	BS020
ST1014.692.ZD32	SP1014.692.ZD32	24.1-35.0	692.0	60.0	795.0	32.0	1/4	LD045	BS020

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆



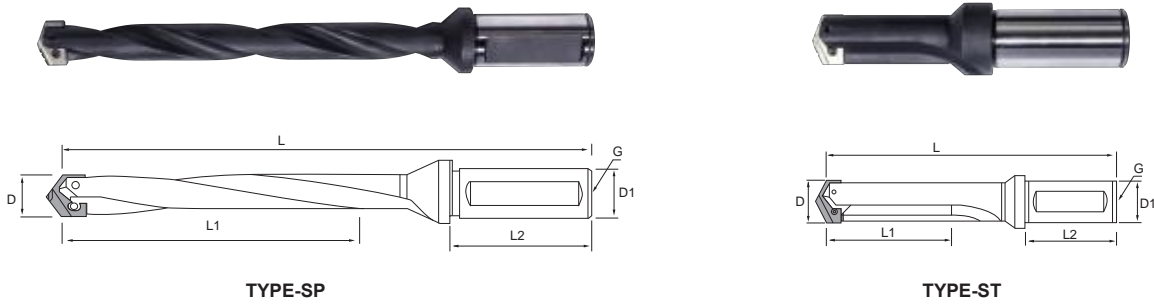
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1014.086.MT40	SP1014.086.MT40	24.1-35.0	86.0	114.0	168.0	281.0	MT4	1/4	SH-3175R	LD045	BS020
ST1014.0137.MT40	SP1014.137.MT40	24.1-35.0	137.0	165.0	218.0	332.0	MT4	1/4	SH-3175R	LD045	BS020
ST1014.187.MT40	SP1014.187.MT40	24.1-35.0	187.0	216.0	269.0	383.0	MT4	1/4	SH-3175R	LD045	BS020
ST1014.289.MT40	SP1014.289.MT40	24.1-35.0	289.0	318.0	371.0	484.0	MT4	1/4	SH-3175R	LD045	BS020

Convertible Straight Shank Drill bit

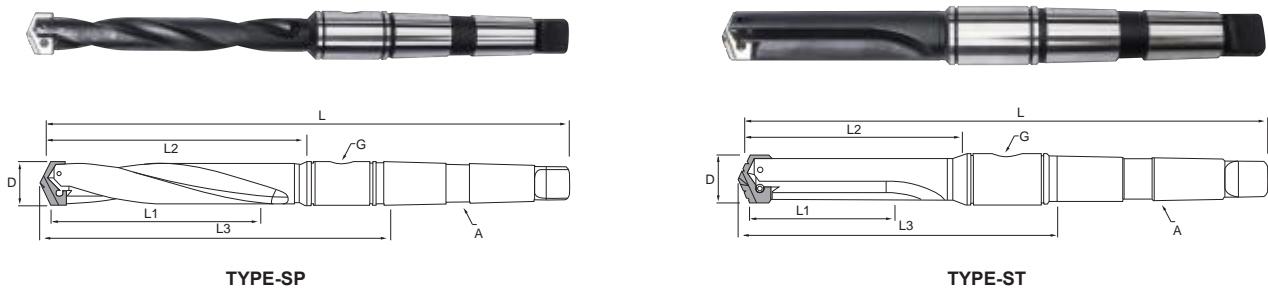
可换式直柄铲钻刀杆



Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1015.076.ZD40	SP1015.076.ZD40	35.1-47.6	76.0	70.0	195.0	40.0	1/4	LD044	BS015
ST1015.121.ZD40	SP1015.121.ZD40	35.1-47.6	121.0	70.0	243.0	40.0	1/4	LD044	BS015
ST1015.165.ZD40	SP1015.165.ZD40	35.1-47.6	165.0	70.0	364.0	40.0	1/4	LD044	BS015
ST1015.187.ZD40	SP1015.187.ZD40	35.1-47.6	187.0	70.0	383.0	40.0	1/4	LD044	BS015
ST1015.210.ZD40	SP1015.210.ZD40	35.1-47.6	210.0	70.0	332.0	40.0	1/4	LD044	BS015
ST1015.289.ZD40	SP1015.289.ZD40	35.1-47.6	289.0	70.0	484.0	40.0	1/4	LD044	BS015
ST1015.349.ZD40	SP1015.349.ZD40	35.1-47.6	349.0	70.0	472.0	40.0	1/4	LD044	BS015
ST1015.559.ZD40	SP1015.559.ZD40	35.1-47.6	559.0	70.0	681.0	40.0	1/4	LD044	BS015
ST1015.787.ZD40	SP1015.787.ZD40	35.1-47.6	787.0	70.0	910.0	40.0	1/4	LD044	BS015

Convertible Taper Shank Drill bit

可换式锥柄铲钻刀杆

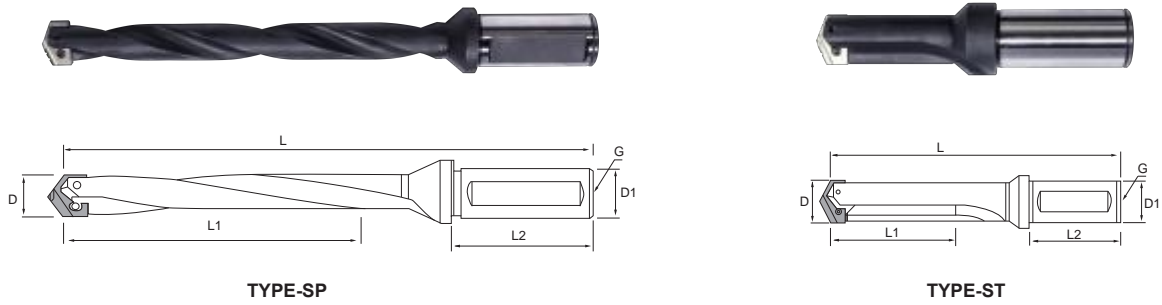


Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1015.086.MT40	SP1015.086.MT40	35.1-47.6	121.0	152.0	206.0	319.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.165.MT40	SP1015.165.MT40	35.1-47.6	165.0	197.0	251.0	364.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.187.MT40	SP1015.187.MT40	35.1-47.6	187.0	216.0	269.0	383.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.289.MT40	SP1015.289.MT40	35.1-47.6	289.0	318.0	371.0	484.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.349.MT40	SP1015.349.MT40	35.1-47.6	349.0	381.0	435.0	548.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.559.MT40	SP1015.559.MT40	35.1-47.6	559.0	591.0	645.0	757.0	MT4	1/4	SH-3175R	LD044	BS015
ST1015.787.MT40	SP1015.787.MT40	35.1-47.6	787.0	819.0	873.0	986.0	MT4	1/4	SH-3175R	LD044	BS015



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



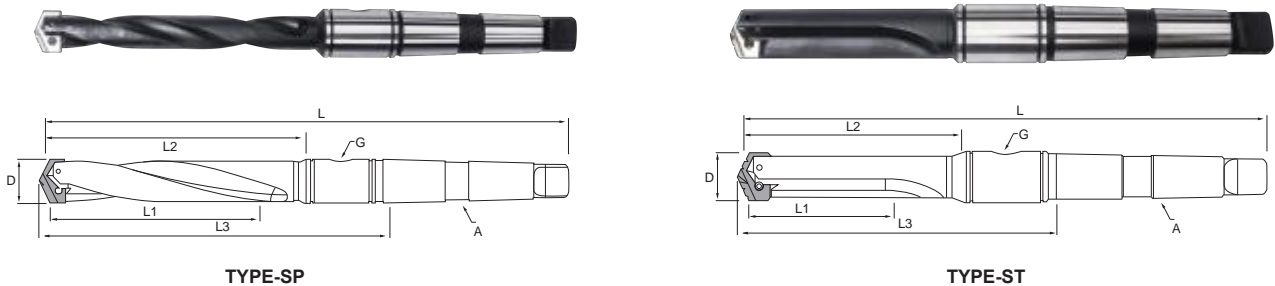
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1016.130.ZD40	SP1016.130.ZD40	47.7-65.0	130.0	70.0	249.0	40.0	1/4	LD044	BS015
ST1016.232.ZD40	SP1016.232.ZD40	47.7-65.0	232.0	70.0	351.0	40.0	1/4	LD044	BS015
ST1016.422.ZD40	SP1016.422.ZD40	47.7-65.0	422.0	70.0	542.0	40.0	1/4	LD044	BS015
ST1016.625.ZD40	SP1016.625.ZD40	47.7-65.0	625.0	70.0	680.0	40.0	1/4	LD044	BS015
ST1016.879.ZD40	SP1016.879.ZD40	47.7-65.0	879.0	70.0	999.0	40.0	1/4	LD044	BS015

Convertible Mohs shank Drill bit

可换式锥柄铲钻刀杆



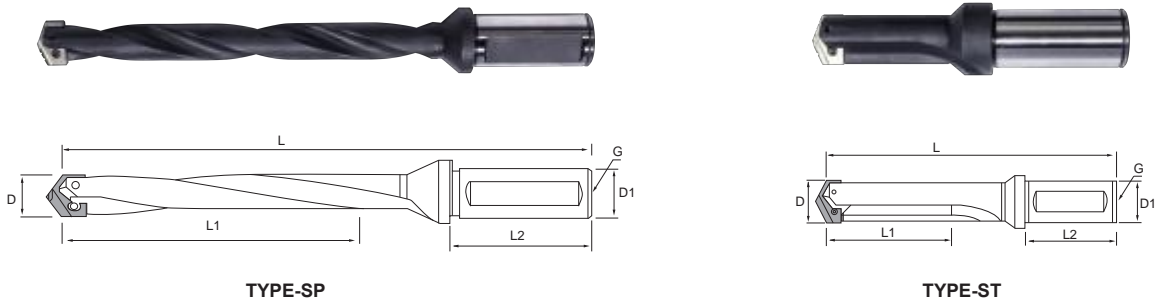
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1016.130.MT50	SP1016.130.MT50	47.7-65.0	130.0	165.0	219.0	364.0	MT5	1/4	SH-4445R	LD044	BS015
ST1016.232.MT50	SP1016.232.MT50	47.7-65.0	232.0	267.0	321.0	465.0	MT5	1/4	SH-4445R	LD044	BS015
ST1016.422.MT50	SP1016.422.MT50	47.7-65.0	422.0	457.0	511.0	565.0	MT5	1/4	SH-4445R	LD044	BS015
ST1016.625.MT50	SP1016.625.MT50	47.7-65.0	625.0	660.0	714.0	586.0	MT5	1/4	SH-4445R	LD044	BS015
ST1016.914.MT50	SP1016.914.MT50	47.7-65.0	879.0	914.0	968.0	1113.0	MT5	1/4	SH-4445R	LD044	BS015

Convertible Straight Shank Drill bit

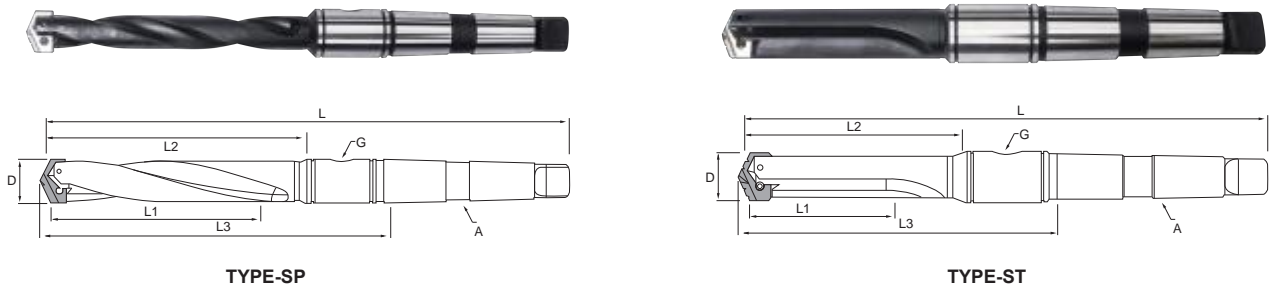
可换式直柄铲钻刀杆



Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1017.171.ZD50	SP1017.171.ZD50	65.1-76.2	171.0	80.0	315.0	50.0	1/2	LD044	BS015
ST1017.273.ZD50	SP1017.273.ZD50	65.1-76.2	273.0	80.0	532.0	50.0	1/2	LD044	BS015
ST1017.350.ZD50	SP1017.350.ZD50	65.1-76.2	350.0	80.0	494.0	50.0	1/2	LD044	BS015
ST1017.464.ZD50	SP1017.464.ZD50	65.1-76.2	464.0	80.0	579.0	50.0	1/2	LD044	BS015
ST1017.660.ZD50	SP1017.660.ZD50	65.1-76.2	660.0	80.0	804.0	50.0	1/2	LD044	BS015
ST1018.889.ZD50	SP1018.889.ZD50	76.3-88.9	889.0	80.0	1148.0	50.0	1/2	LD044	BS015

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆

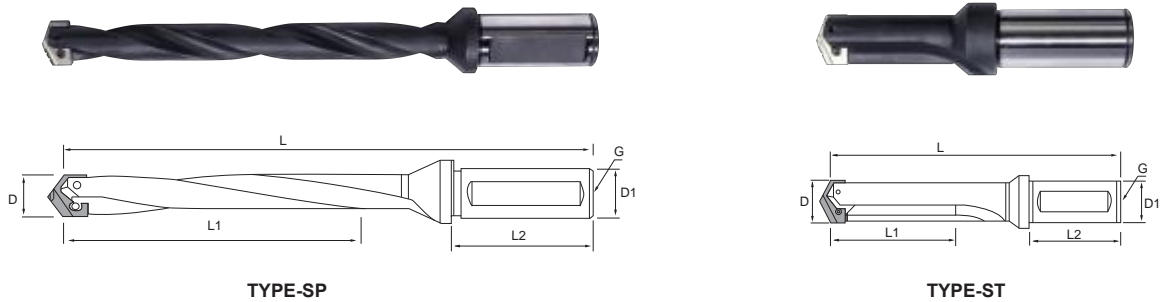


Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1017.172.MT50	SP1017.172.MT50	65.1-76.2	172.0	216.0	287.0	430.0	MT5	1/2	SH-5715R	LD043	BS019
ST1017.273.MT50	SP1017.273.MT50	65.1-76.2	273.0	318.0	389.0	532.0	MT5	1/2	SH-5715R	LD043	BS019
ST1017.464.MT50	SP1017.464.MT50	65.1-76.2	464.0	508.0	579.0	722.0	MT5	1/2	SH-5715R	LD043	BS019
ST1017.660.MT50	SP1017.660.MT50	65.1-76.2	660.0	705.0	776.0	919.0	MT5	1/2	SH-5715R	LD043	BS019
ST1017.889.MT50	SP1017.889.MT50	65.1-76.2	889.0	933.0	1004.0	1148.0	MT5	1/2	SH-5715R	LD043	BS019



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



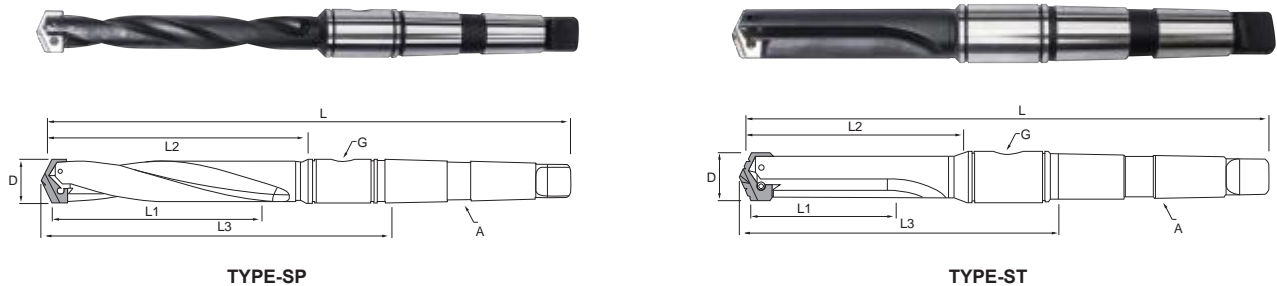
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1018.171.ZD50	SP1018.171.ZD50	76.3-88.9	171.0	80.0	315.0	50.0	1/2	LD043	BS019
ST1018.273.ZD50	SP1018.273.ZD50	76.3-88.9	273.0	80.0	532.0	50.0	1/2	LD043	BS019
ST1018.350.ZD50	SP1018.350.ZD50	76.3-88.9	350.0	80.0	494.0	50.0	1/2	LD043	BS019
ST1018.464.ZD50	SP1018.464.ZD50	76.3-88.9	464.0	80.0	579.0	50.0	1/2	LD043	BS019
ST1018.660.ZD50	SP1018.660.ZD50	76.3-88.9	660.0	80.0	804.0	50.0	1/2	LD043	BS019
ST1018.889.ZD50	SP1018.889.ZD50	76.3-88.9	889.0	80.0	1148.0	50.0	1/2	LD043	BS019

Convertible Mohs shank Drill bit

可换式锥柄铲钻刀杆



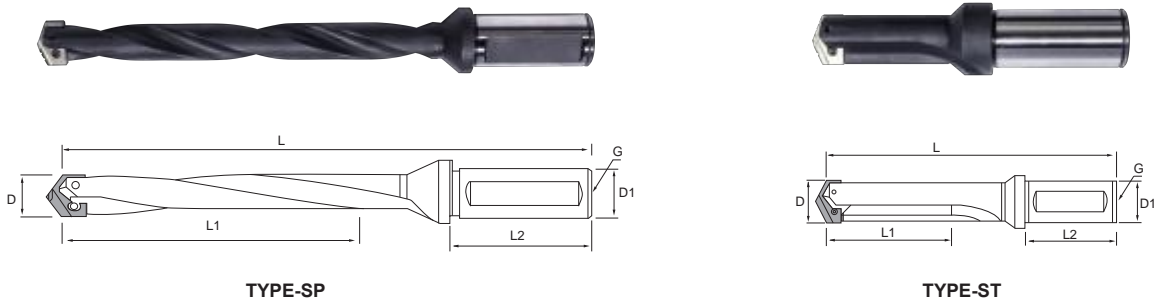
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1018.172.MT50	SP1018.172.MT50	76.3-88.9	172.0	216.0	287.0	430.0	MT5	1/2	SH-5715R	LD043	BS019
ST1018.273.MT50	SP1018.273.MT50	76.3-88.9	273.0	318.0	389.0	532.0	MT5	1/2	SH-5715R	LD043	BS019
ST1018.464.MT50	SP1018.464.MT50	76.3-88.9	464.0	508.0	579.0	722.0	MT5	1/2	SH-5715R	LD043	BS019
ST1018.660.MT50	SP1018.660.MT50	76.3-88.9	660.0	705.0	776.0	919.0	MT5	1/2	SH-5715R	LD043	BS019
ST1018.889.MT50	SP1018.889.MT50	76.3-88.9	889.0	933.0	1004.0	1148.0	MT5	1/2	SH-5715R	LD043	BS019

Convertible Straight Shank Drill bit

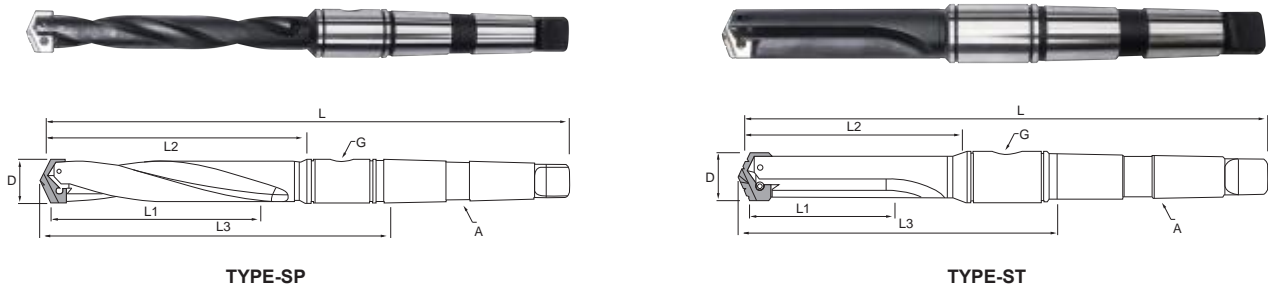
可换式直柄铲钻刀杆



Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1019.172.ZD50	SP1019.172.ZD50	89.0-101.6	172.0	80.0	440.0	50.0	1/2	LD043	BS019
ST1019.200.ZD50	SP1019.200.ZD50	89.0-101.6	200.0	80.0	355.0	50.0	1/2	LD043	BS019
ST1019.273.ZD50	SP1019.273.ZD50	89.0-101.6	273.0	80.0	541.0	50.0	1/2	LD043	BS019
ST1019.400.ZD50	SP1019.400.ZD50	89.0-101.6	400.0	80.0	555.0	50.0	1/2	LD043	BS019
ST1019.556.ZD50	SP1019.556.ZD50	89.0-101.6	556.0	80.0	824.0	50.0	1/2	LD043	BS019
ST1019.685.ZD50	SP1019.685.ZD50	89.0-101.6	685.0	80.0	954.0	50.0	1/2	LD043	BS019
ST1019.800.ZD50	SP1019.800.ZD50	89.0-101.6	800.0	80.0	955.0	50.0	1/2	LD043	BS019
ST1019.939.ZD50	SP1019.939.ZD50	89.0-101.6	939.0	80.0	1208.0	50.0	1/2	LD043	BS019

Convertible Taper shank Drill bit

可换式锥柄铲钻刀杆

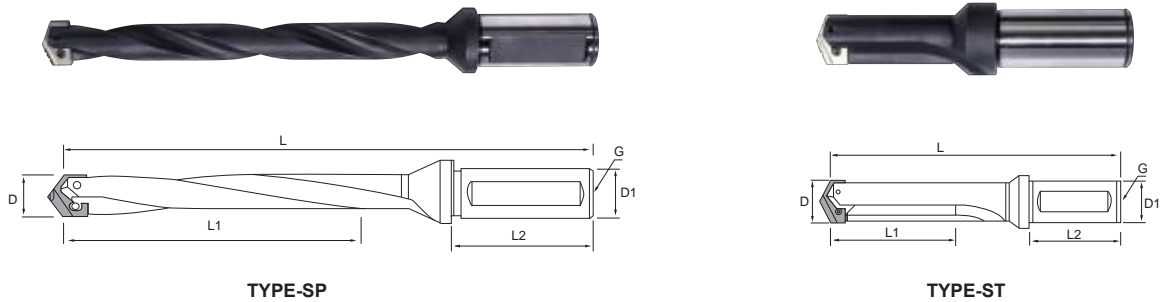


Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1019.172.MT50	SP1019.172.MT50	89.0-101.6	172.0	225.0	297.0	440.0	MT5	1/2	SH-5715R	LD043	BS019
ST1019.273.MT50	SP1019.273.MT50	89.0-101.6	273.0	327.0	399.0	541.0	MT5	1/2	SH-5715R	LD043	BS019
ST1019.556.MT50	SP1019.556.MT50	89.0-101.6	556.0	610.0	681.0	824.0	MT5	1/2	SH-5715R	LD043	BS019
ST1019.685.MT50	SP1019.685.MT50	89.0-101.6	685.0	740.0	811.0	954.0	MT5	1/2	SH-5715R	LD043	BS019
ST1019.939.MT50	SP1019.939.MT50	89.0-101.6	939.0	994.0	1065.0	1208.0	MT5	1/2	SH-5715R	LD043	BS019



Convertible Straight Shank Drill bit

可换式直柄铲钻刀杆



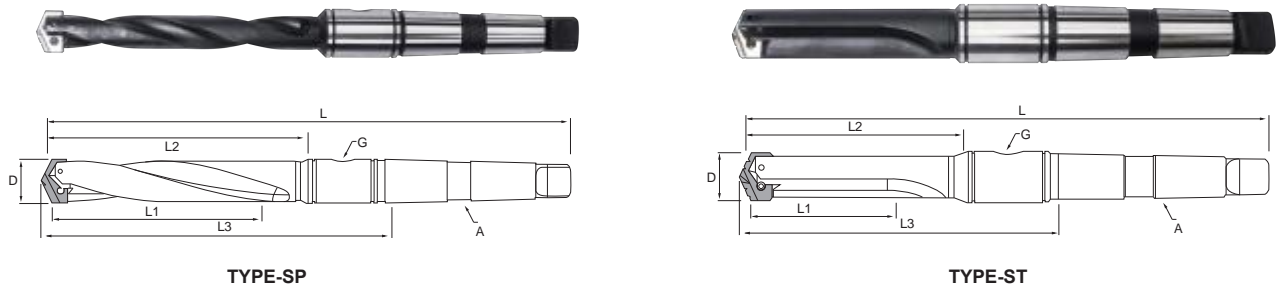
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L mm	D1 mm	G	Screw	Spanner
ST1020.172.ZD50	SP1020.172.ZD50	89.0-101.6	172.0	80.0	440.0	50.0	1/2	LD043	BS019
ST1020.200.ZD50	SP1020.200.ZD50	89.0-101.6	200.0	80.0	355.0	50.0	1/2	LD043	BS019
ST1020.273.ZD50	SP1020.273.ZD50	89.0-101.6	273.0	80.0	541.0	50.0	1/2	LD043	BS019
ST1020.400.ZD50	SP1020.400.ZD50	89.0-101.6	400.0	80.0	555.0	50.0	1/2	LD043	BS019
ST1020.556.ZD50	SP1020.556.ZD50	89.0-101.6	556.0	80.0	824.0	50.0	1/2	LD043	BS019
ST1020.685.ZD50	SP1020.685.ZD50	89.0-101.6	685.0	80.0	954.0	50.0	1/2	LD043	BS019
ST1020.800.ZD50	SP1020.800.ZD50	89.0-101.6	800.0	80.0	955.0	50.0	1/2	LD043	BS019
ST1020.939.ZD50	SP1020.939.ZD50	89.0-101.6	939.0	80.0	1208.0	50.0	1/2	LD043	BS019

Convertible Mohs shank Drill bit

可换式锥柄铲钻刀杆



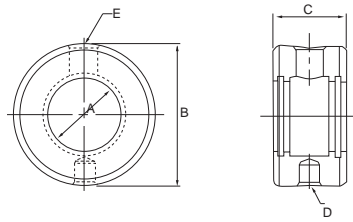
TYPE-SP

TYPE-ST

Straight slot order No	Spiral groove order No	D mm	L1 mm	L2 mm	L3 mm	L mm	A	G	Cooling ring	Screw	Spanner
ST1020.172.MT50	SP1020.172.MT50	101.7-114.0	172.0	225.0	297.0	440.0	MT5	1/2	SH-5715R	LD043	BS019
ST1020.273.MT50	SP1020.273.MT50	101.7-114.0	273.0	327.0	399.0	541.0	MT5	1/2	SH-5715R	LD043	BS019
ST1020.556.MT50	SP1020.556.MT50	101.7-114.0	556.0	610.0	681.0	824.0	MT5	1/2	SH-5715R	LD043	BS019
ST1020.685.MT50	SP1020.685.MT50	101.7-114.0	685.0	740.0	811.0	954.0	MT5	1/2	SH-5715R	LD043	BS019
ST1020.939.MT50	SP1020.939.MT50	101.7-114.0	939.0	994.0	1065.0	1208.0	MT5	1/2	SH-5715R	LD043	BS019

Oil Ring

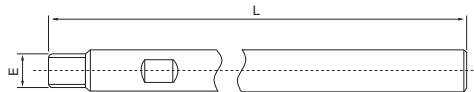
油环



Type	A	B	C	D	E	o-ring
	inside diameter	outside diameter	thickness	driving rod thread	colling nozzle thread	
MT-1905R	19.05	44.45	22.23	M8*1.25	1/8	MF028
MT-2540R	25.4	53.97	28.57	M10*1.25	1/8	MF030
MT-3175R	31.75	63.5	34.92	M10*1.5	1/4	MF026
MT-4445R	44.45	76.20	34.92	M12*1.5	1/4	MF027
MT-5175R	57.15	95.27	44.45	M12*1.75	1/2	MF029

Drive rod

传动杆



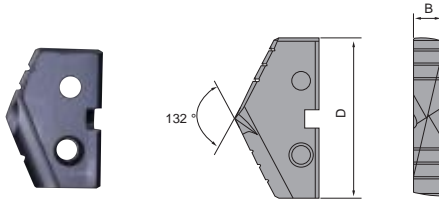
Straight slot order No	Spiral groove order No	D mm	L1 mm
CD-08125	M8*1.25	250	MT-1905R
CD-10125	M10*1.25	250	MT-2540R
CD-10150	M10*1.5	250	MT-3175R
CD-12150	M12*1.5	250	MT-4445R
CD-12175	M12*1.75	250	MT-5175R



Convertible Drill

可换式铲钻

Processing graphics



Adopt high - quality powder metallurgical high - speed steel, different kinds of special coatings, to satisfy different processing materials.
采用优质粉末冶金高速钢，多种特殊涂层，满足不同的加工材料。

Life of the drill is more than 4 times as long as other ordinary drill bit, and the efficiency is more than 2 times.
寿命是普通的钻头4倍以上，效率2倍以上

It has good cutting function which improves the stable of drills.
有良好的断削功能，提高钻孔的稳定性

With new cutting edge which could reduce cutting resistance greatly.
采用新型的刃口，大大降低切削阻力

Order demonstration:
A30.0095.NTX

P	●	●	○
M	●	○	●
K	●	●	○
N	●	○	○
H	○	○	●
S	○	○	●

Order No	Drills Holder	D mm	B mm	NTX	NPK	NMP
A30.0095	1019	9.50	2.38	●	●	●
A30.0098	1019	9.80	2.38	●	●	●
A30.0100	1019	10.00	2.38	●	●	●
A30.0102	1019	10.20	2.38	●	●	●
A30.0105	1019	10.50	2.38	●	●	●
A30.0108	1019	10.80	2.38	●	●	●
A30.0110	1019	11.00	2.38	●	●	●
A30.0115	1011	11.50	2.38	●	●	●
A30.0120	1011	12.00	2.38	●	●	●
A30.0125	1011	12.50	2.38	●	●	●
A30.0130	1012	13.00	3.18	●	●	●
A30.0135	1012	13.50	3.18	●	●	●
A30.0140	1012	14.00	3.18	●	●	●
A30.0145	1012	14.50	3.18	●	●	●
A30.0150	1012	15.00	3.18	●	●	●
A30.0155	1012	15.50	3.18	●	●	●
A30.0160	1012	16.00	3.18	●	●	●
A30.0165	1012	16.50	3.18	●	●	●
A30.0170	1012	17.00	3.18	●	●	●
A30.0175	1012	17.50	3.18	●	●	●
A30.0180	1013	18.00	3.97	●	●	●
A30.0185	1013	18.50	3.97	●	●	●
A30.0190	1013	19.00	3.97	●	●	●
A30.0195	1013	19.50	3.97	●	●	●
A30.0200	1013	20.00	3.97	●	●	●
A30.0220	1013	20.50	3.97	●	●	●

Exchangeable tool rod Series



Convertible Drill

可换式钎钻

Order No	Drills Holder	D mm	B mm	NTX	NPK	NMP
A30.0210	1013	21.00	3.97	•	•	•
A30.0220	1013	22.00	3.97	•	•	•
A30.0230	1013	23.00	3.97	•	•	•
A30.0240	1013	24.00	3.97	•	•	•
A30.0250	1015	25.00	4.76	•	•	•
A30.0260	1015	26.00	4.76	•	•	•
A30.0270	1015	27.00	4.76	•	•	•
A30.0280	1015	28.00	4.76	•	•	•
A30.0290	1015	29.00	4.76	•	•	•
A30.0330	1015	30.00	4.76	•	•	•
A30.0331	1015	31.00	4.76	•	•	•
A30.0332	1015	32.00	4.76	•	•	•
A30.0330	1015	33.00	4.76	•	•	•
A30.0334	1015	34.00	4.76	•	•	•
A30.0335	1015	35.00	4.76	•	•	•
A30.0336	1015	36.00	6.35	•	•	•
A30.0337	1015	37.00	6.35	•	•	•
A30.0338	1015	38.00	6.35	•	•	•
A30.0339	1015	39.00	6.35	•	•	•
A30.0040	1015	40.00	6.35	•	•	•
A30.0041	1015	41.00	6.35	•	•	•
A30.0042	1015	42.00	6.35	•	•	•
A30.0043	1015	43.00	6.35	•	•	•
A30.0044	1015	44.00	6.35	•	•	•
A30.0045	1015	45.00	6.35	•	•	•
A30.0046	1015	46.00	6.35	•	•	•
A30.0047	1015	47.00	6.35	•	•	•
A30.0048	1016	48.00	7.94	•	•	•
A30.0049	1016	49.00	7.94	•	•	•
A30.0050	1016	50.00	7.94	•	•	•
A30.0051	1016	51.00	7.94	•	•	•
A30.0052	1016	52.00	7.94	•	•	•
A30.0053	1016	53.00	7.94	•	•	•
A30.0054	1016	54.00	7.94	•	•	•
A30.0055	1016	55.00	7.94	•	•	•
A30.0056	1016	56.00	7.94	•	•	•
A30.0057	1016	57.00	7.94	•	•	•
A30.0058	1016	58.00	7.94	•	•	•
A30.0059	1016	59.00	7.94	•	•	•
A30.0060	1016	60.00	7.94	•	•	•
A30.0061	1016	61.00	7.94	•	•	•
A30.0062	1016	62.00	7.94	•	•	•
A30.0063	1016	63.00	7.94	•	•	•
A30.0064	1016	64.00	7.94	•	•	•
A30.0065	1016	65.00	7.94	•	•	•
A30.0066	1017	66.00	11.1	•	•	•
A30.0068	1017	68.00	11.1	•	•	•
A30.0070	1017	70.00	11.1	•	•	•

Convertible Drill



Convertible Drill

可换式铲钻

Order No	Drills Holder	D mm	B mm	NTX	NPK	NMP
A30.0072	1017	72.00	11.1	•	•	•
A30.0074	1017	74.00	11.1	•	•	•
A30.0076	1017	76.00	11.1	•	•	•
A30.0077	1018	77.00	11.1	•	•	•
A30.0078	1018	78.00	11.1	•	•	•
A30.0080	1018	80.00	11.1	•	•	•
A30.0082	1018	82.00	11.1	•	•	•
A30.0084	1018	84.00	11.1	•	•	•
A30.0086	1018	86.00	11.1	•	•	•
A30.0088	1018	88.00	11.1	•	•	•
A30.0089	1019	89.00	11.1	•	•	•
A30.0090	1019	90.00	11.1	•	•	•
A30.0092	1019	92.00	11.1	•	•	•
A30.0094	1019	94.00	11.1	•	•	•
A30.0096	1019	96.00	11.1	•	•	•
A30.0098	1019	98.00	11.1	•	•	•
A30.0100	1019	100.00	11.1	•	•	•
A30.0104	1020	104.00	11.1	•	•	•
A30.0106	1020	106.00	11.1	•	•	•
A30.0108	1020	108.00	11.1	•	•	•
A30.0110	1020	110.00	11.1	•	•	•
A30.0112	1020	112.00	11.1	•	•	•
A30.0114	1020	114.00	11.1	•	•	•

Recommended cutting parameters for convertible Spade drill

可换式钻头推荐切削参数

φ (mm)	φ9.5-φ12.5	φ13-φ17.5	φ18-φ24	φ25-φ35	φ36-φ47	φ48-φ65	φ66-φ114
Code groups	A	0.10	0.15	0.17	0.20	0.28	0.40
	B	0.12	0.17	0.20	0.22	0.35	0.45
	C	0.13	0.20	0.25	0.27	0.40	0.55
Feed (mm/rev)	D	0.14	0.25	0.30	0.35	0.45	0.65
	E	0.15	0.30	0.35	0.40	0.50	0.70
	F	0.16	0.33	0.40	0.50	0.59	0.75

Material	JIS	Mpa (N/mm ²)	NPK		NMK		NTX		
			Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	Vc (m/min)	Feed groups	
P	general structural steel	SS330, SM400, SPV450, SG295 SS500, STKM14A, SEV245	≤500 >500-850	55-65	D			50-60	E
	free-machining steel	SUM22L, SUM25, SUM42 SUM41, SUM43	≤850 850-1000	80-90	E			75-85	F
	Non-alloy tempered steel	S20C, S30C S45C, S48C S55C, S58C	≤700 700-850 850-1000	65-75	D			60-70	E
	alloy tempered steel	SCSiMn2, SCr430, SCr435, SMn438 SNC236, SCr440, SCM440, SMnC443	850-≤1000 1000-1200	50-60	C			50-55	D
	quenched and tempered steel	SCr435, SNC815, SMnC415, SCM420	850-≤1000 1000-1200	60-70	C			55-65	D
	Nitriding steel	(34CrA16) SACM645	≥850-≤1000 >1000-1200	40-50	B			40-45	C
	tool steel	SK75, SUJ2, (29CrMoV9) SKD1, SKS31, SKT6	≤850 >850-1000	35-45	B			30-40	C
	high speed steel	SKH51, SKH52, SKH55	≥650-1000	30-40	B			30-35	C
M	stainless steel	SUS416, SUS430, SUS430F, SUS303 SUS304, SUS316Ti, SUS321 SUS431, SUS420J1, SUS444	≤850 ≤850 ≤850			25-35	B	25-30	C
K	Gray cast iron	FC100, FC200 FC250, FC350	850-≤1000 1000-1200	50-60	D	55-65	E	50-60	C
	constant temperature fireball ductile iron	FCAD800(ADI800), FCAD1000(ADI1000), FCAD1200(ADI1200), FCAD1400(ADI1400)	800-1000 1200-1400	40-50	D	45-55	E	40-50	C
N	Aluminum and aluminium alloys	A1050, A5005, A6060	≤400					130-150	F
	Forged aluminium alloy	A6012, A2017, A6061, A7075	≤450					120-160	F
	Cast aluminium alloy <10% Si >10% Si	AC2A, AC2B, AC4B, ADC10 ADC1, ADC2, ACBA	≤600 ≤600					80-110	F
	magnesium alloy	M1, MB2, MB3	≤450					110-140	F
	copper (Cu)	C1030, C5191, BC6	≤400					45-55	D
	Brass short	C3604, C3713, C3800, C2400, C2680, C3350	≤600 ≤600					35-45	C
S	Special Alloys, Super Heat Resistant Alloys	SUH, NCF, NW (Nimonic, Inconel, Monel, Hastelloy)	≤1200			25-35	A	20-25	A
	Titanium and Titanium Alloys	Ti99,5, TiA15Sn2,5, TiCu2 TiA16Zr5, TiA16V4, TiA14Mo4Sn2,5, TiA18Mo1V1	≤850 >850-1200			20-25	A	25-30	A

