MASTER FIXTURES AND ROUTER DRILL JIG TEMPLATES

Master fixtures are designed to be used with removable plates called router drill jig templates (also referred to as templates) to perform various operations in the fabrication and erection of doors, frames and store fronts. The router drill jig template not only guides the router for proper shape cut-out, but also locates and guides the drilling of holes for attaching hardware and reinforcing plates where necessary for installing hardware, hinges, pivots, etc.

In some cases, jigs for locating and drilling holes are not part of the router template. These jigs are referred to as applied jigs and can be used in conjunction with R-A-S router templates or when other methods of routing are used.

The M 6-10 master fixture has the widest variety of uses and fits 3 to 6 inch tubes.

The M 2-10 master fixture is used mainly for narrow tubing or on the edge of standard tubing. The M 2-10 is supplied with a beveled indexing bar for use on beveled door stiles (see drawing on page B-6).

The MA 5-10 master fixture has a wide variety of uses. It is lightweight and adapts well to production use or multiple cut-outs and will fit 1 to 5 inch tubing. The MA 2-10 is mainly used for beveled door cuts-outs.

The M 6-26A master fixture is for making large cut-outs such as overhead concealed closers and can be used on 4 to 6 inch wide tubing.

One master fixture can be used for many different operations by changing the router drill jig template, thus increasing its usefulness with each template that is purchased.

Two or more master fixtures may be mounted on a MA 700 7 ft. bar, MA 900 9 ft. bar, or MA 1100 11 ft. bar for making hinge or pivot cut-outs on a mass production basis.

This manual contains router drill jig templates and reinforcing plates for the most commonly used hardware. We have available, or can design for you, templates and reinforcing plates for any special hardware.

GENERAL NOTES

Wherever possible, the cut-outs and reinforcing plates in the manual are shown to approximate full size so the actual hardware being used can be checked against the drawings for proper shape of cut-out and hole pattern. We cannot be responsible for changes made by any manufacturer that would conflict with the information shown in this manual. Manufacturer part numbers, where given, are for reference only and should be checked before ordering.

When ordering router drill jig templates for standard butt hinges, check the back-set of the hinge in the door, and then add the desired door set-back to get the proper back-set of the hinge in the frame. The last letter of a hinge template denotes the amount of back-set in increments of 1/16 inch.

Most offset pivot router drill jig templates are made for the installation of doors with a standard 1/8 inch set-back. Templates with various other set-backs are available.

Most cut-outs are located on the tube by measuring to the center of the cut-out and aligning the mark on the tube with the indexing slot on the master fixture. Some templates (where the cut-out is at the end of the tube) are manufactured with stops attached to insure positive location of the cut-out.

When the tube to be cut extends only partially into the M 6-10 master fixture (when the cut-out is at the end of the tube), use scrap tube of the same width as a spacer to insure proper clamping.

All router drill jig template cut-outs are 1/8 inch larger on all sides than the actual cut-out in the tube. Use a 1/2 inch router template guide and a 1/4 inch router bit with all router drill jig templates (see J-5 for details).

The use of a foot switch is recommended to give the best control of a router.

R-A-S reinforcing plates and brackets are:

- Manufactured to the highest standards.
- Formed on precision dies to insure proper fit and hole alignment.
- Zinc plated.
- All tapped holes are dimpled where necessary to eliminate the need for under cut screws and deburring of drill holes.

We have available the best quality made screws for attaching brackets, reinforcing plates and frames, in both bronze, cadmium and zinc plated.

ROUTING INSTRUCTIONS

We suggest a minimum of a 1 1/2 h.p. router for use with our router drill jigs. When installing the template guide on a router base, it is very important that the router bit be perfectly centered in the guide. In routing out for a butt, you drill a hole (with the router) and set the correct cutting depth for the bit. This is done by placing the master fixture on the tube to be routed. Make sure no dirt or chips are between the work and equipment. Place the router on the template, seating it flat with the template guide in the cut-out. Move the router around and you can feel the shape of the cut-out. Adjust for the proper depth of the cut-out.

Squirt a reasonable amount of Kool-Kut oil or direct a spray of Kool-Kut mist on the router bit, as this will prevent the router bit from loading up and will keep the bit cool. A cool bit will hold the cutting edge up to 500% longer.

Always start at a corner. In the case of the butt, do not start along the outside edge of the tube, because if you drill too deep, the hole would show. Make sure the switch is off. Plug the router into the foot switch. Grasp the router handles firmly. Turn the router switch on. Start the router by depressing the foot switch. Plunge to the proper depth. You are now ready to rout. Guide the router around the template, following the cut-out. Do this twice. The first time, you cut. The second time, you clean the cut-out. Remove the router after the motor has stopped, so as not to nick the router drill jig template. Drill the holes through the case-hardened bushings for the hardware or reinforcing plates. This completes the operation.

There are several things to keep in mind in using this system. Always lubricate the work to be routed. Do not use thin cutting oil, which has a tendency to blow away, nor use stick wax. Do not put the router under too much strain, nor should you go too slow. After you use the router a few times, you will get the feeling for it. When routing, go from left to right, or if a pattern, go clockwise. Keep your bits sharp, as you get a cleaner cut with less strain on the motor. Do not start the router until you are sure the template guide is seated correctly, and do not remove the router until the motor has stopped. A controlled speed is the best for cutting so always stay in complete command of the router, by firmly holding the handles and slowly moving the machine.

