

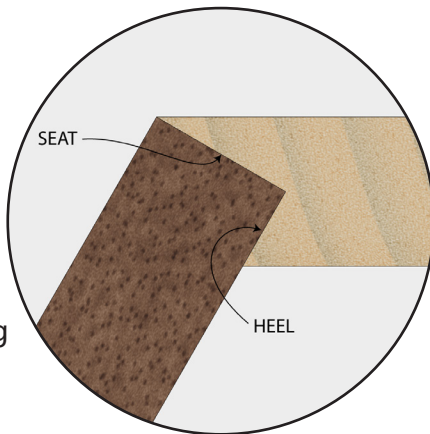
With the 15139 Bird's Mouth Glue Joint Router Bit, you can make accurate 6 and 12-sided shapes for columns, posts or legs. You'll need a few pieces of information to get started. Follow these instructions to make 6-sided objects.

Step 1: Determine diameter of finished object and stock thickness.



First, you should know the desired diameter of your finished piece.

Now you can select a stock thickness. A bird's mouth joint has two parts: the seat and heel. Your stock thickness should be no greater than the router bit's seat-cutting edge.



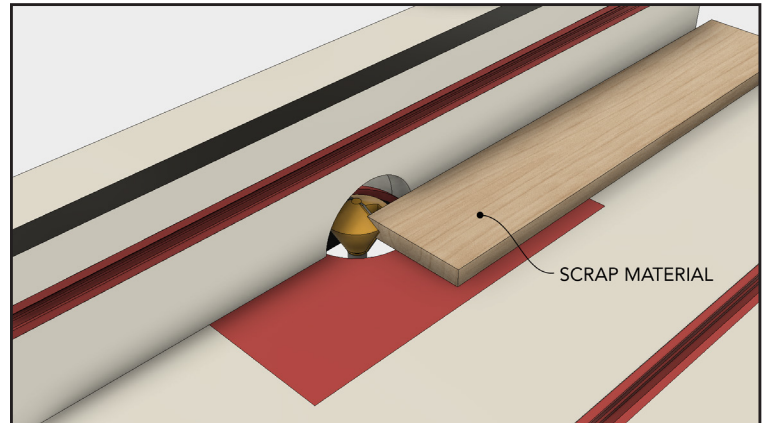
Step 2: Find the segment width.

Once you have the above information, you can calculate the width of each segment. Let's assume you want to make a 6-sided, 10" diameter project. According to the formula for a 6-sided piece (object diameter divided by 1.7), each segment should be 5.88" wide. Cut your segments to this length before moving to the router table.

Step 3. Set bit height and fence depth.

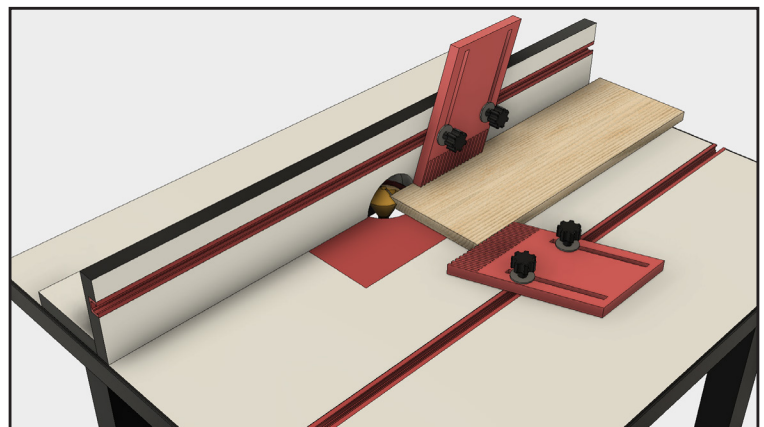
Careful setup at the router table is the key to producing accurate bird's mouth joints. For a 10" diameter, 6-sided project, the bit height should be equal to the stock thickness multiplied by 0.5. If each segment is .5" thick, the bit height should be .25". The fence depth should be equal to the stock thickness multiplied by .866. For .5" stock, your fence should be set to .433".

Step 4: Make a test cut in scrap material.



When your bit height and fence are properly adjusted, run a test cut on one edge of a piece of scrap the same thickness as your stock. Be careful to run the piece face up or face down according to the table below. Test the joint's fit.

Step 5: Route one edge of each segment.



For the cleanest cuts and crisp edges, use a feather board to hold the stock to the router table's surface, and another to press the work into the fence. Feed segments face up for 6-sided objects at a slow and steady rate. A push stick will provide maximum control and will keep your hands at a safe distance from the router bit.

Tip: Don't cut short segments to length before routing. Instead, route an oversized piece and cut several short segments from it.

Important Formulas

To calculate segment width:

Outside diameter / 1.7

Bit height:

Stock thickness x 0.5

Fence depth...

Stock thickness x 0.866

Face up/face down guidelines:

Outside face up

Bit & Fence Setup De- tail

