



Installation Recommendations for Fin Frame Doors

These installation recommendations are made available by MI Windows and Doors, LLC (MI) to assist with the integration of mounting fin sliding glass doors into a typical wood-framed structure three or less stories in height. Installation into other structures and frame types are not addressed here.

Please contact MI or visit www.miwindows.com for additional information.

Important Design Considerations

Read this entire document before proceeding with installation of MI's products. Responsibility for product selection and installation rests with the owner, architect, and installer. Do not proceed with installation unless all factors necessary to properly integrate MI's products into a building's water management system have been addressed.

MI 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 will supersede these recommendations. For additional guidance regarding installation of door products refer to applicable industry standards (e.g., AAMA 2400, AAMA InstallationMasters™, ASTM E 2112).

Failure to follow these recommendations, local requirements, or good building practices may affect the availability of remedies under MI's warranty. Provide a copy of these recommendations and the applicable MI warranty to the owner before installing. MI does not permit adoption of its installation recommendations into the contracts of others without its prior, written consent.

Important Pre-Installation Considerations

- Door installation may disturb finish 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.
- Job site and worker protections are recommended and may be required. Follow all manufacturers' instructions for appropriate and safe use of protective equipment, tools, materials, hardware and site protections necessary for installation.
- Product specification sheets include important information regarding your product and may include additional installation recommendations, such as fastener use with impact resistant doors, finishing instructions, and appropriate use of low expansive foam insulation.

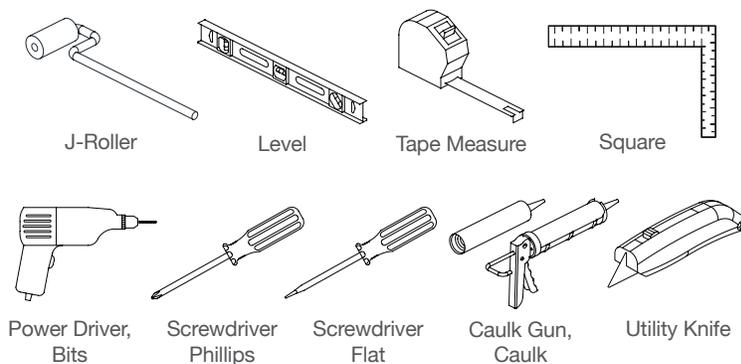
Contact MI for product specifications and additional product information for your MI product.

Materials Required

- Non-compressible shims.
- Flexible membrane sill pan flashing system.
- Fasteners. Type and number as required by code. At a minimum, fastener type should be sufficient to properly affix the frame and penetrate opening as shown in *Figure 1* of instructions.
- High quality compatible exterior grade sealant.
- Seal tape for the weather resistive 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.*
- Low-expansive, low-pressure foam or batt type insulation.*

* Use and placement of these materials may be required by code, plan, or good building practices.

Tools Required



Inspect and Prepare the Product for Installation

1. Inspect the door product thoroughly before beginning installation.
 - Confirm the door matches the size needed for the opening, measuring $\frac{1}{2}$ " smaller than the rough opening dimensions in width and height.
 - Confirm the door's features match the requirements of the project, order, and opening; e.g., Low-E, color, code, rating, operating direction, egress.
 - Confirm there is no damage to the product and that all necessary pieces are in place for a complete installation; e.g., locks, labels, weather stripping.

Do not proceed with installation if there are any concerns about the condition or suitability of the product for installation or compliance with project, order, code, or opening requirements.
2. Keep the jambs plumb and square with the head and sill on the door throughout installation. Keep panels closed and locked throughout installation if this is not a knocked down frame (KD). Avoid "crown up" or "bow down" conditions at both sill and head. Avoid "bowed out" installations by confirming equal jamb widths throughout installation.

Inspect and Prepare the Rough Opening

3. Make sure the rough opening is in good condition and sits plumb, level, and square. *See Figure A.* Confirming measures should not exceed permissive tolerances in ASTM 2112: $\frac{1}{8}$ " nominal square tolerance for units less than 20 sq. ft. or $\frac{1}{4}$ " for units more than 20 sq. ft. 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. Rough openings should be $\frac{1}{2}$ " larger than door frame in width and height.
4. If the building already has a weather resistant barrier (WRB) installed, it is necessary to prepare an opening in the WRB to accept the door. MI 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.

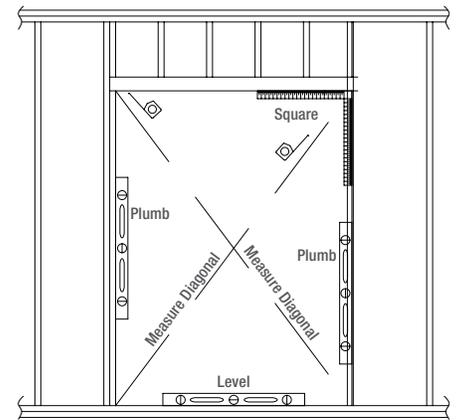


Figure A

Use a modified "I-cut" at the WRB. *See Figure B.*

- A) Begin with a horizontal cut across the entire width of the head and sill of the rough opening.
- B) Next, in the middle of the opening, make a vertical cut from head to the sill.
- C) Fold the WRB into the opening and secure, trimming excess as necessary. *See Figure C.*
- D) Finally, cut two slits in the WRB at the head corners that angle 45 degrees away from the center of the opening. Each cut should be long enough to ensure that the WRB will fold over the entirety of the later-applied head flashing. Fold the WRB upward as shown and temporarily fasten with tape. *See Figure D.*

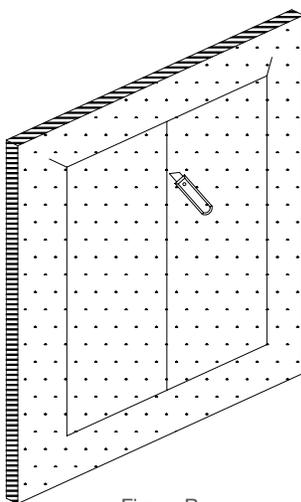


Figure B

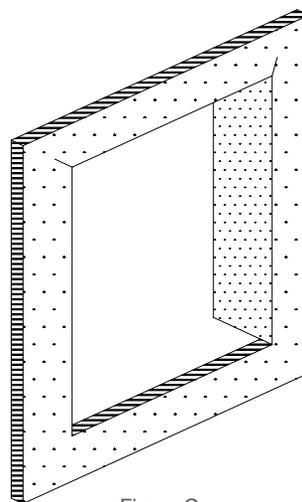


Figure C

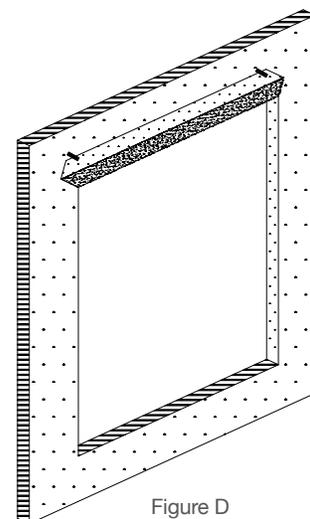


Figure D

Inspect and Prepare the Rough Opening Cont.

- A) MI recommends installers use pan flashing combined with a complete interior air dam around the product.
See Figure E.
- B) Many pan flashing systems are readily available. Choose one that best suits your construction application. Follow the instructions of the pan flashing supplier.
- C) The fenestration product, WRB, flashings, and pan flashing must be sealed to allow the system to inhibit air and water flow to the interior while allowing any incidental water to drain to the exterior of the building or to the drainage plane.
- D) The interior side of the pan flashing and the ends should be turned upward to prevent water from flowing off the flashing into the wall or other finishes. Incorporating end dams at both sides of the pan flashing is intended to prevent water from entering the walls at the lower corners of the product.

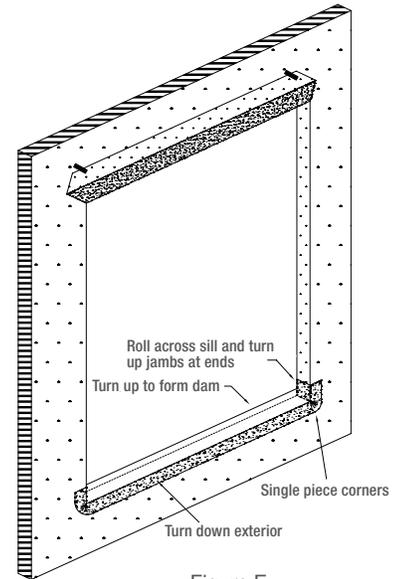


Figure E

Door Preparation

If your mainframe was shipped assembled, remove packaging/shipping materials such as wrap, corner pads, or shipping support blocks. Inspect frame to ensure there are no concerns.

If your door was shipped as KD, remove frame members and hardware from frame kit carton and assemble as directed on the assembly instruction sheet included in the frame kit carton.

Fasteners

Note that some areas such as Florida and Texas require fastener quantities and spacing much more stringent than those employed on the physical test unit. For fastener information regarding these areas, visit www.floridabuilding.org or www.tdi.texas.gov. Search for the product series you are installing and follow the schedule shown rather than the following.

- A) All aluminum product mainframes are pre-punched for fasteners. Fasten through each pre-punched hole.
- B) Some vinyl door frames require field drilling for fasteners.
- C) For areas other than Florida and Texas, for design pressures 30 or less, locate fasteners 18" on center. For design pressures greater than 30, refer to fastener schedules posted on www.floridabuilding.org or www.tdi.texas.gov.
- D) Do not over tighten fasteners. Do not allow fasteners to deform frame materials.
- E) Beginning in one corner, secure door frame with fasteners. Maintain frame in a square, level, and plumb condition while fastening to rough opening.
- F) Install installation screw hole covers if provided.

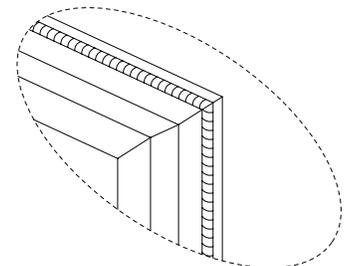


Figure F

Apply Sealant, Set, and Secure the Door

- A) For aluminum doors it will be necessary to pre-drill fastener locations. Unless otherwise required by code, MI recommends fasteners be located no closer than 3" from any corner and no more than every 8" on center. Do not distort the mounting fin during this process. After fastener locations have been predrilled, inspect sealant at all frame joints. Apply sealant at mechanically fastened corners as well as the full length of the joints where mounting fins meet.
- B) Apply a continuous $\frac{3}{8}$ " bead of premium grade, compatible exterior sealant to the backside of the mounting fins (interior facing) at the head and jambs of the door near the outside edge of the mounting fin. **Important: If using pan flashing leave at least 2 gaps that are 2" wide in the sealant bead at the sill.** See Figure F. Apply a $\frac{3}{8}$ " bead of premium grade, compatible exterior sealant on the backside of the sill mounting fin (interior facing), leaving at least 2 gaps that are 2" wide in the sealant bead. **Do not align sill gaps with weeps.** Gaps should not be more than 4" apart on large units. Add more gaps as necessary. See Figure G.

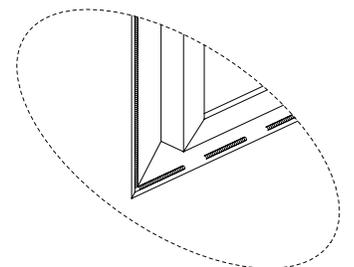
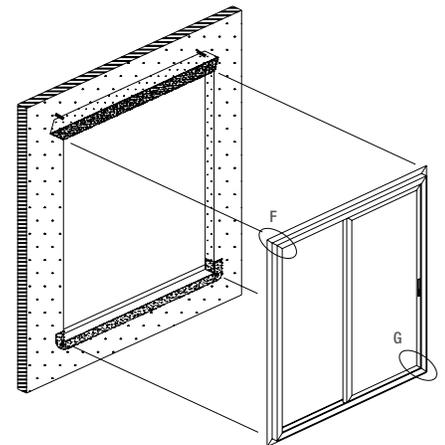


Figure G

- C) Set door into center of opening at sill first. Push up into place. Place a temporary fastener near each corner at the head of the door, no closer than 3" to either corner. Measure the door to ensure it has remained level and square, and the frame is not bowed. Unlock panel (if panels were installed at the factory). Adjust as required to ensure smooth operation. Adjust and place shims as necessary to secure the unit and ensure proper operation. Place additional fasteners in the bottom corners. Confirm again unit is level, plumb, and square. If KD unit, install panels into frame and add hardware and brackets as shown on the installation sheet that was provided with your hardware kit.
- D) Keeping the panel closed and locked, secure the door with fasteners of a type appropriate for the frame and that penetrate the rough framing by a minimum of 1 1/2" or as required by code. *See Figure H.* Take care to install fasteners straight, not angled. No fasteners should be located close to any corner. Do not distort the mounting fin with the fasteners. Unless otherwise required by code, MI recommends its vinyl products have fasteners applied securely into every other pre-punched slot on all sides of the door. Fastening in locations other than the mounting fin may damage the unit. Do not fasten the door with staples.

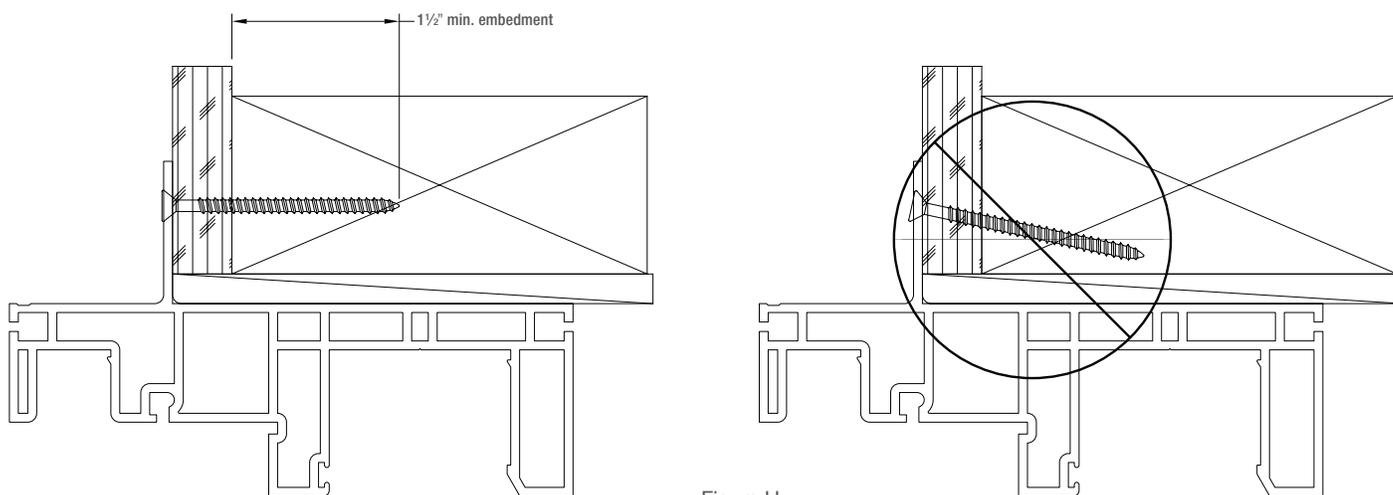


Figure H

Integrate the Door

- A) Cut two pieces of self-adhered flashing for the jambs that extend a minimum of 1" above the head mounting fin and a minimum of 1" below the sill flashing previously installed. Apply flashing over jamb mounting fins. Use a J-roller to remove bubbles or creases. *See Figure I.*
- B) Cut a piece of self-adhered flashing for application at the head of the door. Flashing must extend a minimum of 1" beyond the jamb flashing that was applied in the previous step. Apply flashing over the head mounting fin. Use a J-roller to remove bubbles or creases. *See Figure J.*
- C) Remove tape holding WRB flap and fold WRB downward covering the head mounting fin. Be sure the WRB does not affix to the head flashing or create a pocket at the head of the door. Seal the WRB to head flashing using WRB sealant tape to cover the entirety of the top cuts previously made. *See Figure K.*

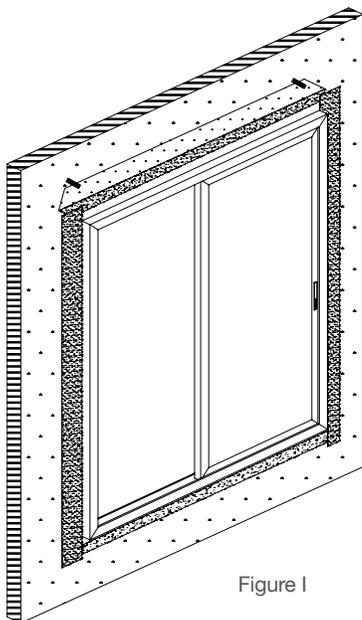


Figure I

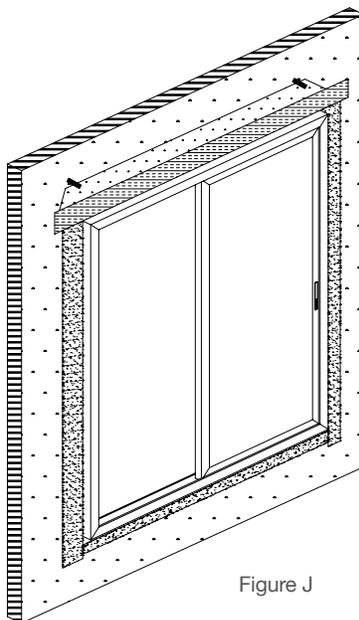


Figure J

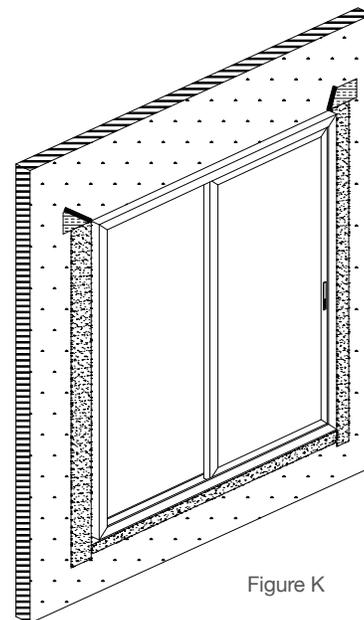


Figure K

Finishing Touches

Lock and Keeper Adjustment

- If keeper/strike was not installed at the factory, attach at this time using the slotted holes which will allow for strike adjustment later.
- Close and lock panel. If lock does not engage with keeper properly, loosen screws through strike and lower or raise strike until lock does engage with keeper.
- If additional adjustment is required and the panel is fitted with a mortise type lock, turn the lock hook adjustment screw to provide more or less lock throw as needed.
- When proper locking is achieved, drive longer screws through strike into construction. This provides better holding power for keeper.

Install Continuous Air Seal

- Using backer rod and sealant, low pressure low expansion foam or loose batt insulation, create an air seal barrier on the interior between rough opening and door. Use caution when using foam to ensure frame is not distorted.

Finish as desired adhering to good construction practices.

Considerations and Cautions

Exterior Considerations

- Care should be taken to ensure proper integration of the door into the building's water management system and with the selected cladding. A properly designed ¼" sealant joint between all sides of the door frame and exterior cladding may be recommended. Consult the responsible architect, owner, or builder, as well as the cladding manufacturer's instructions.
- To ensure proper drainage, patios, decks, or slabs must be at least 1/4" below the bottom of the sill. It is recommended that patios, decks, or slabs slope 1/4" per foot or 2% fall away from the building.

Important Cautions

- ⚠ Use of solvents or acids will damage components of this product and will limit rights under the warranty.
- ⚠ Stage and store door products with caution. Do not store in the sun or lay flat before or during installation.
- ⚠ Care must be taken to ensure material compatibility of the door unit and surrounding building conditions. Where necessary, steps should be taken to isolate the door from reactionary building elements.

Post-Installation Reminders

- With the exception of logo and NFRC labels, all MI applied labels should remain in place and not be removed after installation is complete (e.g., AAMA labels, warranty labels, warning labels).
- MI recommends a yearly inspection of its products and the surrounding materials, inside and outside the home. Upkeep of sealant joints, hardware and weather stripping can ensure longevity and proper functioning of the door products.

Please contact MI or visit www.miwindows.com for additional information.