



EC190 French Rail Patio Door New Construction Installation Instructions

Additional instruction for 3-Panel and 4-Panel Doors on page 4

IMPORTANT INSTALLATION INSTRUCTIONS:

READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING. Please inspect your MI Windows and Doors, Inc. product thoroughly before beginning installation. Inspect the opening and the product, and do not install if there is any observable damage or other irregularity. The product specification sheet and warranty include important information regarding your product and may include product specific installation requirements (for example, types of fasteners to be used with impact resistant windows and limitations on the height at which the product may be installed); if you did not obtain copies please contact MI Windows and Doors Inc. Local building codes may impose additional requirements and those codes supersede these instructions.

FAILURE TO FOLLOW THESE INSTRUCTIONS AND BUILDING CODE REQUIREMENTS, MAY AFFECT THE REMEDIES AVAILABLE UNDER YOUR WARRANTY.

CAUTION:

- Use of solvents or acids will damage components of this product and will limit rights under the warranty.
- It is the sole responsibility of the owner, architect, and/or builder to select correct products to be in compliance with applicable laws, site requirements and building codes and to ensure that installation is in compliance with applicable laws, site requirements and building codes.
- Do not store in the sun or lay flat before or during installation.
- Any penetrations (e.g. Alarm sensors) made through any portion of an MI Windows and Doors product may affect rights under the manufacturer's warranty.

These instructions are minimum requirements only, check state and local code restrictions for additional compliance on installation and/or fastening. If unit has exterior trim (brick mould / J-channel, etc.) the unit must be sealed behind the mounting fin. The trim is provided for aesthetic purposes only, and not designed to be water tight. Installation into masonry or replacement openings must be sealed to the openings using an approved proper method, refer to AAMA 2400 and/or ASTM 2112 standards.

These installation instructions are provided for information only; no representation and warranty is made that these instructions set forth all of the information necessary for proper installation of the product. Given the variety of field conditions, primary responsibility for product installation rests with the installer. Do not proceed unless you have addressed the factors necessary to achieve weather-tight installation of a properly functioning product.

MI Windows and Doors assumes no liability for any personal injury or property damage incurred in installation. These instructions, together with the product specifications and warranty set forth the entire liability of MI Windows and Doors with regard to the product.

SUPPLIES NEEDED FOR INSTALLATION

- Cedar or impervious shims/spacers (12-20 needed)
- Closed cell foam backer rod/sealant backer (12 – 30 feet)
- Flashing – preferably foil backed butyl window and door flashing tape or equivalent
- High quality neutral cure exterior grade polyurethane or silicone sealant

TOOLS REQUIRED FOR INSTALL

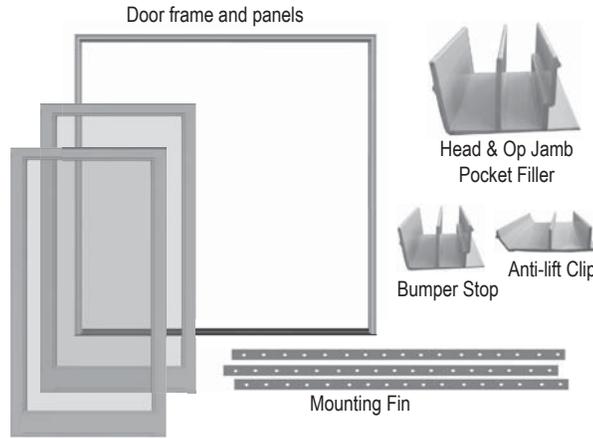
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|----------------|------------------------------------|------------------------------------|-----------------|
| ▪ Tape measure | ▪ Pry bar | ▪ Putty knife | ▪ Rubber Mallet |
| ▪ Level | ▪ Screwdriver - #2 Phillips & Flat | ▪ Wood Chisel | |
| ▪ Hammer | ▪ Utility knife | ▪ Drill with 1/8" & 3/8" drill bit | |

NOTE: INSTALLATION WILL REQUIRE TWO OR MORE PEOPLE FOR SAFETY REASONS. ALWAYS USE AND WEAR PERSONAL PROTECTIVE EQUIPMENT (PPE).



Standard parts / 2-panel door

1. Door frame and 2-panels
2. Fixed panel retainer bracket
3. Fixed interlock
4. Head pocket filler
5. Operable jamb pocket filler
6. Bumper stop & 2 Anti-lift clips
7. Signature Series Handle & Keeper
8. Button Plugs

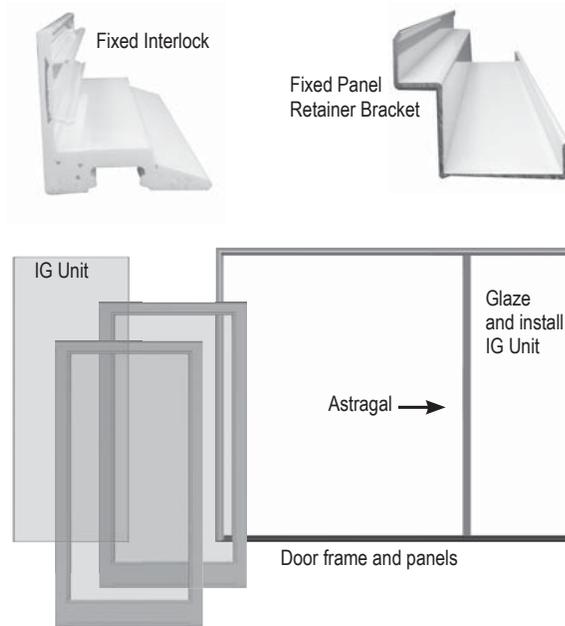


2-Panel Stock Sizes

Nominal Size	Exact Dimensions	Rough Opening
5068	59-1/2" x 79-1/2"	60" x 80"
6068	71-1/2" x 79-1/2"	72" x 80"
8068	95-1/2" x 79-1/2"	96" x 80"
5080	59-1/2" x 95-1/2"	60" x 96"
6080	71-1/2" x 95-1/2"	72" x 96"
8080	95-1/2" x 95-1/2"	96" x 96"

Standard parts / 3-panel door

1. Door frame, 2-panels, & 1-IG unit (field glaze into frame/astragal)
2. Fixed panel retainer bracket
3. Fixed interlock
4. Head pocket filler
5. Operable jamb pocket filler
6. Bumper stop and 2 Anti-lift clips
7. Signature Series Handle & Keeper
8. Button Plugs
9. Glazing tape
10. 1/16" and 1/8" setting blocks (2 of each)
11. Glazing bead



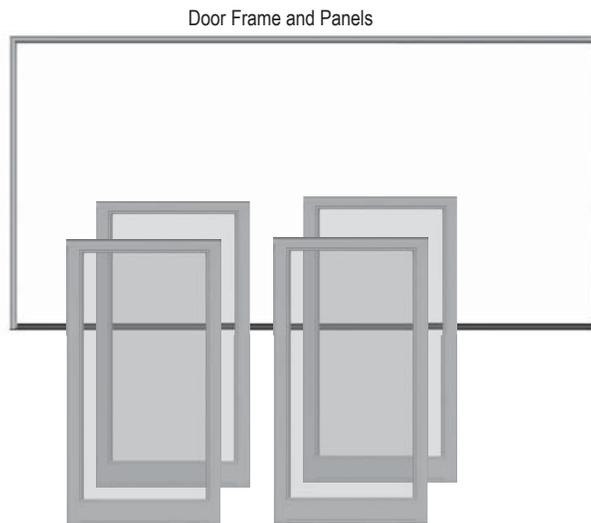
3-Panel Stock Sizes

Nominal Size	Exact Dimensions	Rough Opening
7668	91" x 79-1/2"	91-1/2" x 80"
9068	109" x 79-1/2"	109-1/2" x 80"
12068	149" x 79-1/2"	149-1/2" x 80"
9080	117" x 95-1/2"	117-1/2" x 96"
12080	141" x 95-1/2"	141-1/2" x 96"



Standard parts / 4-panel door

1. Door frame and 4-panels
2. Fixed panel retainer bracket
3. Fixed interlock
4. Head pocket filler
5. Operable jamb pocket filler (2)
6. Bumper stop & 2 Anti-lift clips
7. Signature Series Handle (2 sets)
8. Button Plugs
9. Panel adapter



4-Panel Stock Sizes

Nominal Size	Exact Dimensions	Rough Opening
10068	117" x 79-1/2"	117-1/2" x 80"
12068	141" x 79-1/2"	141-1/2" x 80"
16068	189" x 79-1/2"	189-1/2" x 80"
10080	117" x 95-1/2"	117-1/2" x 96"
12080	141" x 95-1/2"	141-1/2" x 96"
16080	189" x 95-1/2"	189-1/2" x 96"



Opening Preparation

If the building has a weather resistant barrier (WRB) I.E. house wrap, prepare the opening according to WRB manufacturer's instructions.

Make sure the rough opening is plumb, square and the sill plate is level. Rough openings should be $\frac{1}{2}$ " larger than door frame in width and height.



Apply a bead of compatible exterior sealant into the groove on the main frame where the mounting fin will be installed. Install pre-cut mounting fin into the groove on the main frame.

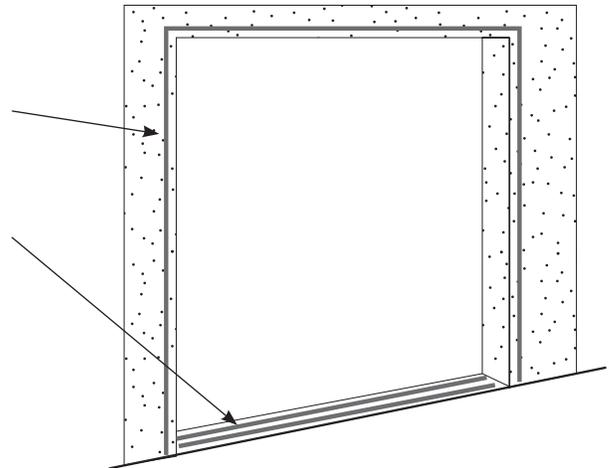


Dry Fit

Dry fit the main frame and mark around the frame where sealant will be applied.

Remove the main frame from the opening. Apply a continuous $\frac{3}{8}$ " bead of premium grade, compatible exterior sealant to the marked areas behind the mounting fin in line with the pre-punched holes on all sides.

Apply 2 continuous beads of sealant on the bottom of the rough opening prior to setting the door into the rough opening.

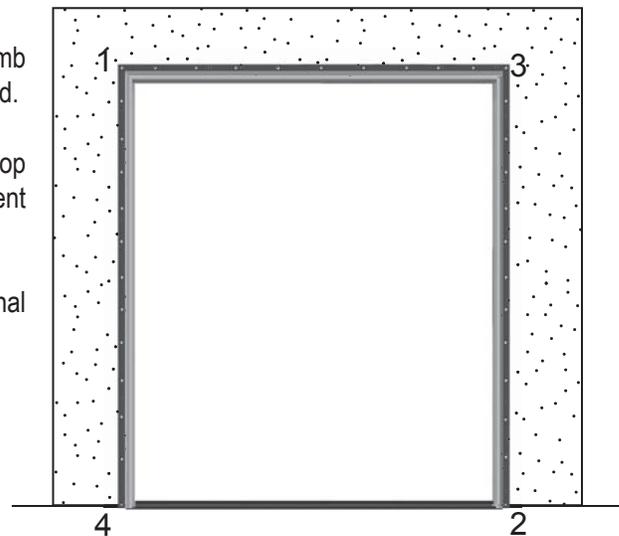


Frame Installation

Place the main frame into the rough opening. Make sure frame is plumb and square and that sill is seated into sealant. Use shims when needed.

Place a temporary fastener into the pre-punched mounting fin, one at a top corner and a second fastener at the opposite bottom corner. (placement 1 and 2)

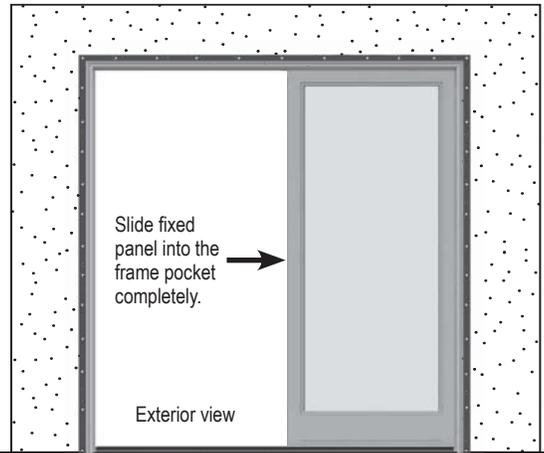
Check if level and square by measuring diagonally. Place additional fasteners in the opposite bottom and top corners. (placement 3 and 4)





Install Fixed Panel

Insert the top of the panel into the frame head and swing the bottom of the panel over the door sill and onto the fixed panel support. Slide fixed panel into the frame pocket completely. Check door is level, plumb & square.



Install Fixed Interlock

Snap fixed interlock onto fixed door panel. The notched end goes into the top. Start at the top and work your way down with a rubber mallet if needed.



Fasten Fixed Interlock

Pre-drill 5 to 7 holes through the weather strip groove on the interior side of the fixed interlock and into the fixed panel. (6Ft door 5 fasteners, 8Ft door 7 fasteners)

Fasten with 1 1/2" screws provided.



Interior view

Install Weather Strip onto Interlock

Snap the weather strip insert onto the interlock, start at the top and work your way down with a rubber mallet.



Interior view

Main Frame Head

Pre-drill a hole into the center of the exterior channel in the head of the door frame. Install a 2" screw, fastening to the opening.



Mounting Fin Installation

Secure the door with fasteners applied into every other slot on the mounting fin. Fasteners should penetrate the framing by a minimum of 1". Care should be taken to install fasteners straight, not angled. Prior to fastening the head be sure it is straight and level. Do not distort the mounting fin with the fasteners.



Block & Flange Installation

Pre-drill 3 holes into the head interior track, center and 6" to 12" in from corners (use 1/8" drill bit – counter sink with 3/8" drill bit for caps). Fasten the head to the rough opening with three 2" screws. Pre-drill 2 holes into the frame on the operator side 6" from top and 6" from bottom (use 1/8" drill bit – counter sink with 3/8" drill bit for caps). Fasten to the rough opening with 2" screws.

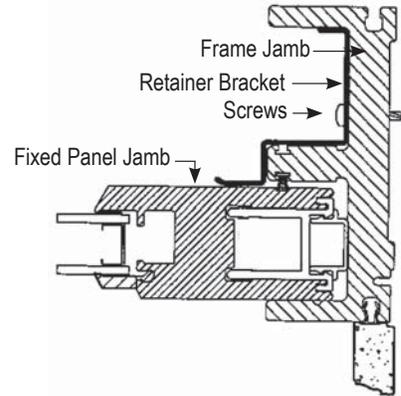
Pre-drill holes on the fix jamb, 6" from top, 6" from bottom and every 24" between (use 1/8" drill bit - counter sink with 3/8" drill bit). Fasten to the rough opening with 2" screws.

Install Fix Panel Retainer Bracket

Insert the retainer bracket into the frame pocket next to the fixed panel.

Align the top of the retainer bracket to the top of the head and install 4 screws (#8 x 1") through the pre-drilled holes on the retainer bracket and into the frame jamb.

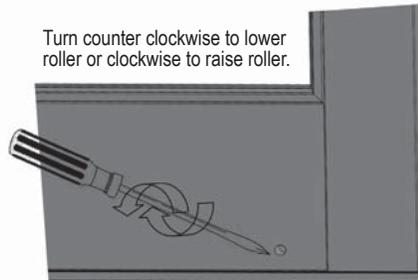
Do not install the screws into the fixed panel jamb at this time.



Install Operating Panel

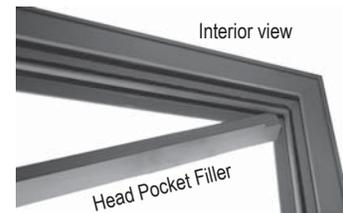
Guide the head in first and slide onto the sill. Slide operating panel to the closed position. Check the reveal. The 2 roller adjustment screws can be adjusted if the reveal is not straight.

If needed, adjust the rollers with the two roller adjustment screws located at the bottom of the interior operable panel. Turn adjustment counter clockwise to lower roller or clockwise to raise roller. Install button plugs over the two wheel adjustment holes and exposed screw heads.



Install Head Pocket Filler

Install the Head Pocket filler into the frame head (place the notched end into the operation jamb side of the frame head).

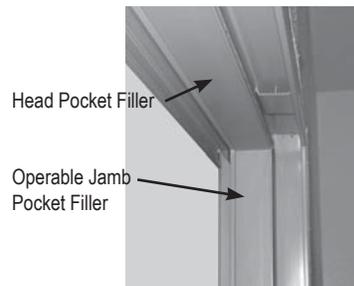


Install Operable Jamb Pocket Filler

Install the Operable Jamb Pocket Filler (angled end into the bottom).

Snap the jamb pocket filler onto the exterior jamb pocket.

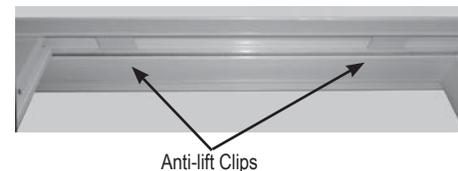
Start at the bottom and work your way up. Use a rubber mallet if needed.



Install Bumper Stop and Anti-lift Clips

Install the bumper stop into the head frame on the fixed panel side.

Install two anti-lift clips, 4" from Interior Jamb and 4" from Interlock. Snap into place.



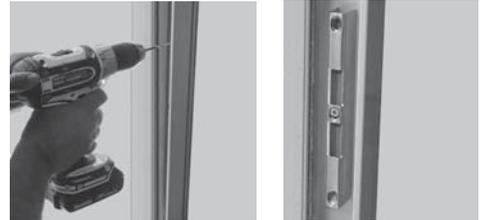


Install Handle

Assemble the door handle following instructions included in the door handle box. Attach the assembled handle onto the operable door panel with fasteners provided.

Install Keeper

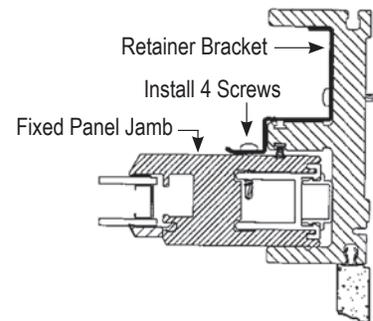
Pre-drill 3 holes into the dimples on the door frame. Place shims between the rough opening and door frame behind the keeper. Insert the three 3" fasteners into the pre-drilled holes and attach the keeper. Close the operating panel and check the position of the keeper. Adjust the keeper position if needed using the slots on the keeper and tighten the fasteners.



NOTE: 3-Panel Door OXO configuration - Install keeper onto the astragal with 1-1/2" screws.

Install Fixed Panel Screws

Install 4 screws (#8 x 1") through the pre-drilled holes on the retainer bracket and into the fixed panel jamb.



Flashing

Flashing of the door opening is recommended and may be required by some building codes. There are 4 accepted flashing methods – please refer to www.astm.org

Apply Sealant

Apply a secondary bead of sealant against the door and mounting fin to make a water tight seal around the door.

Insulate

Insulate between the window frame & rough opening with fiberglass insulation or equivalent. The space may be effectively filled with measured use of low expansion foam but only after determining that foam will not exert pressure against the frame, which can impair operation. Distortion of the frame will affect the user's rights under the warranty.

Seal Expansion Joint

Allow a 1/4" gap between the exterior cladding, siding, brick, stucco or stone and the window frame on all sides (except vinyl J-channel). The gap (expansion joint) should be filled with correct size backer rod, then sealed with a high grade exterior sealant and will need to be maintained.

Additional instruction for 3-Panel and 4-Panel Doors

3-Panel French Rail Patio Door - Install Insulated Glass into Frame and Astragal

STEP 1 Apply glazing tape on fixed opening. Starting from top left corner apply glazing tape across the head making sure to extend tape past glazing lip. Cut tape at corner with utility knife. Apply glazing tape down both jambs, cutting tape each time with utility knife. Apply glazing tape at sill making sure to extend past tape on jambs. **NOTE: Do not overlap tape in corners. If tape is overlapped it will leave a void in tape and possibly result in seal failure.**

STEP 2 Pull blue backing off glazing tape.

STEP 3 Apply neutral cure silicone at each corner joint to fill voids where tape ends meet.

STEP 4 Place 1/8" setting blocks on sill 2" from each end and on 12" centers.

STEP 5 Install insulated glass with fourth corner seal at top.

STEP 6 Install 1/16" or 1/8" setting blocks 2" from ends and 12" centers around perimeter of door panel frame.

STEP 7 Install head and sill glazing bead in glazing bead track of frame. If glazing bead is too long trim back to make fit.

STEP 8 Install jamb glazing bead in glazing bead track of frame. Check glazing bead for fit, trim if necessary.

4-Panel French Rail Patio Door - additional Installation Instructions

STEP 1 Install 4 Panel Adapter onto the operator panel.

STEP 2 Pre-drill through the 3 locator holes in the adapter. Fasten with 1-1/2" screws provided.

STEP 3 Attach keeper in the adapter to align with handle set on other panel. Pre-drill 3 holes in the adapter and fasten with 1-1/2" screws.