

Router Bits RCM / RHM Series Standard Diamond Router



RCM/RHM Router bits have diamond cut geometry and can be used for contour routing on most general electronic printed circuit boards. The range offers good swarf/chip evacuation and long life.

RCM

SIZE : $\phi 0.6 \sim \phi 3.175$



- Some models are made to order.
For more details, please contact the sales representative.

The RCM Router bit is a **Right Hand**, up draft design with a diamond cut geometry. It offers good surface finish through its down draft swarf/chip evacuation and is suitable for CNC drilling machines with vacuum extraction.



RHM

SIZE : $\phi 0.8 \sim \phi 3.175$



- Some models are made to order.
For more details, please contact the sales representative.

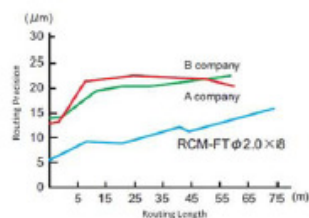
The RHM Router bit is a **Left Hand**, down draft design with a diamond cut geometry. The up draft reduces surface burrs by minimizing cutter "chatter" on the boards edge and because of this design it is suitable for manual routing machines.



RCM Technical Data

Routing Precision and Routing Length

US Union Tool Router bits offer long life and stable routing precision.



Material: FR-4 double-sided xt .6x3 stack
Spindle Speed: 27,000 rpm
Table Feed: 810 mm/min

Comparison of board stack height and tool flute length

Please refer to this chart that indicates the flute length, dependent upon the stack height.

Stack Height	1	2	3	4	5
Flute Length					
4.0	○	△	x	x	x
4.5	○	○	x	x	x
5.0	○	○	x	x	x
6.5	○	○	○	x	x
8.0	○	○	○	○	x
9.5	○	○	○	○	○
10.0	○	○	○	○	○

The life of the router bit depends on swarf (chip) evacuation. Router bits may become burnt or damaged because of poor swarf (chip) evacuation.

Please select a router with a suitable flute length for the number of boards/stack height, to improve swarf (chip) evacuation. We recommend a flute length which is approximately 1 mm longer than the upper surface of the top board.



Specifications

ϕ D mm	ϕ mm		ϕ D mm	ϕ mm			
	Standard	Long		Standard	Long		
0.60	4.0	—	2.00	8.0	9.5		
0.80	4.5		2.10				
0.90			2.20				
1.00			2.30				
1.10	5.0	6.5	2.40	9.5	—		
1.20			2.50				
1.30			2.60				
1.40			2.70				
1.50	6.5		2.80	10.0			
1.60			2.90				
1.70			3.00				
1.80	6.5	8.0	3.10				
1.90	8.0	9.5	3.175				

ϕ 0.6 is available only on RCM Series



Point Geometry Variations



For effective work, please select the point geometry according to the purpose of the application.

- FT (Fish Tail)
Standard shape and it is suitable for routing work, which requires plunging/drilling.
- DP (Drill Point)
Will reduce the thrust load and is suitable when plunging/drilling is required.

* When placing an order, please indicate the shape of the point geometry after the series name (such as RCM-FT).

* DP: Special order only.



Parameters

φ D mm	Spindle Speed	Table Feed	Z-axis Speed	Standard Flute Length		Long Flute Length	
	k rpm	m/min	m/min	φ /mm	Stack Height	φ /mm	Stack Height
0.80	40	0.4	0.1	4.5	1 ~ 2	—	—
0.90		0.6					
1.00		0.8					
1.10	38	0.9		5.0		6.5	
1.20	35	1.0					
1.30	32						
1.40	30		1.1	8.0	3		
1.50	29	0.2					
1.60 ~ 1.70	27					6.5	
1.80	25		2 ~ 3				8.0
1.90	24	8.0					
2.00	23			9.5			
2.10	22				0.3	9.5	—
2.20	21	1.25	10.0				
2.30	20			0.2			
2.40					1.3	9.5	
2.50 ~ 2.60		0.2	3 ~ 4				
2.70 ~ 2.80	0.2			3 ~ 4			
2.90					0.1	10.0	
3.00		0.1	10.0				
3.10 ~ 3.175	0.1			10.0			

These are general parameters recommended for normal conditions. However there may be variances depending upon the material and machine / spindle rigidity.