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I. Care and Maintenance

Operational Warning: Fleetwood products operate smoothly and special care should be taken by the owner to make sure users are not injured. Door is to be operated within the glass side of the handle (Figure 1).

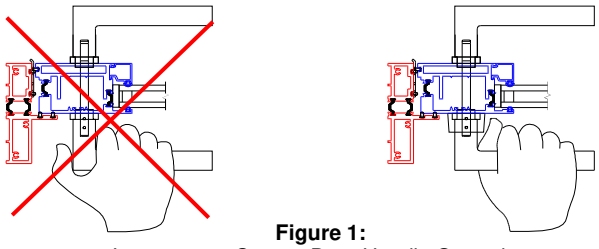


Figure 1:
Incorrect vs. Correct Door Handle Operation

This product is factory finished. Please handle with extreme care. Protect all exposed surfaces from contact with caustics, corrosives, solvents, abrasions, impacts, wet packing material etc. **FAILURE TO DO SO WILL NULLIFY THE WARRANTY.** Before **ANY CLEANING**, review the Care & Maintenance Instructions (go to www.fleetwoodusa.com for more information). **Contact the local dealer with any questions or concerns.** Fleetwood strongly recommends that all products be cleaned after installation and totally protected from construction debris and equipment.

II. Tools / Materials, Sealant Requirements, & Anchor Instructions

Tool Requirements: Tape measure, Level, Shims, Nails, Screws, Sealant, Caulk Gun, Backer Rod, 5/32 Allen Wrench, Scissors or Utility Knife, Drill Bit, Drive Bit and Powered Drill.

Sealant Requirements

- The sealant referred to within this document for seals associated with the assembly of the product should conform to **AAMA 800**. It is recommended that all other sealants conform to **AAMA 800** but may be a sealant recommended and approved by the sealant manufacturer that is compatible with the framing, finish, and surrounding materials.
- All sealant bead sizes must conform to the sealant manufacturers' size requirements.
- The Owner / General Contractor is responsible for identifying the need for any additional sealant to be applied by others. Such sealant shall be elastomeric material, with the framing, finish and surrounding materials.

Load / Anchor Instructions

- Live or Dead Loads can affect product functionality, loads shall be designed to withstand the most critical effects of load factors and load combinations as required by building code.
- Fleetwood requires maximum vertical deflection of the header not to exceed Span/720 or 1/8"
- Structural engineer to determine anchor quantity and spacing for design load requirements.
- Proper isolating material must be between dissimilar surfaces (i.e. block/concrete & aluminum).

III. Assembly and Installation

General: The key to any window or door installation is preparation. This extends from storage of the product to the final installation and to all points in between. Careful planning and attention to detail can help ensure proper installation.

It is essential that each Fleetwood product be assembled and glazed in accordance with AAMA standards and factory instructions. It is the installer's responsibility to ensure that each Fleetwood product is assembled, glazed, installed and completely sealed to ensure that the product is leak-free and operates correctly**. Installation of Fleetwood products must be in accordance with the standards set forth in ASTM E 2112**. If there are any questions regarding the installation of a Fleetwood product contact the factory customer service department.

Fleetwood has provided this product with recommended field glazed weather-stripping. If the provided weather-stripping does not ensure an optimum fit of glass to frame the **Fleetwood Authorized Dealer** should contact Customer Service for an expedited **NO CHARGE** shipment of replacement weather-stripping.

IV. Frame Opening Verification and Sillpan[1] Installation

Note: Sillpan Substitution- If the factory provided pan is not desired, the product warranty will remain intact if the substitute panning system emulates the essential design of the factory pan.

1. Opening Verification

- If the sill option chosen is Arche-Duct see Appendix E for instructions.
- Check the measurements of the opening and verify that the door will fit into the opening. Measure all four sides of the opening to make sure it is 1/2" larger than the product in width and 1/2" in height.
- Verify the opening is plumb and level.
- Remove the product from the packaging and lay it in front of the opening. Check width and height dimensions.
- Remove key from temporary location on lock jamb (outside).

2. Pre-Fit and Leveling

- Place sillpan into the opening and determine any leveling that must be done prior to installation (Figure 2).
- Shim as necessary to stabilize the entire depth and length of the sillpan. No unsupported width of more than 8” is allowed. Shim(s) should be load bearing, non-porous, non-absorbent and inorganic.
- If more than 1/8” shim height is required, it is recommended to use a self-leveling product like “Rock Hard” (or equal) to achieve a level and stable surface.

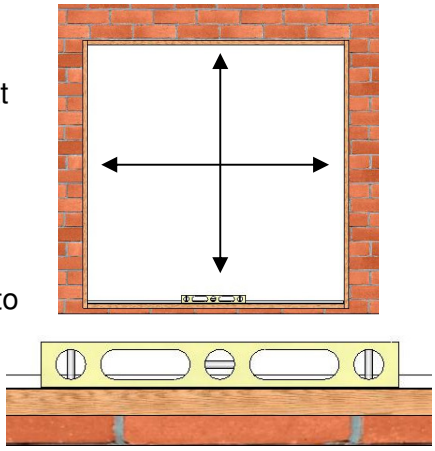


Figure 2:
Plumb and Level Opening

3. Flash the Opening

- Once the opening has been confirmed, flashing of the opening is required prior to Frame installation. Paper and/or liquid flashing methods are acceptable (see AAMA 711/714 for material requirements).
- Check local Building codes for any additional flashing requirements.

Paper Flashing

- At each Jamb the flashing paper should be cut at least 3” past the weep-screed or diado flashing and at least 6” above the head of the door. The flashing must wrap around the jamb and at least 3” back into the opening.
- At the Head run the flashing paper long enough to extend at least 3” past the jamb flashing and wrap around the Header at least 3” into the opening.

Liquid Flashing

- Follow the liquid flashing manufacturer instructions.

[1] Sillpan Refers to a factory provided aluminum pan (or equivalent).

4. Sillpan Installation (Standard Sill Only)

- Apply bituminous paint to raw masonry or concrete at the sill to eliminate electrolytic and chemical reactions. It is recommended a PVC liner be placed to ensure separation of the metal frame with the substrate. In balcony situations flash the sill with aluminum or galvanized brake metal (Sillpan is provided).
- In balcony situations flash the sill with aluminum or galvanized break metal (Sillpan is provided).
- Apply sealant in all corners and seams of the sillpan (Figure 3).
- With bottom side of sillpan up, apply a 3/8” bead of compatible sealant 1/2" in from interior leg. Sealant bead to run across the bottom as well as up each vertical leg of the sillpan. Also apply sealant beads near the sides and across the front (Figure 4).
- Secure the sillpan to the floor with glue. Position sillpan as necessary to allow for proper installation of frame assembly (Figure 5).

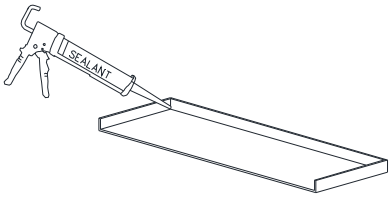


Figure 3:
Seal corners and seams

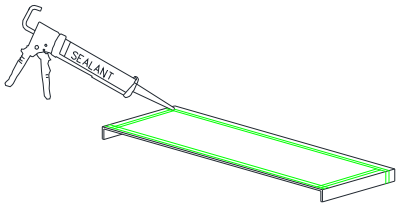


Figure 4:
Seal underside of Sillpan

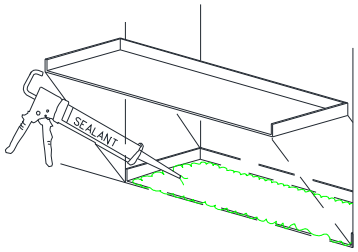


Figure 5:
Set pan in full bed of sealant

Note: Multiple piece sillpans are required on products with net frame widths greater than 14 feet (168 inches) and corner units.

- If the sillpan is more than one piece, butt up to each other and glue to the floor.
- Cut a piece of adhesive backed waterproof material to fit the joint as specified in Figure 6, A=¼”. Select waterproofing material that is compatible for your application. Waterproofing material must have an adhesive backing and be capable of withstanding the temperature ranges for your region.
- Apply sealant to all interior and exterior seams.

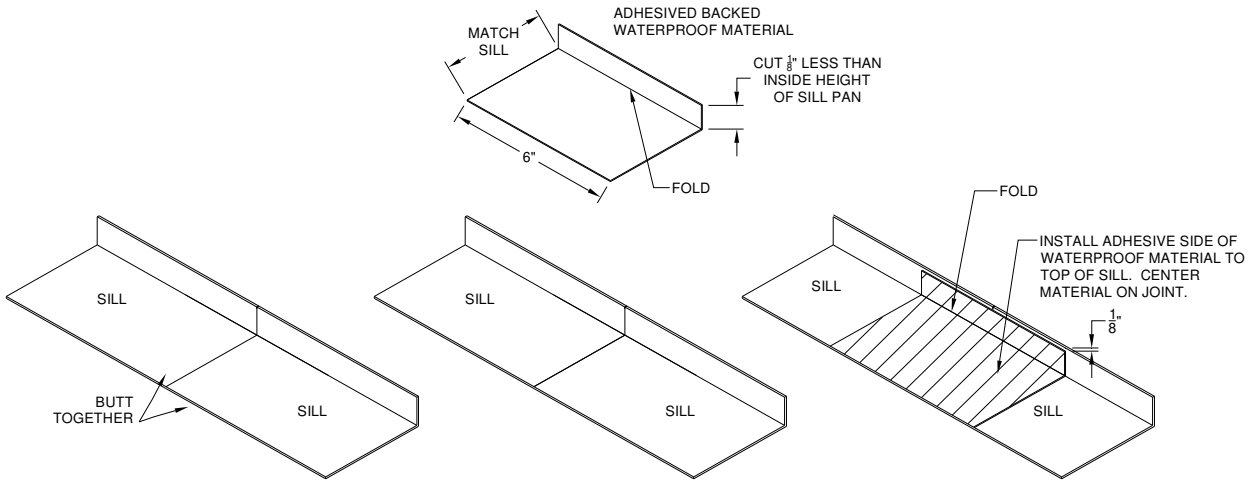


Figure 6:
Joining Sillpans with adhesive backed material

V. Frame Installation

Note: Glass from transom and sidelight should be removed before continuing. Glass to be re-installed after frame installation.

Nail-fin and Block Frames

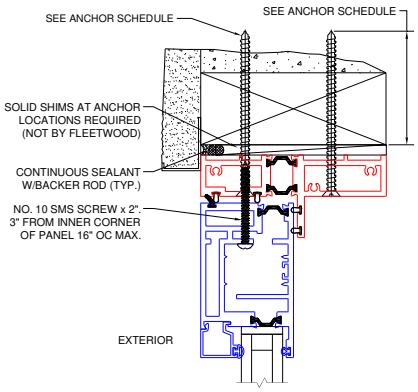
1. Seal frame and vent joints completely with compatible sealant. Apply a heavy bead of sealant to the interior side of the mounting flange (nail-on) where the door frame jamb and sill join (Figure 7C). Sealant must cover the entire joint (from the flange to the inside leg of the door) and extend 1-1/2" up the jamb and along the sill.
2. Apply compatible sealant to the underside of the frame sill, and the screw holes in the sill. Apply the sealant as far to the outside of the opening as possible.
3. For Nail-fin frames immediately prior to installing the frame, apply a continuous 1/2" bead of compatible sealant to the backside (interior) of the mounting flange (nail-fin) at the jambs and head.
4. Insert the door into the opening and set the sill in a full bed of sealant. Cross-measure and adjust as necessary to achieve a plumb square and level condition, as well as an even reveal around the framed opening. Shim with non-porous, non-absorbent, inorganic shims where needed. Seal all fastener heads with compatible sealant. Only drill holes through Sill as required for design load.
5. Anchor Location, Sealant and Wall Condition (Figure 7)
   Frame installation anchors furnished by installer, not by Fleetwood. Stainless steel screws are recommended. Fleetwood recommends countersinking all frame anchors.
   a. Secure the jamb to the trimmer with the screws
   b. Seal all fastener heads during installation with sealant.
   c. If required for design pressure, fasten head, jambs, and sill with screws from Table I.
6. To complete the installation, apply backer rod and a complete bed of sealant to the entire exterior and interior joint between the frame and the building structure. Tool the sealant to eliminate bubbles, voids and / or breaks and ensure a completely watertight seal.
7. The installer is responsible for the integrity of all framing joints after installation and must therefore ***water*** test all joints to guarantee a completely sealed product. Apply joint sealer and/or sealant necessary to ensure watertight joints. Retest as necessary.

Table 1: Recommended Frame Anchor for 15 PSF

SUBSTRATE	ANCHOR TYPE	MINIMUM EMBEDMENT (In.)	EDGE DISTANCE (In.)	HEAD / SILL O.C. DISTANCE (In.)	JAMB O.C. DISTANCE (In.)	CORNER DISTANCE (In.)	CONTRATED AREA (Qty.)
Wood	#12 Wood Anchor	1.5	0.75	14	16	6	6
Concrete / Masonry	3/16" ITW Tapcon	1.25	2.0	14	16	6	6

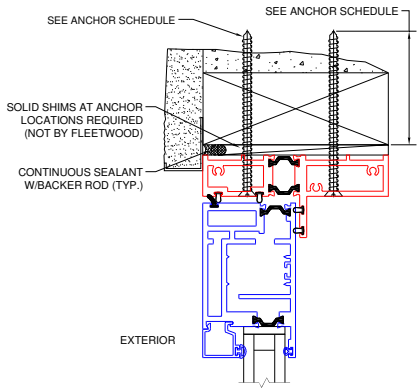
Fleetwood recommends countersink all frame anchors

TYPICAL BLOCK FRAME INSTALLATION



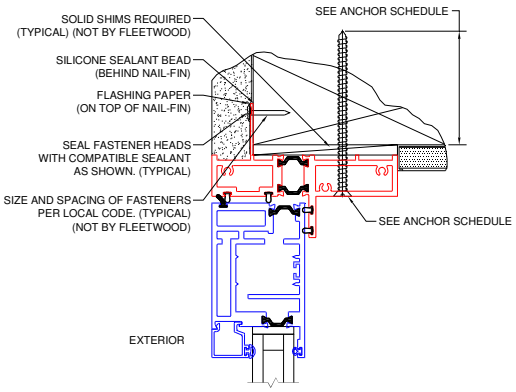
A: WIDE STILE FIXED HEAD

TYPICAL BLOCK FRAME INSTALLATION

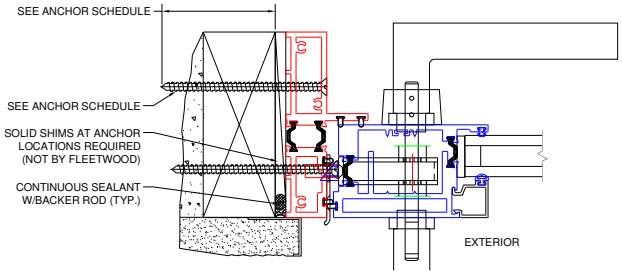


B: SWING-OUT HEAD

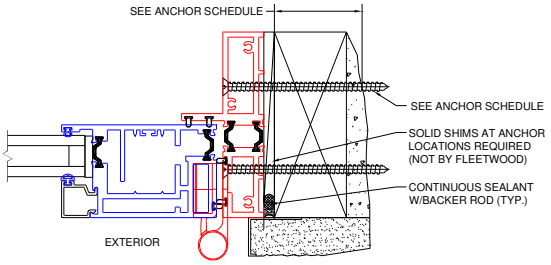
TYPICAL NAIL-FIN FRAME INSTALLATION



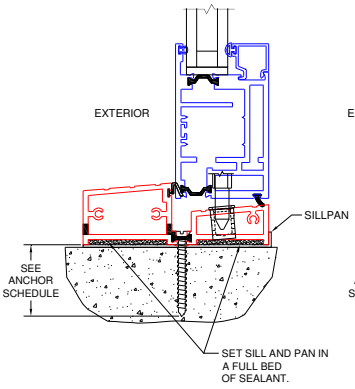
C: SWING-OUT HEAD



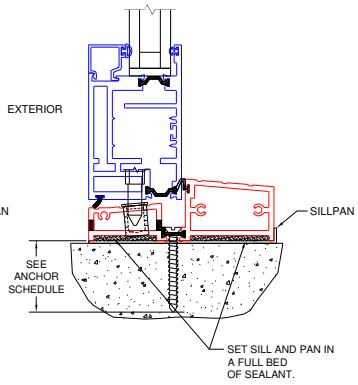
D: SWING-OUT JAMB @ LATCH



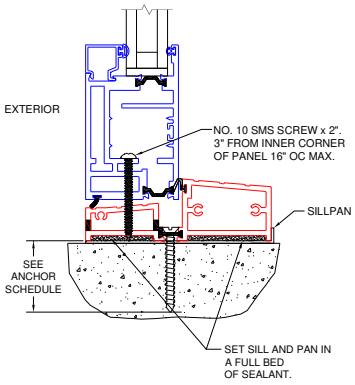
E: SWING-OUT HINGE



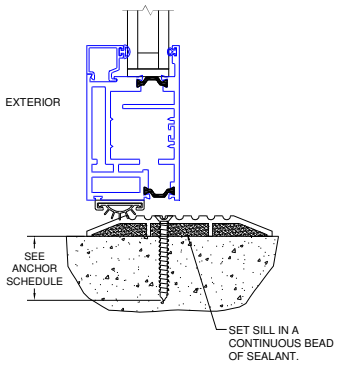
F: SWING-IN SILL



G: SWING-OUT SILL



H: WIDE STILE FIXED



J: SWING-OUT 1/2" SILL

Sill anchoring (if required)

Figure 7:
Anchor Location and Sealant Installation

VI. Panel Assembly (when panels received unassembled)

Note: Make sure to keep individual panel components together. Match door configuration and panel orientation with customer order and/or dealer drawings. Configuration and orientation of panels shown in assembly instructions is for illustration purposes only.

- Check the red (documents enclosed) bag for keys, nuts, washers, and back-up plate (Figure 8).
- Remove glass stops from panel components. Must be field cut to fit once panel is assembled covered in Section VII for panel mounting and glazing instructions.
- On the top and bottom rails cut the bulb vinyl a 1/4" long on both ends. Cut the bulb vinyl on the vertical stiles to length where they will make contact with the inner edge of the top and bottom rails.
- Remove nut, washer, and back-up plate from the red bag.
- Apply sealant to the top and bottom rail where they make contact with the vertical stiles (Figure 9).
- Align the vertical stiles to the top and bottom rail. Place the threaded rod into the pre-drilled holes of the vertical stiles.
- Apply a small amount of high strength threadlocker to the end of the threaded rod.
- Slide the back-up plate over the threaded rod. Followed by the washer and nut (Figure 10).
- Tighten down the nut until all components are securely making contact.
- See Appendix A for panel squaring.
- Place the weather seals into the seal clips and tap the clips into place.



Figure 8:
Red Bag

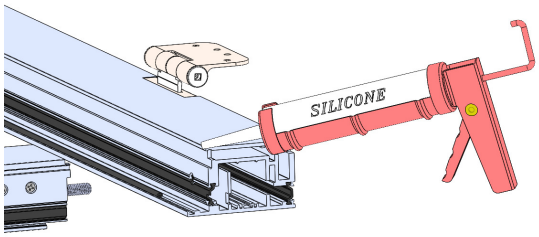


Figure 9:
Silicone Location

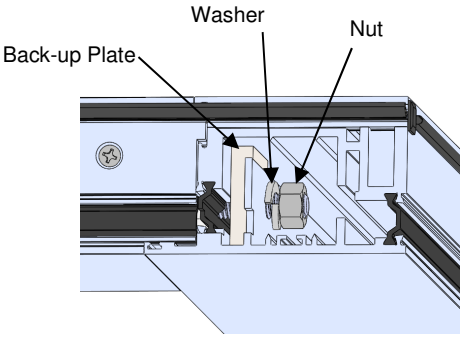


Figure 10:
Panel Assembly (Hinge Stile Shown)

VII. Panel Mounting and Glazing Instructions

Remove precut glass stops from the frame, making sure to note the location from which each has been removed. Each stop is hand cut for a specific location of the frame and must be returned to the same location after the glazing process.

Fixed -Wide Stile:

- Prior to installing the glass fasten the inner panel to outer frame with # 10 x 2" fasteners (Figure 7A, 7H).
- Apply a 3" bead of compatible sealant from each corner on inner flange of panel frame.
- Install glass setting blocks (total 8 pcs per panel) at ¼ points into each jamb, head and sill for all four corners (Figure 11).
- Stagger setting blocks accordingly to support glass lites.
- Install glass to panel (Figure 11).
- Cross-measure to ensure the panel is square. See Appendix A for troubleshooting tip on how to square the panel.
- Finish assembly by inserting the two horizontal glass stops then install the two vertical glass stops.

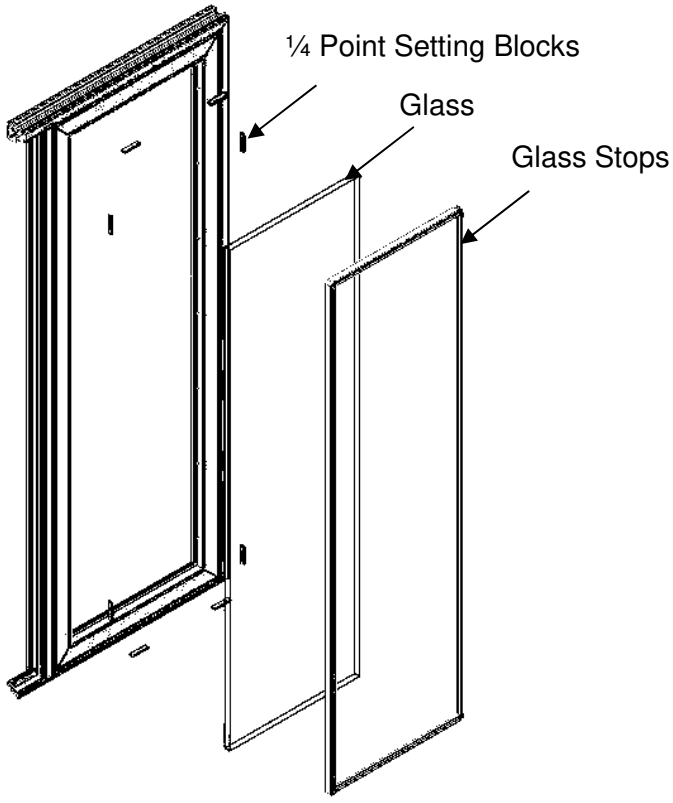


Figure 11:
Panel Glazing Wide Stile Frame

Door: Install panel(s)

- Apply a 3” bead of compatible sealant in each corner on inner flange of panel frame.
- Install glass setting blocks (total 4 pcs per panel) at ¼ points into jamb, head and sill for hinged lower corner and opposite upper corner.
- Stagger setting blocks accordingly to support glass lites.
- Install glass to panel (Figure 12).
- Cross-measure to ensure the panel is square. See Appendix A for troubleshooting tip on how to square the panel.
- Finish assembly by inserting the two horizontal glass stops then install the two vertical glass stops.
- Install the door panels to the outer frame (Figure 12) by aligning the hinges to the frame and installing the provided #10-32 screws with a T25 driver.
- See Appendix B for hardware adjustment.
- When a TDL bar is present and additional protection from water is needed, apply a cap bead of sealant to horizontal TDL bars.

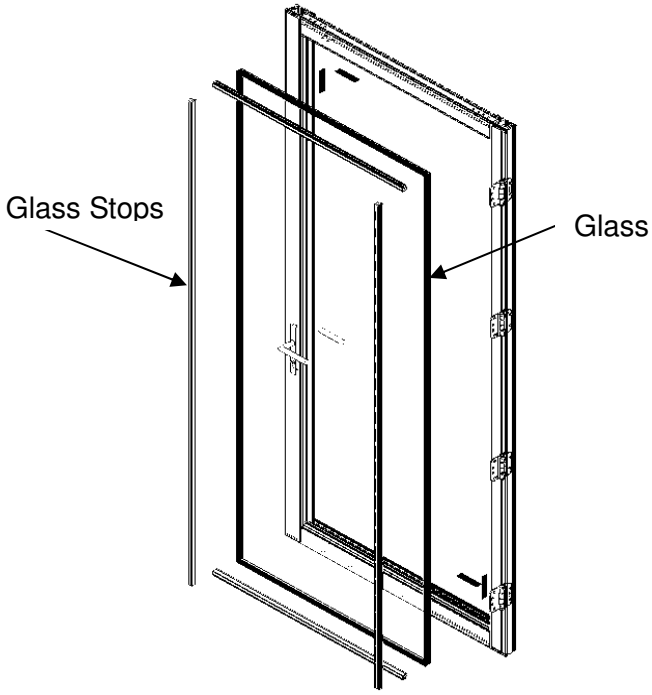


Figure 12:
Panel Glazing Illustration

Alternate Glazing Procedure

Note: Applies to inside glazed or outside glazed product(s) where additional water protection is required. Including areas where snow accumulation and subsequent melting/freezing may cause thermal bridging.

1. Before glazing, apply a continuous bead of sealant to the entire inner frame (Figure 13).
2. After glazing, apply a continuous bead of sealant to the exterior frame and glass along the sill and a minimum of 18 inches up the sides.

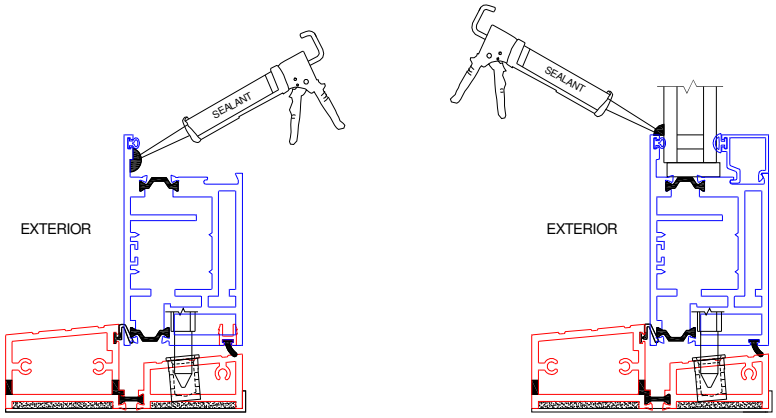


Figure 13:
Inside Glazing Sealant Locations

VIII. Flashing after Installation

The flashing paper referred to in this document is Moistop or other code compliant flashing material that conforms to **Federal Specification UU-B-790a, Type 1, Grade A, Style 4**. The strips of flashing paper are to be no less than 9 inches wide (or wider as required by local codes). Flashing paper must be applied with galvanized nails or corrosion resistant staples. Flashing paper shall be applied in a weatherboard fashion around the full perimeter of the framed opening.

1. Once satisfied that the frame is water tight, and immediately prior to application of the flashing paper at the head and jambs, apply a continuous bead of sealant to the exposed mounting flange (nail-fin) at the top (head) and sides (jambs) of the installed frame. Also, apply sealant at corners of the frame, the full length of the seams where the nail fin flashing is mounted.
2. At each jamb, embed the flashing paper into the sealant onto mounting flange and fasten into place. The flashing paper should be cut sufficiently long enough to extend at least 3 in. past the weep-screed or diado flashing and at least 6 inches above the head of the window (Figure 14).
3. Finally, at the head, embed the flashing into the sealant on the mounting flange and fasten into place. The flashing paper should be cut sufficiently long enough to extend past the flashing paper at each jamb by at least 3 in (Figure 15).
4. Weather resistant building paper should be applied in a weatherboard fashion to complete the installation (Figure 16).

Note: Where weather resistant building paper, insulating board, or other materials by other trades may constitute the primary weather barrier behind the exterior wall finish (i.e. stucco, masonry, siding, etc.), the owner / General Contractor are responsible to ensure that the weather barrier is continuous by effectively sealing the material to the window frame.

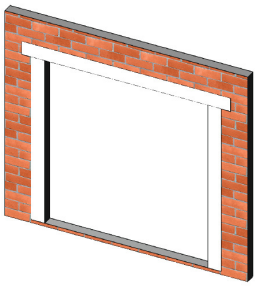


Figure 14:
Jamb flashing

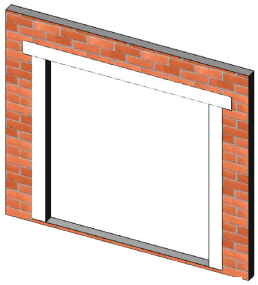


Figure 15:
Head Flashing

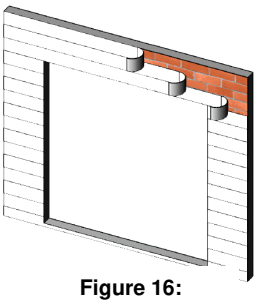


Figure 16:
Building Flashing

Appendix A: Panel Squaring Instructions

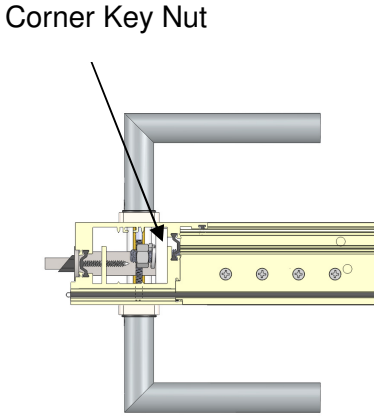


Figure A1:
Corner Key Nut Detail

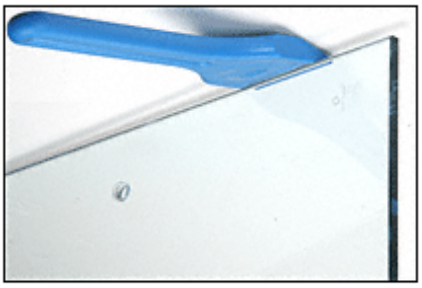


Figure A2:
Plate Glass Lifter

Required Tools: 9/16” wrench, pliers, tape measure, shim, plate glass lifting tool.

1. If panel hits the sill due to the weight of glass/panel.
   a. Make sure the frame is squared before any adjustment to panel.
   b. Adjust the hinges to bring the upper corner toward the hinge jamb, and the lower corner away from the hinge jamb. See “Appendix B: Hinge adjustment”.
   c. If the problem is solved, stop here.
   d. Lay panel on table and check distance of both diagonals. If they are not the same, the panel is not square.
   e. Loosen nuts at 4 corners (2 turns), use plate glass lifting tool and add additional shim(s) to the top of the panel opposite of the hinge, between the glass and vent top rail.
   f. Check diagonal distances, gap of panel to frame.
   g. Tighten corner key nuts.

2. If panel hits the head.
   a. Make adjustment while panel is hanging on frame.
   b. Adjust the hinges to bring the upper corner toward the hinge jamb, the lower corner away from the hinge jamb.
   c. If the problem is solved, stop here.
   d. Loosen nuts at 2 top corners (2 turns), use plate glass lifting tool and remove/replace with thinner shim(s) to the top of the panel opposite of the hinge, between the glass and vent top rail.
   e. Check diagonal distances, gap of panel to frame.
   f. Tighten corner key nuts.

Appendix B: Hardware Adjustment

No power tools, Hand tools only.
Required Tools: 5/32 Hex-L Key

Hinge Adjustment

1. It is recommended that vertical (Figure B1) and horizontal (Figure B2) adjustments be performed with the door in the opened position.
2. Adjust the door according to the images below.
3. Close the panel(s) to check the gaps and make adjustments as needed.

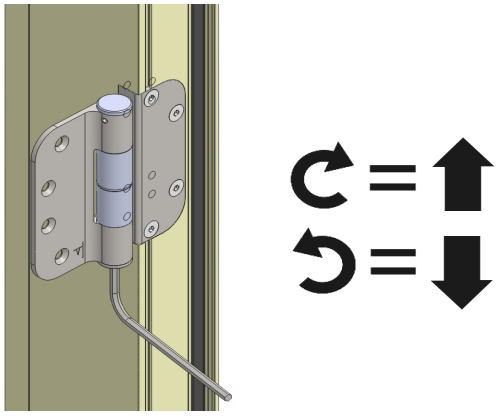


Figure B1:
Vertical Hinge Adjustment
The maximum torque: 32 in-lbs (512 in-ounces)

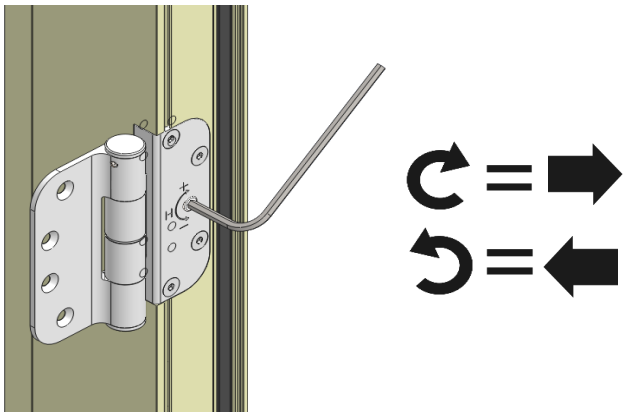


Figure B2:
Horizontal Hinge Adjustment
The maximum torque: 12 in-lbs (192 in-ounces)

Note: If hinge replacement is necessary, back up plates (inside frame) have been permanently attached. Hinges can be removed and remounted.

Escutcheon / Handle Installation

1. Put the handle adapter into the escutcheon plate.
2. Press handle onto handle adapter and escutcheon plate, loosely tighten set screw on underside of handles.
3. Insert the spindle a maximum of 1” into the interior side of escutcheon / handle assembly. Tighten set screw onto spindle.
4. Align the spindle (and the key cylinder tail piece) to the latch or inactive plate and press until the escutcheon plate is against the extrusion.
5. Repeat process with exterior escutcheon plate, aligning the spindle with the handle.
6. Insert and tighten the escutcheon plates with the provided screws.

Appendix C: Stucco Surround Application (Optional)

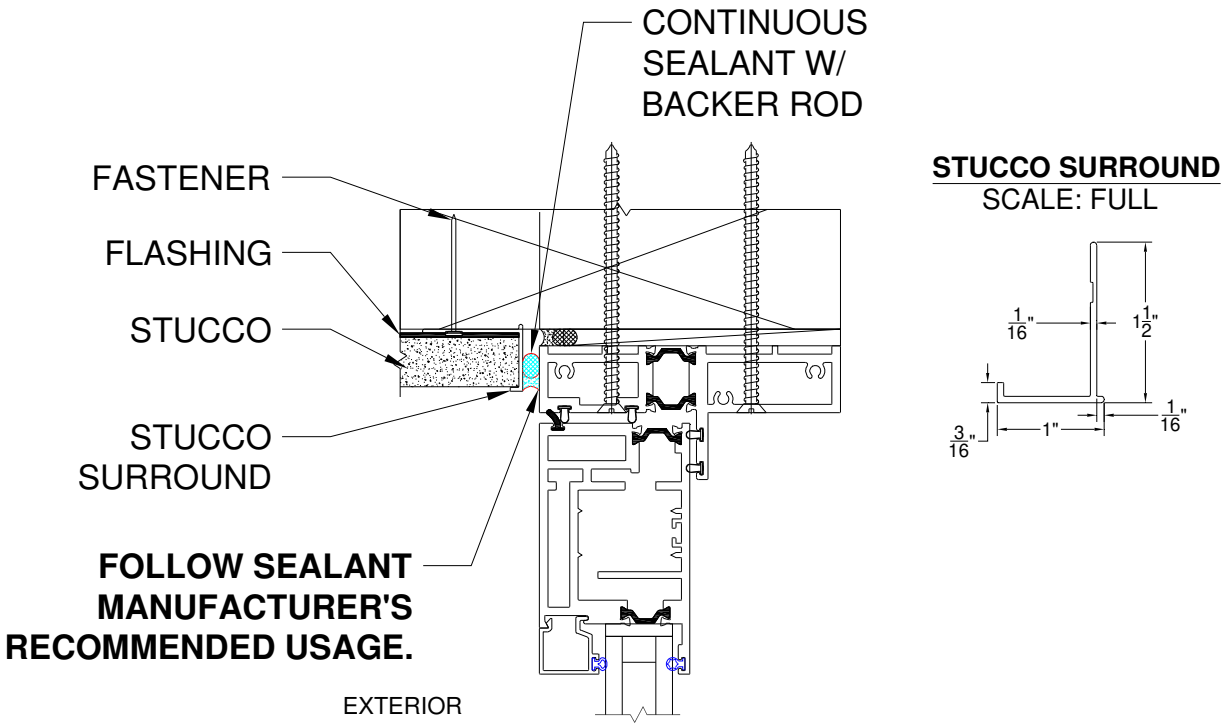


Figure C1:
Stucco Surround Detail and Extrusion

Appendix D: Sill Option-Arche-Duct

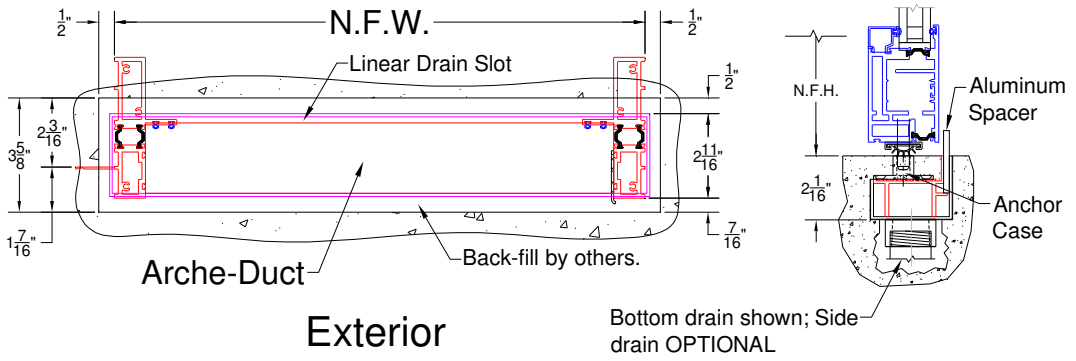
Flooring Material: The sill for this product was designed to incorporate the finished flooring as a key component to the bottom rail sealing and the linear slot drain. The material chosen to surround the extruded sill should be such that water will not damage it.

Linear Slot drain: The sill comes with an aluminum spacer to ensure the linear slot drain spacing is correct. This spacer is to be removed after the flooring is installed.

Note: Do not leave the Arche-Duct system exposed for more than 3 months. Prolonged exposure will damage the powder coated finish.

1. The Arche-Duct sill option requires a flooring block out (Figure D1). If Arche-Duct tabs are present add 1-1/2" to exterior / interior block out. These tabs are for fastening the drainage system to the substrate.
2. After panel installation, if shoot bolts are present, align strike with shoot bolts (Figure D1/D2), mark location, drill holes using #25 drill bit, fasten in place with 1 inch #10 screws provided.
3. Back-fill Arche-Duct system after panel and glazing installation / adjustments are performed.

OUTSWING



INSWING

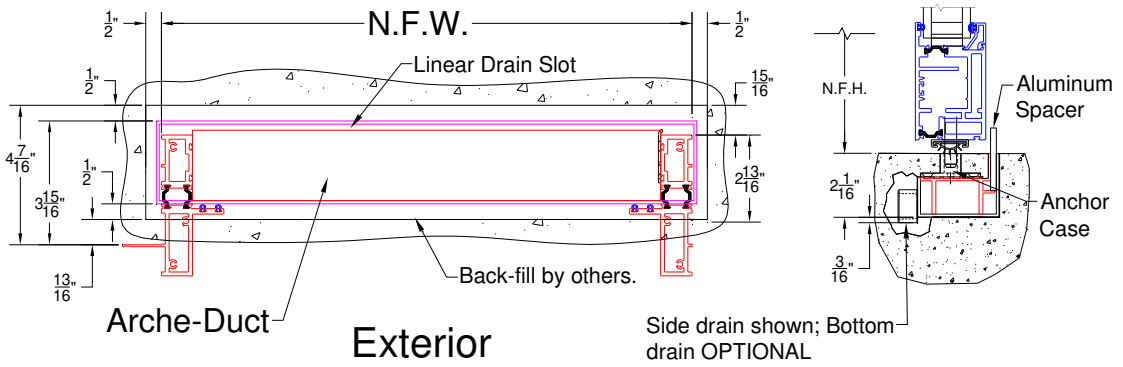


Figure D1:
Arche-Duct Block Out

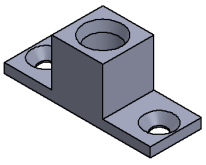


Figure D2:
Shoot Bolt Strike

Appendix E: Knock Down Frame (Optional)

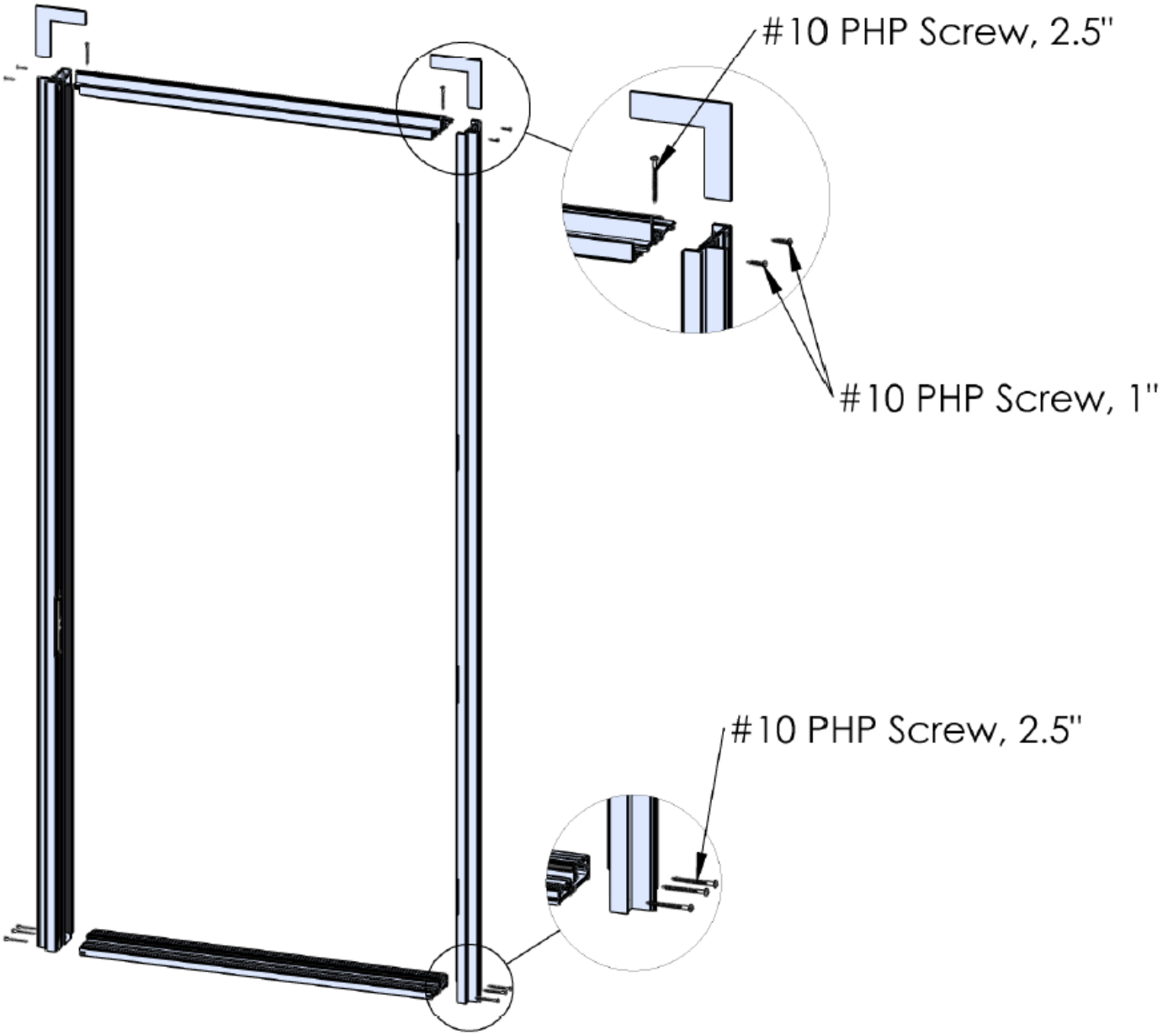


Figure E1:
KD Frame Assembly

Appendix F: 3-PT Hardware Operation

Anti-Slam Feature

This latch comes with an anti-slam feature that can prevent activation of the shootbolts when the door is in the open position. The feature can be accessed by removing the plastic block located in Figure F1.



Figure F1:
Anti-Slam

Shootbolt Engagement

To engage the top and bottom shootbolt pull the handle upward.



Figure F2:
Shootbolt Activation

Deadbolt Operation

The deadbolt is operated independently of the latch. If the deadbolt is engaged the shootbolts and tongue can still be activated / deactivated.



Figure F3:
Deadbolt Activation

Appendix G: CLiC Glass Installation

Fleetwood offers CLiC on demand Privacy Glass as a glazing option. This type of glazing option requires power to be run to each lite using cardinals proprietary glass controller. Depending on the type of product ordered, the wire leads locations will vary. Please ask at the time of purchase to confirm where these leads will be located so assist in preparing the opening accordingly.

Below are links to CLiC glass specific installation instructions:

Quick Start Guide

Installation Manual

Technical Data Sheet