

# 钻头系列

CNC进口整体钨钢钻头

CNC imported solid tungsten steel drill



- 0.4 $\mu\text{m}$ 微颗粒钨钢原料，具有更高的耐磨性和更高硬度的高速切削
- 适用于钢材类，铝合金，不锈钢，铸铁，短切屑有色金属及镍基合金，钛合金等大多数材料的加工。
- 0.4 $\mu\text{m}$  micro-particle tungsten steel raw material has higher wear resistance and higher hardness for high-speed cutting.
- Suitable for steel, aluminum alloy, stainless steel, cast iron, short-chip non-ferrous metals, nickel-based alloys, and titanium alloys.

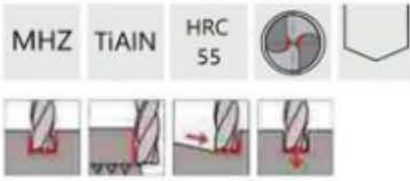
特殊的刃口设计，有效解决刀具刃口沾屑问题

Special edge design, effectively solve the problem of sticky

全球合作伙伴-WORLDWIDE RELIABLE PARTNERS

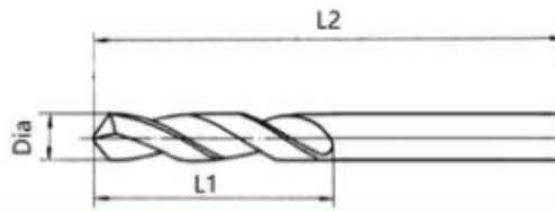


# Twist Drill (Standard)



单位Unit	(mm)
D	D
公差Tol	0 -0.015

P	●
M	●
K	●
N	●
S	●
H	●



Diameter D mm	Cutting Length L1 mm	Shank D2 mm	Overall Length L2 mm
1-2	LOC=1/2 OAL	1-2	40
2.1-2.9		2.1-2.9	40
3-4		3-4	50
4.1-5		4.1-5	50
5.1-6		5.1-6	50
6.1-7.1		6.1-7.1	50
7.2-8.1		7.2-8.1	60
8.2-9.1		8.2-9.1	75
9.2-10.1		9.2-10.1	75
10.2-11.1		10.2-11.1	75
11.2-12.1		11.2-12.1	75
12.2-13.1		12.2-13.1	75
13.2-14		13.2-14	100
14.1-15.1		14.1-15.1	100
15.2-16.1		15.2-16.1	100
16.2-17.1		16.2-17.1	100
17.2-18.1		17.2-18.1	100
18.2-19.1		18.2-19.1	100
19.2-20		19.2-20	100

Ordering Code
MHZ-2F-010140
MHZ-2F-02102140
MHZ-2F-03203250
MHZ-2F-04104150
MHZ-2F-05105150
MHZ-2F-06106150
MHZ-2F-07207260
MHZ-2F-08208275
MHZ-2F-09209275
MHZ-2F-10210275
MHZ-2F-11211275
MHZ-2F-12212275
MHZ-2F-132132100
MHZ-2F-141141100
MHZ-2F-152152100
MHZ-2F-162162100
MHZ-2F-172172100
MHZ-2F-182182100
MHZ-2F-192192100

ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	
P	碳钢合金 (<45HRC) Carbon steel alloy steel 合金钢 (50HRC) Alloy Steel	ap≤0.5D	90	转速 rote speed (min-1)
		ap≤0.05D		进给转速 feed velocity (mm/min)
		ap≤0.5D	70	转速 rote speed (min-1)
		ap≤0.05D		进给转速 feed velocity (mm/min)
K	灰铸铁, 球墨铸铁 (<32HRC) Gry cast iron, nodular cast iron 合金铸铁 (35-45HRC) High alloy cast iron	ap≤0.5D	90	转速 rote speed (min-1)
		ap≤0.05D		进给转速 feed velocity (mm/min)
		ap≤0.5D	80	转速 rote speed (min-1)
		ap≤0.05D		进给转速 feed velocity (mm/min)

刃径 Tool Diameter (mm)							
0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
35830	31850	28600	23890	20470	17910	15920	5840
1150	1150	1150	1100	1110	1070	1110	2800
27870	24770	22290	18580	15920	13930	12380	4780
840	840	850	820	800	780	820	2000
35830	31850	28660	23890	20470	17910	15920	5840
1150	1150	1150	1100	1100	1070	1110	2530
31850	28310	25480	21230	18200	15920	14150	5840
830	850	820	760	800	860	910	2440

上表是侧铣加工的标准值, 刀具切槽时, 转速要以上表的50%~70%, 进给速度要以40%~60%为标准值。

Above table is the standard cutting data for side milling machining, if for groove cutting the VC should reach 50%-70% and the feed should reach 40%-60% based on the table.



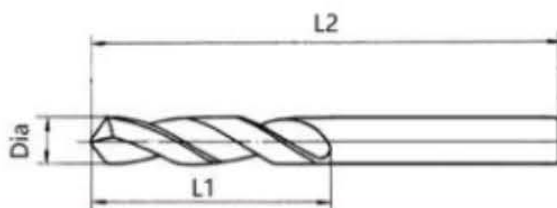
# Twist Drill (Extra Long)

MHZ TiAlN HRC 55



P	●
M	
K	●
N	
S	
H	

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



Diameter D	Cutting Length L1	Shank D2	Overall Length L2
mm	mm	mm	mm
3-4	LOC=1/2 OAL	3-4	100
4.1-5		4.1-5	100
5.1-6		5.1-6	100
6.1-7.1		6.1-7.1	100
7.2-8.1		7.2-8.1	100
8.2-9.1		8.2-9.1	100
9.2-10.1		9.2-10.1	100
10.2-11.1		10.2-11.1	100
11.2-12.1		11.2-12.1	100
12.2-13.1		12.2-13.1	100

Ordering Code
MHZ-2F-0303100
MHZ-2F-041041100
MHZ-2F-051051100
MHZ-2F-061061100
MHZ-2F-072072100
MHZ0-2F-082082100
MHZ-2F-092092100
MHZ-2F-102102100
MHZ-2F-112112100
MHZ-2F-122122100

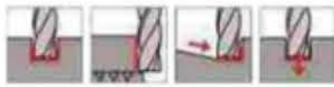
ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	刀具 Tool Diameter (mm)								
				0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0	
P	碳钢合金 (<45HRC) Carbon steel alloy steel 合金钢 (50HRC) Alloy Steel	aps0.5D	90	转速 rate speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		aps0.05D		进给转速 feed velocity (mm/min)	1150	1150	1150	1100	1110	1070	1110	2800
		aps0.5D	70	转速 rate speed (min-1)	27870	24770	22290	18580	15920	13930	12380	4780
K	灰铸铁, 球墨铸铁 (<32HRC) Grey cast iron, nodular cast iron 高合金铸铁 (35-45HRC) High alloy cast iron	aps0.5D	90	转速 rate speed (min-1)	35830	31850	28660	23890	20470	17910	15920	5840
		aps0.05D		进给转速 feed velocity (mm/min)	1150	1150	1150	1100	1100	1070	1110	2530
		aps0.5D	80	转速 rate speed (min-1)	31850	28310	25480	21230	18200	15920	14150	5840
		aps0.05D		进给转速 feed velocity (mm/min)	830	850	820	760	800	860	910	2440

上表是侧铣加工的标准值, 刀具切槽时, 转速要以上表的50%~70%, 进给速度要以40%~60%为标准值。

Above table is the standard cutting data for side milling machining, if for groove cutting the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.

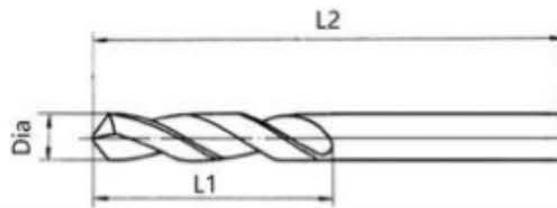


# Twist Drill (Standard)



P	●
M	●
K	●
N	●
S	●
H	●

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



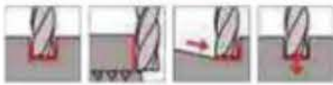
Diameter D mm	Cutting Length L1 mm	Shank D2 mm	Overall Length L2 mm	Ordering Code
1-2	LOC=1/2 OAL	1-2	40	WGZT-2F-010140
2.1-2.9		2.1-2.9	40	WGZT-2F-02102140
3-4		3-4	50	WGZT-2F-03203250
4.1-5		4.1-5	50	WGZT-2F-04104150
5.1-6		5.1-6	50	WGZT-2F-05105150
6.1-7.1		6.1-7.1	50	WGZT-2F-06106150
7.2-8.1		7.2-8.1	60	WGZT-2F-07207260
8.2-9.1		8.2-9.1	75	WGZT-2F-08208275
9.2-10.1		9.2-10.1	75	WGZT-2F-09209275
10.2-11.1		10.2-11.1	75	WGZT-2F-10210275
11.2-12.1		11.2-12.1	75	WGZT-2F-11211275
12.2-13.1		12.2-13.1	75	WGZT-2F-12212275
13.2-14		13.2-14	100	WGZT-2F-132132100
14.1-15.1		14.1-15.1	100	WGZT-2F-141141100
15.2-16.1		15.2-16.1	100	WGZT-2F-152152100
16.2-17.1		16.2-17.1	100	WGZT-2F-162162100
17.2-18.1		17.2-18.1	100	WGZT-2F-172172100
18.2-19.1		18.2-19.1	100	WGZT-2F-182182100
19.2-20		19.2-20	100	WGZT-2F-192192100

ISO	被加工材料 Workpiece Material	切屑量 (mm) Depth of cut	Vc m/min	刃径 Tool Diameter (mm)					
				2	4	6	8	10	12
H	合金钢, 淬硬钢(<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	合金钢, 淬硬钢(65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

上表是侧铣加工的标准值, 刀具切削时, 转速要以上表格的50%~70%, 进给速度要以40%~60%为标准值。  
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.

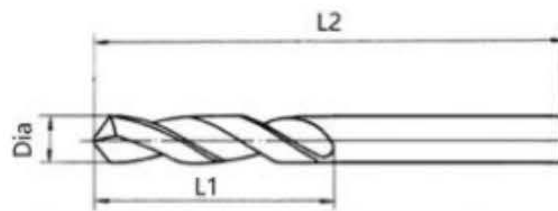


# Twist Drill (Extra Long)



P	●
M	●
K	●
N	●
S	●
H	●

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



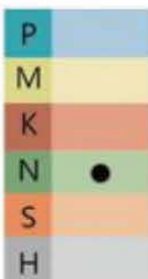
Diameter D	Cutting Length L1	Shank D2	Overall Length L2	Ordering Code
mm	mm	mm	mm	
3-4	LOC=1/2 OAL	3-4	100	WGZT-2F-0303100
4.1-5		4.1-5	100	WGZT-2F-041041100
5.1-6		5.1-6	100	WGZT-2F-051051100
6.1-7.1		6.1-7.1	100	WGZT-2F-061061100
7.2-8.1		7.2-8.1	100	WGZT-2F-072072100
8.2-9.1		8.2-9.1	100	WGZT-2F-082082100
9.2-10.1		9.2-10.1	100	WGZT-2F-092092100
10.2-11.1		10.2-11.1	100	WGZT-2F-102102100
11.2-12.1		11.2-12.1	100	WGZT-2F-112112100
12.2-13.1		12.2-13.1	100	WGZT-2F-122122100

ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	刃径 Tool Diameter (mm)						
				2	4	6	8	10	12	
H	合金钢, 淬硬钢 (<60HRC) Alloy steel, hardened steel	ap ≤ 1D ap ≤ 0.05D	120	转速 rate speed (min-1) 进给转速 feed velocity (mm/min)	19110 380	9550 380	6370 380	7170 930	4780 380	3490 360
	合金钢, 淬硬钢 (65HRC) Alloy steel, hardened steel	ap ≤ 0.7D ap ≤ 0.03D	90	转速 rate speed (min-1) 进给转速 feed velocity (mm/min)	15920 260	11940 360	7960 370	5180 620	4780 370	3980 340

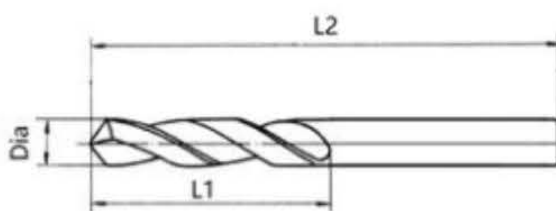
上表是侧铣加工的标准值, 刀具切削时, 转速要以上表格的50%~70%, 进给速度要以40%~60%为标准值。  
Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



## Twist Drill (Standard)



单位Unit	(mm)
D	D
公差Tol	0 -0.015



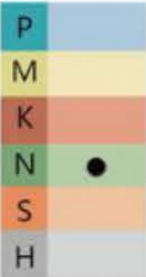
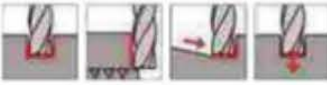
Diameter D mm	Cutting Length L1 mm	Shank D2 mm	Overall Length L2 mm
1-2	LOC=1/2 OAL	1-2	40
2.1-2.9		2.1-2.9	40
3-4		3-4	50
4.1-5		4.1-5	50
5.1-6		5.1-6	50
6.1-7.1		6.1-7.1	50
7.2-8.1		7.2-8.1	60
8.2-9.1		8.2-9.1	75
9.2-10.1		9.2-10.1	75
10.2-11.1		10.2-11.1	75
11.2-12.1		11.2-12.1	75
12.2-13.1		12.2-13.1	75
13.2-14		13.2-14	100
14.1-15.1		14.1-15.1	100
15.2-16.1		15.2-16.1	100
16.2-17.1		16.2-17.1	100
17.2-18.1		17.2-18.1	100
18.2-19.1		18.2-19.1	100
19.2-20		19.2-20	100

Ordering Code
LYMHZ-2F-010140
LYMHZ-2F-02102140
LYMHZ-2F-03203250
LYMHZ-2F-04104150
LYMHZ-2F-05105150
LYMHZ-2F-06106150
LYMHZ-2F-07207260
LYMHZ-2F-08208275
LYMHZ-2F-09209275
LYMHZ-2F-10210275
LYMHZ-2F-11211275
LYMHZ-2F-12212275
LYMHZ-2F-132132100
LYMHZ-2F-141141100
LYMHZ-2F-152152100
LYMHZ-2F-162162100
LYMHZ-2F-172172100
LYMHZ-2F-182182100
LYMHZ-2F-192192100

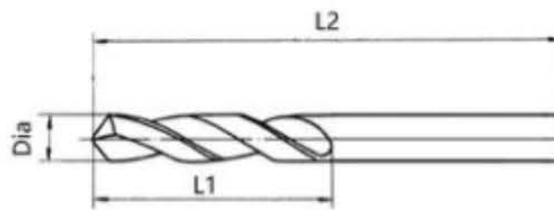
ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	刃径 tool Diameter (mm)									
				1	2	4	6	8	10	12	16	20	
N	锻造及铸造铝合金(SI<12%) Forging and casting aluminum alloy	ap≤0.5D	150	转速 rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60-350)	进给转速 feed velocity (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
	铜合金(<200HB) Copper alloy	ap≤0.5D	150	转速 rate speed (min-1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ap≤1D	(60-350)	进给转速 feed velocity (mm/min)	380	450	800	830	1000	1150	1130	1000	1080



## Twist Drill (Extra Long)



单位Unit	(mm)
D	D
公差Tol	0
	-0.015



Diameter D	Cutting Length L1	Shank D2	Overall Length L2
mm	mm	mm	mm
3-4	LOC=1/2 OAL	3-4	100
4.1-5		4.1-5	100
5.1-6		5.1-6	100
6.1-7.1		6.1-7.1	100
7.2-8.1		7.2-8.1	100
8.2-9.1		8.2-9.1	100
9.2-10.1		9.2-10.1	100
10.2-11.1		10.2-11.1	100
11.2-12.1		11.2-12.1	100
12.2-13.1		12.2-13.1	100

Ordering Code
LYMHZ-2F-0303100
LYMHZ-2F-041041100
LYMHZ-2F-051051100
LYMHZ-2F-061061100
LYMHZ-2F-072072100
LYMHZ-2F-082082100
LYMHZ-2F-092092100
LYMHZ-2F-102102100
LYMHZ-2F-112112100
LYMHZ-2F-122122100

ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	刃径 tool Diameter (mm)								
				1	2	4	6	8	10	12	16	20
N	锻造及铸造铝合金(Si<12%) Forging and casting aluminum alloy	ap≤0.5D	150	转速 rate speed (min-1)								
		ap≤1D	(60-350)	进给转速 feed velocity (mm/min)								
	铜合金(<200HB) Copper alloy	ap≤0.5D	150	转速 rate speed (min-1)								
		ap≤1D	(60-350)	进给转速 feed velocity (mm/min)								
				16000	10000	9000	8000	7800	8000	6800	5000	4000
				400	500	810	920	1100	1280	1300	1310	1200
				16000	10000	9000	8000	7800	8000	6800	5000	4000
				380	450	800	830	1000	1150	1130	1000	1080

# 定心钻

硬质合金定心钻  
Carbide Center Drill



- 具有高锋利性和出色耐用性的定心钻
- 钴高速钢的使用提高了跳动精度
- 优化的刀具形状可提供出色的锋利度并有助于防止磨损。
- The center drill with high sharpness and outstanding durability
- The use of cobalt HSS improving runout accuracy
- The optimized tool shape deliver excellent sharpness and help prevent breakages.

刃口耐磨性和刀具刚性提升  
Improved edge wear resistance and tool rigidity

全球合作伙伴-WORLDWIDE RELIABLE PARTNERS



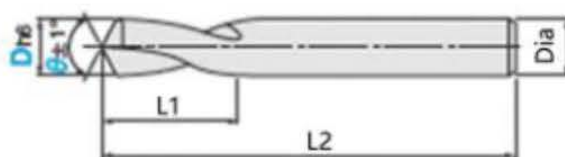
# Center Drill (Standard)

GYDXZ TiAlN HRC 55



P	●
M	●
K	●
N	●
S	●
H	●

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



Diameter D mm	Angle	Shank D2 mm	Overall Length L2 mm
1	90°	4	50
2.5	90°	4	50
3	90°	3	50
3	90°	4	50
4	90°	4	50
5	90°	5	50
6	90°	6	50
8	90°	8	60
10	90°	10	75
12	90°	12	75
4	90°	4	100
6	90°	6	100
8	90°	8	100
10	90°	10	100
12	90°	12	100
16	90°	16	100

Ordering Code
GYDXZ-2F-01900450
GYDXZ-2F-025900450
GYDXZ-2F-03900350
GYDXZ-2F-03900450
GYDXZ-2F-04900450
GYDXZ-2F-05900550
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GYDXZ-2F-08900860
GYDXZ-2F-10901075
GYDXZ-2F-12901275
GYDXZ-2F-049004100
GYDXZ-2F-069006100
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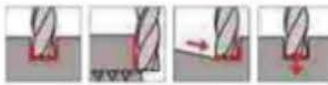
ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	刀具 Tool Diameter (mm)							
				0.8	0.9	1.0	1.2	1.4	1.6	1.8	2.0
P	碳钢合金钢 (<45HRC) Carbon steel alloy steel 合金钢 (50HRC) Alloy Steel	ap ≤ 0.5D	90	35830	31850	28660	23890	20470	17910	15920	5840
		ap ≤ 0.05D	70	1150	1150	1150	1100	1110	1070	1110	2800
K	灰铸铁, 球墨铸铁 (<32HRC) Gry cast iron, nodular cast iron 合金铸铁 (35-45HRC) High alloy cast iron	ap ≤ 0.5D	90	27870	24770	22290	18580	15920	13930	12380	4780
		ap ≤ 0.05D	80	840	840	850	820	800	780	820	2000
		ap ≤ 0.5D	90	35830	31850	28660	23890	20470	17910	15920	5840
		ap ≤ 0.05D	80	1150	1150	1150	1100	1100	1070	1110	2530
		ap ≤ 0.5D	80	31850	28310	25480	21230	18200	15920	14150	5840
		ap ≤ 0.05D	80	830	850	820	760	800	860	910	2440

上表是侧铣加工的标准值。刀具切槽时, 转速要以上表的50%~70%, 进给速度要以40%~60%为标准值。  
Above table is the standard cutting data for side milling machining, if for groove cutting the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



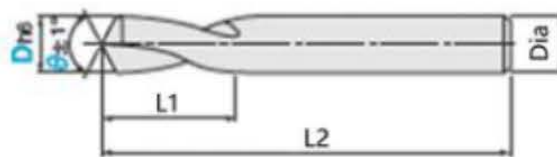
# Center Drill (Standard)

DXZ TiAlSiN HRC 65



- P ●
- M ●
- K ●
- N ●
- S ●
- H ●

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



Diameter D mm	Angle	Shank D2 mm	Overall Length L2 mm
1	90°	4	50
2	90°	4	50
3	90°	4	50
4	90°	4	50
5	90°	5	50
6	90°	6	50
8	90°	8	60
10	90°	10	75
12	90°	12	75

Ordering Code
DXZ-2F-01900450
DXZ-2F-02900450
DXZ-2F-03900450
DXZ-2F-04900450
DXZ-2F-05900550
DXZ-2F-06900650
DXZ-2F-08900860
DXZ-2F-10901075
DXZ-2F-12901275

ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	
H	合金钢, 淬硬钢 (<60HRC) Alloy steel, hardened steel	$ap \leq 1D$ $ap \leq 0.05D$	120	转速 rate speed (min <sup>-1</sup> ) 进给转速 feed velocity (mm/min)
	合金钢, 淬硬钢 (65HRC) Alloy steel, hardened steel	$ap \leq 0.7D$ $ap \leq 0.03D$	90	转速 rate speed (min <sup>-1</sup> ) 进给转速 feed velocity (mm/min)

刀具 Tool Diameter (mm)					
2	4	6	8	10	12
19110	9550	6370	7170	4780	3490
380	380	380	930	380	360
15920	11940	7960	5180	4780	3980
260	360	370	620	370	340

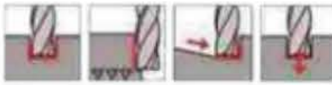
上表是侧铣加工的标准值, 刀具切削时, 转速要以上表格的50%~70%, 进给速度要以40%~60%为标准值。

Above table is the standard cutting data for side milling machining, if for groove cutting, the VC should reach 50%~70% and the feed should reach 40%~60% based on the table.



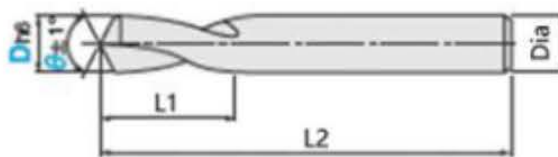
## Center Drill (Standard)

LYDXZ AL HRC 55



P	
M	
K	
N	●
S	
H	

单位Unit	(mm)
D	D
公差Tol	0
	-0.015



Diameter D mm	Angle	Shank D2 mm	Overall Length L2 mm
1	90°	4	50
2	90°	4	50
3	90°	4	50
4	90°	4	50
5	90°	5	50
6	90°	6	50
8	90°	8	60
10	90°	10	75
12	90°	12	75
4	90°	4	100
6	90°	6	100
8	90°	8	100
10	90°	10	100
12	90°	12	100
16	90°	16	100

Ordering Code
LYDXZ-2F-01900450
LYDXZ-2F-02900450
LYDXZ-2F-03900450
LYDXZ-2F-04900450
LYDXZ-2F-05900550
LYDXZ-2F-06900650
LYDXZ-2F-08900860
LYDXZ-2F-10901075
LYDXZ-2F-12901275
LYDXZ-2F-049004100
LYDXZ-2F-069006100
LYDXZ-2F-089008100
LYDXZ-2F-109010100
LYDXZ-2F-129012100
LYDXZ-2F-169016100

ISO	被加工材料 Workpiece Material	切削量 (mm) Depth of cut	Vc m/min	
N	锻造及铸造铝合金(SI<12%) Forging and casting aluminum alloy	ap≤1.5D	150	转速 rate speed (min-1)
		ap≤0.2D	(60-350)	进给转速 feed velocity (mm/min)
	铜合金(<200HB) Copper alloy	ap≤1.5D	150	转速 rate speed (min-1)
		ap≤0.2D	(60-350)	进给转速 feed velocity (mm/min)

刃径 tool Diameter (mm)									
1	2	4	6	8	10	12	16	20	
16000	12700	12000	10600	10000	9500	9280	7000	5600	
580	710	1200	1280	1390	1720	2400	2500	2450	
16000	12700	12000	10600	10000	9500	9280	7000	5600	
520	650	1070	1150	1250	1550	2170	2250	2200	

3xD-External Carbide Drill For Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD901-ED	30-37	3.0-3.7	20	4	62
	38-40	3.8-4.0	24	4	66
	41-46	4.1-4.6	24	6	66
	47-60	4.7-6.0	28	6	66
	61-70	6.1-7.0	34	8	79
	71-80	7.1-8.0	41	8	79
	81-100	8.1-10.0	47	10	89
	101-120	10.1-12.0	55	12	102
	121-140	12.1-14.0	60	14	107
	141-160	14.1-16.0	65	16	115
	161-180	16.1-18.0	73	18	123
	181-200	18.1-20.0	79	20	131
	201-220	20.1-22.0	79	22	131
221-240	22.1-24.0	96	24	153	
241-250	24.1-25.0	96	25	153	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
⊙	⊙	⊙	⊙	⊙		○	⊙	○			

3xD-External Carbide Drill For Stainless Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD901-ED	30-37	3.0-3.7	20	4	62
	38-40	3.8-4.0	24	4	66
	41-46	4.1-4.6	24	6	66
	47-60	4.7-6.0	28	6	66
	61-70	6.1-7.0	34	8	79
	71-80	7.1-8.0	41	8	79
	81-100	8.1-10.0	47	10	89
	101-120	10.1-12.0	55	12	102
	121-140	12.1-14.0	60	14	107
	141-160	14.1-16.0	65	16	115
	161-180	16.1-18.0	73	18	123
	181-200	18.1-20.0	79	20	131
	201-220	20.1-22.0	79	22	131
221-240	22.1-24.0	96	24	153	
241-250	24.1-25.0	96	25	153	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
○	○	⊙	⊙	⊙	⊙	⊙	○		⊙		

### 3xD-Internal Carbide Drill For Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD902-ID	30-37	3.0-3.7	20	4	62
	38-40	3.8-4.0	24	4	66
	41-46	4.1-4.6	24	6	66
	47-60	4.7-6.0	28	6	66
	61-70	6.1-7.0	34	8	79
	71-80	7.1-8.0	41	8	79
	81-100	8.1-10.0	47	10	89
	101-120	10.1-12.0	55	12	102
	121-140	12.1-14.0	60	14	107
	141-160	14.1-16.0	65	16	115
	161-180	16.1-18.0	73	18	123
	181-200	18.1-20.0	79	20	131
	201-220	20.1-22.0	79	22	131
221-240	22.1-24.0	96	24	153	
241-250	24.1-25.0	96	25	153	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
⊙	⊙	⊙	⊙	⊙		○	⊙	○			

### 3xD-Internal Carbide Drill For Stainless Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD902-ID	30-37	3.0-3.7	20	4	62
	38-40	3.8-4.0	24	4	66
	41-46	4.1-4.6	24	6	66
	47-60	4.7-6.0	28	6	66
	61-70	6.1-7.0	34	8	79
	71-80	7.1-8.0	41	8	79
	81-100	8.1-10.0	47	10	89
	101-120	10.1-12.0	55	12	102
	121-140	12.1-14.0	60	14	107
	141-160	14.1-16.0	65	16	115
	161-180	16.1-18.0	73	18	123
	181-200	18.1-20.0	79	20	131
	201-220	20.1-22.0	79	22	131
221-240	22.1-24.0	96	24	153	
241-250	24.1-25.0	96	25	153	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
○	○	⊙	⊙	⊙		⊙	⊙	○		⊙	

### 5xD-External Carbide Drill For Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD903-ED	30-37	3.0-3.7	28	4	66
	38-40	3.8-4.0	36	4	74
	41-46	4.1-4.6	36	6	74
	47-60	4.7-6.0	44	6	82
	61-80	6.1-8.0	53	8	91
	81-100	8.1-10.0	61	10	103
	101-120	10.1-12.0	71	12	118
	121-140	12.1-14.0	77	14	124
	141-160	14.1-16.0	83	16	133
	161-180	16.1-18.0	101	18	153
	181-200	18.1-20.0	101	20	153
	201-220	20.1-22.0	135	22	200
	221-240	22.1-24.0	140	24	200
241-250	24.1-25.0	140	25	200	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
○	○	⊙	⊙	⊙		○	⊙	○			

### 5xD-External Carbide Drill For Stainless Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD903-ED	30-37	3.0-3.7	28	4	66
	38-40	3.8-4.0	36	4	74
	41-46	4.1-4.6	36	6	74
	47-60	4.7-6.0	44	6	82
	61-80	6.1-8.0	53	8	91
	81-100	8.1-10.0	61	10	103
	101-120	10.1-12.0	71	12	118
	121-140	12.1-14.0	77	14	124
	141-160	14.1-16.0	83	16	133
	161-180	16.1-18.0	101	18	153
	181-200	18.1-20.0	101	20	153
	201-220	20.1-22.0	135	22	200
	221-240	22.1-24.0	140	24	200
241-250	24.1-25.0	140	25	200	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
⊙	⊙	⊙				⊙	⊙	○		⊙	○

### 5xD-Internal Carbide Drill For Steel



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD904-ID	30-37	3.0-3.7	28	4	66
	38-40	3.8-4.0	36	4	74
	41-46	4.1-4.6	36	6	74
	47-60	4.8-6.0	44	6	82
	61-80	6.1-8.0	53	8	91
	81-100	8.1-10.0	61	10	103
	101-120	10.1-12.0	71	12	118
	121-140	12.1-14.0	77	14	124
	141-160	14.1-16.0	83	16	133
	161-180	16.1-18.0	101	18	153
	181-200	18.1-20.0	101	20	153
	201-220	20.1-22.0	135	22	200
221-240	22.1-24.0	140	24	200	
241-250	24.1-25.0	140	25	200	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
○	○	⊙	⊙	⊙		○	⊙	○			

### 5xD-Internal Carbide Drill For Stainless



- Helix angle: 30°, 140 point angle.
- Multi-layer PVD coating, lower friction.
- Cutting Diameter Range: 3mm to 25mm, skip by 0.1mm.
- Shank Diameter: 4.0mm to 25mm with +0/-0.01mm Tolerance.
- Polished flutes, reduce friction forces, optimal chip evacuation.

Item No	Specification	Mill Dia (mm)	Channel length (mm)	Shank Dia (mm)	Full length (mm)
BD904-ID	30-37	3.0-3.7	28	4	66
	38-40	3.8-4.0	36	4	74
	41-46	4.1-4.6	36	6	74
	47-60	4.8-6.0	44	6	82
	61-80	6.1-8.0	53	8	91
	81-100	8.1-10.0	61	10	103
	101-120	10.1-12.0	71	12	118
	121-140	12.1-14.0	77	14	124
	141-160	14.1-16.0	83	16	133
	161-180	16.1-18.0	101	18	153
	181-200	18.1-20.0	101	20	153
	201-220	20.1-22.0	135	22	200
221-240	22.1-24.0	140	24	200	
241-250	24.1-25.0	140	25	200	

Workpiece Material											
Carbon Steel	Alloy Steel	Prehardening Steel/ Hardened Steel				Stainless Steel	Cast Iron	Copper Alloy	Aluminum Alloy	Titanium Alloy	Inconel
		30~40HRC	40~45HRC	45~55HRC	55~70HRC						
⊙	⊙	⊙				⊙	⊙	○		⊙	



## 深孔枪钻(Gun drilling)

### 深孔枪钻

直径 (D)	长度1 (L1)	长度2 (L2)	直径 (D)	长度1 (L1)	长度2 (L2)
3.02	0-1650mm	1651-2200mm	18.52	0-1650mm	1651-2200mm
4.02	0-1650mm	1651-2200mm	19.02	0-1650mm	1651-2200mm
5.02	0-1650mm	1651-2200mm	19.52	0-1650mm	1651-2200mm
5.52	0-1650mm	1651-2200mm	20.02	0-1650mm	1651-2200mm
6.02	0-1650mm	1651-2200mm	20.52	0-1650mm	1651-2200mm
6.37	0-1650mm	1651-2200mm	21.02	0-1650mm	1651-2200mm
6.52	0-1650mm	1651-2200mm	21.52	0-1650mm	1651-2200mm
7.02	0-1650mm	1651-2200mm	22.02	0-1650mm	1651-2200mm
7.52	0-1650mm	1651-2200mm	23.02	0-1650mm	1651-2200mm
8.02	0-1650mm	1651-2200mm	24.02	0-1650mm	1651-2200mm
8.52	0-1650mm	1651-2200mm	25.02	0-1650mm	1651-2200mm
9.02	0-1650mm	1651-2200mm	26.02	0-1650mm	1651-2200mm
9.52	0-1650mm	1651-2200mm	27.02	0-1650mm	1651-2200mm
10.02	0-1650mm	1651-2200mm	28.02	0-1650mm	1651-2200mm
10.52	0-1650mm	1651-2200mm	29.02	0-1650mm	1651-2200mm
11.02	0-1650mm	1651-2200mm	30.02	0-1650mm	1651-2200mm
11.13	0-1650mm	1651-2200mm	31.02	0-1650mm	1651-2200mm

C 钴削刀片

### 机夹深孔枪钻



### 深孔枪钻

直径 (D)	长度1 (L1)	长度2 (L2)	直径 (D)	长度1 (L1)	长度2 (L2)
11.52	0-1650mm	1651-2200mm	32.02	0-1650mm	1651-2200mm
12.02	0-1650mm	1651-2200mm	33.02	0-1650mm	1651-2200mm
12.52	0-1650mm	1651-2200mm	34.02	0-1650mm	1651-2200mm
13.02	0-1650mm	1651-2200mm	35.02	0-1650mm	1651-2200mm
13.52	0-1650mm	1651-2200mm	36.02	0-1650mm	1651-2200mm
14.02	0-1650mm	1651-2200mm	37.02	0-1650mm	1651-2200mm
14.3	0-1650mm	1651-2200mm	38.02	0-1650mm	1651-2200mm
14.52	0-1650mm	1651-2200mm	39.02	0-1650mm	1651-2200mm
15.02	0-1650mm	1651-2200mm	40.02	0-1650mm	1651-2200mm
15.52	0-1650mm	1651-2200mm	41.02	0-1650mm	1651-2200mm
16.02	0-1650mm	1651-2200mm	42.02	0-1650mm	1651-2200mm
16.52	0-1650mm	1651-2200mm	43.02	0-1650mm	1651-2200mm
17.02	0-1650mm	1651-2200mm	44.02	0-1650mm	1651-2200mm
17.52	0-1650mm	1651-2200mm	45.02	0-1650mm	1651-2200mm

#### 钻孔直径范围

φ14.02mm-φ15.99mm	φ22.02mm-φ22.99mm
φ15.02mm-φ15.99mm	φ23.02mm-φ23.99mm
φ16.02mm-φ16.99mm	φ24.02mm-φ24.99mm
φ17.02mm-φ17.99mm	φ25.02mm-φ25.99mm
φ18.02mm-φ18.99mm	φ26.02mm-φ26.99mm
φ19.02mm-φ19.99mm	φ27.02mm-φ27.99mm
φ20.02mm-φ20.99mm	φ28.02mm-φ28.99mm
φ21.02mm-φ21.99mm	

C 钴削刀片