

General

The following guidelines provide basic assembly and installation instructions for 'PH' extruded aluminum penthouses mounting to rigid curb conditions.

1. For additional details, refer to the product drawing package posted at www.alllite.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, All-Lite 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 and other items 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 All-Lite representative immediately of any shortages or shipping damage.

Openings

1. Inspect curb/condition openings for damage, repair as needed, and remove any obstructions or debris.
2. Prior to inspection, verify that curb/condition openings are square and level and the penthouse frame will fit properly.
3. 'PH' Penthouses are not designed with a moment resisting frame, rather they rely on a rigid connection at the condition, per the Engineer Of Record (E.O.R.), in order to resist wind load.

Sill Flashing (if applicable)

1. Locate all sill flashing (by others or optional by All-Lite).
2. Confirm that the bottom of the opening and the underside of the flashing are clean and free of all debris.
3. If quantity of 4 pieces of sill flashing are included, cut sill flashing members into two halves for a total of 8 pieces. For wider openings, flashing may already come in 8 pieces. These pieces are cut long in the field so they can overlap and can easily be adjusted in the field. As the flashing pieces overlap less, the rear flashing flange also extends outward. See Figure 1.1.
4. Apply caulk to the top of the condition/curb and firmly set the sill flashing in the caulk. See Figure 1.1.
 - a. Caulk at all overlapping joints and firmly set. See Figure 1.2.
 - b. Corner flashing pieces will include extra length on each end which must be notched and manually bent into place to seal off the corners. Carefully bend up the tabs and thoroughly caulk the corner seams. See Figure 1.3.

Figure 1.1 Sill Flashing Vertical Section

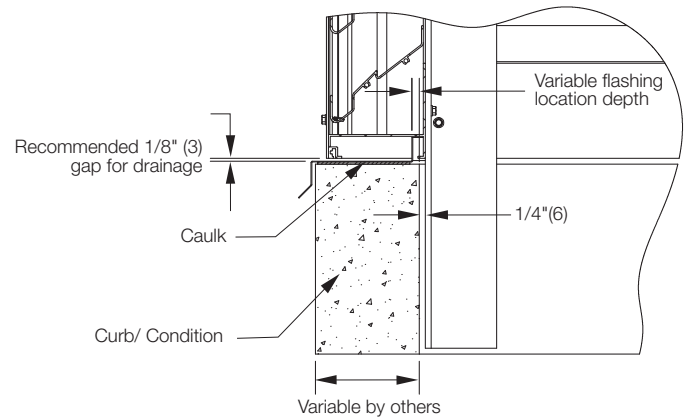


Figure 1.2 Sill Flashing Assembly

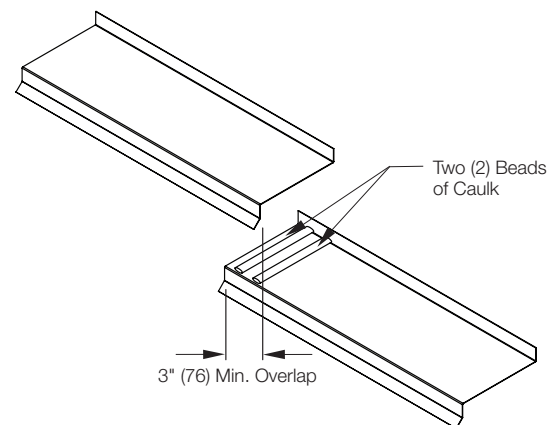
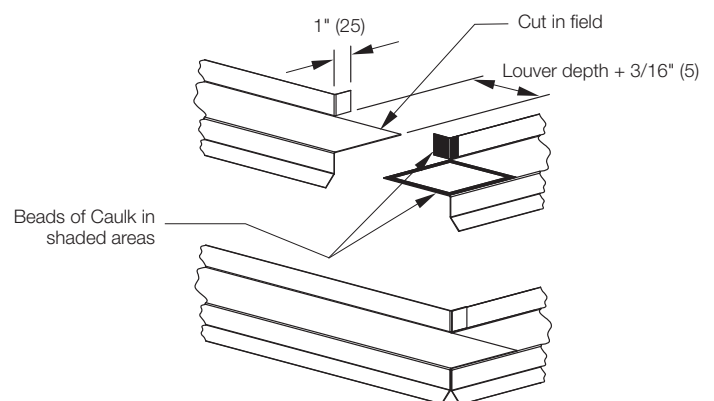


Figure 1.3 Sill Flashing Corners



Penthouse Installation

Tall penthouses, with both 'A' and 'B' throat dimensions equal to or less than 48" (1219) are preassembled prior to shipping.

Penthouses with 'A' or 'B' throat dimensions greater than 60" (1524) will have mid-stiffeners on corresponding louver sections. These mid-stiffeners will have an 8" (203) extension leg as the corner stiffeners do.

1. If penthouse is shipped pre-assembled, skip section 1 and move to section 2 of penthouse installation.
 - a. At fastener connections, all gaps greater than 1/16" (1.6) between members must be shimmed.
 - b. Attach vertical corner stiffeners to the louver sections with #12 TEK fasteners. Fastener location and quantity for all members are dictated by factory drilled clearance holes. See Figure 2.2.
 - c. Upper mounting angles are centered on louver sections, and attached to vertical angles w/ 1/4" TEK fasteners. If only two upper mounting angles are included, they are to be located in connection with roof beams. Louver sections touch at the jamb corners to ease assembly. See Figure 2.2 detail.
 - d. It may be preferred to pre-assemble the corner stiffeners to two opposing louver sections, prior to raising them into place on curb. To do this, ensure the vertical corner stiffeners are lined up flush with the edge of the jambs and top of louver sections prior to fastening together.
 - e. Prior to connecting all four wall sections, ensure the assembly is square as to ensure proper roof fit-up.
2. Locate vertical stiffener angles onto the curb/condition.
 - a. It is recommended to use a curb that gives 1/2" (51) total clearance from the penthouse stiffener legs, in both 'A' and 'B' directions.
 - b. Shims or clamps can be used to vertically locate the louver sections and stiffener angles on the curb surface.
 - c. Drill thru holes as determined necessary by the E.O.R. to attach vertical stiffener angles to a rigid curb/condition. Mounting fasteners sized and provided by others. Shim clearance gaps prior to fastening extension legs to rigid conditions. Shims by others.
3. Attaching roof panels, roof beams and box corners.
 - a. At fastener connections, all gaps greater than 1/16" (1.6) between members must be shimmed.
 - b. Align box corners on roof pan 'A' side with top edge of jambs along with placing roof pan 'A' on the roof. Ensure that the roof pan is pushed firmly against the side of the louver section. See Figure 3.1 and 3.2.
 - c. Fasten roof pan 'A' and box corners with #12 SS TEK fasteners provided by the factory. Location of fasteners is dictated by factory pre-punched holes. See Figure 3.1.
 - d. In order to locate the roof beam, butt the roof beam against the mounted roof panel. Connect roof beam to the upper mounting angle using the factory predrilled angle bracket (centered on vertical web of roof beam.) Use factory provided 1/4" (6.4)-20 SS TEK fasteners. It may be necessary to drill pilot holes into thicker materials, using the angle bracket thru holes as a template. See Figure 3.1.
 - e. Attach roof panel 'B' type, overlapping type 'A' as shown in Figure 3.2 detail. Once the far end roof panel has been added, simultaneously add the remaining two box corner prior to fastening roof pan down. This is to prioritize roof pan fit-up over location of box corners.
 - f. Fasten roof pan 'B' and box corners with #12 SS TEK fasteners provided by the factory. Location of fasteners is dictated by factory pre-punched holes. See Figure 3.1.
 - g. For penthouses with multiple roof panels, start on one end working towards the opposite end, fastening roof pans and roof beams in sequence.
 - h. Lastly, it is recommended to seal the far end gaps between roof pans as well as the corners of roof pans. See Figure 3.2.

Installation Details

'PH' PENTHOUSES Installation Instructions

Figure 2.1 Installation to Curb/ Condition

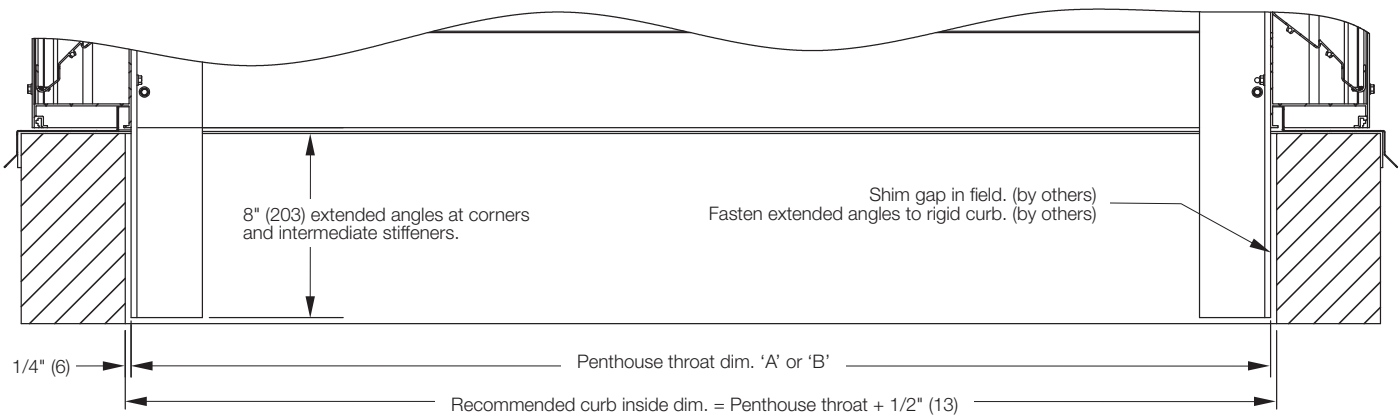
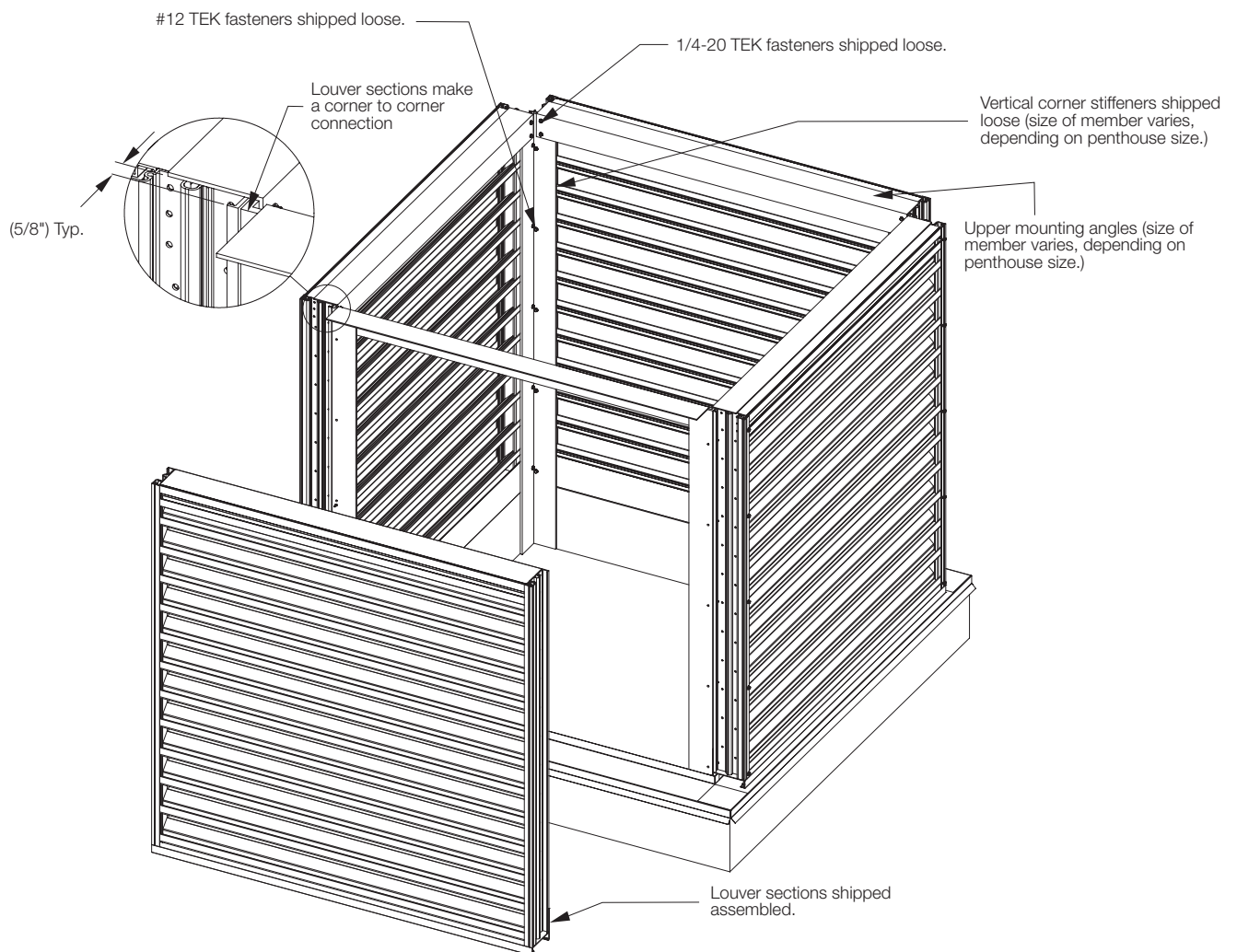


Figure 2.2: Additional Installation for Penthouses with a throat dimension greater than 48" (1219)



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Figure 3.1: Roof Panel, Roof Beam and Box Corner Assembly

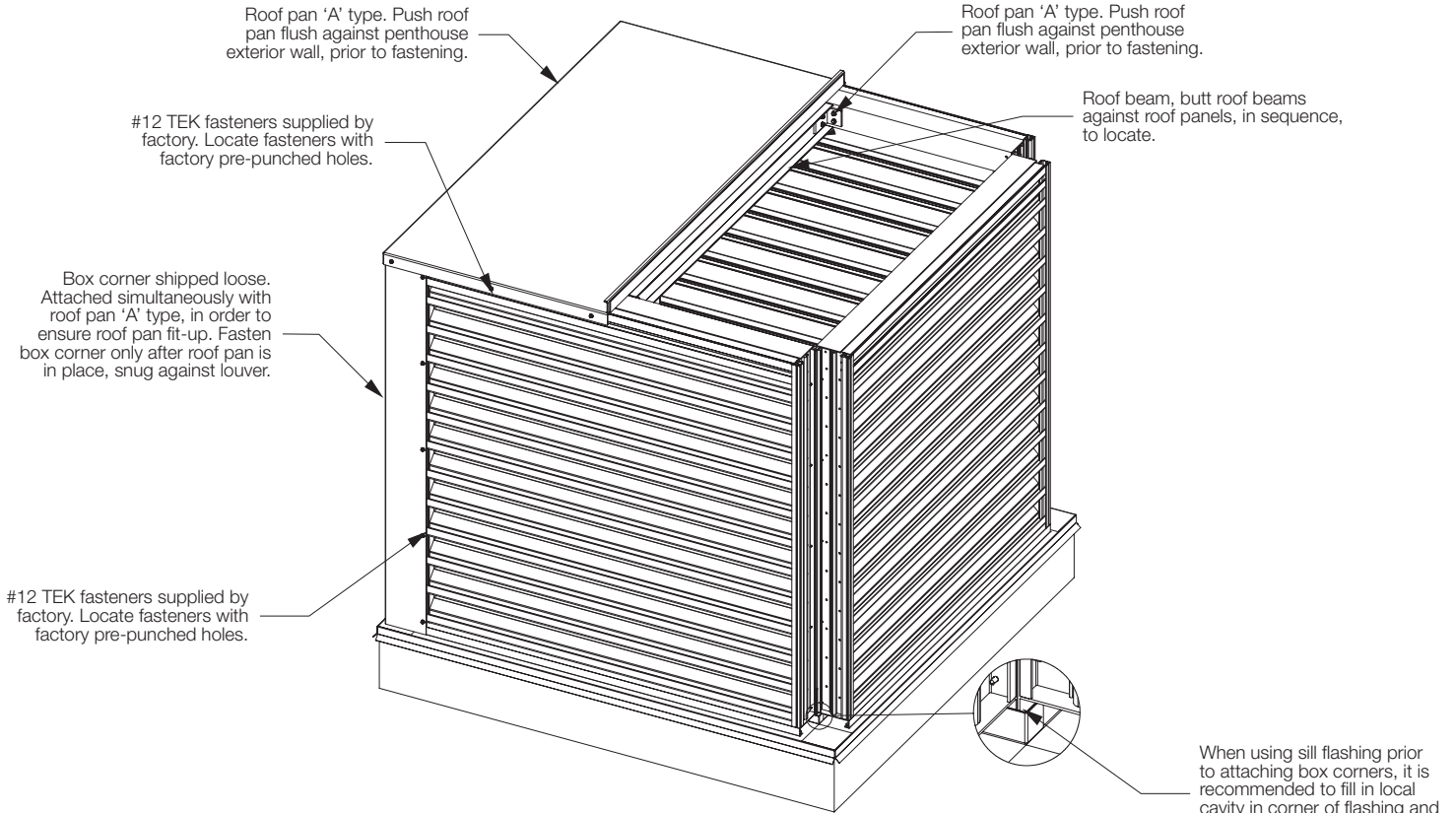


Figure 3.2: Roof Panel Assembly, Sealing

