

# Inlay Bushing Set

1<sup>3</sup>/<sub>4</sub>" Inlay Set

04J28.05

1<sup>3</sup>/<sub>16</sub>" Inlay Set

04J28.07

Inlay Bushing & Key

04J28.01

This inlay bushing set includes a  $\frac{7}{16}$ " inlay bushing (with a hex key), a  $\frac{7}{16}$ " template guide and a ring nut. It allows you to make an inlay plug and mating recess from the same template. The 1 $\frac{3}{4}$ " set (04J28.05) is for use with the Veritas® Base Plate (05J25.01) or the 1 $\frac{3}{4}$ " Veritas® Router Table Counterbore Insert (05J20.15); the 1 $\frac{3}{16}$ " set (04J28.07) is for a standard router base plate with a 1 $\frac{3}{16}$ " through bore and a 1 $\frac{3}{8}$ " counterbore. The inlay bushing (04J28.01) is also available separately if you already have a template guide and ring nut.

## How the Set Works

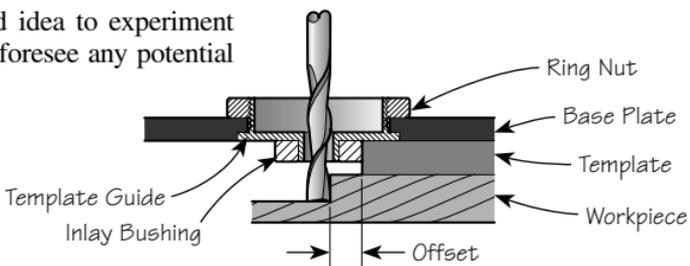
The diagrams below show how the parts of the inlay set work in combination with each other. The different diameters of the inlay bushing and the template guide create a common amount of offset. The inlay bushing positions the bit to cut the inlay recess (**Figure 1**), and the  $\frac{7}{16}$ " template guide positions the bit to cut the plug (**Figure 2**). To ensure both parts will be identical, your router bit must cut exactly  $\frac{1}{4}$ ". To verify that your bit cuts the correct size, rout a straight groove in a scrap piece of wood. Check the width of the resulting groove by standing the inlay bushing on edge and fitting it into the groove. The inlay bushing is precisely machined to 0.250" ( $\frac{1}{4}$ ") thick, so it should fit snugly into the groove with minimal play.

If your router bit cuts oversize, the recess will be oversize, and the plug will be undersize, giving a sloppy fit. There is no way to compensate for this.

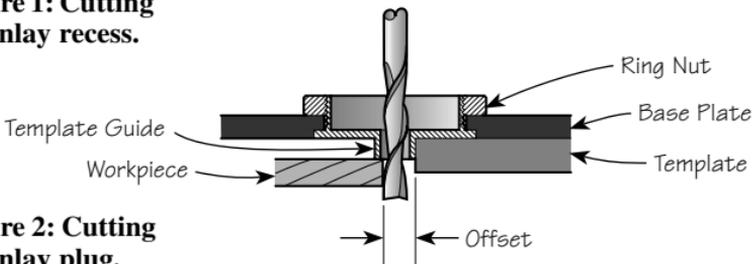
If your router bit cuts undersize, the opposite is true. The recess will be undersize, and the plug will be oversize, and you will not be able to fit the inlay in the recess. In this case, you can sand the edges of the plug to fit inside the recess.

It is also important that the template guide be concentric with the bit; otherwise, the fit between the plug and the recess may not be uniform around the perimeter. To minimize this error, maintain a constant orientation of the router handles as you rout around the template when cutting both pieces.

It is a good idea to experiment in order to foresee any potential problems.



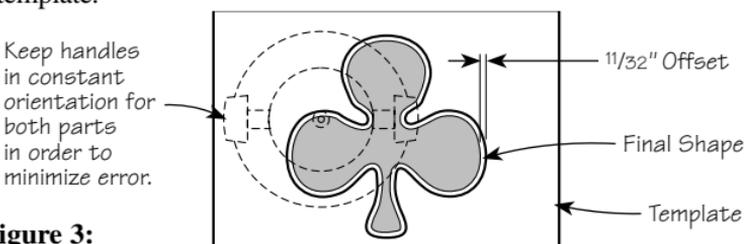
**Figure 1: Cutting the inlay recess.**



**Figure 2: Cutting the inlay plug.**

## Making Templates

You can use the inlay set to create many different designs. The most important thing to consider when making your template is that, besides being the female of your pattern, it will cut a recess and a plug  $\frac{11}{32}$ " smaller than the template (**Figure 3**). Also, the template must not be narrower than  $\frac{15}{16}$ " (the outer diameter of the inlay bushing) nor have any radius less than  $\frac{15}{32}$ " at any point, in order for the inlay bushing to pass smoothly around the template.



**Figure 3:**

Use any material (minimum 1/4" thick), but hardboard, medium-density fiberboard (MDF) and polyethylene can be sanded to give the necessary smooth edges with low friction.

## Creating Inlays From Your Own Template

Use the following procedure to cut both the recess and the plug from a template that you have designed.

1. Securely install the 7/16" template guide to your router base plate.
2. Install a 1/4" diameter bit in your router.
3. Secure your template with double-sided tape to the workpiece that will become the recess. Set the depth of cut to equal the combined thickness of your template, your inlay plug thickness, and the double-sided tape.
4. Install the inlay bushing on the guide, locking it in place with the set screw. Rout the recess in a clockwise direction around the template, making sure to remove all the internal material. Try to maintain a constant orientation of the router handles when routing around the template.
5. Next, remove the inlay bushing from the guide and secure the template to the material from which you will make the inlay plug. To prevent the inlay plug from being grabbed once the cut is complete, ensure that the area that will become the plug is secured to a larger piece of scrap wood with double-sided tape.
6. Rout the inlay plug in a clockwise direction around the template. The depth of cut is not important here. You need to cut through the material if it is already the same thickness as the recess, or cut deep enough into the solid material so that you can cut it free on a bandsaw later. When cutting the inlay plug, it is essential that the template guide does not lose contact with the edge of the template, or you will damage the plug. If you do not have a plunge router, make progressively deeper cuts so that, when you manually lower the router, any damage that occurs will not show all the way through the plug.
7. Once the plug is cut free, it should fit snugly into the recess.

## Cutting a Recess for an Existing Inlay Plug

Use the following procedure to first cut a template and then rout the mating recess for an existing plug. Try the resulting template on a piece of scrap wood before moving to your workpiece.

1. Securely install the 7/16" template guide to your router base plate.
2. Install a 1/4" diameter bit in your router.
3. You must use the existing plug to create a template that will cut the mating recess for the plug. If the existing plug is less than 1/4" thick, you need to mount it on scrap material to obtain at least the 1/4" thickness. You can either sand the edges of the scrap piece flush to the edges of the plug, or make the scrap piece slightly smaller than the plug, using the template guide.
4. Secure the existing plug to the template material and set the bit depth so that it routs through the material. Rout the template by carefully tracing around the perimeter of the plug in a counterclockwise direction.
5. Transfer and secure the template to the workpiece with double-sided tape. Install the 15/16" inlay bushing on the template guide, locking it in place with the set screw. Set the depth of cut equal to the combined thickness of your template, your inlay plug thickness, and the double-sided tape.
6. Rout the recess, making sure to remove all of the internal material.
7. The existing inlay plug should fit snugly inside the recess.



[www.leevalley.com](http://www.leevalley.com)

1090 Morrison Drive Ottawa, Ontario K2H 1C2 Canada 1-800-267-8761	814 Proctor Avenue Ogdensburg, New York 13669-2205 USA 1-800-267-8735
--	--