

IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for EV-545 extruded aluminum louvers mounting to concrete building conditions. These models are designed to withstand severe weather effects typically associated with hurricanes, and have been tested for resistance to impacts, cyclic fatigue, and static pressures up to 130 psf.

1. For additional details, refer to the product drawing package posted at www.csairproducts.com as well as any job-specific submittal drawings when provided.
2. Carefully lift louver sections by the frames using multiple lifting points as necessary to avoid distortion, racking, or other damage. **Do not apply excessive force to a single point, and NEVER LIFT UNITS BY LOUVER BLADES.** Take necessary precautions to prevent marring the louver finish.
3. While installation is underway and before louver sections are permanently fastened in place, C&S recommends that the installer employ temporary straps or bracing (by others) to prevent units from shifting unexpectedly.
4. All gaskets and caulk are supplied by others.

Preparation

Louvers and Hardware

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list, and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your C&S representative immediately of any shortages or shipping damage.

Openings

1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Sill Flashing

1. Locate the sill flashing (optional). Closed-end sill flashing is recommended for all EV-545 installations.
2. Confirm that the sill of the opening and the underside of the flashing are clean and free of all debris.
3. Apply caulk to the sill of the opening and firmly set the sill flashing in the caulk. See Figure 1.1.
 - a. For wider openings, multiple pieces of flashing may be necessary in order to cover the entire width. When this occurs, caulk at all overlapping joints and firmly set. See Figure 1.2.
 - b. Closed end flashing pieces will include extra length on each end which must be notched and manually bent into place to close off the ends. Carefully bend up the end tabs and thoroughly caulk the corner seams. See Figure 1.3.

Figure 1.1 Sill Flashing Vertical Section

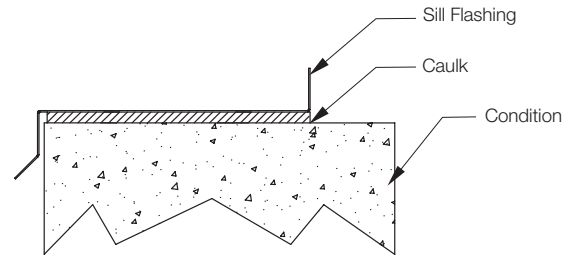


Figure 1.2 Sill Flashing Assembly

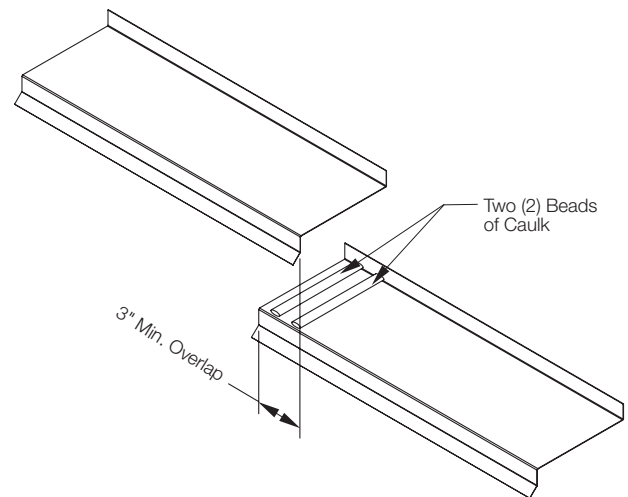
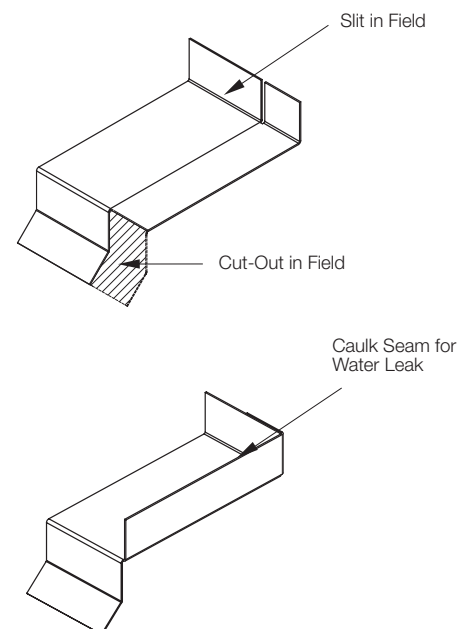


Figure 1.3 Closed End Sill Flashing

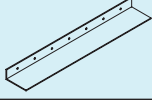
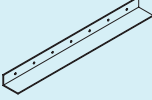
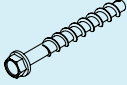


Installation Details

EV-545

Installation Instructions - Concrete Building Condition

Table 1: Installation Hardware

Part	Description		
E-6	Continuous Angle (3-1/2" x 1-1/2" x 1/8" x Varying Length)		Included for ECV-545-MD, optional for ECV-545
E-7	Low-Profile Continuous Angle (2" x 1-1/2" x 1/8" x Varying Length)		Optional for ECV-545
F-2	1/4"-14 x 1" Hex Head Self Drilling Screw		Included for ECV-545-MD, optional for ECV-545
F-3	1/4" x 2-5/8" DeWalt Screw-Bolt+ Screw Anchor		Supplied by others

Single Section Louver Installation

1. Locate the continuous angles (E-6 or E-7), and determine their placement along the top and bottom of the opening, using Figure 2 as a reference. The continuous angles will sit against the rear side of the louver, so they should be recessed behind the exterior face of the wall. If sill flashing has been installed, the angles will be immediately behind the flashing.
2. Drill a series of 5/16"-diameter clearance holes for anchors in each length of angle.
 - a. Each angle will arrive with one side pre-drilled with clearance holes for 1/4" fasteners. Anchor clearance holes should be drilled in the opposite leg of the angle (the side without pre-drilled holes).
 - b. Be careful not to locate any anchor closer than the minimum distance to the rear edge of the concrete. The anchors should also be at least the minimum distance from the front edge of the concrete. See Figure 2.
 - c. Anchor distance to the front and rear edges of the continuous angles should be no less than the minimums specified in the Figure 2 section details.
 - d. Drill one hole the maximum distance from each end and then locate the remaining holes no more than maximum on-center spacing as specified below. See Figure 2.
3. Using the anchor hole pattern in the continuous angles as a guide, drill 1/4"-diameter holes into the concrete above and below the wall opening. Holes should be drilled at least 2-7/8" deep. Again, be careful to maintain the required minimum edge distances to the edges of the concrete, as shown in Figure 2.
4. After cleaning any dust or loose material from the holes, use 1/4" x 2-5/8" DeWalt Screw-Bolt+ screw anchors (F-3) to fasten the continuous angles to the top and bottom surfaces of the opening. Anchors will run through the clearance holes in the angles into the anchor holes in the concrete. Tighten anchors to the correct installation torque specified by DeWalt.
5. Lift the louver section up and place it into the opening as shown in Figure 2. The back of the louver should sit directly against the continuous angles.

6. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).
7. Attach the louver section to the continuous angles using 1/4"-14 x 1" self-drilling screws (F-2) running through the existing clearance holes in the angles.
8. Finish by installing backer rod and caulk around the perimeter of the louver, as required. **To allow for drainage, do not caulk the front gap between louvers and sill flashing.**

Multiple Section Louver Installation

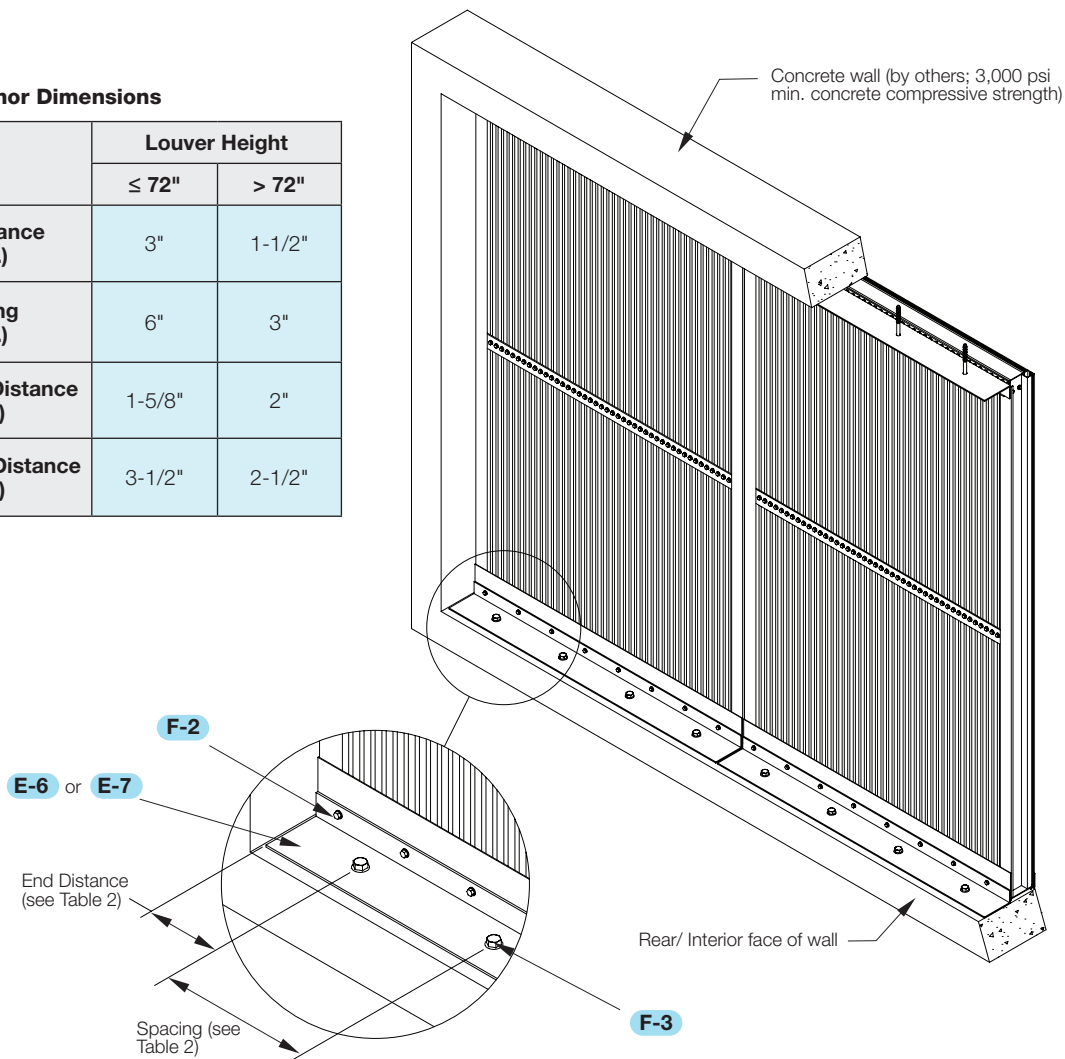
1. Moving from left to right, follow steps 1-7 from "Single Section Louver Installation" to install each louver section within the opening.
 - a. For louvers ordered with an optional 1-1/2" flange, different louver sections are of distinct construction and are not interchangeable. The Left End section will have flange on the top and left side, the Right End section will have flange on the top and right side, and any Center sections (if present) will be flanged on the top only.
 - b. For non-flanged louvers, different sections within an opening are completely interchangeable and may be installed in any order desired.
 - c. Shim as necessary to maintain an approximate 1/4" clearance between the louver frames and the wall condition, and approximately 1/4" between adjacent sections (shims by others).
2. Finish by installing backer rod and caulk in the following locations:
 - a. All vertical joints between sections.
 - b. Around the perimeter of the opening.

To allow for drainage, do not caulk the front gap between louvers and sill flashing.

Figure 2: Installation to Concrete

Table 2: Anchor Dimensions

	Louver Height	
	≤ 72"	> 72"
End Distance (max.)	3"	1-1/2"
Spacing (max.)	6"	3"
Rear Edge Distance (min.)	1-5/8"	2"
Front Edge Distance (min.)	3-1/2"	2-1/2"



Section Detail at Top & Bottom Connections

