



WINDOWS & DOORS

**FOLDING
DOOR
SYSTEM**

**INSTALLATION
INSTRUCTIONS**

**READ THESE INSTRUCTIONS COMPLETELY BEFORE
ATTEMPTING ANY INSTALLATION**

⚠ CAUTION

Lead-based paint may be present in older homes, and the removal of windows & doors may cause this paint to be disturbed. In order to minimize exposure to lead-based paint dust, please consult www.epa.gov/lead for more information.

www.kolbewindows.com

NOTICE

Proper installation and periodic home maintenance of Kolbe windows & doors is essential for upholding and sustaining the quality of our products. Failure to install and maintain our product according to these instructions will void any warranty, written or implied. The installer is responsible for consulting the contractor, structural engineer, architect, or consumer, for proper installation according to local codes and/or ordinances.

NOTICE

Some codes require the use of pressure-treated lumber to line the rough openings. Corrosion resistant materials, such as stainless steel or hot-dip galvanized steel, must be used for fasteners and anchors having direct contact with pressure-treated lumber.

NOTICE

Before applying sealant, make sure the area to be sealed is clean, dry, and frost-free. Use color-matching or transparent sealant. Photos show contrasting sealant for clarity and demonstration only.



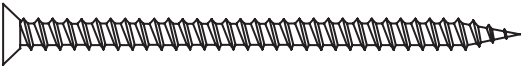



⚠ WARNING

Improper use of hand/power tools could result in personal injury and/or product damage. Follow manufacturer's instructions for safe operation of equipment.

⚠ WARNING

Proper Eye and Hearing Protection must always be worn when installing, removing or performing adjustments to Kolbe window and door products.

ITEMS PROVIDED BY KOLBE

- | | | |
|--|--|--|
| • 1/4" x 6" screw - (head track)
part# 5152660 |  | • Plastic screw caps/optional wood caps |
| • #10 x 3" PH Galvanized Screw - (side jambs)
part# 5142900 |  | • Story board |
| • #9 x 3" Flat Head Screw (jamb pivots, sill strike plates, sill & bottom anchor) part # 5098750 |  | • Flush bolt handle |
| • #8 x 3" Flat Head Screw (frame & sill)
part # 5141370 (for units "knocked down") |  | • Allen wrench (for hinge adjustment) |
| • #9 x 3/4" Flat Head Screw - (U-Channel)
part# 5113720 |  | • Hinge screws (#10 x 2" & #10 x 3/4") quantity & finish TBD by configuration and color choice |
| • #7 x 5/8" Self Sealing Flat Head Screw (frame sides)
part# 5094240 (for units "knocked down") |  | |

INTRODUCTION

These instructions are for installing Folding Doors into a wood or concrete/masonry wall. Contact your Kolbe window and door supplier for information on installing into other wall conditions. Please visit our website at www.kolbewindows.com for additional literature and information. For simplicity, extruded aluminum units are shown in pictures throughout the instructions.

ITEMS REQUIRED BY INSTALLER

- | | |
|----------------------------------|--------------------------|
| • Hearing protection device | • Safety glasses/goggles |
| • Sealant | • Caulk gun |
| • Level | • Square |
| • Plumb Bob | • Hammer |
| • Shims | • Tape Measure |
| • Phillips/Flat head screwdriver | • Power Drill |
| • Flashing tape | • Fiberglass Insulation |
| • Putty Knife | • 10d Finishing Nails |
| • String line | • 3/16" drill bit |
| • 7/64" drill bit (6" long) | • 3/8" socket |
| • #2 square driver bit | |

For temporary nailing through the nailing fin:

- 1-1/2" (38mm) or longer galvanized roofing nails

For installation technique 1:

- Kolbe installation clips (10-1/16")
- #8 x 3/4" (19mm) phillips flat head screws
- #8 x 1-3/4" (44mm) phillips flat head screws or 8d common nails

For installation technique 2:

- #10 x 2-1/2" (64mm) phillips flat head screws

PRELIMINARY PREPARATION

Remove any shipping packaging, skid plates or factory applied bracing. Do not throw away attached story board. Make sure the unit is not damaged and the dimensions are appropriate for the rough opening.

PREPARE ROUGH OPENING:

1. The material/lumber quality and fasteners must be structurally adequate for design load requirements (the head carries the weight of all the doors - a minimum of 4-1/2" of wood framing material is required at the head - approximately 60 foot lbs/foot of board length.) The maximum header deflection is +/- 1/8". The rough opening must be lined with a 1-1/2" (38mm) thick wood buck.
2. Typically the rough opening should be sized 1/2" (13mm) wider and 1/2" (13mm) higher than the outside measurement of the door frame. Masonry opening should be sized 1/2" (13mm) wider and 1/4" (6mm) higher than the clad nosing/exterior casing (verify sizing with local building code requirements).
For units with a recessed weep sill, rough opening needs to be 2" wider than frame width.
3. The rough opening must be plumb, square, level and in plane.
4. Individual construction members should not be twisted.
5. The floor beneath the unit must be perfectly level for proper unit operation.

⚠ CAUTION

When installing on a concrete floor, first install a sub floor to ensure a level surface. The sub floor should be caulked and fastened to the concrete. Use a caulk rated for adhesion to concrete. When installing into a wall with exterior rigid foam insulation panels, place solid blocking material behind the brickmould/nailing fin to provide proper support when fastening the unit into the provided opening.

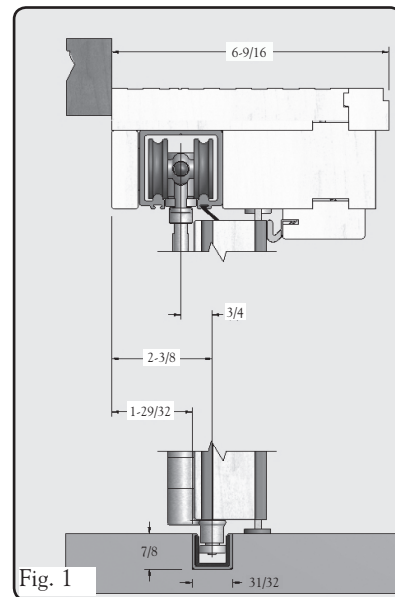
RECESSED SILL INSTALLATION (if applicable)

Before you begin

The location of the finished floor determines the location of the sill. All other measurements for the door system are related to the recessed channel. The tools listed in the pre-installation section should be on site. Lay out all components near the opening.

Recessed Sill Installation Prep

1. Determine the high spot on the slab near the opening for the Folding Door and use it as the starting point for the entire installation. The flooring contractor will use this same location to start the flooring installation.
2. Using the high point on the slab, determine the finished floor location, taking into account any anticipated floating of the flooring material. Mark that location somewhere near the opening for future reference.
3. If your recessed sill is over 24 feet in width, your sill will be delivered in sections. You will need to splice these sections together. (Lay out the sill sections and verify the correct order, the different parts will come labeled from the factory). Align the sections of the sill together.
4. Prep for any water drainage system that may be required. It is recommended that a drainage system be used on exterior units. This system will be determined by the installer.



Position Sill Channel

See Fig. 1 & 2. In relation to the outside of the wall, create a mark approximately 1-29/32" in from the outside of the wall. This mark will serve as the outer most channel wall. Create a 31/32" channel that will extend the entire length of the rough opening.

Recessed Drainage System

It is recommended that a drainage system be used on exterior units. This system will be determined by the installer. Weep drainage system is shown in Fig. 3. Install the weep drainage tubes into the aluminum U-channel end caps on both ends. (Only one side is shown in pictures for simplicity.)

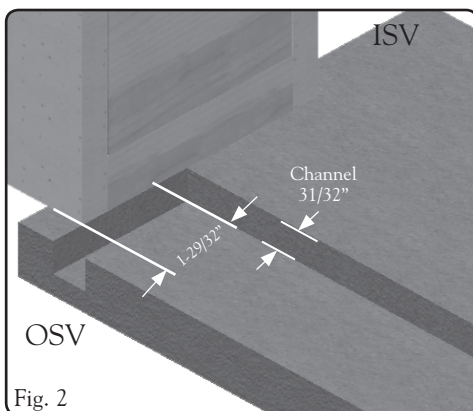


Fig. 2

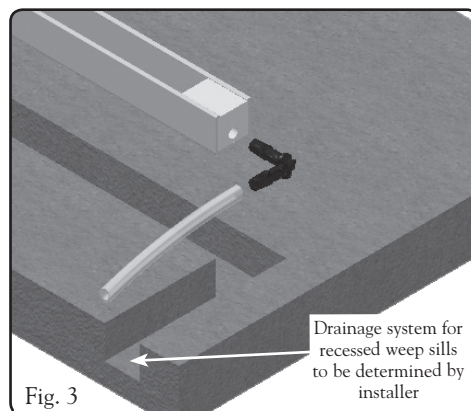


Fig. 3

Secure U-Channel

See Fig. 4 & 5. Place the aluminum U-Channel into the U-Channel trench. Screw aluminum U-Channel into flooring using the pre-drilled hole locations and supplied #9 x 3/4" screws. Place a dab of sealant over each screw head. Then place the U-Channel insert into the Aluminum U-Channel. (*Only one weep side is shown in pictures for simplicity.*)

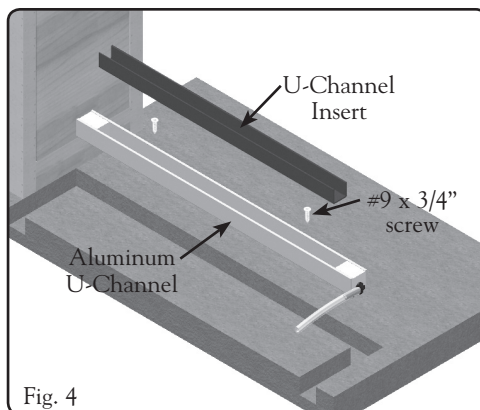


Fig. 4

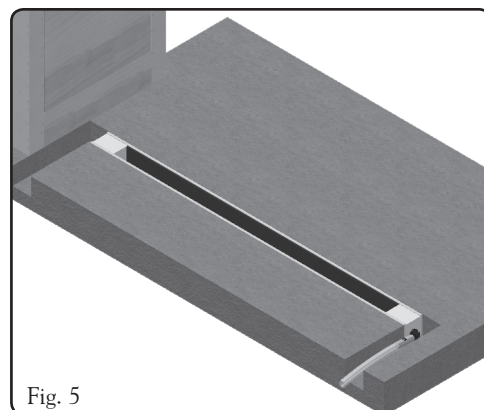


Fig. 5

FRAME ASSEMBLY

See Fig. 6. Apply sealant to the top of each side jamb as shown in Fig. 6. Attach the head jamb to the side jams using the supplied #8 x 3" (78mm) flat head screws in the pre-drilled holes. Secure the corner key into the side jamb using the provided #7 x 5/8" (16mm) self sealing screws.

See Fig. 7. Apply sealant to the sill as shown in Fig. 7. Tilt the sill up flush with the end of the side jams and fasten it in place using the supplied #8 x 3" flat head screws into the pre-drilled holes.

The frame is now assembled. Pump sealant into each corner using the pre-drilled pump holes. Pump sealant into each corner until it squeezes out the verification hole.

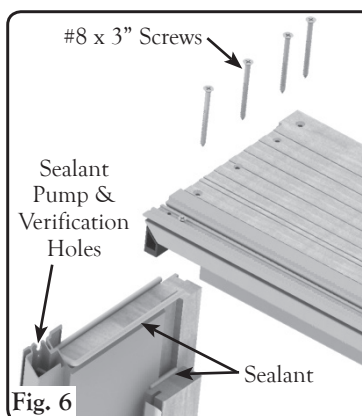


Fig. 6

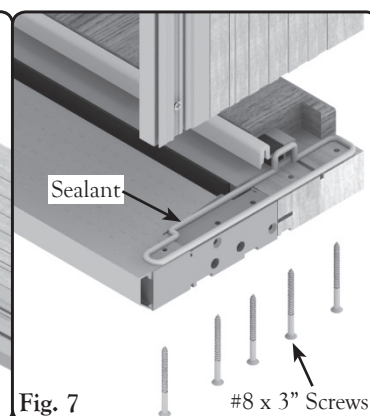


Fig. 7

SELECT INSTALLATION TECHNIQUE

These techniques are general guidelines only, and may not be appropriate for all performance requirements. Kolbe recommends using installation clips for units with exterior trim, and units in high wind pressure locations. Screwing through the frame may be required with some mullion situations.

If using installation clips, fasten the clips to the frame sides now. Use two #8 x 3/4" (19mm) Phillips flat head screws (provided by other) per clip and follow the spacing determined by the Installation Anchor Calculator. For more information, see the instructions provided with your Kolbe installation clips.

SEALANT AND FLASHING

Kolbe recommends following ASTM E 2112 guidelines for sealing and flashing exterior doors. Maintain a gap of at least 1/4" (6mm) between the door frame and the rough opening structure. Create a proper seal between the door and the building exterior. For more details, see our pamphlets Sealant Information and Flashing Information. These publications are available from your Kolbe window & door supplier or visit www.kolbewindows.com to download a copy.

Units with brickmould to be field applied and units without casing have a nailing fin applied. Nailing fins are optional on units with factory applied brickmould. Both are shown. Heritage Series (wood) units do not have nailing fin applied.

See Fig. 8 & 9. Apply two 3/16" (5mm) diameter beads of sealant on the head and sides of the unit on the backside of the nailing fin or brickmould as shown in the pictures to the right.

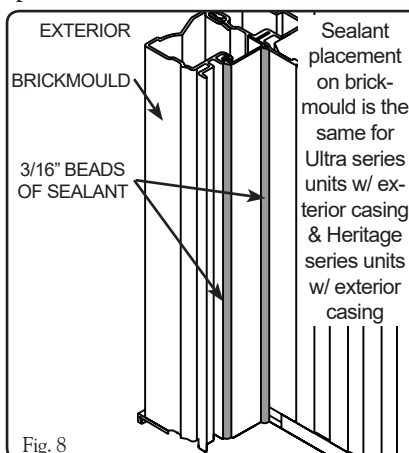


Fig. 8

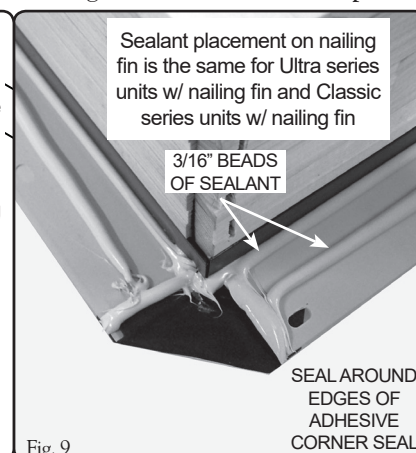


Fig. 9

Apply sealant to rough opening sill

See Fig. 10. Run two 3/8" (10mm) diameter beads of sealant across the entire width of the sub floor and up each side jamb a minimum of 12" (305mm), allowing the sealant to pool in the corners. Run the first bead 1/2" (13mm) in from the exterior face of the wall, and run the second bead 1-1/2" (38mm) in from the first bead.

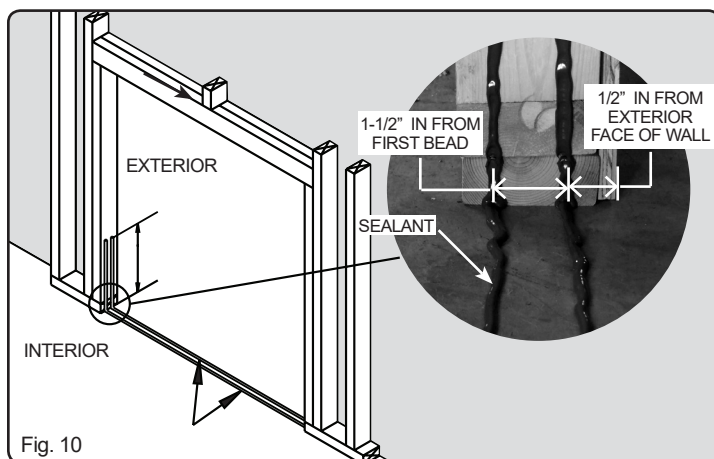


Fig. 10

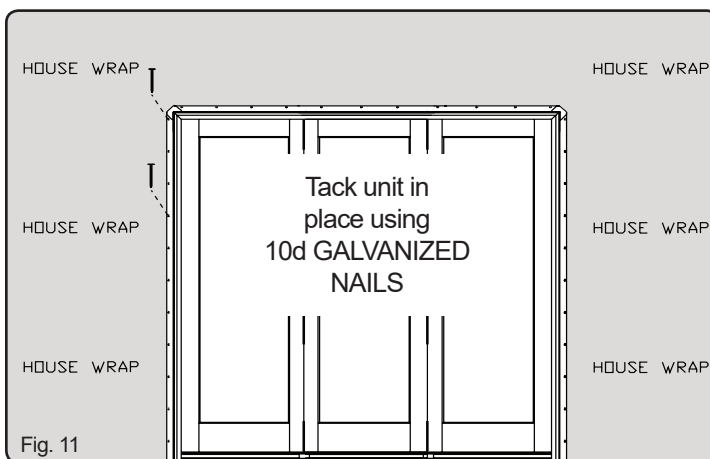


Fig. 11

INSTALL UNIT IN OPENING USING INSTALLATION CLIPS

If using screw through the frame (sides) installation, skip to the install unit in opening by screwing through the frame section now.

Place unit in rough opening

From the exterior, tilt the unit, sill first into the opening. Center the unit and press the brickmould or nailing fin against the sheathing.

Temporary fastening for units with Nailing Fin (units without nailing fin, skip to checking for square section)

See Fig. 11. Tack the unit in place using one 1-1/2" (38mm) or longer galvanized roofing nails (provided by other) in the first pre-punched hole from each corner/end of the nailing fin to tack unit in place. Plumb, level and square the unit in the opening (see checking for square), then use 1-1/2" roofing nails in every third hole (approximately 10-1/2" (267mm) on center) along the sides. Do not drive the nail head in too far, as doing so could compress and warp the nailing fin.

Checking for square and for plumb

See Fig. 12. To check that the unit is square, measure both diagonals from the interior, the measurements must be within 1/16" (2mm) of each other. The height of the frame at the center must be the same as the height at each end. Add shims if necessary to square the unit in the opening. Check for plumb between the head and sill.

Shimming

See Fig. 12. At a minimum shims should be placed along the head and side jambs at 4" (102mm) from the corners/ends and every 12" (305mm) between. One shim should be placed above each installation clip between the frame and rough opening. Shimming ensures correct margins, parallel jambs, a level unit, and proper operation. Do not bow the jambs by over shimming.

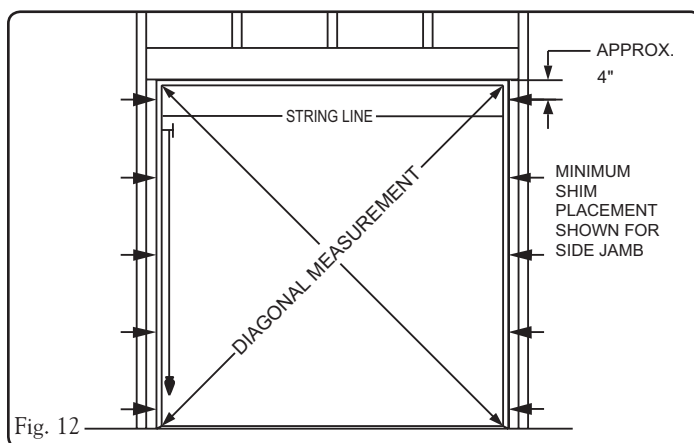


Fig. 12

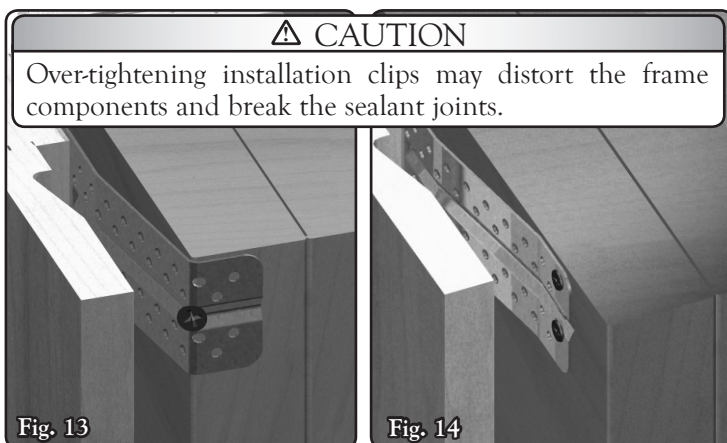


Fig. 13

Fig. 14

Secure side jambs in opening

See Fig. 13 or 14, previous page. Starting with an interior upper corner, hammer bend the clip(s) as shown in Fig. 13 or do a face mount as shown in Fig. 14 around the rough opening frame. Fasten with one #8 x 1-3/4" (44mm) SMS screw (provided by other) or two 8d common nails (provided by other) at a 20° angle through the pre-punched holes at the hammer-bend within 1/8" of buck corner or two #8 1-1/4" (32mm) SMS screw (provided by other) for face mounted clips. Continue around the perimeter, making sure the jambs are straight and the unit is square.

Secure head jamb and track in opening

Run a string line between side jambs, see Fig. 12 on previous page. Remove temporary screws in head track. Using the story board, fasten the head jamb using the supplied 1/4" x 6" screws by starting at one end and working towards the other, verifying the opening using the story board after each screw is secured, see Fig. 16 below. (Shims are needed for every screw hole location on the head jamb.) Check to make sure distance between frame and string line is level after each screw has been placed. Use the supplied story board to verify inside opening dimension. All pre-drilled hole locations in head track require 1/4" x 6" screws.

INSTALL UNIT IN OPENING BY SCREWING THROUGH THE FRAME

Place unit in rough opening

From the exterior, tilt the unit, sill first into the rough opening. Center the unit and press the brickmould or nailing fin against the sheathing.

Temporary fastening for units with Nailing Fin (units without nailing fin, skip to checking for square section)

See Fig. 11, previous page. Tack the unit in place using one 1-1/2" (38mm) or longer galvanized roofing nails (provided by other) in the first pre-punched hole from each corner/end of the nailing fin to tack unit in place. Plumb, level and square unit in opening, then use 1-1/2" roofing nails in every third hole (approximately 10-1/2" (267mm) on center) along the sides. Do not drive the nail head in too far, as doing so could compress and warp the nailing fin.

Checking for square and for plumb

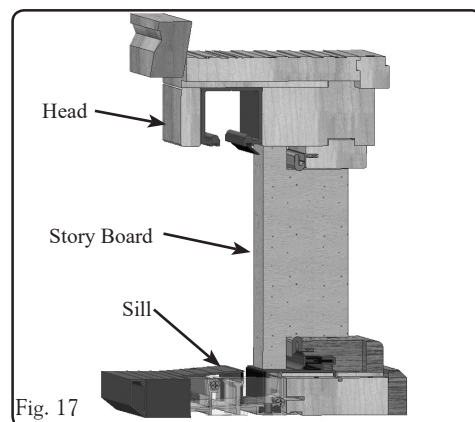
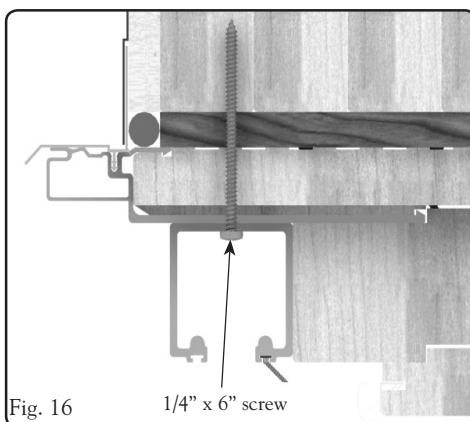
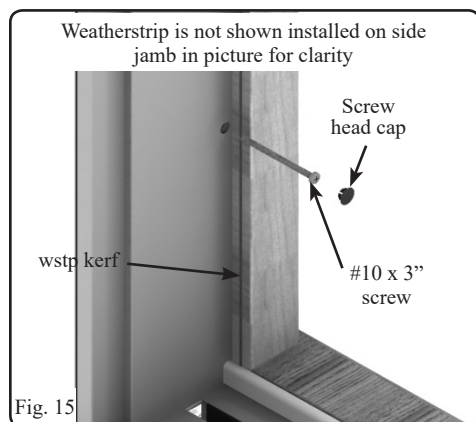
See Fig. 12, previous page. To check that the unit is square, measure both diagonals from the interior, the measurements must be within 1/16" (2mm) of each other. The height of the frame at the center must be the same as the height at each end. Check for plumb between head and sill. Add shims if necessary to square the unit in the opening.

Shimming

See Fig. 12, previous page. At a minimum shims should be placed along the head and side jambs at 4" (102mm) from the corners/ends and every 12" (305mm) between. One shim should be placed behind each marked screw location between the frame and rough opening. Shimming ensures correct margins, parallel jambs, a level unit, and proper operation. Do not bow the jambs by over shimming.

Secure side jambs in opening

See Fig. 15. Lift the side jamb weatherstrip, fasten through the door frame and into the rough opening at each pre-drilled hole location. Use the supplied #10 x 3" (78mm) screws. Cover the exposed screw heads using the provided caps using sealant to secure and seal.



Secure head jamb and track in opening

Run string line between side jambs, See Fig. 12, page 4. Remove temporary screws in head track. Using the story board, fasten the head jamb using the supplied 1/4" x 6" screws by starting at one end and working towards the other, verifying the opening using the story board after each screw is secured, See Fig. 16, previous page. (Shims are needed for every screw hole location on the head jamb.) Check to make sure distance between frame and string line is level after each screw has been placed. Use the supplied story board to verify inside opening dimension. All pre-drilled hole locations in head track require 1/4" x 5" screws.

See Fig. 17, previous page. Now that the head jamb is secure, use the supplied story board to level the head track horizontally. The story board should be snug but not tight. The story board has been calculated to provide the correct clearance for the doors to move.

ADDITIONAL ANCHORING REQUIREMENTS

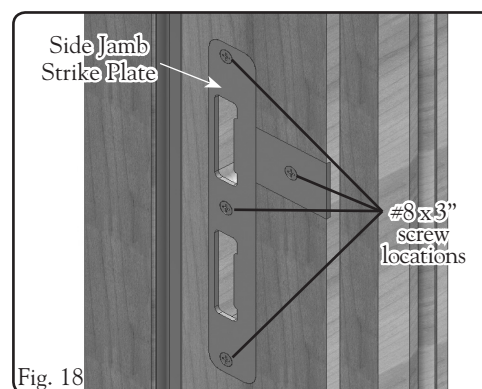
Anchoring at the Pivot Hinges (The following should be performed on units with hinges applied to the door frame.)

Remove the two (2) screws factory installed from the side jamb pivot hinges. Shim behind pivot hinge location and pre-drill holes using a 7/64" (3mm) x 6" (153mm) long drill bit. Replace with the supplied #9 x 3" (78mm) screws.

Anchoring at the Side Jamb Strike Plate

(Only applies to access doors locking into the side jamb)

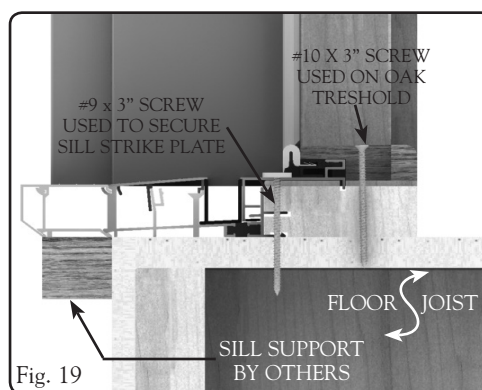
See Fig. 18. Remove the strike plate from the frame. (The strike plate is the metal plate located on the side jamb which accepts the lock tongue, when engaged.) Drill a 9/64" (4mm) lead hole through the jamb and shims, making sure to place it so that it will be concealed after replacing the strike plate. You will need to countersink the lead hole. This will allow the strike plate to be replaced without the head of the screw making contact with the back surface. Install a #10 x 2-1/2" (64mm) phillips flat head screw into the pre-drilled hole. Replace the strike plate and fasten using the provided #8 x 3" (78mm) screws.



SECURING THE SILL

See Fig. 19. To secure the sill to the flooring, you must first remove the screws at each end of the oak threshold and every other screw in between. Next, drill a 3/16" (5mm) clearance hole through the existing hole locations on the oak threshold. The hole should pass through the oak threshold and sill, stopping short of the underlying floor system. A 7/64" (3mm) lead hole should then be drilled through the clearance hole into the underlying floor system (if anchoring into a concrete floor, drill a 3/16" (5mm) lead hole). Masonry screws supplied by others.

Place a dab of sealant into each screw hole prior to installing screws, in order to prevent any penetration of water that may get on the sill. Install a #10 x 3" (78mm) Phillips flat head stainless steel screw into each of the pre-drilled holes.



⚠ CAUTION

Do not over tighten the sill strike plate screws as this may distort the sill members and break the underlying bead of sealant.

Finally, remove the factory applied screws from the sill strike plate(s). A 7/64" (3mm) lead hole should then be drilled through the clearance hole into the underlying floor system. Place a dab of sealant into each screw hole and replace them using the supplied #9 x 3" (78mm) screws.

Securing the bottom anchor

- See Fig. 20 & 21. Remove the clamp screws and bottom slide plate.
- Drill a 5/64" (2mm) lead hole through the existing holes and into the underlying flooring system.
- Pump the drilled holes with sealant and cover the bottom side of the bottom anchor with sealant.
- Using the provided #9 x 3" (78mm) screws, fasten the bottom anchor and spacer to the sill (the black spacer is factory installed into the weep sill when applicable).
- Re-fasten bottom slide plate back into place using the previously removed clamp screws.

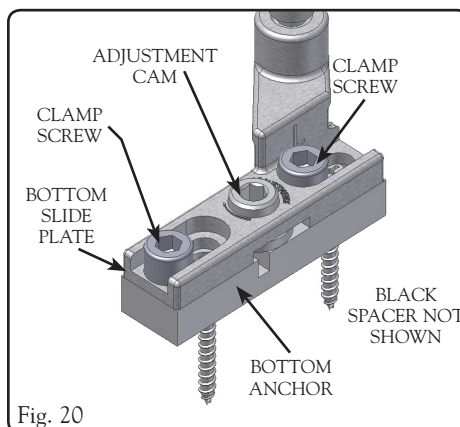


Fig. 20

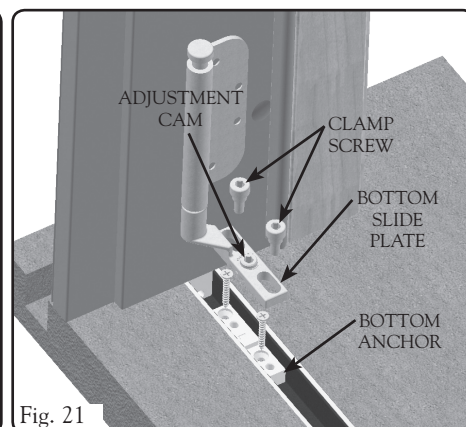


Fig. 21

PANEL INSTALLATION

Review Fig. 22 to familiarize yourself with the hinge system. All panel hangers are installed in the head track. Use the window installation labels stating the panel installation order to properly install the panels.

- See Fig. 23. Use the supplied screws to attach install panel #1 to the pivot set hinges. (Head pivot shown.)
- See Fig. 24. Use a block(s) to keep the panels balanced, level and straight with the finished floor **while installing the panels**.
- See Fig. 25. Attach install panel #2 to install panel #1 using the supplied screws at each hinge location on the exterior folding side.
- Install panel #2 (interior folding side) will be attached to either the intermediate hanger set or the end hanger set dependent on unit configuration, see Fig. 26 (*intermediate hanger set shown*).
- Repeat process above for additional panels and/or other pivot side if required.

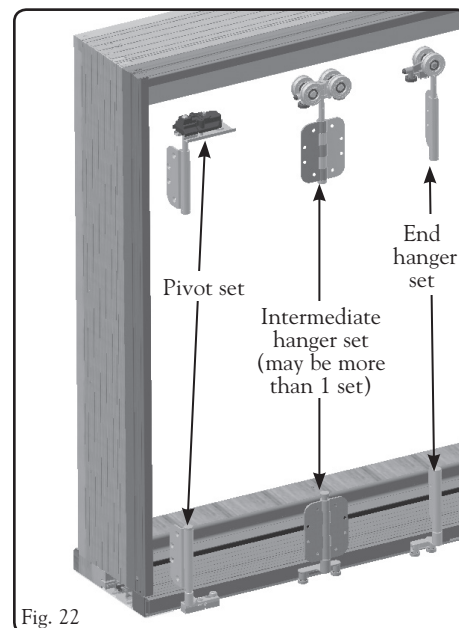


Fig. 22

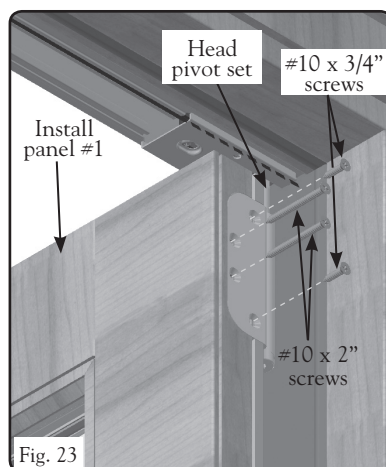


Fig. 23

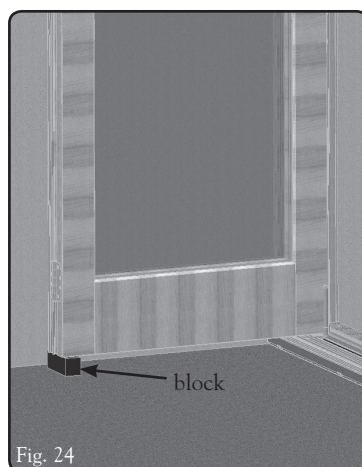


Fig. 24

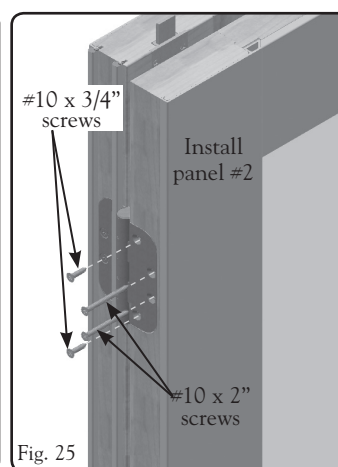


Fig. 25

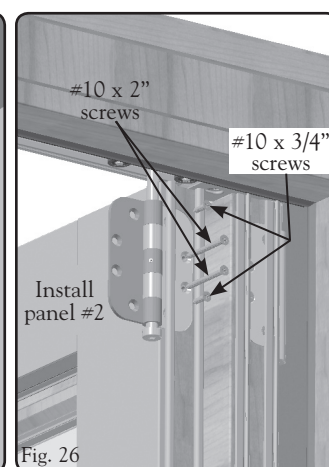


Fig. 26

Position Sill Strikes - recessed sill only

(Important - This step is to be done after the panels have been installed)

Using the approved shop drawing, locate the center of the strike plate location. Find the correct "Gap" to be used. This will be determined by the make-up of the sash thickness and locking system. Mark the "Gap" based off the interior wall channel. Then create the strike plate pocket using the dimensions shown in Fig. 18. The depth of the pocket will be 5/8" deep.

Next you will need to locate the strike plate packet. In this packet will be a hole cover (color black), strike plate and two (2) #9 x 2" screws. Sealant will need to be filled into the strike plate hole about 1/4" of the way up. Insert the hole cover. Drill two (2) 5/32" diameter screw holes, (if anchoring into a concrete floor, drill a 3/16" (5mm) lead hole) then place strike and screw into place. See Fig. 19.

The flush bolt is shown locked into place in Fig. 20.

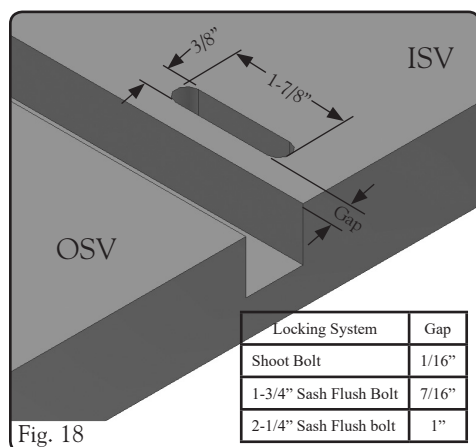


Fig. 18

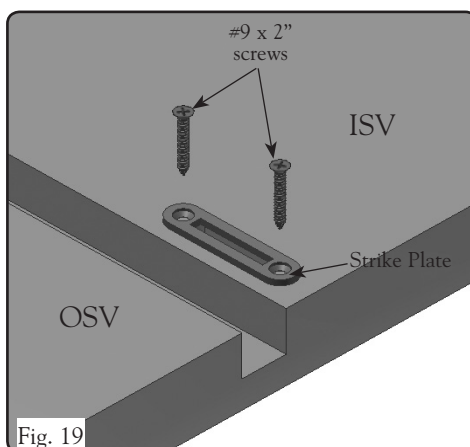


Fig. 19

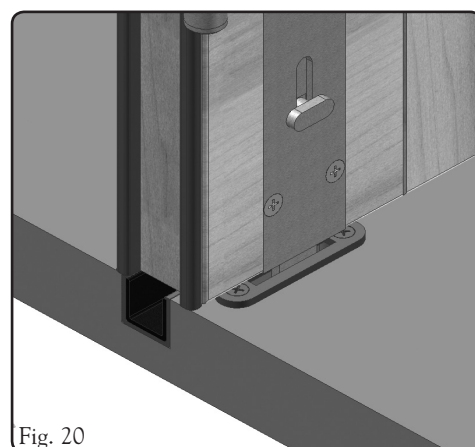


Fig. 20

ADJUSTMENTS

When doing any adjustments be sure the margin is consistent. The available adjustment in the system is the pivot set hinges at the head, sill and side jambs. Adjustment options are shown below in Fig. 26.

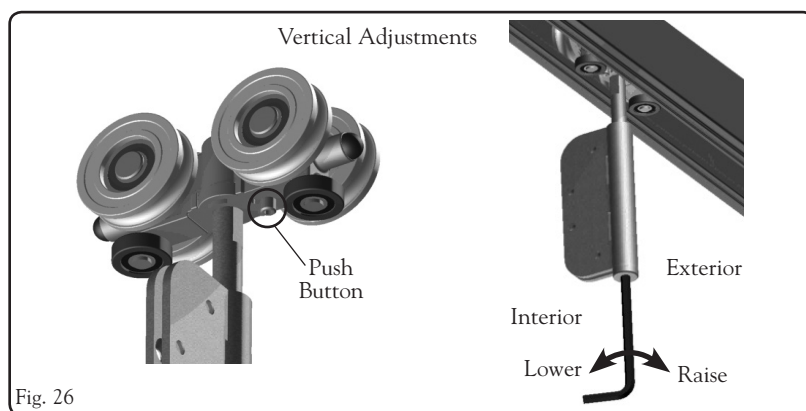


Fig. 26

Vertical Adjustments (Fig. 26)

- All panels must be in the open position.
- Engage the push button on the top pivot/hangers.
- Insert Allen wrench into hinge pin and adjust panel. (Push button must be engaged during this process.)
- Once adjustment is complete, disengage push button.
- Repeat steps above for each hanger set.

Horizontal Adjustments (Fig. 27)

Top pivot

- All panels must be in the closed position.
- Remove the top pivot cover.
- Use an Allen wrench to adjust the horizontal adjustment cam on the top pivot set.

Bottom pivot

- Loosen the clamp screws.
- Insert Allen wrench into bottom adjustment cam to adjust the panel.
- Once panel is properly adjusted, tighten the clamp screws and re-attach the top pivot cover.

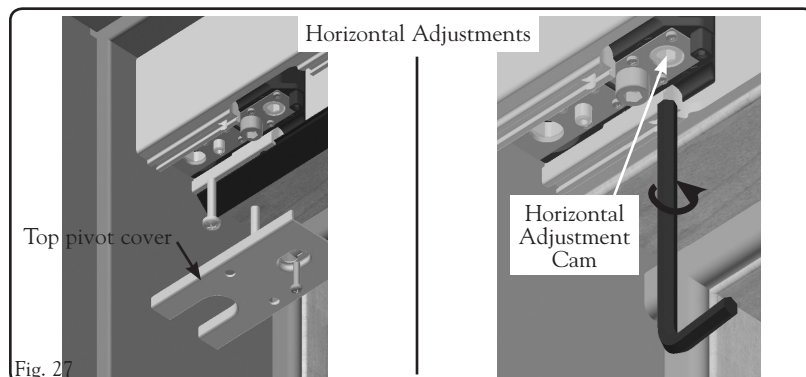
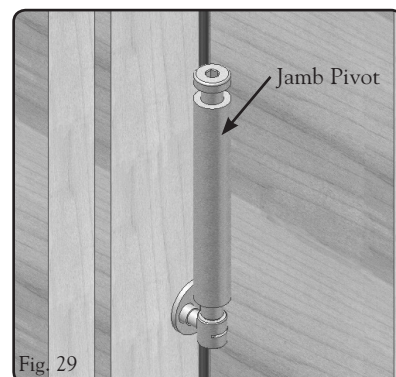
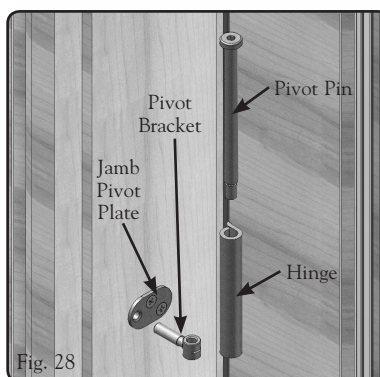


Fig. 27

JAMB PIVOT ADJUSTMENT

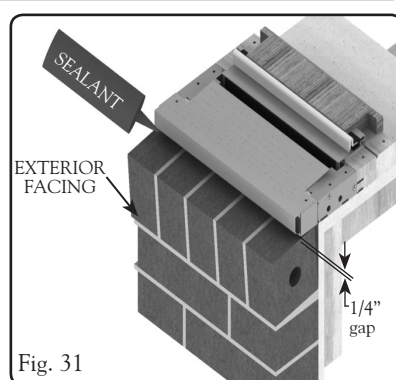
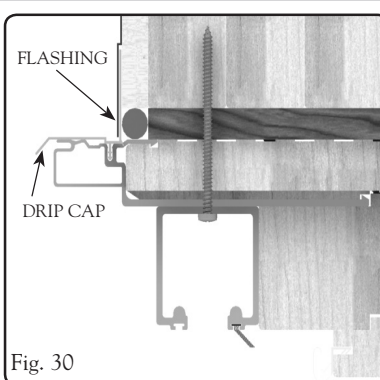
- Locate the jamb pivot package sent with your unit.
- Cover face of stile behind jamb pivot mount to prevent scratching.
- See Fig. 28. Screw the pivot bracket into jamb pivot plate.
- The barrel of the bracket needs to line up vertically with the barrel of the hinge.
- See Fig. 29. Once they are aligned, insert the pivot pin into the hinge. Using an Allen wrench screw the pivot pin into the jamb pivot bracket.



COMPLETING THE EXTERIOR

A drip cap must be installed to direct water away from the system and lessen the chance of water seepage. If a drip cap has not been applied, apply now. Seal the side ends of the drip cap to the system. Seal between the drip cap and the exterior sheathing. When using building paper to cover the exterior sheathing, also seal the paper to the drip cap. See Fig. 30.

Apply a 3/16" (5mm) bead of sealant to the inside corner created by the bottom of the sill and face of the exterior sheathing. Secure a support block up underneath the sill, see Fig. 31.



Review supplemental installation instructions provided with the handle set. Install handles, gaskets, escutcheons and key cylinders as required.

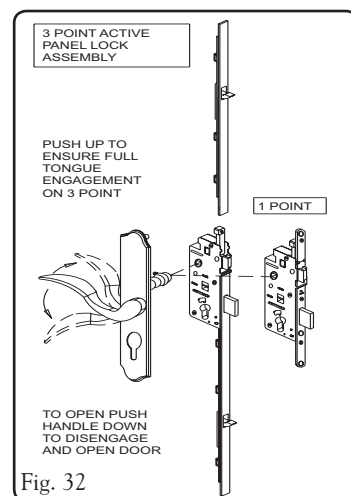
Access style door units consist of an active panel, which is utilized as the primary panel.

IMPORTANT

A 1/4" (6mm) minimum gap between the door perimeter and framing materials should be provided when using brick, stone, marble or concrete as an exterior facing. This will provide for any movement or settling of the structure, which could affect operation of the unit. The gap should be spanned by an appropriate sealant joint. See Fig. 31.

HARDWARE INSTALLATION

Active panels are available with either a one point lock, consisting of a latch bolt and a dead bolt at the handle elevation, or a three-point lock having the same latch and dead bolt at the handle elevation plus two additional latches (tongues). Tongues are located at the head and base of the active door panel stile. Three-point lock systems are manual as standard. To latch the top and bottom tongues, the door must be closed and the handle must be lifted to its full upright position. This will engage the tongues into the strike plates. Only at this point can the dead bolt be utilized. See Fig. 32.



INSULATION & INTERIOR CASING/TRIM

Kolbe recommends installing fiberglass insulation in the void created by the outer perimeter of the door frame and rough opening members. Using a putty knife, loosely fill the entire depth of the gap with insulation. (Foam insulation may be used, but it must be a low expanding type foam. Use of any foam other than low expanding foam will void the warranty.) Apply the interior casing.

⚠ CAUTION

Over-packed insulation can lessen the insulation effectiveness and distort the frame, resulting in poor panel operation. If you are using a foam type insulation, it must be a low expansion type foam and used in conjunction with fiberglass insulation. Follow the manufacturer's instructions for proper application of the foam.

EXTERIOR & INTERIOR FINISHING

Exterior: Fill any voids created by fasteners used in securing the primed unit to the building structure using an exterior wood filler. Sand wood filler flush and scuff remaining exterior primed wood surfaces prior to applying exterior top coat. Primed wood and metal must remain dry and finishing should be completed immediately. See our pamphlet *Finishing Recommendations* for more information.

IMPORTANT

To maintain the K-Kron II finish warranty, any surface penetration of the finish film of the K-Kron II surface must be sealed with a color-matched or clear sealant. See the finish warranty for details.

Interior: Finish bare wood interiors including edges of sash immediately using a top quality stain, sealer and/or polyurethane varnish. On factory primed interiors, apply a quality top coat system. See our pamphlet *Finishing Recommendations* for more information.

IMPORTANT

Avoid getting finishing products on any vinyl components and weatherstripping.

MAINTENANCE TIPS / PROCEDURES

Inspect your Kolbe products periodically/yearly to see if the exterior sealants and/or finishes have any gaps, cracks or signs of damage and deterioration. Any cracks must be caulked immediately with a high quality sealant, to maintain the seal integrity of the paint finish and to prevent infiltration of water and air. See our pamphlet *Maintenance Guide* for more information.

CLEANING

A quarterly cleaning with a mild soap and sweet water (tap water) solution is recommended for the panels and frames (all extrusions on Ultra Series products); then rinse. **(Cleaning on units installed in high salt spray areas require a monthly cleaning and rinse.)** Clean glass with standard glass cleaner, keeping it from running down the panel onto the frame and weatherstrip.

⚠ CAUTION

Do not pressure wash!

HARDWARE

Check all fasteners, making sure all hardware is properly secured. The hardware can be lubricated with a Teflon® or a Teflon®/silicone spray. Lubricate the key hole, if supplied. If/when removing the twin bolt handle, use a manual screw driver. Do not over-tighten any screws.

INSULATING GLASS

Broken or fogged IG units, requiring re-glazing or replacement should be referred to your Kolbe window & door supplier.

NOTE

Kolbe's standard H°K insulating glass has a LoE coating on surface two (2). It does not match clear glass or other LoE products. Do-it-yourself re-glazing/replacing without Kolbe & Kolbe's permission, will void the product's warranty.

RECYCLING

Care must be taken to properly recycle or dispose of old materials. Any recyclable materials should be separated from non-recyclable or hazardous materials. Please consult with local or state authorities regarding proper disposal of non-recyclable or hazardous materials.

Contact your Kolbe window and door supplier or visit us
at www.kolbewindows.com for further information.

**THANK YOU
FOR PURCHASING KOLBE PRODUCTS.**

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to change specifications without notice.*

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KOLBE®
WINDOWS & DOORS

**FOLDING
DOOR
SYSTEM
INSTALLATION
INSTRUCTIONS**

**READ THESE INSTRUCTIONS COMPLETELY BEFORE
ATTEMPTING ANY INSTALLATION**

⚠ CAUTION

Lead-based paint may be present in older homes, and the removal of windows & doors may cause this paint to be disturbed. In order to minimize exposure to lead-based paint dust, please consult www.epa.gov/lead for more information.

www.kolbewindows.com