

C.R. LAURENCE CO., INC.

CRL Full Length Hinge Installation Instructions

For Models 100, 150, 200 and 250 Fully Concealed Hinges

I. CAUTION:

Please follow the installation instructions carefully. Not doing so may result in improper installation and void CRL's warranty. All CRL hinges have a permanent, factory applied lubricant on the geared areas. Removal or alteration of this lubricant or painting of the product in the field will void the warranty.

II. CLEARANCE REQUIREMENT CALCULATIONS

Single Door: Frame Opening - Total Clearance Required = Net Door Width
Double Door: Frame Opening - Total Clearance Required = Net Door Width Per Door

2

1. SINGLE DOORS:

(Square and Beveled Edged)

- A. Hinge clearance
- B. Lockside clearance
- C. Clearance for irregularities

Total Clearance Required

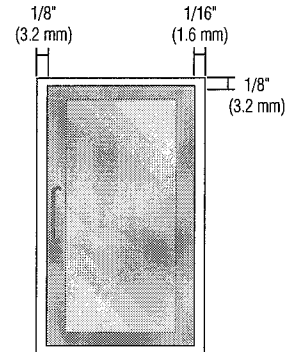
Clearances

0"

1/8" (3.2 mm)

1/16" (1.6 mm)

3/16" (4.8 mm)



2. DOUBLE DOORS

(Square and Beveled Edged)

- A. First Hinge clearance
- B. First clearance for irregularities
- C. Edge to edge clearance
- D. Second hinge clearance
- E. Second clearance for irregularities

Total Clearance Required

0"

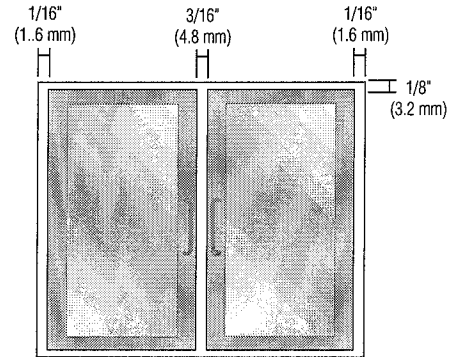
1/16" (1.6 mm)

3/16" (4.8 mm)

0"

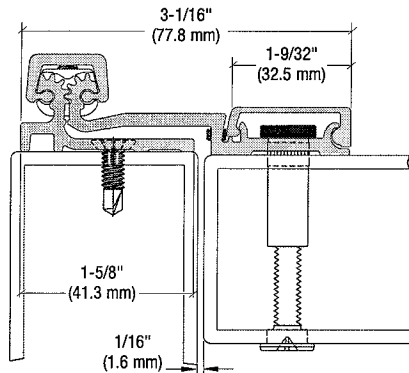
1/16" (1.6 mm)

5/16" (7.9 mm)

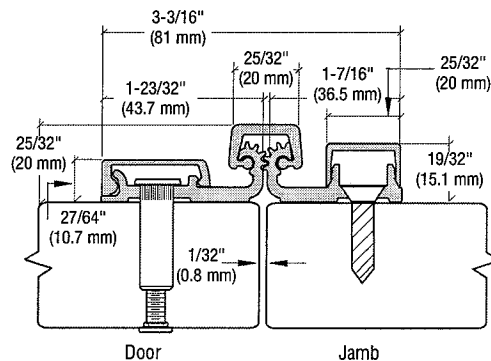


NOTE: Models 200 and 250 requires a minimum of 7/8" (22.2 mm) of frame face for mounting. If you have more than 7/8" (22.2 mm) frame face, mark an alignment line on the frame face from 1" (25.4 mm) up to 1-5/16" (33.3 mm) away from the center of the gap between the jamb and the door.

NOTE: Models 100 and 150 requires you to re-template existing overhead closers to match the swing clear pivot point of the hinge. If the existing closer is not re-templated, the door will only open to 70 degrees in a 90 degree opening. Install the hinge door leaf cover before reinstalling the existing door closer.



100 and 150 Series



200 and 250 Series

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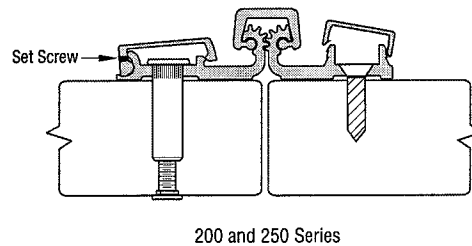
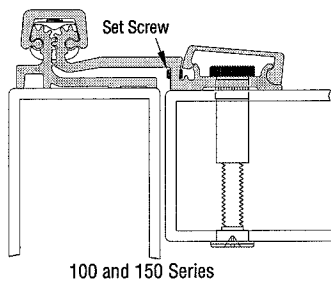
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III. INSTALLATION:

NOTE: All CRL hinges are supplied slightly shorter than a nominal door height to avoid threshold or carpeting clearance problems. The 100, 150, 200, 250 Series are non-handed and templated. Use the same model for both right and left hand openings. The 100, 150, 200, and 250 Series remain unhandled after cutting.

Cutting: If the hinge must be cut shorter, cut only one end, using a hacksaw. The hinge should be in a closed position, either standing cap up, or on its side, cap closest to you so that the saw cuts through the cap first. If you cut off one of the set screw bearings, reinstall it on the hinge. The hinge must be installed with the cut end on the bottom. This allows any chips to work out after installation.

1. **Attaching the Hinge to the Frame:** With the hinge in the open position, use a shim to position the top end of the hinge 1/8" (3.2 mm) below the header to allow for door clearance. Line up the hinge with the door side edge of the frame or your alignment line, being sure that no part of the base of the hinge protrudes beyond the frame. Fasten the frame leaf at one top and one bottom hole, using the #12-24 flathead screws provided. Mark or center punch hole locations. Drill all holes using a #13 (.185) or 3/16" (.188) drill. For wood, use the #12 x 1-1/2" flathead wood screws provided and a 5/32" (.156) drill.
2. **Preparing the Door:** Attach the door leaf to the door through two locator holes (Option: use all four locator holes), using the panhead tek screws. A #3 Phillips drive is required for installation of screws. Remove shims and check door clearances. Occasionally, the door will sag slightly when shims are removed; note amount of adjustment required to bring door back into alignment. Then locate and drill holes for the top and bottom thru bolts in the door, marking the location of the thru bolt holes using the 3/8" x 1" transfer punch. Remove the door and drill the holes with a 3/8" (10 mm) drill.
3. **Attaching the Door:** Attach the door with the top and bottom thru bolts, then make any further adjustments on the frame leaf. Once the door is correctly aligned, completely secure the frame leaf using the flathead screws. Mark and drill the remaining thru bolt holes in the door, and secure the door leaf with the sex bolts and 1/4-20 shoulder screws.
4. **Installing Covers:** Set screws installed in the side of the door cover will need to be backed out before you begin. Line up the door or frame cover even with the top end of the hinge. Starting at the top, apply pressure along the length of the cover, snapping it into place as you go down the hinge. If using a hammer to tap cover into place, protect cover surface. Once door cover is in place, tighten the set screws securely with 3/64" Allen wrench. Door covers can be removed and reinstalled. If added security desired, apply a bead of construction adhesive inside the door cover or over the thru bolt heads. See illustrations below for cover installation.



REINFORCING AND RIV-NUTS: No reinforcing is necessary except on extremely heavy or extra-wide doors. Riv-Nuts are recommended in the frame and door when door weight exceeds 450 pounds (204 kg).

PAIRS OF DOORS WITH MULLIONS: If the mullion is between the doors, treat as a single door installation. If the mullion is behind the doors, treat as a double door installation.

GROUTED/FLUSHED-IN FRAMES: For ease of installation, it is recommended that some sort of mudguard be installed behind the frame. Do not use self-drilling, thread-forming screws with grouted steel frames having no mudguard. If mudguards have not been used, carefully drill holes through frame and remove grout for screw clearance. Do not oversize holes in frame.

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