INSTALLATION INSTRUCTIONS FOR CECO DOOR FLOOD RESISTANT DOOR AND FRAME ASSEMBLIES

GENERAL

The installation of flood resistant door and frame assemblies differs significantly from that of standard door and frame assemblies. These instructions are specially designed for the successful installation of Ceco Door flood resistant door products and are to be utilized in combination with the approved shop drawings in order to ensure proper operation, to achieve up to 36” flood resistance, and to validate product warranty. These instructions assume the installer has had previous experience in setting frames and installing doors. If any questions arise during installation please contact our Customer Service Department.

FRAME INSTALLATION

A. Frames provided by Ceco Door are designed to be installed in masonry wall as the wall is being erected. Frames designed to be installed in existing walls usually require special conditions which will likely require further review of the approved shop drawings. A review of the architect’s plans.

B. Frames should be immediately checked to ensure they are square and true. Minor damage which could occur during shipping can be easily corrected by an experienced installer. Note that frames are required to be grouted. Sill and jambs should be completely filled to 40” AFF minimum. Frames in new masonry walls will be grout filled as specified by the project documents as the wall and frame are erected. Frames in existing masonry walls should be grout filled after the frame is installed.

C. Installation In New Masonry Partitions (Fig. 1).
   1. Place the frame between the floor tracks.
   2. Using vertical wood braces and horizontal wood spreaders at the middle of the frame, square up, level and set the frame.
   3. Cross string the frame to ensure the jambs are properly set.
   4. Anchor to the wall using anchors provided.
   5. Once the frame is fully attached, the temporary wood spreaders can be removed.
   6. The frame should then be fully caulked around the perimeter at both sides where it meets the wall and at the floor using 100% silicone.
   7. The bottom sill must be installed to the floor slab and not over carpeting or similar material as this would allow leakage and potentially degrade the flood resistance.
   8. Grout fill as the wall is erected. Special precautions should be taken to prevent the sill and jambs from bowing during grout fill.

Note: After installation of the frame, the frame should be continuously caulked to the wall on both sides of the frame the entire perimeter of the frame.
DOOR, AND PERIMETER SEAL INSTALLATION

A. Mount the hinges (Fig. 2) to the frame with the screws provided with the hinges. Check that the bottom leaf hinge has been fully caulked in, including filling the grout box with caulk. If the box is not filled, contact your technical service representative.

B. Hang the door to the frame using the screws provided with the hinges.

C. At this point, all other mortised and surface applied hardware supplied by others can also be installed. Note that heavy duty offset hardware mounting brackets (Fig. 3) are provided for all hardware intended to be mounted to the frame stop. No hardware should be mounted directly to the seal assembly.

D. Check the door for proper clearances (1/8" at edges, and top). The weight of these doors often requires minor shimming of hinges in order to square them in the opening. Slotted metal shims which can be placed under the hinge to shim the door.

E. Install all perimeter seal retainers through the elongated slots with the ¼-20 machine bolts provided, beginning with the jamb retainers and then the head retainers and slide them to a point farthest away from the door.
F. Install the EPDM rubber Sound Tight seals into the retainers beginning at the top and bottom corners, working toward the center. Note that the small V-shaped leg of the seal must be toward the door. (Fig. 4). It’s important that the seals are installed properly.

G. Close and latch the door and then push the seal and retainer assembly tight to the door and snug the screws. Do not over tighten the screws at this point. Using a block of wood, tap the retainer assembly with a hammer until the seal makes complete contact with the entire length and width of the door. During the adjustment process, use a very thin credit card or similar to check seal tension. The card should fit very snugly along the entire perimeter and not fall out. Periodically open and close the door during seal adjustment to ensure the door operates properly. Do not force the seal against the door as this will cause it to bind. Darken the room and check the seal assembly for light penetration with a flashlight. Once optimum adjustment is obtained, tighten the retainer bolts to prevent the seal assembly from moving.

H. Once all seals are adjusted and the doors are fully operable the entire seal assembly (top, bottom and sides) should be final checked. Any weak points which can then be addressed in the final adjustment process.

I. After final adjustment, run a single bead of 100% silicone caulk along the entire exposed edge of the head and jamb retainers.

J. Apply 100% silicon caulk between the hinge and the face of the frame.

K. Install the head and jamb covers with the 6-32 self drilling screws provided. The covers should be field painted prior to installing and it’s most important to prevent paint and/or debris from coming into contact with the seals.
Flood Resistant Frame Detail (Hinge Prep)

- Sealed Chamber
- Hinge Box to be 1" min deep x 12" min long
- Watertight Chamber sealed from the inside with 100% General Purpose Silicone
- Bottom of Chamber Built With A Slope

FIGURE XX

Flood Resistant Frame Detail (Strike Prep)

- Sealed Chamber
- Strike Box to be 1" min deep x 8" min long
- Watertight Chamber sealed from the inside with 100% General Purpose Silicone
- Strike Plate by Others

Watertight Chamber sealed from the inside with 100% General Purpose Silicone

3/16" HINGE REINFORCING

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CAPPING CHANNEL, SEAL WITH BONDO, GRIND AND FINISH SMOOTH

VERTICAL STIFFENERS TERMINATED AT TOP & BOTTOM CHANNEL AND CLOSER REINFORCING

SKIN SHEETS - See Spec Sheet For Gauge & Material

ARC WELDED TOP & BOTTOM

22 GA. VERTICAL STIFFENERS

TERMINATE VERTICAL STIFFENERS AT CLOSER REINFORCING

12 GA. STRIKE REINFORCING

FULLY WELDED EDGE GRIND, FILL AND FINISH ALL WELDS

1/8" IN 2" BEVEL

FILL ALL VOID SPACES OF DOORS WITH U.L. APPROVED MINERAL FIBERGLASS

22 GA. VERTICAL STIFFENERS 6" MAX DISTANCE BETWEEN

STIFFENERS & 5" MAX DISTANCE BETWEEN SPOT WELDS

INVERTED BOTTOM CHANNEL

16 Ga. x 1-5/8" inverted top channel

12 Ga. x 5-3/8" x 20" closer reinforcing

SMOOTH
TROUBLESHOOTING (ALL MODELS)

It’s important that the installation instructions for each flood resistant door model are carefully read and followed. Occasionally there are minor issues that need to be addressed and these are usually related to installation. The following is a list of items that should be reviewed in order to verify that all attributes are properly installed and correctly adjusted. Our Project Manager or our Customer Service Department can assist in this.

Door Frames
It’s very important that the frames are installed perfectly plumb and square. They should be fully grouted. The frame needs to be fully caulked to the wall on both sides around the entire perimeter and at the floor.

Doors
The doors need to be perfectly square in the frame with a maximum 1/8” door to frame clearance at the head and jambs. Metal shims plates should be used with the hinges to compensate for sag, if any. Some doors include preparation for vision lites and we normally provide the lite kits only. Factory installed glass is available as an option. It’s most important to follow the installation instructions to ensure that these doors are properly field glazed.

Perimeter Seals/Door Bottom Seals

EPDM Rubber perimeter seals:
These are a large preassembled seal, a four piece seal retainer and a four piece cover. These are sized to fit the clear opening. The seal should be adjusted to tightly fit the perimeter of the door without binding. A seal adjusted too tightly will bind the door and make it difficult to close. A seal adjusted too loosely could allow the door to close past the intended point possibly causing the anti-pick latch of a lock to enter the latch bolt cutout in the strike and cause it to fail. Proper adjustment can be verified by attempting to slide a credit card between the seal and the door in the closed position around the entire perimeter. When properly adjusted this should be difficult to do. Verify the EPDM seals are installed as shown in the installation instructions. It’s quite easy to get the seal reversed and installed incorrectly. Be sure this is mounted as shown in the installation instructions provided.

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