



Good Team

SCIENTIFIC MANAGEMENT QUALITY FIRST BEST SERVICE

PCB router drill bit catalog



Good Team

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Good Team

Xinxiang Good Team Electronics Technology Co.,Ltd



XIAMENEGRET TOOL CO., LTD



COMPANY INTRODUCTION

Xinxiang Good Team Electronics Technology Co.,Ltd.

Good Team Electronics Technology Co., Ltd. was founded in 2006. Good Team electronics is located in Xin Xiang city, He Nan province. The initiator of the company has been in the PCB industry for nearly 20 years, possessing profound industry knowledge and rich social resources. On the other hand, Good Team electronics is the executive member of China Printed Circuit Association; the chairman Mrs. Xu is the executive director of the Association. Therefore, we have the absolute advantage in the industry; we have excellent customer resources. Virtually, we have built a sound and solid relationship with our customer, for example, Foxconn Group, 3SEMS Group, HannStar Board Corporation, Dynamic Electronics, Tripod Technology are all our faithful clients. As a result of the professional technique and rich experiences, there are growing number of customers come to us. And now the market share is still growing steadily.

The company insists on satisfying customer as the purpose, premium quality as the core, and reputation as the development, we constantly upgrade the technique, and strives to offer the premium quality and livelonger product. Our product has passed the ISO14001:2004 and GT/B 24001-2004 Environmental Management System Certification, and ISO9001 Quality Assurance System. Good Team electronics is a professional, reliable and large production scale PCB dedicated drill bits and router bits manufacturer. In the future we are going to step forward and keep enlarging the scale of production, and constantly completing the R&D, production, and marketing system. The company will strive to become the leader of PCB machining tools industry in the world and make a significant contribution to the innovation of the industry.



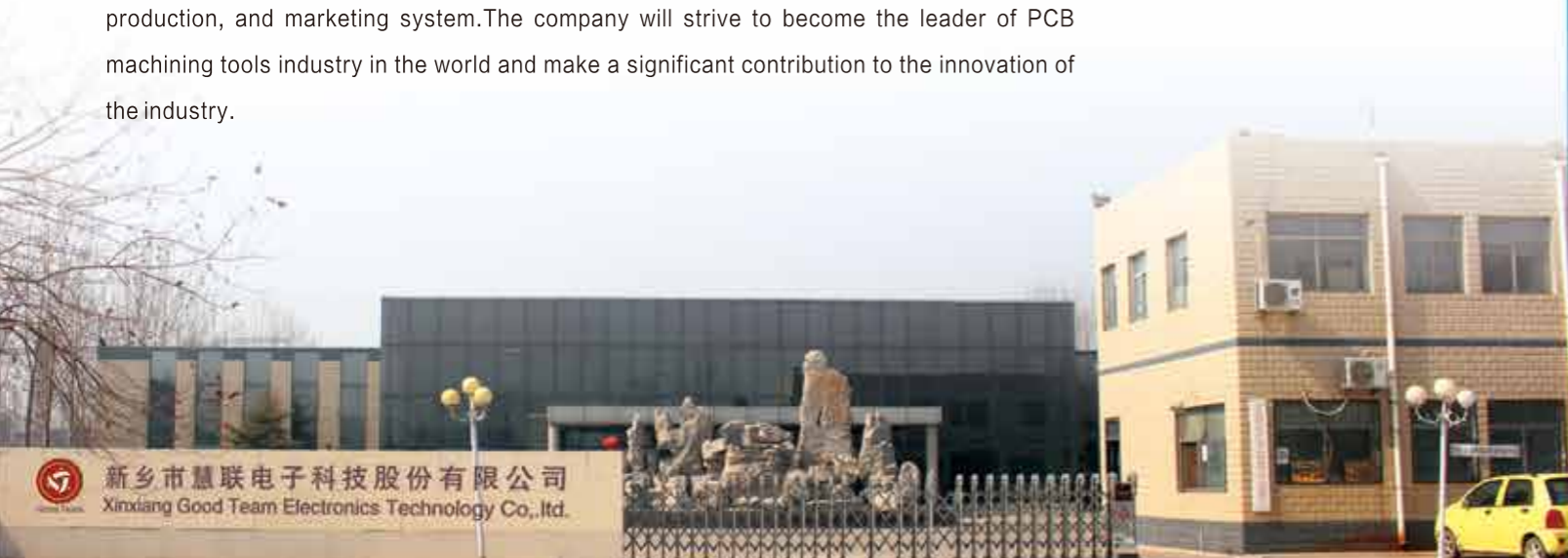
COMPANY INTRODUCTION

XIAMEN EGRET TOOL CO., LTD.

Xiamen Egret Tool CO., LTD. (Egret Tool), with registered capital RMB 100 million, was established by its original work teams and core technological engineers in 2018 after the system reforms of the PCB Tools Division of Xiamen Golden Egret Special Alloy CO., LTD. The Company has continued to be a manufacturer integrating the R&D, design, manufacturing and sales on PCB router bits, PCB drill bits and the special precision cutting tools, and we also manufacture the cutting tools for 3C industries. Egret Tool concentrates itself on the development of PCB industries and 3C industries, providing the high-quality products, the professional total solution and the like complete hospitality service for the customers.

With the world class facilities and processing technology, Egret Tool has more than 300 production equipments, provides 40 million PCB router bits and 2 million micro cutting tools every year.

Egret Tool pursues excellence through creative talents, advanced technologies, high-level manufacturing equipments and quality testing facilities. Driven by high quality products and superior service. ISO9001 and OHSAS18001 system certified to guarantee the superior quality. Our customers are worldwide, including China (including Hong Kong, Macao and Taiwan), Korea, Japan and other countries and regions. Egret Tool maintains the operation principle of people-oriented, honesty-practice, efficiency and pragmatism, win-win results, enhances the enterprise spirit of never ceasing and forever striving. We are striving for the industries' technological advance and deployment, and striving to be a dedicated, professional, single-minded modernized enterprise.

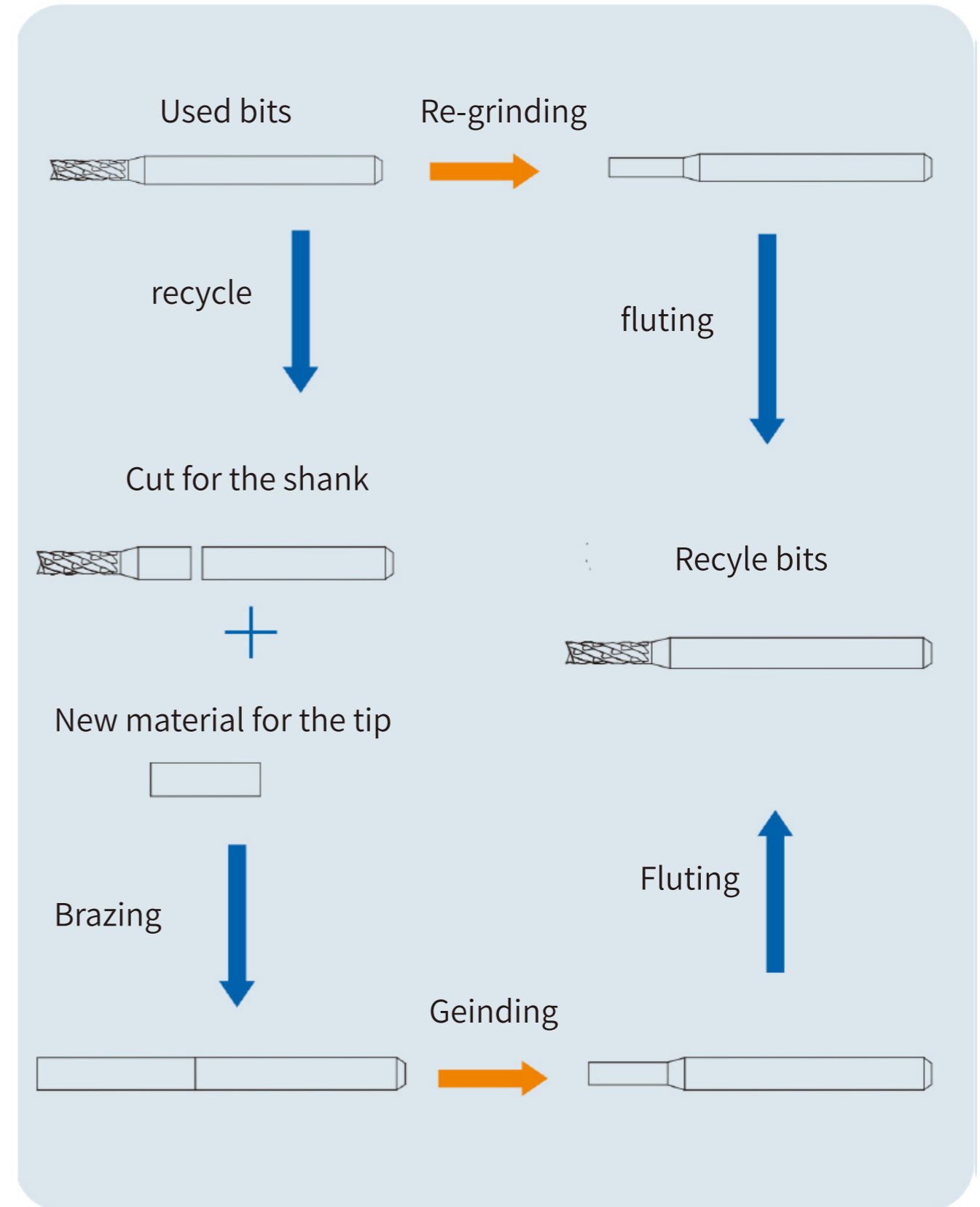




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Recycle Process



INSTRUCTION

End type

categories	Diagram
Fish Tail	
Drill Point	
Flat-End	

★ Fish tail type is standard router; Flat-end and drill types can be provided upon the requirement.

Draft type

Up Draft	Down Draft

★ Up draft type is supplied as standard; Down draft can be provided upon the requirement.

Customized products

★ Customer design is possible.

RCF

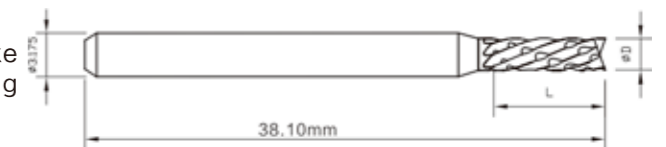
RCF Series have diamond cut geometry and suitable for contouring on most general PCBs and Halogen-free PCBs. The range offers good swarf/chip evacuation and long-life.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	7.0	40-45	5-7
1.1	7.0	42-46	8-12
1.2	7.0	41-45	8-14
1.3	7.0	38-42	8-14
1.5	8.0	31-35	10-16
1.6	8.0	28-33	11-16
1.8	10.0	26-30	12-18
1.9	10.0	25-29	12-18
2.0	10.0	24-29	11-16
2.2	10.0	23-27	16-20
2.4	10.0	22-26	16-20
2.5	10.0	21-25	16-20
3.0	10.0	18-22	16-20
3.175	12.0	18-22	16-20

RFL

RFL series suitable for down draft processing, like SMT contouring; and also suitable for the finishing condition.

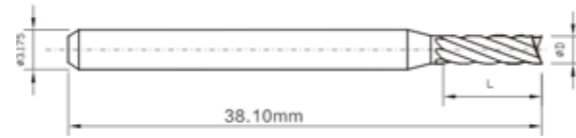


Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	7.0	40-45	5-7
1.2	8.0	41-45	8-14
1.5	8.0	31-35	10-16
1.8	8.5	26-30	12-18
2.0	9.0	27-32	11-16
2.2	10.0	24-29	11-16

Customer design is possible.

RRS/RLS

RRS/RLS series suitable for finishing, especially for gold finger PCBs, with high surface quality.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.6	4.0	40-48	3-5
0.8	5.5	40-48	3-5
1.0	7.0	40-45	5-7
1.2	8.0	38-43	9-11
1.6	8.0	28-33	11-16
1.8	9.0	27-32	11-16
2.0	10.0	24-29	11-16

RCB

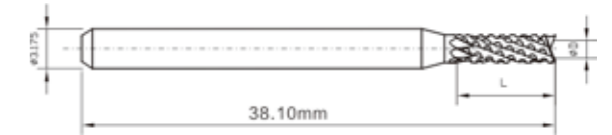
RCB series suitable for contouring on most general printed circuit boards and High-Tg printed circuit boards, high dimensional accuracy, high feed speed and excellent surface quality.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.8	5.5	40-48	3-5
1.0	7.0	40-45	5-7
1.2	8.0	38-43	9-11
1.5	8.0	28-33	11-16
1.6	8.0	28-33	11-16
1.8	9.0	27-32	11-16
2.0	9.0	24-29	11-16
2.4	10.0	22-26	16-20
3.175	10.0	18-22	16-20

RRC

RRC series suitable for contouring on most general printed circuit boards and High-Tg printed circuit boards, it offers high dimensional accuracy, high feed speed, and excellent surface quality.

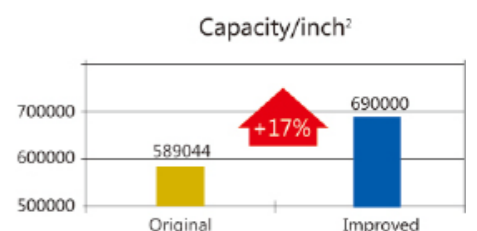
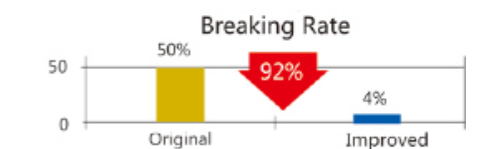
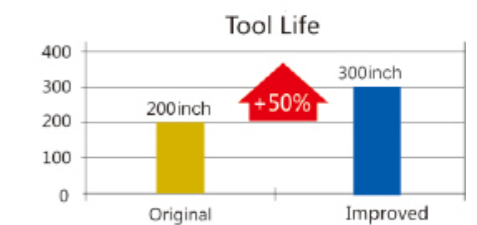


Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.6	4.0	40-48	3-5
1.2	7.5	41-45	8-14
1.6	8.0	28-32	10-16
1.8	10.0	26-30	12-18
2.0	10.0	24-28	14-20
2.5	10.0	21-25	16-20

Example of case

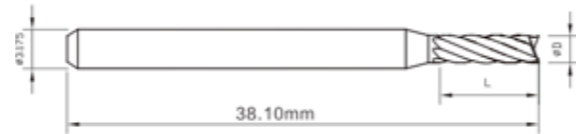
RRC1.0 × 8.5D Life improved

Tool type	RRC router
Dimension	RRC1.0 × 8.5D
Workpiece material	7100655-1 (H/F), NB
Spindle speed	S36 KRPM
Feed speed	8.5mm/s
Working piont	line cutting
Panel high	1.3mm*5PNL
Type of cooling	none
Achievement	The rate of tool breaking fall from 50% to 4% and life increase by 300 inch. The output promote to approximately 17.1% annual month, improving capacity 10000inch ² in total.



RNL

RNL router is suitable for cutting PCBs with PTH, especially for the high demand of boards edge.

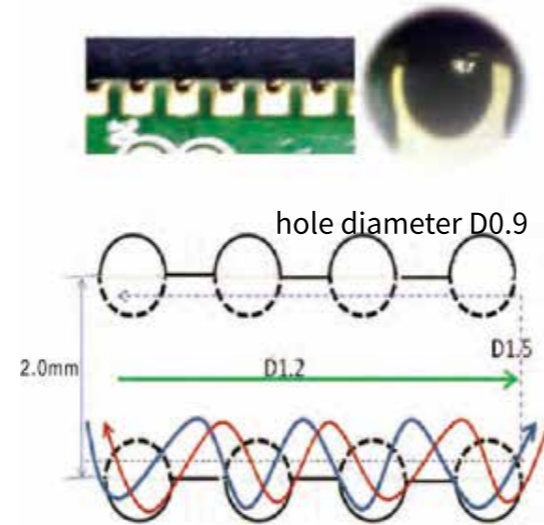


Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.5	4.0	46-50	3-5
0.8	5.0	40-48	3-5
1.0	8.0	40-45	5-7
1.4	10.0	38-43	9-11

Example of case

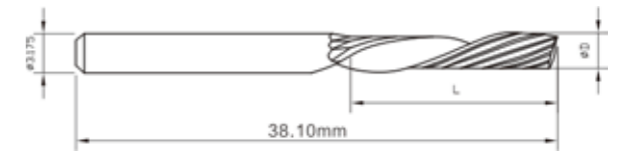
Reverse router RNL0.5*4.0 improve machining drawbench

Tool type	RNL Router
Dimension	RNL0.5*4.0C
Workpiece material	PCB with PTH holes
Spindle speed	S38 KRPM
Feed speed	4mm/s
Working point	Finish Procedure
Panel high	0.8mm*4PNL
Type of cooling	none
Achievement	The original technology cost vast power with many process; Improving the drawbench and PCB quality with RNL router.



PRS/PLS

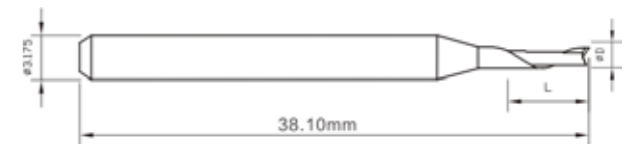
PRS /PLS router is suitable for routing PVC and boards with high dimensional accuracy, high feed speed, excellent surface quality.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	5.0	40 ~ 45	4 ~ 6
1.5	7.0	30 ~ 35	8 ~ 10
2.0	8.0		
3.175	10.0	20 ~ 25	12 ~ 15
3.175	22.0		
4.0	17.0	12 ~ 15	

PRB

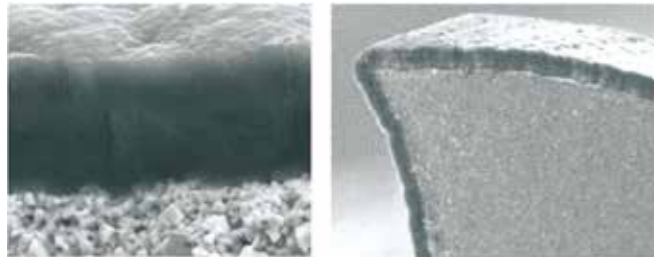
PRB router is suitable for machining soft-materials, such as FPCB, PP, Teflon, with sharp cutting edge and good chip evacuation.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	5.0	35 ~ 40	4 ~ 6
1.2	6.0		
1.6	6.0	30 ~ 35	8 ~ 10
1.8	8.0		
2.0	8.0	25 ~ 30	8 ~ 12
3.175	10.0		

Diamond Series PCB Coated Cutter

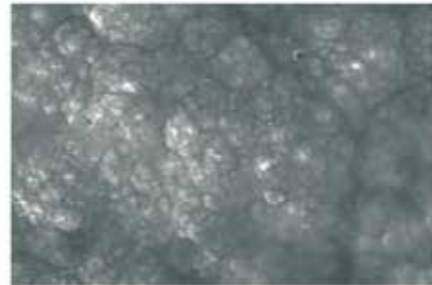
PCB router with diamond coating, suited for routing contours of High-Tg and metal-based board situations with long life and dimensional stability.



- The excellent design maintain sharp cuttil
- Best wear resistance
- Good heat resistance



normal coating

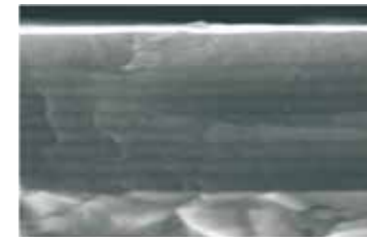


Ultra fine grain diamond coating

Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	7.0	40-45	5-7
1.1	7.0	42-46	8-12
1.2	7.0	41-45	8-14
1.3	7.0	38-42	8-14
1.5	8.0	31-35	10-16
1.6	8.0	28-33	11-16
1.8	10.0	26-30	12-18
1.9	10.0	25-29	12-18
2.0	10.0	24-29	11-16
2.2	10.0	23-27	16-20
2.4	12.0	22-26	16-20
2.5	12.0	21-25	16-20
3.0	12.0	18-22	16-20
3.175	12.0	18-22	16-20

Armor Series PCB Coated Cutter

PCB router with Armor-J coating, high hardness, perfect wear resistance, super performance with new and advanced Armor-J coating.



- Multilayer coating with high hardness
- Fine heat resistance
- Superior wear resistance and fracture resistance.

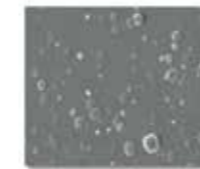


- High sharpness
- The excellent design maintain sharp cutting



Armor-J coating

- High tool surface quality
- Avoid the heat and the stick-chip in the production process effectively
- Slow down the diffusion process of wear and tear
- Provide the excellent surface quality



General coating

- High tool life
- High-durability ensures consistency of dimensions during the contour routing
- Supper better for coutouring the CCL
- Tool life lifted 200%

Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	7.0	40-45	5-7
1.2	7.0	41-45	8-14
1.3	7.0	38-42	8-14
1.5	8.0	31-35	10-16
1.6	8.0	28-33	11-16
1.8	10.0	26-30	12-18
2.0	10.0	24-29	11-16
2.2	10.0	23-27	16-20
2.4	12.0	22-26	16-20
2.5	12.0	21-25	16-20
3.175	12.0	18-22	16-20

MICRO DRILL SERIER(MD)



© Product Technical Parameters

Diameter (D)		Flute Length (l)
Metric	Inch	Metric
0.10	0.0036	1.5
0.15	0.0059	2.5
0.20	0.0079	3.5
0.25	0.0098	4.0
0.30	0.0118	5.5
0.35	0.0138	5.5
0.40	0.0157	7.0
0.45	0.0177	7.0

© Product Standard Chart



★ Customer design is possible.

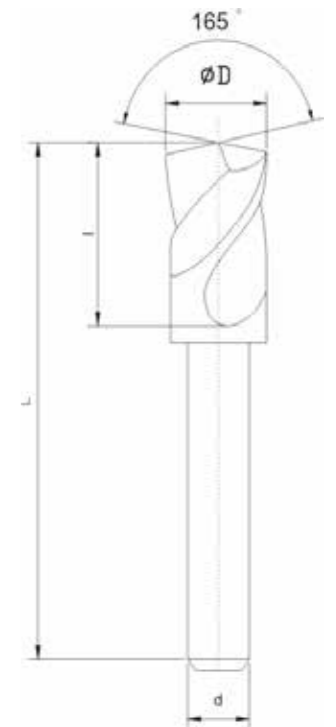
MICRO DRILL SERIES(LD)



© Product Technical Parameters

Diameter (D)		Flute Length (l)	Diameter (D)		Flute Length (l)
Metric	Inch	Metric	Metric	Inch	Metric
3.20	0.1260	12.0	4.85	0.1909	12.0
3.25	0.1280	12.0	4.90	0.1929	12.0
3.30	0.1299	12.0	4.95	0.1949	12.0
3.35	0.1319	12.0	5.00	0.1969	12.0
3.40	0.1339	12.0	5.05	0.1988	12.0
3.45	0.1358	12.0	5.10	0.2008	12.0
3.50	0.1378	12.0	5.15	0.2028	12.0
3.55	0.1398	12.0	5.20	0.2047	12.0
3.60	0.1417	12.0	5.25	0.2067	12.0
3.65	0.1437	12.0	5.30	0.2087	12.0
3.70	0.1457	12.0	5.35	0.2106	12.0
3.75	0.1476	12.0	5.40	0.2126	12.0
3.80	0.1496	12.0	5.45	0.2146	12.0
3.85	0.1516	12.0	5.50	0.2164	12.0
3.90	0.1535	12.0	5.55	0.2185	12.0
3.95	0.1555	12.0	5.60	0.2205	12.0
4.00	0.1575	12.0	5.65	0.2224	12.0
4.05	0.1594	12.0	5.70	0.2244	12.0
4.10	0.1614	12.0	5.75	0.2265	12.0
4.15	0.1634	12.0	5.80	0.2283	12.0
4.20	0.1654	12.0	5.85	0.2303	12.0
4.25	0.1673	12.0	5.90	0.2323	12.0
4.30	0.1693	12.0	5.95	0.2343	12.0
4.35	0.1713	12.0	6.00	0.2362	12.0
4.40	0.1732	12.0	6.05	0.2382	12.0
4.45	0.1752	12.0	6.10	0.2402	12.0
4.50	0.1772	12.0	6.15	0.2421	12.0
4.55	0.1791	12.0	6.20	0.2441	12.0
4.60	0.1811	12.0	6.25	0.2461	12.0
4.65	0.1831	12.0	6.30	0.2480	12.0
4.70	0.1850	12.0	6.35	0.2500	12.0
4.75	0.1870	12.0	6.40	0.2520	12.0
4.80	0.1890	12.0	6.45	0.2539	12.0
			6.50	0.2559	12.0

© Product Standard Chart



★ Customer design is possible.

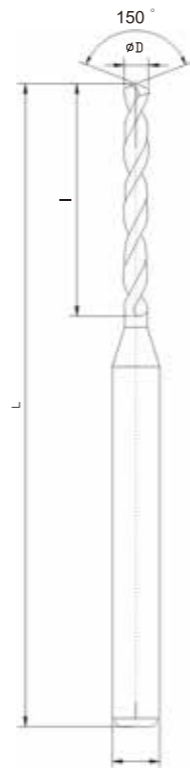
SLOT DRILL SERIES(SX)



© Product Technical Parameters

© Product Standard Chart

Diameter (D)		Flute Length (L)		Diameter (D)		Flute Length (L)	
Metric	Inch	Metric	Metric	Inch	Metric	Metric	Metric
0.40	0.0157	5.5	1.95	0.0768	8.7		
0.45	0.0177	5.5	2.00	0.0787	8.7		
0.50	0.0197	5.5	2.05	0.0807	8.7		
0.55	0.0217	5.5	2.10	0.0827	8.7		
0.60	0.0236	6.7	2.15	0.0846	8.7		
0.65	0.0256	6.7	2.20	0.0866	8.7		
0.70	0.0276	8.7	2.25	0.0886	8.7		
0.75	0.0295	8.7	2.30	0.0906	8.7		
0.80	0.0315	8.7	2.35	0.0925	8.7		
0.85	0.0335	8.7	2.40	0.0945	8.7		
0.90	0.0354	8.7	2.45	0.0965	8.7		
0.95	0.0374	8.7	2.50	0.0984	8.7		
1.00	0.0394	8.7	2.55	0.1004	8.7		
1.05	0.0413	8.7	2.60	0.1024	8.7		
1.10	0.0433	8.7	2.65	0.1043	8.7		
1.15	0.0453	8.7	2.70	0.1063	8.7		
1.20	0.0472	8.7	2.75	0.1083	8.7		
1.25	0.0492	8.7	2.80	0.1102	8.7		
1.30	0.0512	8.7	2.85	0.1122	8.7		
1.35	0.0531	8.7	2.90	0.1142	8.7		
1.40	0.0551	8.7	2.95	0.1161	8.7		
1.45	0.0571	8.7	3.00	0.1181	8.7		
1.50	0.0591	8.7	3.05	0.1201	8.7		
1.55	0.0610	8.7	3.10	0.1220	8.7		
1.60	0.0630	8.7	3.15	0.1240	8.7		
1.65	0.0650	8.7					
1.70	0.0669	8.7					
1.75	0.0689	8.7					
1.80	0.0709	8.7					
1.85	0.0728	8.7					
1.90	0.0748	8.7					



★ Customer design is possible.

UC DRILL SERIES(UC)



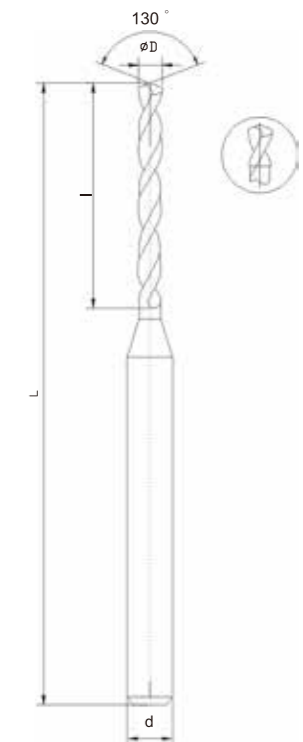
© Product Technical Parameters

Mainly used for plates with higher hole wall roughness requirements.

© Product Technical Parameters

Diameter (D)		Flute Length (L)	
Metric	Inch	Metric	Metric
0.20	0.0079	3.5	
0.25	0.0098	4.0	
0.30	0.0118	5.5	
0.35	0.0138	6.0	
0.40	0.0157	6.5	
0.45	0.0177	7.0	
0.50	0.0197	7.0	
0.55	0.0217	7.0	
0.60	0.0236	7.0	
0.65	0.0256	8.0	
0.70	0.0276	8.0	
0.75	0.0295	8.5	
0.80	0.0315	8.5	
0.85	0.0335	9.5	
0.90	0.0354	9.5	
0.95	0.0374	9.5	
1.00	0.0394	9.5	
1.05	0.0413	10.5	
1.10	0.0433	10.5	
1.15	0.0453	10.5	
1.20	0.0472	10.5	
1.25	0.0492	10.5	
1.30	0.0512	10.5	
1.35	0.0531	10.5	
1.40	0.0551	10.5	
1.45	0.0571	10.5	
1.50	0.0591	10.5	
1.55	0.0610	10.5	
1.60	0.0630	10.5	
1.65	0.0650	10.5	
1.70	0.0669	10.5	
1.75	0.0689	10.5	
1.80	0.0709	10.5	
1.85	0.0728	10.5	
1.90	0.0748	10.5	
1.95	0.0768	10.5	
2.00	0.0788	10.5	

© Product Standard Chart



★ Customer design is possible.

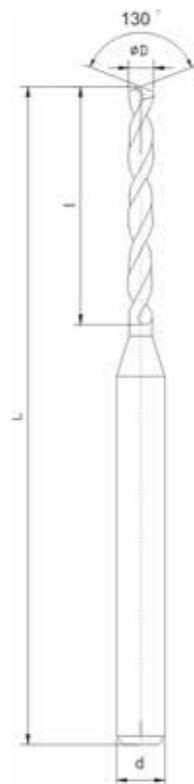
STANDARD DRILL SERIES(ST)



© Product Technical Parameters

Diameter (D)		Flute Length (L)		Diameter (D)		Flute Length (L)	
Metric	Inch	Metric	Metric	Inch	Metric	Metric	Metric
0.50	0.0197	8.5	2.05	0.0807	12.0		
0.55	0.0217	8.5	2.10	0.0827	12.0		
0.60	0.0236	8.5	2.15	0.0846	12.0		
0.65	0.0256	8.5	2.20	0.0866	12.0		
0.70	0.0276	10.0	2.25	0.0886	12.0		
0.75	0.0295	10.0	2.30	0.0906	12.0		
0.80	0.0315	10.0	2.35	0.0925	12.0		
0.85	0.0335	10.0	2.40	0.0945	12.0		
0.90	0.0354	10.0	2.45	0.0965	12.0		
0.95	0.0374	10.0	2.50	0.0984	12.0		
1.00	0.0394	10.0	2.55	0.1004	12.0		
1.05	0.0413	10.0	2.60	0.1024	12.0		
1.10	0.0433	10.0	2.65	0.1043	12.0		
1.15	0.0453	10.0	2.70	0.1063	12.0		
1.20	0.0472	10.0	2.75	0.1083	12.0		
1.25	0.0492	12.0	2.80	0.1102	12.0		
1.30	0.0512	12.0	2.85	0.1122	12.0		
1.35	0.0531	12.0	2.90	0.1142	12.0		
1.40	0.0551	12.0	2.95	0.1161	12.0		
1.45	0.0571	12.0	3.00	0.1181	12.0		
1.50	0.0591	12.0	3.05	0.1201	12.0		
1.55	0.0610	12.0	3.10	0.1220	12.0		
1.60	0.0630	12.0	3.15	0.1240	12.0		
1.65	0.0650	12.0	3.175	0.1250	12.0		
1.70	0.0669	12.0					
1.75	0.0689	12.0					
1.80	0.0709	12.0					
1.85	0.0728	12.0					
1.90	0.0748	12.0					
1.95	0.0768	12.0					
2.00	0.0787	12.0					

© Product Standard Chart



★ Customer design is possible.

SLOT OUTER SERIES (EA)



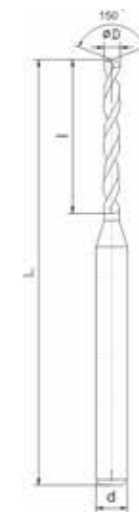
© Product Technical Parameters

EA series slot cutters have the characteristics of sharp edges and are particularly suitable for improving the deformation of short slot holes and processing high-precision plates.

© Product Technical Parameters

刃径 (D) Diameter (D)		刃长 (L) Flute Length (L)		角度 (a) Angle (a)	
Metric	Inch	Metric	Metric	Metric	Metric
0.60	0.0236	5.5	150°		
0.65	0.0256	5.5	150°		
0.70	0.0276	5.5	150°		
0.75	0.0295	5.5	150°		
0.80	0.0315	5.5	150°		
0.85	0.0335	5.5	150°		
0.90	0.0354	5.5	150°		
0.95	0.0374	5.5	150°		
1.00	0.0394	5.5	150°		

© Product Standard Chart

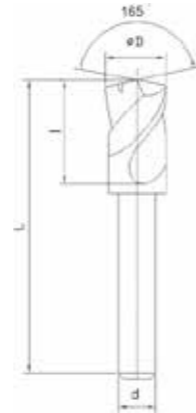


★ Customer design is possible.

CHIP BREAKER BIT SERIES



© Product Standard Chart



© Product Technical Parameters

The chip breaker series drill bits add a chip breaker at the appropriate position of the main cutting edge to improve the chip breaking effect and effectively improve the hole wall roughness and positioning accuracy.

© Product Technical Parameters

★ Customer design is possible.

Diameter (D)		Flute Length (L)		Angle (a)		Overall Length	
Metric	Inch	Metric	Metric	Metric	Metric	Metric	Metric
2.00	0.0787	12	165°	38.1			
2.05	0.0807	12	165°	38.1			
2.10	0.0827	12	165°	38.1			
2.15	0.0846	12	165°	38.1			
2.20	0.0866	12	165°	38.1			
2.25	0.0886	12	165°	38.1			
2.30	0.0906	12	165°	38.1			
2.35	0.0925	12	165°	38.1			
2.40	0.0945	12	165°	38.1			
2.45	0.0965	12	165°	38.1			
2.50	0.097	12	165°	38.1			
2.55	0.1004	12	165°	38.1			
2.60	0.1024	12	165°	38.1			
2.65	0.1043	12	165°	38.1			
2.70	0.1063	12	165°	38.1			
2.75	0.1083	12	165°	38.1			
2.80	0.1102	12	165°	38.1			
2.85	0.1122	12	165°	38.1			
2.90	0.1161	12	165°	38.1			
2.95	0.1181	12	165°	38.1			
3.00	0.1201	12	165°	38.1			
3.05	0.1220	12	165°	38.1			
3.15	0.1240	12	165°	38.1			
3.175	0.1250	12	165°	38.1			
3.20	0.1250	12	165°	38.1			
3.25	0.1260	12	165°	38.1			
3.30	0.1280	12	165°	38.1			
3.35	0.1299	12	165°	38.1			
3.40	0.1319	12	165°	38.1			
3.45	0.1358	12	165°	38.1			
3.50	0.1378	12	165°	38.1			
3.55	0.1398	12	165°	38.1			
3.60	0.1417	12	165°	38.1			
3.65	0.1437	12	165°	38.1			
3.70	0.1457	12	165°	38.1			
3.75	0.1476	12	165°	38.1			
3.80	0.1496	12	165°	38.1			
3.85	0.1516	12	165°	38.1			
3.90	0.1535	12	165°	38.1			
3.95	0.1555	12	165°	38.1			
4.00	0.1575	12	165°	38.1			
4.05	0.1594	12	165°	38.1			
4.10	0.1614	12	165°	38.1			
4.15	0.1634	12	165°	38.1			
4.20	0.1654	12	165°	38.1			
4.25	0.1673	12	165°	38.1			

Diameter (D)		Flute Length (L)		Angle (a)		Overall Length	
Metric	Inch	Metric	Metric	Metric	Metric	Metric	Metric
4.30	0.1693	12	165°	38.1			
4.35	0.1713	12	165°	38.1			
4.40	0.1732	12	165°	38.1			
4.45	0.1752	12	165°	38.1			
4.50	0.1772	12	165°	38.1			
4.55	0.1791	12	165°	38.1			
4.60	0.1811	12	165°	38.1			
4.65	0.1831	12	165°	38.1			
4.70	0.1850	12	165°	38.1			
4.75	0.1870	12	165°	38.1			
4.80	0.1890	12	165°	38.1			
4.85	0.1909	12	165°	38.1			
4.90	0.1929	12	165°	38.1			
4.95	0.1949	12	165°	38.1			
5.00	0.1969	12	165°	38.1			
5.05	0.1988	12	165°	38.1			
5.10	0.2008	12	165°	38.1			
5.15	0.2028	12	165°	38.1			
5.20	0.2047	12	165°	38.1			
5.25	0.2067	12	165°	38.1			
5.30	0.2087	12	165°	38.1			
5.35	0.2106	12	165°	38.1			
5.40	0.2126	12	165°	38.1			
5.45	0.2146	12	165°	38.1			
5.50	0.2165	12	165°	38.1			
5.55	0.2185	12	165°	38.1			
5.60	0.2205	12	165°	38.1			
5.65	0.2224	12	165°	38.1			
5.70	0.2244	12	165°	38.1			
5.75	0.2264	12	165°	38.1			
5.80	0.2283	12	165°	38.1			
5.85	0.2303	12	165°	38.1			
5.90	0.2323	12	165°	38.1			
5.95	0.2343	12	165°	38.1			
6.00	0.2362	12	165°	38.1			
6.05	0.2382	12	165°	38.1			
6.10	0.2402	12	165°	38.1			
6.15	0.2421	12	165°	38.1			
6.20	0.2441	12	165°	38.1			
6.25	0.2461	12	165°	38.1			
6.30	0.2480	12	165°	38.1			
6.35	0.2500	12	165°	38.1			
6.40	0.2520	12	165°	38.1			
6.45	0.2539	12	165°	38.1			
6.50	0.2559	12	165°	38.1			

LST BIT SERIES



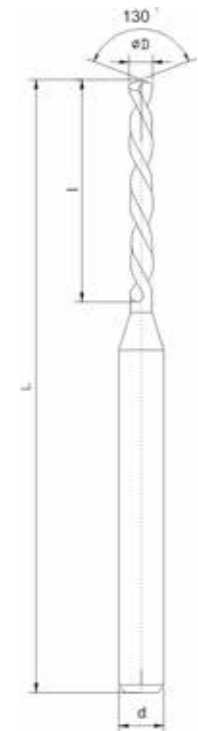
© Product Technical Parameters

Left-hand series drill bits are mainly used for downward chip removal processing, and the blade length can be specially customized.

© Product Technical Parameters

刃径 (D) Diameter (D)		刃长 (L) Flute Length (L)	
Metric	Inch	Metric	Metric
0.40	0.0157	3.5	
0.45	0.0177	3.5	
0.50	0.0197	4.5	
0.55	0.0217	4.5	
0.60	0.0236	4.5	
0.65	0.0256	4.5	
0.70	0.0276	5.5	
0.75	0.0295	5.5	
0.80	0.0315	5.5	
0.85	0.0335	5.5	
0.90	0.0354	5.5	
0.95	0.0374	5.5	
1.00	0.0394	5.5	
1.05	0.0413	6.5	
1.10	0.0433	6.5	
1.15	0.0453	6.5	
1.20	0.0472	6.5	

© Product Standard Chart



★ Customer design is possible.

RRD

RRD router is suitable for machining special PCBs, such as Aluminum PCBs, copper PCBs and so on, sharp cutting edge, good chip evacuation.

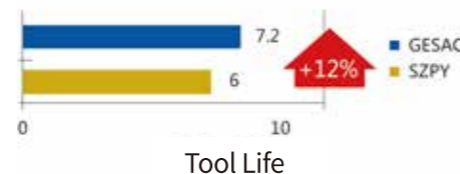
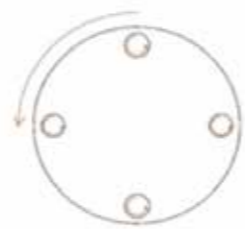


Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (m/min)
0.8	4.0	25 ~ 30	0.05 ~ 0.2
1.0	5.0		
1.2	6.0		
1.5	7.0		0.3 ~ 0.6
1.6	8.0		
1.8	9.0		
2.0	9.0		

Example of case

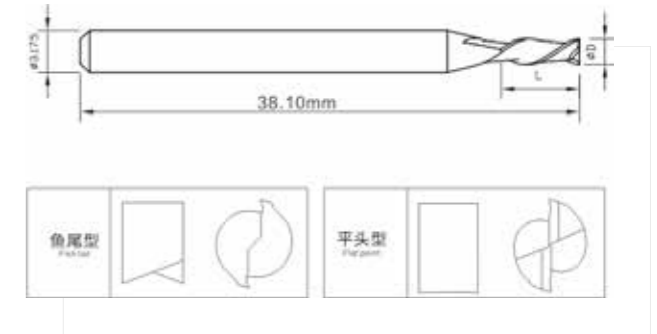
Double-flute router success example

Tool type	PCB Double-flute Router
Dimension	RRD2.0 × 9.0A
Workpiece material	KPS600A, KPS600A aluminum substrate
Spindle speed	S28KRPM
Feed speed	5.0mm/s
Working piont	Finish procedure
Panel high	2.5mm*1PNL
Type of cooling	none
Achievement	Our tools increase by 12.5% than SZPA in life and get better quality.



PRD/PRT/PRF

PRD/PRT/PRF router, the special design can get sharp cutting edge and good chip removal, be suitable for PCBs with high requirements of the groove and flat processing.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.5	2.0	46 ~ 50	0.15 ~ 0.3
0.8	2.0	35 ~ 40	
1.0	3.5		0.2 ~ 0.4
1.5	4.5	31 ~ 35	0.3 ~ 0.5
2.0	6.5	25 ~ 31	0.4 ~ 0.6
3.0	9.5		

PDJ

PDJ cutter is suitable for the PCB inside chamfering, screw hole processing.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	90°	30 ~ 50	0.3 ~ 0.5
1.5	90°	25 ~ 30	0.5 ~ 0.8
2.0	90°		
2.5	90°	20 ~ 27	0.8 ~ 1.0
3.0	90°		

Position with the handle ring and coating can be customized.

Special angle can be made upon customer needs.

PVC

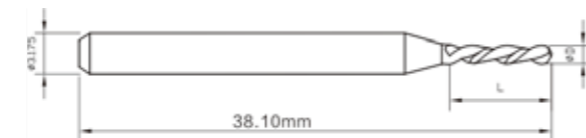
A special V-groove router for standard PCBs enable stable V-groove routing without burring or unevenness.



Dimension(mm)		Parameters	
Mill Dia ΦD	Angle (a)	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	90°	30 ~ 35	0.6 ~ 0.8
1.2	90°		
1.5	90°		
2.0	90°	25 ~ 30	0.8 ~ 1.0
2.5	90°		
3.0	90°		
	90°		

PMZ

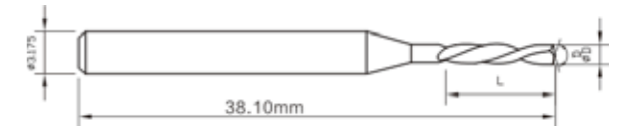
A sharp rake angle on peripheral cutting edges and suitable for cooper PCBs and HDI, etc.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.8	3.0	25-30	0.1-0.3
1.0	4.0		
1.2	5.0		
1.6	6.5		
2.0	8.0	15-25	0.3-0.6
2.4			
3.0			
			0.5-0.8

PLL

PLL cutter is suitable for machining V-shape groove and screw hole.



Dimension(mm)		Parameters	
Mill Dia ΦD	Angle (a)	Spindle Speed (Krpm)	Table Feed (mm/s)
0.5	90°	30 ~ 35	0.1-0.2
0.8	90°		
1.0	90°		
1.3	90°		0.2-0.4
1.5	90°		
1.6	90°		
2.0	90°		0.4-0.8
3.0	90°		
3.175	90°		

PZD

PZD cutter is suitable for all kinds of PCBs taper shape, it offers long tool life and high precision.

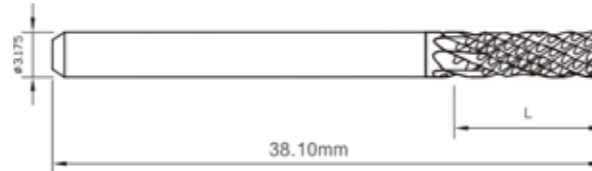


Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	2.0	30 ~ 35	0.2 ~ 0.6
2.0	4.0	25 ~ 30	0.8 ~ 0.1
2.5	4.0	20 ~ 27	
3.0	4.0		
4.0	6.0		

Speical flute diameter&The Angle can be supplied according to request.

PFH

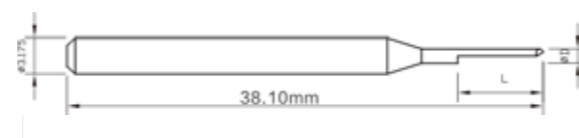
PFH series suitable for machining composite materials and slot milling processing; Diamond coating can provide the longer tool life; The special diamond cut geometry can effectively control the flanging and the burr, etc.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.1	5.0	30	1.1
1.4	5.0		
1.9	8.0	24	1.2
2.2		21	1.25
2.3	9.5	20	1.25
2.9		17	1.3
3.0	17		
3.2	10.0	16	

PBY

PBY cutter is suitable for small spot facing on the surface of PCBs for surface mounted components. It's simple shape allows the finishing of the recess face with suitable roughness for mounting components. Easy to re-point and economical.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	3.0	30~35	0.3~0.5
1.5	4.0	25~30	0.5~0.8
2.0	6.0		
2.5	6.0	20~27	0.8~1.0
3.0	6.0		

PND

PND series suitable for the inside chamfering on PCBs, the minimal end-teeth runout can guarantee the good finishing.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
1.0	3.0	30~50	0.3~0.5
1.5	4.0	25~30	0.5~0.8
2.0	6.0		
3.0	9.0	20~27	0.8~1.0
4.0	11.0		

PJS

PJS series suitable for all kinds of metal PCB finishing, which can provide high wear-resistance, good chip evacuation, good rigidity.



Dimension(mm)		Parameters	
Mill Dia ΦD	Flute Length L	Spindle Speed (Krpm)	Table Feed (mm/s)
0.8	4.0	30-35	0.1-0.3
1.0	4.5		
1.5	6.5		
2.8	8.0	15-25	0.5-0.8
3.0	10.0		
3.175			

Machining Parameter Calculation Formula

Machining Parameter Definition :

V_s = cutting speed[m/min]

n = spindle speed[rpm]

D = diameter[mm]

f_{xy} = chip load[mm/rev.]

F_{xy} = feed rate[m/min]

cutting speed V_s :

$$V_s = \frac{n \times D \times \pi}{1000}$$

feed per revolution f_{xy} :

$$f_{xy} = \frac{F_{xy} \times 1000}{n}$$

feed rate F_{xy} :

$$F_{xy} = \frac{f_{xy} \times n}{1000}$$

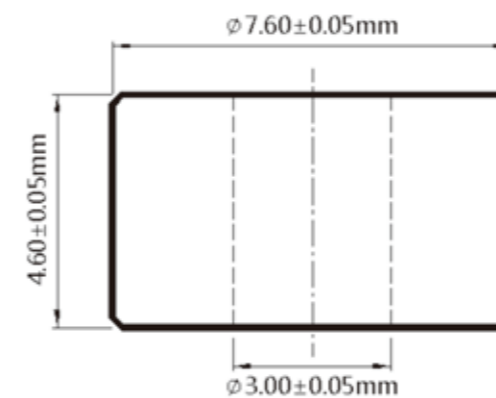
spindle speed n :

$$n = \frac{V_s \times 1000}{D \times \pi}$$

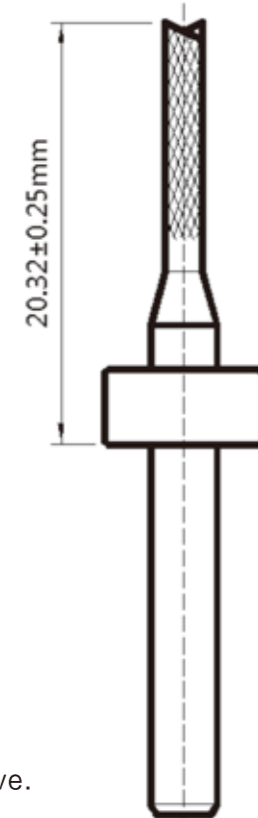
RING SETTING

Color	Grey	Dark Blue	Pink	Red	White
Example					
Color	Dark Green	Black	Coffee	Dark Purple	Yellow
Example					

RING



RING SETTING SPECIFICATION



Remarks:

- 1、 Different manufactures, the color maybe different;
- 2、 For more details, please contact the sales representative.