

GUIDE BUSH OFFSET & FORMULA

Cutter Template/Guide Bush Relationship:

This chart shows the offset which results from using a specific size of guide bush and cutter. This offset shown on the shaded areas should be calculated prior to producing a template. All the guide bushes will fit the UNIBASE, GB/5 and GB/PLATE sub-bases-see opposite.

| Outside Dia. | | Ref. | GUIDE BUSH | | | | | | | | | | | | | | |
|--------------|------|------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | GB10 | GB11 | GB12 | GB14 | GB16 | GB17 | GB18 | GB20 | GB22 | GB24 | GB26 | GB28 | GB30 | GB32 | GB40 |
| DIA. CUTTER | | | 10 | 11 | 12 | 14 | 16 | 17 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 40 |
| inches | mm | | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| 7/64 | 3 | | 3.5 | 4 | 4.5 | 5.5 | 6.5 | 7 | 7.5 | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 18.5 |
| 1/8 | 3.2 | | - | 3.9 | 4.4 | 5.4 | 6.4 | 6.9 | 7.4 | 8.4 | 9.4 | 10.4 | 11.4 | 12.4 | 13.4 | 14.4 | 18.4 |
| 5/32 | 4 | | - | 3.5 | 4 | 5 | 6 | 6.5 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 18 |
| 3/16 | 4.8 | | - | - | 3.6 | 4.6 | 5.6 | 6.1 | 6.6 | 7.6 | 8.6 | 9.6 | 10.6 | 11.6 | 12.6 | 13.6 | 17.6 |
| 13/64 | 5 | | - | - | 3.5 | 4.5 | 5.5 | 6 | 6.5 | 7.5 | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 | 17.5 |
| 7/32 | 5.5 | | - | - | - | 4.2 | 5.2 | 5.8 | 6.2 | 7.2 | 8.2 | 9.2 | 10.2 | 11.2 | 12.2 | 13.2 | 17.2 |
| 15/64 | 6 | | - | - | - | 4 | 5 | 5.5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 17 |
| 1/4 | 6.3 | | - | - | - | 3.8 | 4.8 | 5.4 | 5.8 | 6.8 | 7.8 | 8.8 | 9.8 | 10.8 | 11.8 | 12.8 | 16.8 |
| 5/16 | 8 | | - | - | - | - | 4 | 4.5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 16 |
| 23/64 | 9 | | - | - | - | - | 3.5 | 4 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 | 10.5 | 11.5 | 15.5 |
| 3/8 | 9.5 | | - | - | - | - | - | 3.8 | 4.2 | 5.2 | 6.2 | 7.2 | 8.2 | 9.2 | 10.2 | 11.2 | 15.2 |
| 25/64 | 10 | | - | - | - | - | - | 3.5 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 15 |
| 7/16 | 11 | | - | - | - | - | - | - | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 | 10.5 | 14.5 |
| 15/32 | 12 | | - | - | - | - | - | - | - | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 14 |
| 1/2 | 12.7 | | - | - | - | - | - | - | - | 3.6 | 4.6 | 5.6 | 6.6 | 7.6 | 8.6 | 9.6 | 13.6 |
| - | 13 | | - | - | - | - | - | - | - | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 | 13.5 |
| - | 15 | | - | - | - | - | - | - | - | - | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 12.5 |
| 5/8 | 16 | | - | - | - | - | - | - | - | - | - | 4 | 5 | 6 | 7 | 8 | 12 |
| - | 18 | | - | - | - | - | - | - | - | - | - | - | 4 | 5 | 6 | 7 | 11 |
| 23/32 | 18.2 | | - | - | - | - | - | - | - | - | - | - | 3.9 | 4.9 | 5.9 | 6.9 | 10.9 |
| 3/4 | 19 | | - | - | - | - | - | - | - | - | - | - | 3.5 | 4.5 | 5.5 | 6.5 | 10.5 |
| - | 20 | | - | - | - | - | - | - | - | - | - | - | - | 4 | 5 | 6 | 10 |
| 7/8 | 22.2 | | - | - | - | - | - | - | - | - | - | - | - | - | 3.9 | 4.9 | 8.9 |
| 1 | 25.4 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7.3 |
| 1-1/8 | 28.5 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5.7 |
| 1-1/4 | 31.8 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4.1 |

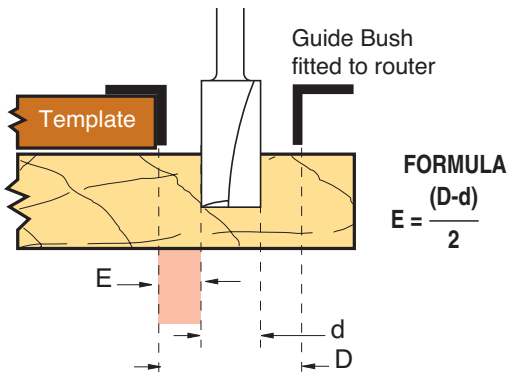
Guide Bushes When Hand Routing:

Guide bushes are required when material has to be profiled or routed to a set pattern or shape.

In operation, a suitable guide bush is first mounted on the router base or sub-base. When choosing guide bush and cutter, make allowances for a minimum of 3.5mm between cutter and outside of bush. This ensures there is enough clearance to allow the waste to clear the guide bush.

There is a special size relationship between the bush, the cutter and the template. The diagram shows this relationship, which is important for cutting the template to correct size. The difference in size of template relative to the finished workpiece can be calculated as follows:

This difference is shown in the chart by the shaded area relative to the range of bushes and cutters available.



'Deduct the cutter diameter from outside diameter of guide bush and divide by two'.