



## Shop Chart: Safe Speeds for Router Bits

Because there are a variety of factors to consider, there isn't a "best" bit speed; however in terms of safety, a good rule of thumb is "the bigger the bit, the slower the operating speed."

Use this chart as a starting point, and then check out the notes, below.

Bit Diameter	Maximum Speed
UP TO 1"	22,000-24,000 RPM
1 - 2"	18,000-22,000 RPM
2 - 2½"	12,000-16,000 RPM
2½ - 3½"	8,000-12,000 RPM



**Notes:**

- Use the maximum safe operation speeds as a threshold. Depending on the router, material, and feed rate, a bit's "sweet spot" may be slightly below the maximum RPM.
- Routing a perfect profile is a balancing act between RPM and the feed rate. Even if the bit is set properly, an excessively fast feed rate can result in chipping and tearout. By increasing the number of cuts per inch, slowing the feed rate can improve the cut quality, but be careful not to overdo it. An excessively slow feed rate will result in heat buildup which can damage the bit and the workpiece.
- Make practice cuts in scrap stock, especially when using an unfamiliar bit or material.
- For best results, finish each cut with a super light (1/32" or less) pass.

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