

MILGARD®

AX650
Pocket
**Installation
Instructions**

LUXURIOUS PATIO DOORS

By MITER Brands™



Things to Know Before You Start

IMPORTANT

It is imperative that you carefully review and understand these instructions and all drawings supplied prior to installation of the Milgard AX550 Bi-fold Door System (the "Product"). Responsibility for product selection and installation rests with the owner, architect and installation contractor. Do not proceed with installation unless all factors necessary to properly integrate the Product into a building's water management system have been addressed.

Milgard makes no representation or warranty that these recommendations include all information necessary to ensure proper integration into every building. State and local code requirements may impose different or additional demands which could supersede, supplement and/or modify these recommendations. For additional guidance regarding installation of the Product refer to applicable industry standards.

(E.g. AAMA 2400, AAMA Installation Masters™ ASTM E 2112, FMA/AAMA/WDMA 300-12).

Failure to follow these recommendations, local requirements, and good building practices may result in poor performance including, but not limited to, operation, security and weatherproofing failures and may void coverage under the applicable Milgard express limited warranty. Provide a copy of these recommendations and the applicable Milgard express limited warranty to the owner before installing. Milgard does not permit adoption of its installation recommendations into the contracts of others without its prior, written consent.

SAFETY AND HANDLING

Installation of the Product is not a "do-it-yourself" project. The Product should be installed only by experienced, qualified and, where required, licensed installation professionals.

- Read and fully understand ALL manufacturer's instructions prior to beginning the installation. Failure to follow proper installation instructions may affect coverage under the applicable Milgard express limited warranty.
- This is a finished product that must be protected before, during and after installation to prevent damage to the glass, frame, finish and hardware. All component parts, including door panels, should be stored in a dry location that is protected from the elements.
- Before proceeding with installation, inspect the component parts and confirm that there is no damage that will affect appearance or performance. Damaged or missing parts should be reported to your supplier immediately.
- Use caution when working at elevated heights including but not limited to ladders and scaffolding.
- It is the responsibility of the installation contractor to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to commencing installation.
- Do not work alone and use safe lifting techniques. Two or more people may be required to lift. Use a reasonable amount of people with enough strength to lift, carry and install to avoid injury and/or damage to the Product.
- Use caution when handling glass. Broken or cracked glass can cause serious injury.
- Wear protective gear (safety glasses, gloves, ear protection, etc...).
- Operate hand and power tools safely and follow the manufacturer's operating instructions.
- Job site and worker protections are recommended and may be required.

Things to Know Before You Start

REQUIREMENTS FOR A SUCCESSFUL INSTALL

Rough Opening

- Ensure that the sill is flat and level. **See Fig. 1.**
- Ensure that the entire opening is square and plumb. **See Fig. 2.**

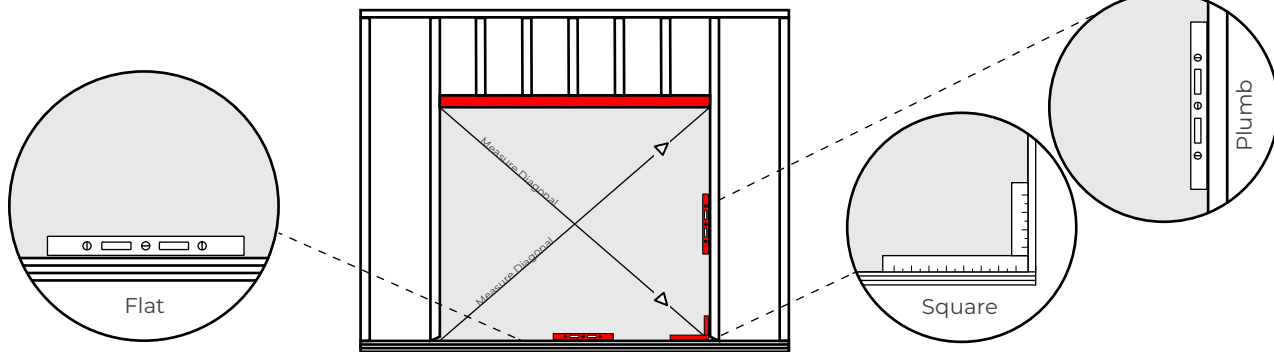


Fig. 1

Fig. 2

Manpower

- A minimum of two people must be used to install these systems. Three or more is preferred and larger systems may require more than three.

Protection from Wind and Rain

- Systems should be installed with overhead protection from wind and rain to prevent potential damage from water. We recommend that a professional waterproofing consultant be used to ensure proper steps are taken to reduce the potential for damage.

Installing in Existing Structures

- System installation may disturb surfaces and paint in existing structures. Specific notice and work site precautions may be required. Additional information is available at www.epa.gov/lead. Comply with all applicable federal, state and local requirements.
- Special disposal considerations may be necessary for materials used during installation. Materials removed from an existing structure may also have their own disposal or recycling requirements. Comply with all applicable federal, state and local requirements.

Warranty Registration

- Milgard is dedicated to quality and build our windows and patio doors to last. With the Milgard AX550 Moving Glass Wall, the original homeowner is covered pursuant to the applicable Lifetime Limited Warranty. Register your warranty at **Milgard.com/register**.

Things to Know Before You Start

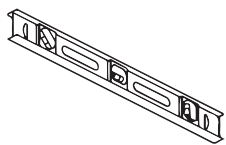
MATERIAL AND TOOL LIST

Materials and tools indicated below are general suggestions. Additional or different items may be required depending on the type of install and regional code requirements.

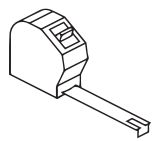
Materials Required:

- Non-compressible shims.
- Fasteners for Wood Frame Installation provided.
 - Type and number as required by code.
 - At minimum fastener type should be sufficient to properly affix the frame and penetrate opening.
- Flexible membrane for sill pan flashing system.
- High quality compatible exterior grade sealant.
- Seal tape for the weather resistant barrier.
- Self-adhering flashing.
 - In a width required by code but no less than 4".
 - AAMA 711 compliant flexible butyl tape flashing or equivalent is recommended.
- Backer rod.
- 2" Chip brush for spreading Liquid Applied Flashing.
- Joint knife, trowel, or spatula for applying Liquid Applied Flashing.
- Low-expansive, low-pressure foam or batt type insulation.
- DRILL BIT size required: 9/64".

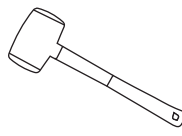
TOOL CHECKLIST:



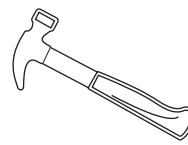
LASER LEVEL



TAPE MEASURE



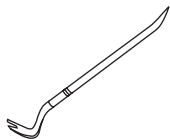
RUBBER Mallet



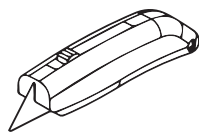
HAMMER



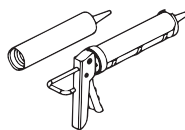
SCREW GUN



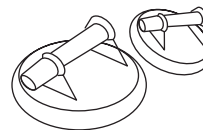
PRY BAR



UTILITY KNIFE



CAULK GUN



SUCTION CUPS



LADDER

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NOTE: Unless specifically indicated on the Figure as “Interior View”, all Figures in this installation guide are detailed from door Exterior.

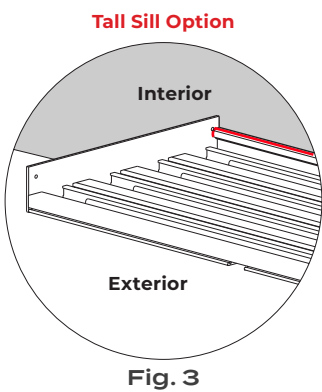
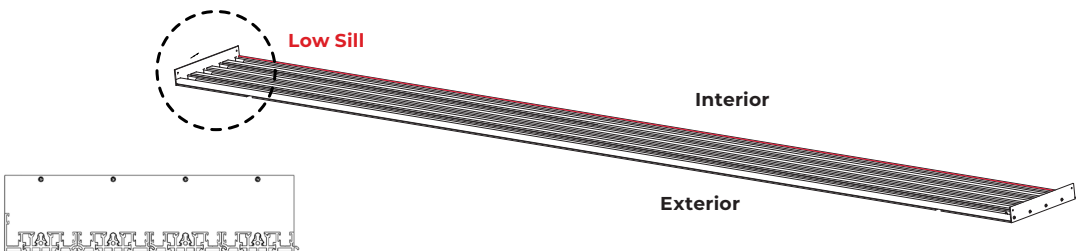
Step 1 - Installation Preparation

PARTS LIST

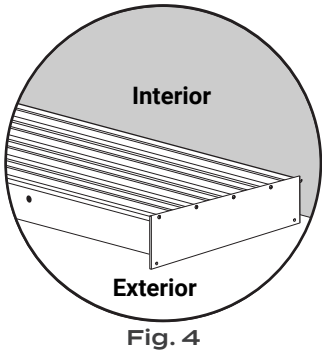
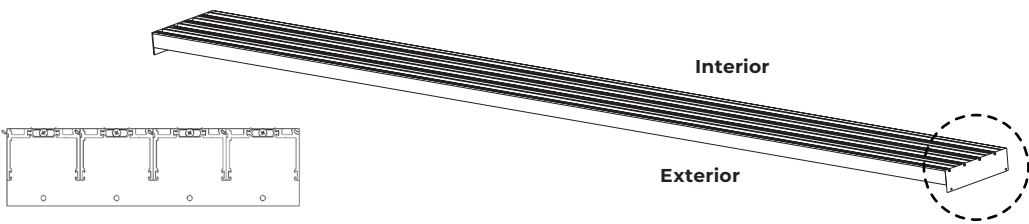
FRAME COMPONENTS

Frame Sill. **See Fig. 3.**

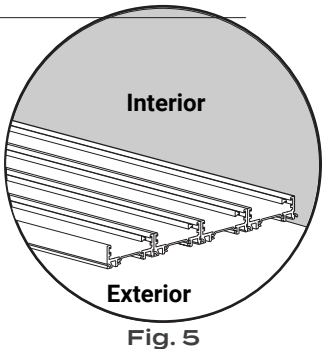
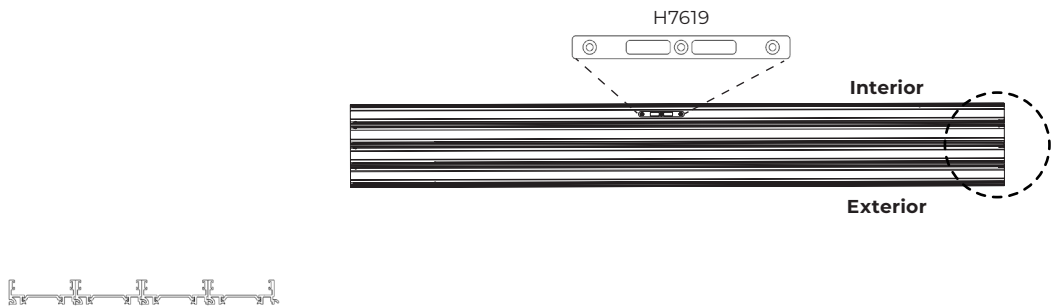
Low Sill or Tall Sill Option



Frame Head. **See Fig 4.**



Frame Lock Jamb. **See Fig 5.**



Step 1 - Installation Preparation

PARTS LIST

DOOR PANELS - # DEPENDENT ON CONFIGURATION

Fixed Panel. See Fig. 6.

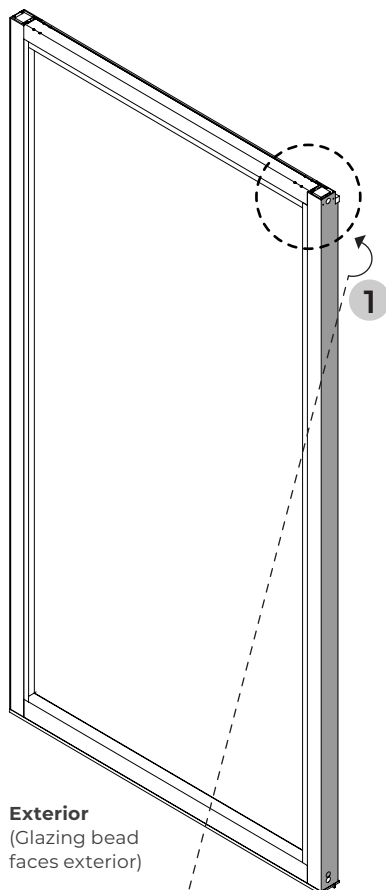


Fig. 6

Fixed Panel.
Non-sliding Panel contains
1 Interlocking Stile on the
Interior side of the door panel.

Intermediate Panel. See Fig. 7.

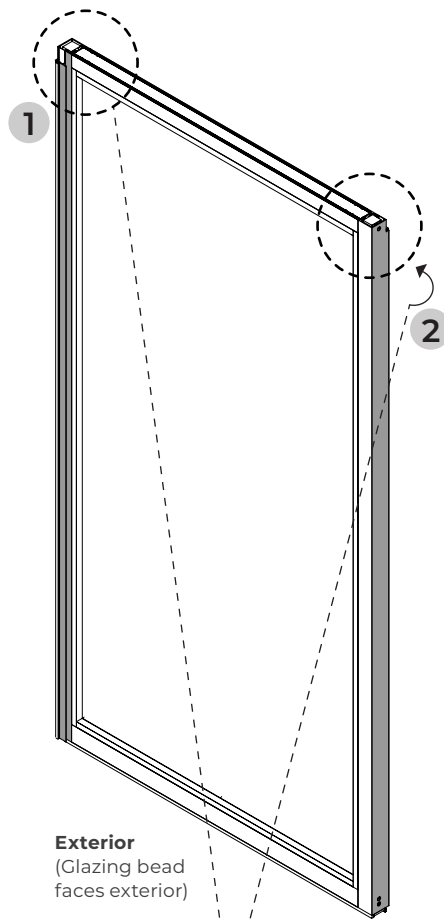


Fig. 7

Intermediate Panel.
Panel contains **2 Interlocking Stiles** one the Exterior and one on the interior side of the door panel.

Lock Panel. See Fig. 8.

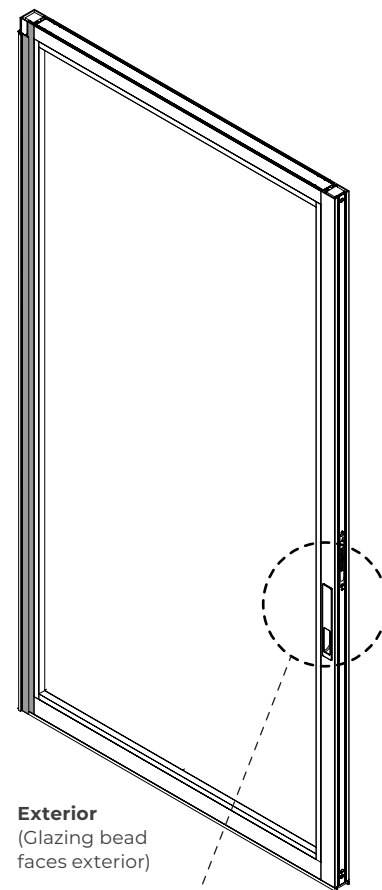


Fig. 8

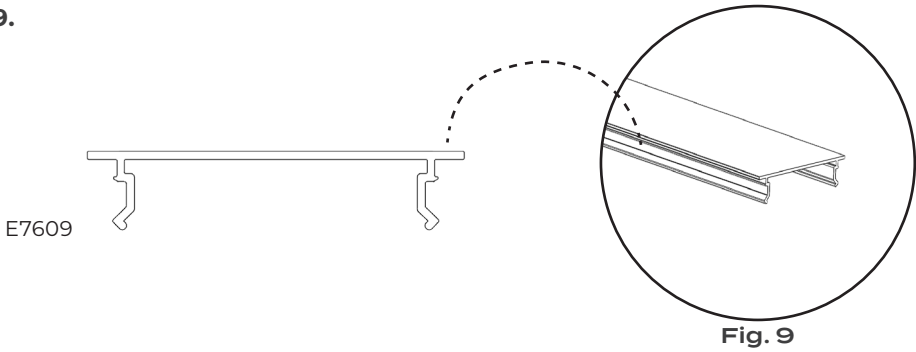
Lock Panel.
Panel contains **1 Interlocking Stile** and the handle on the exterior of the door panel.

Step 1 - Installation Preparation

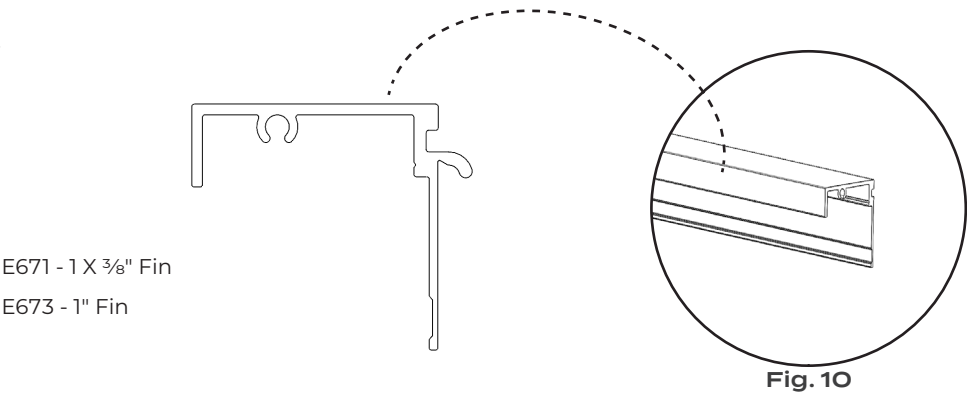
PARTS LIST

ACCESSORIES

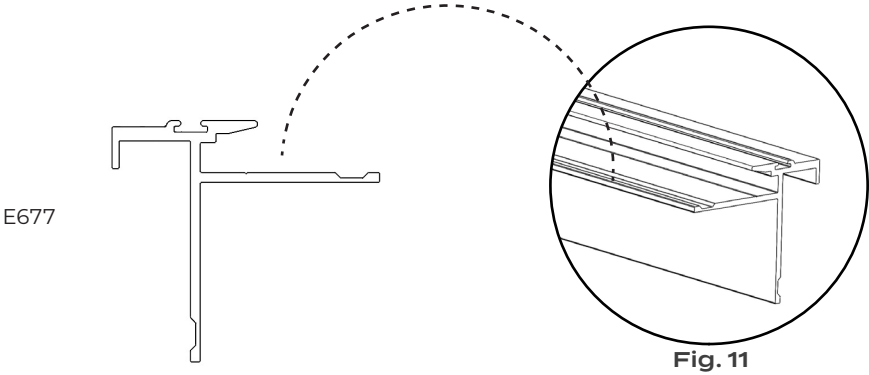
Jamb Cover Plates **See Fig. 9.**



Flashing Fin **See Fig. 10.**
(Optional)



Pocket Jamb **See Fig. 11.**



Step 1 - Installation Preparation

HARDWARE BOX COMPONENT LIST

HARDWARE BOX

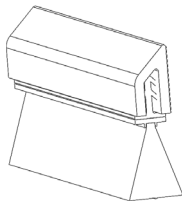


Fig. 12 - Sill Track Plug B
H7706

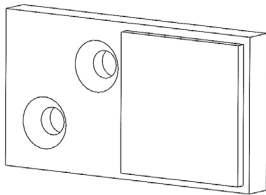


Fig. 13 - Collector Plate
H8783

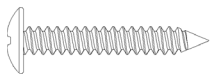


Fig. 14 - Assembly Screws
F5009 #8-18 X 3/4" Phillips flat head self
drilling x - SS, SSBL, SSWH, SSTN

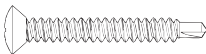


Fig. 15 - Assembly Screws
F5011 #8 X 3/4" Phillips flat head self
drilling x - SS, SSBL, SSWH, SSTN



Fig. 16 - installation Screws
F5014 #10 X 2 1/2" Phillips flat head
sheet metal screw

HANDLE STYLES

Keyed
Entry



Non-Keyed
Entry



Fig. 17 - Flush Handle



H480/H841



H480/H482

Step 1 - Installation Preparation

ROUGH OPENING INSPECTION

INSPECT AND PREPARE THE ROUGH OPENING

- Ensure the rough opening is in good condition and sits plumb, level and square.
- Confirm overall width, height and diagonal measurements of rough opening
 - Diagonal measurements should be within 1/8" for openings less than or equal to 20 square feet and 1/4" for openings greater than 20 square feet. Framing conditions at the rough opening must be sufficient to support the door unit, framing header above, and permit appropriate integration of the door into the building's water management system. Consider if the roof has been loaded or not. The maximum deflection over the entire length should not exceed 1/8", including when the roof is loaded.
- If the building already has a weather resistant barrier (WRB) installed, it is necessary to integrate the door system into the existing WRB. Milgard recommends that the installer follow the WRB manufacturer's recommendation to prepare this opening. The installer must confirm rough opening preparation will not impact the WRB manufacturer's warranty or otherwise inhibit drainage before proceeding.
- Milgard requires the use of a sill pan to allow for any water to drain to the exterior drainage plane. Sill Pan can be rigid or flexible and is mandatory. Sill Pans to be supplied by others and is not included with the Door System. (See next page for details of a L-metal sill pan method using Liquid applied flashing).
- Multi-slide sills come in a variety of riser heights and should be noted as to the one specified for your application.
See Fig. 18.

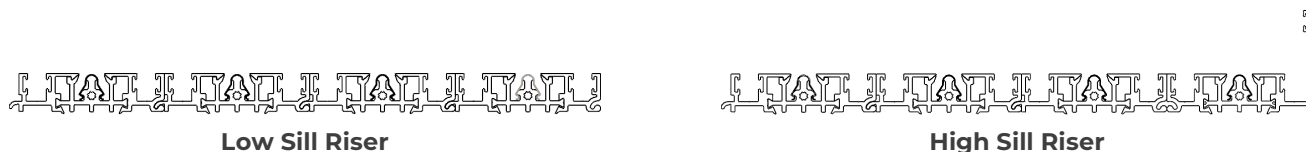


Fig. 18

- The height of the finish floor must be determined prior to installation and noted somewhere near the opening.

Step 1 - Installation Preparation

L - METAL INSTALLATION

INSTALL 3/4" X 3/4" L - METAL ALUMINUM

- Install 3/4" x 3/4" aluminum L-metal the full length of the sill as the raised leg of the liquid applied flashing pan. **See Fig. 19.**
- Leave a minimum 1/8" between the door frame and the L-metal. This space will be filled with backer rod and sealant while installing the air & water seal later in this instruction.

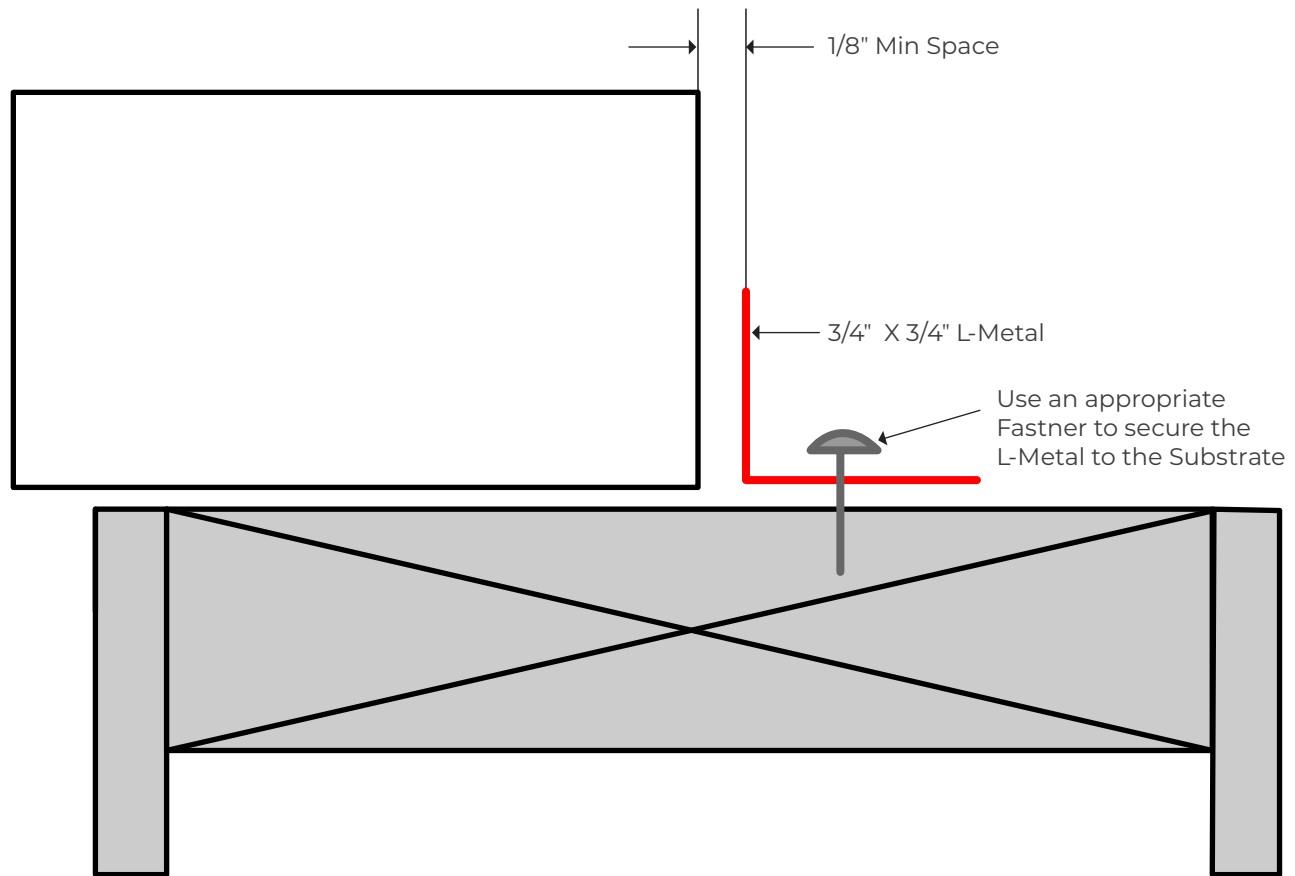


Fig. 19

Step 2 - Frame Assembly

GATHER FRAME COMPONENTS

PREPARE PARTS FOR ASSEMBLY

- Verify Height and Width of the opening including pocket height, width and depth. We Recommend Painting the inside surfaces of the pocket Black before installing the Door Frame.
- Innermost pocket wall should be built and available prior to the Pocket Door frame and panels Installation.
- Gather frame components in an area with enough flat space to assemble the frame. **Tip:** working near the rough opening will minimize the distance assembled frame needs to be moved after assembly and helps to minimize the damage risk to the assembled frame.
- Identify frame component's features. **See Fig. 20.** (Refer Step 1 : Parts List for additional detail).

ORIENT AND LAYOUT THE FRAME PIECES FOR ASSEMBLY

- Set the Jamb and Head, with the INTERIOR face down at the head ends of the Jamb.
- Set the Sill with the INTERIOR face down at the Sill ends of the Jambs.

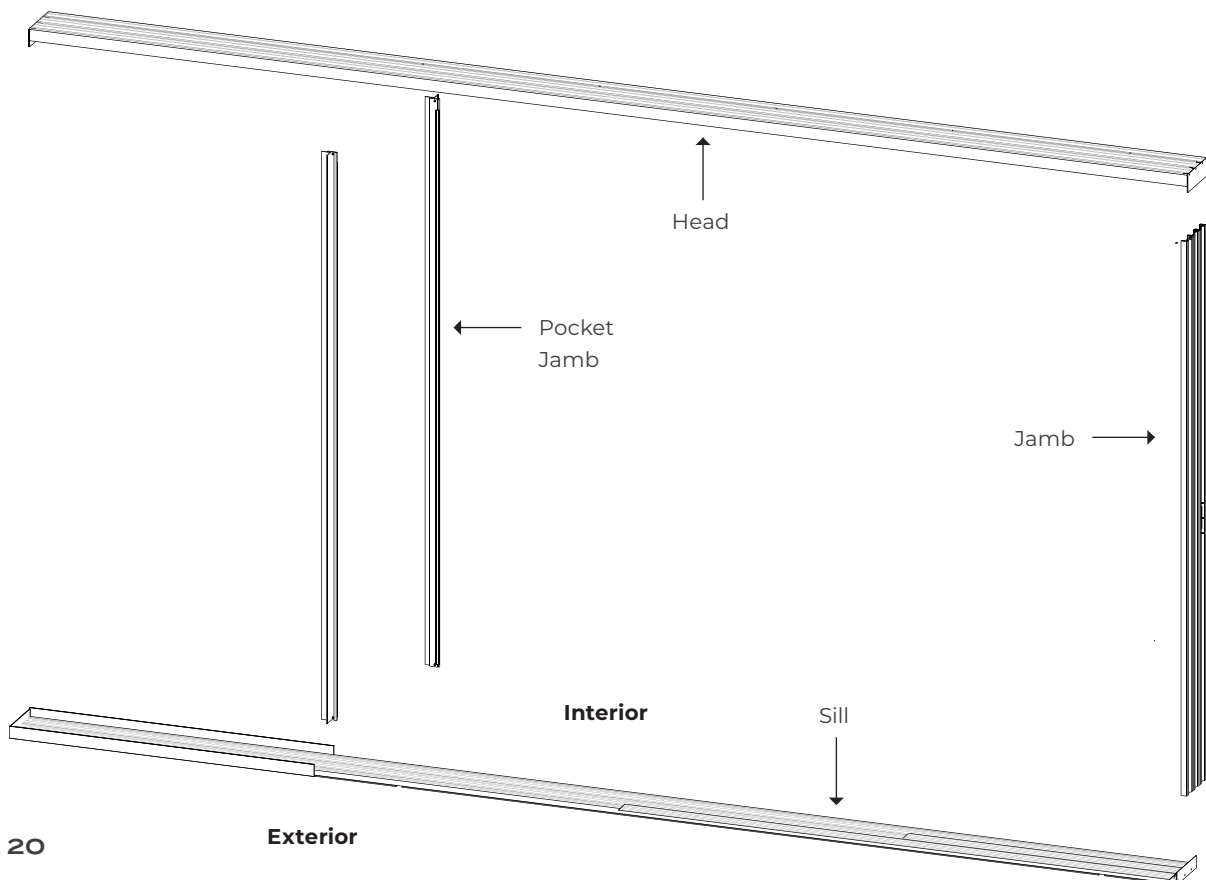


Fig. 20

Step 2 - Frame Assembly

ORIENT AND ASSEMBLE

FRAME ASSEMBLY - SEE FIG. 21

1. Align the head end of the Jamb to the Head and screw together from the inside to the outside as shown. Use **F5009**.
2. Align the Sill end of the Jamb to the Sill and screw together from the inside to the outside as shown. Use **F5009**.
3. Use a hacksaw to trim the screws flush with the outside of jamb.
4. Align the Pocket Jambs to the Head and Sill and screw together from the outside to inside using the predrilled holes on the Head and Sill. Use **F5009**.

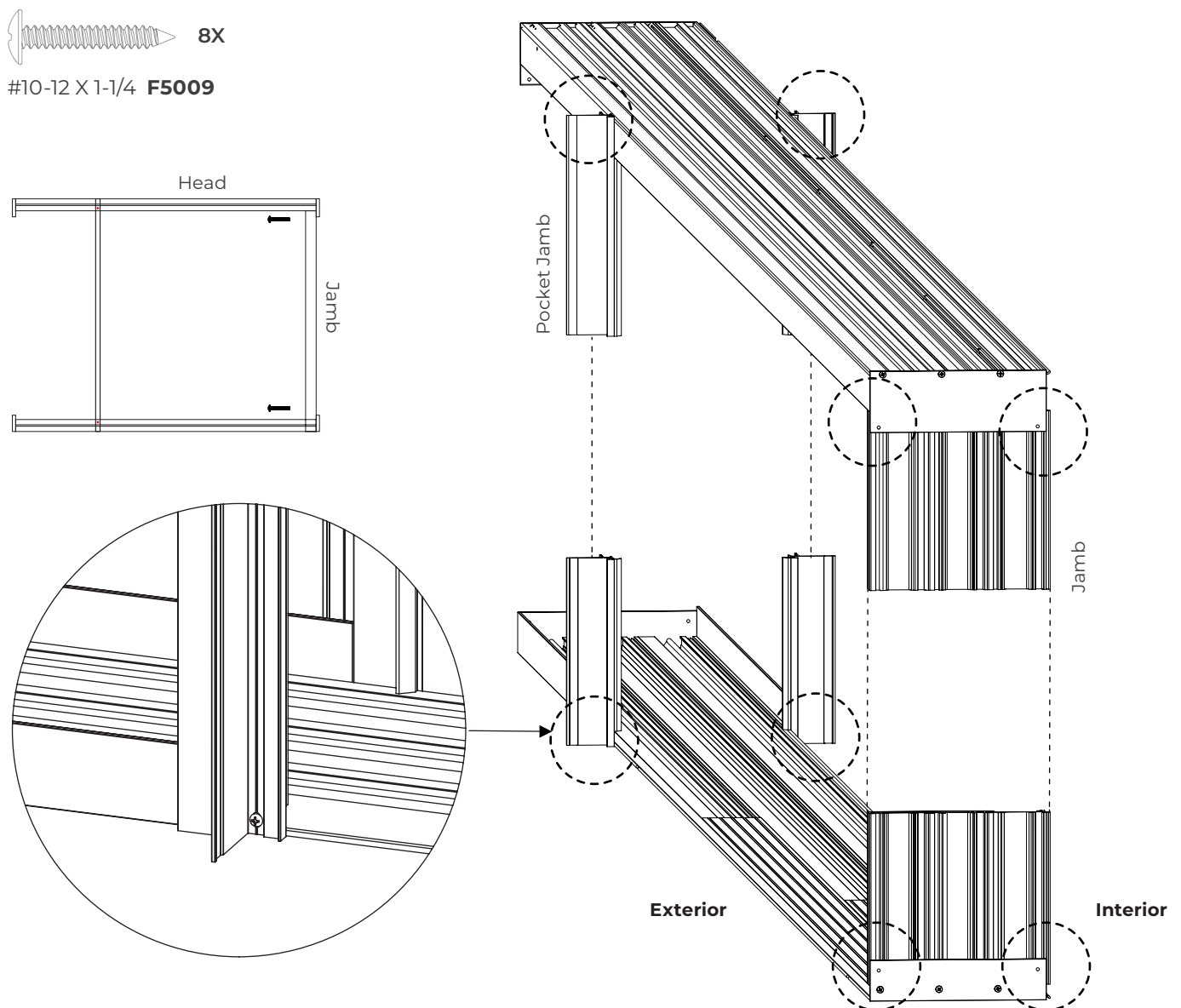


Fig. 21

Step 3 - Frame Installation

PREPARE ROUGH OPENING

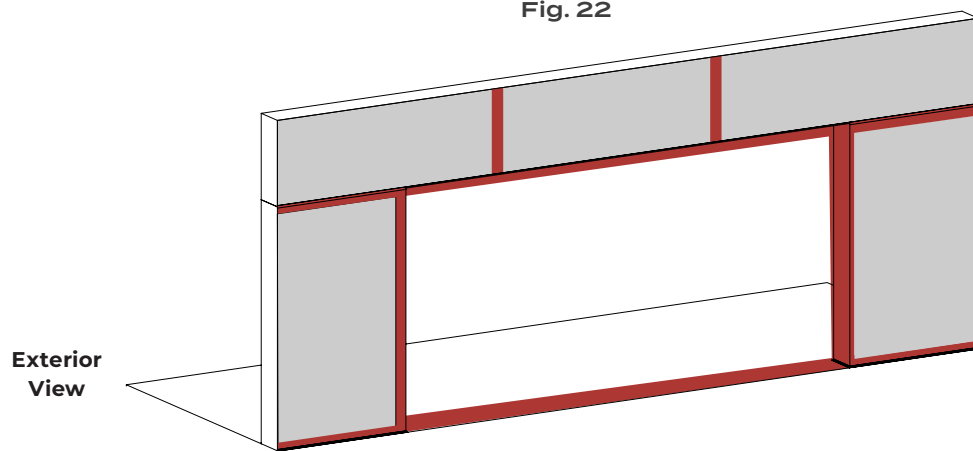
CONFIRM FIT OF FRAME ASSEMBLY

- Transport Frame Assembly to Rough Opening.
- Confirm fit of Frame Assembly to the Rough Opening by “Dry fitting” the Frame Assembly into Rough Opening.
 - Make any adjustments required for proper fit, such as the use of shims.
- Remove Frame Assembly from Rough Opening after confirmation of fit and place the exterior face flat on the ground.

PREPARE ROUGH OPENING - SEE FIG. 22

- Preparation:
 - To ensure best results, apply Liquid Applied Flashing to clean surface free of contaminants. Chemical residues, surface oxidation, surface coatings or films may adversely affect adhesion. Pressure-treated or fire-retardant wood and other contaminated surfaces should be cleaned with an Isopropyl Alcohol wipe and allowed to flash-off before application of Liquid Applied Flashing products. Concrete must be in place 3-7 days and free of any curing compounds or form release agents before permeable Liquid Applied Flashing products are applied.
- Liquid flashing application:
 - Apply a bead of Liquid Applied Flashing in each corner of the rough opening and at the sheathing-to stud transition, and fully cover the upturned leg of the L-metal then strike smooth with a DRY tool. Joint widths up to 1/4 inch may be treated with Liquid Applied Flashing and no backer rod. Treat joints ranging from 3/8 inch to 1 inch with backer rod and a Joint & Seam Filler.
 - Apply Liquid Applied Flashing over the exterior inside framing of the rough opening and onto the exterior vertical wall surface 4–6 inches to create a 12–15 mil thick monolithic, pinhole free flashing surface.
 - Allow treated surfaces to skin before installing windows, doors and other wall assembly, components.

Fig. 22



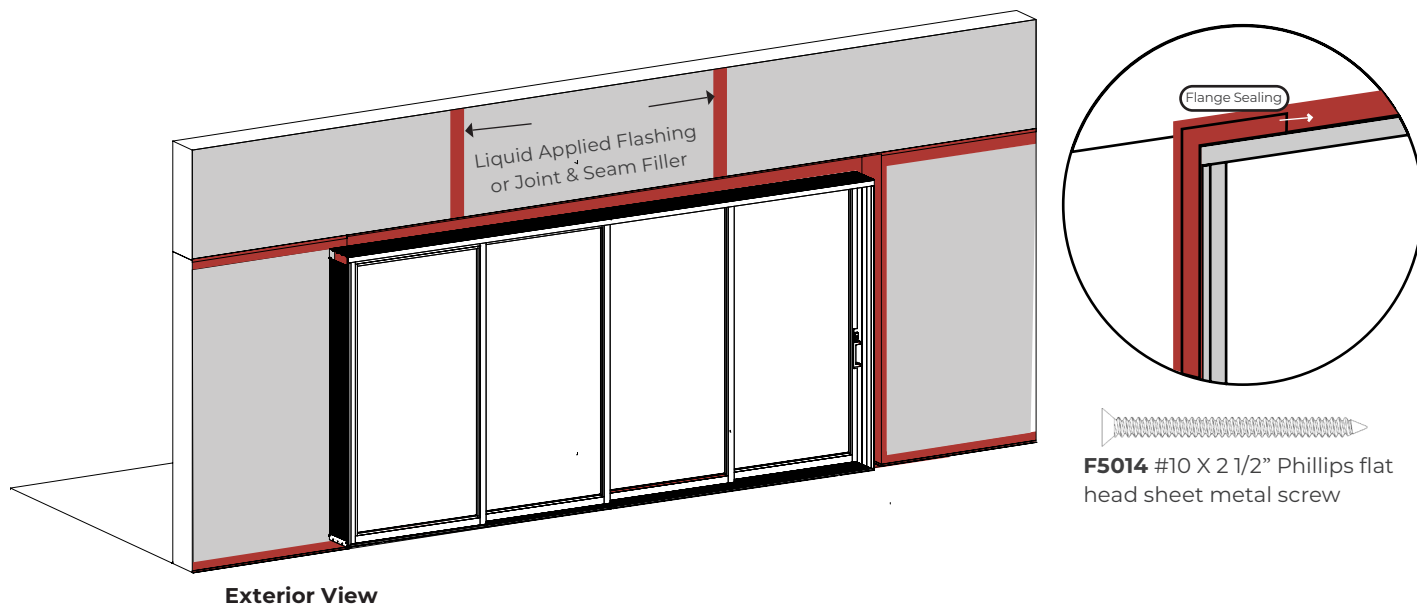
Step 3 - Frame Installation

SEALING EXTERIOR FLASHING FLANGE

PREPARE ROUGH OPENING - SEE FIG. 23

- Install the door “plumb, level and square” into the rough opening prepared with a Joint & Seam Filler and Liquid Applied Flashing.
- To “wet-set” the exterior door flange, install a continuous bead of Sealant on the back of the flange along the top (head) and sides (jambs) of the door.
Note: Make sure to leave the sill flange free of Sealant for drainage capabilities.
- Place the door in the prepared rough opening. Install fasteners along the Head, Sill and Jambs using the prefabricated fastener pattern.
Use **F5014** to install the Head and the Jambs. Use **F5014** to install the Sill.
- Limit counter flashing to the top (head) and sides (jambs) of the door. Do not seal the door bottom (sill) or obstruct weeps.
- Apply a thick bead of Liquid Applied Flashing over the outer edge of the door flange at the door head and jambs. Use a dry joint knife, trowel, or chip per brush to spread the wet product to create a seamless membrane, directing bulk water away from the door and the rough opening.
- Apply additional Liquid Applied Flashing as needed to create an opaque, monolithic membrane free of voids or pinholes.
- Ensure both jambs and the head-to-wall interfaces are covered. Do not seal the door bottom (Sill) or obstruct weeps.

Fig. 23



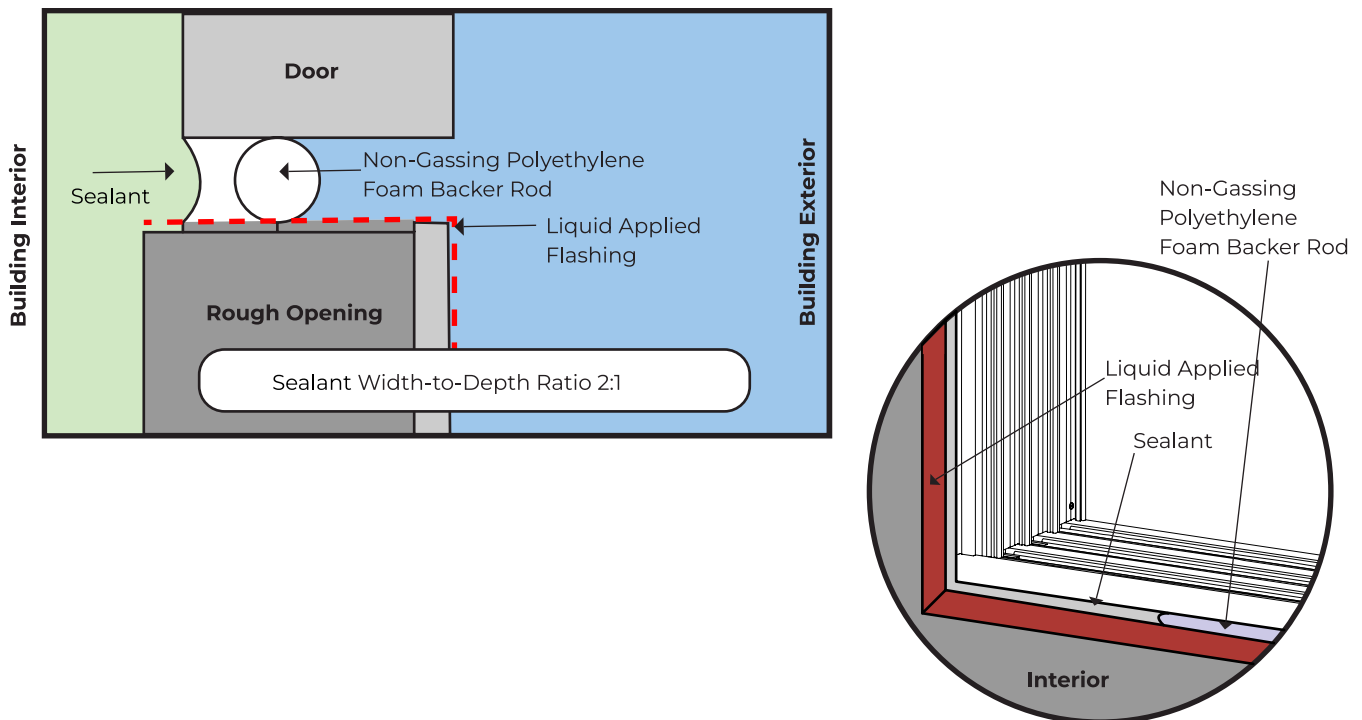
Step 3 - Frame Installation

INTERIOR AIR AND WATER SEAL

INSTALL THE INTERIOR AIR AND WATER SEAL USING BACKER ROD AND SEALANT SEE FIG. 24

- Use Sealant as the interior air dam to ensure compatibility with the treated rough opening and create a long-lasting, weather-tight seal. The Sealant prevents bulk water and moist outside air from entering, and conditioned indoor air from escaping around the door. This ties the door into the larger air and water management system and prevents water which may collect in the door frame from entering the conditioned space.
- **Joint Size** – Sealant depth should be one-half the width of the joint. Maximum sealant depth should be $\frac{1}{2}$ inch (13 mm). Minimum sealant depth should be $\frac{1}{4}$ inch (6 mm). Minimum joint width should be $\frac{1}{4}$ inch (6mm).
- **Joint Backing** – A properly sized non-gassing polyethylene foam backer rod should compress by 25-30% when installed. Install backer rod by compressing and rolling continuously into the joint channel without stretching or puncturing.
- **Installation** – Install a continuous bead of Sealant without gaps or air pockets. Tool immediately with a dry spatula to ensure complete wetting of the joint bond surface and produce a smooth, concave joint profile.

Fig. 24



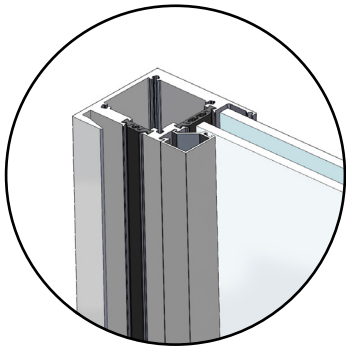
Step 4 - Panel Installation

GATHER ALL PANELS FOR INSTALLATION

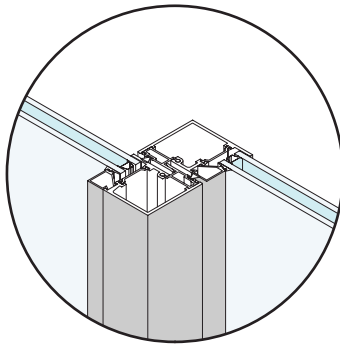
SAFETY WARNING

Door panels are heavy. Before installing ensure you have the appropriate number of people and tools to handle and maneuver the panels safely.

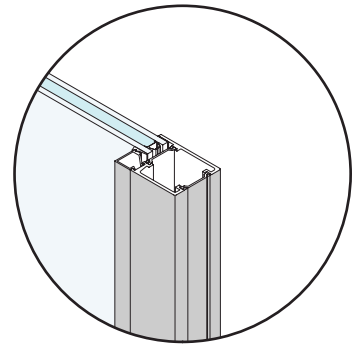
- All Panels must be installed into the frame from the exterior. **See Fig. 25.**
- Each Panel will be installed into its own unique Panel Track.
- Panel installation starts with the Locking Panel and ends with the Fixed Panel.



Pocket Panel
Sectional View

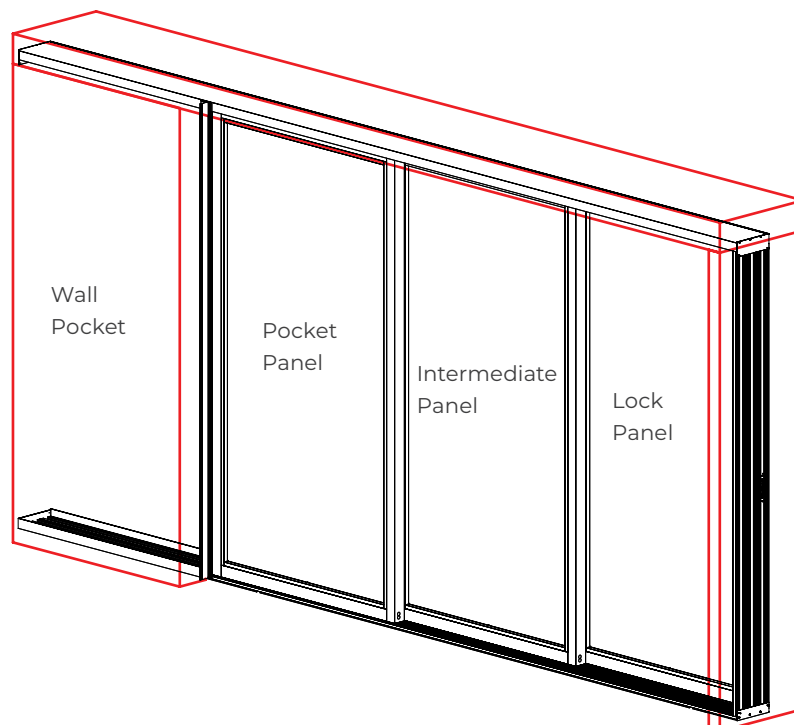


Intermediate Panel(s)
Sectional View



Lock Panel
Sectional View

Fig. 25



Step 4 - Panel Installation

PANEL INSTALLATION

LOCK PANEL INSTALLATION

- From the exterior of the building, with the Glazing Stops on the panel to the exterior, lean the top of the panel into the Lock Panel Track at the Head of the frame and then lower it onto the corresponding track in the sill.
See Fig. 26.
- Remove lower Hole Plug only on each end of the panel. **See Fig. 27.**
IMPORTANT: Pry the Hole Plug out gently. Do not use sharp tools that may scratch the door.
 - Insert a #3 Phillips screwdriver through the hole at the bottom ends of each stile and adjust the rollers to achieve a light contact of the end sweep to top surface of the Sill. Note: Do not raise the panel all the way up until all panels are installed. Otherwise the Top Interlock Dust Plug may be damaged.
- Continue to adjust the rollers until the edge of Lock Panel is parallel to the Lock Jamb and the gap at the head and sill is equal. **See Fig. 28.**

Fig. 26

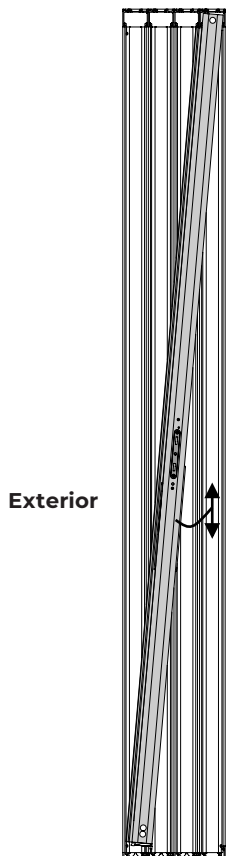


Fig. 27

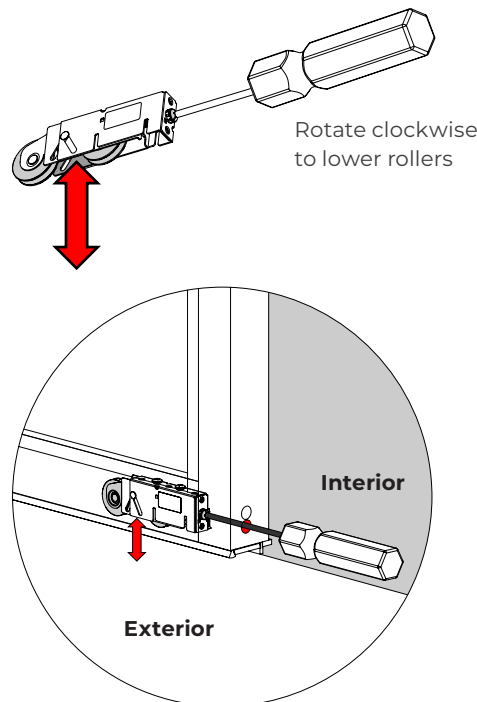
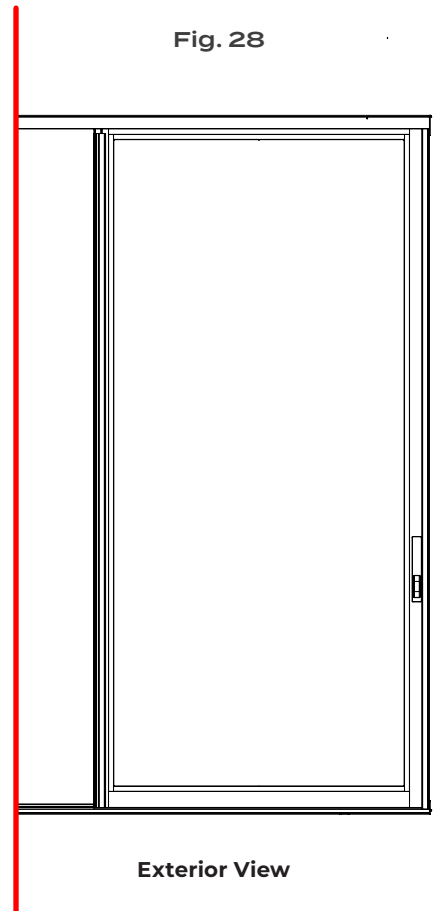


Fig. 28



Step 4 - Panel Installation

PANEL INSTALLATION

INTERMEDIATE PANEL INSTALLATION (SKIP TO FIXED PANEL INSTALLATION FOR 2 PANEL DOORS SYSTEM CONFIGURATIONS)

- From the exterior of the building, with the Glazing Stops on the panel to the exterior and with a portion of the panel overlapping to Lock Panel, lean the top of the panel into the Intermediate Panel Track at the head of the frame and then lower it onto the corresponding track in the sill. **See Fig. 29**
- Remove lower plug on each end of the panel. **See Fig. 27.**
 - Insert a #3 Phillips screwdriver through the hole at the bottom ends of each stile and adjust the rollers to achieve a light contact of the end sweep to top surface of the Sill.
- Continue to adjust the rollers until the edge of Intermediate Panel is parallel to the edge of the panel next to it and the gap at the Head and Sill is equal. **See Fig. 30.**
- Repeat steps for each remaining Intermediate Panel.

Fig. 29

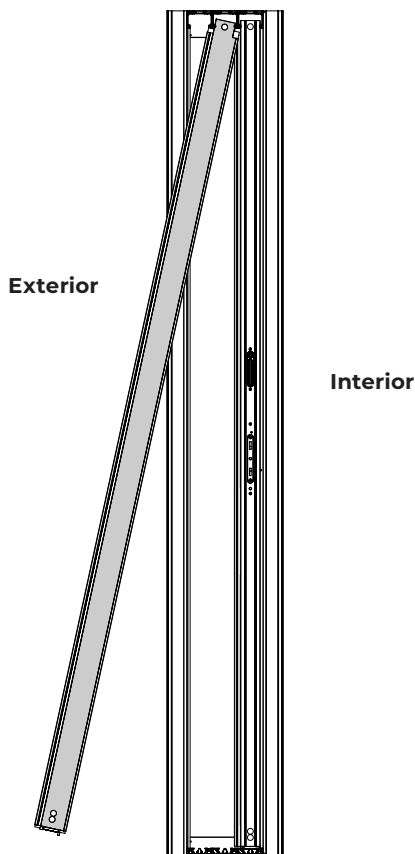
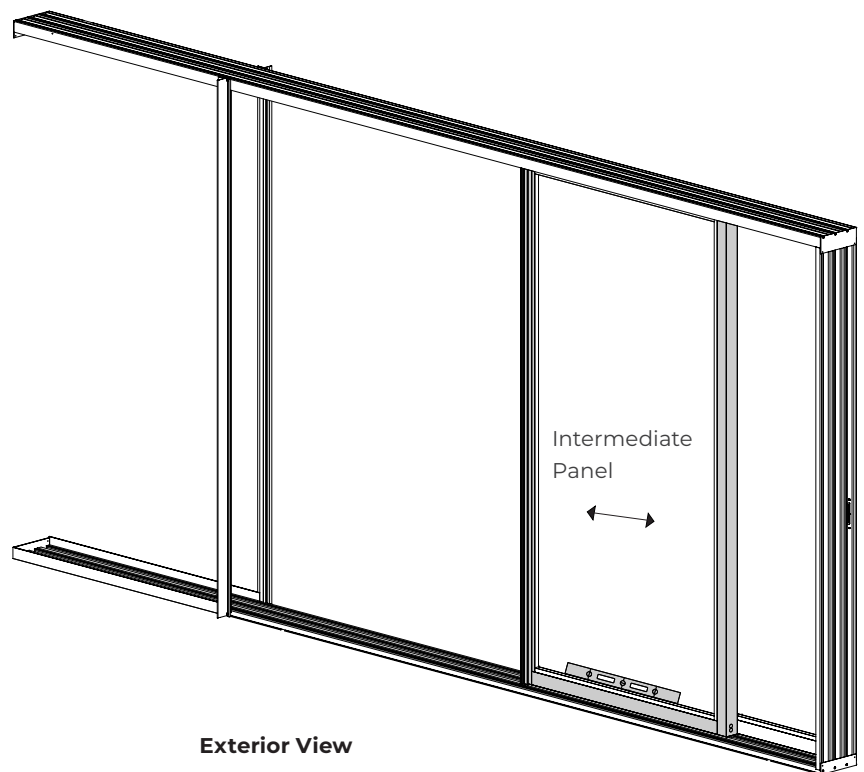


Fig. 30



Step 4 - Panel Installation

PANEL INSTALLATION

POCKET PANEL INSTALLATION

- From the exterior of the building, with the Glazing Stops on the panel to the exterior and with a portion of the panel overlapping the last panel installed, lean the top of the panel into the Pocket Panel Track at the head of the frame and then lower it onto the corresponding track in the sill. **See Fig. 31.**
- Remove lower plug on each end of the panel. **See Fig. 27.**
 - Insert a #3 Phillips screwdriver through the hole at the bottom ends of each stile and adjust the rollers to achieve a light contact of the end sweep to top surface of the sill.
- Continue to adjust the rollers until the edge of Pocket Panel is parallel to the edge of the panel next to it and the gap at the head and sill is equal. **See Fig. 32.**

Fig. 31

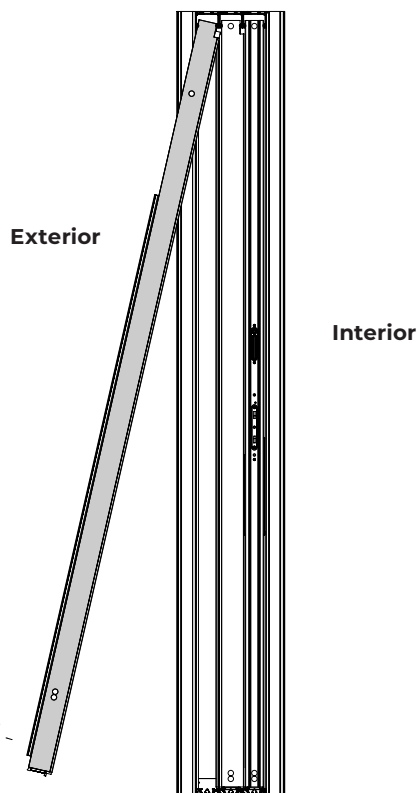
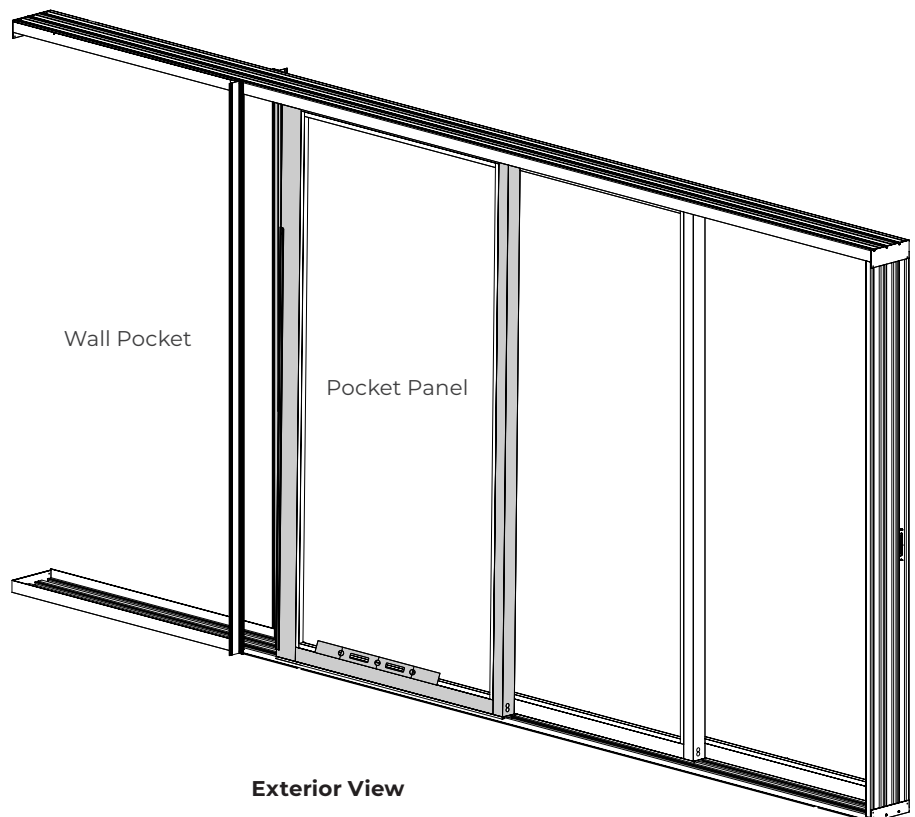


Fig. 32



Step 4 - Panel Installation

MORTISE LOCK ADJUSTMENT

FINAL ADJUSTMENTS

- Make final adjustment to the panel rollers to achieve the optimum alignment through out the entire door system.
- Re-install all bottom plugs into the panels.

ALIGNMENT AND ENGAGEMENT OF STRIKE PLATE AND THE LOCK

- Lock Alignment. **See Fig. 33.**
 - Remove the two machine screws that hold the Strike Plate in place.
 - Move Strike Plate up or down until it is aligned with the lock.
- Lock Engagement. **See Fig. 34.**
 - Open the Lock Panel.
 - Adjust the lock using the slotted screw in the center of the lock.

Fig. 33

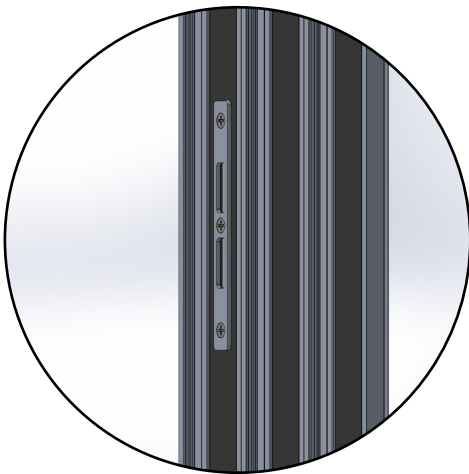
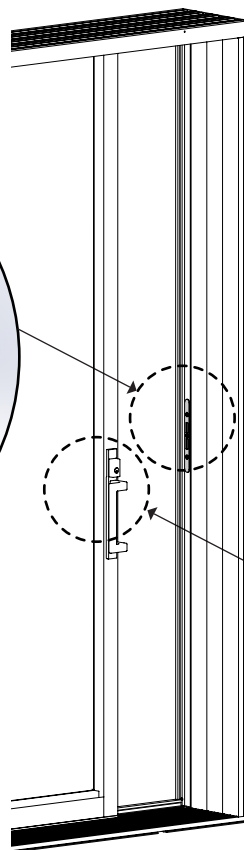
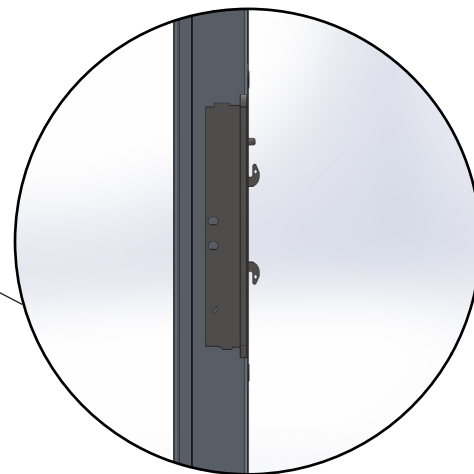


Fig. 34

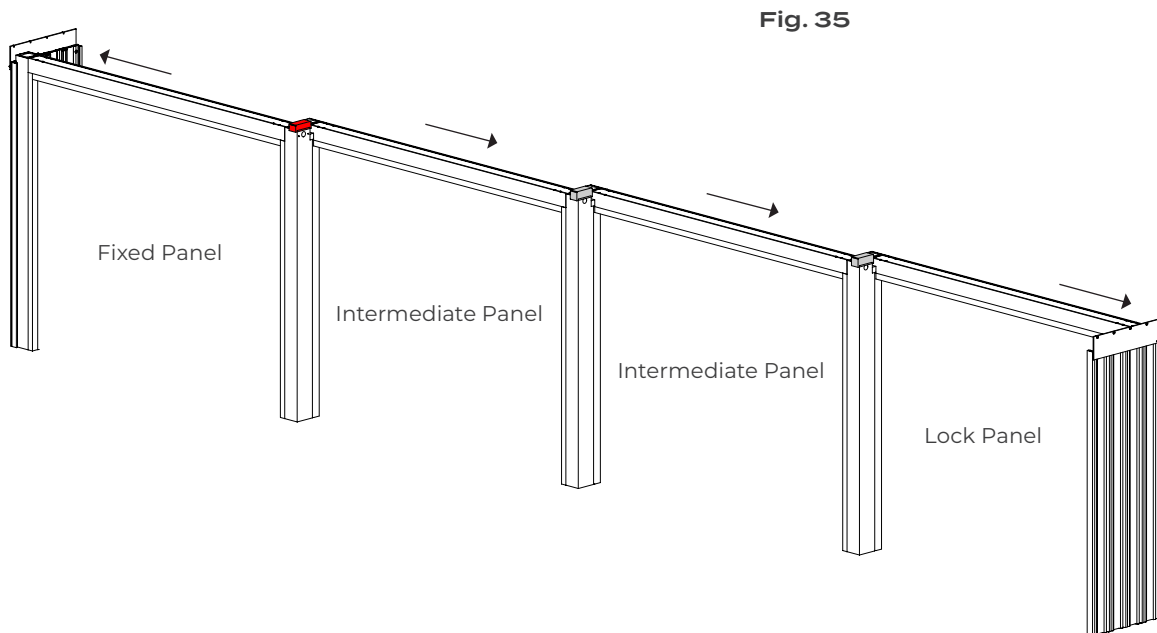


Step 4 - Panel Installation

FIXED PANEL INSTALLATION

SECURE THE FIXED PANEL

- Lock the Lock Panel into the Lock Jamb.
- Push the Intermediate Panels towards the Fixed Panel until the interlocks of each Intermediate Panel is fully engaged. **See Fig. 35.**
- Push Fixed Panel fully into Fixed Panel Jamb.
- Verify weather-strip engagement between the Fixed Panel and the Fixed Panel Jamb.



Step 5 - Accessory Installation

GATHER AND INSTALL ACCESSORIES

COLLECTOR PLATES

- Predrill and secure with screws from **FA0432 Color Matched Package** distance from the top of the interior of each Intermediate Panel. **See Fig. 36.**

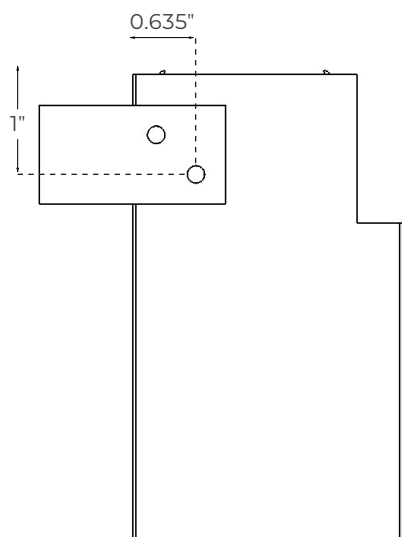
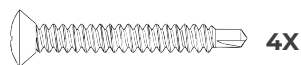
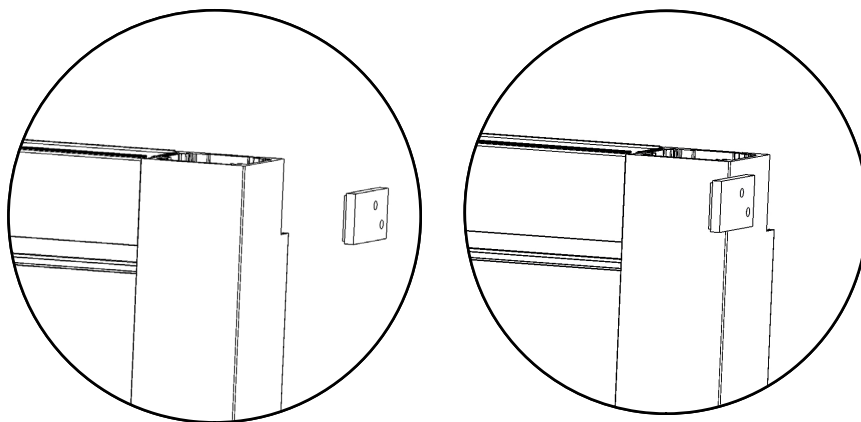


Fig. 36



F5011 #8-18 X 1-1/4

Step 5 - Accessory Installation

GATHER AND INSTALL ACCESSORIES

SIDE JAMB COVERS

- Remove liner from the adhesive tape located on the back of the Jamb Cover.
- Place Side Jamb Cover into groove located in the Jamb Track. **See Fig. 37.**
- Tap into place using a rubber mallet on the opposite side.
- Repeat for each track of each Jamb except the Lock Panel Track. **See Fig. 38.**

If your door system has the **Mid Height Sill Riser (optional)**, 1 jamb cover will have a notch at the bottom and this cover will be applied to the interior most track.

Note: Install the cover carefully. Once the cover is installed, removing it for any adjustment may cause damage to the part.

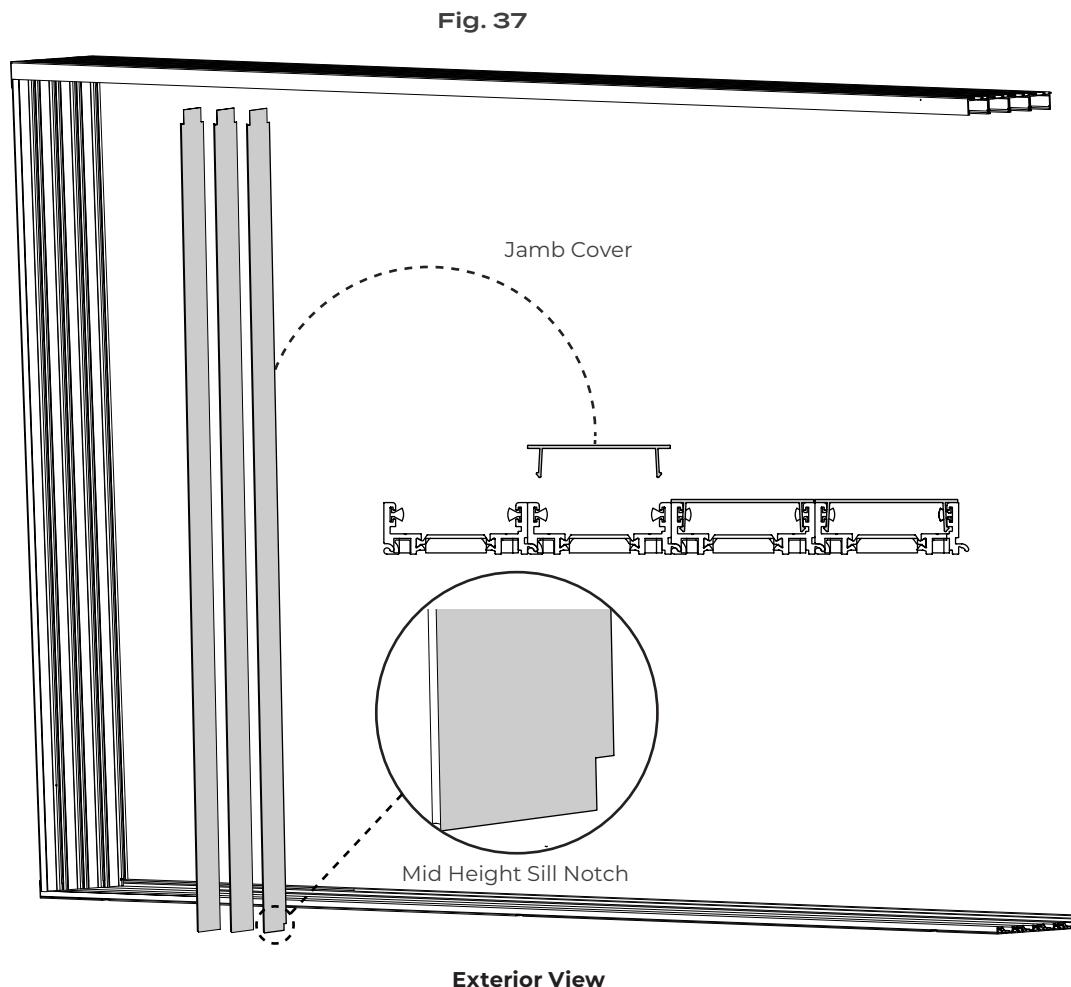
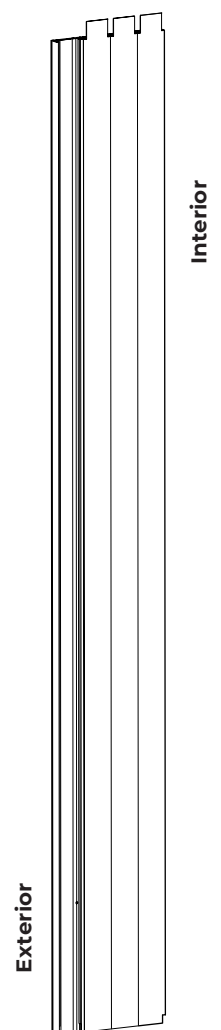


Fig. 38



AX650 POCKET MOVING GLASS WALLS

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