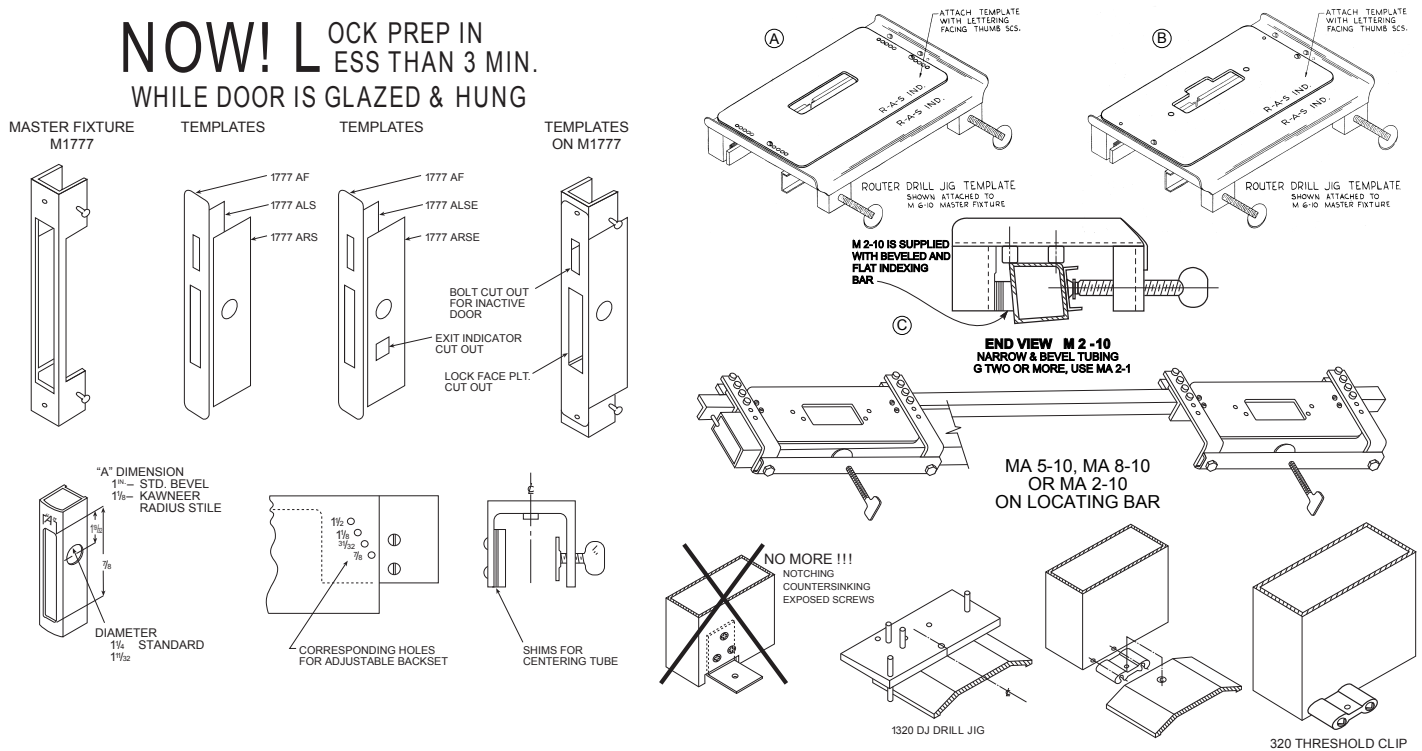


**NOW! LOCK PREP IN  
LESS THAN 3 MIN.  
WHILE DOOR IS GLAZED & HUNG**



**DRILL JIGS**

**ROUTER-DRILL JIGS**

**NOTCHING SAWS**

**DRILL BITS**

**ROUTER BITS**

**SCREWS**

**BRACKETS**

**BACK UP PLATES**

**COOLANT (KOOL-CUT)**

**CLIPS**

**REINFORCING PLATES**

**COOLANT SYSTEMS**

**TEMPLATES FOR ELU, WEGOMA OR OTHER COPY ROUTERS,  
SPECIAL JIGS, DRILL-JIGS, ROUTER TEMPLATES, BRACKETS,  
AND REINFORCING PLATES MADE TO CUSTOMER SPECIFICATIONS**

**RAS Industries**

**TOOLS • SYSTEMS • ACCESSORIES**

SECTION

|   |                                                                                                                                              |
|---|----------------------------------------------------------------------------------------------------------------------------------------------|
| A | GENERAL NOTES                                                                                                                                |
| B | MASTER FIXTURES                                                                                                                              |
| C | BUTT HINGES<br>Reinforcing Plates<br>Router Drill Jig Templates                                                                              |
| D | MISCELLANEOUS DOOR HARDWARE<br>Door Closers<br>Door Holders<br>Center Hung Pivots<br>Intermediate Offset Pivots<br>Panic Hardware            |
| E | TOP OFFSET PIVOTS<br>Reinforcing Plates<br>Router Drill Jig Templates                                                                        |
| F | BOTTOM OFFSET PIVOTS<br>Reinforcing Plates<br>Router Drill Jig Templates<br>Threshold Clips                                                  |
| G | LOCK HARDWARE<br>Door Prep. Fixtures & Templates<br>Maximum Security Locks<br>Lock Strikes<br>Dead Bolts<br>Electric Releases<br>Flush Bolts |
| H | BRACKETS & DRILL JIGS                                                                                                                        |
| J | TOOLS & MISCELLANEOUS<br>Notching Saws<br>Router Bits & Guides<br>Special Drill Jigs<br>Drill Bits & Bushings<br>Screws                      |
| - | REVISIONS                                                                                                                                    |

## **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.

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.

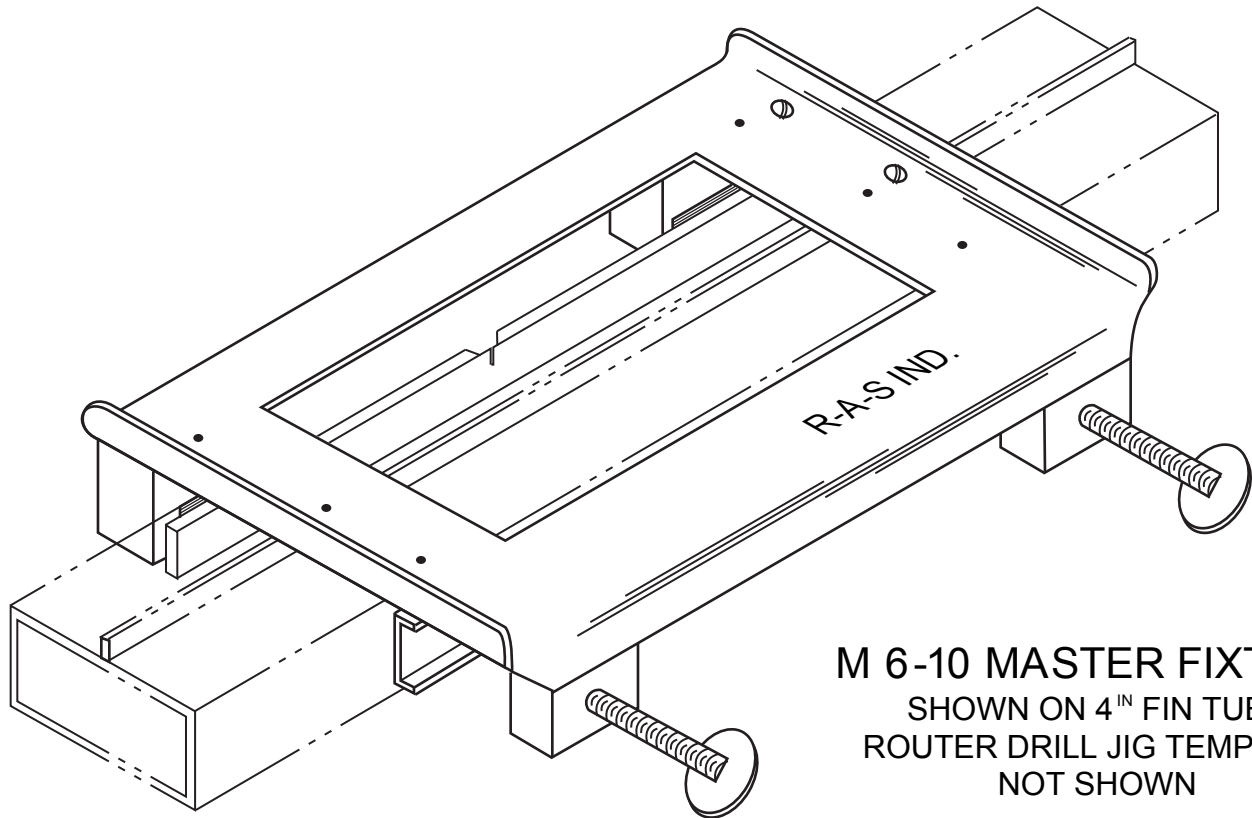
Squirt a reasonable amount of Kool-Kut oil or direct a spray of Kool-Kut mist on the router bit, as this will prevent the router bit from loading up and will keep the bit cool. A cool bit will hold the cutting edge up to 500% longer.

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.

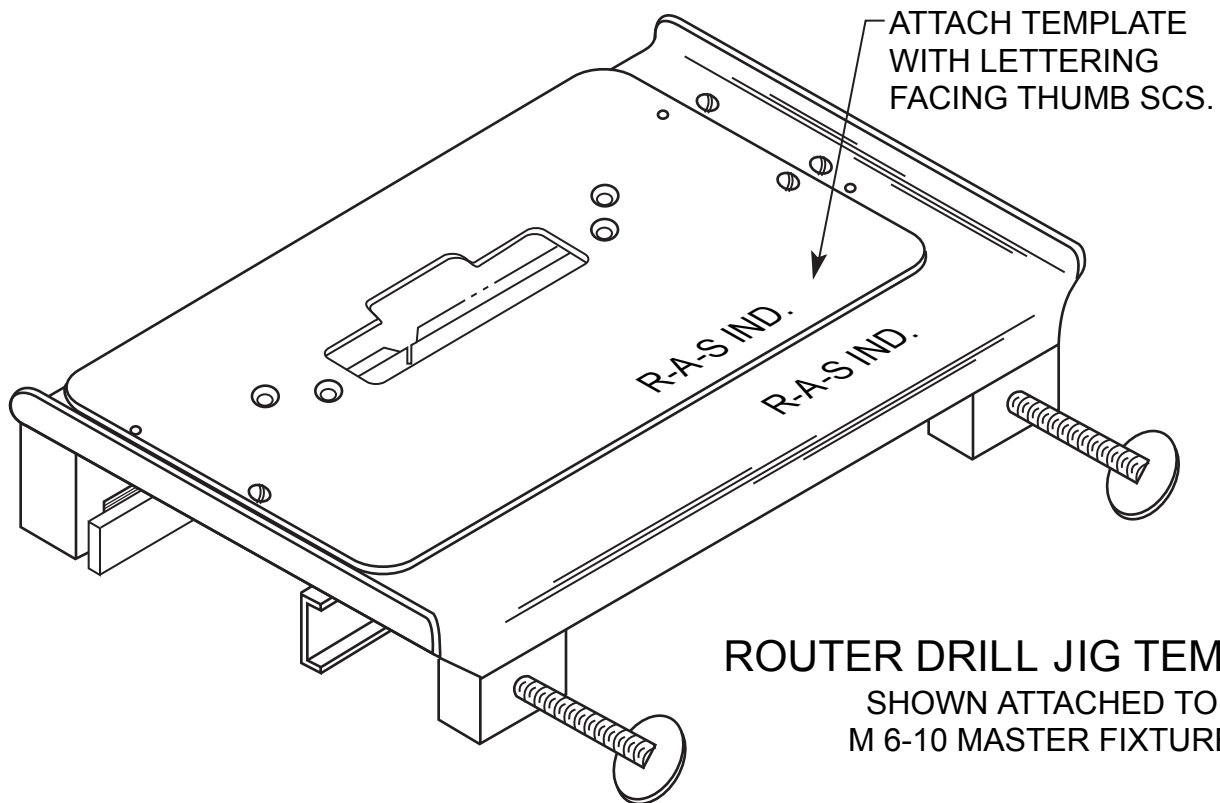
There are several things to keep in mind in using this system. Always lubricate the work to be routed. Do not use thin cutting oil, which has a tendency to blow away, nor use stick wax. Do not put the router under too much strain, nor should you go too slow. After you use the router a few times, you 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.

## **SECTION B - MASTER FIXTURES**

| MASTER FIXTURE                       | PAGE |
|--------------------------------------|------|
| M 6-10                               | B-2  |
| M 6-10                               | B-3  |
| ROUTER DRILL JIG TEMPLATE FOR M 6-10 | B-4  |
| M 6-26A                              | B-5  |
| M 6-10      M 2-10      M 6-26A      | B-6  |
| MA 5-10      MA 8-10      MA 2-10    | B-7  |
| MA 5-10      MA 8-10      MA 2-10    | B-8  |
| TOP OFFSET PIVOT                     | B-10 |

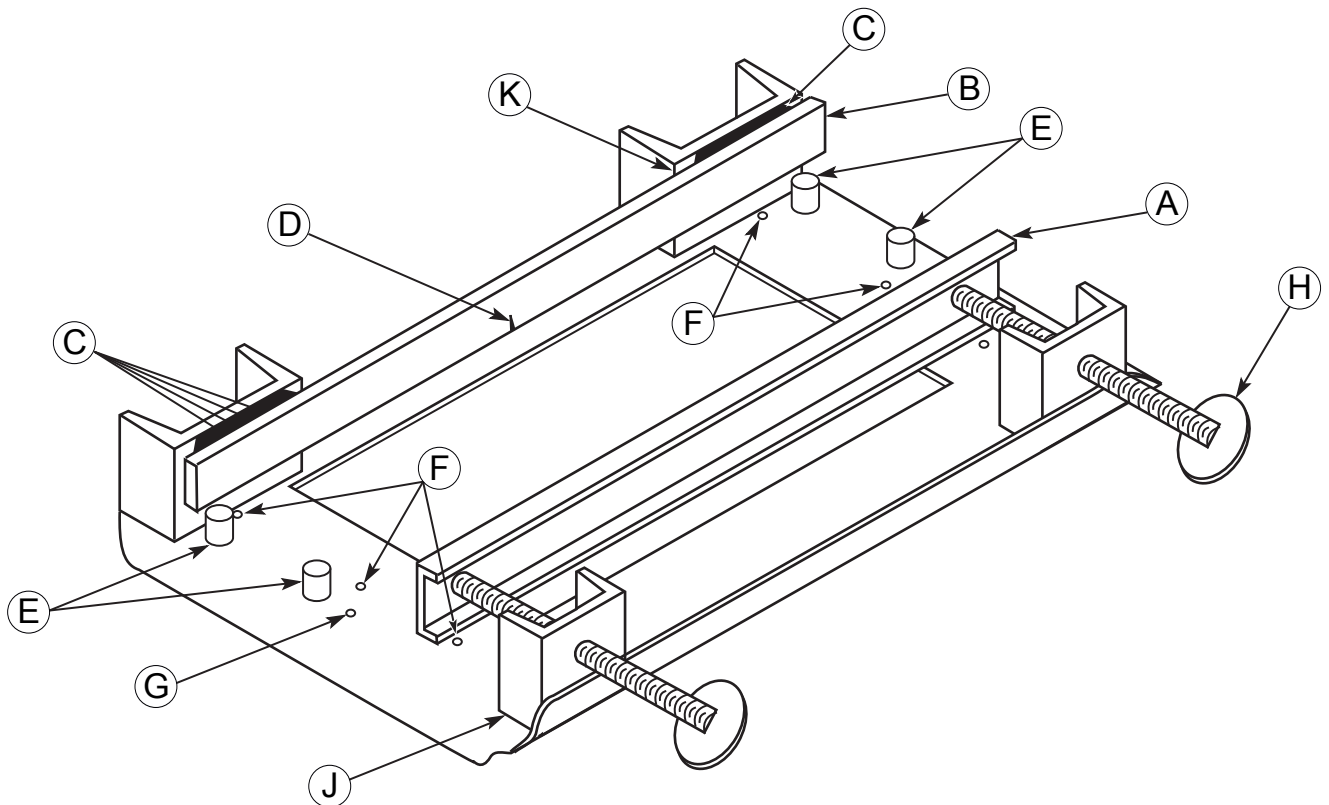


**M 6-10 MASTER FIXTURE**  
SHOWN ON 4" FIN TUBE  
ROUTER DRILL JIG TEMPLATE  
NOT SHOWN



**ROUTER DRILL JIG TEMPLATE**  
SHOWN ATTACHED TO  
M 6-10 MASTER FIXTURE

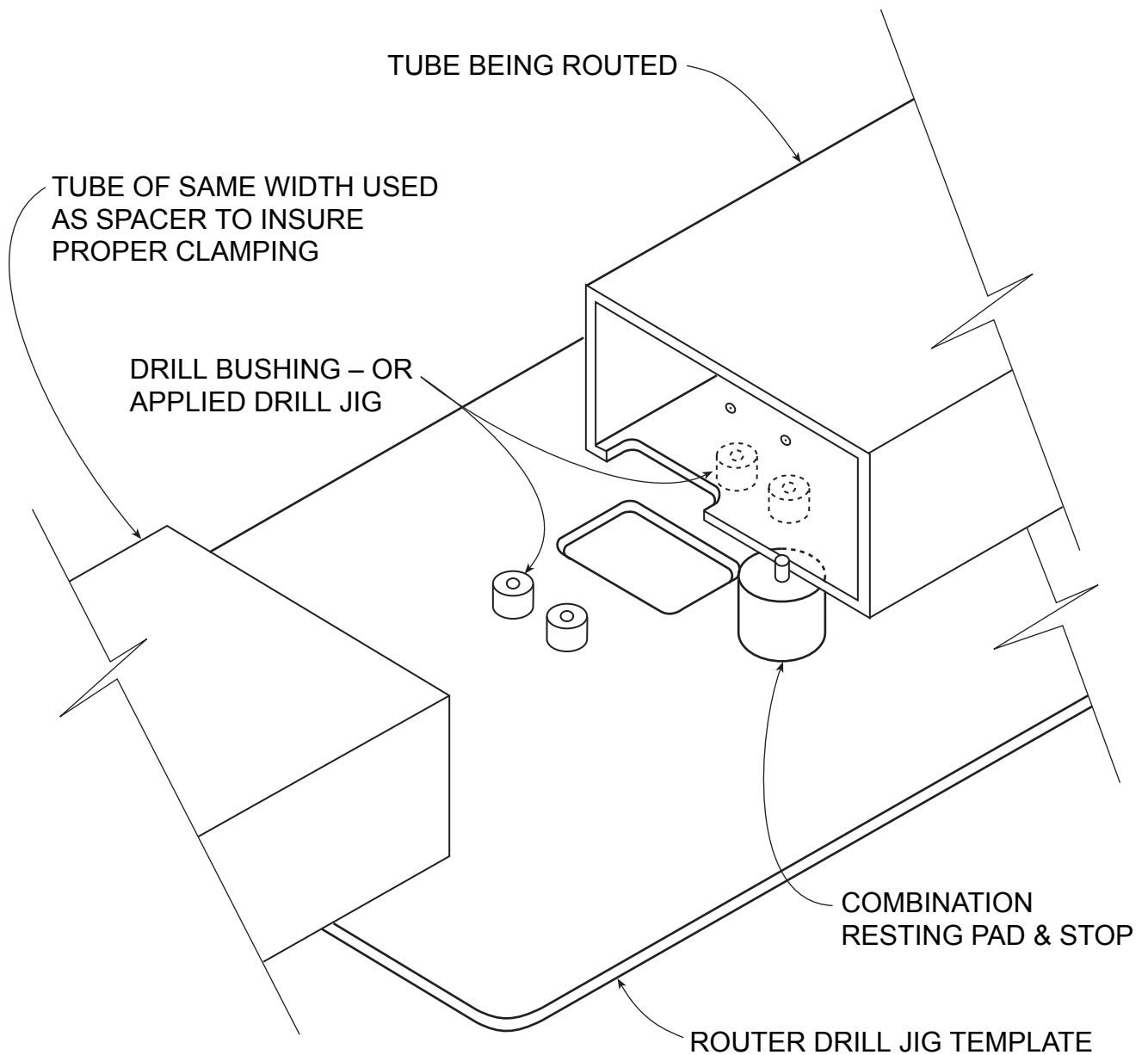
**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**



**INVERTED VIEW**  
**M 6-10 MASTER FIXTURE**  
SHOWN WITHOUT ROUTER DRILL JIG TEMPLATE

- (A) CLAMPING BAR SECURES MASTER FIXTURE TO TUBE, M 6-10 FOR 3<sup>IN</sup> TO 6<sup>IN</sup> TUBE AND M 2-10 FOR 1<sup>IN</sup> TO 2½<sup>IN</sup> TUBE
- (B) INDEXING BAR LOCATES MASTER FIXTURE Laterally ON TUBE
- (C) INDEXING BAR SHIMS 4 EACH END 1/16<sup>IN</sup> THICK ALLOW BACK-SET ADJUSTMENT
- (D) INDEXING SLOT LOCATES MASTER FIXTURE LONGITUDINALLY ON TUBE AND INSURES PROPER LOCATION OF ROUTER DRILL JIG TEMPLATE
- (E) PRECISION MACHINED RESTING PADS ALLOW MASTER FIXTURE TO BE USED WITH FIN TUBING AND INSURES PARALLEL ALIGNMENT OF JIG WITH TUBE SURFACE
- (F) THREE TAPPED HOLES AT EACH END OF MASTER FIXTURE FOR EASY ATTACHMENT OF OVER 100 ROUTER DRILL JIG TEMPLATES
- (G) ONE HOLE AT EACH END OF MASTER FIXTURE FOR MOUNTING 2 OR MORE FIXTURES ON SEVEN FOOT BAR FOR MORE THAN ONE CUT-OUT
- (H) LARGE THUMB SCREW INSURES POSITIVE CLAMPING OF MASTER FIXTURE TO TUBE
- (J) HEAVY DUTY WELDED CONSTRUCTION, ALL PARTS PLATED OR ENAMELED
- (K) MACHINED SURFACES AND PRECISION ASSEMBLY OF MASTER FIXTURE INSURE ACCURATE CUT-OUTS WITH ALL ROUTER DRILL JIG TEMPLATES

**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**

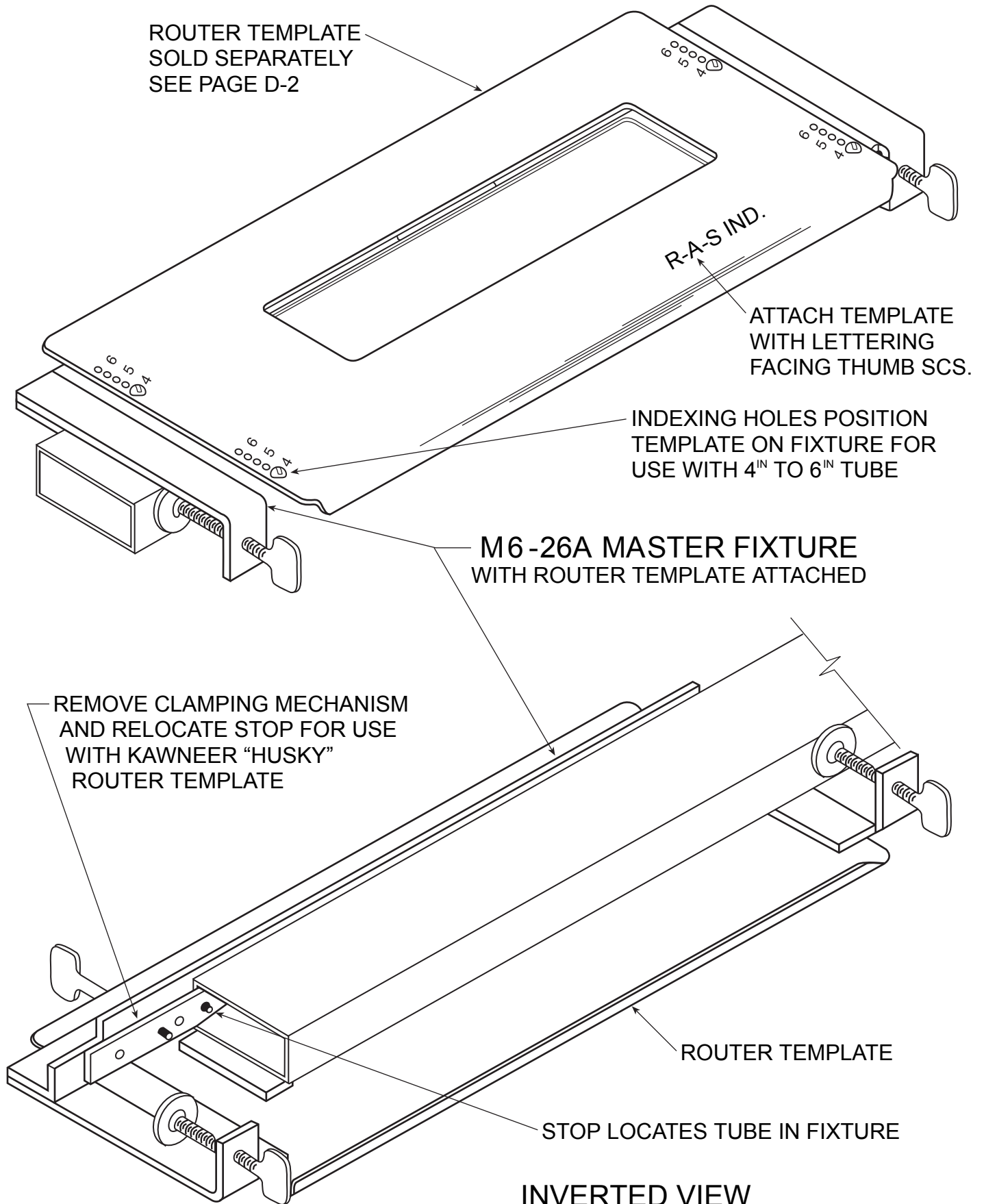


**INVERTED VIEW - ROUTER DRILL JIG TEMPLATE**  
SHOWING END OF TUBE CUT OUTS

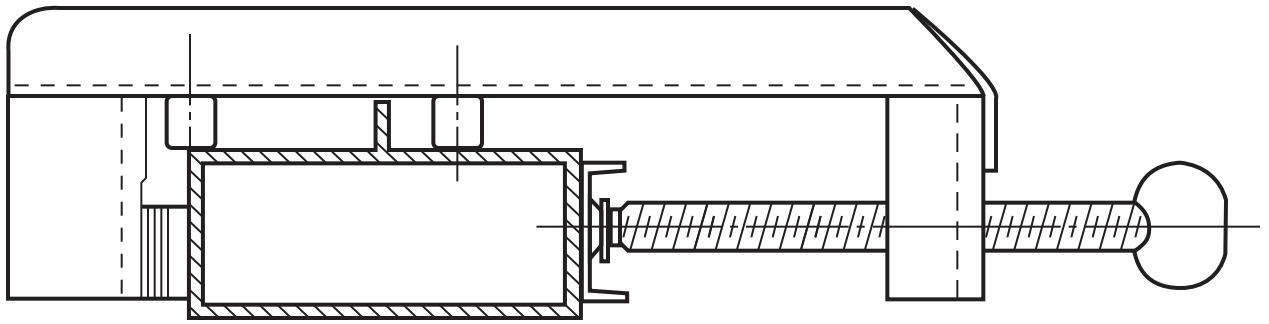
SOME TEMPLATES CAN BE USED FOR BOTH RIGHT  
AND LEFT HAND CUT OUTS

**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**

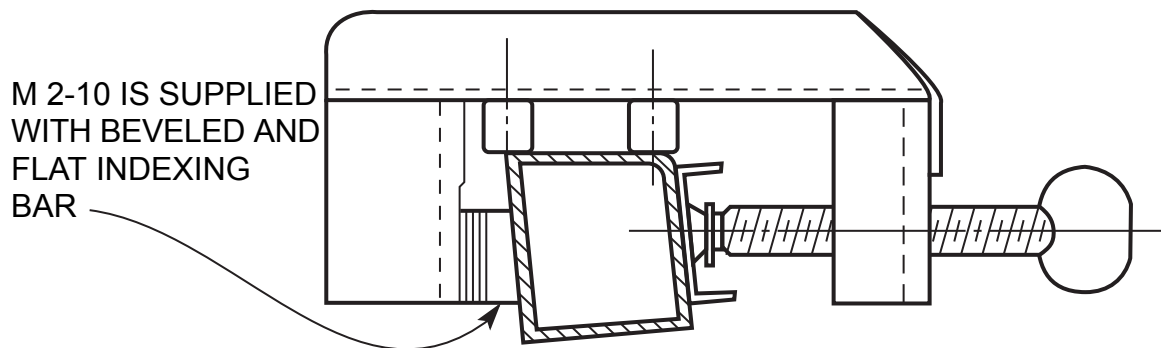
# M 6-26A MASTER FIXTURE CONCEALED OVERHEAD DOOR CLOSER



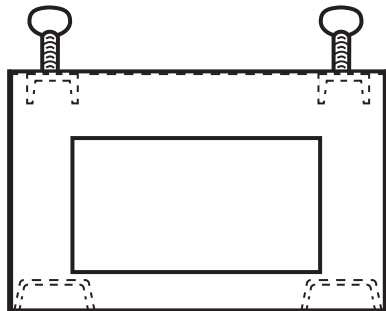
**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**



**END VIEW M 6 - 10**  
FOR 3"<sup>IN</sup> TO 6"<sup>IN</sup> TUBING



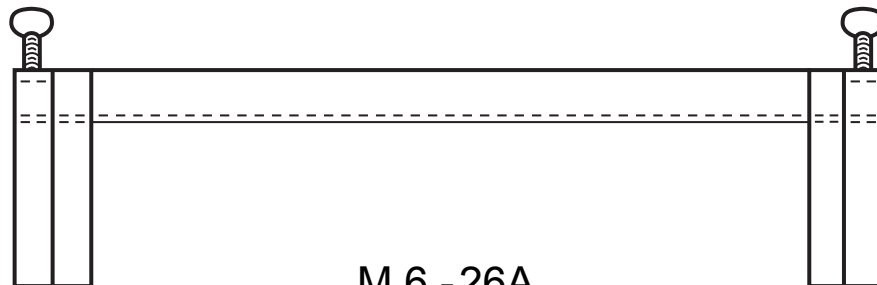
**END VIEW M 2 - 10**  
NARROW & BEVEL TUBING



**M 6 - 10**

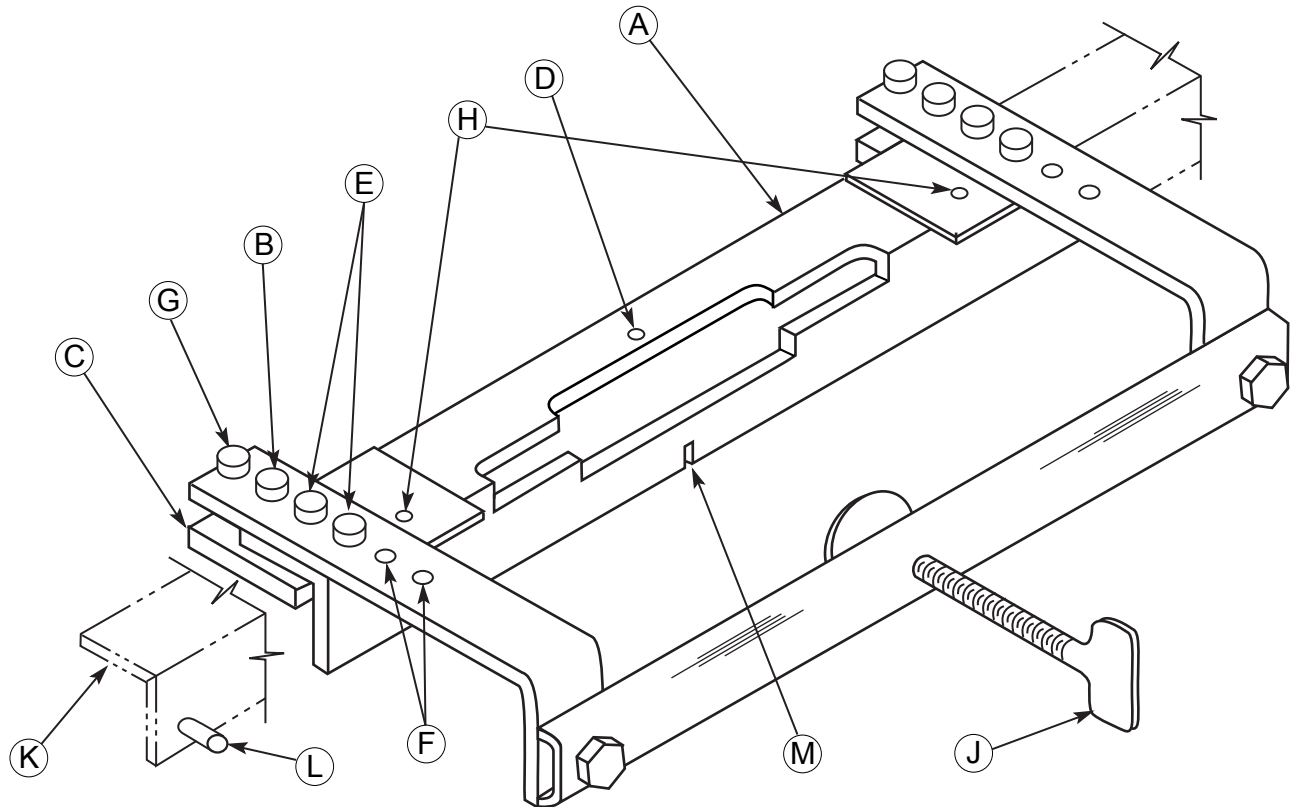


**M 2 - 10**



**M 6 - 26A**  
FOR CONCEALED OVERHEAD DOOR CLOSER

**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**



### MA 5-10 MASTER FIXTURE

SHOWN WITHOUT ROUTER DRILL JIG TEMPLATE

MA 5-10 WILL FIT 1<sup>IN</sup> TO 5<sup>IN</sup> TUBE

MA 8-10 WILL FIT 4<sup>IN</sup> TO 8<sup>IN</sup> TUBE

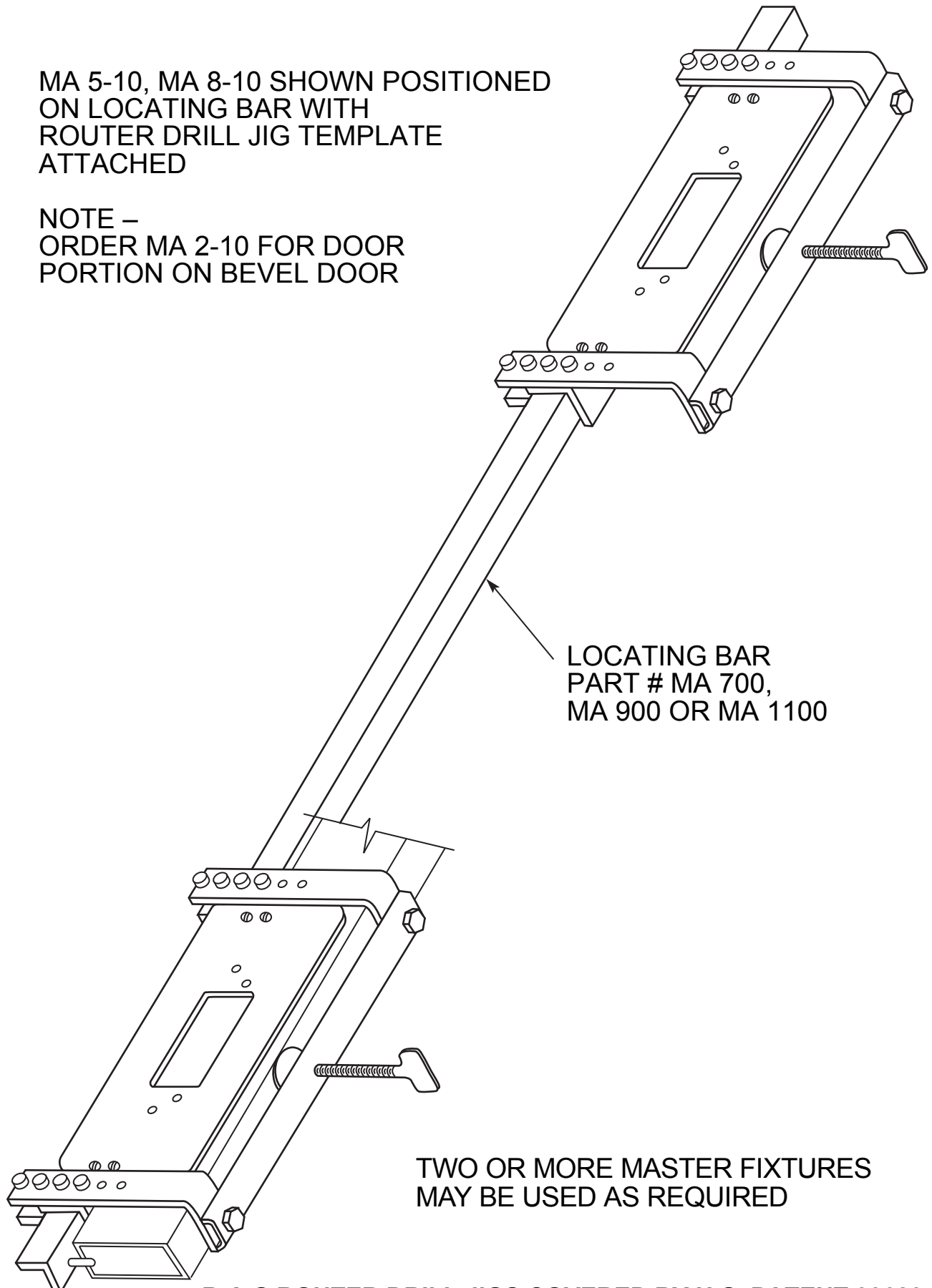
MA 2-10 WILL FIT BEVEL DOOR RAIL

- (A) INDEXING ANGLE
- (B) SOCKET HD. CAP SC. TIGHTENS CLAMP (C) ON LOCATING BAR (K)
- (C) CLAMP
- (D) INDEXING HOLE FOR ATTACHING MASTER FIXTURE ON LOCATING BAR (K) FOR OFTEN USE DIMENSION. (OR PRODUCTION WORK)
- (E) SOCKET HD. CAP SCREWS ATTACH INDEXING ANGLE FOR USE ON 3<sup>IN</sup> TO 5<sup>IN</sup> TUBE
- (F) HOLES FOR ATTACHING INDEXING ANGLE FOR USE ON 1<sup>IN</sup> TO 3<sup>IN</sup> TUBE  
NOTE – (B) (C) & (G) MUST ALSO BE RELOCATED
- (G) CLAMPING SPACER
- (H) TAPPED HOLES FOR MOUNTING ROUTER TEMPLATE
- (J) LARGE THUMB SCREWS INSURE POSITIVE CLAMPING OF FIXTURE TO TUBE
- (K) LOCATING BAR (SOLD SEPARATELY) FOR TWO OR MORE MASTER FIXTURES
- (L) STOP FOR LOCATING TUBE
- (M) INDEXING SLOT LOCATES MASTER FIXTURE LONGITUDINALLY ON TUBE AND INSURES PROPER LOCATION OF ROUTER DRILL JIG TEMPLATE

**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**

MA 5-10, MA 8-10 SHOWN POSITIONED  
ON LOCATING BAR WITH  
ROUTER DRILL JIG TEMPLATE  
ATTACHED

NOTE –  
ORDER MA 2-10 FOR DOOR  
PORTION ON BEVEL DOOR

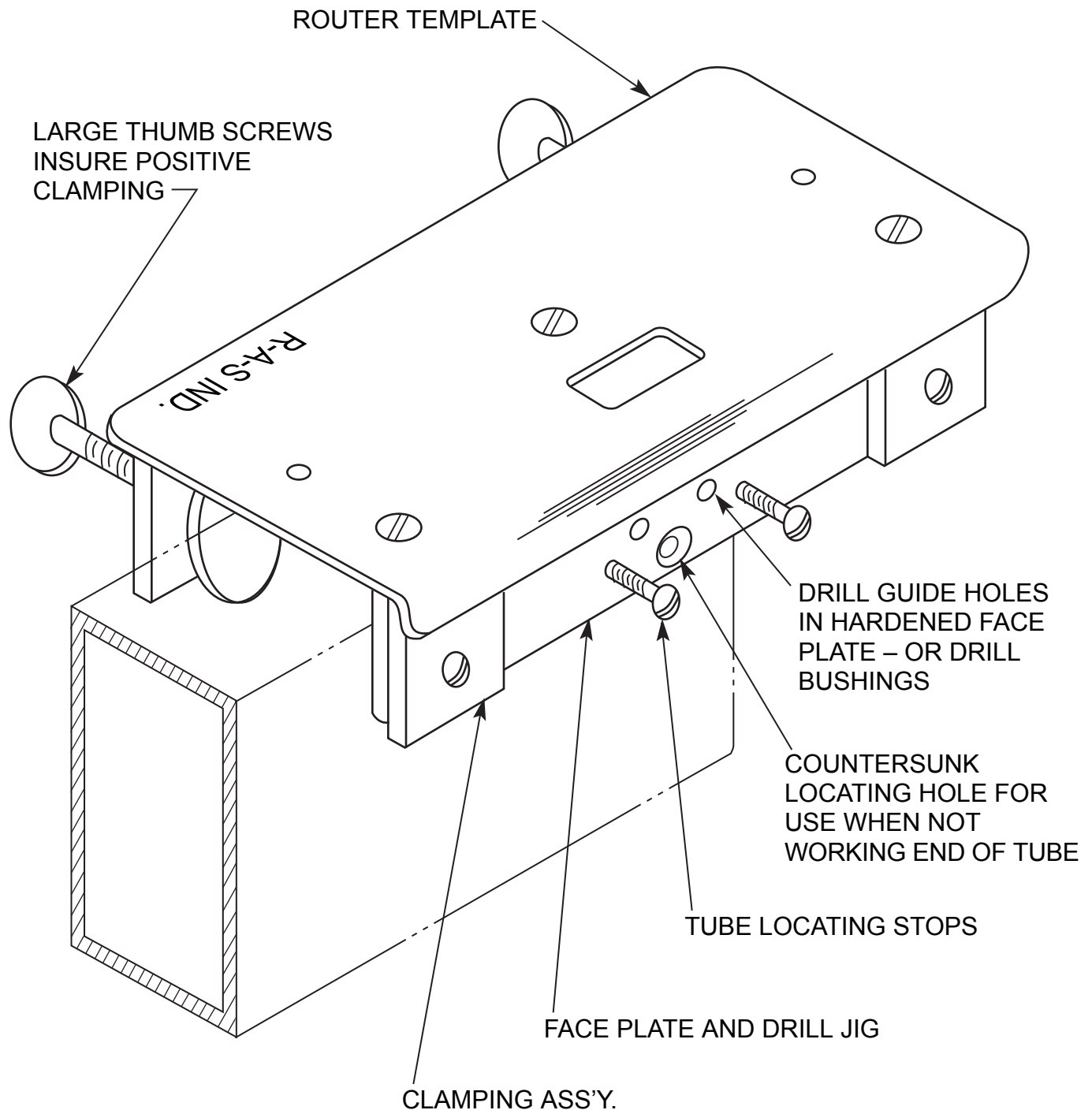


LOCATING BAR  
PART # MA 700,  
MA 900 OR MA 1100

TWO OR MORE MASTER FIXTURES  
MAY BE USED AS REQUIRED

**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**

NOTE – SEE TOP OFFSET PIVOT SECTION  
OF THIS CATALOG FOR HOLE PATTERN  
AND PART NUMBER FOR ORDERING



**R-A-S ROUTER DRILL JIGS COVERED BY U.S. PATENT 3062075**

## SECTION C - BUTT HINGES

### REINFORCING PLATES - ROUTER DRILL JIG TEMPLATES

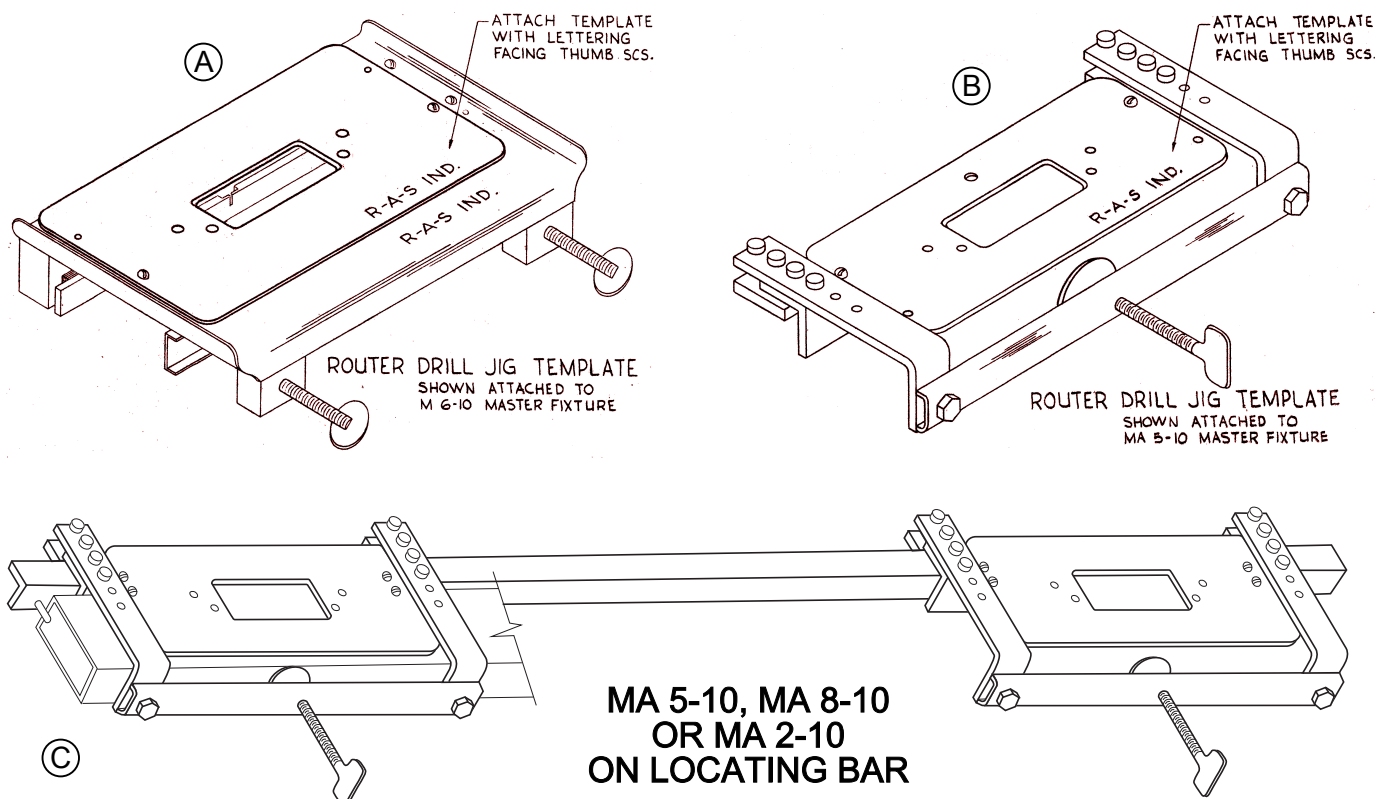
| APPLICATION           | REINFORCING PLATE | MISC. INFO.     | ROUTER DRILL JIG TEMPLATE | PAGE |
|-----------------------|-------------------|-----------------|---------------------------|------|
| 3 1/2 STD. BUTT HINGE | 793               |                 | 1793                      | C-3  |
| 4 IN STD. BUTT HINGE  | 794               |                 | 1794                      | C-4  |
| 4 1/2 STD. BUTT HINGE | 951U & 951NA      | SEE CHART BELOW | 1951 & 1951NA             | C-5  |
|                       | 951A              |                 | 1951AG                    | C-6  |
|                       | 951UL & 951P      |                 | 1951-xxx                  | C-7  |
| 5 IN STD. BUTT HINGE  | 796               |                 | 1796-xxx                  | C-8  |

SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING

### 4 1/2 STD. BUTT CUT OUT FOR THE FOLLOWING MANUFACTURES

| MANUFACTURER  | STANDARD SET BACK OF DOOR | DOOR TEMPLATE | STANDARD BACK-SET OF HINGE | FRAME TEMPLATE | STANDARD BACK-SET OF HINGE |
|---------------|---------------------------|---------------|----------------------------|----------------|----------------------------|
| U.S. ALUMINUM | FLUSH                     | 1951D         | 1 7/16                     | 1951D          | 1 7/16                     |
| KAWNEER       | 1/8                       | 1951D         | 1 7/16                     | 1951F          | 1 9/16                     |
| TUBELITE      | 3/16                      | 1951D         | 1 7/16                     | 1951G          | 1 5/8                      |
| REBCO         | 1/8                       | 1951E         | 1 1/2                      | 1951G          | 1 5/8                      |

NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.



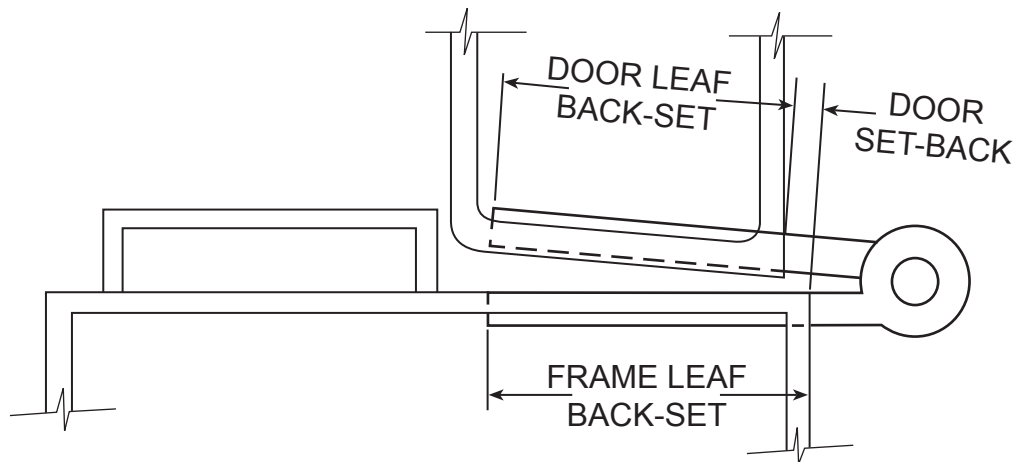
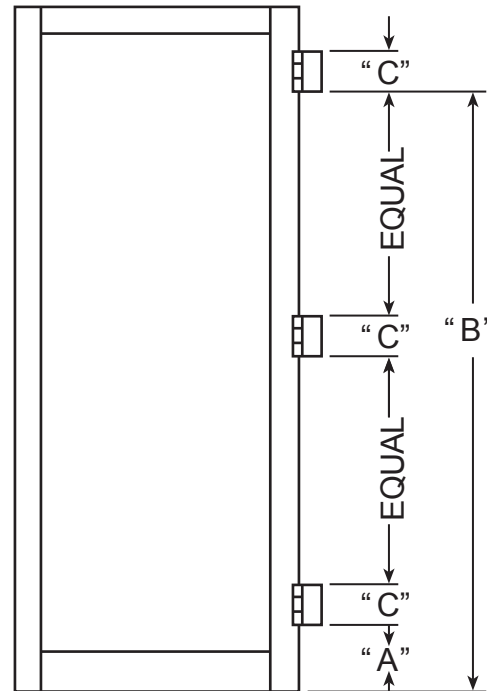
**GENERAL INFORMATION:**

"A" BOTTOM OF DOOR TO  
BOTTOM OF LOWER HINGE.

"B" BOTTOM OF DOOR TO  
BOTTOM OF TOP HINGE.

"C" HEIGHT OF HINGE.

MIDDLE HINGE IS NOT STD.  
AND IS SHOWN ONLY FOR  
LOCATION WHEN REQUIRED.



CHECK REFERENCE CHART OR DRAWING OF REINFORCING PLATE & ROUTER DRILL JIG CUTOUT OF PARTICULAR HINGE BEING USED FOR PROPER TEMPLATE NUMBER.

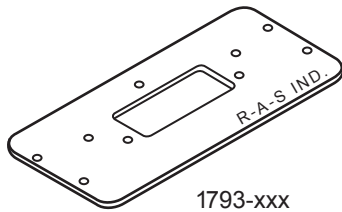
LAST LETTER OF ROUTER DRILL JIG TEMPLATE NUMBER DENOTES HINGE BACK-SET.

WHEN DOOR IS FLUSH WITH FRAME SAME TEMPLATE MAY BE USED ON DOOR & FRAME.

HINGE BACK-SET IN DOOR PLUS DOOR SET-BACK EQUALS HINGE BACK-SET IN FRAME.

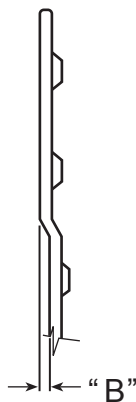
# 793 REINFORCING PLATE

## 3 1/2" STANDARD BUTT HINGE



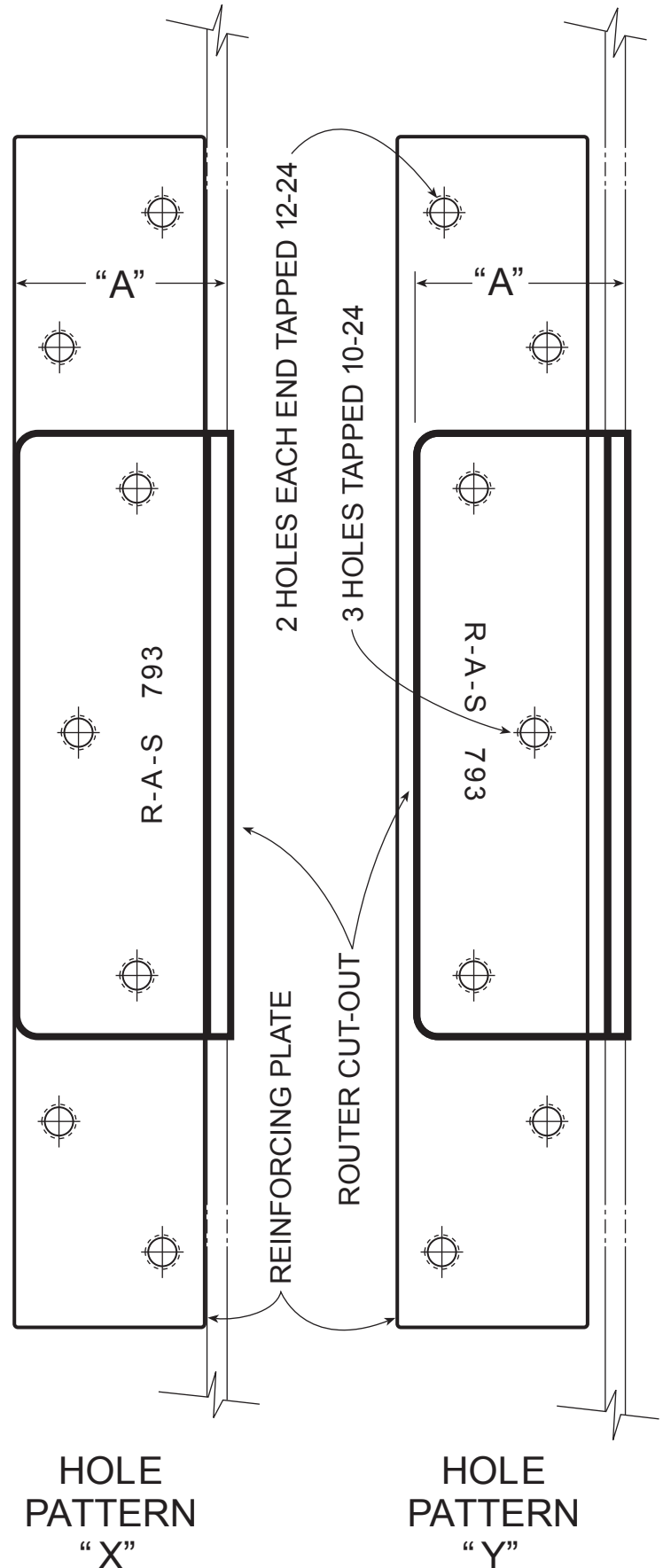
"A" DIMENSION IS HINGE BACK-SET. USE ROUTER DRILL JIG PLATE SHOWN. LAST LETTER DENOTES HOLE PATTERN.

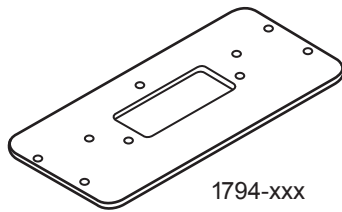
|        |         |         |
|--------|---------|---------|
| 1 1/4  | 1793 AX | 1793 AY |
| 1 5/16 | 1793 BX | 1793 BY |
| 1 3/8  | 1793 CX | 1793 CY |
|        |         |         |
|        |         |         |



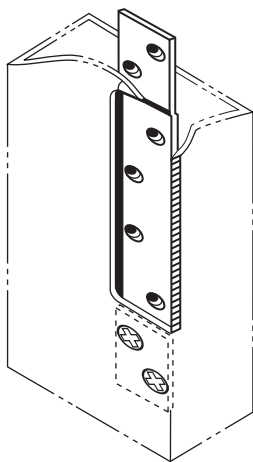
"B" DIM. IS REINFORCING PLATE OFFSET. USE PLATE NUMBER SHOWN.

|              |                     |  |
|--------------|---------------------|--|
|              | 1/8 (.123)<br>HINGE |  |
| .125<br>TUBE | 793                 |  |
| .105<br>TUBE | 793                 |  |
| .090<br>TUBE | 793                 |  |
|              |                     |  |

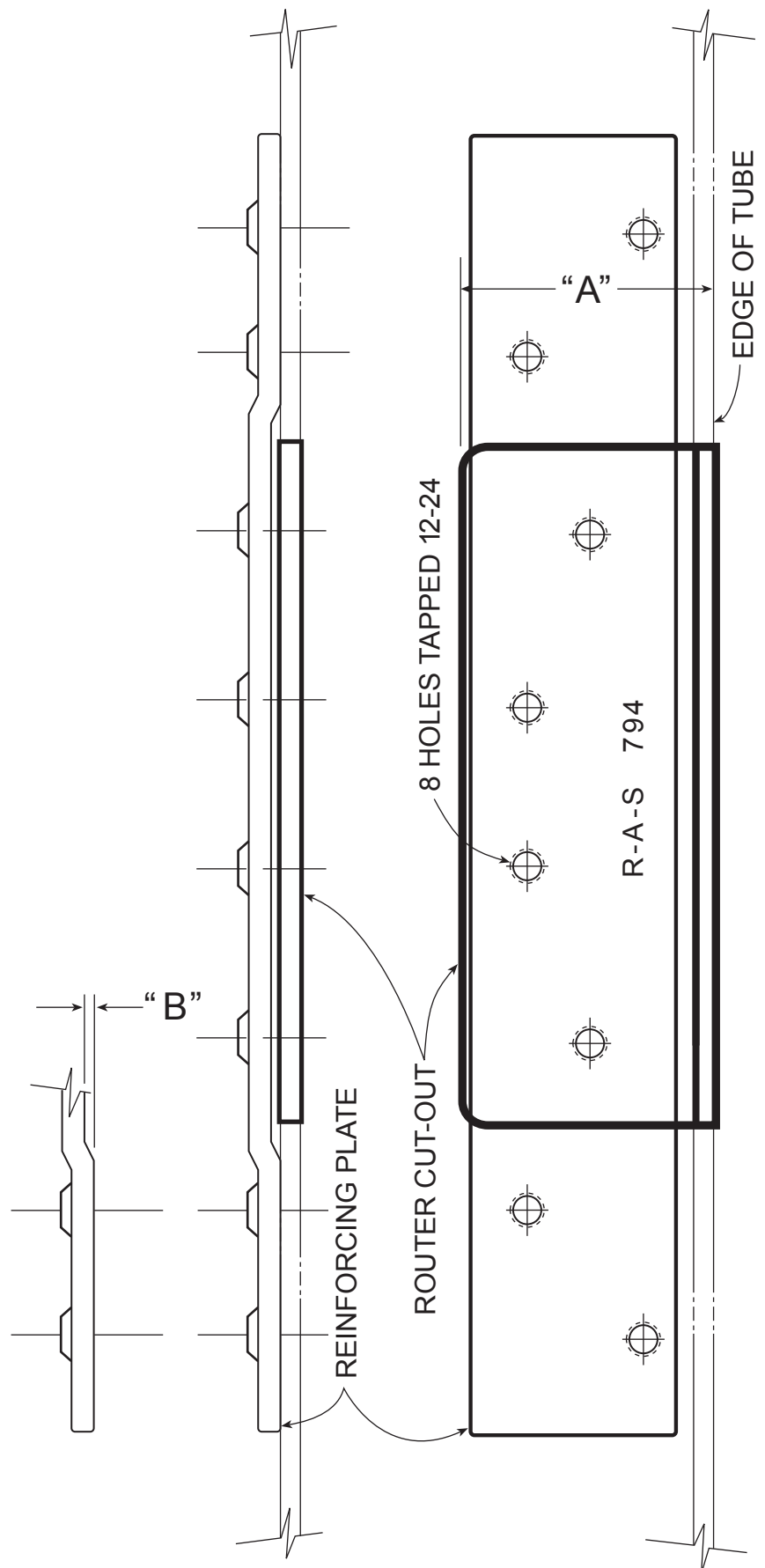


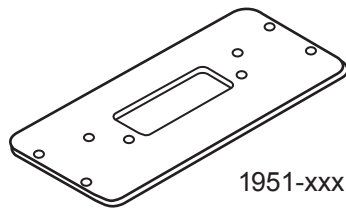


|                                                                        |        |
|------------------------------------------------------------------------|--------|
| "A" DIMENSION IS<br>HINGE BACK-SET.<br>USE ROUTER JIG<br>PLATE NUMBER. |        |
| 1 <sup>3</sup> / <sub>8</sub>                                          | 1794 C |
| 1 <sup>7</sup> / <sub>16</sub>                                         | 1794 D |
| 1 <sup>1</sup> / <sub>2</sub>                                          | 1794 E |
| 1 <sup>9</sup> / <sub>16</sub>                                         | 1794 F |
| 1 <sup>5</sup> / <sub>8</sub>                                          | 1794 G |

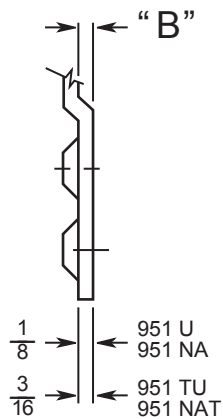


|                                                                     |                     |  |
|---------------------------------------------------------------------|---------------------|--|
| "B" DIM. IS REINFORCING<br>PLATE OFFSET. USE PLATE<br>NUMBER SHOWN. |                     |  |
|                                                                     | 1/8 (.130)<br>HINGE |  |
| .125<br>TUBE                                                        | 794                 |  |
| .105<br>TUBE                                                        | 794                 |  |
| .090<br>TUBE                                                        | 794                 |  |
|                                                                     |                     |  |



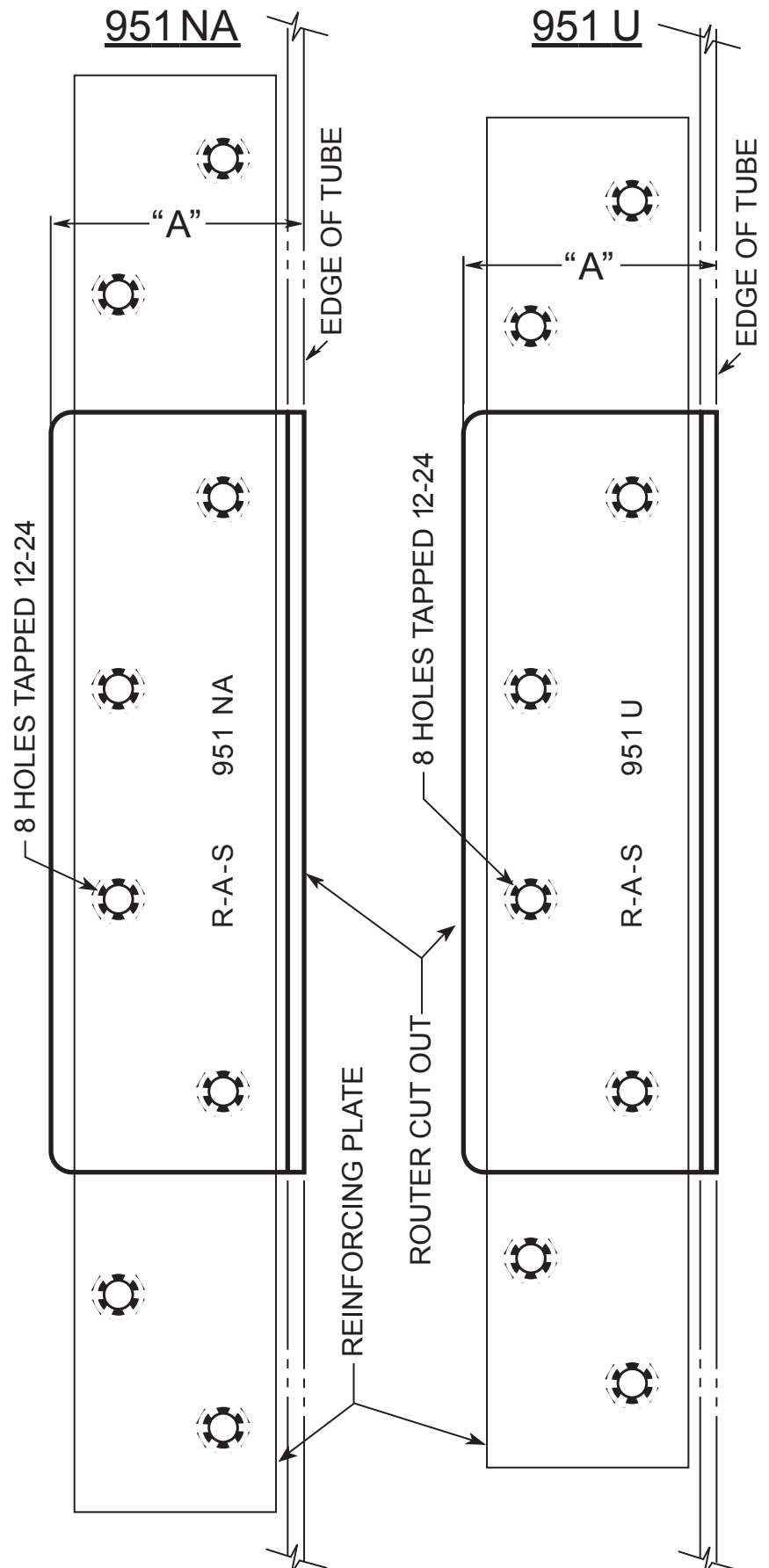


| "A" DIMENSION IS<br>HINGE BACK-SET<br>USE ROUTER JIG<br>TEMPLATE NUMBER |                  |
|-------------------------------------------------------------------------|------------------|
| $1\frac{7}{16}$                                                         | 951 DNA<br>951 D |
| $1\frac{1}{2}$                                                          | 951 ENA<br>951 E |
| $1\frac{9}{16}$                                                         | 951 FNA<br>951 F |
| $1\frac{5}{8}$                                                          | 951 GNA<br>951 G |
| $1\frac{11}{16}$                                                        | 951 HNA<br>951 H |

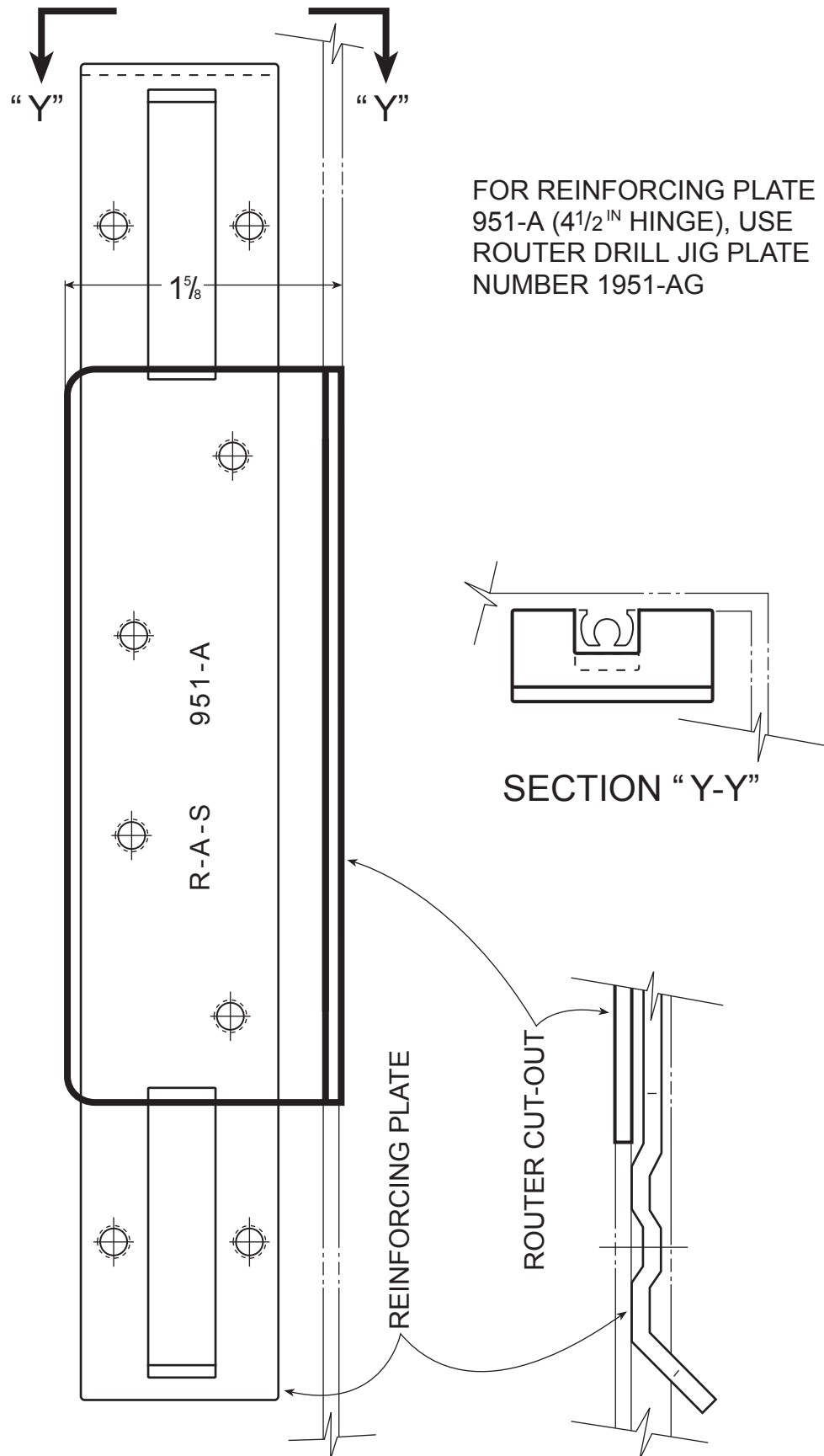


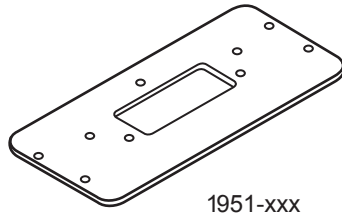
| "B" DIMENSION IS<br>REINFORCING PLATE<br>OFFSET. USE PLATE<br>NUMBER SHOWN |                               |                                |
|----------------------------------------------------------------------------|-------------------------------|--------------------------------|
|                                                                            | $\frac{1}{8}$ (.140)<br>HINGE | $\frac{3}{16}$ (.187)<br>HINGE |
| .125<br>TUBE                                                               | 951 NA<br>951 U               | 951 NAJ<br>951 UJ              |
| .105<br>TUBE                                                               | 951 NA<br>951 U               | 951 NAJ<br>951 UJ              |
| .090<br>TUBE                                                               | 951 NAJ<br>951 UJ             | 951 NAK<br>951 UK              |

NOTE - USE SUFFIX "T" FOR  $\frac{3}{16}$   
THK. REINFORCING PLATE



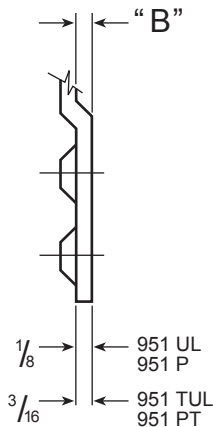
## 951 A REINFORCING PLATE 4 1/2" STANDARD BUTT HINGE





"A" DIMENSION IS  
HINGE BACK-SET.  
USE ROUTER JIG  
TEMPLATE NUMBER.

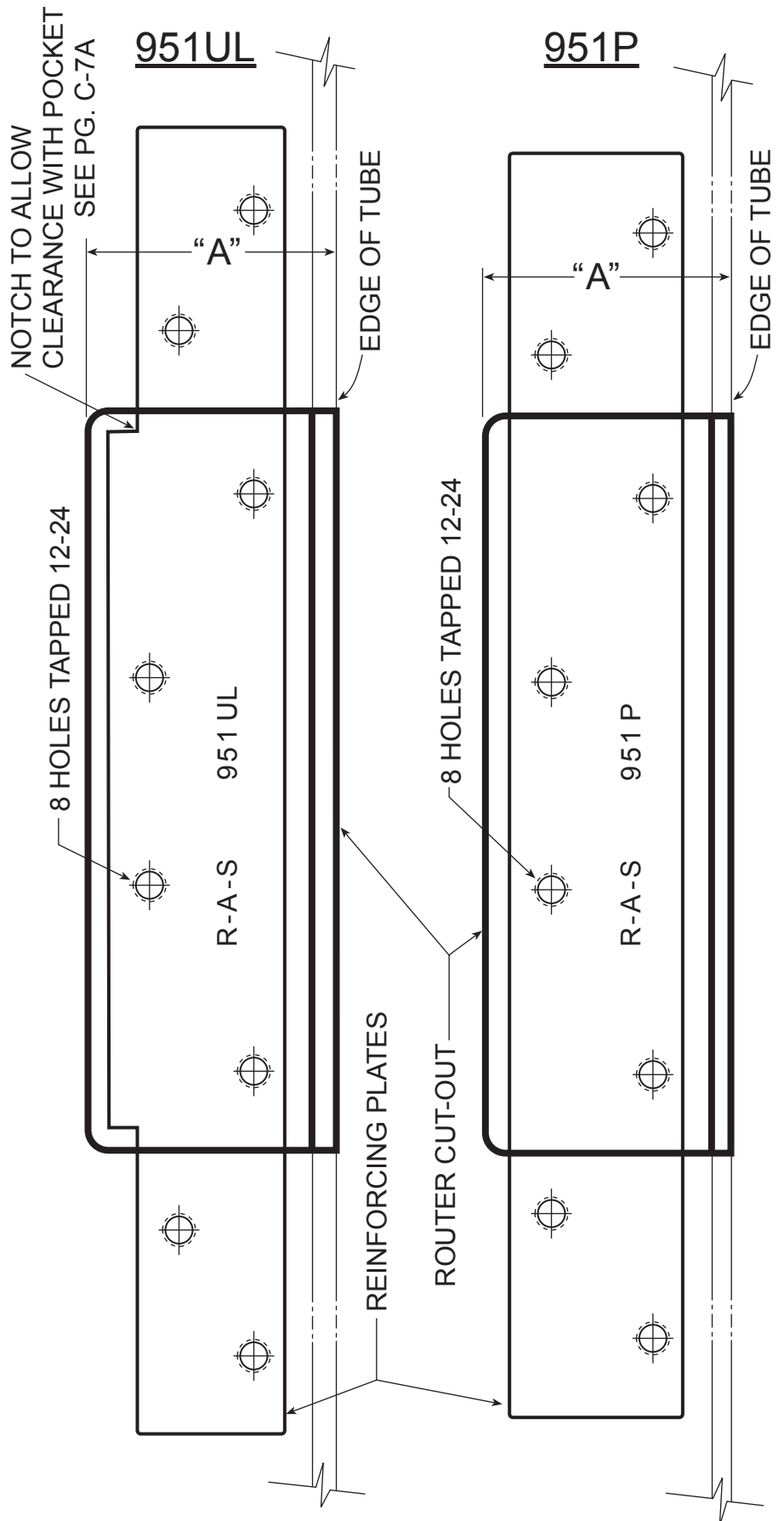
|         |                    |
|---------|--------------------|
| 1 11/32 | 1951 BCP           |
| 17/16   | 1951 DL<br>1951 DP |
| 1 1/2   | 1951 EL<br>1951 EP |
| 19/16   | 1951 FL<br>1951 FP |
| 1 5/8   | 1951 GL<br>1951 GP |
| 1 11/16 | 1951 HL<br>1951 HP |



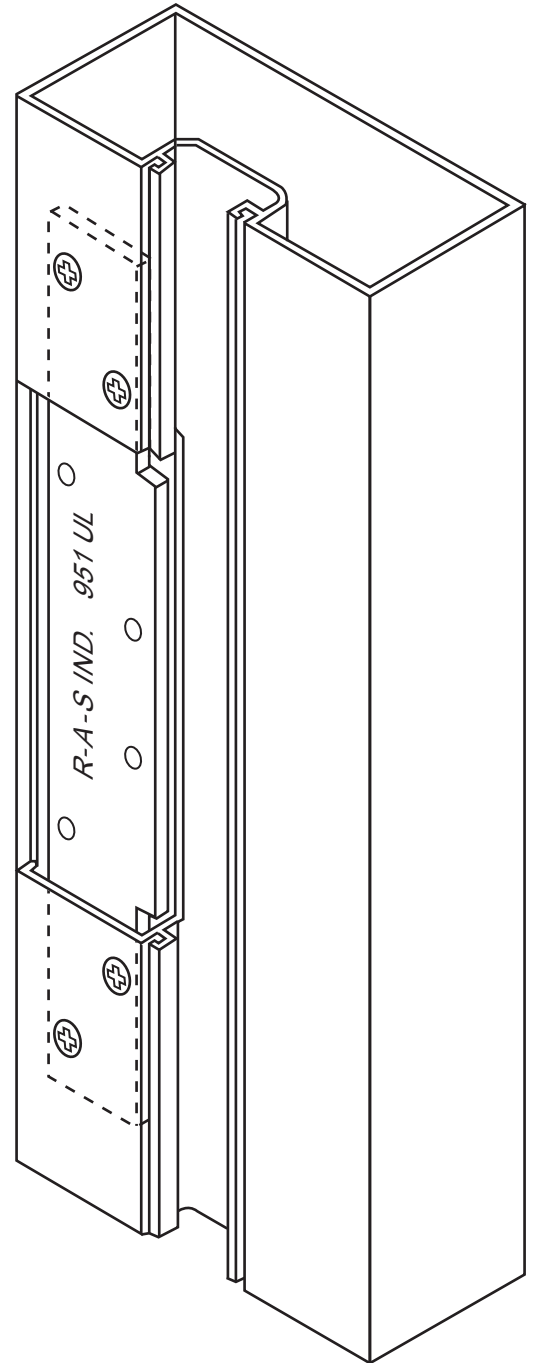
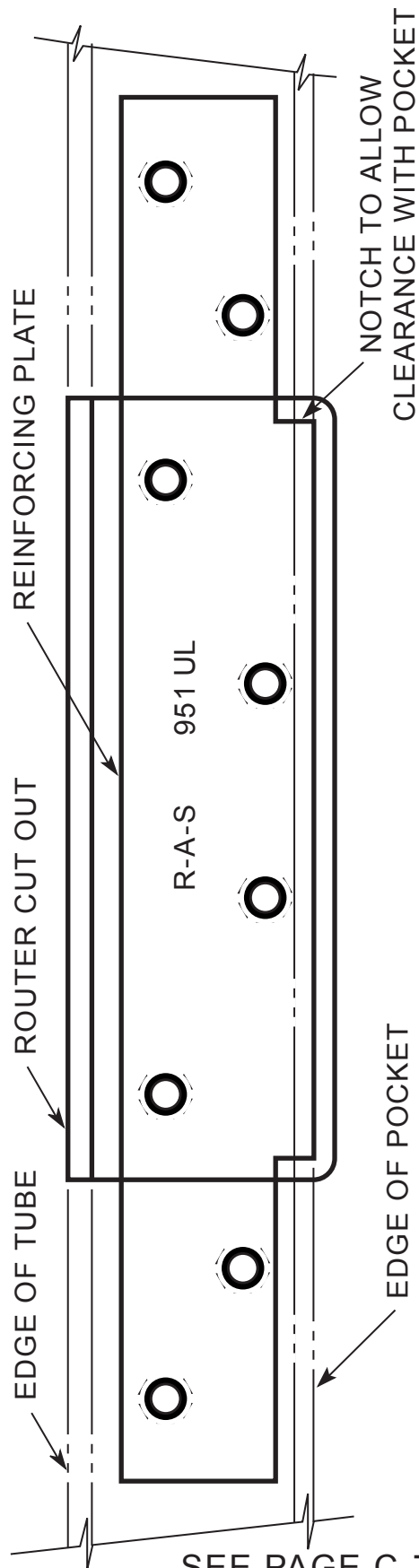
"B" DIM. IS REINFORCING  
PLATE OFFSET. USE  
PLATE NUMBER SHOWN.

|              | 1/8 (.130)<br>HINGE | 3/16 (.187)<br>HINGE |
|--------------|---------------------|----------------------|
| .125<br>TUBE | 951 L<br>951 P      | 951 LJ<br>951 PJ     |
| .105<br>TUBE | 951 L<br>951 P      | 951 LJ<br>951 PJ     |
| .090<br>TUBE | 951 LJ<br>951 PJ    | 951 LK<br>951 PK     |

NOTE - USE SUFFIX "T" FOR 3/16  
THICK REINFORCING PLATE



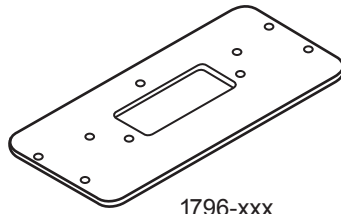
**951 UL REINFORCING PLATE**  
**4 1/2" STANDARD BUTT HINGE**  
**USE WITH POCKET TUBE**



SEE PAGE C-7 FOR ORDERING INFORMATION

# 796 REINFORCING PLATE

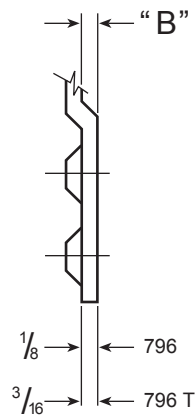
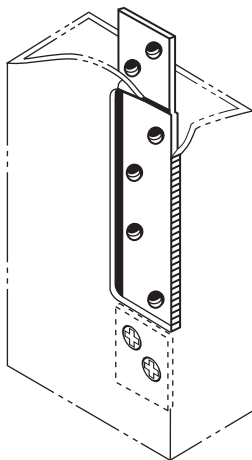
## 5" STANDARD BUTT HINGE



1796-xxx

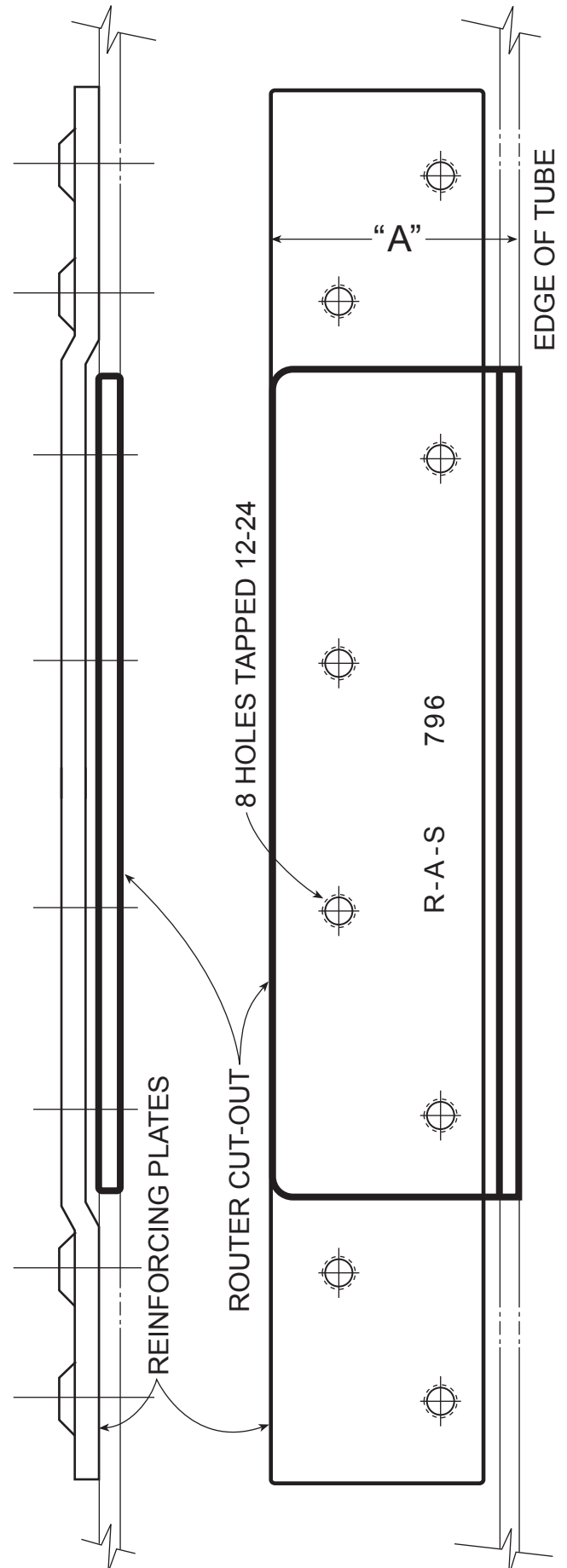
"A" DIMENSION IS  
HINGE BACK-SET.  
USE ROUTER JIG  
PLATE NUMBER.

|         |        |
|---------|--------|
| 17/16   | 1796 D |
| 1 1/2   | 1796 E |
| 19/16   | 1796 F |
| 1 5/8   | 1796 G |
| 1 11/16 | 1796 H |



NOTE - USE SUFFIX "T" FOR 3/16  
THICK REINFORCING PLATE

| "B" DIM. IS REINFORCING<br>PLATE OFFSET. USE<br>PLATE NUMBER BELOW. |                     |                      |
|---------------------------------------------------------------------|---------------------|----------------------|
|                                                                     | 1/8 (.146)<br>HINGE | 3/16 (.190)<br>HINGE |
| .125<br>TUBE                                                        | 796                 | 796 NA               |
| .105<br>TUBE                                                        | 796 NA              | 796 NB               |
| .090<br>TUBE                                                        | 796 NA              | 796 NB               |



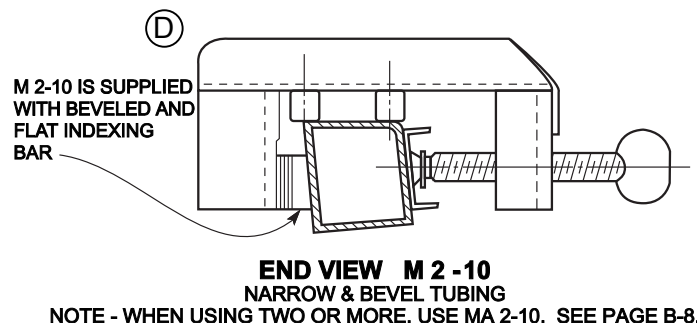
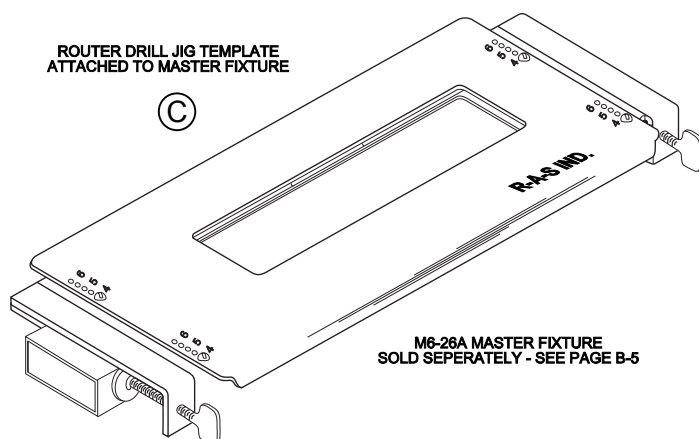
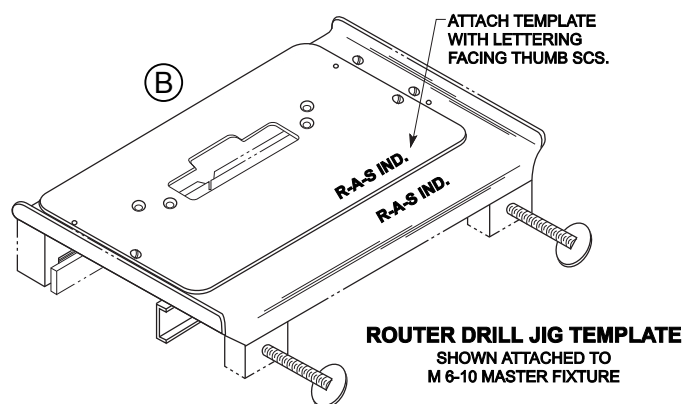
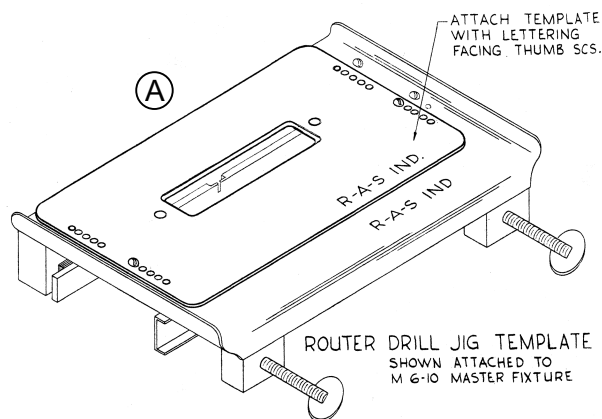
## SECTION D - MISCELLANEOUS DOOR HARDWARE

### DOOR CLOSER - DOOR HOLDER - CENTER HUNG PIVOT - INTERMEDIATE PIVOT

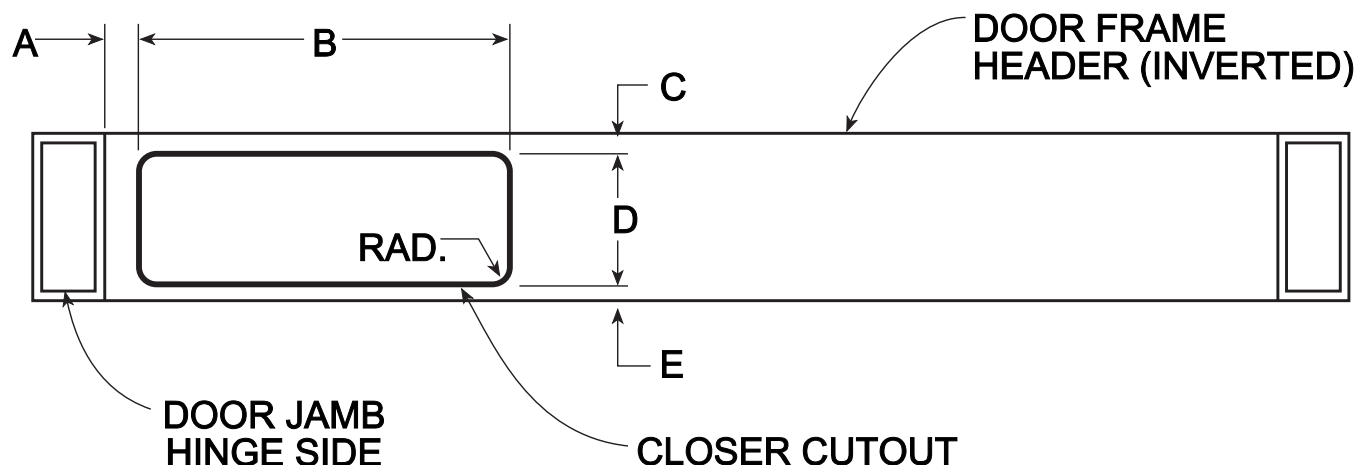
| APPLICATION                                                |                                   | REINFORCING PLATE | ROUTER DRILL JIG TEMPLATE | PAGE                          |                        |      |
|------------------------------------------------------------|-----------------------------------|-------------------|---------------------------|-------------------------------|------------------------|------|
| CONCEALED OVERHEAD DOOR CLOSER                             |                                   | see table, D-2    | 1847-xxx                  | D-2                           |                        |      |
| OVERHEAD DOOR HOLDER -<br>GLYNN-JOHNSON, RIXSON, LCN, ETC. |                                   | 510-xxx           | 1510-xxx &<br>1530-xxx    | D-3<br>D-3A                   |                        |      |
| TOP PIVOT CENTER HUNG                                      |                                   | 954               | 1954-xxx                  | D-4                           |                        |      |
|                                                            |                                   | 954 U             | 1954 U-xxx                | D-5                           |                        |      |
| INTERMEDIATE OFFSET PIVOT                                  |                                   | DOOR<br>PORTION   | 206                       | 1206 D OR 1206 F              | D-7                    |      |
|                                                            |                                   |                   | FRAME<br>PORTION          | 795 D&F                       | 1795 DLH &<br>1795 DRH | D-8  |
|                                                            |                                   |                   |                           | 795 TD&F                      |                        | D-8A |
|                                                            |                                   | 795 TD&FM         |                           | D-8B                          |                        |      |
|                                                            |                                   | FRAME<br>PORTION  | 795 D&F                   | 1795 F, 1795 FF,<br>& 1795 FT | D-9                    |      |
|                                                            |                                   |                   | 795 TD&F                  |                               | D-9A                   |      |
|                                                            |                                   |                   | 795 TD&FM                 |                               | D-9B                   |      |
| VON<br>DUPRIN                                              | EPT10 POWER TRANSFER UNIT         |                   | 954-08                    | 1954-08                       | D-10A                  |      |
|                                                            | CONCEALED VERTICAL ROD DEVICE     |                   | NOT REQ'D                 | 177 VD1AL & R                 | D-10B                  |      |
|                                                            | CONCEALED VERTICAL ROD DEVICE     |                   | NOT REQ'D                 | 177 VD1G                      | D-10C                  |      |
|                                                            | 370L & 370L-BE CONTROL            |                   | NOT REQ'D                 | 177 VD1NL & R                 | D-10D                  |      |
|                                                            | 376-T CONTROL                     |                   | NOT REQ'D                 | 177 VD1P                      | D-10E                  |      |
|                                                            | TRIM METAL DOOR APPLICATION       |                   | NOT REQ'D                 | 177 VD1TL & R                 | D-10F                  |      |
|                                                            | 338 STRIKE FOR HOLLOW METAL FRAME |                   | NOT REQ'D                 | 1954-VD1O                     | D-10G                  |      |

SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING

NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.



## CONCEALED OVERHEAD DOOR CLOSER



WHEN ORDERING ROUTER TEMPLATE FOR INSTALLING CONCEALED OVERHEAD CLOSER, FURNISH ALL DIMENSIONS SHOWN ABOVE AND LATEST INSTALLATION DRAWINGS.

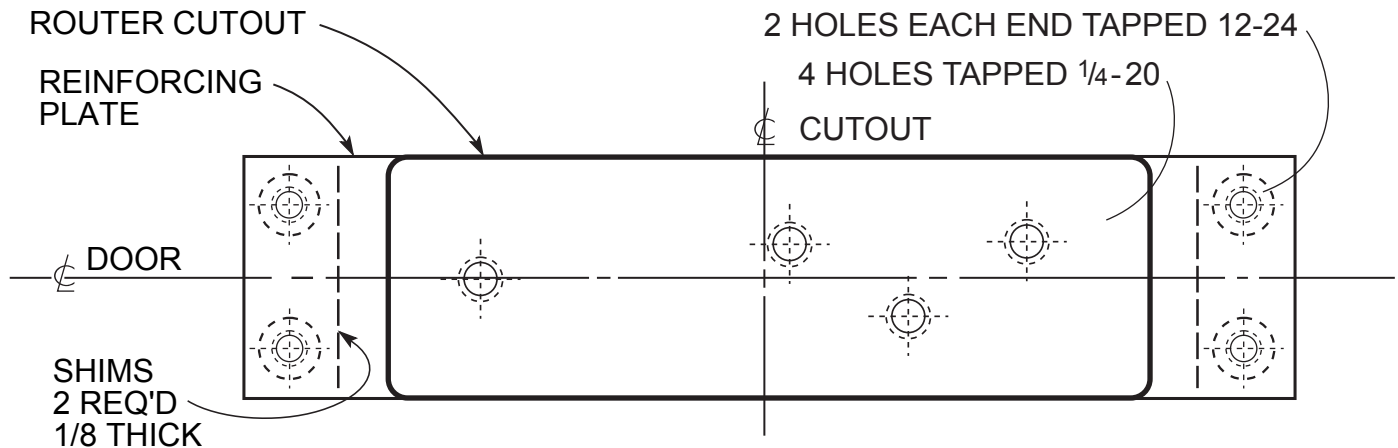
ROUTER TEMPLATES FOR OVERHEAD CLOSER MUST BE USED WITH M 6-26A MASTER FIXTURE. SEE PAGE B-5.

| Inventory # | Description                    | A     | B      | C     | D     | E     |
|-------------|--------------------------------|-------|--------|-------|-------|-------|
| 1847-01 E   | Jackson C/O/C Center Hung      | 0.000 | 12.562 | 0.125 | 3.750 | 0.125 |
| 1847-02 E   | Jackson C/O/C Center Hung      | 0.000 | 12.500 | 0.125 | 3.750 | 0.125 |
| 1847-03 E   |                                | 1.750 | 12.500 | 0.125 | 3.750 | 0.125 |
| 1847-04 E   |                                | 0.000 | 12.500 | 0.093 | 3.812 | 0.093 |
| 1847-05 E   | Rixson                         | 0.000 | 14.000 | 0.125 | 3.750 | 0.125 |
| 1847-06 E   | Dorma                          | 0.000 | 15.750 | 0.140 | 3.720 | 0.140 |
| 1847-07 E   |                                | 1.375 | 12.562 | 0.125 | 3.750 | 0.125 |
| 1847-08 C   | Jackson Butt or Offset Pivot   | VAR   | 13.875 | 0.125 | 3.750 |       |
| 1847-09 E   | Rixson 708                     | 0.500 | 18.250 | 0.125 | 3.750 | 0.125 |
| 1847-10 C   | Jackson                        | VAR   | 12.500 | 0.125 | 3.750 |       |
| 1847-11 C   | Jackson                        | VAR   | 14.000 | 0.125 | 3.750 |       |
| 1847-12 C   | Jackson                        | VAR   | 11.687 | 0.125 | 3.750 |       |
| 1847-13 E   | Jackson                        | 0.000 | 13.250 | 0.125 | 3.750 | 0.125 |
| 1847-14 C   | Dorma 8575                     | VAR   | 15.750 | 0.125 | 3.750 |       |
| 1847-15 C   | LCN 2014, 5014, 2.062 x 14     | VAR   | 14.000 | 0.125 | 2.062 |       |
| 1847-16 C   | LCN 5030                       | VAR   | 21.875 | 0.593 | 3.718 |       |
| 1847-17 C   | Dorma                          | 0.000 | 11.375 | 0.312 | 3.875 |       |
| 1847-18 E   | Taco                           | 0.125 | 14.500 | 0.125 | 3.750 | 0.125 |
| 1847-19 C   | Jackson                        | VAR   | 13.187 | 0.156 | 3.687 | 0.156 |
| 1847-20 C   | Jackson                        | VAR   | 12.562 | 0.125 | 3.750 | 0.125 |
| 1847-21 E   |                                | 1.750 | 13.906 | 0.156 | 3.812 | 0.156 |
| 1847-22 C   | YKK                            | VAR   | 12.500 | 0.234 | 3.750 |       |
| 1847-23 C   | Kawneer                        | VAR   | 13.500 | 0.125 | 3.750 |       |
| 1847-24 C   | LCN (847-24 Reinforcing Plate) | VAR   | 21.000 | 0.500 | 3.000 |       |

6/09

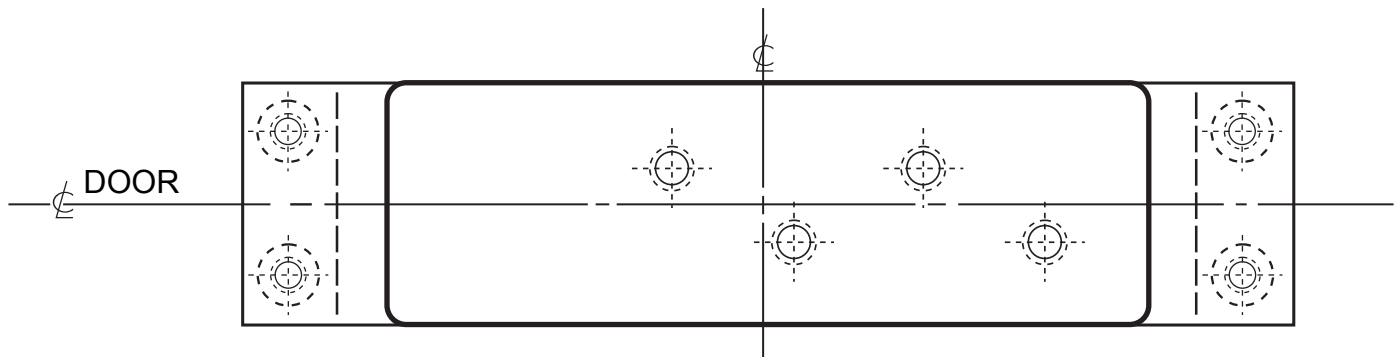
## 510 REINFORCING PLATE OVERHEAD DOOR HOLDER FRAME PORTION

510-xxx REINFORCING PLATE.  
USE 1510-xxx ROUTER DRILL JIG TEMPLATE.  
CALL FOR PROPER xxx SUFFIX PART NUMBER.



FOR RIXSON SERIES #1, #6, T8, T9, T27, T85, T90, T105 USE:  
510 D REINFORCING PLATE.  
1510 D ROUTER DRILL JIG TEMPLATE, 1" x 3 1/2".

FOR SARGENT SERIES 690 USE:  
510 E REINFORCING PLATE.  
1510 E ROUTER DRILL JIG TEMPLATE, 1" x 3 13/16".

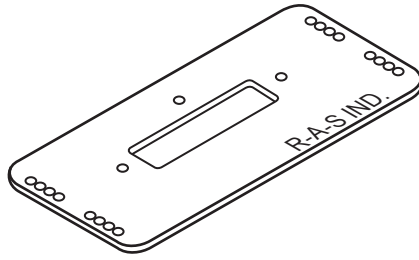


FOR GLYNN-JOHNSON SERIES 80 AND 90 USE:  
510 J REINFORCING PLATE.  
1510 D ROUTER DRILL JIG TEMPLATE, 1" x 3 1/2".

FOR GLYNN-JOHNSON SERIES 400 USE:  
510 R REINFORCING PLATE.  
1530 ROUTER DRILL JIG TEMPLATE, 3/4" x 2 7/8".

FOR GLYNN-JOHNSON SERIES 410 USE:  
510 R REINFORCING PLATE.  
1510 D ROUTER DRILL JIG TEMPLATE, 1" x 3 1/2".

# 954 REINFORCING PLATE TOP PIVOT CENTER HUNG

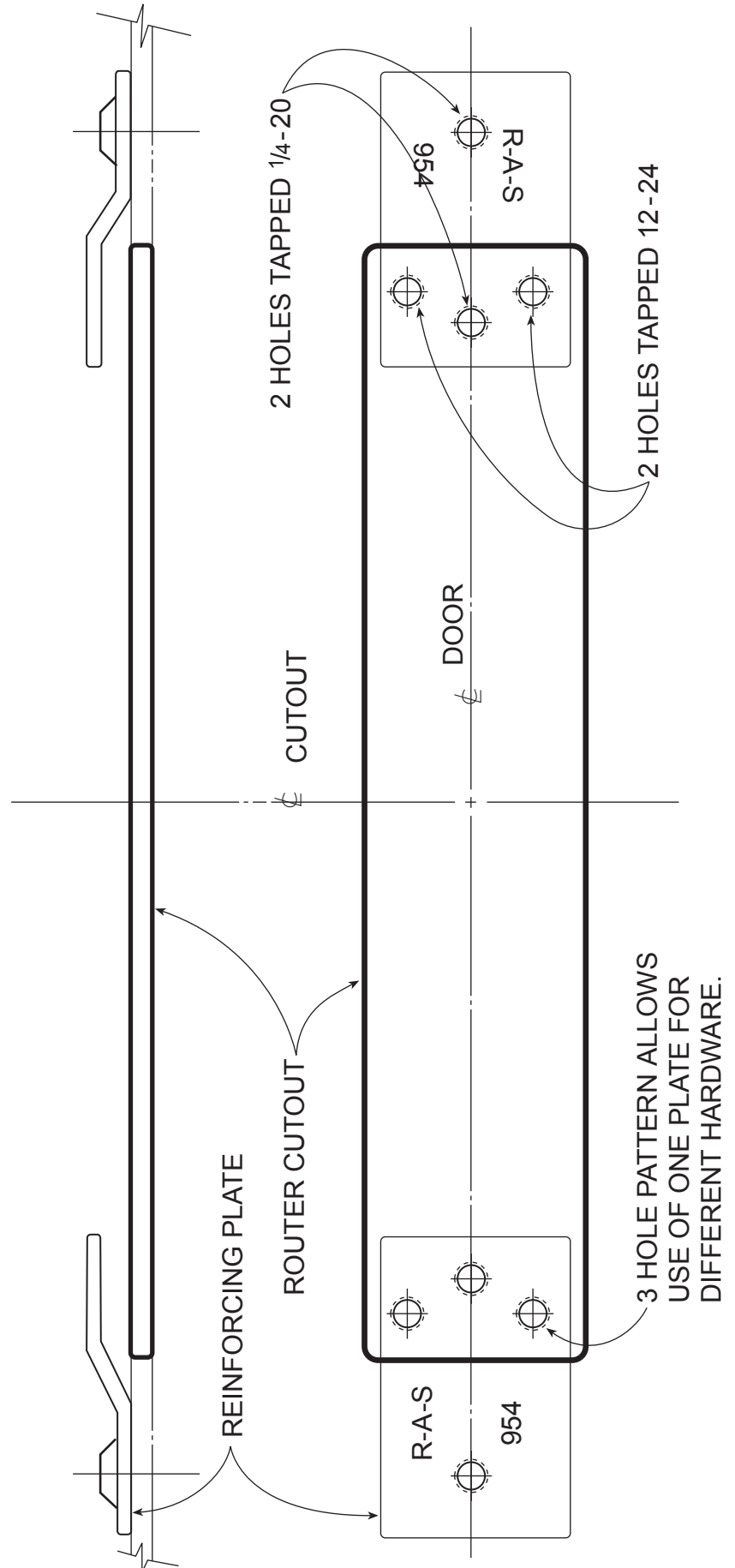


NOTE – 954 REINFORCING PLATE FITS RIXSON & DOR-O-MATIC STD. CENTER HUNG TOP PIVOT.

USE R-A-S ROUTER DRILL JIG TEMPLATE 1954-xxx.

THE ATTACHING HOLES ON THE 1954 TEMPLATE MARKED “SA” ARE FOR  $1\frac{3}{4}$ ” THICK DOORS WITH  $\frac{1}{8}$ ” SET-BACK. THE OTHER ATTACHING HOLES MARKED BY NUMBER INDICATE TUBE SIZE ON WHICH CUTOUT WILL BE CENTERED FOR DOUBLE ACTING DOORS. (SEE DRAWING OF TEMPLATE N° 1205 ON PAGE G-3)

APPLIED DRILL JIG 1954J AVAILABLE FOR DRILLING MOUNTING HOLES WHEN OTHER METHODS OF ROUTING ARE USED.

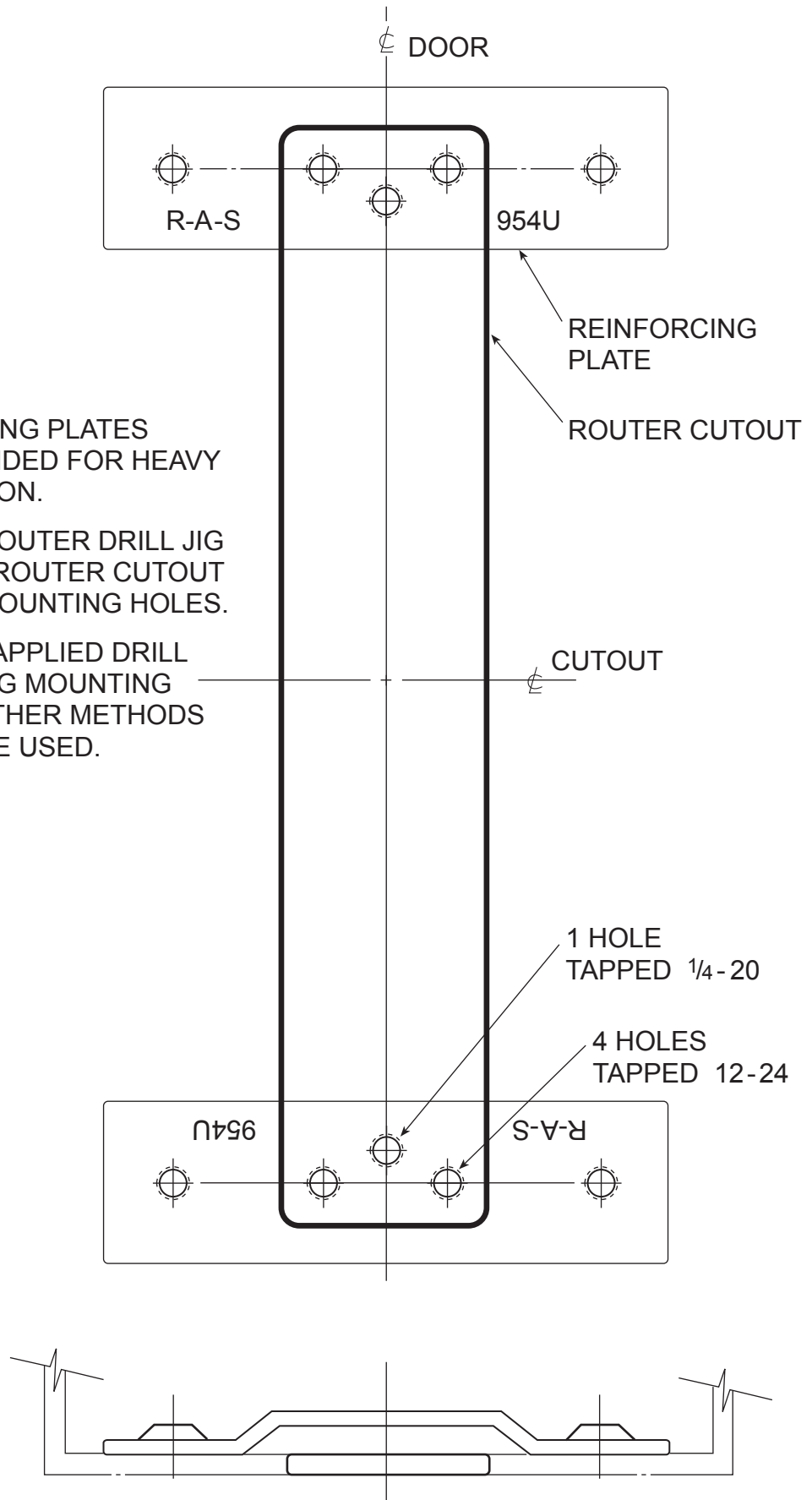


**NOTE –**

954U REINFORCING PLATES  
ARE RECOMMENDED FOR HEAVY  
DUTY APPLICATION.

USE 1954U-xxx ROUTER DRILL JIG  
TEMPLATE FOR ROUTER CUTOUT  
AND DRILLING MOUNTING HOLES.

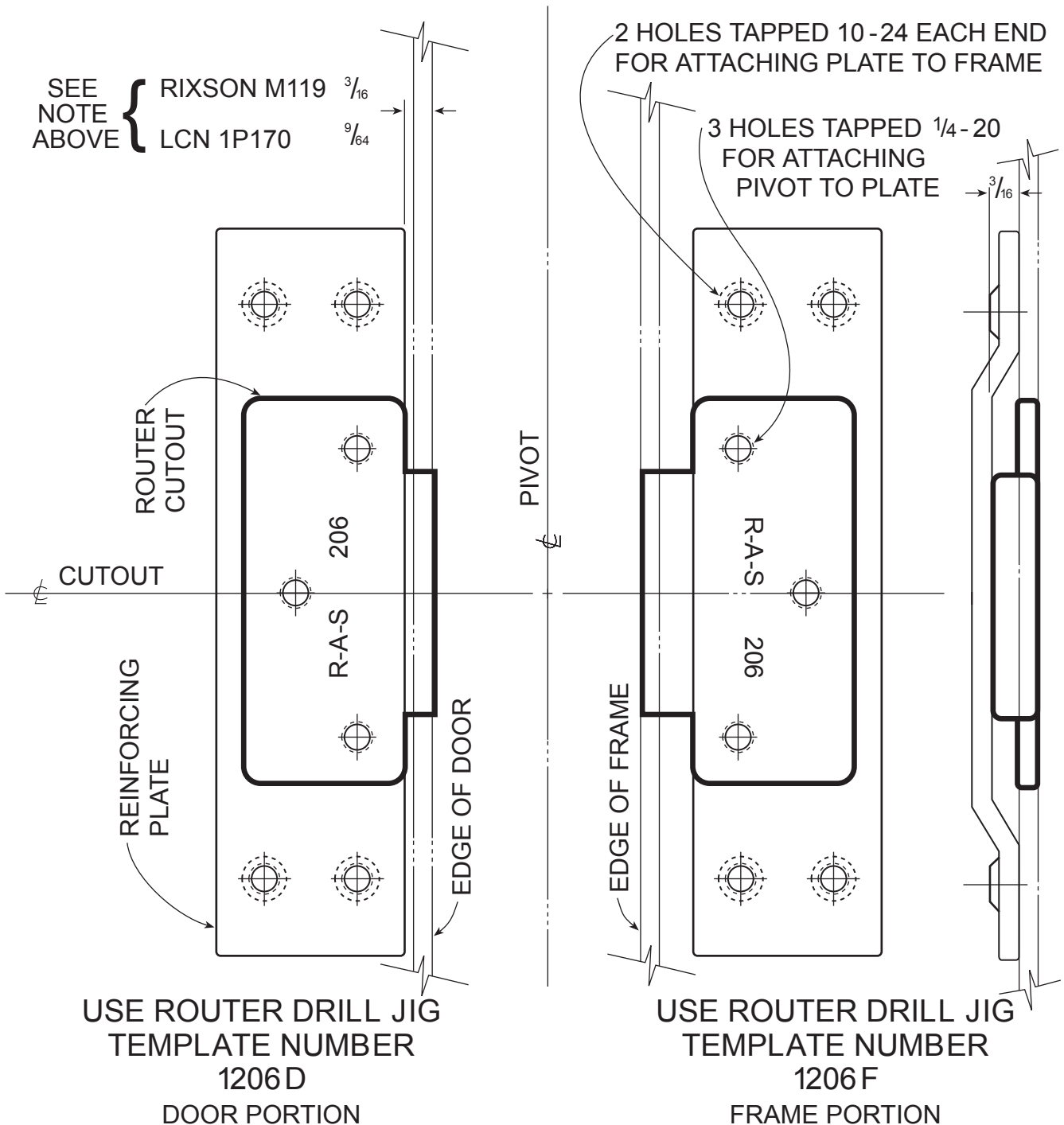
USE 1954UJ-xxx APPLIED DRILL  
JIG FOR DRILLING MOUNTING  
HOLES WHEN OTHER METHODS  
OF ROUTING ARE USED.



## 206 REINFORCING PLATE INTERMEDIATE OFFSET PIVOT

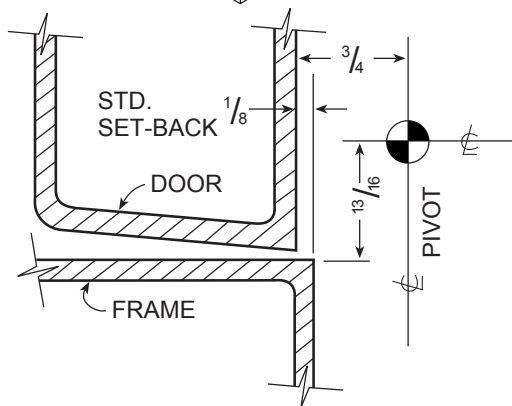
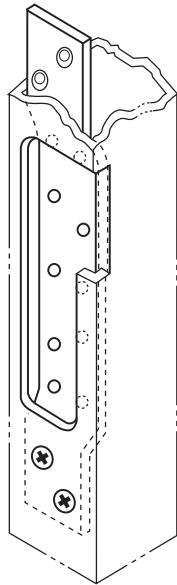
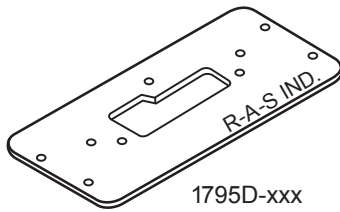
NOTE – 206 REINFORCING PLATE FITS RIXSON T119 & LCN 1P170 PIVOTS.  
WHEN ROUTING DOOR PORTION FOR LCN HARDWARE REMOVE ONE  
 $\frac{1}{16}^{\text{IN}}$  SHIM FROM EACH END OF INDEXING BAR ON MASTER FIXTURE  
TO GIVE PROPER DIMENSION OF  $\frac{9}{64}$  FROM EDGE OF DOOR.

- FRAME PORTION IS THE SAME FOR RIXSON & LCN.
- THESE TEMPLATES ARE FOR STD.  $\frac{1}{8}^{\text{IN}}$  SET-BACK.
- ROUTER BIT DEPTH OF CUT  $\frac{5}{16}^{\text{IN}}$ .



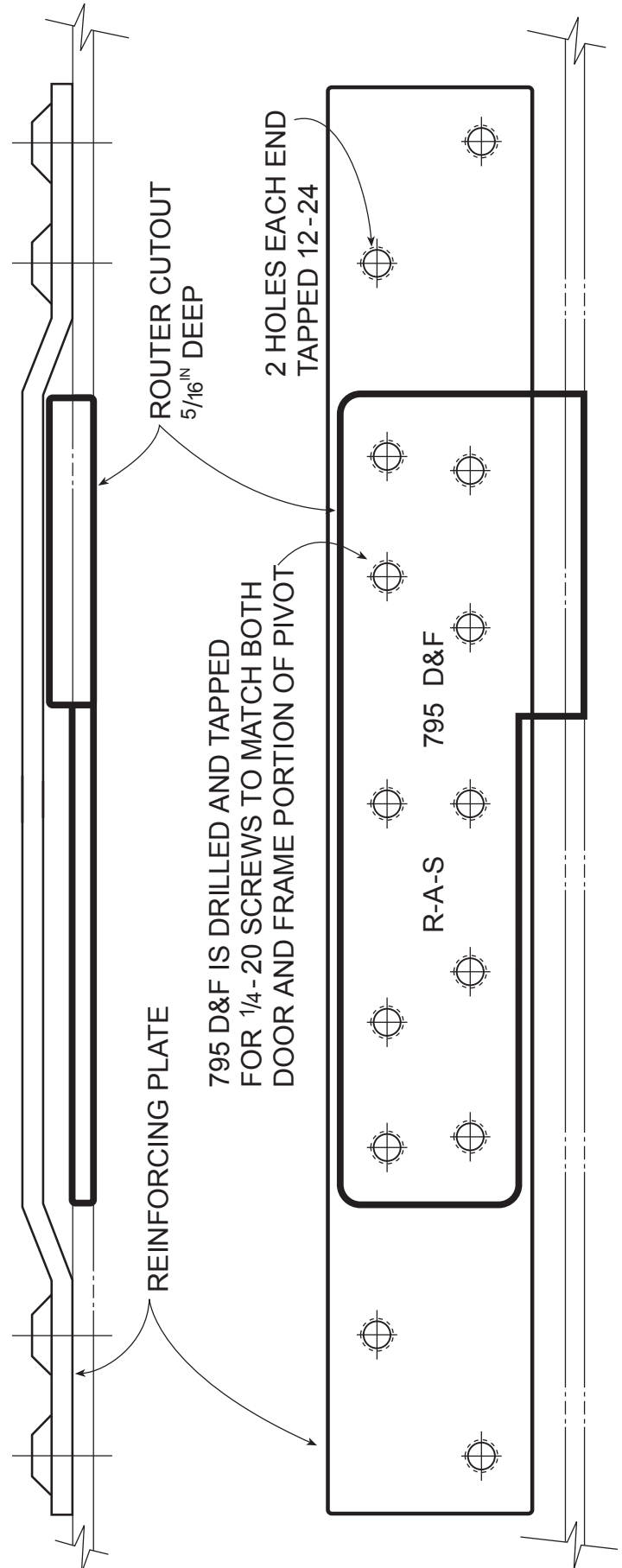
# 795 D&F REINFORCING PLATE

1/8" PLATE, 1/8" TUBE, INTERMEDIATE  
OFFSET PIVOT, DOOR PORTION (R.H. SHOWN)



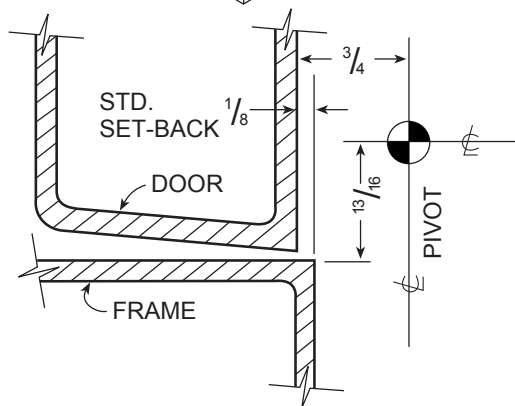
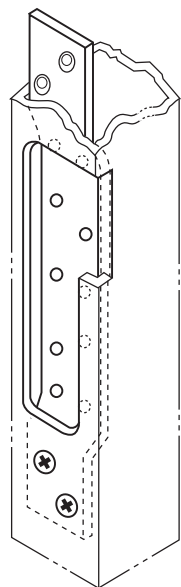
FOLLOWING TEMPLATES & JIGS AVAILABLE  
1795 DRH IS RIGHT HAND (SHOWN)  
TEMPLATE WITH DRILL BUSHINGS  
1795 DLH IS LEFT HAND  
TEMPLATE WITH DRILL BUSHINGS  
1795 DJ IS AN APPLIED DRILL JIG  
WHICH CAN BE USED IF CUTOUT  
IS PREPARED BY OTHER MEANS  
CAN BE USED ON DOOR AND FRAME

ROUTER BIT DEPTH OF CUT 5/16"

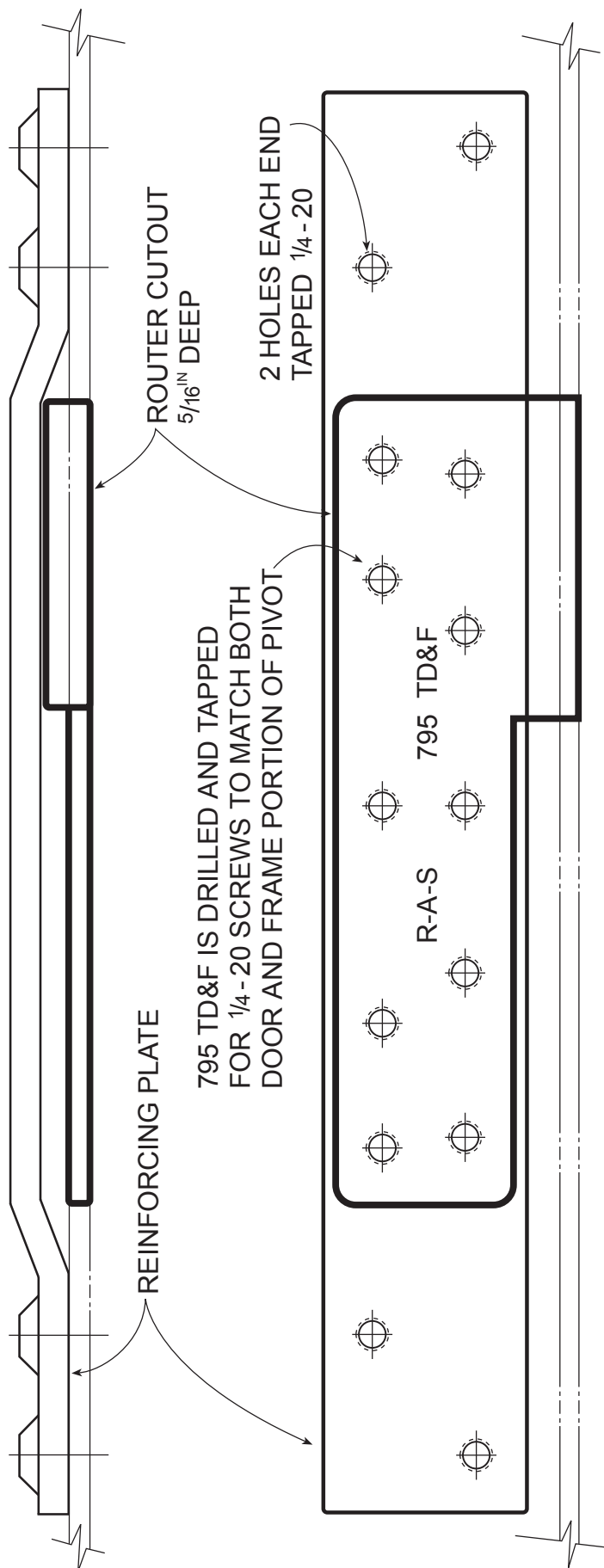




1795D-xxx

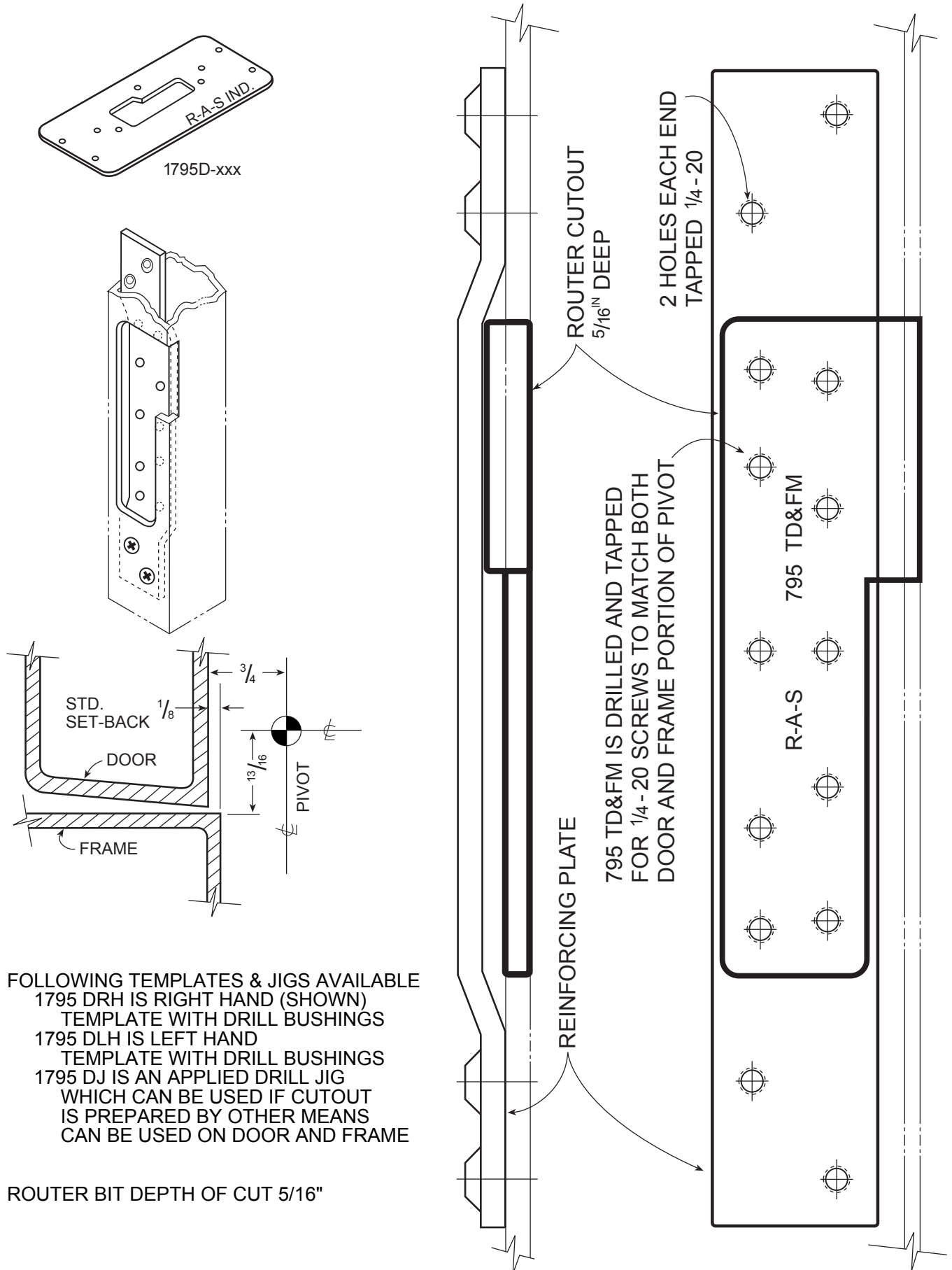


ROUTER BIT DEPTH OF CUT 5/16"



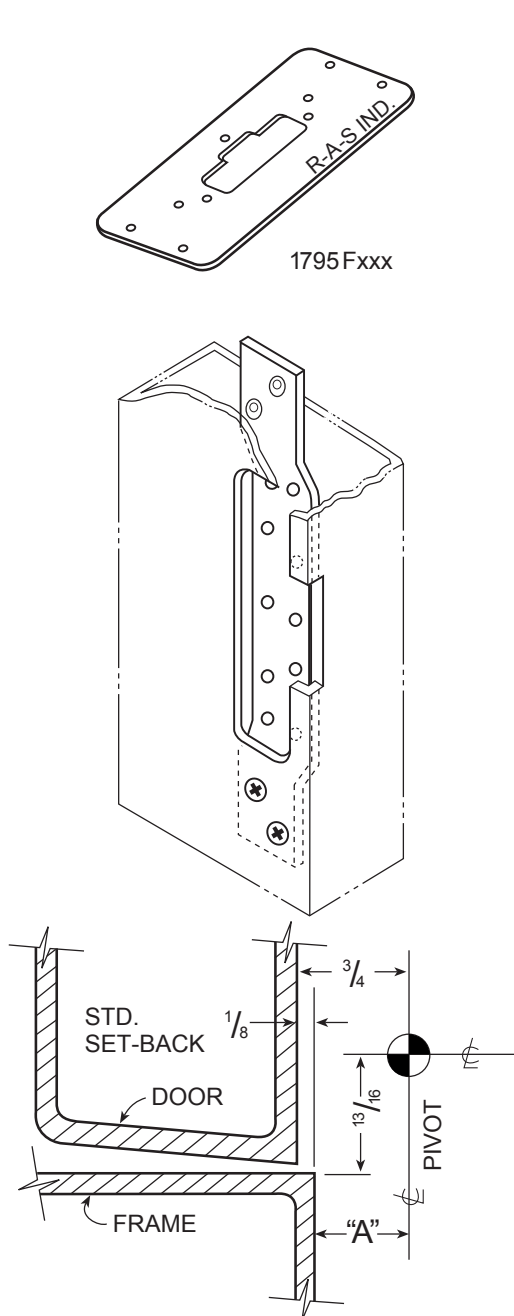
# 795 TD&FM REINFORCING PLATE

3/16" PLATE, 3/16" TUBE, INTERMEDIATE  
OFFSET PIVOT, DOOR PORTION (R.H. SHOWN)



# 795 D&F REINFORCING PLATE

## 1/8" PLATE, 1/8" TUBE, INTERMEDIATE OFFSET PIVOT, FRAME PORTION



FOLLOWING TEMPLATES & JIGS AVAILABLE  
DIMENSION "A"

1795 F IS FOR 1/8" SET BACK\* 5/8"  
1795 FF IS FOR FLUSH DOOR\* 3/4"  
1795 FT IS FOR 3/16 SET BACK\* 9/16"

\*TEMPLATE WITH DRILL BUSHINGS

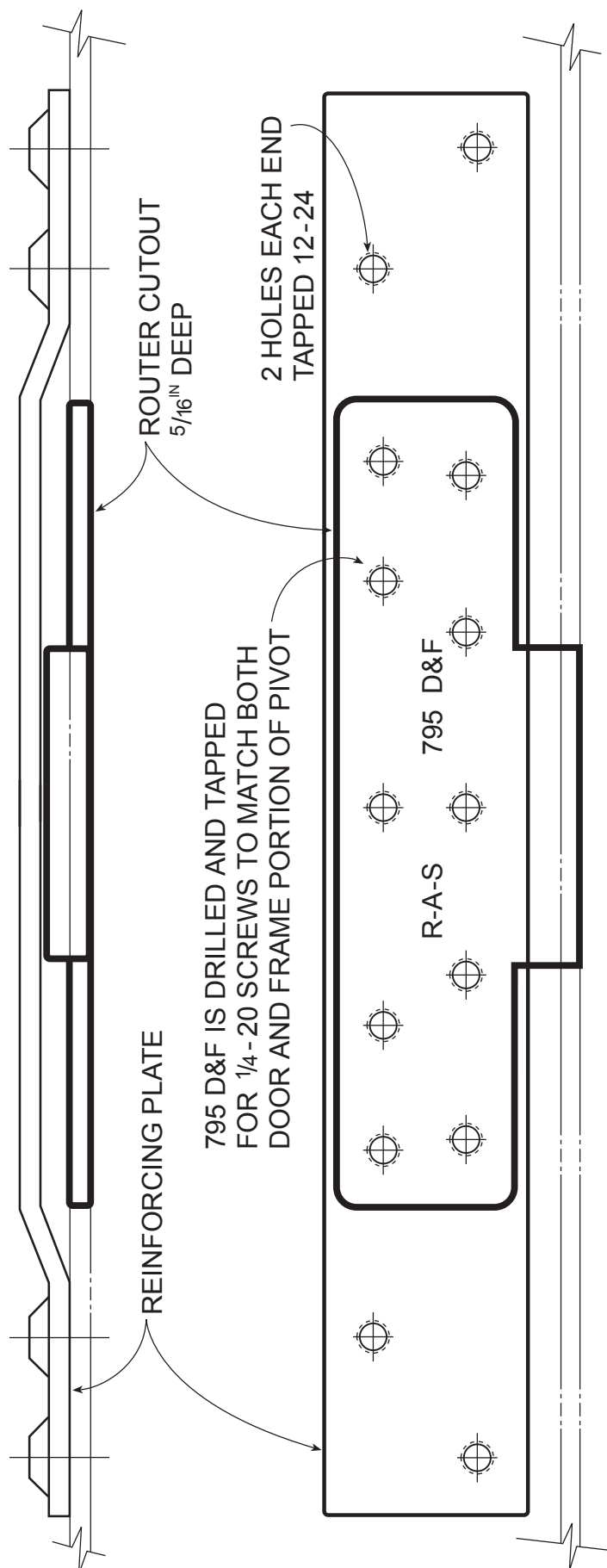
1795 DJ IS AN APPLIED DRILL JIG

WHICH CAN BE USED IF CUTOUT  
IS PREPARED BY OTHER MEANS.

CAN BE USED ON DOOR AND FRAME

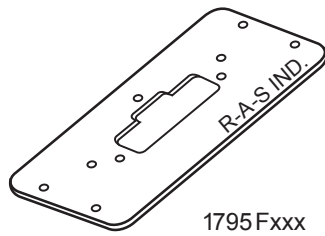
TEMPLATES FOR OTHER SET BACKS AVAIL.

ROUTER BIT DEPTH OF CUT 5/16"

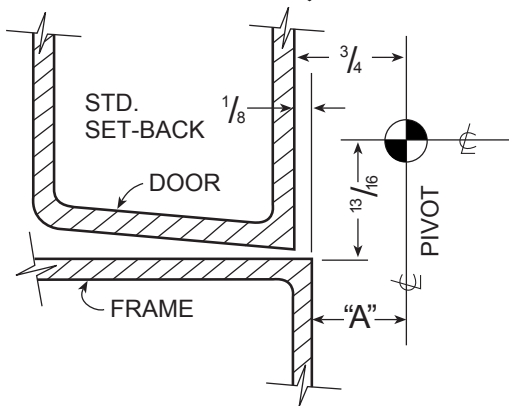
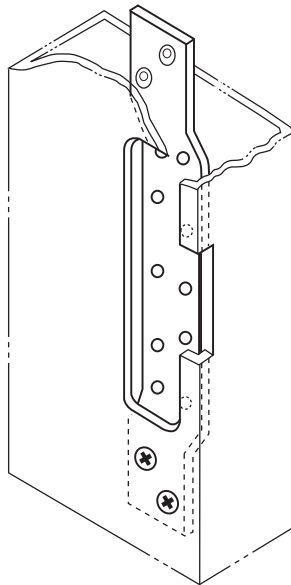


# 795 TD&F REINFORCING PLATE

## 3/16" PLATE, 1/8" TUBE, INTERMEDIATE OFFSET PIVOT, FRAME PORTION



1795 Fxxx



FOLLOWING TEMPLATES & JIGS AVAILABLE  
DIMENSION "A"

1795 F IS FOR 1/8" SET BACK\* 5/8"  
1795 FF IS FOR FLUSH DOOR\* 3/4"  
1795 FT IS FOR 3/16 SET BACK\* 9/16"

\*TEMPLATE WITH DRILL BUSHINGS

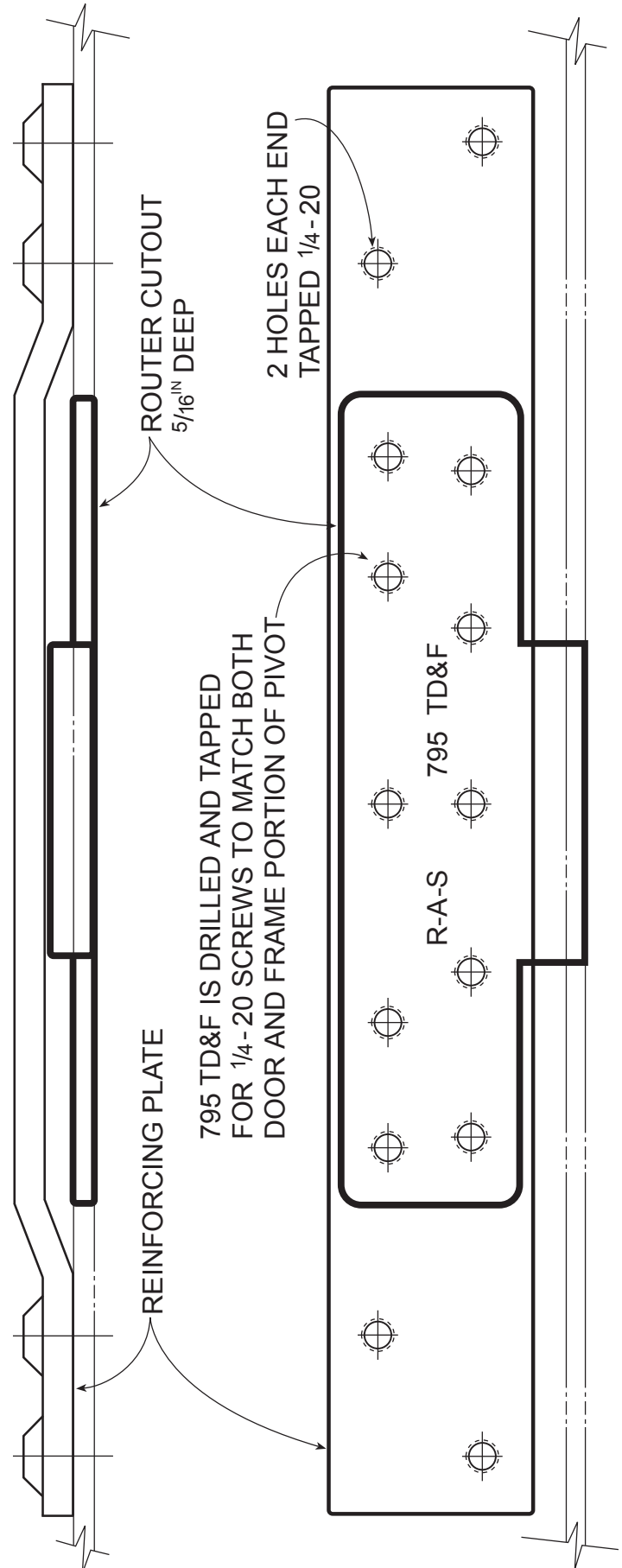
1795 DJ IS AN APPLIED DRILL JIG

WHICH CAN BE USED IF CUTOUT  
IS PREPARED BY OTHER MEANS.

CAN BE USED ON DOOR AND FRAME

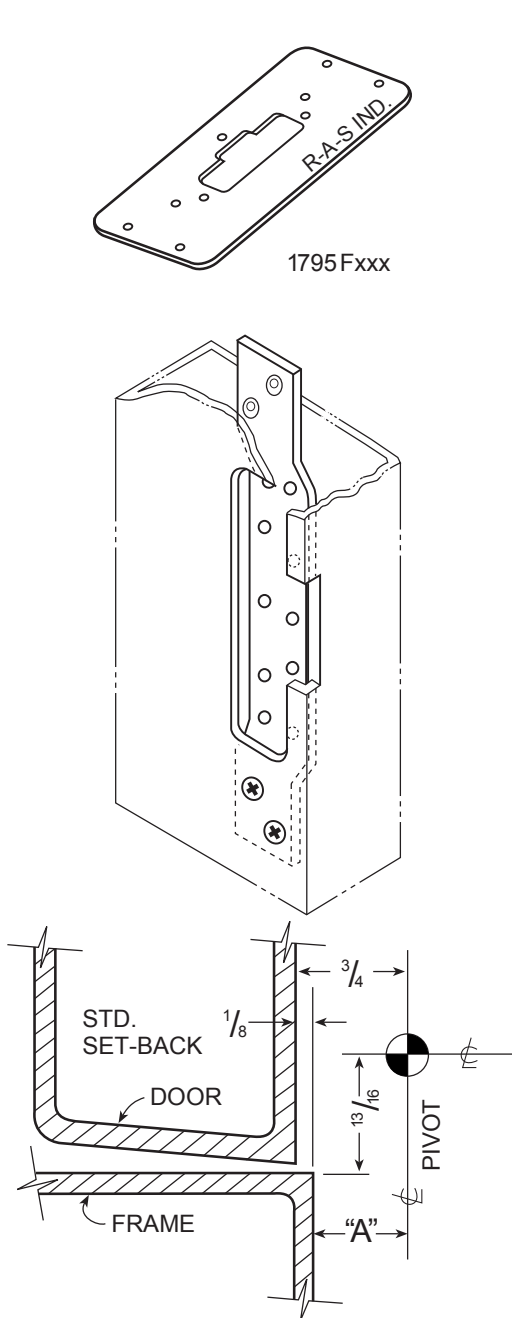
TEMPLATES FOR OTHER SET BACKS AVAIL.

ROUTER BIT DEPTH OF CUT 5/16"



# 795 TD&FM REINFORCING PLATE

3/16" PLATE, 3/16" TUBE, INTERMEDIATE  
OFFSET PIVOT, FRAME PORTION



FOLLOWING TEMPLATES & JIGS AVAILABLE  
DIMENSION "A"

1795 F IS FOR 1/8" SET BACK\* 5/8"  
1795 FF IS FOR FLUSH DOOR\* 3/4"  
1795 FT IS FOR 3/16 SET BACK\* 9/16"

\*TEMPLATE WITH DRILL BUSHINGS

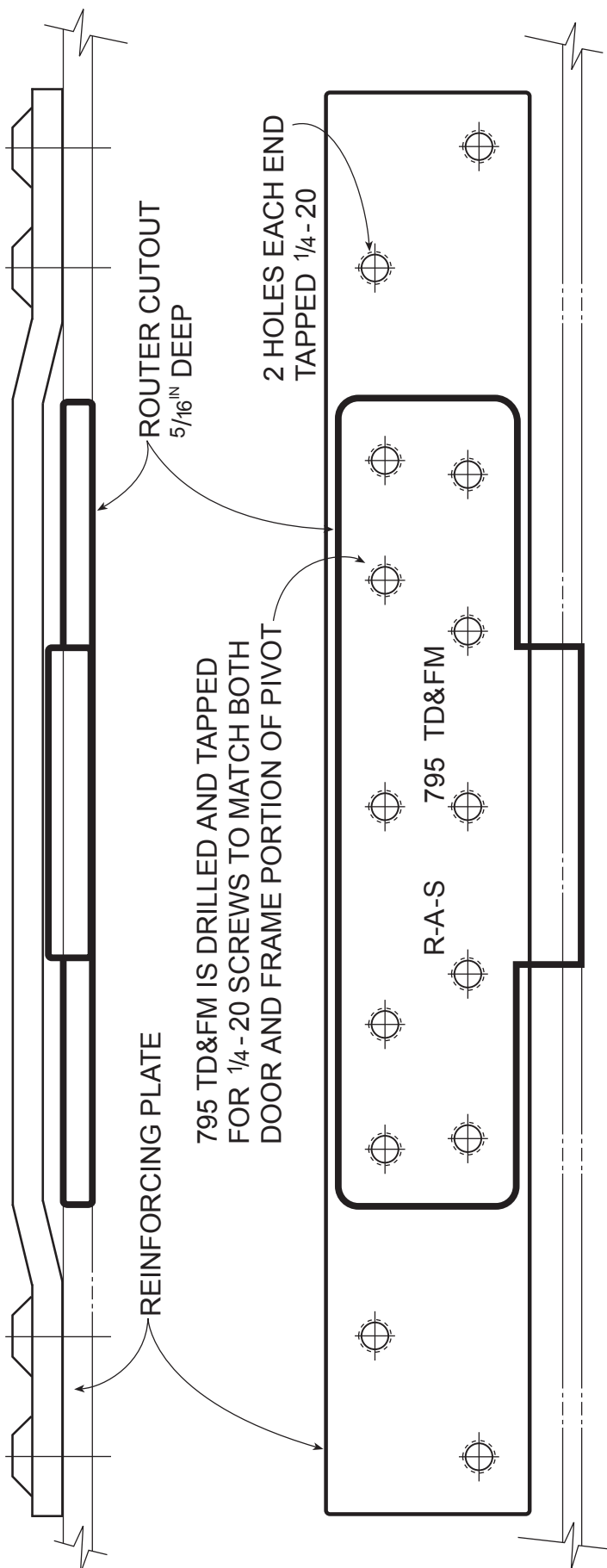
1795 DJ IS AN APPLIED DRILL JIG

WHICH CAN BE USED IF CUTOUT  
IS PREPARED BY OTHER MEANS.

CAN BE USED ON DOOR AND FRAME

TEMPLATES FOR OTHER SET BACKS AVAIL.

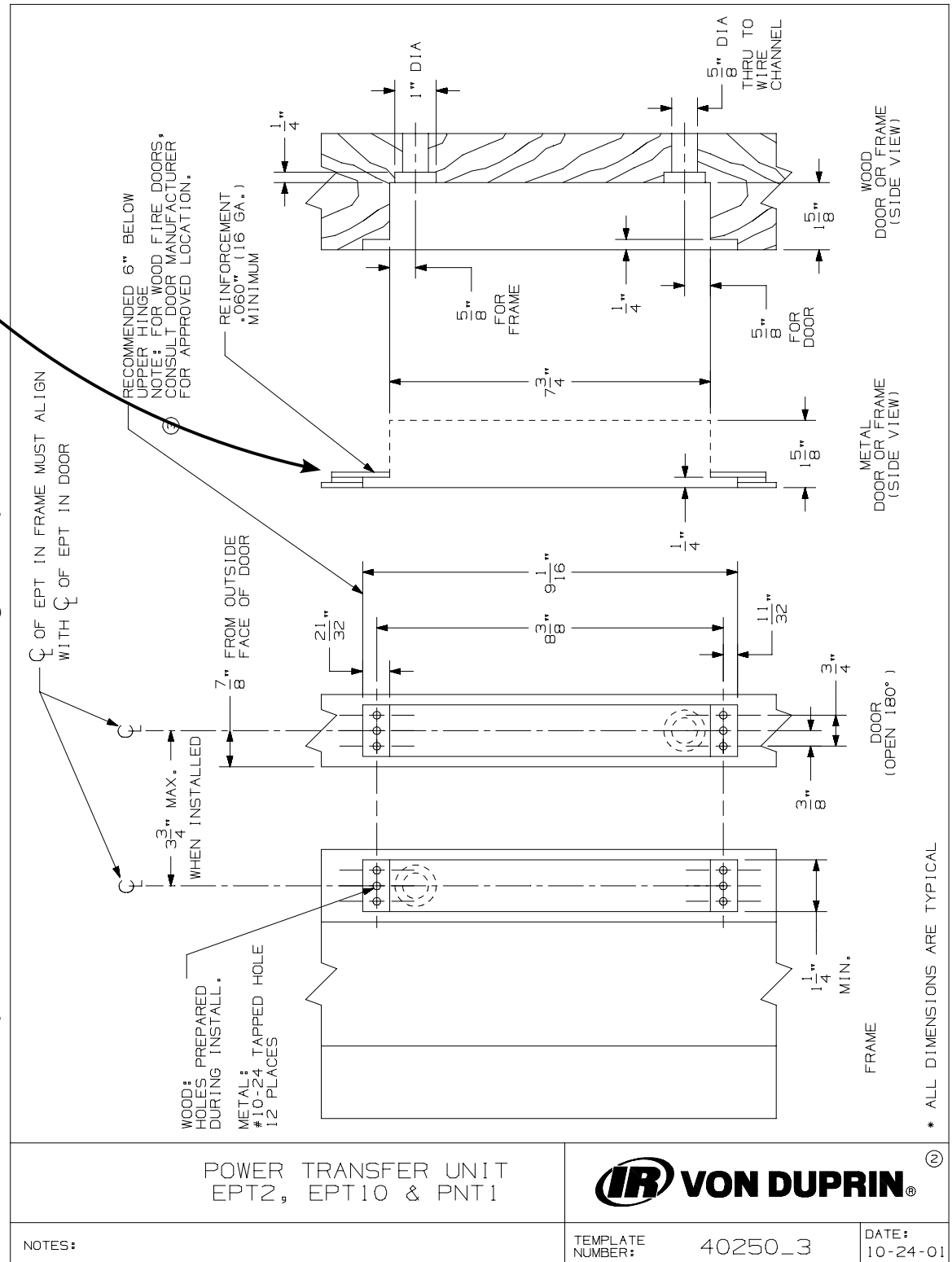
ROUTER BIT DEPTH OF CUT 5/16"



USE 1954-08 ROUTER TEMPLATE AND  
954-08DJ DRILL JIG FOR DOOR AND FRAME.  
USE ROUTER TEMPLATE WITH M 2-10 MASTER FIXTURE FOR DOOR AND  
M 6-10 MASTER FIXTURE FOR FRAME.  
USE (4 EACH) 954-08 REINFORCING PLATE FOR MOUNTING.

954-08  
REINFORCING  
PLATE

NOTE: This template drawing is the property of Ingersoll-Rand.  
See [www.vonduprin.com](http://www.vonduprin.com) for the latest drawing and specifications.



NOTE: USE WITH M 1777 MASTER FIXTURE.

**GLASS BEAD KIT AVAILABLE WHEN REQUIRED**

**APPLICATION PREPARATION**

| SURFACE APPLICATION               | #10-24 TAP - 4 PLACES               |
|-----------------------------------|-------------------------------------|
| 99D TRIM APPLICATION              | 1/4 DIA. THIS SIDE                  |
| SEX BOLT APPLICATION (SEE NOTE 1) | 13/32 DIA. OPPOSITE SIDE - 4 PLACES |

**NOTE 1:** THESE 4 HOLES TO BE PREPARED FOR SURFACE APPLICATION (#10-24 TAP) WHEN USING 696/697 TRIM. DO NOT PREPARE FOR SEX BOLTS

**DETAILED DIMENSIONS AND COMPONENTS:**

- Top Elevation:** Shows overall width and height. Dimensions include 10-24 tap holes, latch case width (min. 1 7/16"), and device height (2 1/4").
- Bottom Elevation:** Shows the device's profile relative to the floor. Dimension: 39 5/8" TO FINISHED FLOOR.
- Side Elevation:** Shows the device's depth and mounting. Dimensions include 1 3/8" minimum latch case width, 1 1/16" hole for ratchet release, and 1/2" dia. hole for ratchet release.
- Top Cross-Section:** Shows the device's internal components and mounting. Dimensions include 1 3/4" total height, 5/8" device height, and 3 3/4" mounting clearance.
- Bottom Cross-Section:** Shows the device's base and reinforcement requirements. Dimensions include 1 1/4" stop height, 7/16" latch case width, and 1 1/8" device height.
- Inside Face of Lock Stile LHR Door:** Shows the device's internal components and mounting. Dimensions include 1 1/4" undercut required for this device, 1/4" device height, and 1 1/8" threshold application.

**REINFORCING REQUIRED**

**LATCH CASE & DEVICE**

**\* 1/4 UNDERCUT REQUIRED FOR THIS DEVICE**

**365-A OR 304-L STRIKE APPLICATION**

**THRESHOLD APPLICATION**

**PREP AT BOTTOM SAME AS TOP**

**LHR SHOWN RHR OPPOSITE**

**NOTE:** IT IS RECOMMENDED THE MOUNTING HOLES BE PREPARED IN THE FIELD

**FOR OUTSIDE TRIM PREPARATION, WHEN REQUIRED SEE ADDITIONAL TRIM TEMPLATE**

**FRAME AT TOP**

**\* 10-24 TAP 2 HOLES**

**DEVICE APPLICATION SCHEDULE**

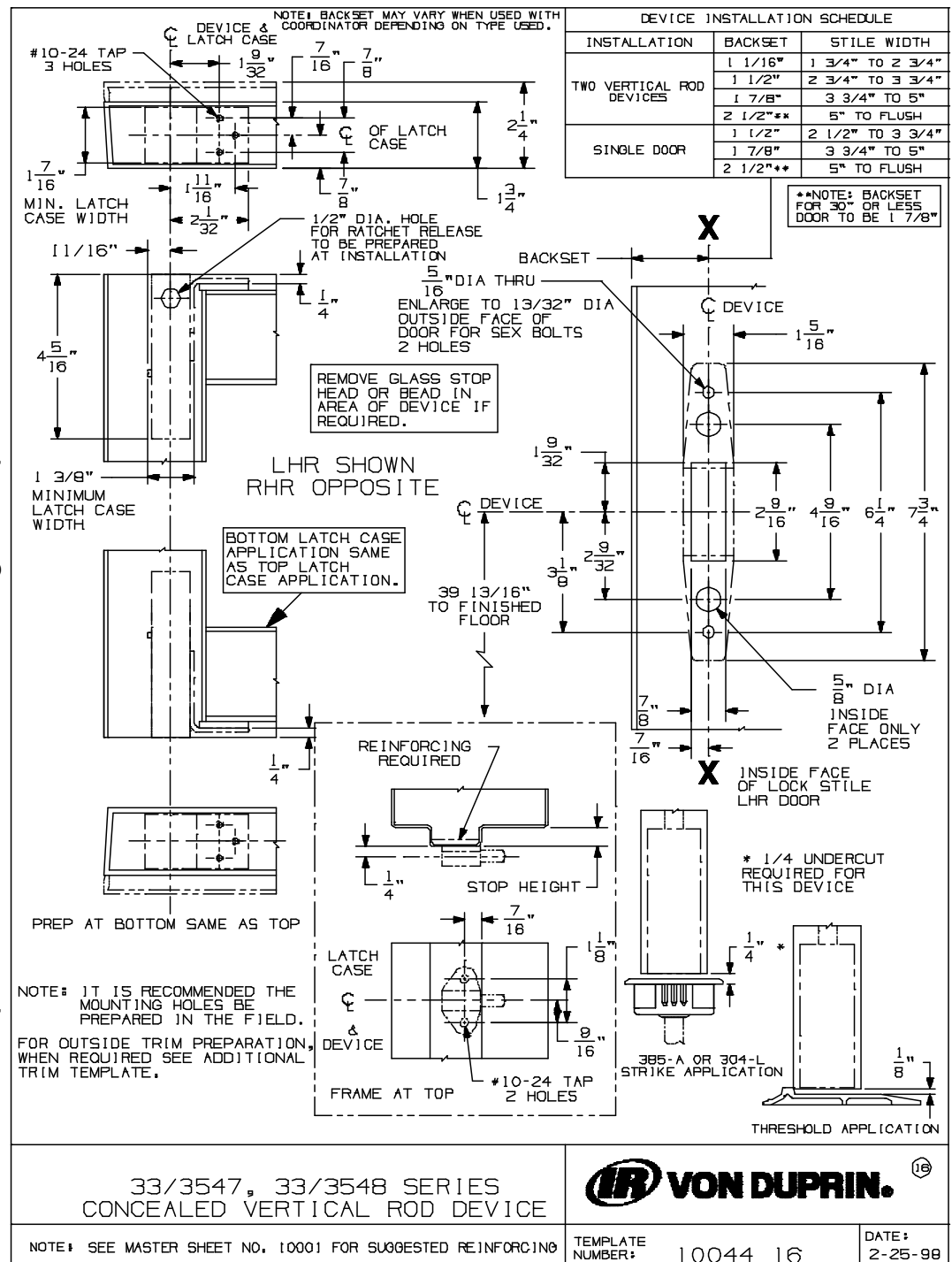
| INSTALLATION                         | MIN. STILE BACKSET       |
|--------------------------------------|--------------------------|
| TWO VERT. ROD DEVICES OR SINGLE DOOR | 3 11/16" Z 3 3/16"       |
| VERTICAL ROD & MORTISE DEVICE        | SEE TEMP. 10305 Z 2 3/4" |

**BOTTOM LATCH CASE APPLICATION SAME AS TOP LATCH CASE APPLICATION**

R-A-S ROUTER DRILL JIG TEMPLATE PART # :  
177 VD1G

NOTE: USE WITH M 1777 MASTER FIXTURE.

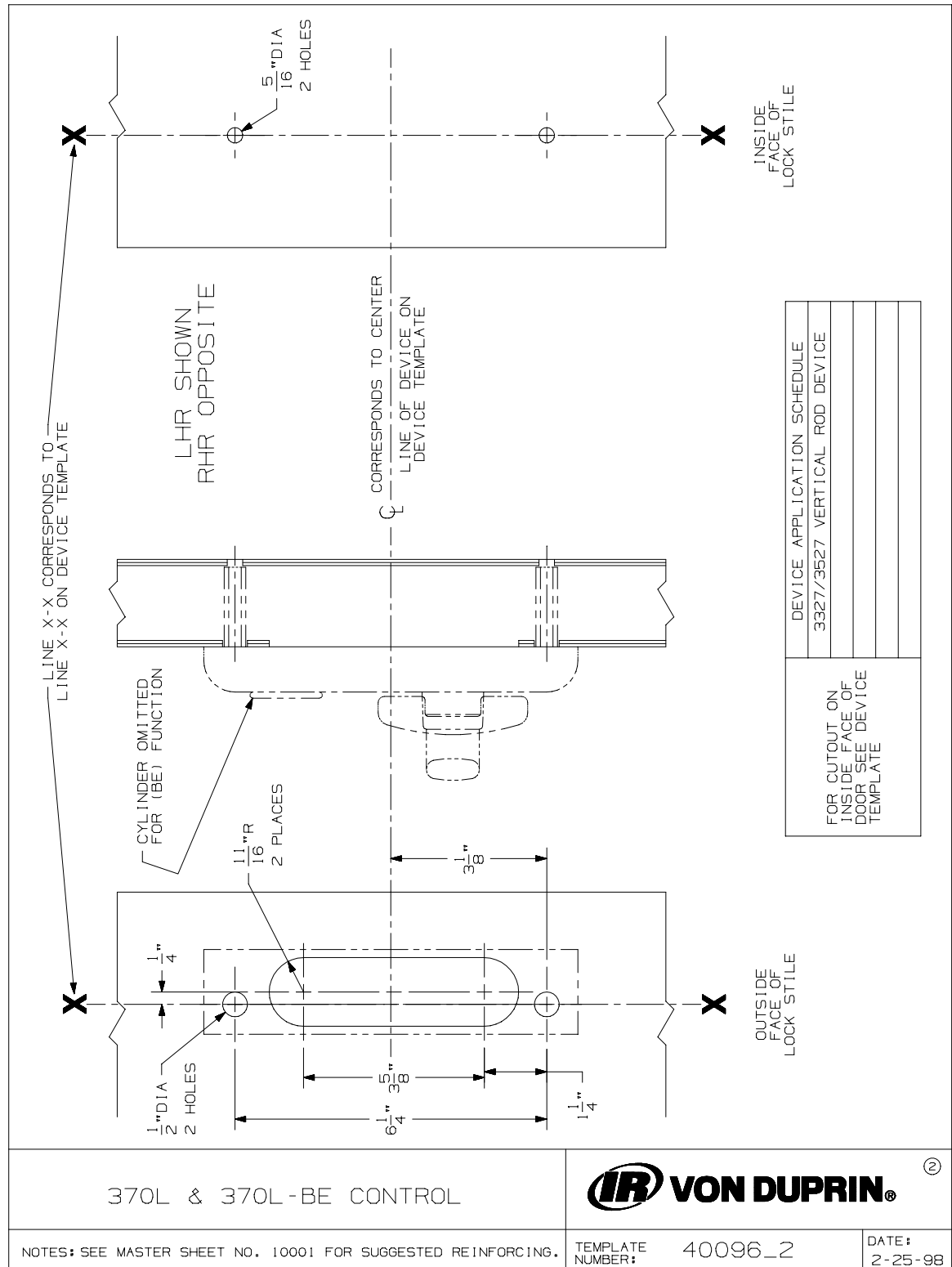
NOTE: This template drawing is the property of Ingersoll-Rand. See www.vonduprin.com for the latest drawing and specifications.



R-A-S ROUTER DRILL JIG TEMPLATE PART # :  
177 VD1NL (LEFT HAND) AND  
177 VD1NR (RIGHT HAND)

NOTE: USE WITH M 1777 MASTER FIXTURE.

NOTE: This template drawing is the property of Ingersoll-Rand.  
See [www.vonduprin.com](http://www.vonduprin.com) for the latest drawing and specifications.



NOTE: USE WITH M 1777 MASTER FIXTURE.

**(B)** VERT. ROD & LATCH CASE CORRESPONDS TO  
VERT. ROD & LATCH CASE ON DEVICE TEMPLATE

**(B)** VERTICAL ROD & LATCH CASE

LHR SHOWN  
RHR OPPOSITE

C OF THUMBTURN

INSIDE FACE OF LOCK STILE

OUTSIDE FACE OF LOCK STILE

TO FINISHED FLOOR

53 1/2"

1 1/16" DIA 2 HOLES

1 1/16" R 2 PLACES

7/16"

1/4"

3"

1 7/8"

1 1/4"

C CONTROL

IT IS RECOMMENDED THE MOUNTING HOLES BE PREPARED IN THE FIELD.

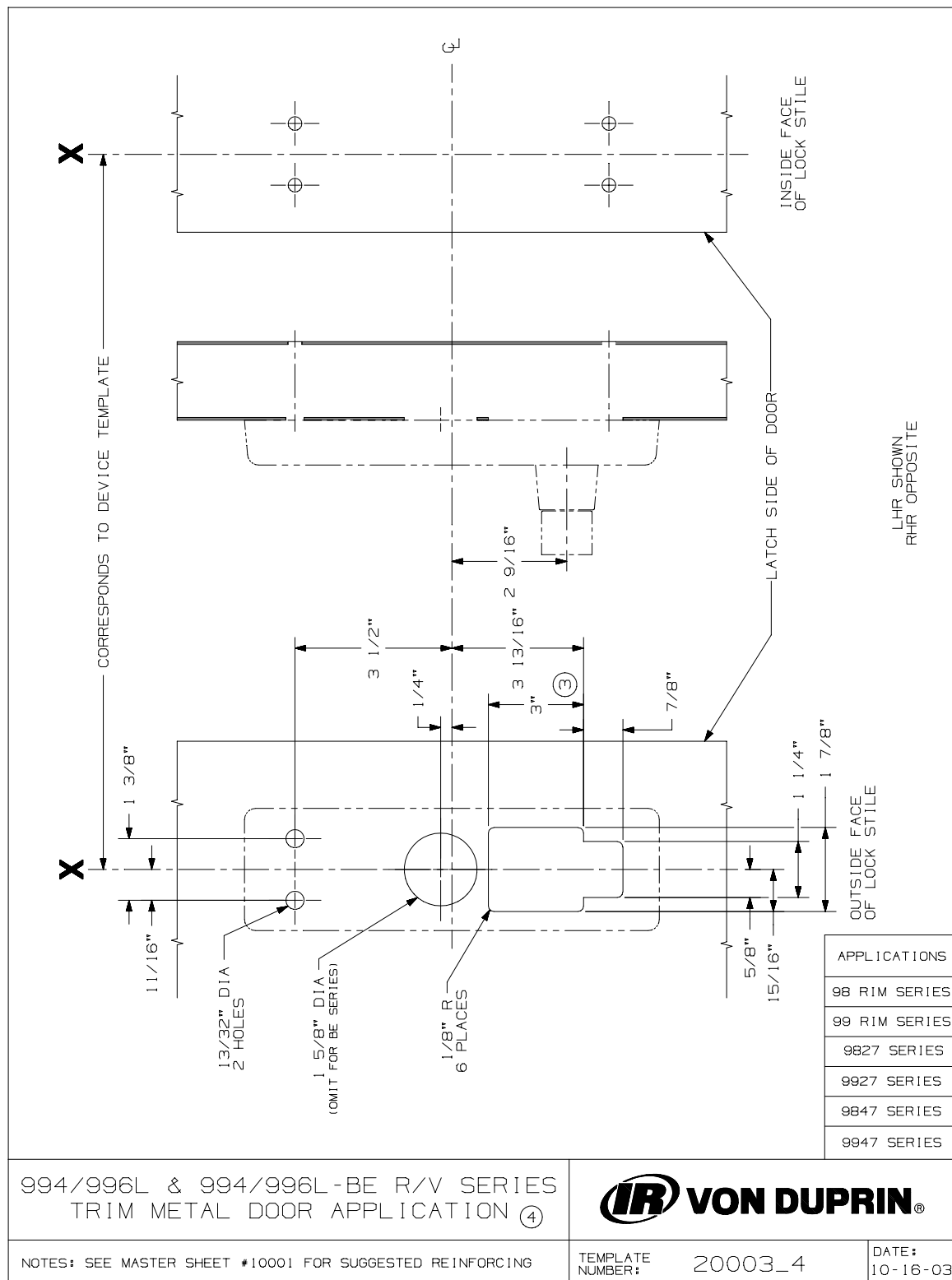
| DEVICE APPLICATION SCHEDULE       |
|-----------------------------------|
| 5547/5547-F VERT. ROD DEVICE      |
| 8847-F VERT. ROD DEVICE           |
| * 3347/3547 VERT. ROD DEVICE      |
| 3347-F/3547-F VERT. ROD DEVICE    |
| * 3347A/3547A VERT. ROD DEVICE    |
| 3347A-F/3547A-F VERT. ROD DEVICE  |
| 9847/9947 VERT. ROD DEVICE        |
| 9847-F/9947-F VERTICAL ROD DEVICE |

**(B)** NOT TO BE USED WITH 1 1/16" LATCH CASE BACKSET ON BULLNOSE EDGE DOORS WITH WEATHERSTRIP CHANNEL.

R-A-S ROUTER DRILL JIG TEMPLATE PART # :  
177 VD1TL (LEFT HAND) AND  
177 VD1TR (RIGHT HAND)

NOTE: USE WITH M 1777 MASTER FIXTURE.

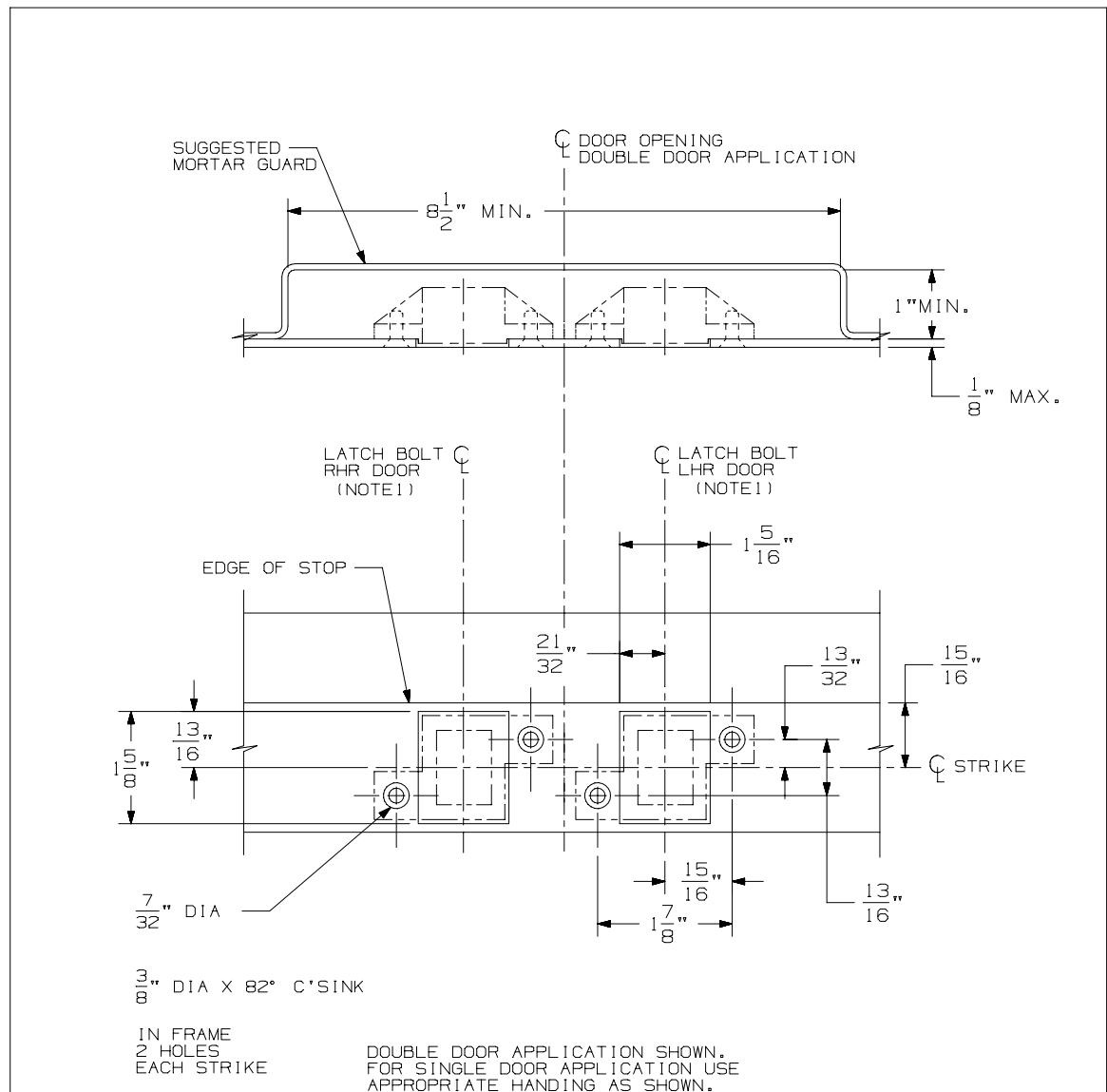
NOTE: This template drawing is the property of Ingersoll-Rand.  
See [www.vonduprin.com](http://www.vonduprin.com) for the latest drawing and specifications.



USE 1954-VD10 ROUTER TEMPLATE AND  
954VD10DJ DRILL JIG FOR FRAME.

NOTE: USE ROUTER TEMPLATE WITH  
M 6-10 MASTER FIXTURE FOR FRAME.

NOTE: This template drawing is the property of Ingersoll-Rand.  
See [www.vonduprin.com](http://www.vonduprin.com) for the latest drawing and specifications.



| DEVICE APPLICATION SCHEDULE         |
|-------------------------------------|
| 33/3547 & 33/3547-F SERIES DEVICE   |
| 98/99/47 & 98/99/47-F SERIES DEVICE |
| 5547/5547 WDC SERIES                |
| 33/3547A & 33/3547A-F SERIES DEVICE |
| 94/9547 SERIES DEVICE               |

- NOTES: 1. SEE DEVICE TEMPLATE FOR LOCATION OF LATCH BOLT.
2. IF DEVICE IS TO BE MOUNTED ON WOOD DOORS, SEE WOOD DOOR TEMPLATE FOR LATCH BOLT LOCATION.

⑨

338 STRIKE FOR  
HOLLOW METAL FRAME PREPERATION



NOTE: SEE MASTER SHEET NO. 10001 FOR SUGGESTED REINFORCING

TEMPLATE NUMBER: 30038\_9

DATE: 07-26-04

## SECTION E - TOP OFFSET PIVOT

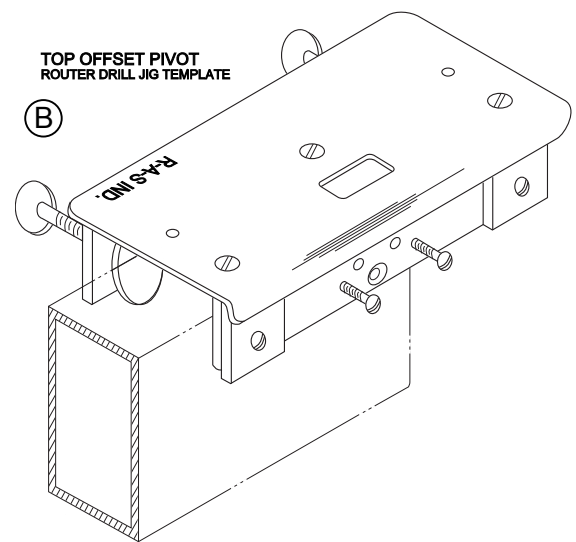
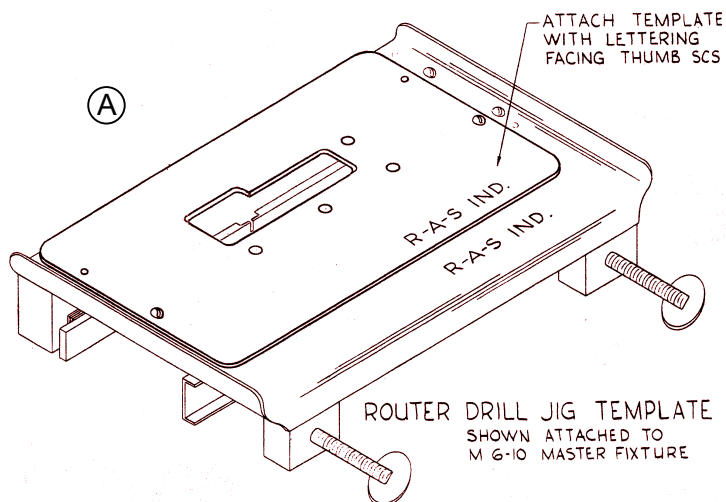
### REINFORCING PLATES - ROUTER TEMPLATES - DRILL JIGS

| ROUTER TEMPLATE<br>OR DRILL JIG | DESCRIPTION                                   | MISC.<br>INFO.                 | REINFORCING<br>PLATE | PAGE |
|---------------------------------|-----------------------------------------------|--------------------------------|----------------------|------|
| RIX 1025 AT                     | ROUTER TEMPLATE                               |                                | RIX 25A              | E-2  |
| RIX 1025 AJ                     | DRILL JIG                                     |                                |                      |      |
| 1412                            | ROUTER DRILL JIG<br>TEMPLATE<br>SEE PAGE B-10 |                                | NOT<br>REQUIRED      | E-4  |
| 1422                            |                                               |                                |                      |      |
| 1417                            |                                               | JACKSON<br>SEE NOTE<br>KAWNEER |                      | E-5  |
| 1437                            |                                               |                                |                      |      |
| 1442                            |                                               |                                |                      | E-6  |
| 1407 PA                         |                                               |                                |                      |      |
| 1447                            |                                               | U.S. ALUM                      |                      | E-7  |
| 1432                            |                                               | HOWMET                         |                      |      |

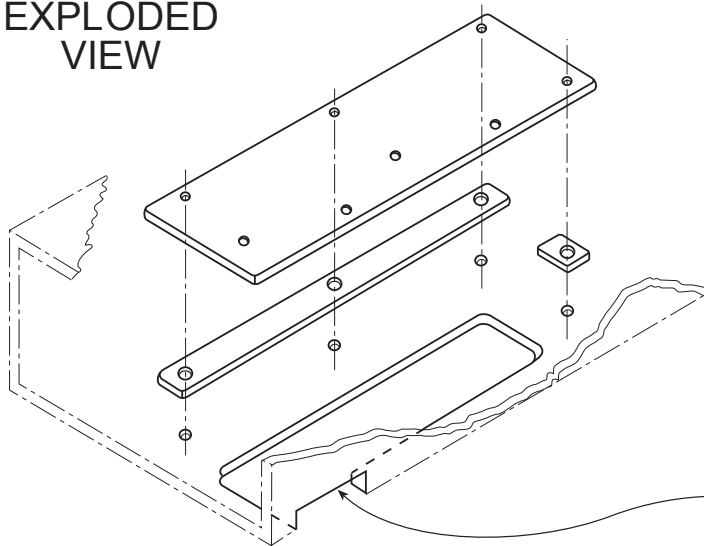
SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING

NOTE - OTHER MANUFACTURERS USING JACKSON TOP OFFSET PIVOT  
ALUMILINE - REBCO - ARCH ALUMINUM

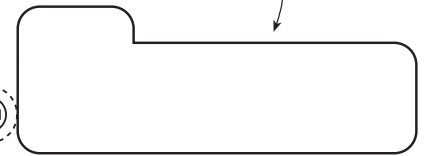
NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.



**EXPLODED VIEW**



ROUTER TEMPLATE 1025T RH  
SHOWN AS IT WOULD  
APPEAR ON INVERTED  
HEADER (1/2 SIZE)

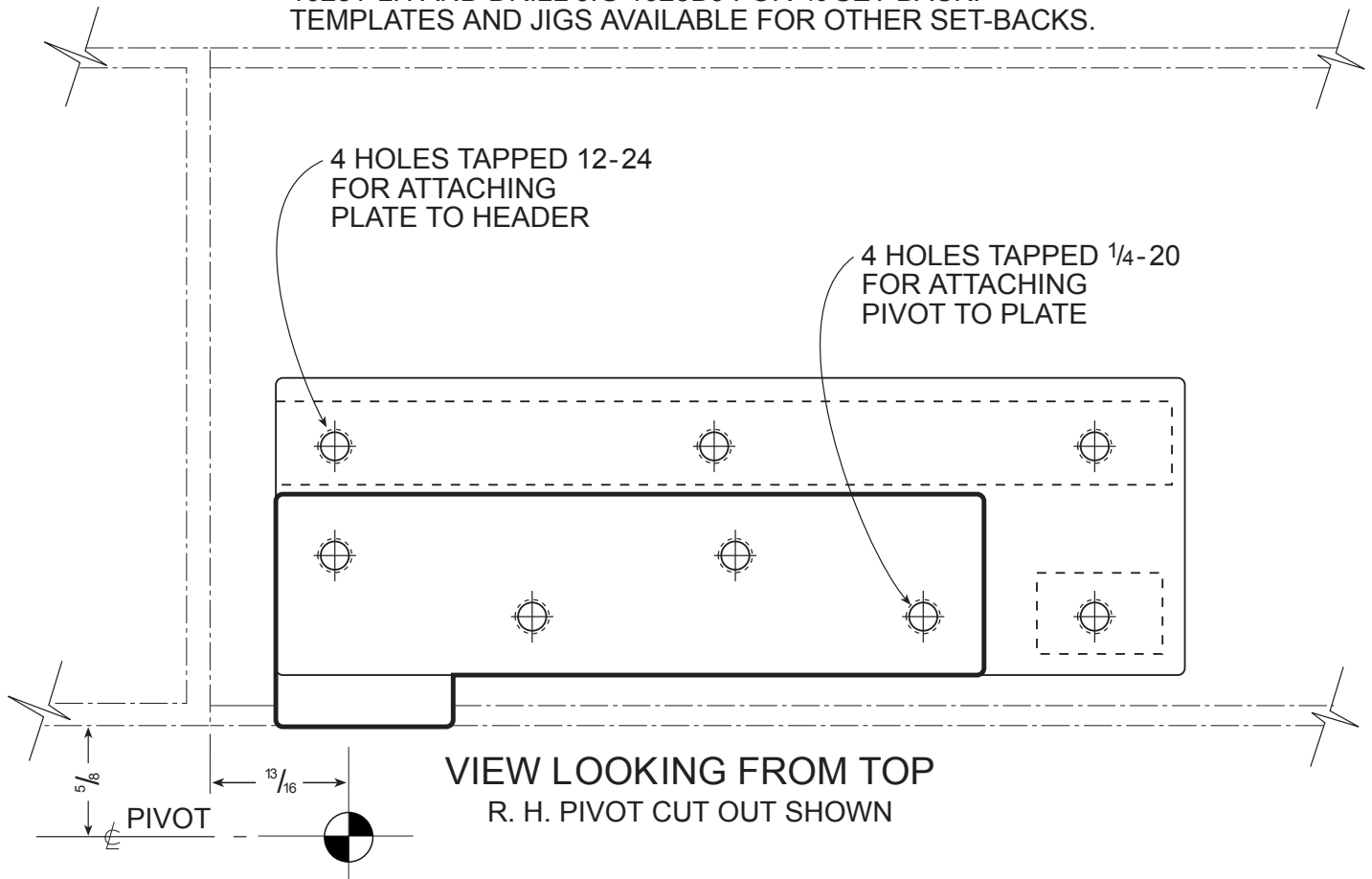


STOP LOCATES  
CUT OUT FROM  
END OF TUBE

TOP OFF-SET PIVOT CUT OUT IN DOOR HEADER  
USE R-A-S ROUTER TEMPLATE 1025T RH OR  
1025T LH AND DRILL JIG 1025DJ FOR 1/8 SET-BACK.  
TEMPLATES AND JIGS AVAILABLE FOR OTHER SET-BACKS.

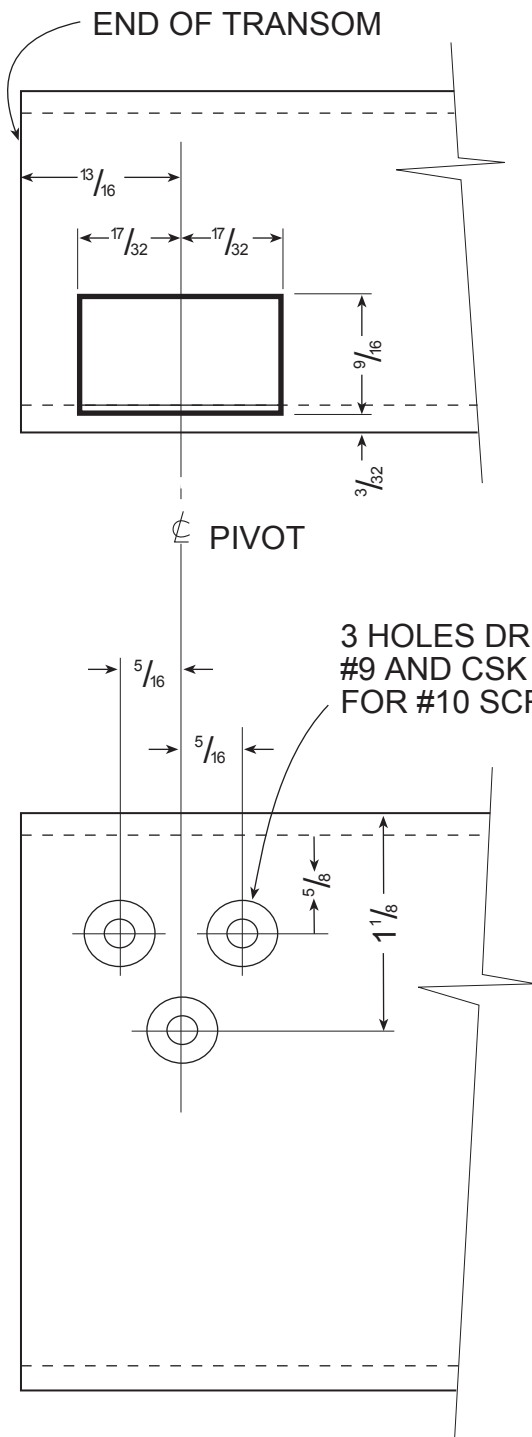
4 HOLES TAPPED 12-24  
FOR ATTACHING  
PLATE TO HEADER

4 HOLES TAPPED 1/4-20  
FOR ATTACHING  
PIVOT TO PLATE

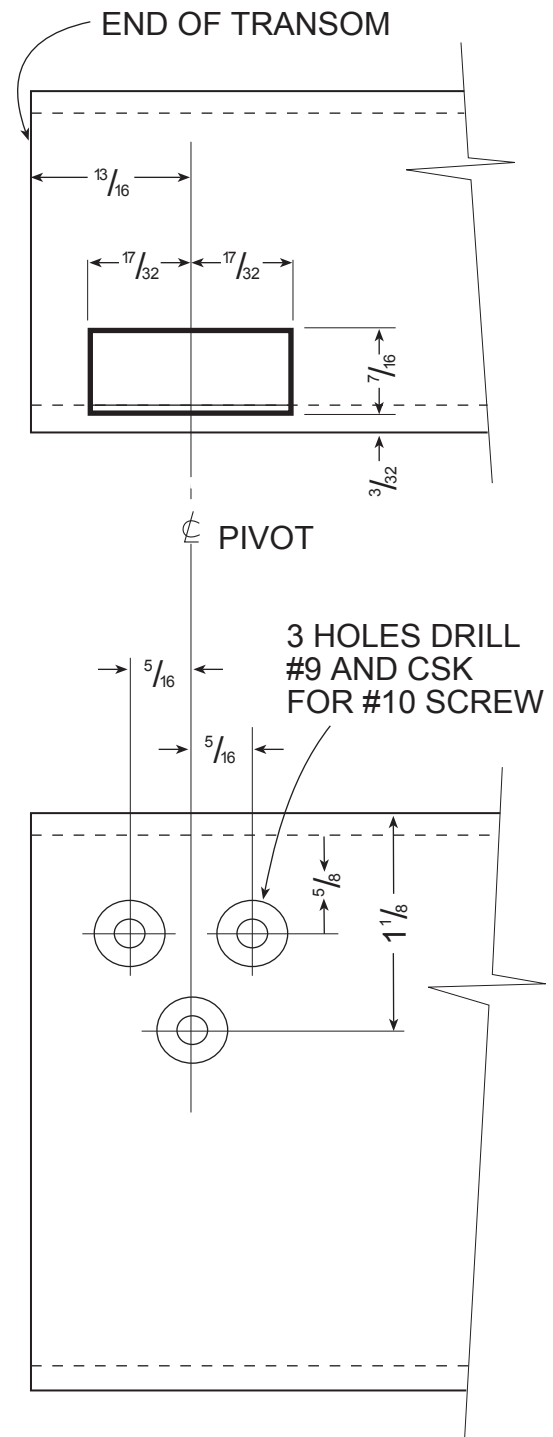
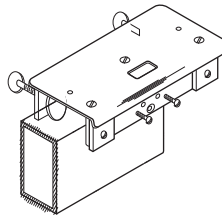


**VIEW LOOKING FROM TOP**  
R. H. PIVOT CUT OUT SHOWN

SEE PAGE B-10

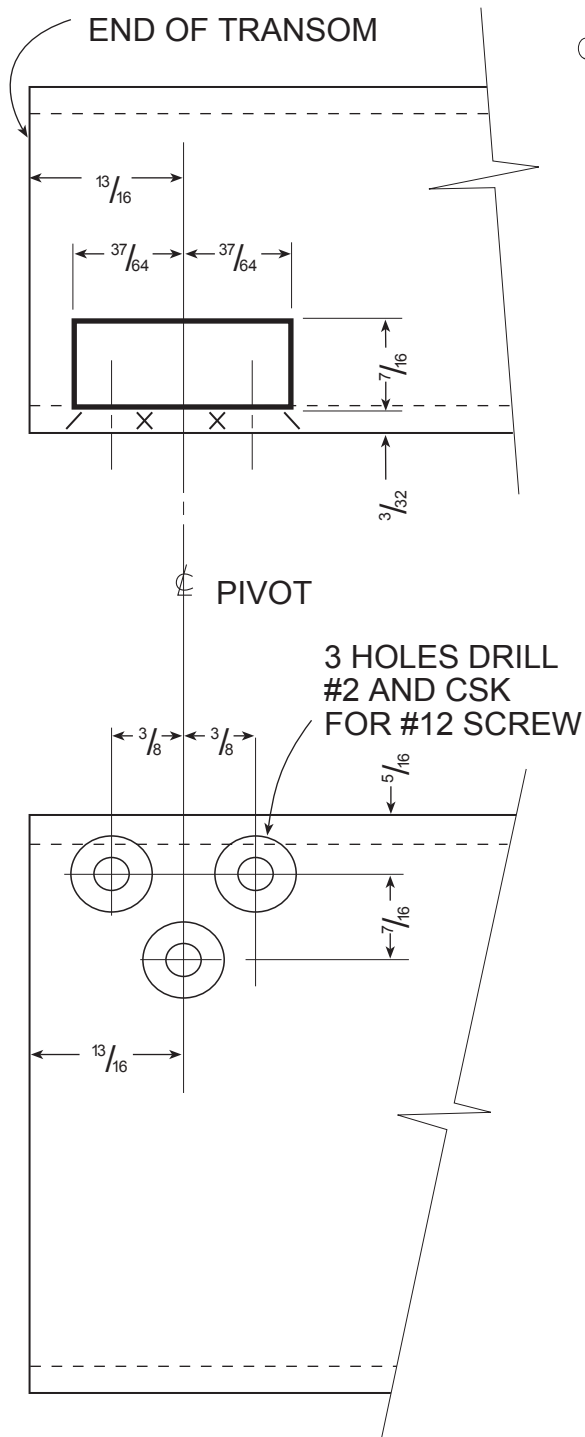


**1412 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
ALDORA

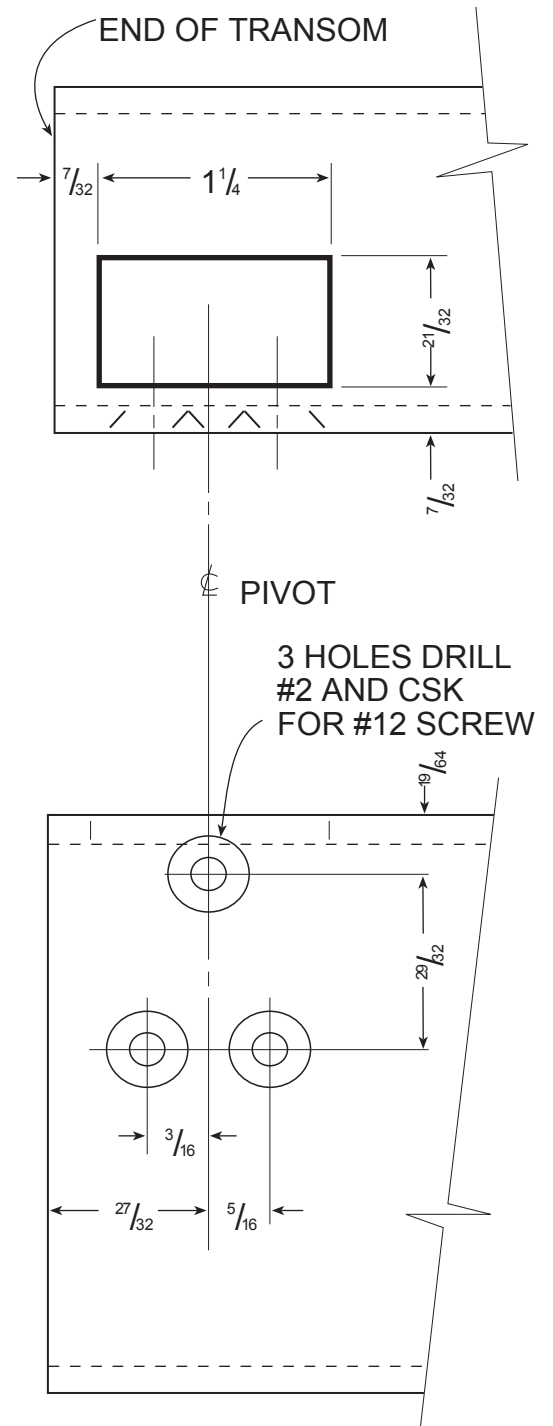
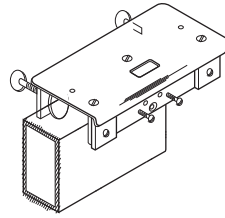


**1422 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
AMARLITE

SEE PAGE B-10

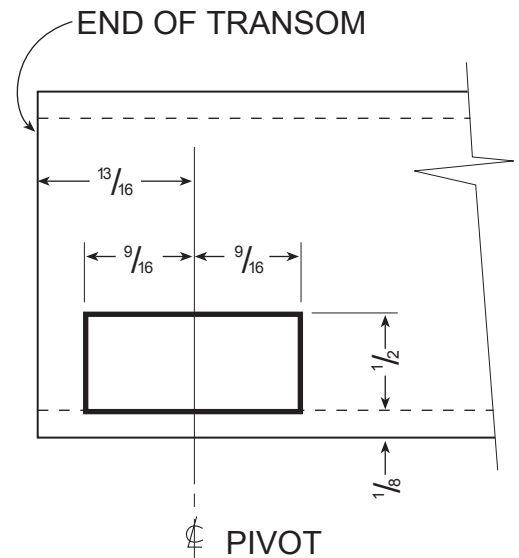
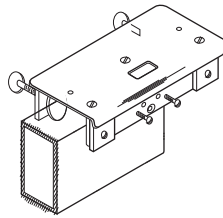
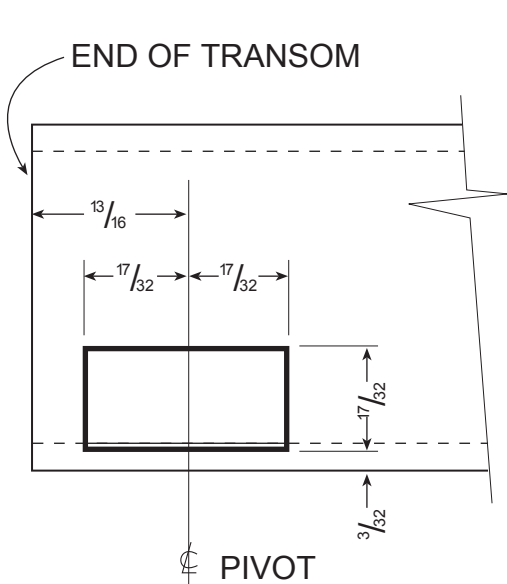


**1417 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
JACKSON  
SEE NOTE PAGE E-1

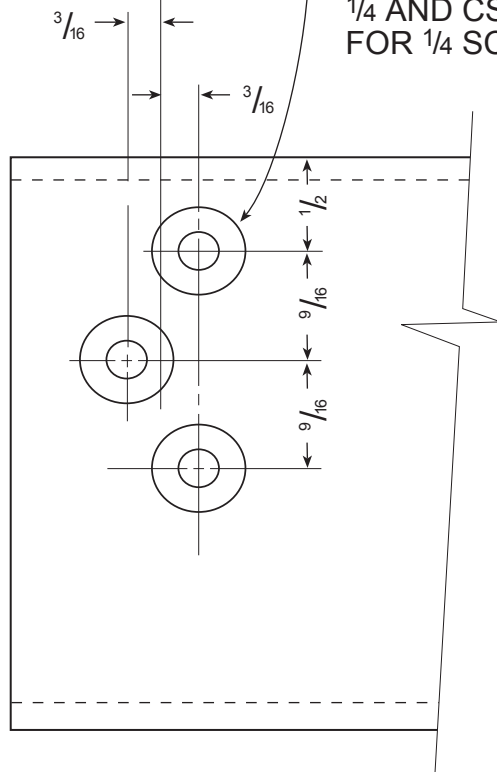


**1437 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
KAWNEER

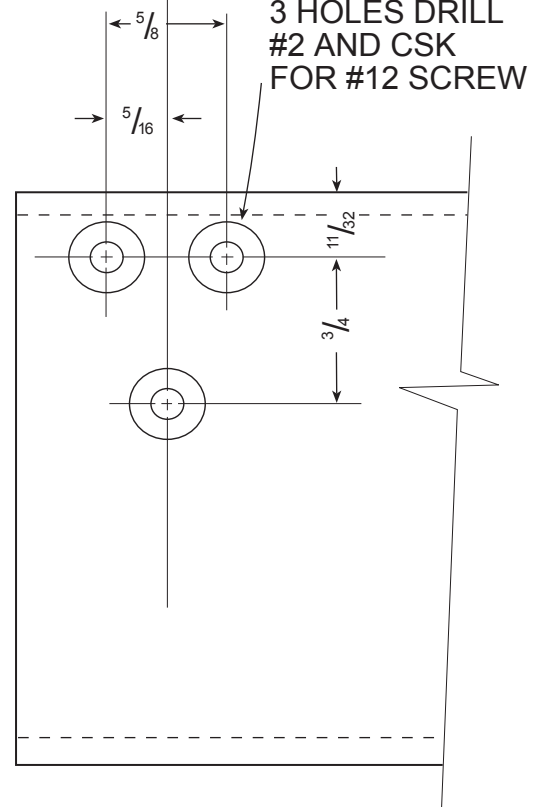
SEE PAGE B-10



3 HOLES DRILL  
 $1/4$  AND CSK  
FOR  $1/4$  SCREW



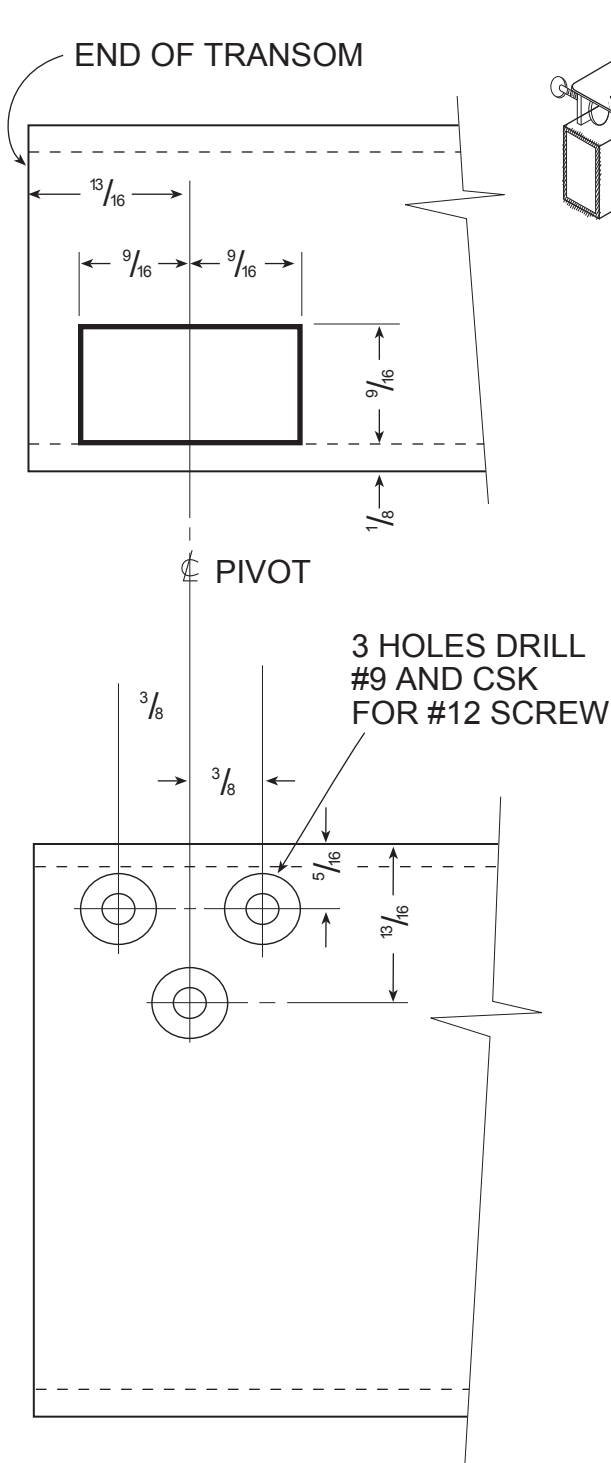
3 HOLES DRILL  
#2 AND CSK  
FOR #12 SCREW



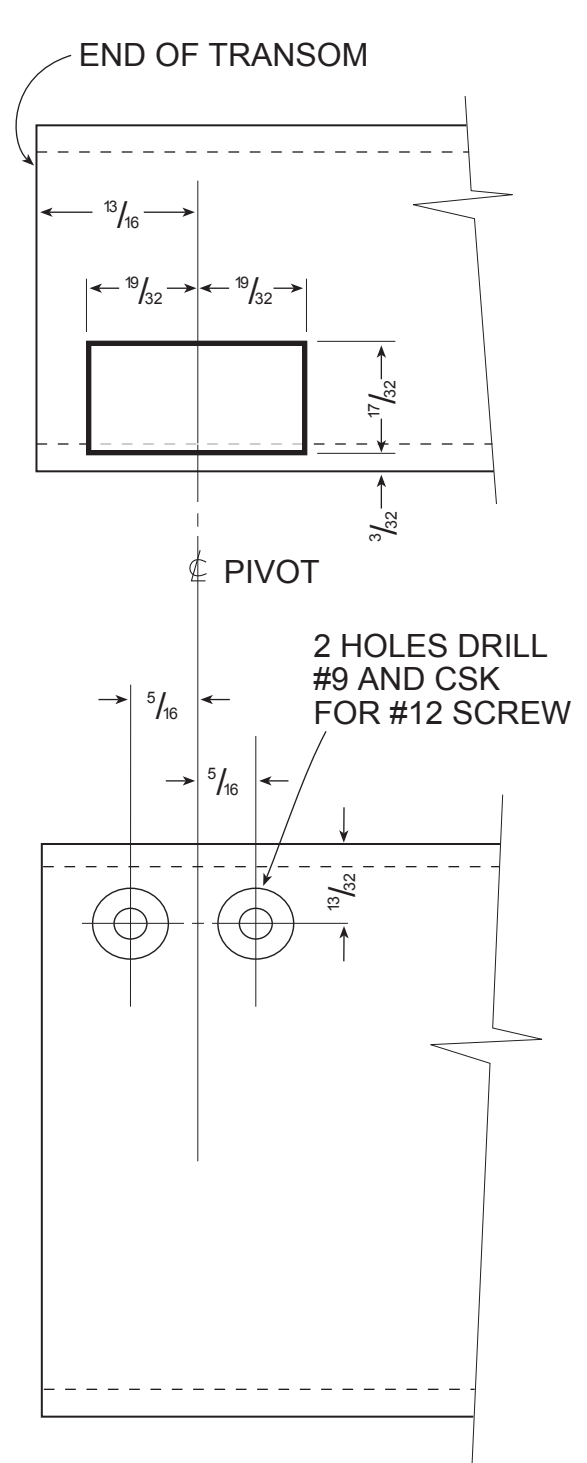
**1442 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
EXTRUDART

**1407-PA ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
PITTCO

SEE PAGE B-10



**1432 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
HOWMET VISTAWALL



**1447 ROUTER DRILL  
JIG TEMPLATE**  
CUT OUT & HOLE PATTERN  
U. S. ALUMINUM

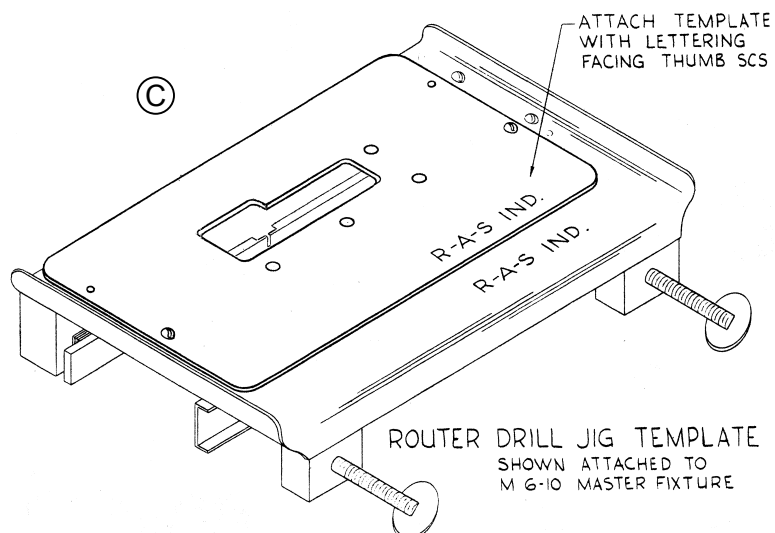
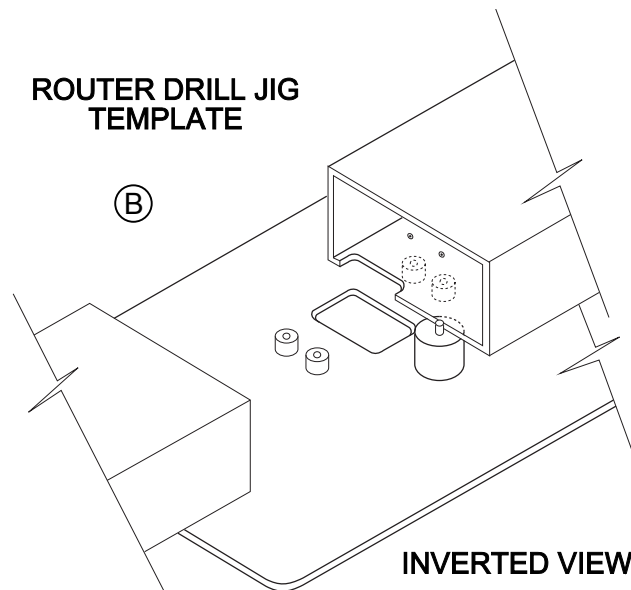
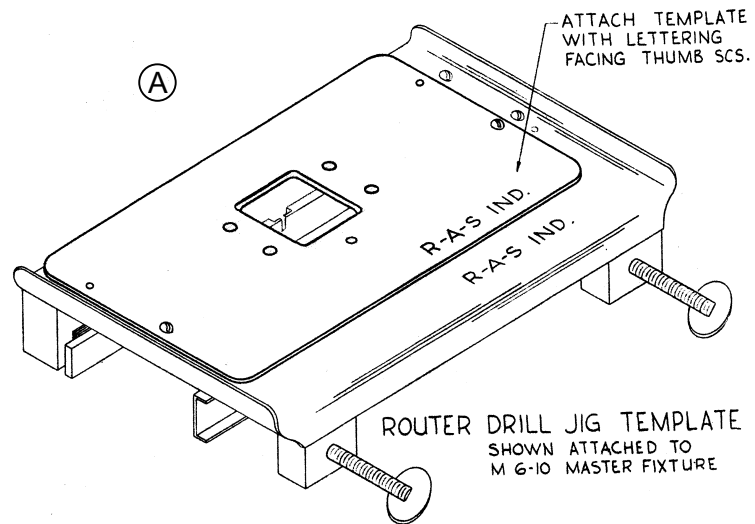
**SECTION F - BOTTOM OFFSET PIVOT**  
**REINFORCING PLATES - THRESHOLD CLIPS- ROUTER TEMPLATES - DRILL JIGS**

| ROUTER<br>TEMPLATE<br>OR DRILL JIG | DESCRIPTION                  | USE<br>WITH | MISC.<br>INFO.    | REINFORCING<br>PLATE OR CLIP | PAGE         |
|------------------------------------|------------------------------|-------------|-------------------|------------------------------|--------------|
| 1203                               | ROUTER DRILL<br>JIG TEMPLATE | M 6-10      |                   | 203                          | F-2          |
| 1207                               |                              |             |                   | 207                          | NOT<br>SHOWN |
| 1302 TJ                            |                              |             | ALUMILINE         |                              | F-3          |
| 1307 TJ                            |                              |             | PITTCO            |                              |              |
| 1317 TJ                            |                              |             | TUBELITE          |                              |              |
| 1337 T                             | ROUTER TEMPLATE              | M 6-10      | UNIVERSAL         |                              |              |
| 1322 TJ                            | ROUTER DRILL<br>JIG TEMPLATE | M 6-10      | AMARLITE          |                              | F-4          |
| 1327 T                             | ROUTER TEMPLATE              | M 6-10      | AMARLITE          |                              |              |
| 1327 DJ                            | DRILL JIG                    | APPLIED     | SPLINE            |                              |              |
| 1312 TJ                            | ROUTER DRILL<br>JIG TEMPLATE | M 6-10      | ALDORA            |                              |              |
| 1309 TJ                            |                              |             | U.S. ALUM.        |                              |              |
| 1332 TJ                            |                              |             |                   |                              | F-5          |
| 1337 TJ - 1337 BTJ                 | ROUTER DRILL<br>JIG TEMPLATE | M 6-10      | KAWNEER           |                              |              |
| 1337 DJ                            | DRILL JIG                    | APPLIED     |                   |                              |              |
| 1337 BDJ                           |                              |             |                   |                              |              |
| 1317 TJ                            | ROUTER DRILL<br>JIG TEMPLATE | M 6-10      | JACKSON           |                              | F-5A         |
| 1319 TJ                            |                              |             |                   |                              |              |
| 1321 TJ                            |                              |             |                   |                              |              |
| 1325 DJ                            | DRILL JIG                    | APPLIED     | JACKSON           |                              | discontinued |
| 1326 DJ                            |                              |             |                   |                              |              |
| 1320 DJ                            | DRILL JIG                    |             | THRESHOLD<br>CLIP | 320                          | F-6 & F-6A   |

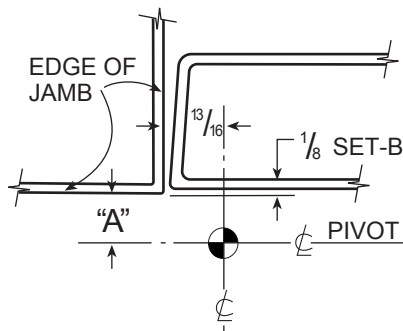
NOTE - SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING  
M 6-10 APPLICATION SEE PAGES A-1, A-2 AND A-3.

NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.

NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.



# 203 REINFORCING PLATE BOTTOM OFFSET PIVOT FRAME PORTION

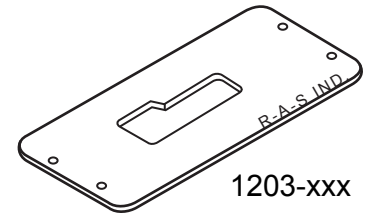


FOLLOWING TEMPLATES & JIGS AVAILABLE  
DIMENSION "A"

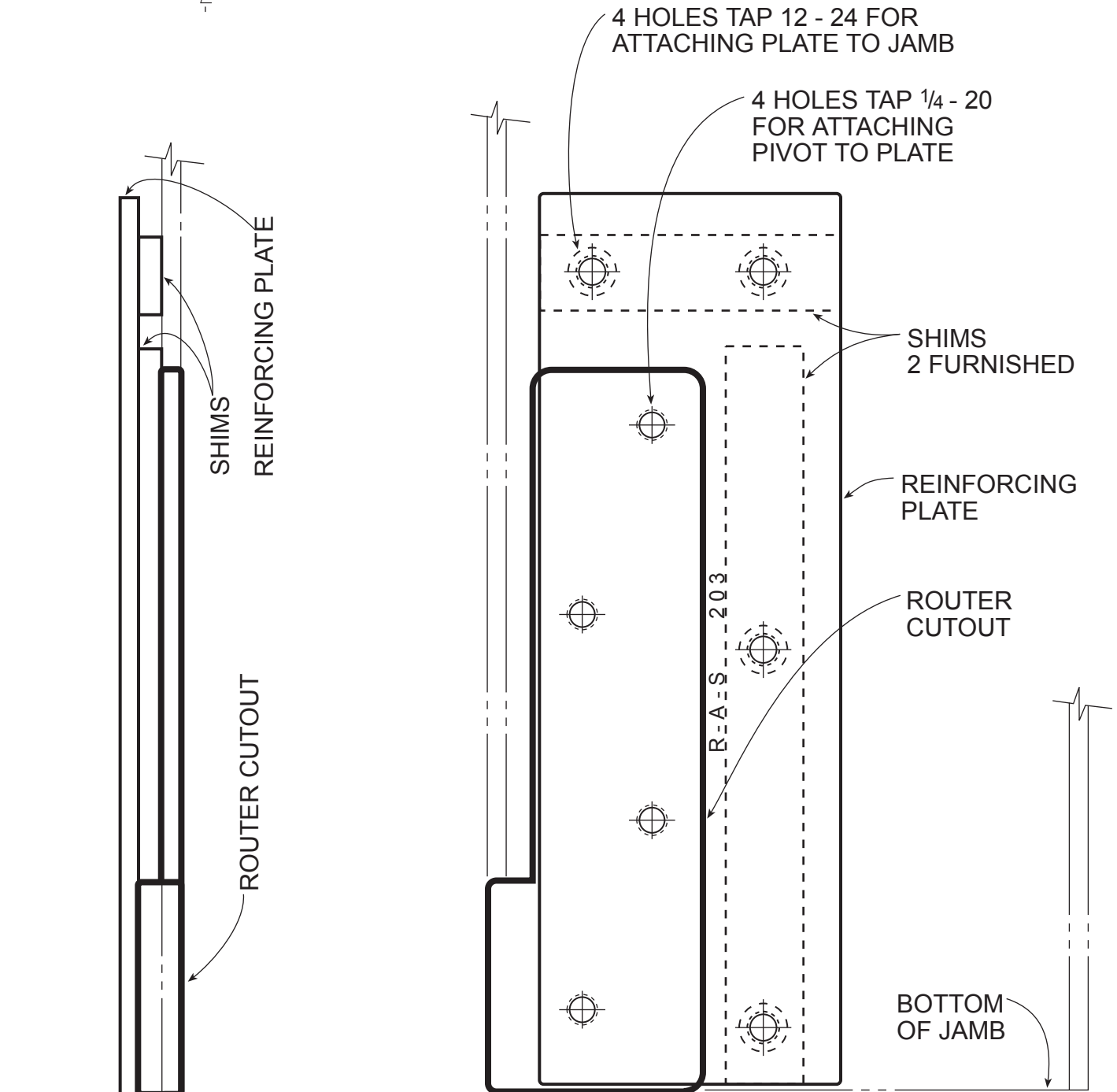
1203F IS FOR 1/8 SET BACK 5/8"  
1203FF IS FOR FLUSH DOOR 3/4"  
1203FT IS FOR 3/16 SET BACK 9/16"

1203DJ IS AN APPLIED DRILL JIG  
WHICH IS USED AFTER CUT-OUT.

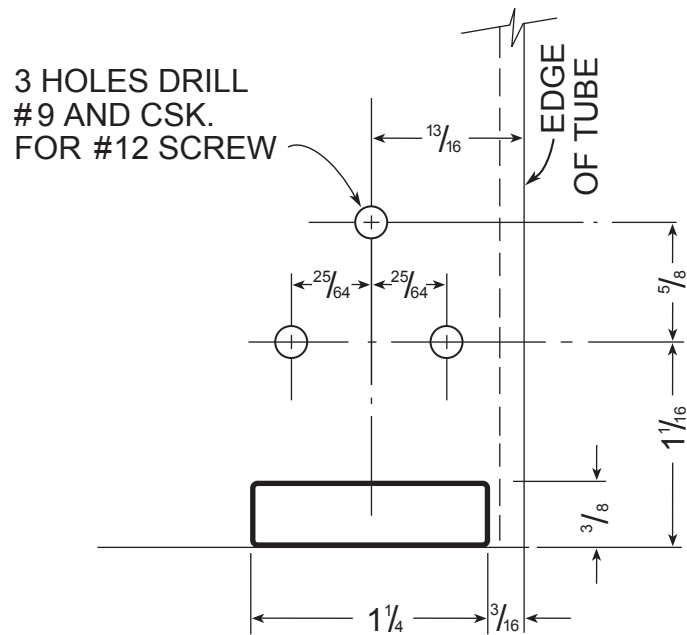
RIGHT HAND PIVOT SHOWN  
TEMPLATES FOR OTHER SET BACKS AVAILABLE  
ROUTER BIT DEPTH OF CUT 5/16"



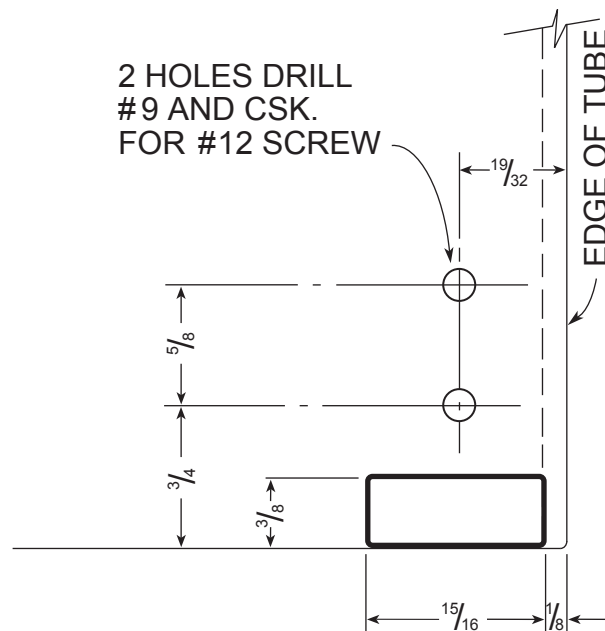
1203-xxx



**BOTTOM OFFSET PIVOT  
OR THRESHOLD CLIP  
USE 1300 SERIES WITH M 6-10**

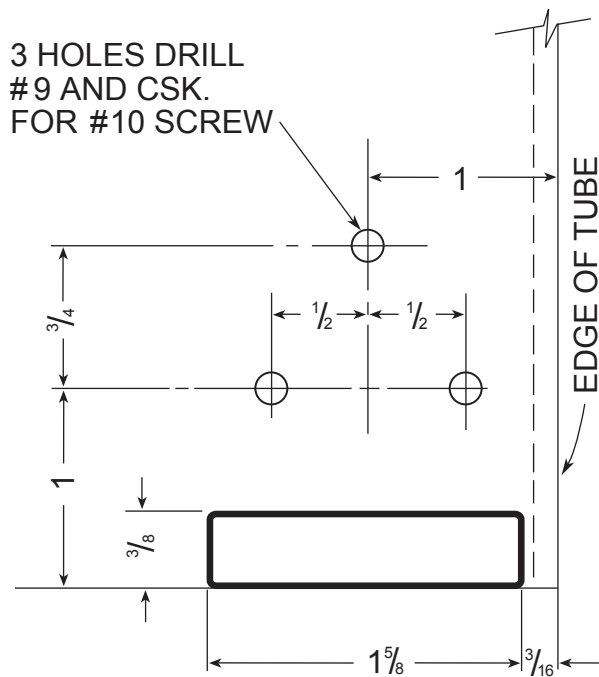


**1307 T J**  
ROUTER DRILL JIG TEMPLATE  
PITTCO

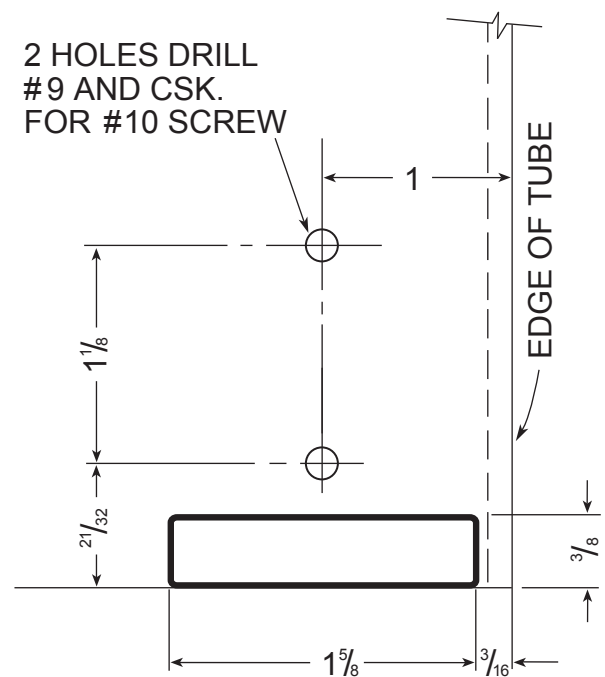


**1318 T J**  
ROUTER DRILL JIG TEMPLATE  
TUBELITE

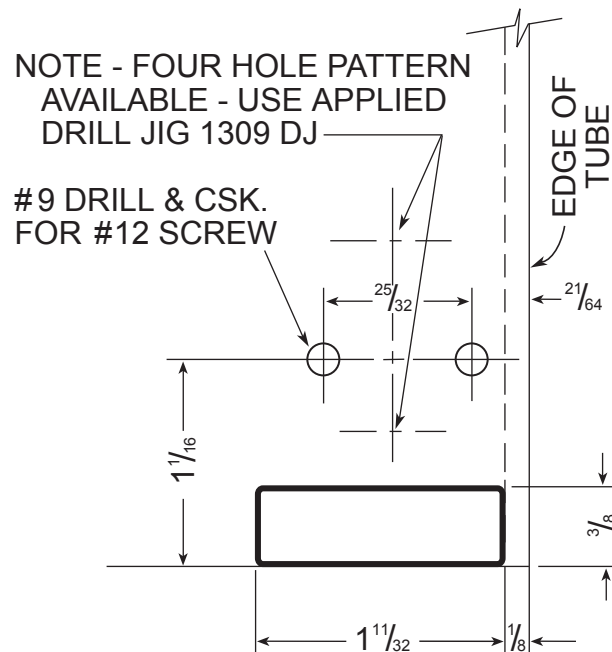
**BOTTOM OFFSET PIVOT  
OR THRESHOLD CLIP  
USE 1300 SERIES WITH M 6-10**



**1322 T J**  
ROUTER DRILL JIG TEMPLATE  
AMARLITE

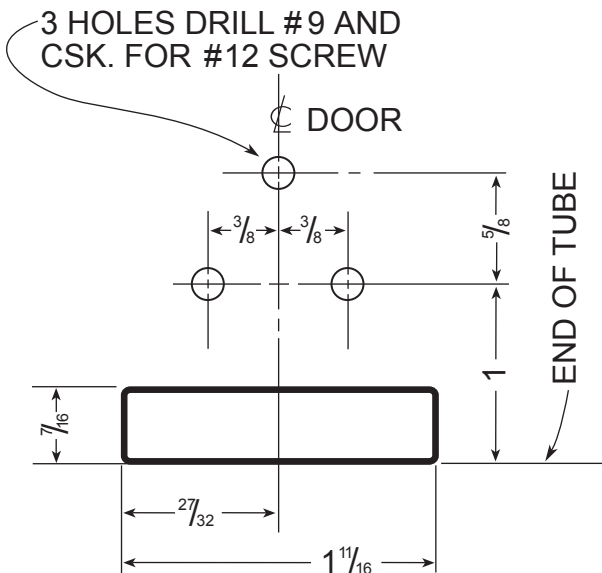


**1327 T** ROUTER TEMP.  
**1327DJ** DRILL JIG  
AMARLITE SPLINE TUBE

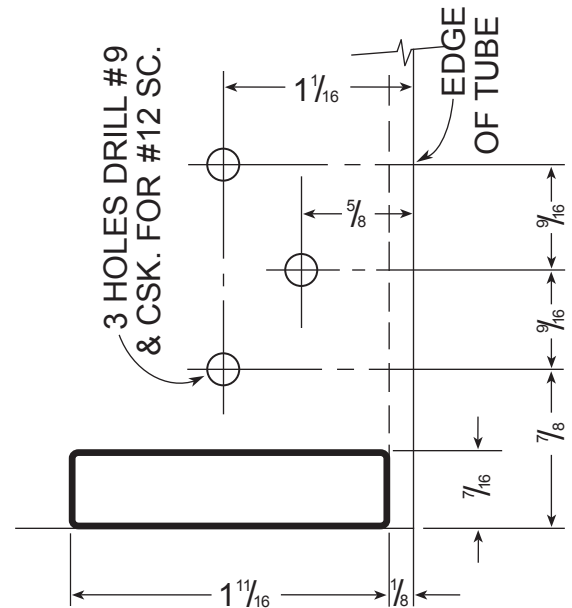


**1309 T J**  
ROUTER DRILL JIG TEMPLATE  
U.S. ALUMINUM

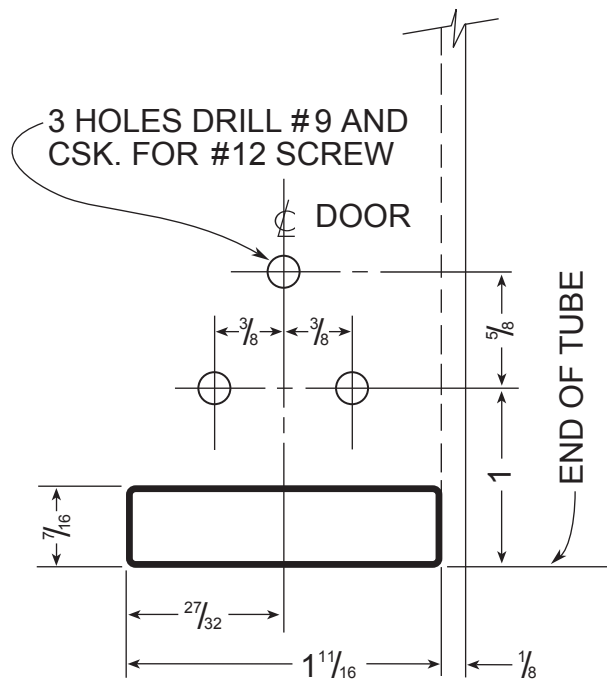
**BOTTOM OFFSET PIVOT  
OR THRESHOLD CLIP  
USE 1300 SERIES WITH M 6-10**



**1332 T J**  
ROUTER DRILL JIG TEMPLATE  
CENTER HUNG 3" IN TO 6" IN TUBE  
KAWNEER

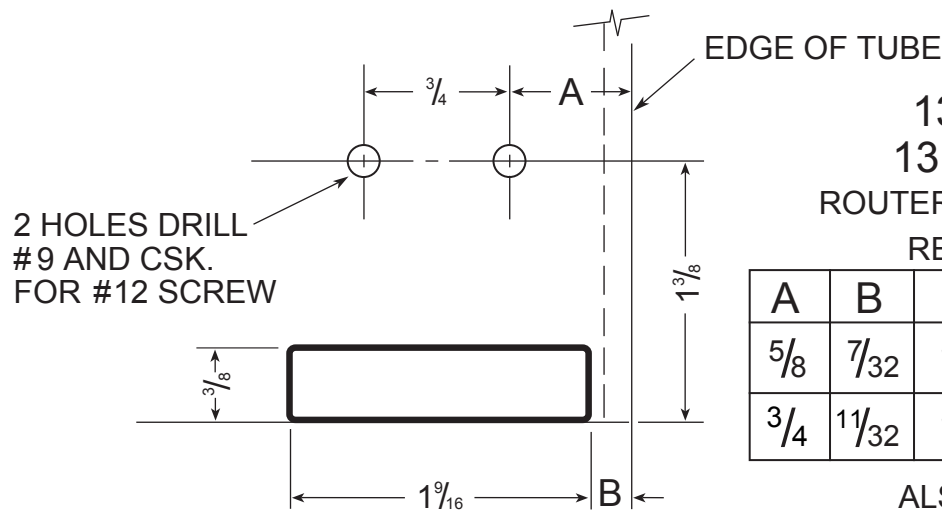


**1337 T J** ROUTER DRILL  
JIG TEMPLATE  
**1337DJ** DRILL JIG  
KAWNEER



**1337 T J B**  
ROUTER DRILL JIG TEMPLATE  
KAWNEER

# **BOTTOM OFFSET PIVOT OR THRESHOLD CLIP USE 1300 SERIES WITH M 6-10**



1317TJ (J-25)

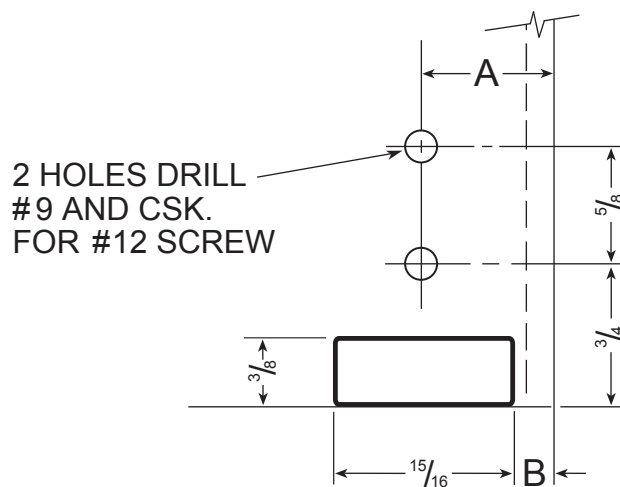
1317TJS (J-26)

ROUTER DRILL JIG TEMPLATE

REFERENCE ONLY

| A             | B               |              |                        |
|---------------|-----------------|--------------|------------------------|
| $\frac{5}{8}$ | $\frac{7}{32}$  | JACKSON J-25 | FLUSH                  |
| $\frac{3}{4}$ | $1\frac{1}{32}$ | JACKSON J-26 | $\frac{1}{8}$ SET-BACK |

ALSO FITS OTHERS



1319TJ (J-30)

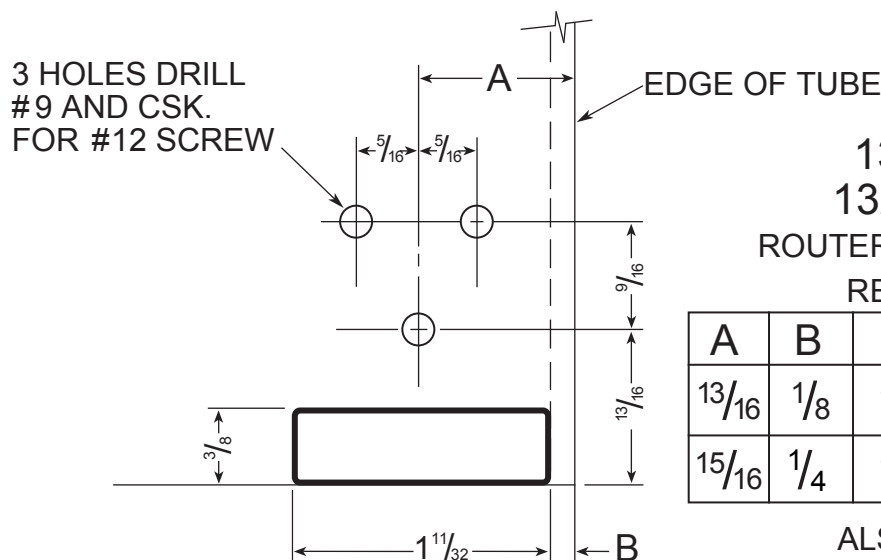
1319TJS (J-31)

ROUTER DRILL JIG TEMPLATE

REFERENCE ONLY

| A                | B               |              |                        |
|------------------|-----------------|--------------|------------------------|
| $1\frac{11}{16}$ | $\frac{7}{32}$  | JACKSON J-30 | FLUSH                  |
| $1\frac{13}{16}$ | $1\frac{1}{32}$ | JACKSON J-31 | $\frac{1}{8}$ SET-BACK |

ALSO FITS OTHERS



1321TJ (J-32)

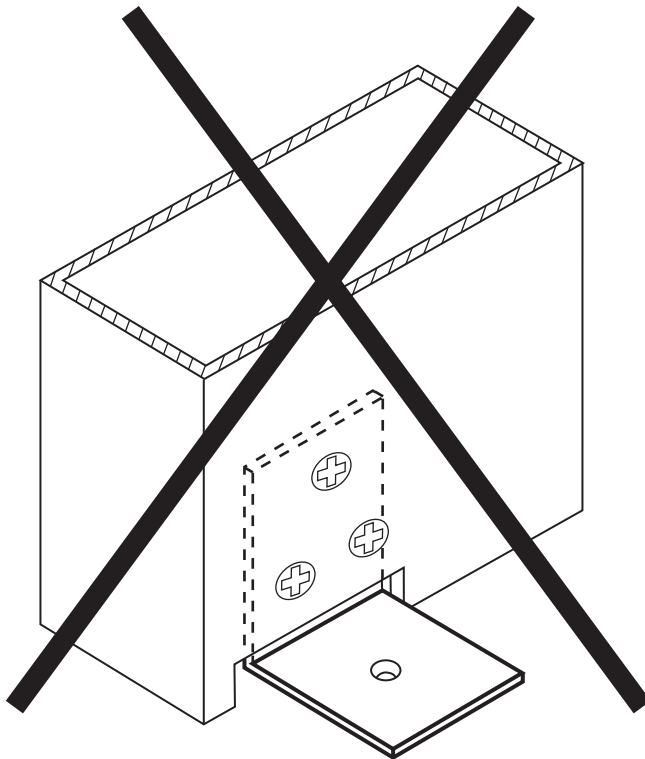
1321TJS (J-33)

ROUTER DRILL JIG TEMPLATE

REFERENCE ONLY

| A                | B             |              |                        |
|------------------|---------------|--------------|------------------------|
| $1\frac{13}{16}$ | $\frac{1}{8}$ | JACKSON J-32 | FLUSH                  |
| $1\frac{15}{16}$ | $\frac{1}{4}$ | JACKSON J-33 | $\frac{1}{8}$ SET-BACK |

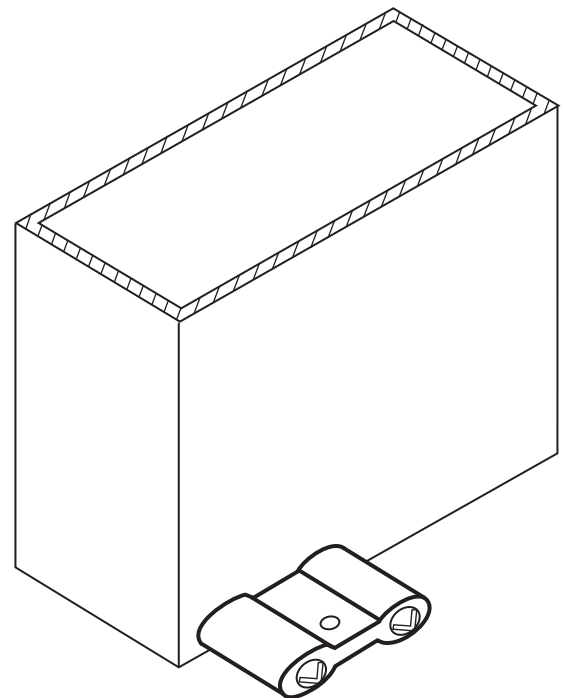
ALSO FITS OTHERS



**NO MORE !!!**  
NOTCHING  
COUNTERSINKING  
EXPOSED SCREWS

### 320 THRESHOLD CLIP

USE 1320 DJ DRILL JIG  
NO CUT OUT REQUIRED  
ONE DRILL JIG FOR FRAME  
AND THRESHOLD  
DRILL JIG REVERSABLE FOR  
RIGHT OR LEFT HAND DOOR  
DRILL JIG ADJUSTABLE FOR  
 $\frac{1}{8}$  SET-BACK OR FLUSH DOOR



## 320 THRESHOLD CLIP

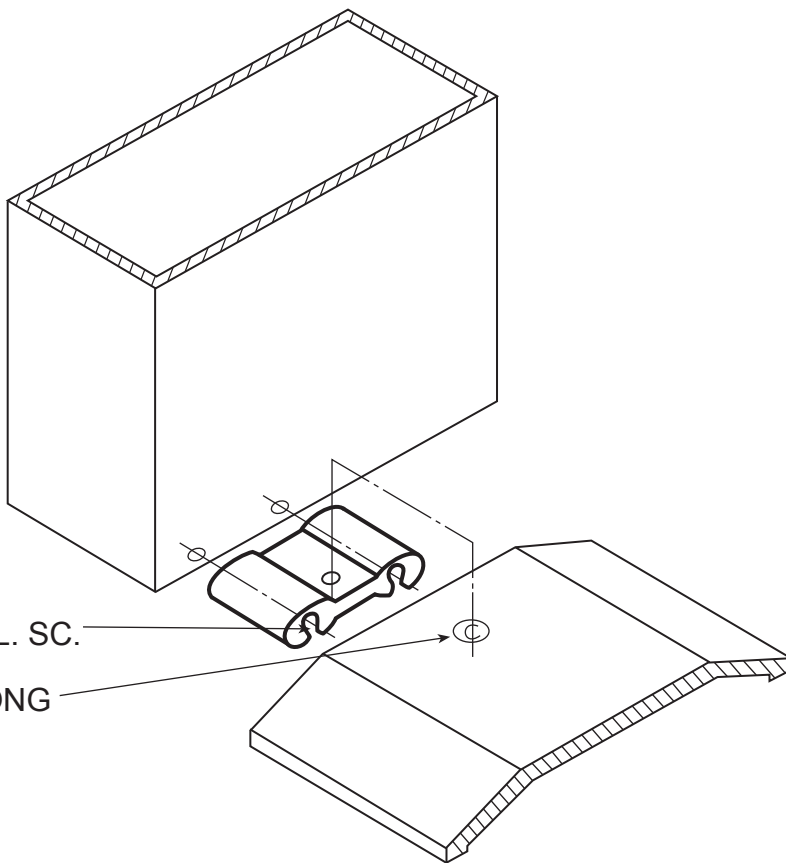
USE 1320 DJ DRILL JIG

NO CUT OUT REQUIRED

ONE DRILL JIG FOR FRAME  
AND THRESHOLD

DRILL JIG REVERSABLE FOR  
RIGHT OR LEFT HAND DOOR

DRILL JIG ADJUSTABLE FOR  
 $\frac{1}{8}$  SET-BACK OR FLUSH DOOR



USE #8 x  $\frac{1}{4}$  PAN HD. SHEET MTL. SC.

USE #10 FLAT HD.  $\frac{1}{2}$  LONG

LOCATING PINS FROM END OF THRESHOLD  
AND BOTTOM OF DOOR FRAME

1 HOLE #9 DRILL FOR THRESHOLD

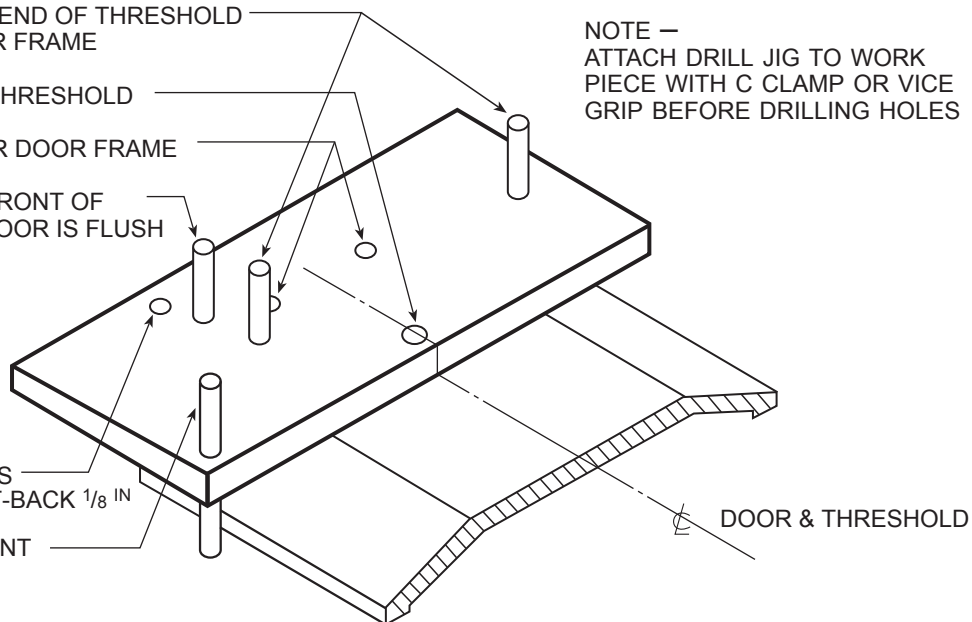
2 HOLES #29 DRILL FOR DOOR FRAME

LOCATING PIN FROM FRONT OF  
DOOR FRAME WHEN DOOR IS FLUSH

NOTE —  
ATTACH DRILL JIG TO WORK  
PIECE WITH C CLAMP OR VICE  
GRIP BEFORE DRILLING HOLES

USE LOCATING PIN IN THIS  
HOLE WHEN DOOR IS SET-BACK  $\frac{1}{8}$  IN

LOCATING PIN FROM FRONT  
OF THRESHOLD



## 1320 DJ DRILL JIG

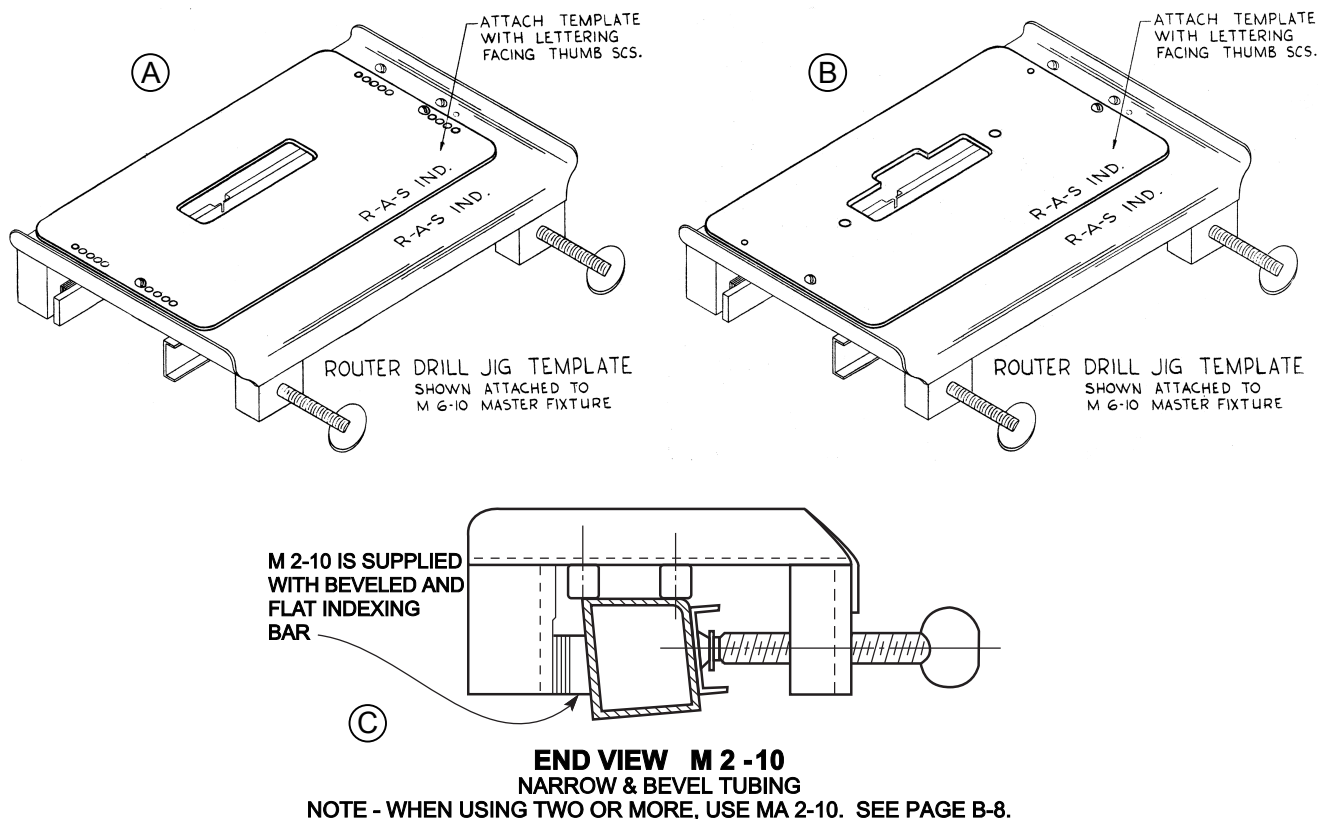
## SECTION G - LOCK HARDWARE

### REINFORCING PLATES - ROUTER TEMPLATES - DRILL JIGS - FIXTURES

| APPLICATION                        | ROUTER TEMPLATE<br>DRILL JIG<br>OR FIXTURE | REINFORCING<br>PLATE | PAGE  |
|------------------------------------|--------------------------------------------|----------------------|-------|
| LOCK PREP                          | 1777                                       |                      | G-2   |
| LOCK PREP                          | 1777 DJF                                   | 777<br>777 B         | G-2A  |
| LOCK HANDLE PREP                   | 1777 DJH                                   |                      |       |
| ADAMS RITE MAXIMUM SECURITY LOCK   | 1205                                       |                      | G-3   |
| LOCK STRIKE                        | 1784 A                                     | 784 A                | G-4   |
|                                    | 1784 B                                     | 784 B                | G-5   |
| LOCK STRIKE & DEAD BOLT            | 1784 ADSK                                  | 784 A                | G-6   |
|                                    | 1784 ADSJ                                  | 784 AS               |       |
| ADAMS RITE LOCK STRIKE             | 4501                                       |                      | G-7   |
|                                    | 4502                                       |                      |       |
| FOLGER ADAMS ELECTRIC DOOR RELEASE | 310-2T                                     |                      | G-8   |
|                                    | 310-2DJ                                    |                      |       |
| ELECTRIC DOOR RELEASE              | 1002                                       | 002                  | G-9   |
| ADAMS RITE ELECTRIC DOOR RELEASE   | 7500                                       |                      | G-10  |
|                                    | 7530                                       |                      |       |
| FLUSH BOLT                         | 1781 D                                     |                      | G-11  |
| FLUSH BOLT                         |                                            |                      | G-11A |

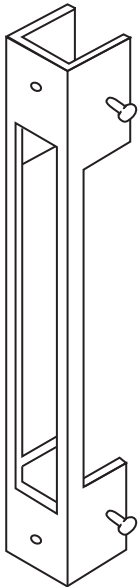
SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING

NOTE - ROUTER TEMPLATE GUIDE MUST BE USED WITH R-A-S ROUTER TEMPLATES. SEE PAGE J-5.

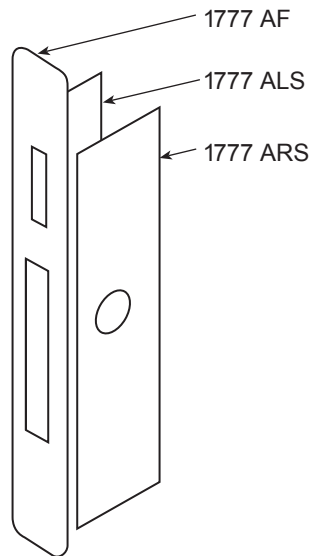


# NOW! LOCK PREP IN LESS THAN 3 MIN. WHILE DOOR IS GLAZED & HUNG

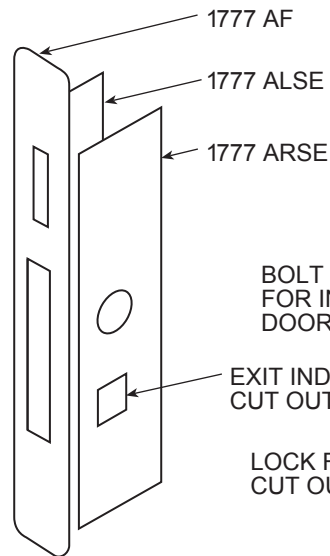
MASTER FIXTURE  
M1777



TEMPLATES



TEMPLATES

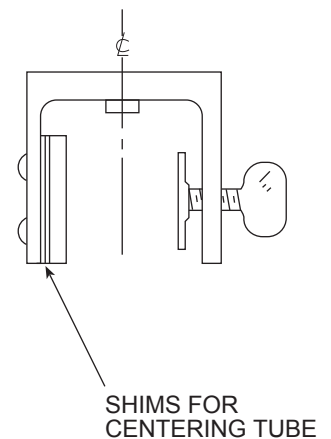
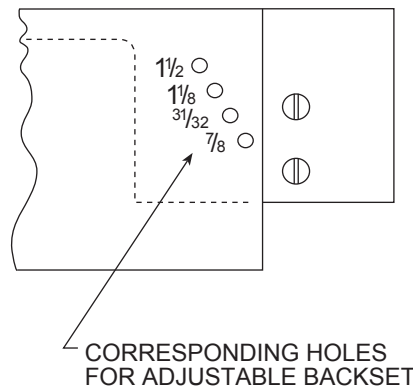
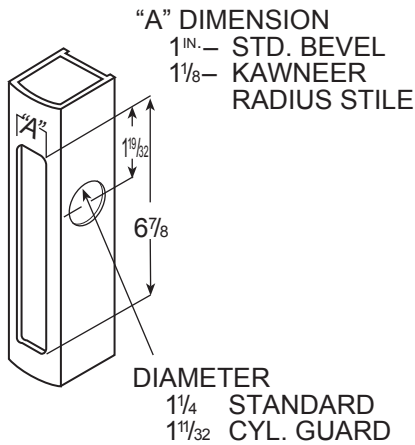


TEMPLATES  
ON M1777

BOLT CUT OUT  
FOR INACTIVE  
DOOR

EXIT INDICATOR  
CUT OUT

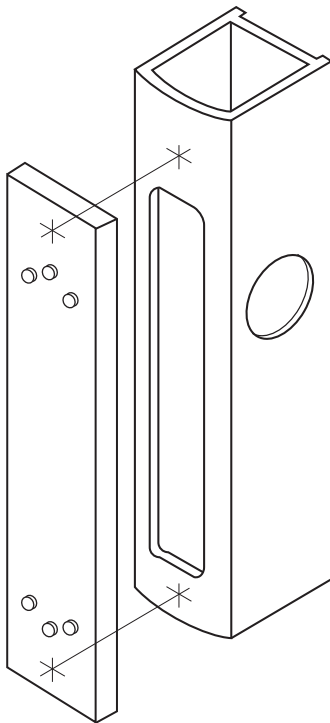
LOCK FACE PLT.  
CUT OUT



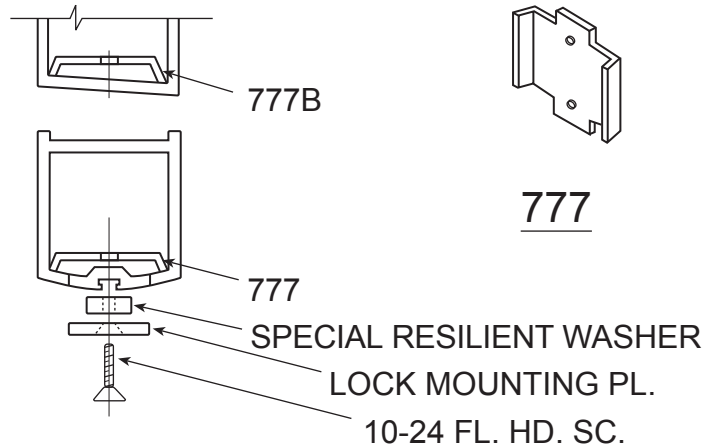
MS 1850 A  
MS 1850 - A505  
MS 1890  
4510

**ORDERING INFORMATION**  
FOR KAWNEER FACE PLATE ORDER 1777 AFK  
FOR TUBELITE FACE PLATE ORDER 1777 AFT  
FOR CYLINDER GUARD ORDER 1777 ALSCG & 1777 ARSCG

TEMPLATES AVAILABLE FOR VARIOUS LOCKS, LETTER-SLOTS, PANIC HARDWARE ETC.



**1777 DJF**



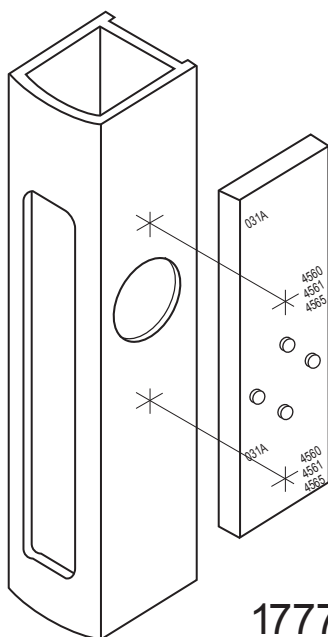
USE 1777 DJF DRILL JIG TO LOCATE & DRILL HOLES FOR R-A-S CLIP #777 OR #777B.

INSERT LOCATING PINS INTO LOCK CUT OUT (SEE PG. G-2) TO POSITION JIG ON DOOR STILE & DRILL TWO #9 HOLES AND CSK. FOR #10-24 FL. HD. SC.

AFTER INSTALLING CLIP TO DOOR STILE ATTACH LOCK TO CLIP WITH #10-24 FL. HD. SC. AND SPECIAL RESILIENT WASHER #1777 W WHICH ALLOWS FOR PROPER INSTALLATION OF FACE PLATE.

USE CLIP #777 FOR FLAT OR RADIUS DOORS  
USE CLIP #777B FOR BEVEL DOORS

NOTE – 1777 DJF CAN ALSO BE USED ON KAWNEER  
1<sup>1</sup>/<sub>8</sub> WIDE FACE PLATE BY MOVING LOCATING  
PINS TO OUTER HOLES WHICH ARE PROVIDED.



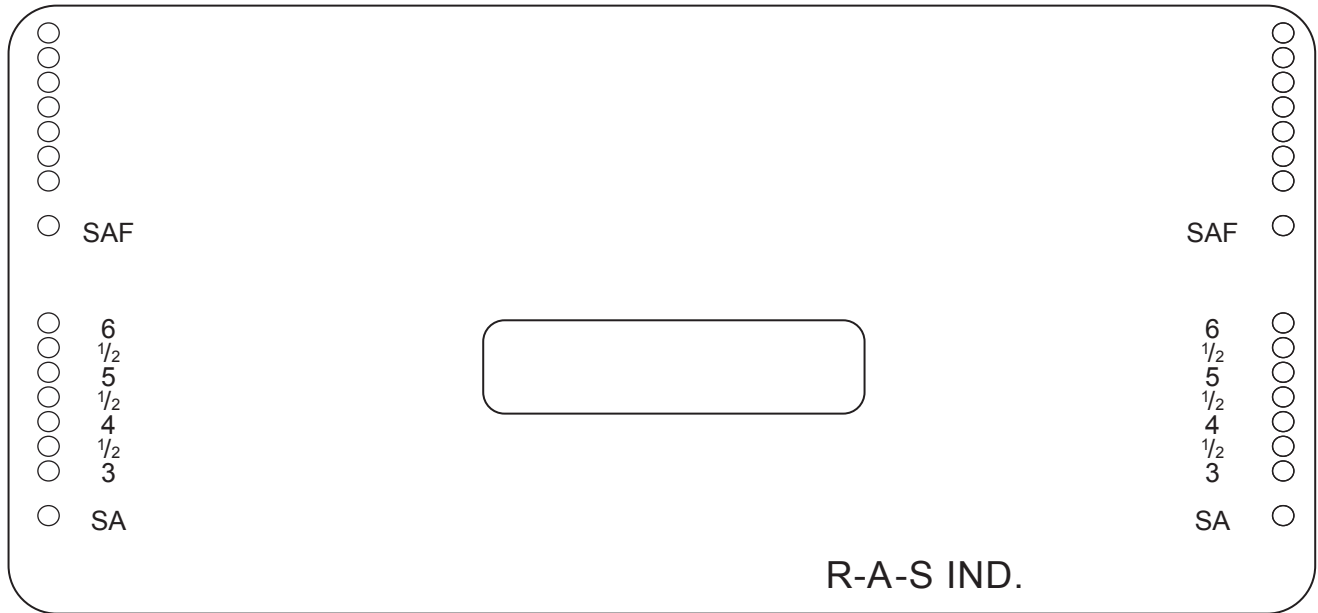
**1777 DJH**

USE 1777 DJH DRILL JIG TO LOCATE AND DRILL HOLES FOR ADAMS RITE LATCH HANDLES.

INSERT LOCATING PINS INTO CYLINDER CUT OUT (SEE PG. G-2) TO POSITION JIG ON DOOR STILE.

ALIGN JIG WITH DOOR STILE AND DRILL TWO <sup>5</sup>/<sub>32</sub>" (#21) HOLES. NOTE – JIG HAS TWO SETS OF HOLES FOR TWO DIFFERENT APPLICATIONS.

USE AS SHOWN FOR ADAMS RITE 4560, 4561 & 4565 LATCH HANDLES. ROTATE JIG 180° TO USE FOR ADAMS RITE 4160 REPLACEMENT HANDLE.



## HALF SCALE PLAN VIEW

**1205A** ACTUAL CUT-OUT IN FRAME  $2\frac{1}{32} \times 3\frac{3}{4}$   
STANDARD BOLT

**1205AS** ACTUAL CUT-OUT IN FRAME  $2\frac{1}{32} \times 2$  IN  
SHORT THROW

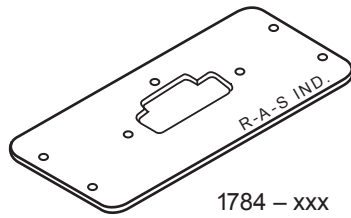
THERE ARE 9 SETS OF HOLES AT EACH END OF THE TEMPLATE FOR ATTACHING TEMPLATE TO THE MASTER FIXTURE.

EACH SET OF HOLES ALLOWS THE SAME TEMPLATE TO BE USED FOR 9 DIFFERENT APPLICATIONS.

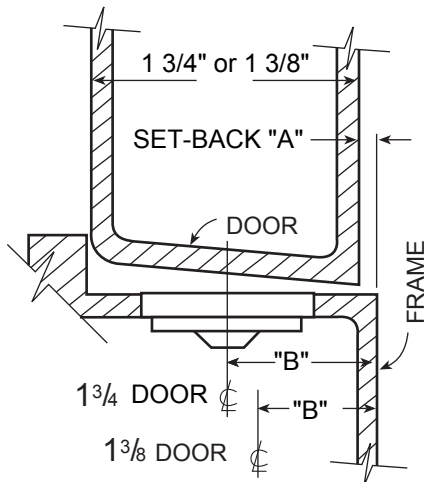
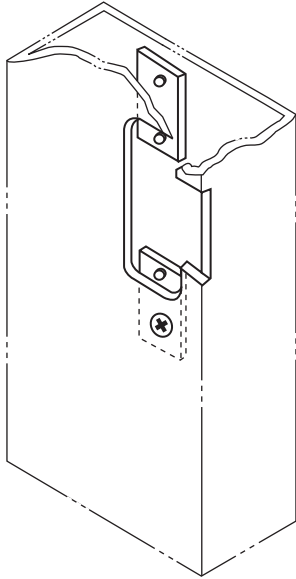
WHEN ATTACHED TO THE HOLES MARKED "SA" THE CUT-OUT WILL BE LOCATED ON ANY SIZE TUBE FOR A DOOR  $1\frac{3}{4}$ " THICK WITH  $\frac{1}{8}$ " SET-BACK. "SAF" DENOTES DOOR MOUNTED FLUSH WITH FACE OF FRAME 0" SET-BACK.

NUMBERS ON LAST SET OF HOLES DENOTES THE TUBE SIZE. WHEN ATTACHED AT THESE HOLES THE CUT-OUT WILL BE IN THE CENTER OF THAT PARTICULAR SIZE TUBE.

OTHER TEMPLATES ARE AVAILABLE.



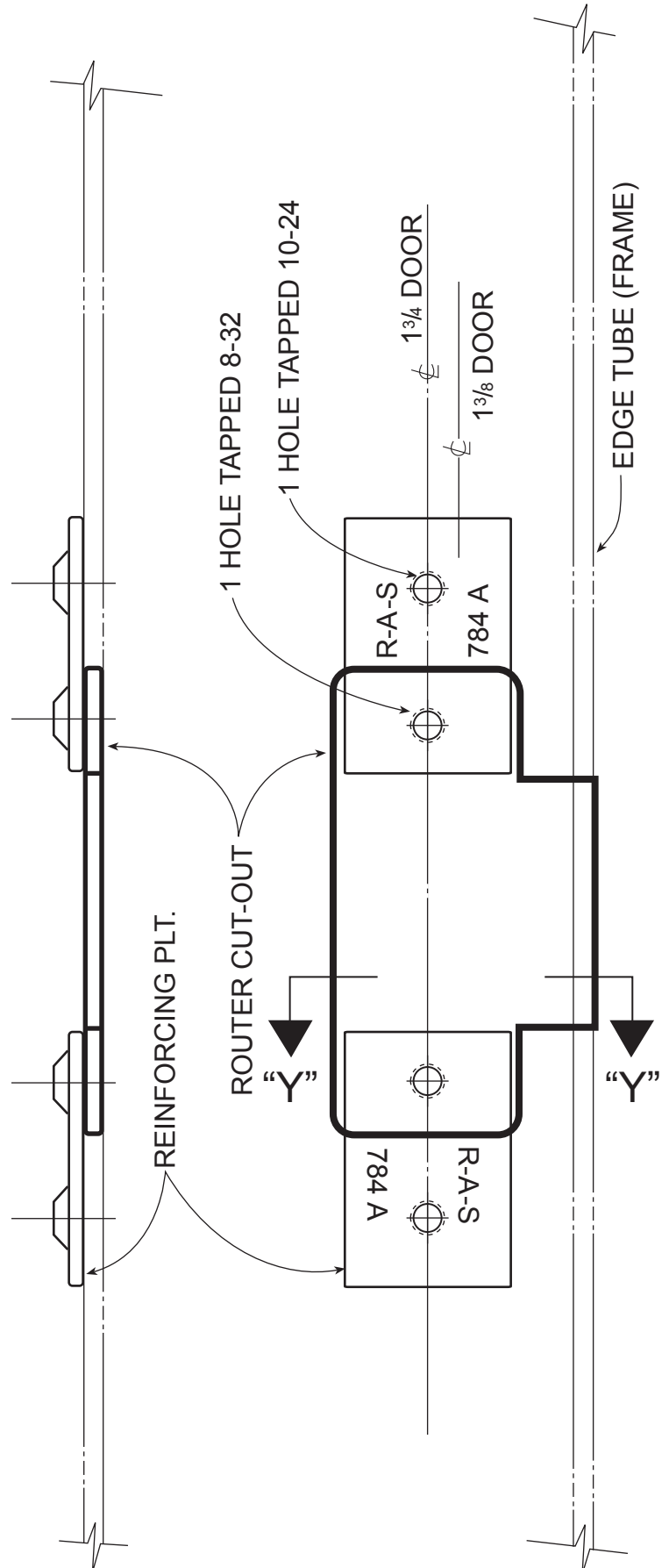
1784 - xxx

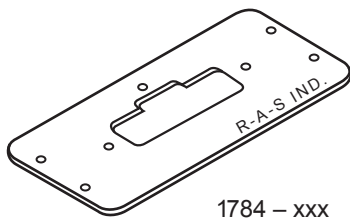


SECTION Y-Y

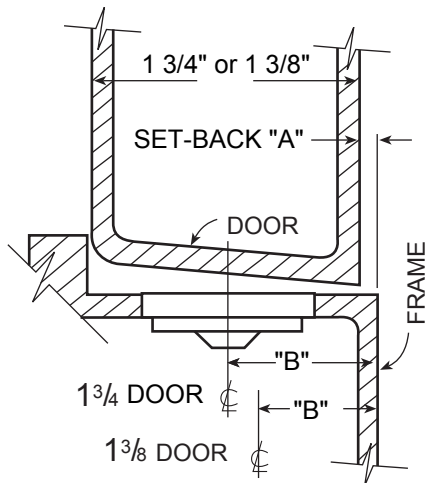
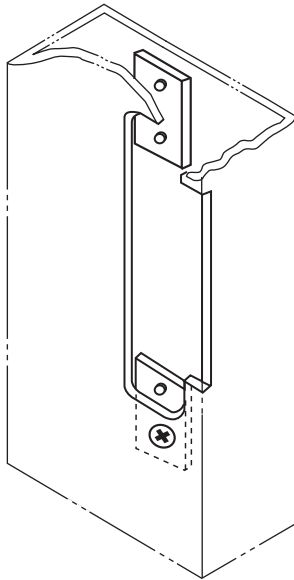
| ROUTER DRILL<br>JIG TEMPLATE | DOOR<br>THICKNESS | SET-BACK<br>"A" | "B"   |
|------------------------------|-------------------|-----------------|-------|
| 1784AJ                       | 13/8              | 1/8             | 13/16 |
| 1784AK                       | 13/4              | 1/8             | 1     |
| 1784AJF                      | 13/8              | FLUSH           | 11/16 |
| 1784AKF                      | 13/4              | FLUSH           | 7/8   |

OTHER SET-BACKS AVAILABLE





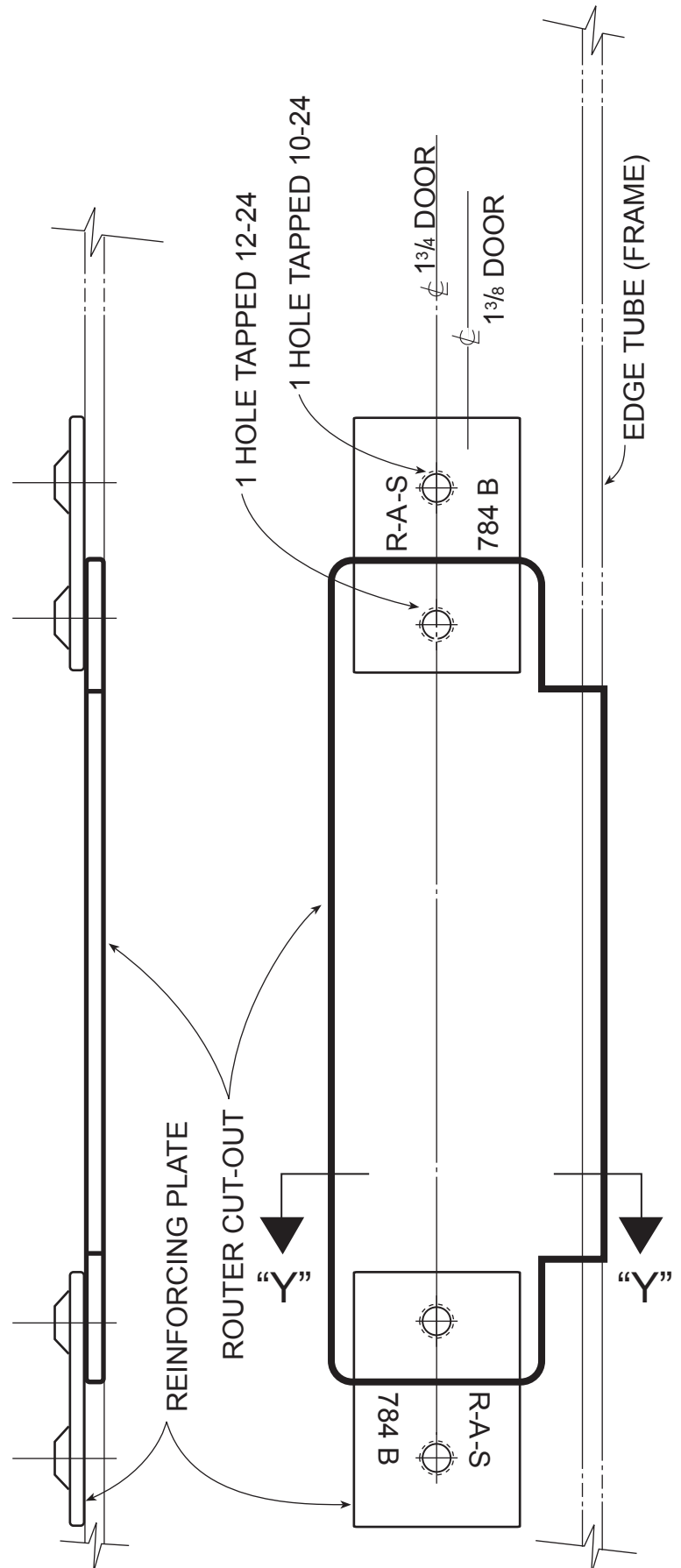
1784 - xxx



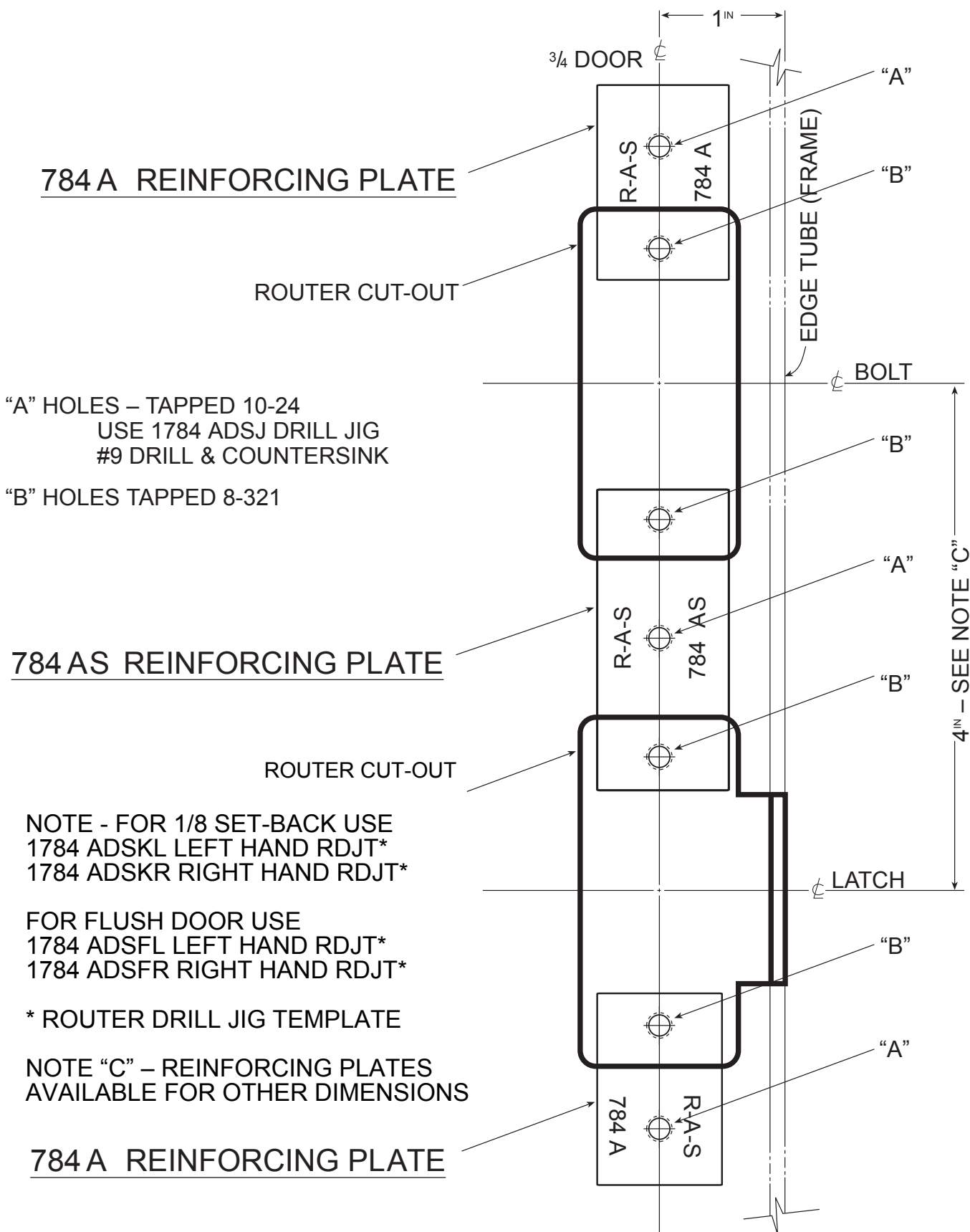
SECTION Y-Y

| ROUTER DRILL<br>JIG TEMPLATE | DOOR<br>THICKNESS | SET-BACK<br>"A" | "B"   |
|------------------------------|-------------------|-----------------|-------|
| 1784BJ                       | 13/8              | 1/8             | 13/16 |
| 1784BK                       | 13/4              | 1/8             | 1     |
| 1784BJF                      | 13/8              | FLUSH           | 11/16 |
| 1784BKF                      | 13/4              | FLUSH           | 7/8   |

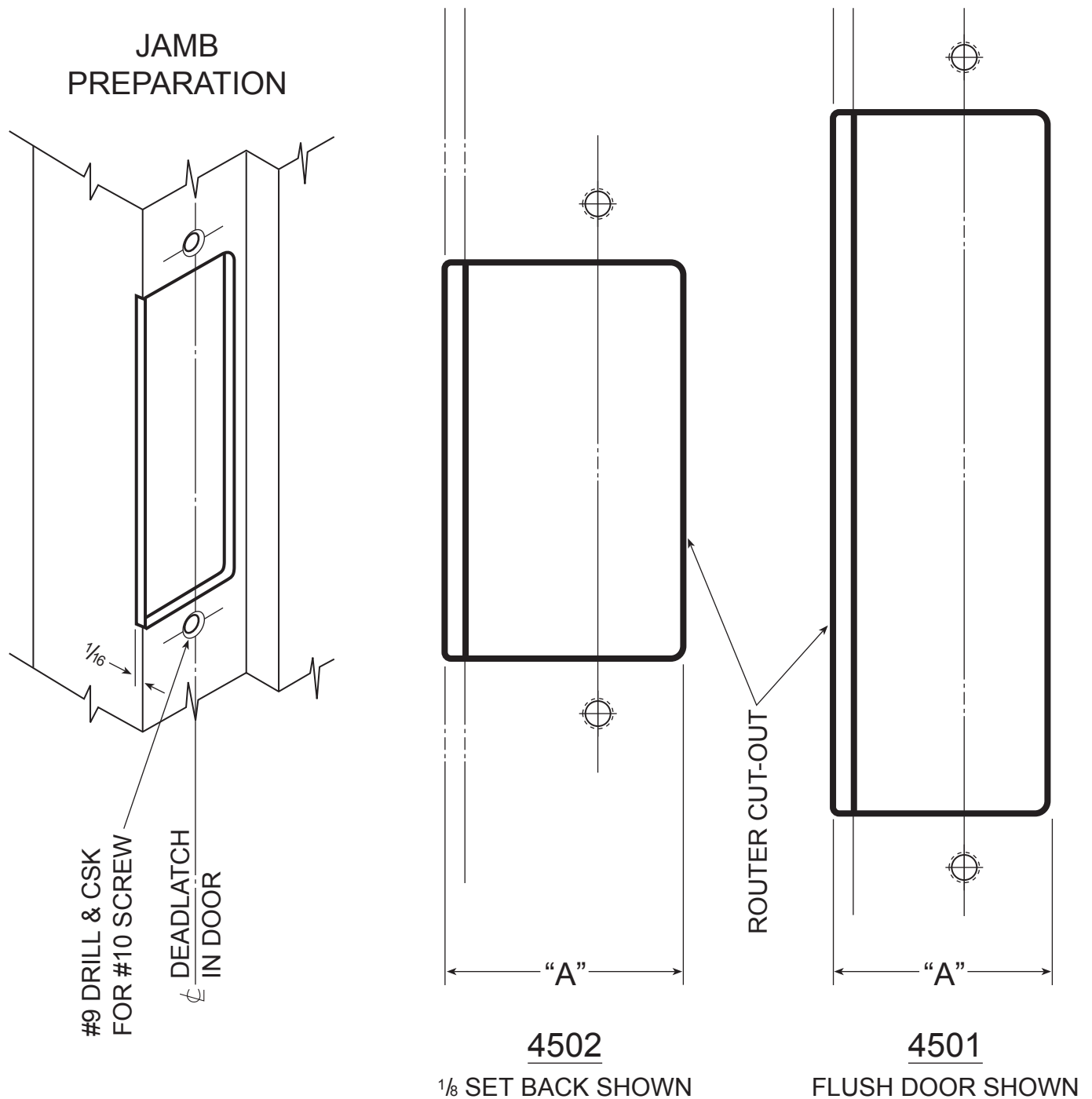
OTHER SET-BACKS AVAILABLE



# 784 A & 784 AS REINFORCING PLATE LOCK STRIKE & DEADBOLT



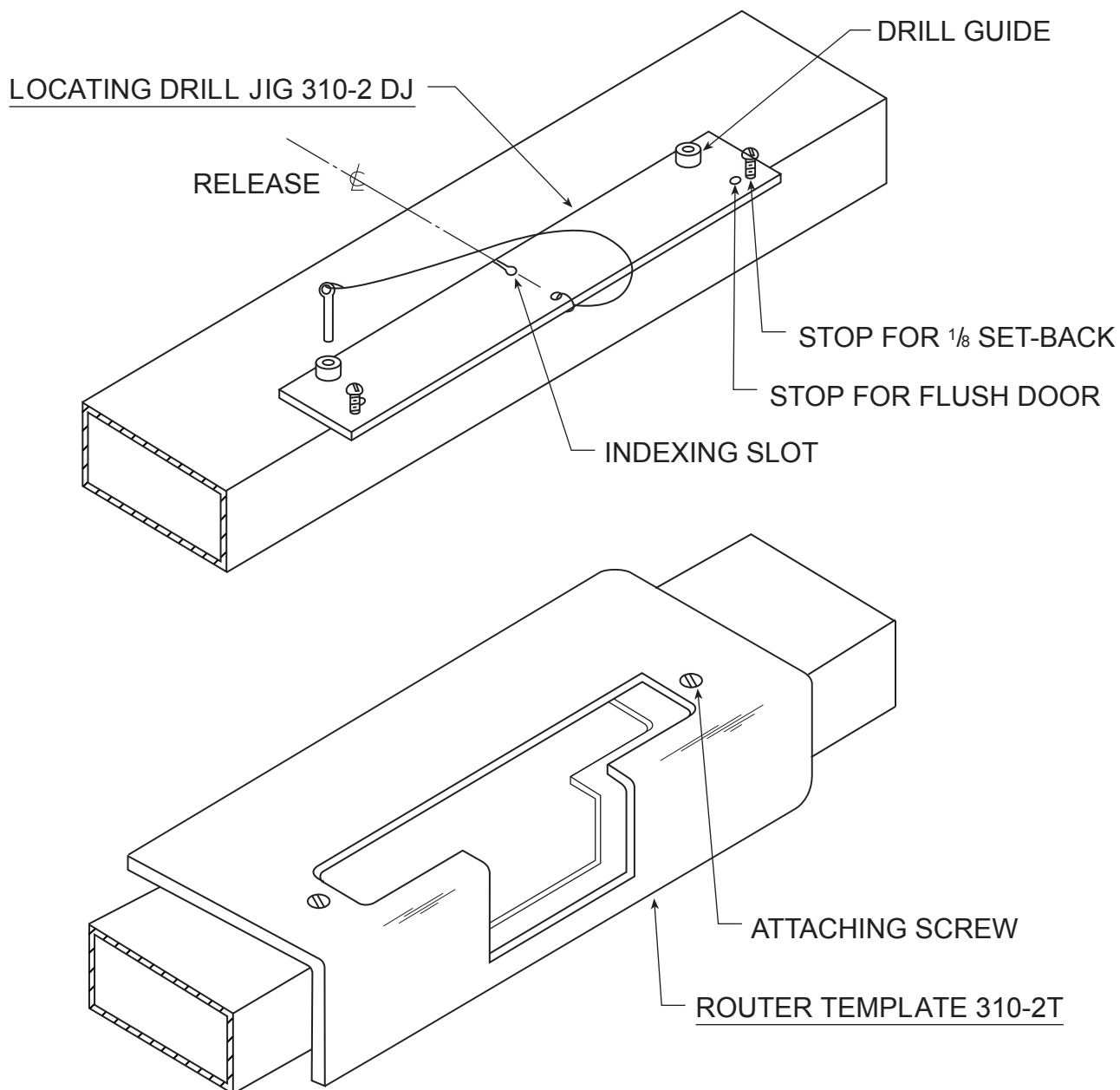
**4501 & 4502**  
**ROUTER DRILL JIG TEMPLATE**  
ADAMS RITE LOCK STRIKE



"A" DIMENSION IS DETERMINED BY DOOR SET BACK USE FOLLOWING  
ROUTER DRILL JIG TEMPLATE

$1\frac{3}{4}$  THK. DOOR – FLUSH OR INACTIVE – 4501F OR 4502F

$1\frac{3}{4}$  THK. DOOR –  $\frac{1}{8}$  SET BACK – 4501 OR 4502

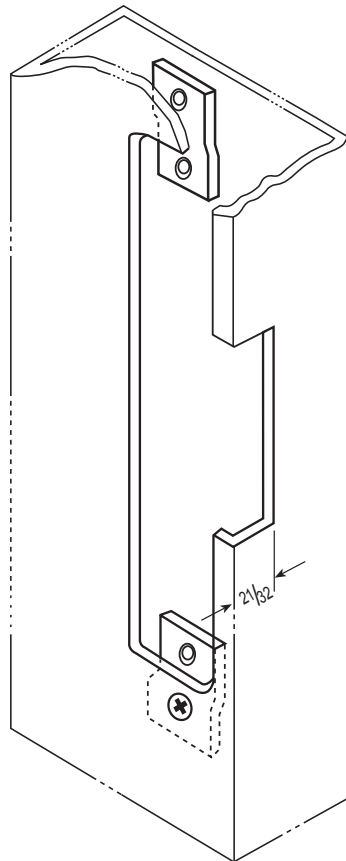


#### INSTRUCTIONS

MARK CENTER OF ELECTRIC RELEASE ON TUBE & APPLY LOCATING DRILL JIG 310-2 DJ.  
DRILL ONE HOLE AND INSTALL PIN. DRILL SECOND HOLE.  
ATTACH ROUTER TEMPLATE 310-2T WITH TWO ATTACHING SCREWS.  
ROUT OUT FACE AND EDGE OF TUBE IN ONE OPERATION.  
REMOVE ROUTER TEMPLATE AND COUNTERSINK TWO ATTACHING HOLES FOR 10-24 SCS.  
INSTALL REINFORCING PLATES 784B AND ATTACH ELECTRIC RELEASE.  
NOTE – OTHER JIGS AND TEMPLATES AVAILABLE.

# 002 REINFORCING PLATE ELECTRIC DOOR RELEASE

## 002 REINFORCING PLATE ELECTRIC DOOR RELEASE (2-REQUIRED)



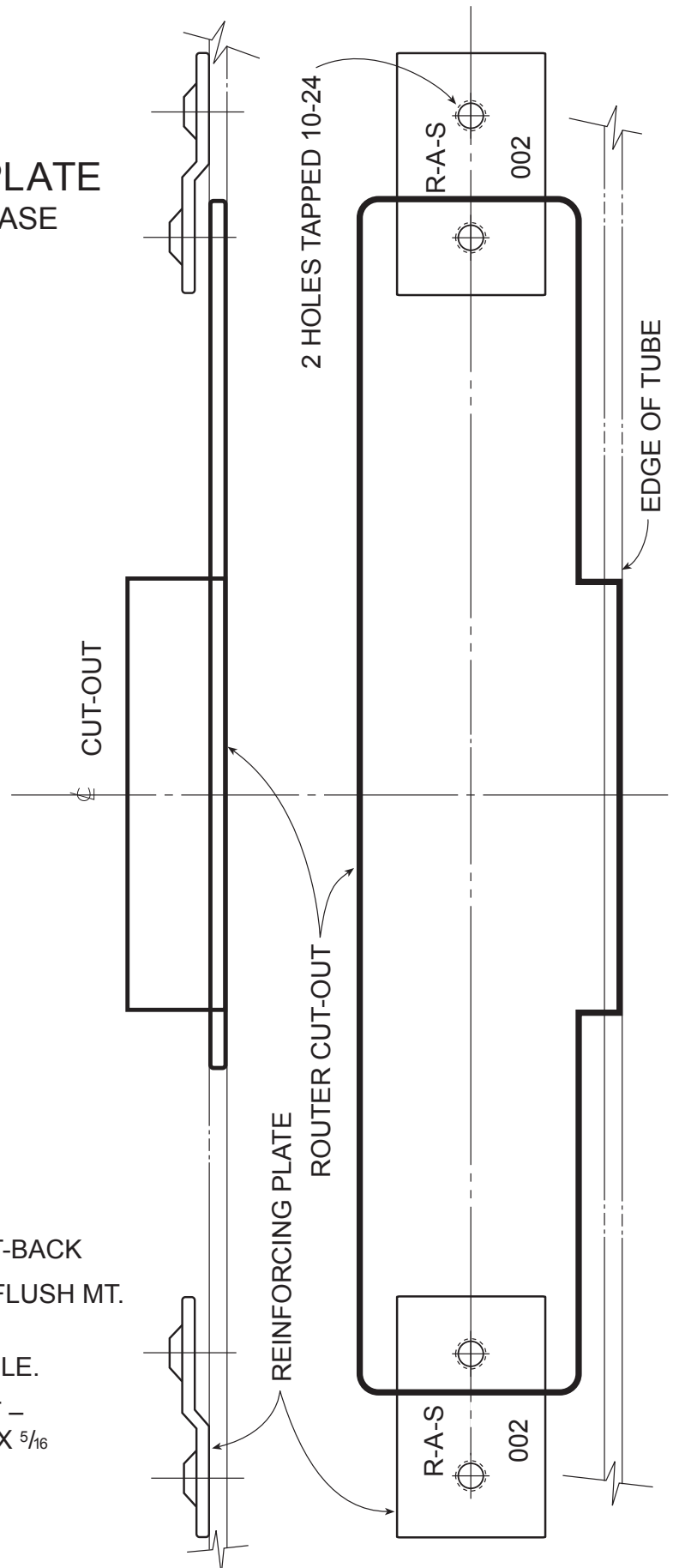
USE R-A-S ROUTER DRILL  
JIG TEMPLATE –

1002 FOR 1<sup>3</sup>/<sub>4</sub> DOOR & 1<sup>1</sup>/<sub>8</sub> SET-BACK

1002F FOR 1<sup>3</sup>/<sub>4</sub> DOOR WITH FLUSH MT.  
OR INACTIVE

OTHER SET-BACKS AVAILABLE.

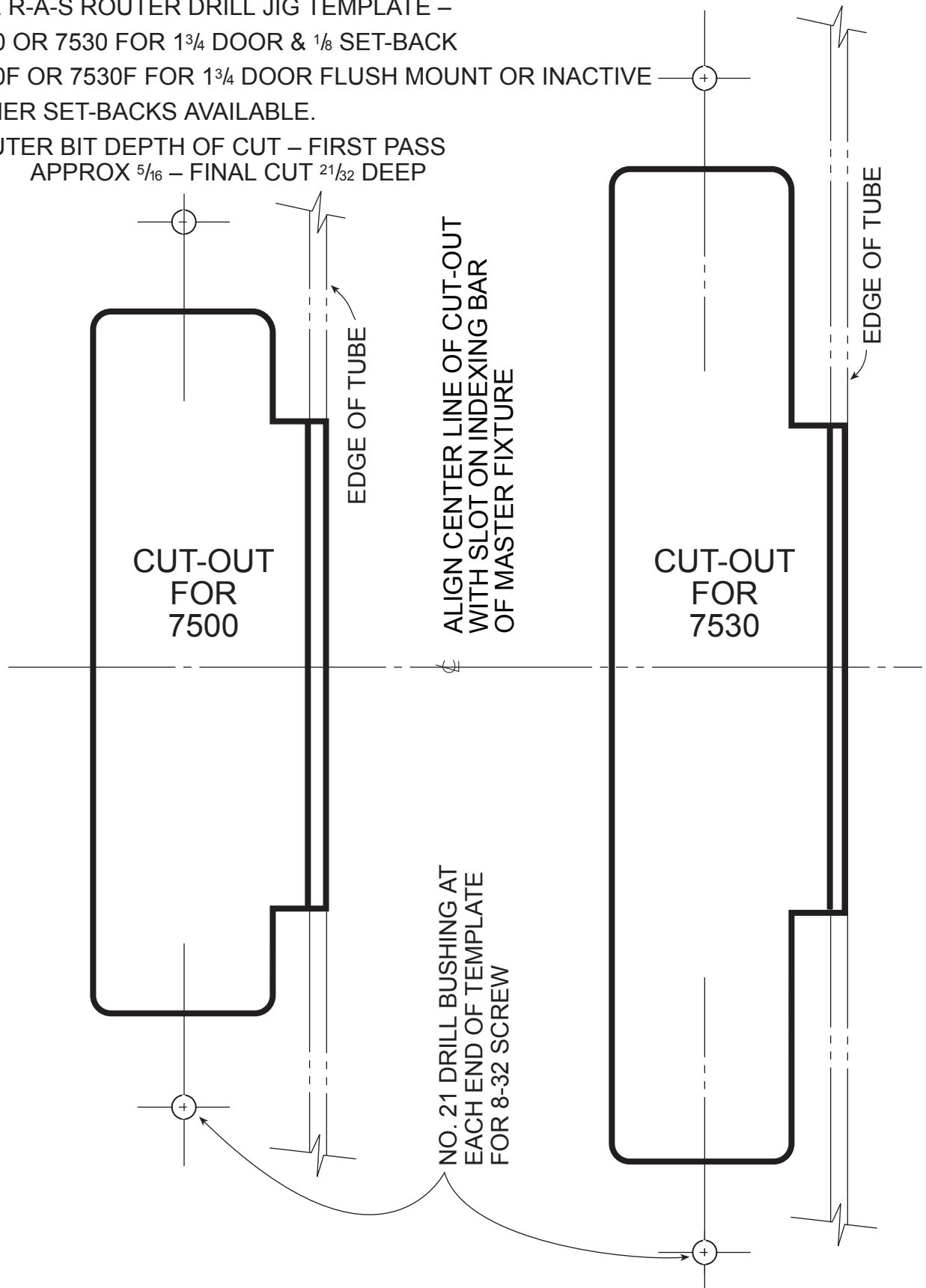
ROUTER BIT DEPTH OF CUT –  
FIRST PASS APPROX <sup>5</sup>/<sub>16</sub>  
FINAL CUT 2<sup>1</sup>/<sub>32</sub> DEEP

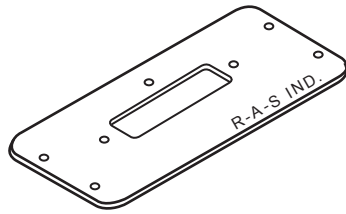


**7500 & 7530**  
**ROUTER DRILL JIG TEMPLATES**  
ADAMS RITE ELECTRIC DOOR RELEASE

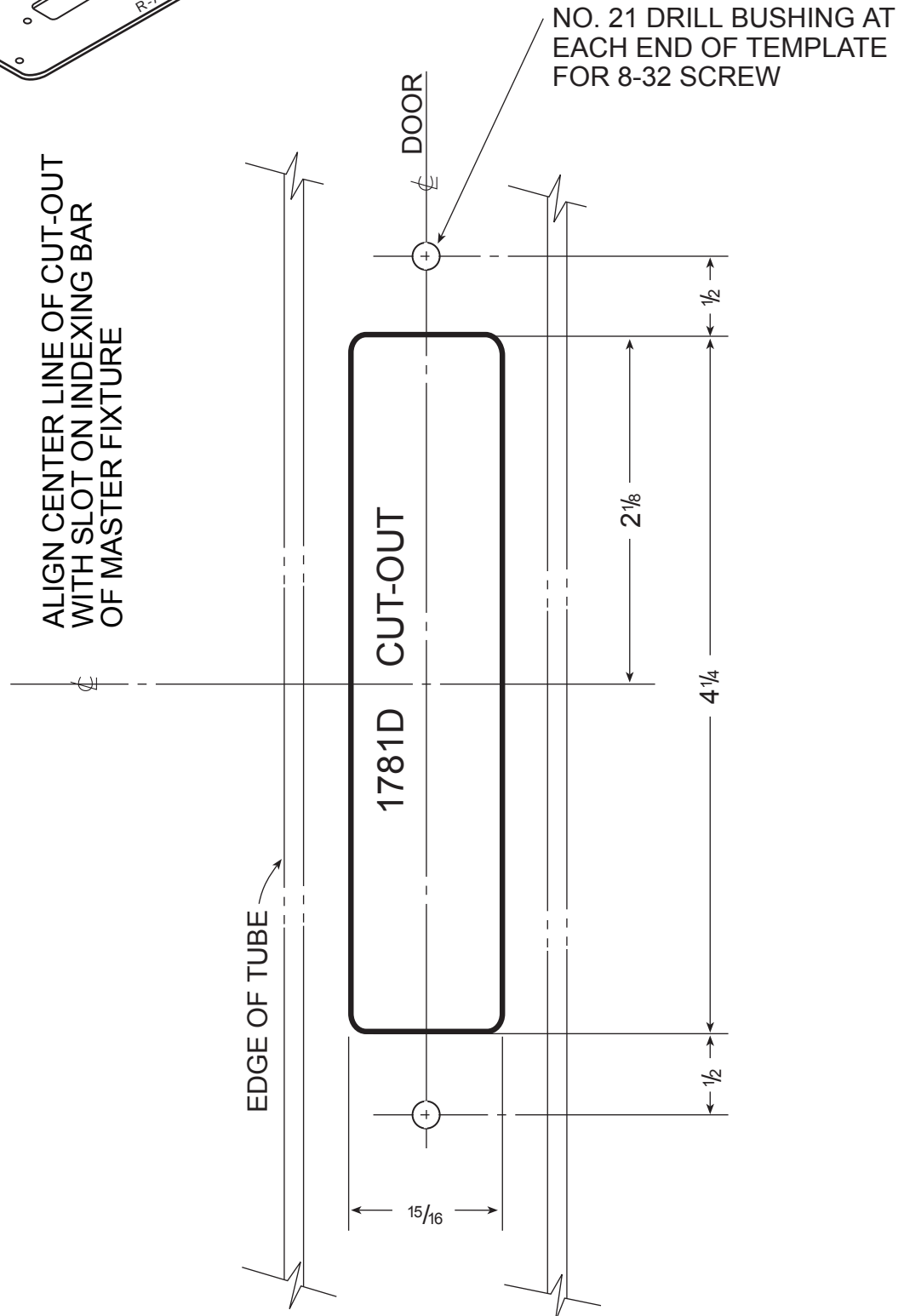
USE R-A-S ROUTER DRILL JIG TEMPLATE –  
7500 OR 7530 FOR  $1\frac{3}{4}$  DOOR &  $\frac{1}{8}$  SET-BACK  
7500F OR 7530F FOR  $1\frac{3}{4}$  DOOR FLUSH MOUNT OR INACTIVE  
OTHER SET-BACKS AVAILABLE.

ROUTER BIT DEPTH OF CUT – FIRST PASS  
APPROX  $\frac{5}{16}$  – FINAL CUT  $2\frac{1}{32}$  DEEP





NOTE – USE M2-10 MASTER FIXTURE



NOTE – TEMPLATES AVAILABLE FOR OTHER FLUSH BOLT CUT-OUTS, SEE PAGE G-11A.

# ROUTER DRILL JIG TEMPLATES

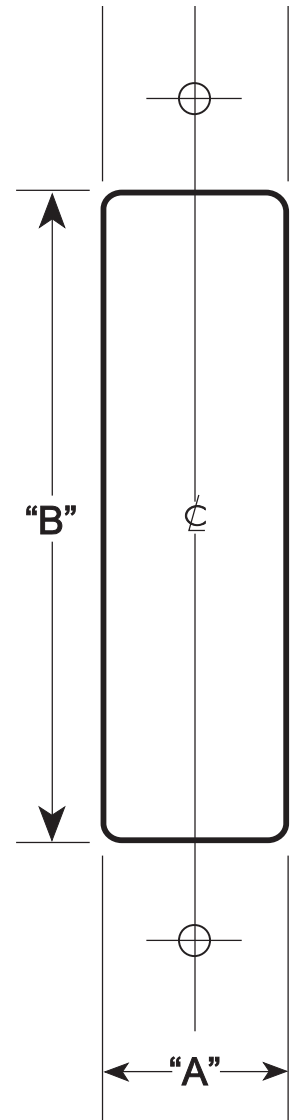
FLUSH BOLT

Reinforcing Plates available where required.

| Inventory # | Mfg Description                         | "A"   | "B"   |
|-------------|-----------------------------------------|-------|-------|
| 1781 B1     | Government 86 Lock                      | 1.250 | 8.000 |
| 1781 B2     | Government 161 Lock                     | 1.125 | 2.250 |
| 1781 B3     | Government 160 Lock                     | 1.000 | 2.250 |
| 1781 B4     | Baldwin 8560                            | 1.000 | 5.750 |
| 1781 B5     | Dead Lock Strike                        | 1.000 | 3.625 |
| 1781 B6     | Corbin-Russwin                          | 1.000 | 4.187 |
| 1781 D      | Standard Flush Bolt                     | 0.937 | 4.250 |
| 1781 D1     | Rockwood, Glynn-Johnson                 | 1.000 | 6.750 |
| 1781 D2     | Dynalock 1300 Series                    | 1.500 | 4.000 |
| 1781 D3     | Dynalock 1300 Series                    | 1.500 | 8.000 |
| 1781 D4     | Rockwood (outside cut-out)              | 1.000 | 7.000 |
| 1781 D6     | Rockwood                                | 1.000 | 5.500 |
| 1781 D7     | Sargent 7700, 8100<br>(same as 1781 B1) | 1.250 | 8.000 |
| 1781 D8     | Lock cut-out                            | 1.000 | 3.500 |
| 1781 D9     | Arcadia 4994 Door Pull                  | 1.062 | 5.375 |
| 1781 D9DJ   | Drill Jig for Door Pull                 |       |       |
| 1781 D11    |                                         | 1.000 | 6.375 |

ROUTER DRILL JIG TEMPLATES INCLUDE DRILL BUSHINGS FOR MOUNTING HOLES.

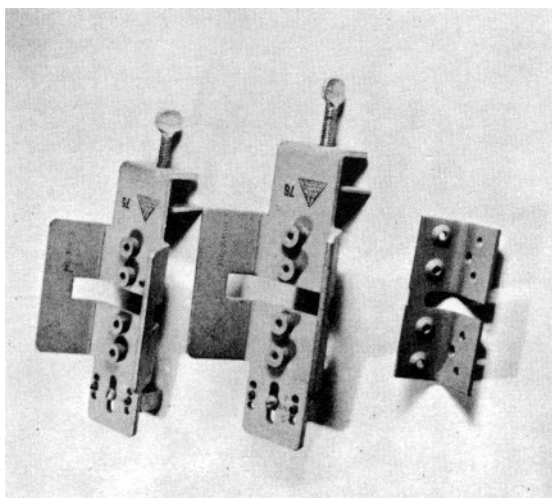
REINFORCING PLATES ARE ALSO AVAILABLE AS REQUIRED.



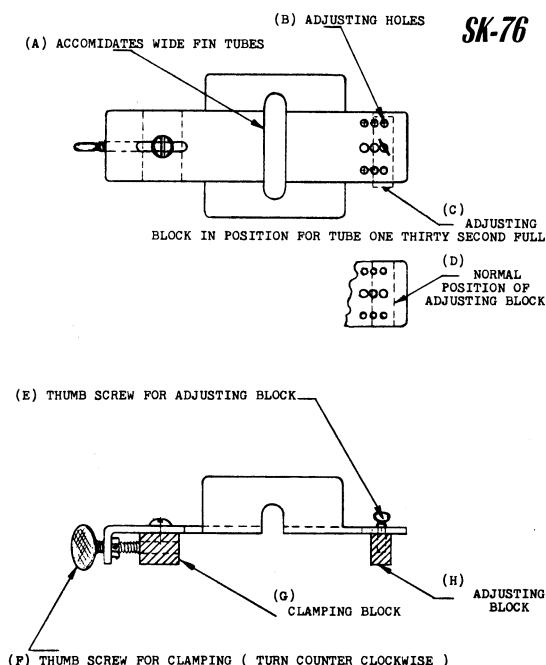
## SECTION H - BRACKETS AND DRILL JIGS

| BRACKETS                | DRILL JIGS                                                                         | MISCELLANEOUS<br>INFORMATION | PAGE |
|-------------------------|------------------------------------------------------------------------------------|------------------------------|------|
| 80                      | 75 & 76                                                                            | ADJUSTABLE JIG               | H-2  |
| 80                      | 40 & 45                                                                            |                              | H-3  |
| 80<br>84<br>84 RH<br>81 | 40 & 45 THRU 75 & 76<br>38 C & 39 C<br>38 A, 39 AR & 39 AL<br>10 & 15 THRU 75 & 76 |                              | H-4  |
| 36                      |                                                                                    | 4" DOVETAIL TUBE             | H-6  |

NOTE - SEE SPECIFIC PAGE FOR FULL PART NUMBER BEFORE ORDERING.



R-A-S Brackets and Drill Jigs  
covered by U.S. Patents  
3046818 & 3047110.



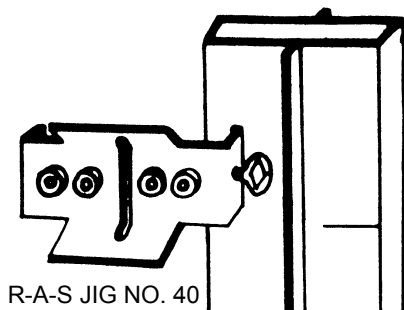
THE ADJUSTING BLOCK ( POSITION B AND C ) CAN BE REVERSED ON THE JIG. WHEN THIS IS DONE THE DRILL BUSHING HOLES WILL BE CENTERED ON A TUBE THAT IS FULL BY AS MUCH AS A THIRTY SECOND. ©1961

# NEW ADJUSTABLE DRILL JIGS

SAVE TIME, MONEY, AND ACCURACY ON STORE FRONT FABRICATION

R-A-S Industries, the originator of the patented drill-jig, and system for extrusion fabrication has now developed an all new adjustable drill jig for store front fabrication. Easily adjustable to 4", 4½", and 5" aluminum extrusions, the new R-A-S drill jig No.'s 75 and 76, and the No. 80 Bracket enable you to save time, money and accuracy with the one set of 2 drill-jigs pictured above — *eliminating the three sets (6 jigs) previously required!* The method of securing the jig to the extrusion gives up to 800% more gripping power. The gripping pad is reversible giving a plus or minus of 1/32" to take care of the difference in extrusion tolerances. The new jigs are formed from 3/16" steel with case hardened drilling holes clearly marked for drilling size. One set of the new adjustable drill-jigs is approximately 1/3 the cost of the three sets previously required.

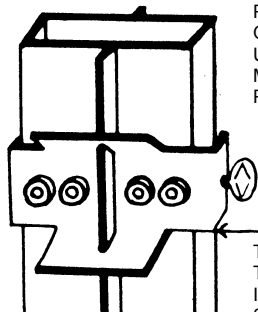
**R-A-S MANUFACTURES DRILL JIGS AND BRACKETS  
FOR ALL TYPES OF ALUMINUM EXTRUSIONS**



R-A-S JIG NO. 40

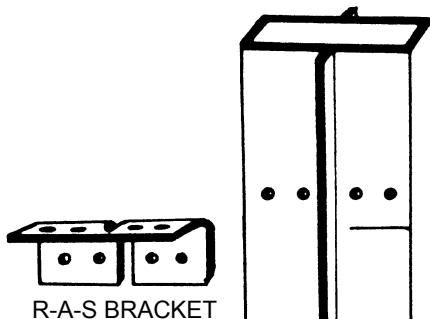
FOR HORIZONTAL BUTT JOINT INTO A VERTICAL TUBE

MEASURE UP THE VERTICAL TUBE TO WHERE THE BOTTOM OF THE HORIZONTAL TUBE WILL BUTT IT AND DRAW A LINE.



PLACE THE R-A-S NO. 40 JIG ON THE VERTICAL TUBE. SLIDE UP UNTIL BOTTOM OF THE JIG MATCHES UP WITH THE LINE PREVIOUSLY DRAWN.

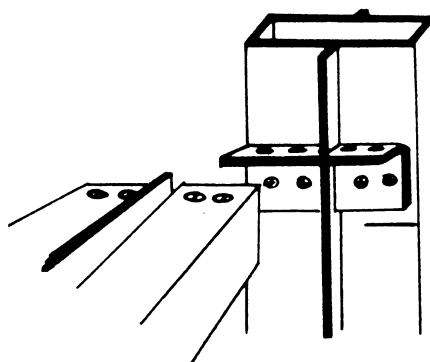
TIGHTEN THE THUMB SCREW ON THE END OF THE JIG. (THE JIG IS REVERSIBLE SO THAT THE THUMB SCREW CAN BE USED ON THE LEFT OR THE RIGHT).



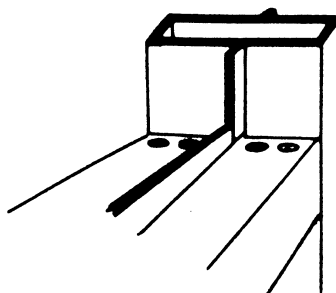
R-A-S BRACKET NO. 80

USING THE BUSHINGS AS GUIDES, DRILL FOUR HOLES FOR NO. 10 SELF-TAPPING ROUND HEAD SCREWS.

PLACE THE R-A-S NO. 80 BRACKET SO THAT THE CLEARANCE HOLES LINE UP WITH THE HOLES DRILLED AND FASTEN WITH THE NO. 10 SELF-TAPPING SCREWS.



FOR HORIZONTAL TUBE ATTACHMENT, SEE INSTRUCTIONS UNDER USE OF THE R-A-S JIG NO. 45

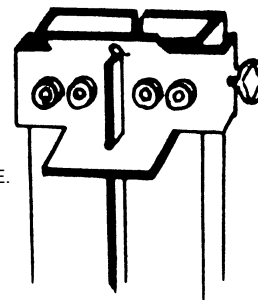


COMPLETED HORIZONTAL BUTT JOINT INTO A VERTICAL TUBE.

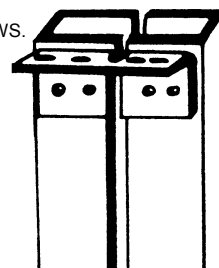
WHERE VERTICAL TUBES BUTT INTO HORIZONTALS, REVERSE THE PROCEDURE.

FOR A HEADER JOINT INTO A VERTICAL TUBE

SLIDE THE R-A-S JIG NO. 40 TO THE TOP OF THE VERTICAL TUBE. LINE UP JIG WITH TOP OF TUBE. HOLD SECURELY IN PLACE.



TIGHTEN THE THUMB SCREW ON THE END OF THE JIG AND DRILL FOUR HOLES FOR NO. 10 SELF-TAPPING ROUND HEAD SCREWS.



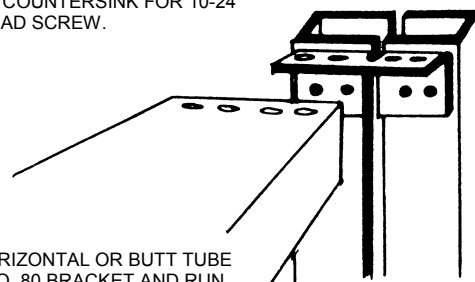
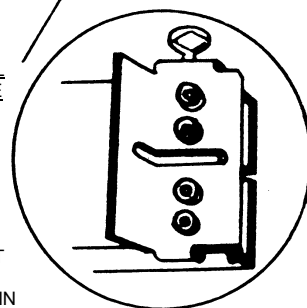
PLACE R-A-S BRACKET NO. 80 SO THAT THE CLEARANCE HOLES LINE UP WITH THE HOLES DRILLED AND FASTEN WITH SELF-TAPPING SCREWS.



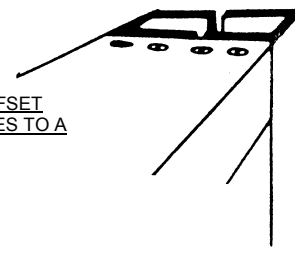
R-A-S JIG NO. 45

TO ATTACH THE HORIZONTAL OR BUTT TUBE -- USE OF THE R-A-S NO. 45 JIG.

PLACE THE R-A-S JIG NO. 45 ON THE END OF THE HORIZONTAL TUBE AND SEAT SECURELY. TIGHTEN THUMB SCREW (SEE HEAD ON VIEW IN CIRCLE). USING BUSHINGS AS GUIDES, DRILL WITH #9 DRILL -- REMOVE JIG AND COUNTERSINK FOR 10-24 FLAT HEAD SCREW.



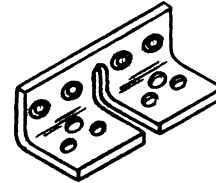
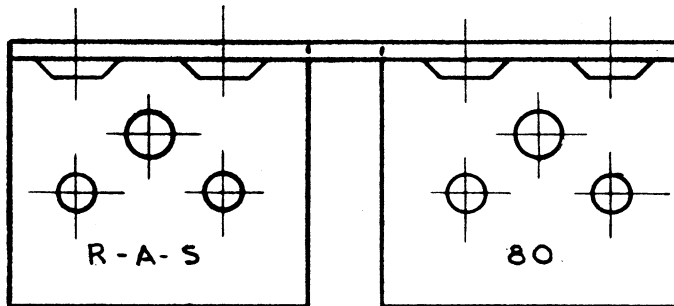
SLIP HORIZONTAL OR BUTT TUBE OVER NO. 80 BRACKET AND RUN 10-24 FLAT HEAD SCREWS HOME THROUGH THE TAPPED HOLES.



NOTE: THE DRILL JIG IS OFFSET ENOUGH TO DRAW UP TUBES TO A HAIRLINE JOINT.

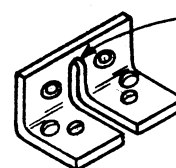
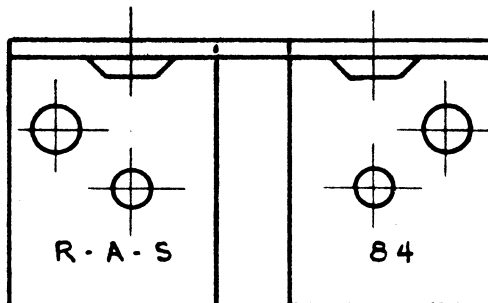
NOTE: THE USE OF THE R-A-S JIGS AND BRACKETS PROVIDE A MORE ECONOMICAL MEANS OF CONSTRUCTION.

BRACKETS AND JIGS COVERED BY U.S. PATENTS 3046818 & 3047110,  
ALSO CANADIAN PATENTS 665838 & 679198.



#80 BRACKET FOR USE ON 4 TO 5" PLAIN OR FIN TYPE TUBE.

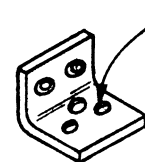
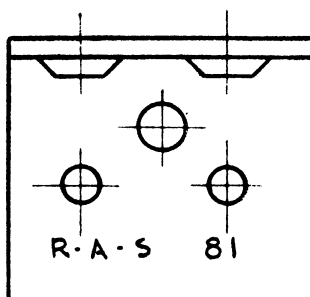
USE R-A-S DRILL JIGS # 40 & 45, 50 & 55, 60 & 65, OR 75 & 76.  
SEE REFERENCE CHART - PAGE H-13



FIN SLOT  
5/8" HIGH

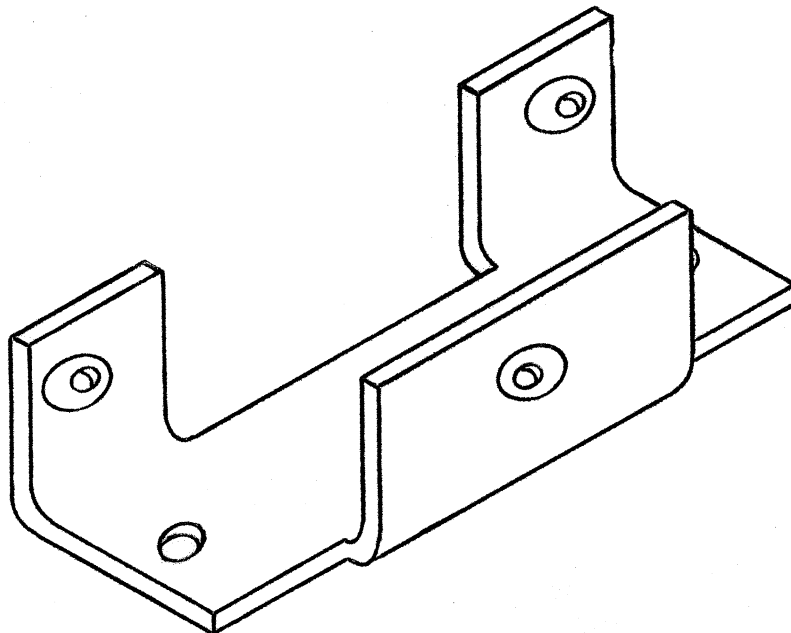
#84 BRACKET FOR USE ON 3" PLAIN OR FIN TYPE TUBE.

USE R-A-S DRILL JIGS # 38C & 39C.



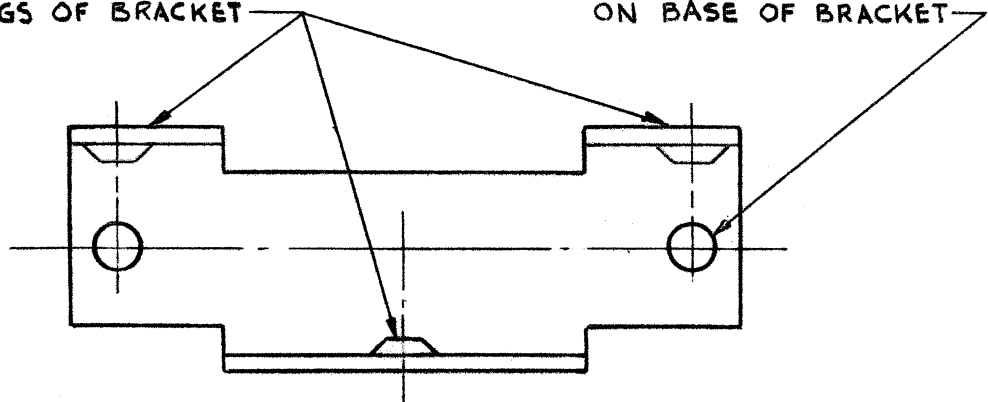
ALL CLEARANCE  
HOLES FOR #10  
SCREW.

# 81 BRACKETS ARE FOR SPECIAL APPLICATION.  
USE R-A-S DRILL JIGS 40 & 45, 50 & 55, 60 & 65, 75 & 76, 10 & 15, 20 & 23 OR OTHER SPECIAL JIGS  
SEE REFERENCE CHART - PAGE H-13



3 HOLES DIMPLED & TAPPED  
12-24 ON LEGS OF BRACKET

2 CLEARANCE HOLES  
FOR  $\frac{1}{4}$ " SCREW  
ON BASE OF BRACKET



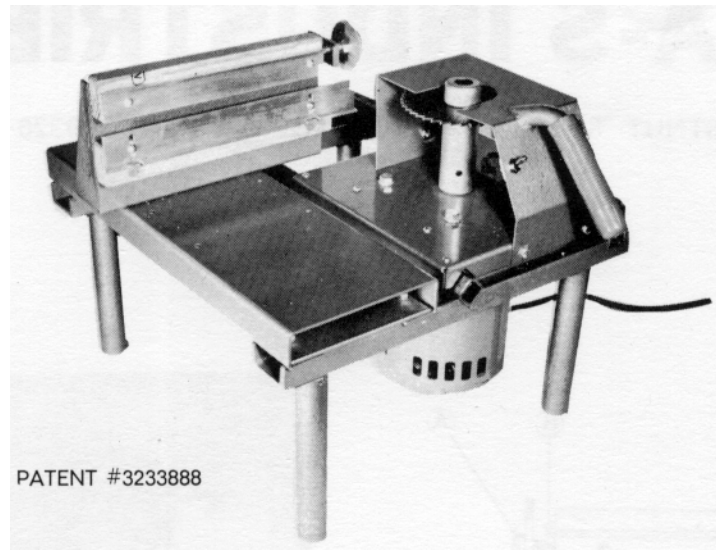
# 36 BRACKET FOR  $\frac{1}{8}$  WALL 4" WIDE DOVETAIL TUBE  
USE R-A-S DRILL JIGS N° 30 AND 35

R-A-S Brackets and Drill Jigs covered  
by U.S. Patents 3046818 & 3047110.

## **SECTION J - TOOLS AND MISCELLANEOUS**

| APPLICATION                 | PAGE       |
|-----------------------------|------------|
| NOTCHING SAW                | J-2 & J-2A |
| 825 & 826 DRILL JIG (BLANK) | J-3        |
| DRILL BUSHINGS              | J-4        |
| MISCELLANEOUS TOOLS         | J-5        |
| SCREWS                      | J-6        |

# NS-400 NOTCHING SAW



## NOW IN 3 SECONDS YOU CAN NOTCH A FIN TUBE . . . CLEANLY AND ACCURATELY

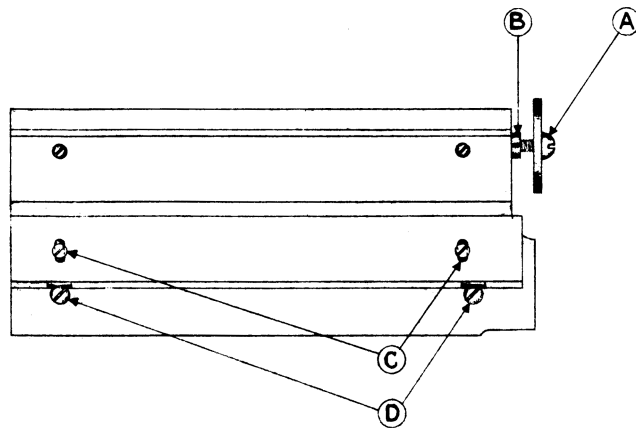
Place the fin of the tube in the guide slot. The fin will rest on the bottom of the guide slot — the tube does not rest on the table. This gives the fin perfect alignment to the saw blade. Slide the tube along until you reach the stop. Grasp the handle on the saw guard, press the momentary switch and push the saw forward. This will cut a clean, accurate notch. (The same procedure is used for fins that are not center located.)

### SPECIAL FEATURES OF THE NS-400 NOTCHING SAW

- Made of heavy-duty channel and square steel tubing.
- Powered by Westinghouse 3/4 H.P. motor for continued heavy-duty use.
- Motor is activated by momentary switch located conveniently at the handle.
- 5" high speed steel slotting saw blade.
- Height of the tube stop is adjustable for the depth of the notch desired.
- The machine is portable for field fabrication.
- Specifications: Width 17 1/2", Length 17", Height 14", Shipping weight 80 pounds.

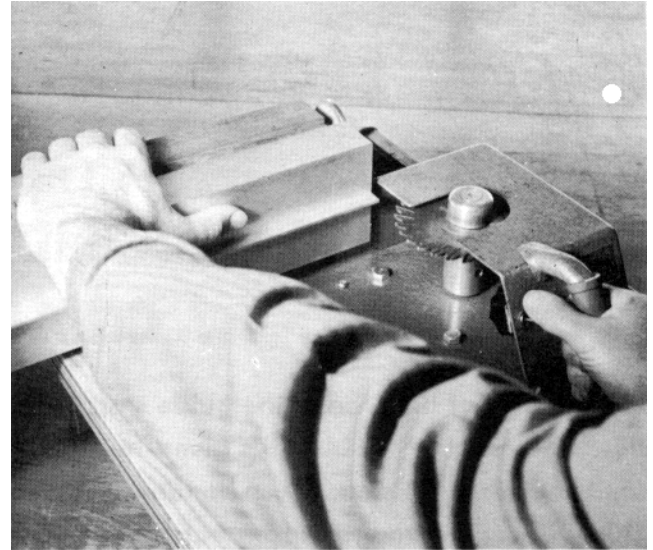
### R-A-S MANUFACTURES DRILL JIGS AND BRACKETS FOR ALL TYPES OF ALUMINUM EXTRUSIONS

R-A-S NS-400 Notching Saw covered by U.S. Patent 3233888.

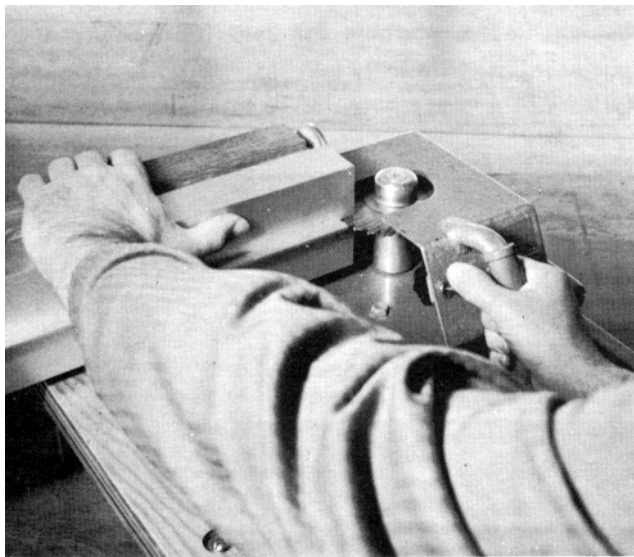


**LOCATING BLOCK**

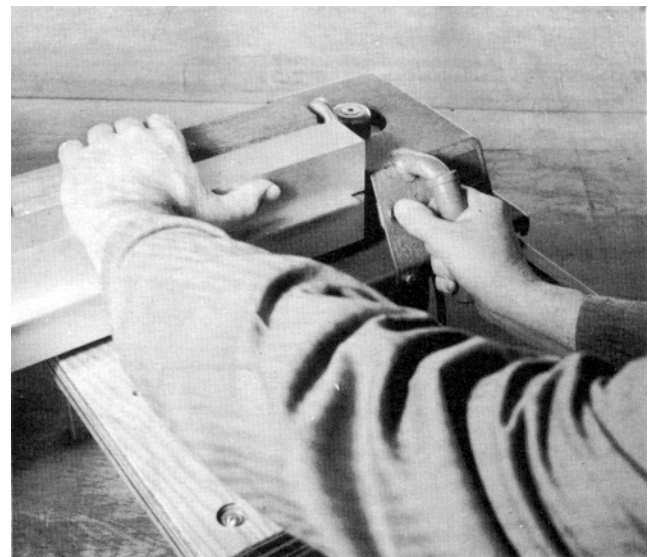
To increase or decrease the notch depth, release lock nut (B). With screwdriver, turn slotted screw (A) to proper depth. Tighten lock nut (B). To put fin in alignment with saw blade, release screws (C) and turn screws (D) in or out to proper alignment.



Place fin in slot, slide forward to positive stop. Hold tube with left hand, grasp handle with the right hand.



Hold momentary switch down, slide toward tube slowly, blade will start cutting, go all the way through.



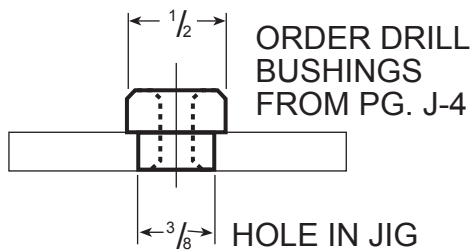
Having gone through, return with power on to original position, clearing notch.

## INEXPENSIVE CUSTOM DRILL JIG

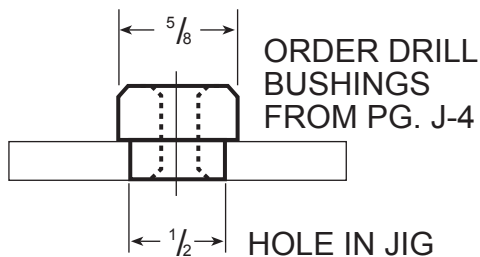
DRILL THIS JIG OUT TO SUIT YOUR OWN SPECIFICATIONS.

INSTALL DRILL BUSHINGS (SOLD SEPARATELY ACCORDING TO SIZE).

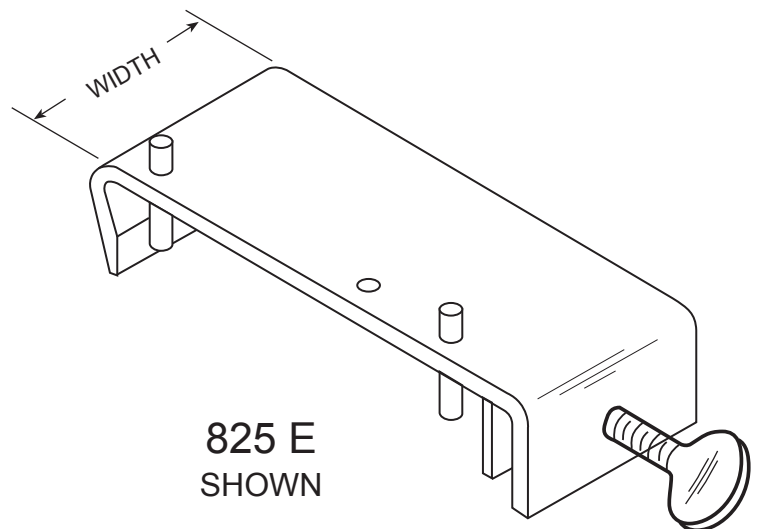
YOU NOW HAVE YOUR OWN CUSTOM DRILL JIG.



#34 TO #8 DRILL



#7 TO #0 DRILL



825 DRILL JIG COMES WITH HOLES & PINS FOR LOCATING JIG ON END OF TUBE.

826 DRILL JIG HAS NO HOLES.

STOCK JIGS ARE 1<sup>3</sup>/<sub>4</sub> – 2 & 2<sup>1</sup>/<sub>2</sub> WIDE. OTHER SIZES AVAILABLE.

THREE JIGS AVAILABLE IN EACH WIDTH TO FIT 3<sup>IN</sup> TO 6<sup>IN</sup> TUBE.

DRILL BUSHINGS ARE ORDERED FROM PAGE J-4

| DRILL JIG    | WIDTH                         | TUBE SIZE |
|--------------|-------------------------------|-----------|
| 825A OR 826A | 1 <sup>3</sup> / <sub>4</sub> | 3 TO 4    |
| 825B OR 826B | 1 <sup>3</sup> / <sub>4</sub> | 4 TO 5    |
| 825C OR 826C | 1 <sup>3</sup> / <sub>4</sub> | 5 TO 6    |
| 825E OR 826E | 2                             | 3 TO 4    |
| 825F OR 826F | 2                             | 4 TO 5    |
| 825G OR 826G | 2                             | 5 TO 6    |
| 825J OR 826J | 2 <sup>1</sup> / <sub>2</sub> | 3 TO 4    |
| 825K OR 826K | 2 <sup>1</sup> / <sub>2</sub> | 4 TO 5    |
| 825L OR 826L | 2 <sup>1</sup> / <sub>2</sub> | 5 TO 6    |

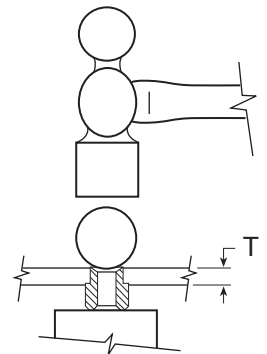
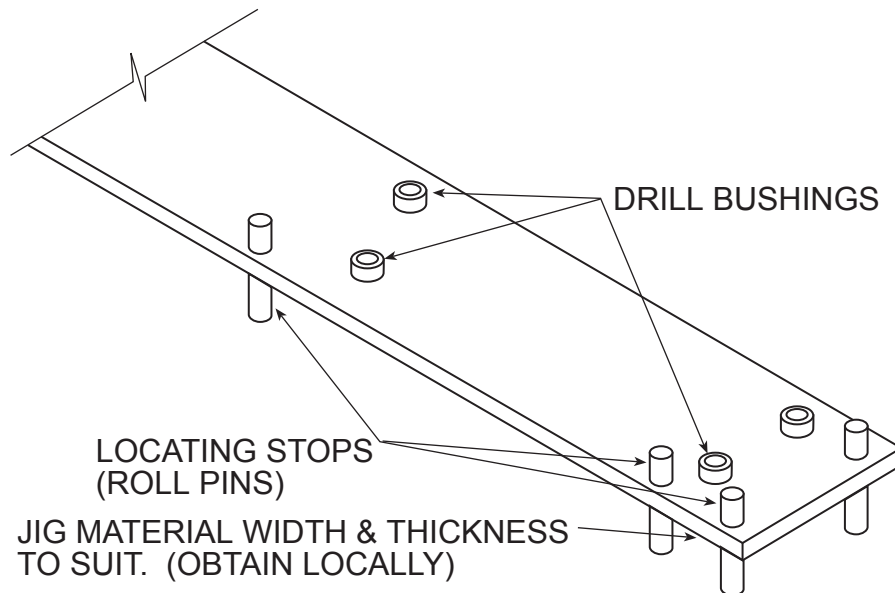
FULL LENGTH OR INDIVIDUAL DRILL JIGS CAN BE FABRICATED IN YOUR OWN SHOP TO YOUR SPECIFICATIONS.

DRILL AND INSTALL STOPS ( $\frac{3}{16}$  OR  $\frac{1}{4}$  ROLL PINS) WHERE NECESSARY.

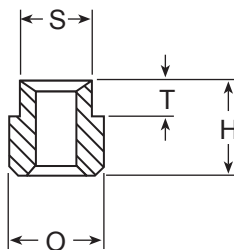
LAY OUT DESIRED HOLE PATTERN AND DRILL THROUGH JIG MATERIAL.

OPEN HOLES TO "S" DIMENSION AND INSERT DRILL BUSHINGS.

INVERT JIG AND FLARE BUSHINGS (SEE DETAIL).



### DRILL BUSHINGS



| TYPE | DRILL SIZE                                      | T<br>JIG THICKNESS |                |               | S<br>SHANK<br>DIA. | O<br>OUTSIDE<br>DIA. | H<br>HEIGHT                            |
|------|-------------------------------------------------|--------------------|----------------|---------------|--------------------|----------------------|----------------------------------------|
|      |                                                 | $\frac{1}{8}$      | $\frac{3}{16}$ | $\frac{1}{4}$ |                    |                      |                                        |
| DB 1 | #54 to #35 ( $\frac{1}{16}$ to $\frac{7}{64}$ ) | B                  | C              | D             | $\frac{1}{4}$      | $\frac{3}{8}$        | BC- $\frac{1}{4}$<br>D- $\frac{5}{16}$ |
| DB 2 | #34 to #8 ( $\frac{1}{8}$ to $\frac{3}{16}$ )   | B                  | C              | D             | $\frac{3}{8}$      | $\frac{1}{2}$        | $\frac{3}{8}$                          |
| DB 3 | #7 to 0 ( $\frac{13}{64}$ to $\frac{5}{16}$ )   | B                  | C              | D             | $\frac{1}{2}$      | $\frac{5}{8}$        | $\frac{1}{2}$                          |
| DB 4 | P ( $\frac{21}{64}$ ) to $\frac{17}{32}$        | B                  | C              | D             | $\frac{5}{8}$      | $\frac{13}{16}$      | $\frac{5}{8}$                          |

WHEN ORDERING INDICATE TYPE, DRILL SIZE & JIG THICKNESS "T"

EXAMPLE DB2 - 29 - D

| RECOMMENDED DRILL SIZE |     |               |
|------------------------|-----|---------------|
| SCREW SIZE             | TAP | CLEARANCE     |
| 6                      | 36  | 28            |
| 8                      | 29  | 19            |
| 10                     | 21  | 9             |
| 12                     | 16  | 2             |
| $\frac{1}{4}$          | 7   | $\frac{1}{4}$ |

TAP DRILL FOR SELF TAPPING  
OR SHEET METAL SCREW

### WE HAVE IN STOCK

DRILL BUSHINGS

DRILL BITS FOR INSTALLING BUSHINGS

HARDENED BALL FOR FLARING BUSHINGS  
OR HAND HELD FLARING TOOL

DRILL BITS FOR USE IN DRILL BUSHINGS

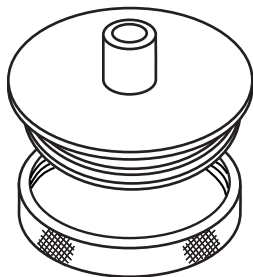
ROLL PINS (FOR LOCATING STOPS)

$$\frac{3}{16} \times \frac{1}{2} - \frac{3}{4} - 1 - \frac{11}{4}$$

$$\frac{1}{4} \times \frac{1}{2} - \frac{3}{4} - 1 - \frac{11}{4}$$

## ROUTER TEMPLATE GUIDE

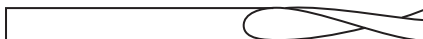
MUST BE USED WITH R-A-S ROUTER TEMPLATES  
RECOMMENDED SIZE – 1/2" TEMPLATE GUIDE AND 1/4" ROUTER BIT.  
OR 5/8" TEMPLATE GUIDE AND 3/8" ROUTER BIT.



FOR BLACK & DECKER OR  
ROCKWELL-PORTER CABLE ROUTERS:  
1/2" TEMPLATE GUIDE: PART# 955 B BR  
5/8" TEMPLATE GUIDE: PART# 955 D BR  
USE AT LEAST 1/2 H.P.  
RECOMMEND 1/2" TEMPLATE GUIDE AND 1/4" ROUTER BIT

## ROUTER BITS

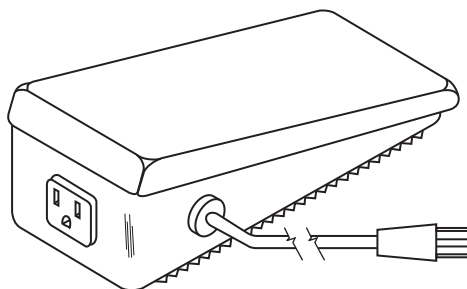
SELF STARTING



| CUTTING DIA. | SHANK DIA. | CUTTING LENGTH | OVERALL LENGTH | 2 FLUTE PART # | 1 FLUTE PART # |
|--------------|------------|----------------|----------------|----------------|----------------|
| 1/8          | 1/4        | 3/8            | 2 1/2          | 958 A          | 958 AS         |
| 3/16         | 1/4        | 5/8            | 2 5/8          | 958 B          | 958 BS         |
| 1/4          | 1/4        | 1              | 3              | 958 C          | 958 CS         |
| 5/16         | 5/16       | 1              | 3 1/4          | 958 D          | 958 DS         |
| 3/8          | 3/8        | 1              | 3 1/4          | 958 E          | 958 ES         |

## FOOT SWITCH PART# 950 G

EASIEST WAY TO CONTROL  
A ROUTER



| <u>Release</u> | <u>Changes</u>                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3/09           | Original Release                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 6/09           | Cover Page, Table of Contents, A-1, A-2, A-3,<br>B-1, B-2, B-4, B-5, B-6, B-7, B-8, B-10,<br>C-1, C-2, C-3, C-4, C-5, C-7, C-7A, C-8<br>D-1, D-2, D-3, D-3A, D-4, D-5, D-7, D-8, D-8A, D-8B, D-9, D-9A, D-9B,<br>D-10A (new), D-10B (new), D-10C (new), D-10D (new),<br>D-10E (new), D-10F (new), D-10G (new),<br>E-1, F-2, F-6, F-6A, G-1, G-2, G-2A, G-3, G-4, G-5, G-6, G-8, G-10, G-11, G-11A,<br>H-2, H-3, H-6, J-2, J-3, J-5, Revisions (new) |

To determine the release for the full catalog: look at the version at the bottom, right corner of the *Revisions* page at the end. If there is no *Revisions* page, then you have the first 3/09 release.

To determine the release for an individual catalog section: page through each of the pages to see the highest version number.