After selecting the size, find center of your combination of segments and use one of the non-tapered guide bearing shafts to center the template array on the template holder. This works for either the round-end or square-end templates.


The three steps in the mortise slot allow three widths of mortise. Use the lowest step when you need a perfect fit side-to-side for through mortise and tenon. Use the second or third step if you prefer a little side-to-side adjustability. This can sometimes be helpful during glue-up. Using the third step also allows room to wedge the tenon.

To center an array of segments that does not have a center hole option, use a try-square to locate each end equidistant from the center of the template holder. The metric scale on the template holder is easiest for this because there are more lines.


A mortise and tenon $1 / 8^{\prime \prime}$ larger or smaller than those shown on the chart can be made using one circle end piece and one triangle end piece. Center the combination of segments using the try-square measuring method above since the centering holes will be off by $1 / 8$ ".

Note: All tenons are cut using the $1 / 2^{\prime \prime}$ bit and the guide bearing shown on the chart under the M\&T size selected. Other combinations of bit and guide bearing are possible, but the recommended combination works best for all sizes. All mortises are cut using a bit the same diameter as the M\&T thickness with the 10 mm guide bearing in the mortise slot.

## PantoRouter

## Segmented Mortise and Tenon Templates

Three steps to selecting any of 154 sizes of round-end M\&T plus another 77 sizes of square-end tenons.

1. Select the M\&T thickness (mortise bit diameter)
2. Choose the desired width
3. Find the combination of end pieces and segments


Segmented Mortise and Tenon Templates for the PantoRouter ${ }^{\ominus}$

| Mortise Bit Size | 1/8" M\&T | 1/4" M\&T | 5/16" M\&T | 3/8" M \% T | 1/2". M\&T | 3/4" M\&T | 1" M \& T | Segment Combinations |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Guide Bearing | 6 mm | 10 mm | 12 mm | 15 mm | 22 mm | 35 mm | 48 mm | All tenons use the 1/2" bit and guide bearings listed to left |  |  |  |  |  |  |
|  | 3/4 | 7/8 | 15/16 | 1 | $11 / 8$ | $13 / 8$ | $15 / 8$ | - | - | Circle marked round-end pieces only Triangle marked round-end pieces only |  |  |  |  |
|  | 1 | $11 / 8$ | $13 / 16$ | $11 / 4$ | $13 / 8$ | $15 / 8$ | $17 / 8$ | $\triangle$ | $\Delta$ |  |  |  |  |  |
|  | $11 / 4$ | $13 / 8$ | $17 / 16$ | $11 / 2$ | $15 / 8$ | $17 / 8$ | $21 / 8$ | - | 1/2" | $\bigcirc$ | End pieces with segments of various combinations |  |  |  |
|  | $11 / 2$ | $15 / 8$ | $111 / 16$ | $13 / 4$ | $17 / 8$ | $21 / 8$ | $23 / 8$ | - | 1/2" | $\triangle$ |  |  |  |  |
|  | $13 / 4$ | $17 / 8$ | $115 / 16$ | 2 | $21 / 8$ | $23 / 8$ | $25 / 8$ | - | $1{ }^{\prime \prime}$ | - |  |  |  |  |
|  | 2 | $21 / 8$ | 2 3/16 | $21 / 4$ | $23 / 8$ | $25 / 8$ | $27 / 8$ | $\triangle$ | $1{ }^{1 \prime}$ | $\triangle$ |  |  |  |  |
|  | $21 / 4$ | $23 / 8$ | 2 7/16 | $21 / 2$ | $25 / 8$ | $27 / 8$ | $31 / 8$ | $\bigcirc$ | $11 / 2^{\prime \prime}$ | O |  |  |  |  |
|  | $21 / 2$ | $25 / 8$ | 2 11/16 | $23 / 4$ | $27 / 8$ | $31 / 8$ | $33 / 8$ | $\triangle$ | $11 / 2^{\prime \prime}$ | $\triangle$ |  |  |  |  |
|  | $23 / 4$ | $27 / 8$ | 2 15/16 | 3 | $31 / 8$ | $33 / 8$ | $35 / 8$ | - | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | O |  |  |  |
|  | 3 | $31 / 8$ | 3 3/16 | $31 / 4$ | $33 / 8$ | $35 / 8$ | $37 / 8$ | $\Delta$ | 1" | $1{ }^{\prime \prime}$ | $\Delta$ |  |  |  |
|  | $31 / 4$ | $33 / 8$ | 3 7/16 | $31 / 2$ | $35 / 8$ | $37 / 8$ | $41 / 8$ | - | $1{ }^{1 \prime}$ | 1/2" | $1{ }^{\prime \prime}$ | $\bigcirc$ |  |  |
|  | $31 / 2$ | $35 / 8$ | 3 11/16 | $33 / 4$ | $37 / 8$ | $41 / 8$ | $43 / 8$ | $\triangle$ | $1{ }^{\prime \prime}$ | 1/2" | 1" | $\triangle$ |  |  |
|  | $33 / 4$ | $37 / 8$ | 3 15/16 | 4 | $41 / 8$ | $43 / 8$ | $45 / 8$ | - | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $\bigcirc$ |  |  |
|  | 4 | $41 / 8$ | 4 3/16 | $41 / 4$ | $43 / 8$ | $45 / 8$ | $47 / 8$ | $\triangle$ | $1{ }^{\prime \prime}$ | 1" | $1{ }^{\prime \prime}$ | $\triangle$ |  |  |
|  | 4 1/4 | $43 / 8$ | 4 7/16 | $41 / 2$ | $45 / 8$ | $47 / 8$ | $51 / 8$ | O | $1{ }^{1 \prime}$ | 11/2" | $1{ }^{\prime \prime}$ | $\bigcirc$ |  |  |
|  | $41 / 2$ | $45 / 8$ | 4 11/16 | $43 / 4$ | $47 / 8$ | $51 / 8$ | $53 / 8$ | - | $1{ }^{1 \prime}$ | 11/2" | 1" | $\Delta$ |  |  |
|  | $43 / 4$ | $47 / 8$ | $415 / 16$ | 5 | $51 / 8$ | $53 / 8$ | $55 / 8$ | - | $11 / 2^{\prime \prime}$ | $1{ }^{\prime \prime}$ | 1" | 1/2" | - |  |
|  | 5 | $51 / 8$ | $5 \quad 3 / 16$ | $51 / 4$ | $53 / 8$ | $55 / 8$ | $57 / 8$ | $\triangle$ | 11/2" | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | 1/2" | $\triangle$ |  |
|  | $51 / 4$ | $53 / 8$ | 5 7/16 | $51 / 2$ | $55 / 8$ | $57 / 8$ | $61 / 8$ | - | 11/2" | $1{ }^{\prime \prime}$ | 1" | $1{ }^{\prime \prime}$ | - | * |
|  | $51 / 2$ | 5 5/8 | 5 11/16 | $53 / 4$ | $57 / 8$ | $61 / 8$ | $63 / 8$ | $\triangle$ | $11 / 2^{\prime \prime}$ | 1 " | 1" | $1{ }^{\prime \prime}$ | $\triangle$ | * |
|  | $53 / 4$ | $57 / 8$ | $515 / 16$ | 6 | $61 / 8$ | $63 / 8$ | $65 / 8$ | - | 11/2" | $1{ }^{\prime \prime}$ | 1" | 1/2" | $1{ }^{\prime \prime}$ | - |
|  | 6 | $61 / 8$ | 6 3/16 | $61 / 4$ | $63 / 8$ | $65 / 8$ | $67 / 8$ | - | 11/2" | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | 1/2" | $1{ }^{\prime \prime}$ | - |



$\stackrel{\circ}{\circ}$
Indicates the round-end pieces with the circle mark. These together make a 1 " M\&T X $3 / 8$ " thick (other sizes according to the chart above)
Indicates the round-end pieces with the triangle mark. These together make a 1-1/4" M\&T X 3/8" thick (other sizes according to the chart above)
Indicates the square-end pieces. These together make a 1 " M\&T X 3/8" thick.
The square-end templates do not have steps in the mortise slot since these will always be through M\&T and the ends of the mortise will need to be squared with a chisel

