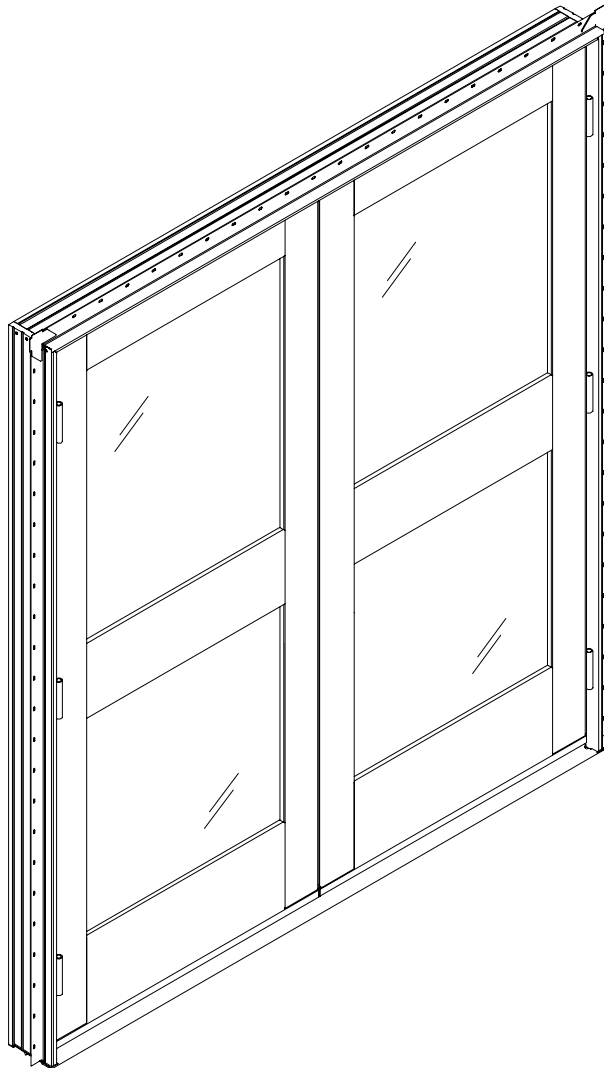


Clad Commercial Door

Installation and Finishing Instructions



MARVIN 

Windows and Doors

Made for you.®

BEFORE YOU BEGIN

- Read these instructions thoroughly **BEFORE** beginning to install your Marvin window or door product.
- Regional standard practices, environmental conditions and codes may vary. Identify and follow local regulations and standard practices when they exceed the enclosed procedures. The responsibility for compliance is yours: the installer, inspector and owner(s).
- Plan sizing of rough opening and clearance from exterior finishing systems to allow for normal materials shrinkage or shifting. (e.g. wood structure with brick veneer; allow adequate clearance at sill.) Failure to do so can void the Marvin warranty coverage.
- All windows and doors must be properly flashed and/or sealed at exterior perimeter. Materials used must meet all codes and be compatible with building exterior and window/door surfaces.
- All windows and doors must be properly flashed and/or sealed at exterior perimeter. Materials used must meet all codes and be compatible with building exterior and window/door surfaces.

WARNING: This door is glazed with safety glass (tempered or laminated) and if broken must be replaced with safety glass. This is in accordance with state and federal laws

WARNING: Practice safety! Wear safety glasses or goggles and appropriate hearing protection when installing or performing adjustments to a Marvin window or door product.

- It is the responsibility of the builder, installer and subcontractors to protect the interior and exterior of windows/doors from excessive contact with harsh chemical washes, construction material contamination and moisture. Damage to glazing, hardware, weatherstrip and cladding/wood can occur. Protect with painters tape and/or protective sheathing as required. Follow all guidelines regarding material use, preparation, personal safety and disposal.
- Alterations to Marvin products including window films, insulating or reflective interior window treatments or additional glazings can cause excessive heat buildup and/or condensation. This may lead to premature failures not covered under warranty by Marvin Windows and Doors.

CAUTION: Chemicals, solvents and other harsh substances should never come in contact with the sill of your wood Commercial Door. To maintain sill appearance, wash using only a mild soap and water solution. Remove fresh paint splashes, grease or caulking with painters naphtha or isopropyl alcohol.

NOTE TO THE INSTALLER AND SUBCONTRACTORS:

Always provide a copy of these instructions to the current (or future) building owner.

Failure to follow the above recommendations and any other specific warnings, procedures for use, safety recommendations and standard construction practices can result in personal injury, poor product performance, premature failure and unnecessary call backs.

Contact your Marvin supplier if you have any questions regarding product and materials used in manufacturing. Before purchasing or applying any product that may affect the installation or performance of Marvin windows and doors contact the manufacturer of aftermarket product/glazings that are not supplied by Marvin and request written product use, associated warranties and damage coverage. Provide this information and warranties to the end user and/or building owner for future reference.

Choose the installation method that fits your application and follow steps provided within these instructions.

For assistance, contact your Marvin dealer or visit us at www.marvin.com.

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REPLACEMENT PARTS

If replacement of parts becomes necessary, please contact your local Marvin Windows and Doors dealer.

YOU WILL NEED TO SUPPLY

Safety glasses	Hearing protection
Level (3"–6')	Hammer
Shim material	Power drill / screwdriver
Phillips screwdriver	Interior trimming material
Low expansion foam ²	Perimeter Sealant ¹
#8 x 3 1/2" Flat head (FH) wood screws (jamb screw application only)	
#8 x 3" Flat head (FH) wood screws (jamb screw application with 2 1/4" panel)	
1 5/8" sheet rock screws (masonry clip application only)	

For metal construction:


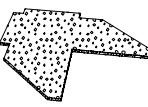

#12–24 x 2 1/2" FH self drilling screws or
#12 x 2 1/2" FH sheet metal screws
#8 x 2 1/2" FH sheet metal screws

For concrete construction:

1/4" x 4" FH concrete screws
3/16" x 2 1/4" FH concrete screws
3/16" x 3 1/4" FH concrete screws

¹ Sealant must be Grade NS Class 25 per ASTM C920 and compatible with door product and the finished exteriors of the building.

² Optional, use low expansion foam insulation only. Foam and foam application must comply with ASTM E2112, section 5.9.2.

STANDARD PARTS SHIPPED		
ILLUSTRATIONS (not to scale)	DESCRIPTION AND COLOR	PART/PROFILE NUMBER
	#12 X 2 1/2" Replacement screws (Quantity - 2 per hinge)	02101072
	4 Nailing fin corner gaskets with instructions.	11869519
	#8 X 2 1/2" Replacement screws - strike plate (Quantity - 4)	11882349

NOTE: For steel frame applications, machine screws are included with frame package.

NOTE: Numbers listed in parentheses () are metric equivalents in millimeters rounded to the nearest whole number.

ATTENTION: Specifications and technical data are subject to change without notice.

JAMB EXTENSION SHIPMENT

If your unit was ordered with optional jamb extensions, they may be shipped loose.

IMPORTANT: Field applied jamb extensions should be applied before the unit is installed into the rough or masonry opening.

ROUGH AND MASONRY OPENING REQUIREMENTS

1. **Rough openings (RO)** should be 1" (25) wider than the outside measurement of the frame and 1/2" (13) higher. **Masonry openings (MO)** should be 1/2" wider than the outside measurement of the frame or casing and 1/4" (6) higher than the outside measurement of the frame or casing. When framing rough opening, care should be taken to ensure the sill plate is level and the opening is square, straight and plumb.
2. Check the bottom surface of the opening to ensure it is flat and level.

IMPORTANT! The previous steps are crucial to obtain a trouble-free installation. If previous conditions are not met, the installer must take corrective actions to alter the opening(s) before proceeding. For typical wood frame construction it is also essential that the wall sheathing be a solid surface to ensure that the unit can be secured firmly to the wall.

ATTENTION: If chemically treated lumber is used for buck material, fasteners into the buck must be a minimum of 0.90 OZ/SQ FT zinc hot dipped galvanized or stainless steel types 304 or 316.

NOTE: The following procedures outline the recommended method to prepare the rough opening for construction applications using a continuous air barrier system. For construction applications using building paper skip to the section, "Rough Opening Preparation-Building Paper".

ROUGH OPENING PREPARATION - AIR BARRIER

3. When trimming away the air barrier at openings, first cut horizontally across the entire width of the rough opening at the head jamb and sill. Next, cut vertically in the center of the opening from sill to head jamb. Finally cut the head jamb corners diagonally away from the opening. The complete cut should be in an "I" fashion. **DO NOT cut air barrier diagonally from corner to corner in an "X" fashion.** See illustration 1.

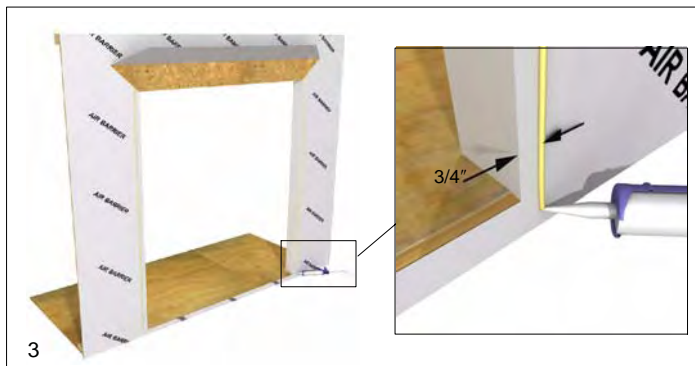


4. Wrap barrier at the sides to the interior and tack in place. Do not tack barrier at head jamb. Fold the head jamb flap up and tack in place or tuck beneath. This will allow the top flap to fit over the head jamb flashing after installation of the door. See illustration 2.



5. Apply a continuous bead of sealant 3/4" (19) from the top and sides of the door opening. See illustration 3.

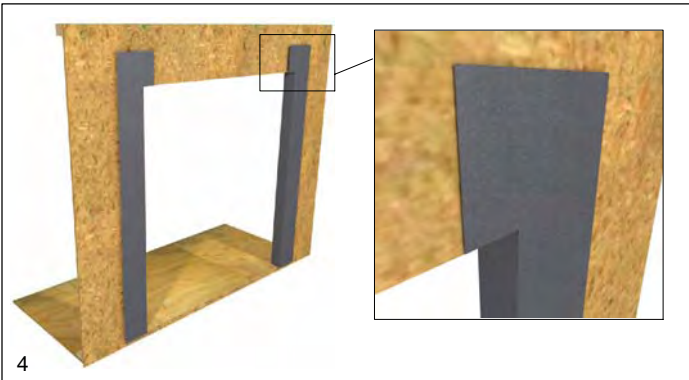
NOTE ON UNITS WITH CASING: For units with casing, apply the sealant where the casing or casing flange will contact the sheathing.



ROUGH OPENING PREPARATION - BUILDING PAPER

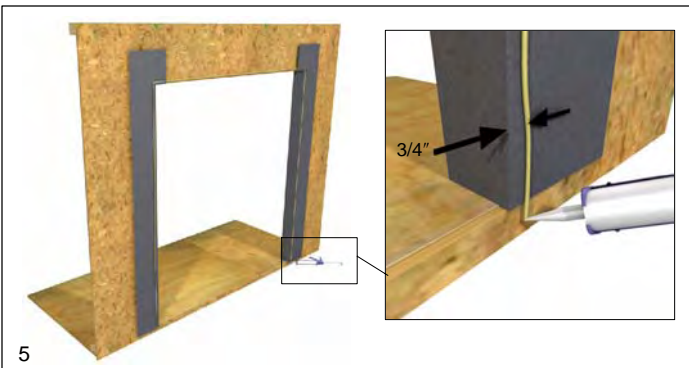
NOTE ON BUILDING PAPER APPLICATIONS: Apply the main courses of building paper after the door has been installed.

6. Cut two 13" (330) pieces of Grade "D" building paper 8 1/2" (216) longer than the rough opening height. (Adjust material width for wall thickness. Add 9" (229) to the wall thickness to determine width.)
7. Position the pieces in place overlapping the rough opening by as much as the jamb depth. The wrap should extend above the rough opening by 8 1/2" (216). Tack in place around the edge of the rough opening. Use a utility knife to cut the paper even at the head jamb. Fold to the interior and tack in place. See illustration 4.



8. Apply a continuous bead of silicone sealant¹ 3/4" (19) from the top and sides of the door opening. See illustration 5.

NOTE ON UNITS WITH CASING: Apply the sealant where the casing or casing flange will contact the sheathing.



INSTALLING THE DOOR

NOTE: If field mulling transom units, refer to appropriate instructions at this time.

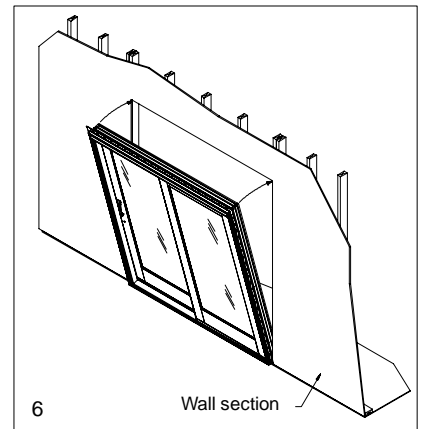
9. Position the factory applied nailing fin upright for installation following the instructions provided. **Do not apply nailing fin corner gaskets at this time.**

NOTE: Corner gaskets are shipped in the installation pouch with these instructions.

NOTE: If installing utilizing structural masonry clips, install clips prior to unit installation. Apply clips to the jambs and head jamb of unit, minimum of 2 per side attached with #7 X 5/8" screws 6" (152) from each corner with all others evenly spaced a maximum of 12" (305) on center (lock leg masonry clip into the nailing fin kerf on the unit). Instructions included with the clips provide further details.

10. Tip door frame into opening and center it. Temporarily fasten upper corners of the nailing fin. Do not drive the nail all the way in. See illustration 6.

NOTE: Nailing fin is not designed to permanently secure the door.

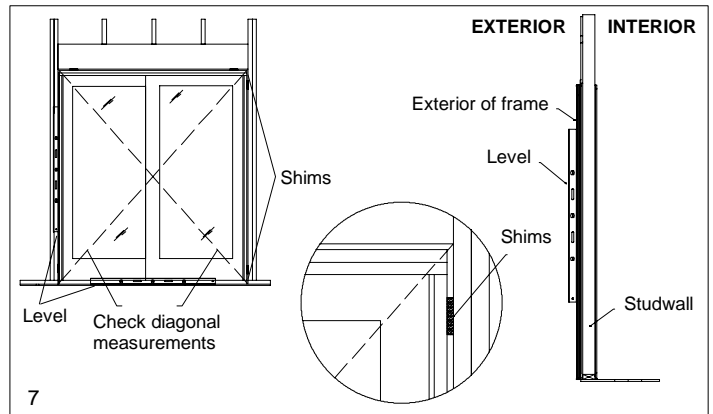


IMPORTANT: It is essential that the sheathing behind the nailing fin be a solid surface to ensure the unit is secured firmly to the wall.

NOTE: If installing in a masonry opening, wood portions of unit frame must not come in direct contact with concrete or stucco used in the structure.

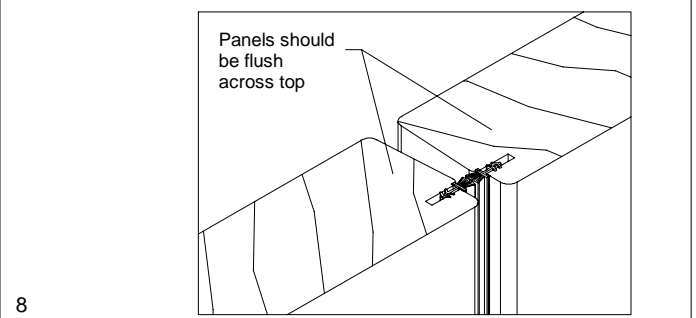
11. Before the sealant/adhesive is allowed to set up, ensure the jambs are straight and plumb (interior/exterior and left/right). The sill must be level and straight; correct as needed. Check diagonal measurements for the entire frame. Adjust as necessary by applying shims to the corners 6" (152) from the sill and head jamb. See illustration 7.

NOTE: Proper shimming is extremely important. Under shimming can cause the unit to sag out of square, over shimming will result in bowed jambs and/or head jamb. Both conditions can contribute to improper operation of door panels.



12. On a multiple panel unit check to make sure top corners of the panel locking stiles are aligned and flush with each other. On a single operating panel unit check to make sure the margin along panel top and head jamb are even. See illustration 8. If one panel is higher/lower (or on a single operating panel door the margin is not even between the panel and head jamb) move the top of the frame horizontally until the panel(s) align.

PANELS PROPERLY ALIGNED



PERMANENTLY SECURING THE DOOR UNIT

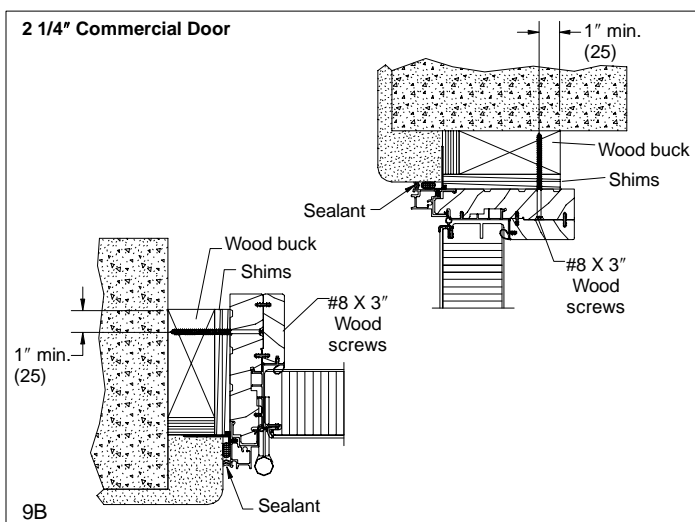
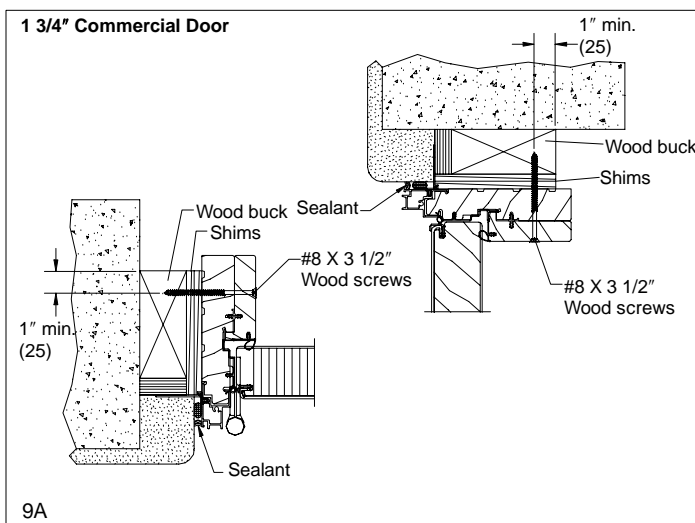
13. Place a shim at each hinge and on each side of jamb and head jamb strike plates. Place additional shims a maximum of 12" apart. Be careful not to bow the jambs.

IMPORTANT: The matrix listed below shows the installation methods that are recommended for the Clad Commercial Door (CCD and MCD). Choose the one that best fits your application and follow the steps provided.

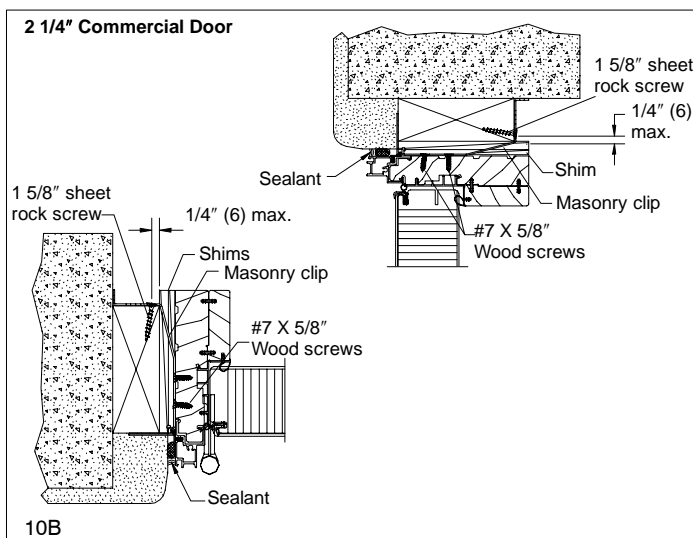
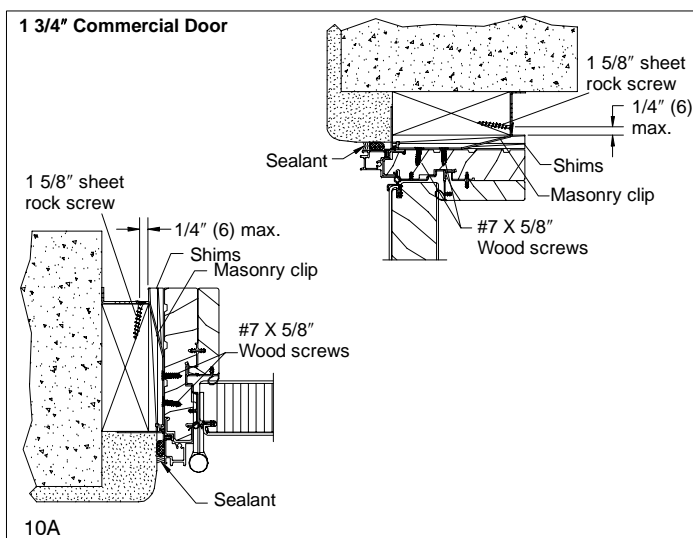
Product Type	Jamb Screw	Masonry Clips
CCD (1 3/4")	X	X
MCD (2 1/4")	X	X

IMPORTANT: For metal construction, Marvin recommends using masonry clips to install the commercial door. To fasten clips to stud, use two #8-18 x 1/2" self drilling/tapping or #8 x 1/2" sheet metal screws with a predrilled hole. For concrete construction with less than a 2x buck, Marvin recommends using the jamb screw method using 1/4" x 4" concrete screws.

14. **For units utilizing jamb screw installation:** Once the unit has been properly shimmed, plumbed, and squared, fasten unit to wood buck/rough opening with a minimum diameter of #8 wood screws. The length of the jamb screw may vary depending on type of unit, location, and operation of the panel; a minimum screw length of 3 1/2" (89) is required. Screws must be a minimum of 1" (25) from edge of buck with a minimum 1 1/4" (32) penetration. Place the screws 6" (152) from each corner, maximum 12" (305) on center, with a minimum of 2 per side. See illustration 9.



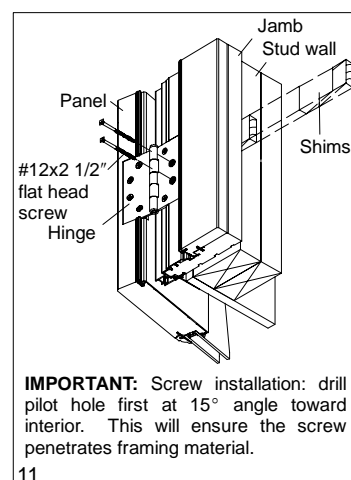
15. **For units utilizing masonry clip instructions:** Once the unit has been properly shimmed, plumbed, and squared, wrap clip to the interior around wood buck, predrill two 5/32" (4) holes, and fasten with 1 5/8" (41) sheet rock screws, 2 per clip. The screws must be placed no greater than 1/4" (6) from the edge of the wood buck with the rough opening a maximum of 1/2" (13) gap at point of attachment. Angle the screws a minimum of 15 degrees towards the thicker part of the buck. See illustration 10.



NOTE: Illustrations 9 and 10 show masonry application but apply to wood also.

16. On all operating panels, install two #12 x 2 1/2" screws in all hinges as shown in illustration 11.

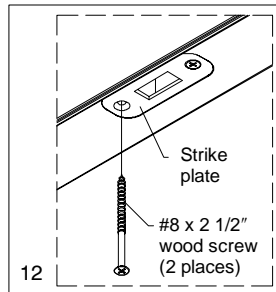
IMPORTANT: For installing hinges in metal construction, use either #12-24 x 2 1/2" flat head self drilling/tapping screws or a #12 x 2 1/2" flat head sheet metal screw with a predrilled hole. For concrete construction with less than a 2x buck, use 3/16" x 3 1/4" flat head concrete screw.



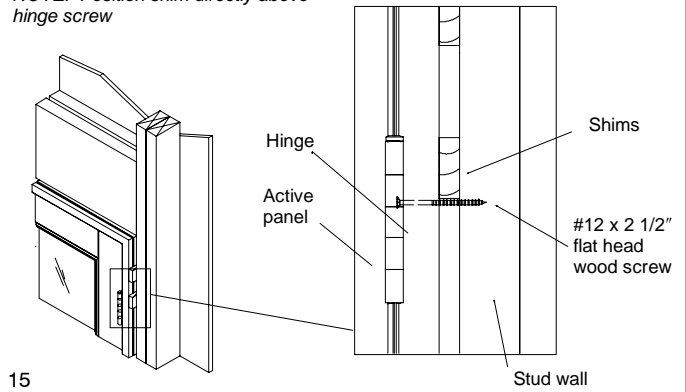
IMPORTANT: If door unit has a transom direct mulled above DO NOT install #8 x 2 1/2" screws through top strike plates.

17. Where applicable, remove and replace screws on all side and head jamb strike plates with the #8 x 2 1/2" screws provided. See illustrations 12 and 13.

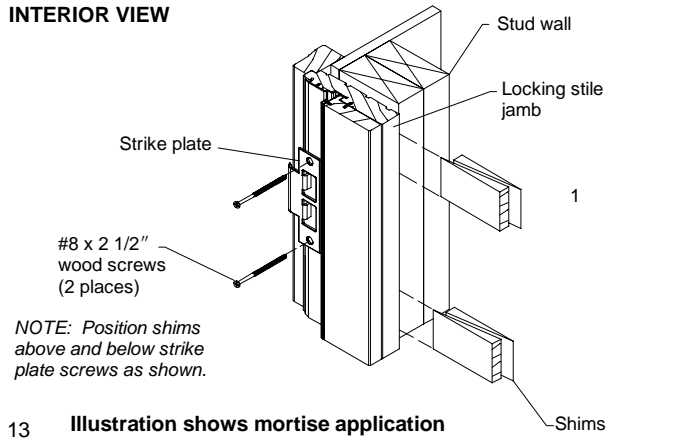
IMPORTANT: For strikes in metal construction, use either #12-24 x 2 1/2" flat head self drill/tapping screws or #8 x 2 1/2" flat head sheet metal screws with a predrilled hole. For concrete construction with less than a 2x buck, use 3/16" x 3 1/4" flat head concrete screw.



NOTE: Position shim directly above hinge screw

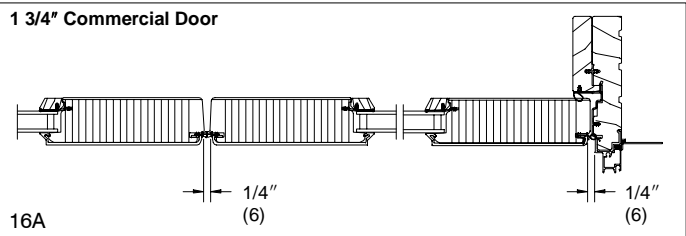


INTERIOR VIEW

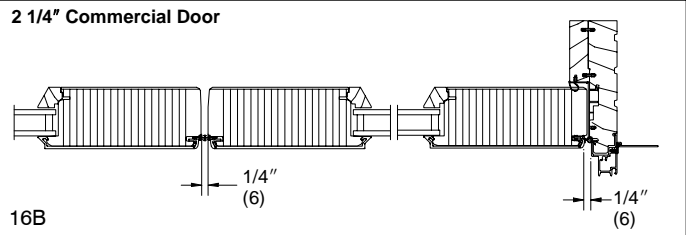


NOTE: The goal is to achieve panel alignment, 1/4" (6) panel margin at exterior between two operating panels (1/4" (6) at panel/locking jamb) plus have a smooth operation of the door. See illustration 16.

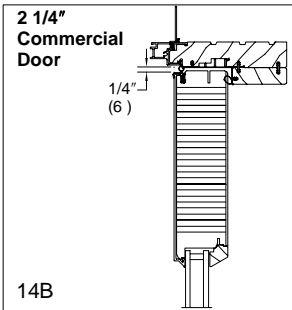
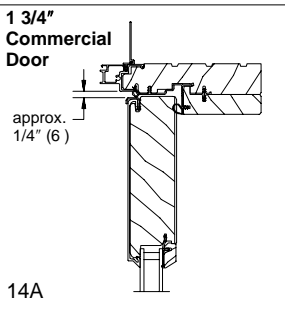
1 3/4" Commercial Door



2 1/4" Commercial Door



18. Close the panel(s) and check the margin between the active and the inactive panel or panel and jambs and head jamb. The door is designed to have an approximate 1/4" (6) gap between the panels (or panel and jambs and head jamb). Correct the margin if needed by adjusting the long screws installed in the previous steps. See illustration 14.



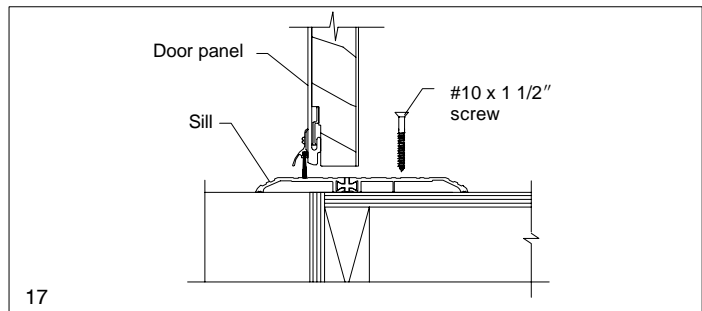
NOTE: If door has a head and foot bolt, engage at this time.

19. After margins are adjusted and panel(s) is aligned, loosen long screw in one hinge 1/4 turn and position shim material between frame and opening directly above screw. Then tighten screw and recheck panel margins and alignment. Adjust shims if needed. If installing a multiple panel jamb hinged unit repeat this procedure on the other panel. See illustration 15.

20. Finish securing nailing flange.

21. **Securing the sill:** With the #10 X 1 1/2" flat head screws provided with the sill, drill through pre-existing holes. See illustration 17.

IMPORTANT: For sill in concrete construction, anchor the sill with 3/16" x 2 1/4" flat head concrete screws.

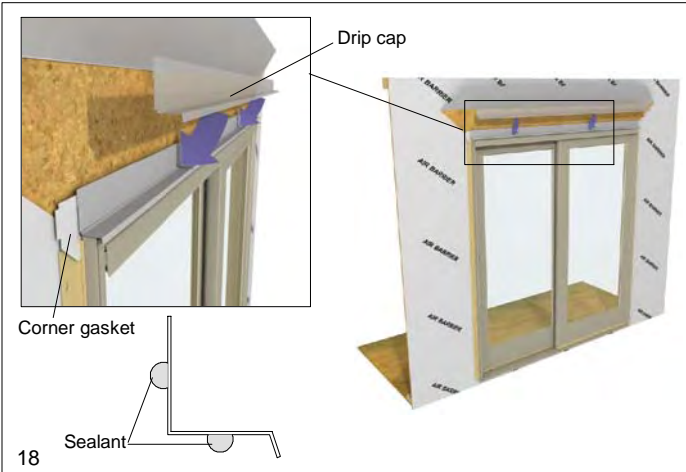


SEALING THE INSTALLATION - AIR BARRIER

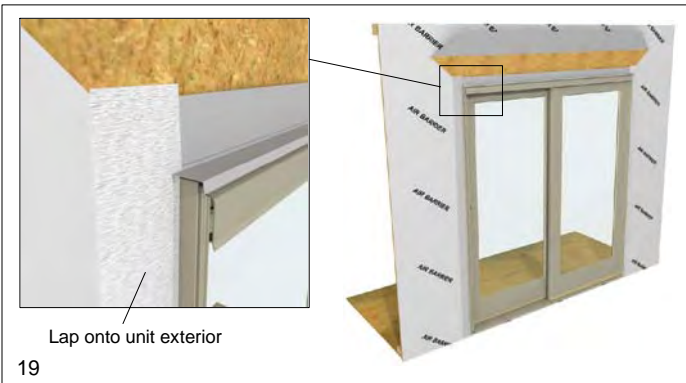


IMPORTANT: Nailing fin is not designed to be a weatherproof flashing.

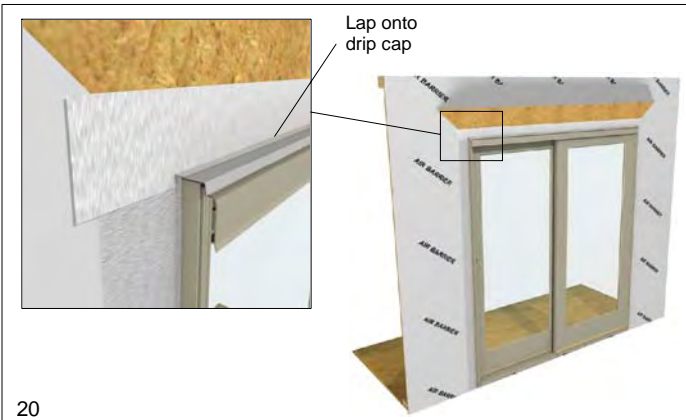
22. Apply nailing fin corner gaskets to each corner of the nailing fin. Follow instructions on back of gasket. (Units with clad flat casing do not use corner gaskets.)
23. If not done already, install a drip cap along the head jamb or head jamb casing. Be sure to apply a bead of sealant¹ along the back sides of both vertical and horizontal surfaces of the cap that come in contact with the door, door casing, and/or sheathing. See illustration 18.



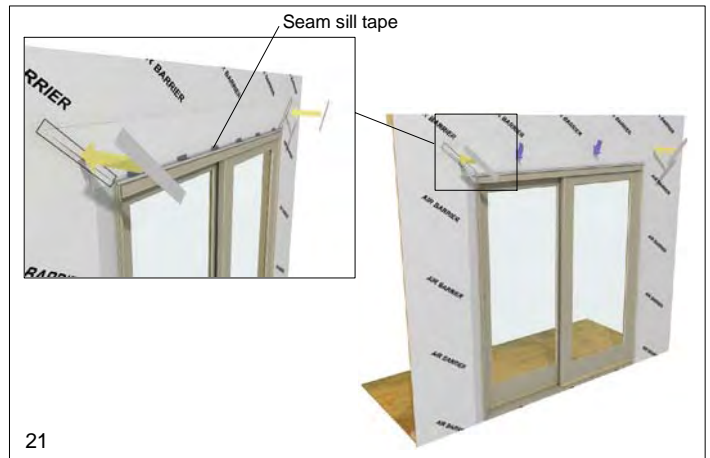
24. Lap vertical strips of self sealing adhesive flashing onto the unit or casing and out over the air barrier. Make small cuts at the head jamb to allow the flashing to fold back onto the exterior. See illustration 19.



25. Install another layer of horizontal adhesive flashing lapping onto head jamb of unit and over exterior sheathing. Horizontal flashing at head jamb must extend and cover vertical flashing previously installed at the jambs. See illustration 20.



26. Fold head jamb air barrier down over the head jamb flashing. Apply seam seal tape over the diagonal cut in air barrier. Make sure the tape laps onto the unit or casing. Cut 3" (76) lengths of tape and install every 12" (305) along the head jamb to help keep the flap in place until exterior finish is applied. Tape and seal any seams and fasteners directly above the unit. See illustration 21. Proceed to the "Final Sealing Procedures" section.



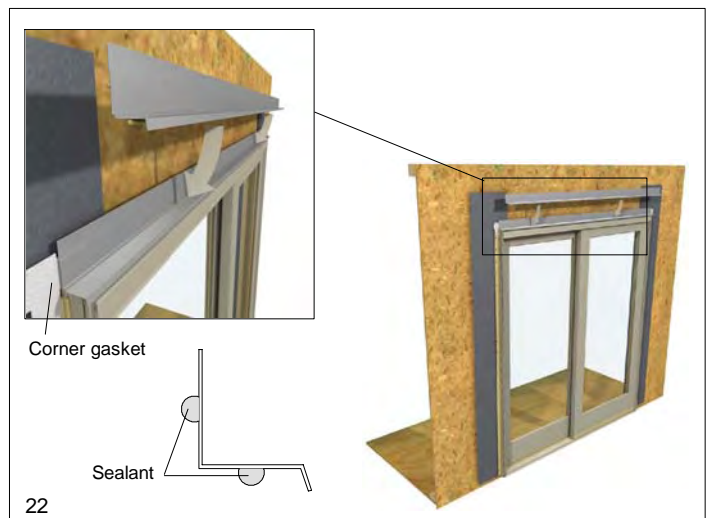
SEALING THE INSTALLATION - BUILDING PAPER

27. Apply nailing fin corner gaskets to each corner of the nailing fin. Follow instructions on back of gasket. (Units with clad flat casing do not use corner gaskets.)

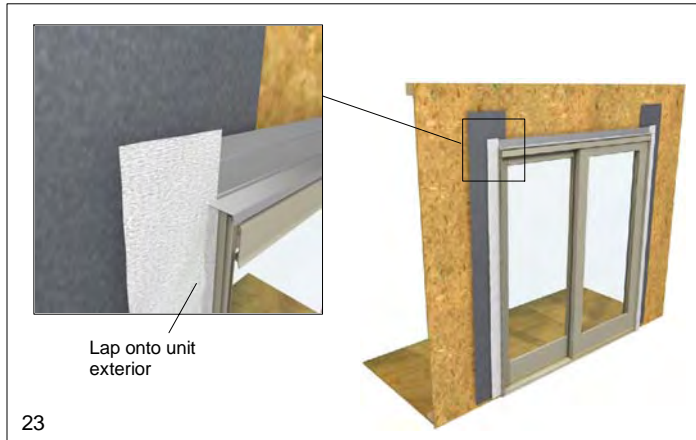


IMPORTANT: Nailing fin is not designed to be a weatherproof flashing.

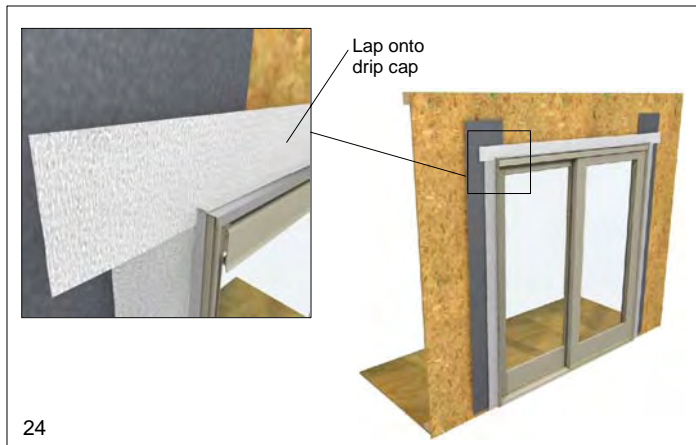
28. If not done already, install a drip cap along the head jamb or head jamb casing. Be sure to apply a bead of sealant¹ along the back sides of both vertical and horizontal surfaces of the cap that come in contact with the door, door casing, and/or sheathing. See illustration 22.



29. Lap vertical strips of self sealing adhesive flashing onto the unit or casing and out over the building paper. Make small cuts at the head jamb to allow the flashing to fold back onto the exterior. See illustration 23.



30. Install another layer of adhesive flashing lapping onto head jamb of unit and over sheathing. Horizontal flashing at head jamb must extend and cover vertical flashing previously installed at jambs. See illustration 24.



31. Tuck a double ply layer of building paper beneath previous layers of building paper and adhesive flashing at jambs and staple in place. Overlap the previous course by at least 2"(51). Continue installing courses beyond the height of the door unit as shown. See illustration 25.

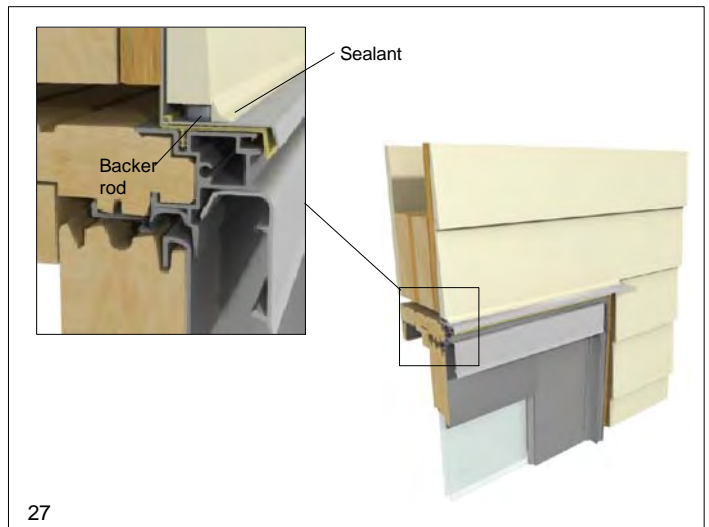


32. Measure and cut a double roll of building paper to bridge the opening between the paper courses at the sides. This course should extend past the paper previously installed by at least 6"(152). See illustration 26. Proceed to the "Final Sealing Procedures" section.



FINAL SEALING PROCEDURES

33. After exterior finish or siding is installed, apply sealant¹ around the exterior perimeter of the unit frame or casing. As needed, insert backing material between the frame or casing and the structure to provide a proper sealant joint. Sealant depth must be equal to width between unit and exterior finish material (brick and masonry apply). Always refer to the manufacturer's recommendations for proper surface preparation and application. See illustration 27.



34. Trim all shim material even with the interior of the structure.
35. If desired, apply a 1"-2"(25-51) thick bead of low expansion foam insulation on the back side of the nailing fin or brick mould casing. **Don't apply too much as it is possible to bow the jambs.** Now insulate loosely around the door with fiberglass insulation.



CAUTION! Some building codes require foam type insulation to form an infiltration seal. Use only low expansion type foam in combination with fiberglass insulation. Foam and foam application must conform to ASTM E2112-01, sec. 5.9.2. Follow all instructions and warnings from the foam manufacturer.

Questions? Contact your Marvin dealer or visit us at www.marvin.com.