



Technical Document – Installation Guide for Casco Aluminum Porch Enclosure System (F-channel Installation)

This guide provides step-by-step instructions for preparing, assembling, and installing the Casco Aluminum Porch Enclosure System. Please read the entire guide before starting to ensure a smooth installation.

Suggested Tools:

Safety Glasses, Gloves, Tape Measure, Pencil/Marker, Level, Drill Bits (appropriately sized for pilot holes), Phillips Screwdriver Bit, Miter Saw and/or Miter Box with Saw, Rubber Mallet, Drill, Caulk Gun, Color-Matched Caulk, Low-Tack Masking Tape

SAFETY FIRST:

Before beginning installation, always wear safety glasses when handling or cutting sharp aluminum extrusions. Use cut-resistant gloves as needed to protect hands from sharp edges. When operating power tools, follow best practices and safe procedures at all times. Failure to observe proper safety measures may result in injury.

1. Preparing the Components

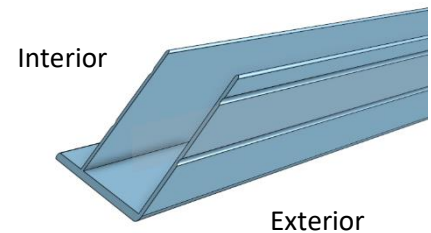
Removing Glass and Screen Inserts

1. Remove all packaging materials from the preassembled frames.
2. Unscrew the interior thumb screws around the perimeter to release the glass and screen inserts.
3. Carefully remove each insert, keeping it paired with its corresponding frame to ensure proper reinstallation.
 - This reduces weight and simplifies handling during installation.
 - Do not discard any installation screw packs, labels, or instruction sheets included with the unit.

Cutting F-Channels - *If noted on the order, Casco supplies installation F-channel extrusions slightly longer than the required opening size, rounded up to the nearest foot based on the provided dimensions. For a precise fit, each end must be cut at a 45-degree angle to align with the corners of the opening.*

Steps for Cutting F-Channels:

1. Before beginning trimming of installation F-Channels:
 - Lay out and identify all porch openings to confirm that all necessary F-channel extrusions are present and correctly provided.
 - Verify measurements and confirm that each opening has a corresponding set of F-channels before making any cuts.
2. Measure the Opening:
 - Select an installation F-channel length that is the next whole foot larger than your opening size.
(e.g., for a 38" opening width, use a 48" F-channel length and trim to fit).
3. Cut the Head and Sill Installation F-Channels (top and bottom):
 - Measure the width of the opening surface at both the head and the sill.
 - On one end of the installation F-channel, cut a 45-degree angle inward.
 - Deduct 1/8" from measured width to allow for clearance.
 - Mark this adjusted dimension and cut the opposite end at a matching 45-degree angle inward.
4. Cut the Jamb Leg Installation F-Channels (sides):
 - Measure the full height of the opening from head to sill on both sides.
 - On one end of the installation F-channel, cut a 45-degree angle inward.
 - Deduct 1/4" from measured height to allow for clearance.
 - Mark this adjusted dimension and cut the opposite end at a matching 45-degree angle inward.
5. Repeat for All Openings:
 - Cut all head, sill, and jamb F-channels to match their respective opening dimensions.
 - Ensure all cuts maintain the proper 45-degree angle, with the fin side as the longest point.



2. Preparing the Opening

The Casco Aluminum Porch Enclosure System is not a watertight product and should only be installed into a weathertight, properly prepared opening to help protect the porch materials over time. A slight outward pitch at the sill—typically 1/8" to 1/4" per foot—is recommended to ensure proper drainage. While the system can be installed on a flat sill, standing water may collect and could lead to material damage or premature wear overtime.



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3. Installing the F-Channels

1. Select the appropriate sub-frame (with inserts removed) for the opening you intend to install.
 - Slide the pre-mitered F-channel extrusions onto the frame edges:
 1. Head F-Channel – top edge
 2. Jamb F-Channels – left and right sides
 3. Sill F-Channel – bottom edge
2. Press the F-channels evenly onto the sub-frame edges, ensuring a snug fit.
 - Note: The F-channels are not designed to push fully onto the frame and seat on the sub-frame. As long as the mitered corners meet, the fit is correct and acceptable.

4. Positioning the Frame in the Opening

1. With F-channels pre-mounted, lift the enclosure assembly into the opening.
 - For multi-frame combinations within a single opening, a second person may be required.
 - You may also temporarily tape the F-channels to the sub-frame to hold them in place during positioning.
 - *Tip:* Ensure glass and screen inserts are still removed at this point for easier handling.
2. Position the frame so that the F-channels fit snugly against the opening:
 - As you place the frame, slide the installation F-channels slightly outward from the sub-frame—removing any temporary tape at this point—so they can be pressed snugly against the opening surfaces.
 - Head F-Channel: Push upward against the top of the opening.
 - Jamb F-Channels: Press outward against the sides of the opening.
 - Sill F-Channel: Rest directly on the bottom of the opening.
 - Note: Sliding the F-channels outward may create a small gap at the mitered corners—this is expected and will be sealed with caulk in a later step.

5. Securing the Frame

1. Set the frame into the opening and loosely secure it by predrilling pilot holes through the F-channel fin and fastening with the supplied screws.
 - This temporary attachment allows for both major and minor adjustments.
2. Verify that the frame is square, level, plumb, and true, and ensure it is secured enough to support glass panel insertion.
 - While the rough opening may not be perfectly square, the sub-frame is designed to float within the F-channels, allowing it to remain square and true inside the enclosure.
 - Make any necessary adjustments before proceeding. A rubber mallet can be used for fine-tuning (avoid striking the glass).
3. Insert the corresponding glass panel into the sub-frame to confirm that it is properly aligned and capable of accepting the inserts.
 - The panel should slide in easily without binding, indicating the frame is correctly positioned.
 - *Note: If only screen panels were purchased, a screen panel may be used for this step instead to check alignment.*
4. Once proper alignment is confirmed, permanently secure the frame into the opening:
 - Place screws within 6 inches of each corner.
 - Space additional screws approximately 12 inches apart around the entire perimeter evenly.
 - *Note: For a clean interior appearance, we recommend installing screws evenly along both sides, as well as the top and bottom, to maintain visual balance inside the opening.*

6. Sealing the Frame

1. Interior caulking of all mitered joints is required to prevent insect intrusion.
 - For mullioned units, apply color-matched caulk to any visible gaps where horizontal and vertical F-channels meet on the interior.
2. Perimeter caulking of the frame is not required, but may be applied on the exterior for improved aesthetics.
 - *If caulking the exterior miter joints, leave a small 1/8" gap at the bottom of each corner to allow for drainage and prevent water from becoming trapped within the system during heavy rains.*

7. Installing Multi-Unit Systems with H-Channels

For porch systems that span multiple openings or include multiple connected frames, H-channels are used to join sub-frames vertically and horizontally. Follow these guidelines for proper fit:

Vertical H-Channels

- Cut to fit continuously between the head and sill F-channels.
- Measure the full height of the opening, then deduct for head and sill overlap:
 - Cut Length = **Opening Height** – 1-7/8"

Horizontal Mullions

- Horizontal mullions run between two vertical components and support the connection of stacked units.
- The cut length depends on the placement of the mullion:



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- At the outer perimeter to an intermediate (terminating at vertical F-channels/jamb and H-channel):
 - Cut Length = Width of **Sub-Panel Frame** – 1-1/2"
 - Between two intermediate vertical H-channels (within a multi-frame row):
 - Cut Length = Width of **Sub-Panel Frame** – 1-1/4"
 - These deductions ensure proper seating between components and maintain alignment of the sub-frames.
 - Note: When installing intermediate horizontal mullions, a small gap may remain at each end where the mullion meets the vertical H-channels. These gaps should be sealed with color-matched caulk during the finishing stage to prevent insect intrusion and improve the overall appearance.
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8. Shipping Notes

Master Frames

- Shipped pre-assembled, with the glass and screen inserts stacked inside the frame for transit.
- *Important:* Do not store the glass and screen inserts stacked inside the opening after installation. Remove and store them separately in a safe, protected area to avoid damage.

F- and H-Channels

- Shipped as loose, uncut lengths, rounded up to the nearest foot based on the ordered opening sizes.
 - These components are intended for field cutting to fit site-specific dimensions.
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9. Final Inspection

Before completing the installation, ensure the system is properly secured, aligned, and sealed by verifying the following:

1. All screws are fully tightened around the perimeter of each frame.
 2. The frame is square, level, plumb, and true, with no visual distortions or misalignment.
 3. Glass and/or screen panels slide easily into the sub-frame without binding.
 4. All interior miter joints are caulked to prevent insect intrusion.
 5. If exterior miter joints were caulked, they include small drainage gaps at the bottom corners for proper weepage.
 6. Intermediate horizontal mullions (if used) are sealed at both ends where they meet vertical H-channels.
 7. No glass or screen inserts are left stored stacked together inside the finished sub-frame or opening—this configuration is for shipping only.
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10. Additional Tips

- Lay out and label all openings and components before beginning to ensure everything is accounted for.
 - Double-check all measurements before cutting, especially for F- and H-channels.
 - Dry-fit components when possible before final fastening to confirm fit.
 - Use assistance when handling large, heavy, or combination frames to avoid damage or injury.
 - Use a rubber mallet for minor adjustments when aligning frames within the opening—avoid contact with glass.
 - Keep color-matched caulk, screws, and basic tools on hand for field adjustments.
 - Seal all necessary joints as outlined to prevent insect intrusion and water-related issues.
 - Do not store glass or screen inserts inside the frame after installation, store them standing as vertically as possible in a dry, protected area.
 - Removing screen panels during winter months is recommended to extend their lifespan by protecting them from prolonged exposure to outdoor conditions and UV rays.
 - Casco offers touch-up paint for many standard and custom colors—available through local dealers.
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By following this guide and applying these tips, you'll achieve a secure, professional installation with a clean, long-lasting finish.