KOLBE®

WINDOWS & DOORS

Ultra Series

TerraSpan® Lift & Slide Door

with Flush Sill

INSTALLATION INSTRUCTIONS

READ AND COMPLETELY UNDERSTAND THESE INSTRUCTIONS BEFORE STARTING 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

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TERRASPAN® LIFT & SLIDE DOOR INSTALLATION INSTRUCTIONS
for units with a Flush Sill

NOTICE

Failure to install and maintain our product according to these instructions will result in voiding any warranty, whether written or implied. The installer holds the responsibility to consult with the contractor, structural engineer, architect, or consumer for ensuring proper installation in compliance with local codes and/or ordinances.

⚠CAUTION

Certain codes mandate the utilization of pressure-treated lumber for frame rough openings. When fastening or anchoring directly into pressure-treated lumber, corrosion-resistant materials like stainless steel or hot-dip galvanized steel are required for fasteners and anchors.

⚠WARNING

Proper eye and hearing protection must always be worn when installing, removing, or making adjustments to Kolbe window and door products.

TOOLS & SUPPLIES NEEDED

- Standard framing or finish carpentry tools are required.
- Laser level (and a water level – long and short)
- Concrete drill
- Flat head screw driver
- #2 Phillips head screwdriver (power recommended)
- #2 Square drive head screw driver (power recommended)
- 6mm Allen wrench.
- 7/32” drill bit (for flush mount sill on wood floor)
- Super Glue
- Spray lubricant (silicone or graphite based)
- Sealant
- Plumb bob (several to place along the length of the head track)
- Several ladders to install head
- Glass Suction Cups (for moving panels, 2-4 recommended)
- Clean Cloths
- Isopropyl Alcohol
- Mineral Oil
- UV Protectant Spray (e.g., Armor-all)

NOTE

When installing the flush sill onto concrete, it's recommended to use 1/4" tap con screws (not provided) instead of #14 wood screws. Ensure to use the appropriate size drill bit for pre-drilling holes into the floor.

Supplied by Kolbe:

- Please consult the packing list located in the frame box for a detailed inventory of supplied screws.
- Tin Shims

SECTION 1: VERIFY DRAWINGS TO ROUGH OPENING / PRELIMINARY PREPARATION

The drawings enclosed within the frame box depict your TerraSpan unit in its original manufactured configuration.

1. *Unpacking:* Remove and recycle or properly dispose of all shipping and packaging materials. These materials may include the protective shipping film and covers on the exterior of the frame, cardboard wrapping, skid plates, factory bracing, or factory applied ridged or strap handles attached to the frame.
2. *Hardware Check:* Verify that all necessary hardware, including screws, brackets, and handles, is present.
3. *Assessment:* Ensure the unit is undamaged. Take note of its size dimensions for reference.
4. *Positioning:* Place the door on a clean, flat work surface with the exterior side facing up.
5. *Rough Opening Inspection:*

Before installation, inspect the rough opening to ensure it meets the proper size requirements and is plumb, square, and level for a precise fit. Verify that your rough opening matches the provided drawings before beginning the installation. Remember that the jamb jack screws included with the unit can adjust up to a maximum spacing of 5/8”.

SECTION 2: LIFT & SLIDE COMPONENTS

Component Overview

When your Lift & Slide system is delivered, it will be packaged with the panels in one or more crates, and the head, sill, side jambs, and all other components will be in separate crate(s).

⚠CAUTION

Due to the size and weight of the shipping crates, specialized handling equipment might be required.

Below are illustrations of your unit's components. The quantity of components may vary depending on your specific configuration.

Flush Sill

The flush sill comes pre-assembled as a single component. An illustration of the flush sill system suitable for a 2-panel setup is displayed in **(Fig. 1)**.

Head Jamb

The head jamb arrives pre-assembled as a single unit.
For a 2-panel setup, an illustration of the head jamb is provided in **(Fig. 2)**.

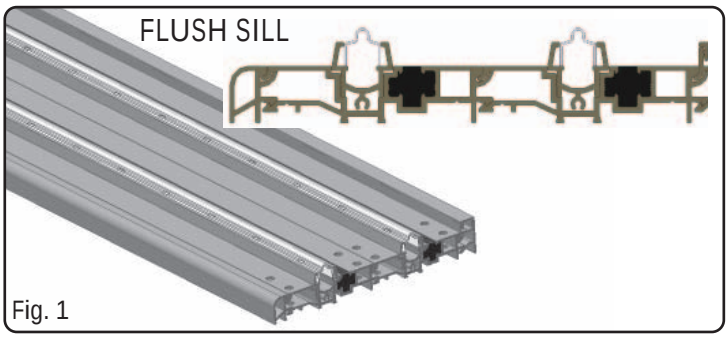


Fig. 1

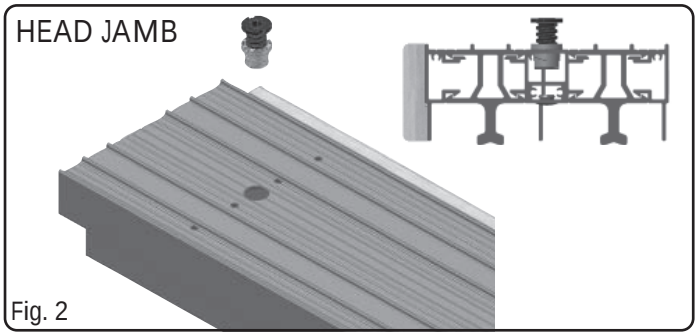


Fig. 2

Side Jamb

The side jamb is pre-assembled as a single unit.
For a 2-panel setup, you'll find an illustration of the head jamb in **(Fig. 3)**.

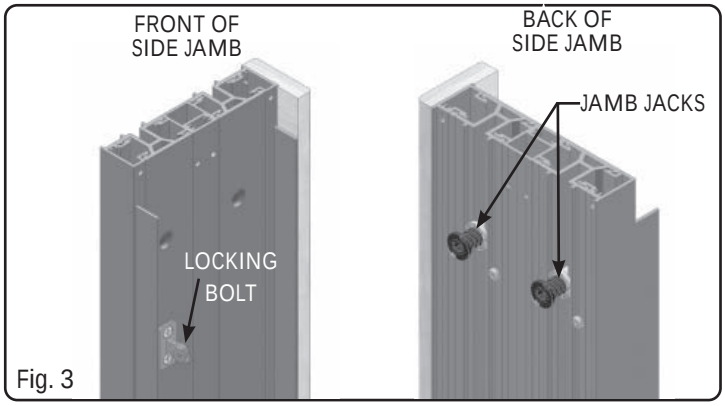


Fig. 3

NOTE

The pocketing side of a unit does not require a side jamb.

Exterior Pocket Interlock

For TerraSpan® flush sill pocketing units, the exterior pocket interlock on the pocketing jamb is intentionally cut long for field trimming and arrives pre-assembled as a single component with weatherstrip included.
An example of the exterior pocket interlock suitable for a pocketing system is depicted in **(Fig.4) & (Fig. 4A next Page)**.

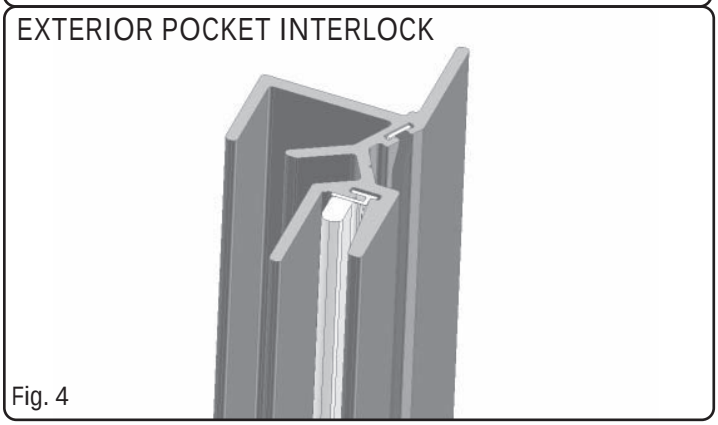


Fig. 4

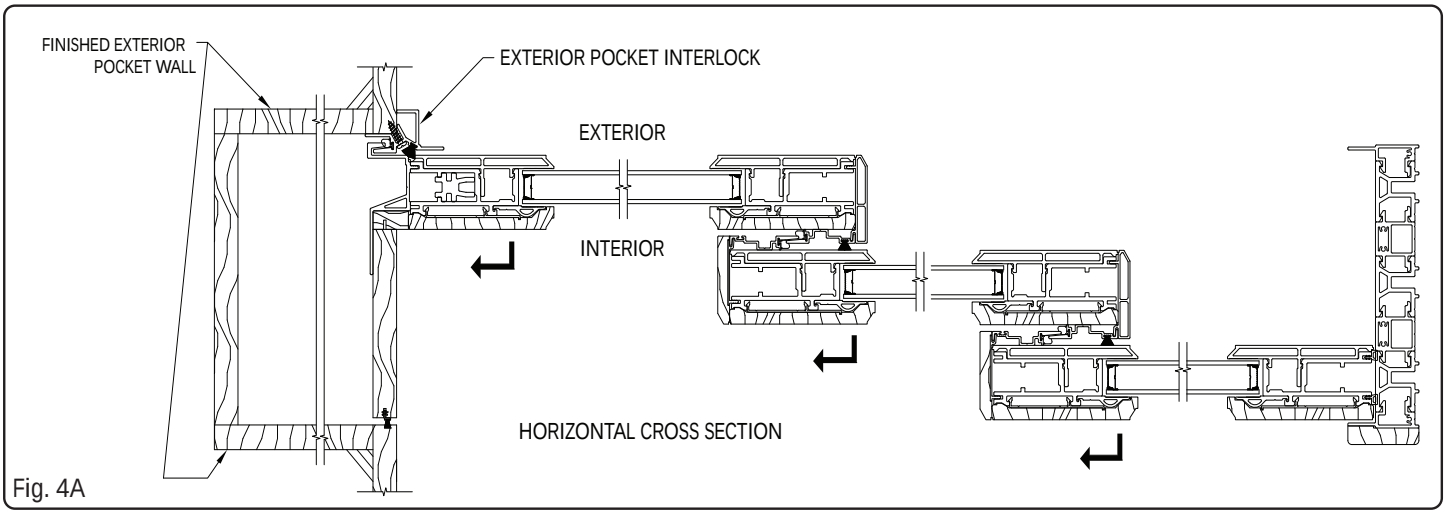


Fig. 4A

Panel
The panel(s) arrive pre-assembled as a single component with glass and hardware installed, except for the handle set. Each panel is individually crated and equipped with a door panel label detailing the order of installation.
An example of the panels to be used is illustrated in **(Fig. 5, 5A, 5B & 5C)**.

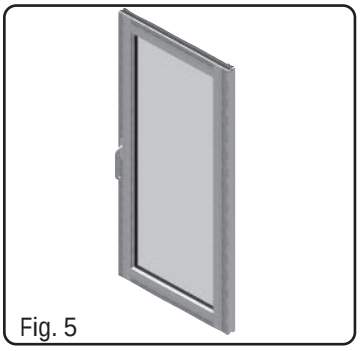


Fig. 5

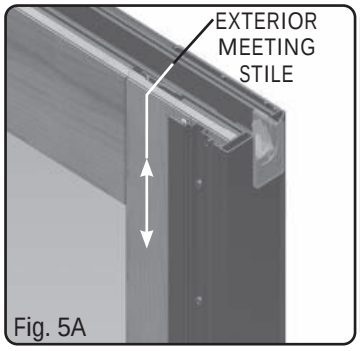


Fig. 5A

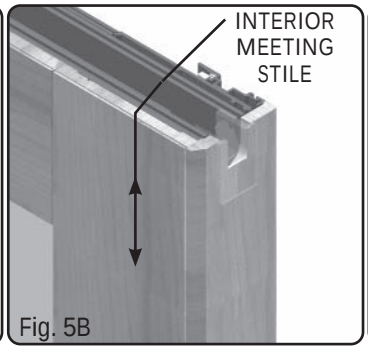


Fig. 5B

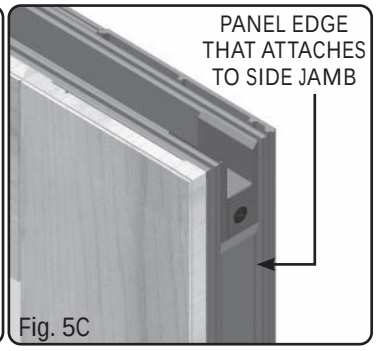


Fig. 5C

SECTION 3: INSTALLATION OF FLUSH SILL UNITS

Before You Begin The positioning of the finished floor determines the placement of the sill, serving as the reference point for all other measurements regarding the door system. Arrange all components near the opening accordingly.

1. *Position the Sill for Non Pocketing Units with two Jambs and No Nail Fin*
This unit configuration has two jambs and no nail fins, you have the flexibility to position the sill within the wall's depth according to your preference. Confirm the jambs final positions within the opening, inside to outside, to ensure the spacing is the same on both ends of the unit.

2. *Position the Sill for Pocketing Units*
The gap between the edge of the exterior sill nosing and the stud wall of the exterior pocket wall should be **5/8"**. This calculation is based on the use of **3/4"** plywood for sheathing the interior of the exterior pocket wall, which is necessary for ensuring the correct spacing of the pocket interlock, **(Fig. 6)**. The inside of the exterior finished wall to the center of the most exterior sill track is to be **1 5/8"**.

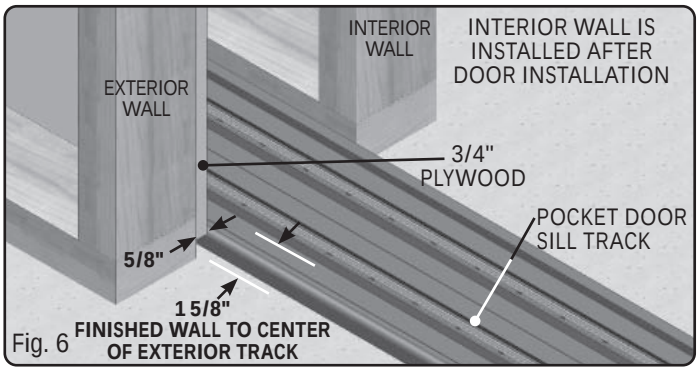


Fig. 6

3. *For Pocketing and Non-Pocketing Units*

Once you've positioned the flush sill correctly, mark its placement on the floor along each edge lengthwise and at the center, as illustrated in **(Fig. 7)**. These markings will act as a reference for applying sealant to seal the sill to the floor and for positioning the assembled frame within the opening at a later stage.

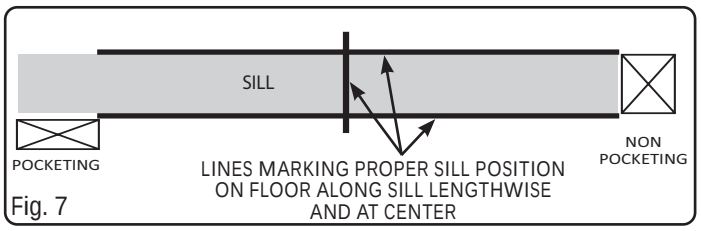


Fig. 7

4. *Drainage Tube Route and 90° Elbow*
   - Determine the route for the drainage tubes.
   - Decide whether the supplied 90° elbow piece will be used.
   - Note: the application of drainage tubes & the 90° elbow will occur later. Refer to **(Fig. 10)** for visual guidance.

5. *Shimming the Sill*
   - To achieve a level condition, shim the sill.
   - Place the supplied tin shims at each pre-drilled hole location on the sill & every 8 inches along the length of the sill.

6. *Marking Floor Screw Locations*
   - Use the pre-drilled holes in the sill as reference points.
   - Mark the floor screw locations for pre-drilling.

7. *Pre-Drilling Holes*
   - Carefully remove the sill, leaving the tin shims in place.
   - Pre-drill holes for the attachment screws using an appropriate size drill bit based on the flooring type.
   - If unsure about the drill bit size, consult the "TOOLS & SUPPLIES NEEDED" section on **Page 1**.

SECTION 4: SIDE JAMB(S), HEAD TRACK & SILL ASSEMBLY; FRAME INSTALL, LEVEL & ALIGNMENT

NOTE

The pocketing side of a unit does not get a side jamb.

1. *Side Jamb Attachment*
   - If your configuration includes side jambs, attach jambs to the head jamb using #8 x 2" screws (supplied) as shown in **(Fig. 8)**.
   - For *Impact units*, ensure that panel lock guides temporarily secured on the head track remain in place during frame assembly.
   - *Sealant application* will be done later during the SECTION 6: FINE TUNE THE DOOR SYSTEM on **Page 8**.

2. *Sealing the Side Jambs*
   - Apply sealant to the entire bottom of the side jambs.
   - Tilt the sill up flush with the end of the side jambs.
   - Fasten the sill onto the side jambs using the #8 x 2" screws (supplied). Refer to **(Fig. 9)**.

3. *Drainage Tube Application (for units with a weep sill)*

Attach drainage tube(s) to each end of the sill:
   - Apply super glue to the exterior of the end cap adapter.
   - Slide the drainage tube onto the end cap adapter, **(Fig. 10)**.

4. *Frame Set-Up is Complete*

Congratulations! You now have your frame set-up.

5. *Installing the Completed Set-Up Frame*
   - Apply a heavy bead of sealant along your marked line on the floor (as described in **Fig. 7**).
   - Set the frame on the sill and tilt the assembly up into the framed opening.
   - Temporarily support the head jamb while allowing movement for positioning.
   - Position the sill correctly, avoiding damage to the drainage tube assemblies.
   - Verify that the sill is level.
   - Apply sealant to the sill screw holes and fasten the sill to the floor using the #14 x 3" screws (supplied).

TIP

For the ease of frame assembly, pre-thread screws into appropriate screw bosses.

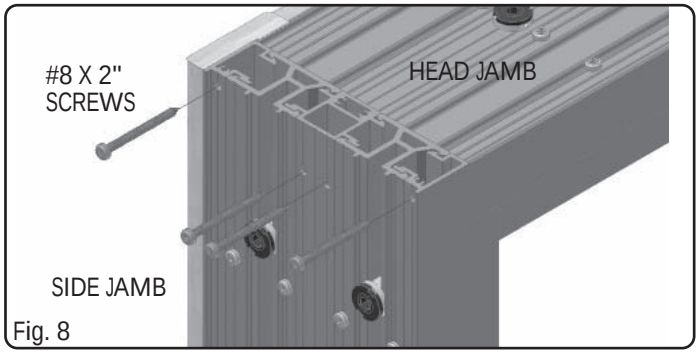


Fig. 8

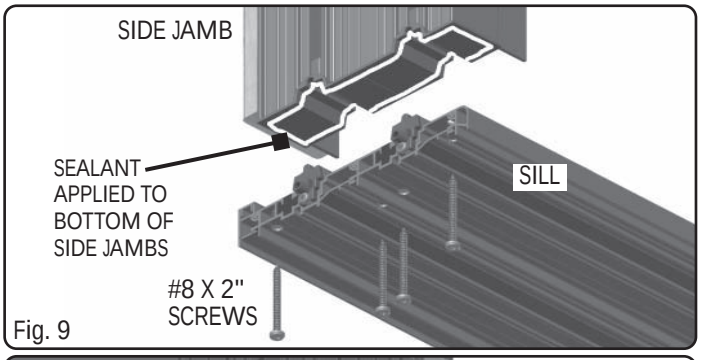


Fig. 9

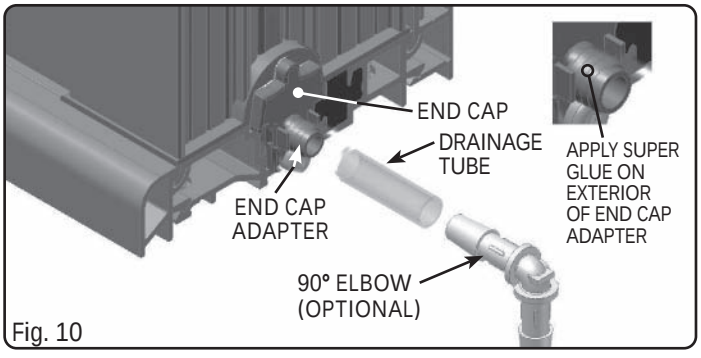


Fig. 10

6. *Leveling and Plumb Adjustment*
Using a level and plumb bob:
- Ensure the side jambs are plumb.
- Confirm that the head jamb is square to the sill.
- The pre-installed jamb jacks aid in shimming out the jamb to the correct location.
- Start at the bottom, making the side jamb square to the sill.
- Adjust the jamb jacks to level and tighten the side jamb to the wall, using a 6mm Allen wrench.
- Predrill all fastener holes and apply fasteners.
- Repeat the process for the other side jamb, **(Fig. 11)**.

7. *Leveling the Head Track*
- With the side jambs now level, utilize the supplied story board.
- Level the head track horizontally along its entire length.

Adjust the jamb jacks and secure with #10 x 3" screws (supplied) as you progress from one end to the other.

8. *Maintaining Alignment* **(Fig. 12)**
- Use a plumb bob and the story board to ensure head alignment with the sill.
- The story board should be snug but not overly tight.
- It has been precisely calculated to provide the correct clearance for door movement.
- Additionally, it ensures that when the doors are in the locked position, the top gaskets seal against the top guide.

9. *Impact Units*
If you have an impact unit, proceed to **Page 12** for instructions on additional fastening of the head track and replacing the *shoot bolt keeper screws.*

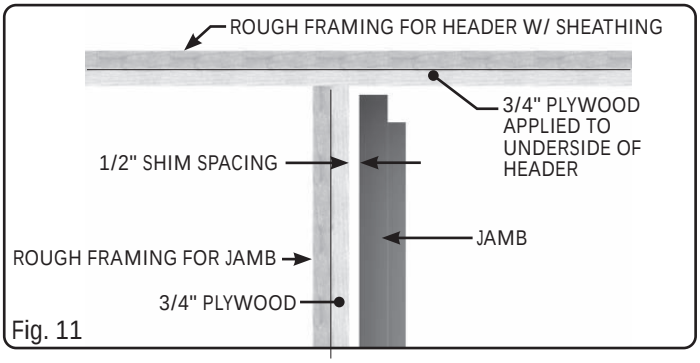


Fig. 11

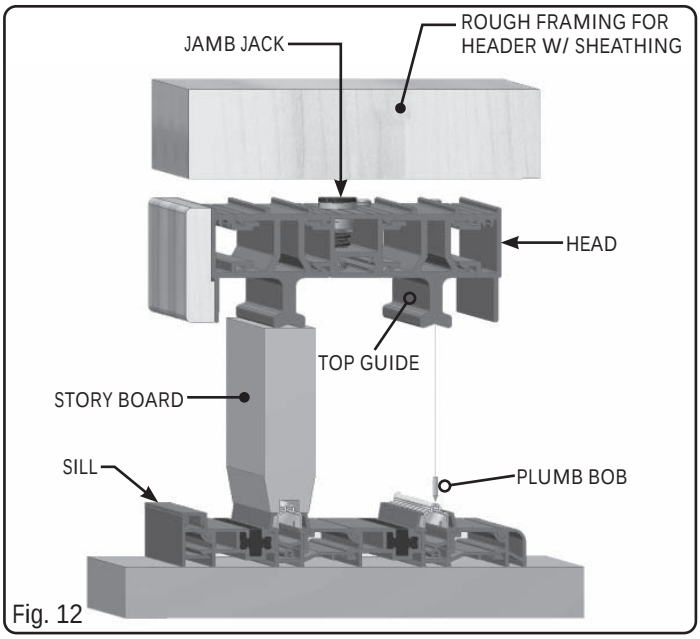


Fig. 12

SECTION 5: INSTALLATION OF PANELS

1. *Door Placement* Refer to the shop drawing and door labels to determine which door goes on which track. The doors follow the same setup as any conventional sliding door system: the fixed or secondary door is placed on the exterior side (first), and the primary door is positioned on the interior side (last).

2. *Wheel Position* Ensure that the wheels are in the retracted position (wheels should be up). To operate the gears, use the provided construction handle.

3. *Panel Installation:*
- Tilt the top of the panel under the correct top guide.
- Lift the panel up.
- Swing the bottom of the panel over the sill track.
- Perform these steps from the interior side of the unit.
- Each door should straddle the next panel in the proper sequence.

3. *Fixed Panel Identification*
- Fixed panels do not have wheels; instead, they feature a PVC block in the standard wheel location, **(Fig. 13)**.
- These panels should be lifted off the weatherstrip.
- Slide the fixed panel into place against the locking jamb, just as you would if it had wheels.

PANEL INSTALLATION TIP

If you lubricate the panel head gasket or frame head guide with a silicone/graphite lubricant, the panels will be easier to install.

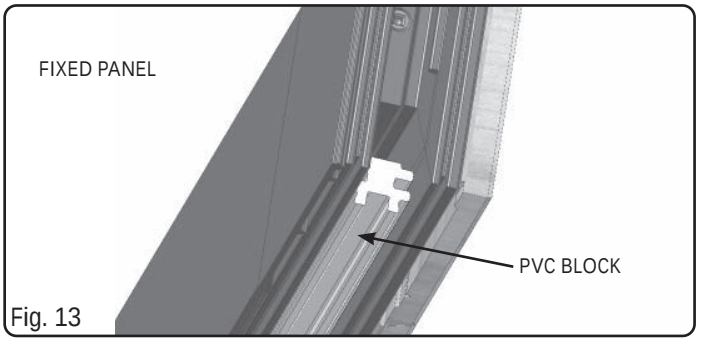


Fig. 13

IMPORTANT

If the panel does not lift, it may not be properly on the track. Re-adjust the panel to ensure it is correctly positioned on the track. Failing to do so could result in damage to the weatherstrip.

4. *Design Considerations*
   - The fixed panel is intentionally designed to have a reveal against the side jamb and finished floor during installation.

Remember these details when working with fixed panels.
Continuing with the panel installation process, follow these steps to test the panel operation:

1. *Slide Operating Panels*

Slide the operating panels open and closed to ensure proper movement.

2. *Test with Construction Handle*
   - Insert construction handle into the designated hole.
   - Rotate the handle to raise the panel.
   - Slide the panel to verify smooth movement.
   - Adjust up or down as needed for smooth operation.

3. *Adjust Roller Height*
   - Refer to **(Fig. 14)** for guidance.

4. Lower the Panel:
   - Rotate the handle in reverse to lower the panel.

These steps will help ensure that your panels operate smoothly and securely.

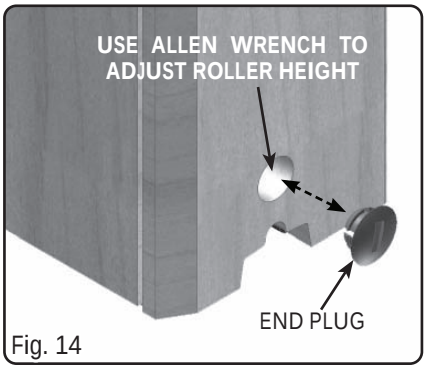


Fig. 14

- Remove the end plug from the bottom of the end panel.
- Use a 6mm Allen wrench to adjust rollers:
  - Turn the Allen wrench clockwise to raise the panel.
  - Turn counter-clockwise to lower the panel.
  (Note: Initially, panels are adjusted all the way down when they arrive from Kolbe.
- Re-insert the end plug into the end of the panel.

Interior Pocket Filler & Interlock Assembly Installation for Pocketing Systems:

This component comes pre-assembled as a unit from the factory, **(Fig. 14C)**.
Screws are supplied and the assembly has pre-drilled holes for ease of installation.
- If installing a pocketing unit, the next step is:
  - After panel installation, install the interior pocket filler & interlock assembly.

Steps for installation:
- With the interior wall unfinished and the end of the panel accessible:
  - Apply a bead of sealant in the panel core weatherstrip kerf, starting at the bottom of the panel and going up 4", **(Fig. 14B)**.
  - Insert the pocket filler & interlock assembly, **(Fig. 14A & 14C)** into position on the panel edge within the pocket.
  - Ensure that the pocket filler & interlock assembly is flush with the bottom of the panel, **(Fig. 14A)**.
  - Attach the assembly using #8 x 3" screws (supplied) into the pre-drilled holes **(Fig. 14D)**.

Repeat the process for the other side if your unit has pockets on both sides.

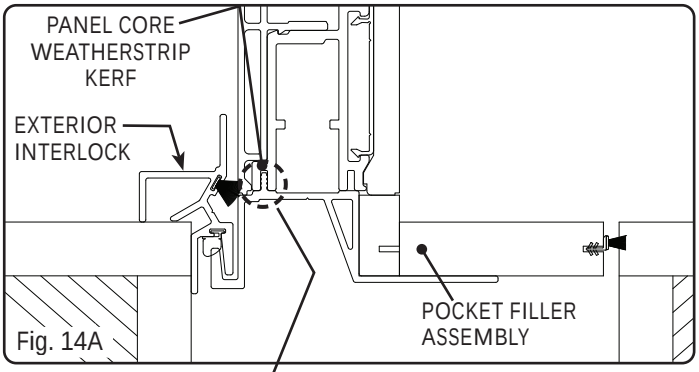


Fig. 14A

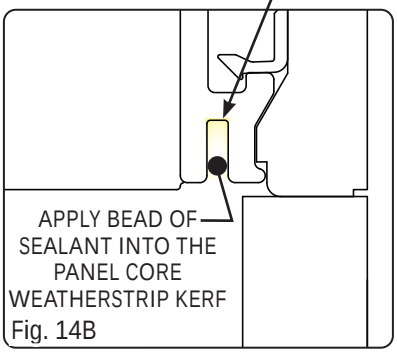


Fig. 14B

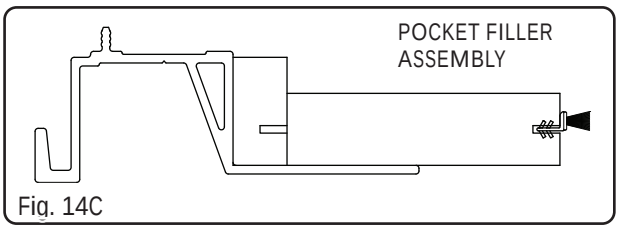


Fig. 14C

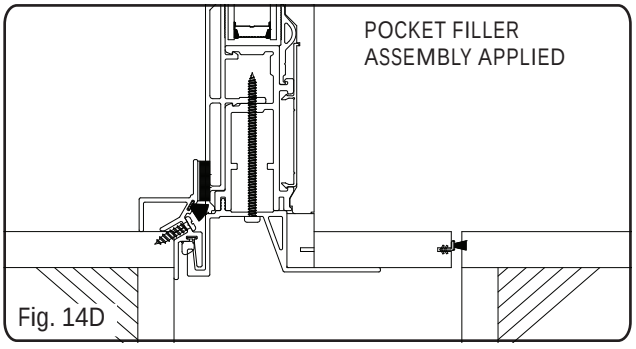


Fig. 14D

Installation of Exterior Pocket Interlock for Pocketing Systems

The pocket interlock creates a seal between the building and the panels. This step insures that the system is weather tight after installation.

- Slide the door panels into the pocket.

1. *Sill Pad Placement:*
   - Adhere the exterior pocket interlock sill pad to the sill. Position it 13/16" out from the wall edge, **(Fig. 15)**.
2. *Cutting and Fitting:*
   - Measure and cut the exterior pocket interlock to fit. Remember that all cutting should be done on the bottom end, which requires a straight cut. The top end is notched to fit the head jamb.
3. *Initial Attachment:*
   - Place the exterior pocket interlock on the exterior wall, directly on top of the sill.
   - Use the supplied screws to attach it through the pre-drilled holes at the top and bottom. However, attach the screws only during this step.
   - Verify that the interlock is level.
4. *Door Adjustment:*
   - Pull the door(s) out from the pocket, maintaining a slow and controlled movement.
   - Important: Ensure all doors are installed and fully closed during this step.
   - Check if the pocket interlock engages with the pocket door. If there's any clanking or if the interlock doesn't engage properly, it needs to be shimmed and leveled to the correct position, **(Fig. 16)**.
5. *Fine-Tuning:*
   - Adjust the exterior interlock as needed. Repeat the process until the interlock engages smoothly without any metal rubbing.
6. *Final Securement:*
   - Secure the interlock in place by adding the remaining screws.
   - Verify that the interlock remains level.
7. *Operational Check:*
   - Operate the doors once more to ensure the proper location of the interlock.
8. *Sealing:*
   - Seal the interlock, applying a continuous 3/16" bead of silicone sealant, **(Fig. 16)**.
   - Additionally, apply sealant to close the gap between the pocket interlock and the sill trough wall, **(Fig. 17)**.

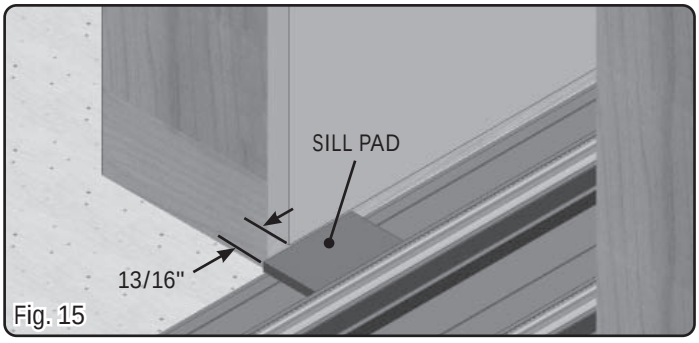


Fig. 15

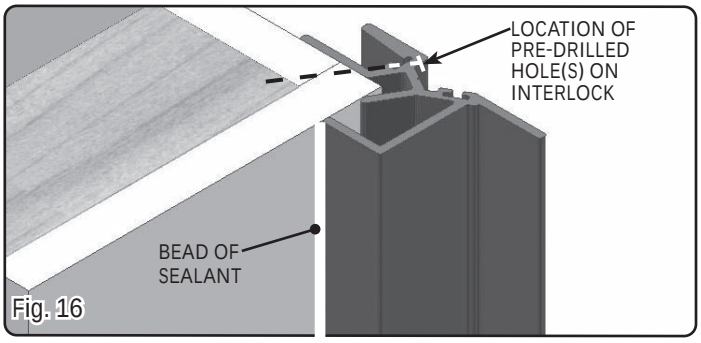


Fig. 16

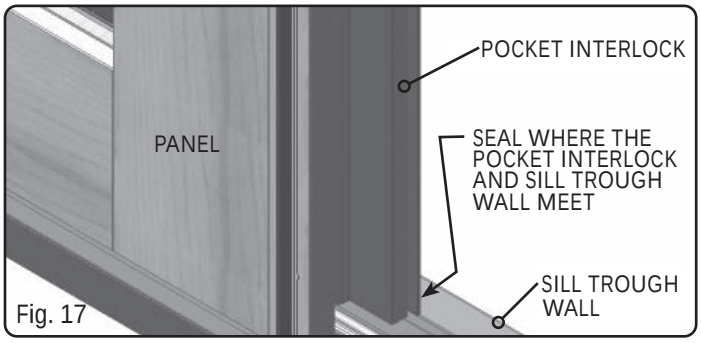


Fig. 17

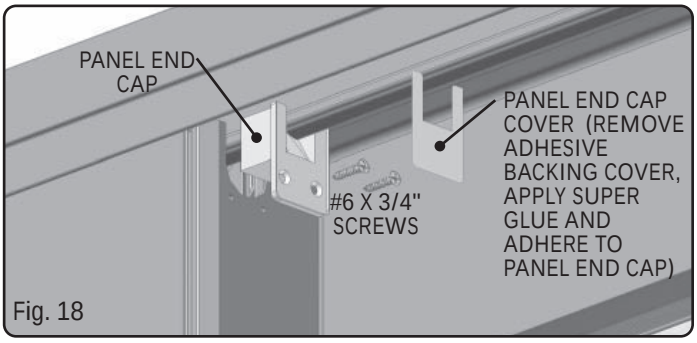


Fig. 18

Install Panel End Caps

Note for Impact Units: Prior to applying the panel end cap covers, Please consult **Page 12**, "**FOR IMPACT PERFORMANCE UNITS ONLY**", section labeled *Secure panel lock guides and apply panel end cap covers*.

1. *Install the Panel End Caps:*
   - Clean the area where the end caps will be placed, using isopropyl alcohol and a clean rag.
   - Use the provided #6 x 3/4" screws to affix the end caps securely in position.
2. *Apply the Panel End Cap Covers:*
   - Once the end caps are installed, apply the panel end cap covers over them, **(Fig. 18, Previous page)**.

SECTION 6: FINE TUNE THE DOOR SYSTEM

1. *Adjusting End Doors*
   - Ensure that the end doors hit the jamb straight and parallel.
   - Adjust the jambs and track until they align properly.
   - The doors should operate freely and smoothly.
   - You'll hear a slight sound as the brushes seal against each other, but there should be no metal-to-metal sounds.
2. *Locking Bolt Screw Replacement*
   Replace the locking bolt screws in your side jamb:
   - Remove the factory-installed screws.
   - Place a shim behind the jamb.
   - Pre-drill holes using a 1/8" bit.
   - Install the supplied #10 x 3" screws, **(Fig. 19)**.

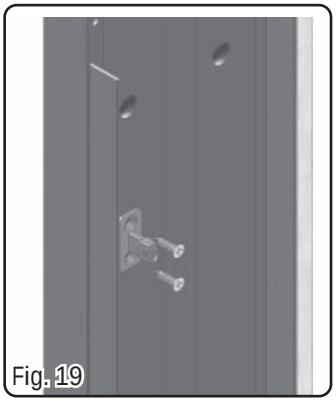


Fig. 19

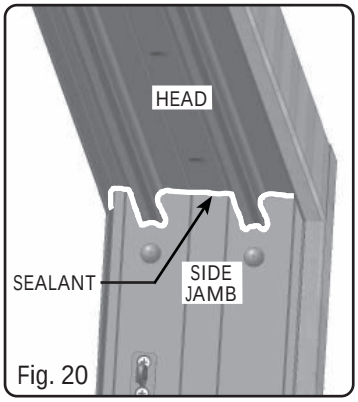
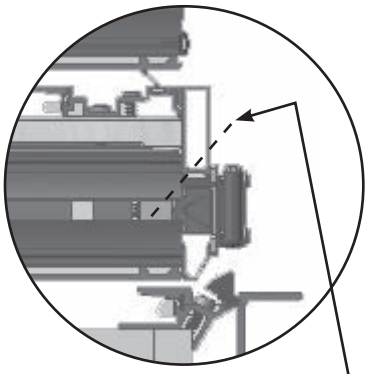


Fig. 20

3. *Weep System Check*
   - If your system has a weep system, verify it is properly set to drain.
   - Refer to the *Building Opening Preparation Guide* for details on drainage tube routing.
4. *Sealing the Valleys*
   - Run a bead of sealant in the valley created by the head jamb and side jamb, **(Fig. 20)**.
   - Wipe off any excess sealant.
5. *Fixed Handles Installation*
   - If you have fixed handles, install them now.
6. *Jamb Jack Covers*
   Install jamb jack covers:
   - Apply sealant around the perimeter of the jamb jack holes.
   - Insert the covers.
7. *Pocketing Units Only*
   - For pocketing units, apply the head track pocket pile pad as shown in **(Fig. 21)**.
8. *Panel Pocket Bumper*
   Install the panel pocket bumper inside the pocket studding:
   - This allows access to the screws on the exterior pocket interlock.
   - Shim behind the panel pocket bumper if necessary, **(Fig. 22)**.



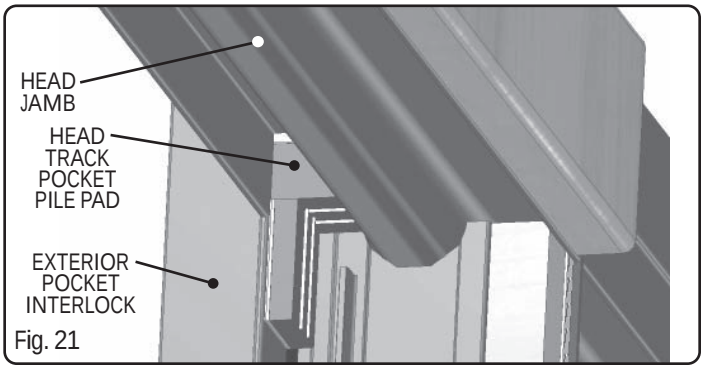


Fig. 21

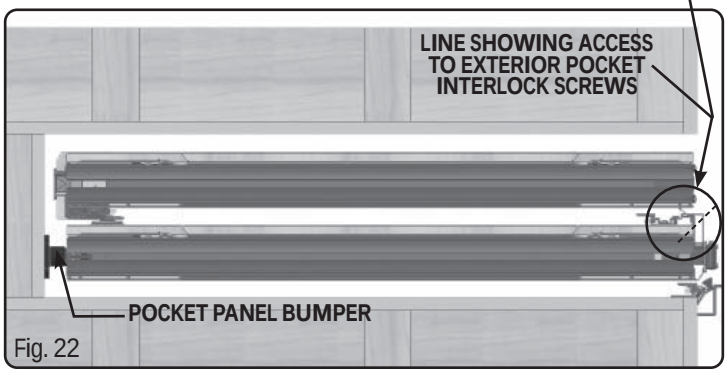


Fig. 22

DETAIL LOOKING DOWN AT THE TOP OF THE PANELS

SECTION 7: FINALIZING INSTALLATION PROCEDURES

1. *Finish Work and Drainage*
   - Your system is securely installed in the opening. Now, focus on completing the finish work to finalize the opening.
   - Additionally, direct drainage tubes to ensure a negative grade for proper water flow away from the system.
2. *Adjustable Components*
   - The only adjustable components in the entire system are the jamb jacks located in the head and side jambs. Keep in mind that the jamb jack screws included with the unit are capable of adjusting to a maximum spacing of 5/8".
   - Note that gears do not have adjustment capabilities.
3. *Gap Filling/ Sealing & Designing for Future Adjustments*
   - When planning the finish work around the opening, consider potential future adjustments.
   - Ensure that the space between the rough opening header and the Kolbe Lift and Slide system head is filled with standard insulation or compressible material.
   - Fill any gaps around the door and rough opening with appropriate backing material.
   - DO NOT use expanding foam, as it will hinder adjustments to the head and jambs.
   - Seal these gaps securely using sealant to ensure a weather-tight and secure unit **(Fig. 23)**.

Properly executed finish work contributes to the overall performance and longevity of your Kolbe Lift and Slide system.

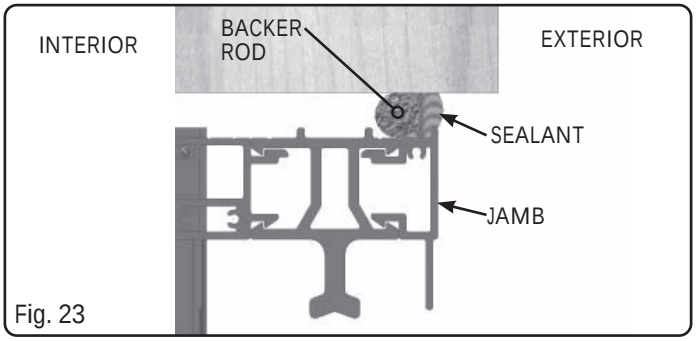


Fig. 23

SECTION 8: PRODUCT CARE CONSIDERATIONS

1. *System Protection*
   - Stucco can etch the finish on aluminum, stain wood, clog the sill, and damage rollers.
   - Drywall can also stain wood, clog the sill, and potentially gum up the rollers.
2. *Wheelbarrow Precautions*
   - Be cautious with wheelbarrows near the system:
     - They can bend the bottom sill.
     - Scratching of jambs and doors may occur if they rub against the sides.
   - Consider building a protective bridge over the sill to prevent damage.
   - Remember that the surface finish of the sill significantly impacts how smoothly the doors slide when finished.
   - Protect the sill and jambs from wheelbarrow damage.
3. *Duct Tape and Surface Protection*
   - Avoid using duct tape directly on the system, as its adhesives can chemically affect finishes.
   - Instead, use 3M blue painters tape to protect painted surfaces.
     - Note that even 3M blue painters tape should not remain on the surface for more than 7 days, as indicated on the product packaging.
4. *Glass Protection*
   - Do not cover glass with plastic tarps or anything that can blow in the wind.
     - Wind-blown plastic can sand glass surfaces and cause abrasive marks on the aluminum framing.
   - When you are painting a wall around a door, protect the glass by using brush-on protectant such as Masking Liquid H20 instead of tape. Reference and follow manufacturers' instructions.
   - Non-touching panels, (e.g. plywood sheets. roll-down shutter).
   - For future orders, consider Kolbe's optional glass preserve applied to the glass.
5. *Fasteners and Jamb Jacks*
   - Kolbe supplies jamb jacks (factory-installed) for adjusting the jambs.
   - The jambs are pre-drilled for #10 screws (supplied).
     - Remember to pre-drill pilot holes before installing screws.
6. *Cleaning and Maintenance*
   - Clean gaskets and contact surfaces as needed using a clean damp cloth.
   - After gaskets and sealing areas dry, apply a coat of UV protectant spray (e.g., Armor-All) to maintain flexibility and reduce drag. Ensure that over spray is thoroughly removed with a clean cloth.
   - Clean locking bolts and hardware with a clean damp cloth.
   - Apply a light coating of mineral oil to all metal surfaces for lubrication and corrosion protection.
7. *Sill Vacuuming*
   - Regularly vacuum the sill to remove dirt and debris. Use a soft brush to loosen any stubborn dirt or debris.
   - Avoid using an air hose, as it may clog the weep holes and hinder proper drainage.
8. *Routine Maintenance*

Regular maintenance includes lubricating locks and moving parts (except wheels) regularly, as well as keeping tracks and surfaces cleaned and waxed.
In corrosive environments, such as near the ocean or around swimming pools, cleaning and lubricating the doors may be necessary more frequently. Sand can be particularly damaging to tracks, rollers, and weatherstripping on sliding doors if not properly maintained.
Please reference the Kolbe Maintenance Guide for full instructions on maintenance, care, and finishing.

SECTION 9: TROUBLESHOOTING

Below is a brief list of common problems and solutions that may be implemented without calling a service technician.

Problem: Doors do not slide smoothly and/or make squeaking noises.
Solution: Clean head jamb panel guide with a dry lubricant.

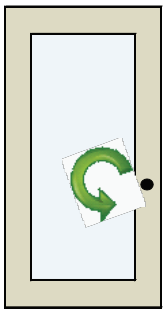
Problem: Doors do not slide smoothly and seem to be getting worse.
Solution: The head jamb has sagged. This can be checked using the following technique:

1. Note the location where the doors start being difficult to move. This is an area that you will check in some of the steps to come.
2. Rotate the handle to the 90-degree position (hold parallel to the floor) from the locked or down position. Move the doors again being sure to pay particular attention to the area you located in step 1. If the door moves easier that is a clear indication that the head is sagging.
3. To confirm, measure the panel height and subtract 11/16" from that measurement. That new value (panel height minus 11/16" = story board height) is the distance from the top of the bottom track to the bottom of the upside down "Y" on the head track. The system is designed to seal along the top of the panel. Any deviations from this should be noted so that adjustments can be made in those areas.
4. If the head jamb is too low, the following method is used to raise the head.
   - Remove some of the screw caps and screws in the area that is low and insert a 6mm Allen head driver (or wrench) into the hole and lower the jamb jacks. This will allow the head to be pulled up when the screw is re-inserted and tightened. Recheck the Head to make sure it is level.
   - Repeat steps 1 and 2 to insure correct height of head and smooth operation of panels.

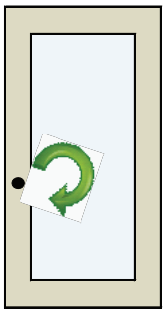
Problem: Grinding noise while operating handle. This is caused by the short gold locking bolt shipping screws falling into the hardware channel.
Solution: Remove the hardware channel and remove the loose screw. Replace hardware channel and check to ensure grinding noise is gone.

Problem: Removable handle is loose or hard to insert.
Solution: The removable handle has roller pins that can be adjusted on the back side of the face plate. Remove the faceplate, and you will see the ball bearings with the set screws from the back side. Holding the handle in place and making it easy to pull in and out is a bit of a balancing act controlled by the set screws. Tighten the set screws until handle will stay in position, but still allows for easy removal of handle. Add break-away lock tight to screws to help prevent future movement.

HANDLE OPERATION



Turn handle counterclockwise



Turn handle clockwise

* When rotating handle, it should always pass over the glass

When door panel is down insert handle as shown

When door panel is up insert handle as shown

SECTION 10: RECYCLING

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

SECTION 11: FOR IMPACT PERFORMANCE UNITS ONLY

1. *Additional Screws & Shims*
   - For Impact units, you'll need extra screws to secure the pre-drilled holes in the head jamb.
   - Extra shimming is required between the head jamb and the rough opening at each screw location, **(Fig. 24 & 25)**.
2. *Head Track Reinforcement Bracket*
   - Impact units over 8 feet tall have a factory-installed head track reinforcement bracket, which aligns with the pre-drilled holes in the head jamb.
3. *Install screws at meeting stile joint*
   - Install six (supplied) #14 x 3", into each meeting stile joint. (A quantity of 6 screws into each meeting stile joint)
4. *Panel Lock Guides:*
   - Lock guides are secured on the head track at the factory.
   - Make sure they remain in place, **(Fig. 27)**.
   - These guides will be permanently secured later in the installation process.

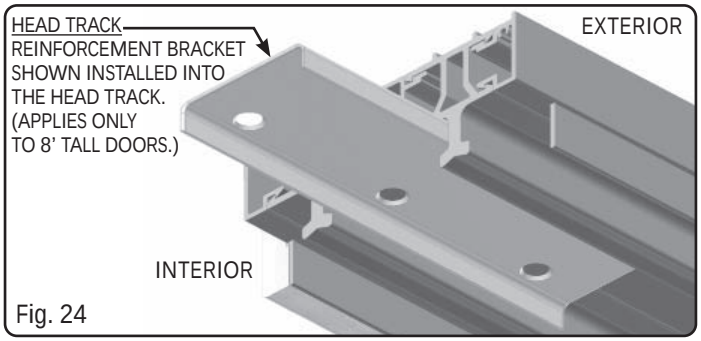


Fig. 24

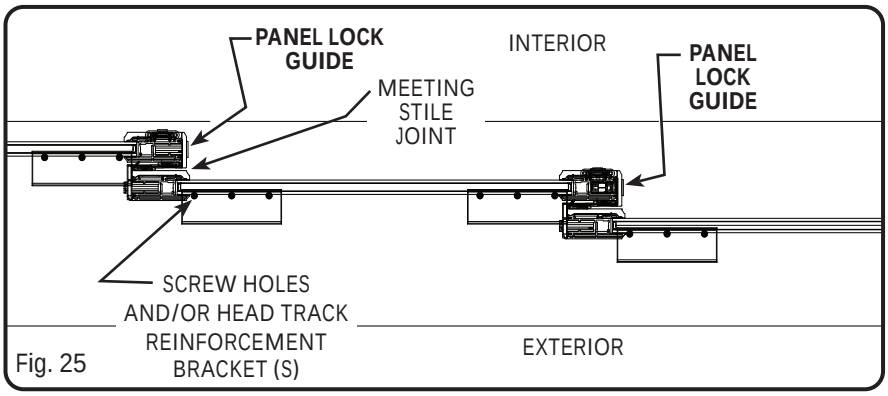


Fig. 25

Installing longer screws in shoot bolt keepers

- Replace the short shipping screws in the shoot bolt keepers with the provided #9 x 3" screws. There is a shoot bolt keeper at each meeting stile joint, **(Fig. 26)**.

When these steps are completed, return to *Install Panel End Caps* at the top of **Page 8**.

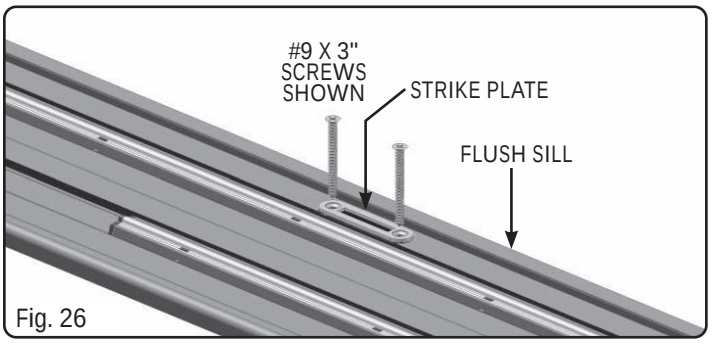


Fig. 26

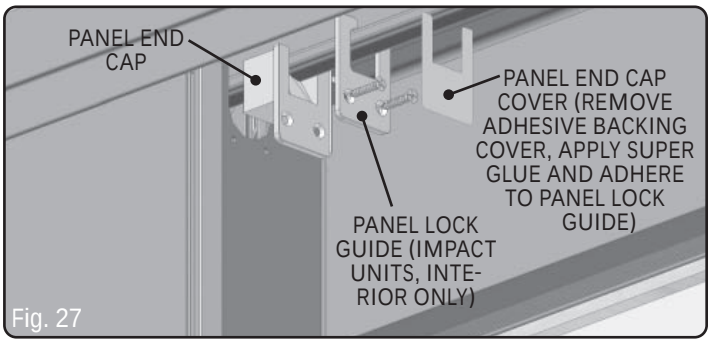


Fig. 27

Secure panel lock guides and apply panel end cap covers

- Impact units require the placement of a panel lock guide on each head track that has a meeting stile joint.
- These guides are initially positioned on each head track and temporarily fastened close to the end of the head jamb at the factory, primarily for shipping purposes.
- To install, remove the tape securing them in place and slide each panel lock guide alongside the panel end cap.
- Utilize the provided screws currently securing the panel end cap to affix both components securely.
- Finally, apply the panel end cap covers over the panel lock guides, **(Fig. 27)**.

When these steps are completed, return to SECTION 6: FINE TUNE THE DOOR SYSTEM on **Page 8**.

SECTION 12: INTERIOR SILL NOSING EXTENSION APPLICATION

To meet performance standards, add the appropriate number of interior sill nosing extensions to the unit.

- Attach cap **#1** and apply silicone to each required extension in the same location as the base **(see Fig. 28, 29, and 30)**.
- Run a continuous bead of silicone **#4** along the interior side of the exterior leg of the flush sill nosing base **#4 (Fig. 28, 29, 30)**.
- Insert the interior flush sill nosing cap into the base, tapping it down if necessary to ensure a secure fit.
- Completely seal the ends of the sill nosing extensions.
- **(Fig. 28-30)** illustrates the correct installation of the sill nosing extensions and track cap filler on the sill nosing.
- **(Fig. 31, page 14)** shows the sill nosing extensions and track cap filler fully applied.

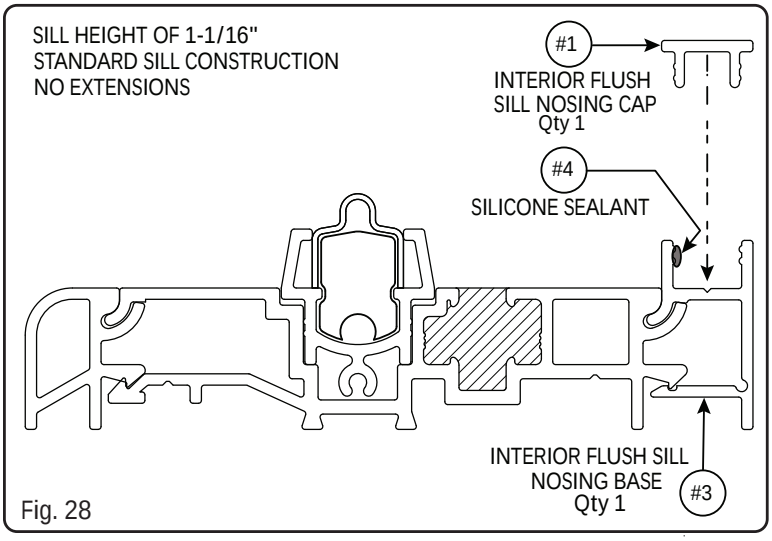


Fig. 28

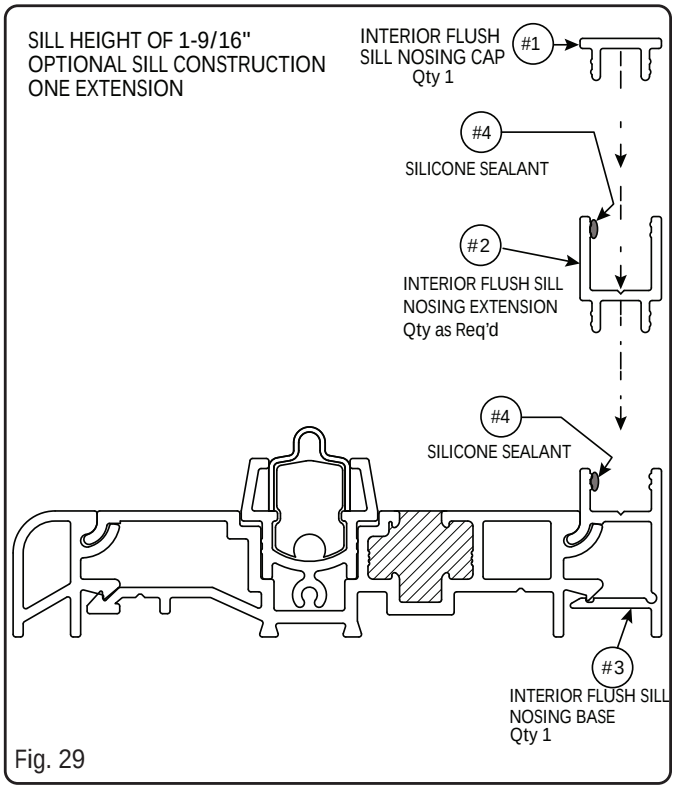


Fig. 29

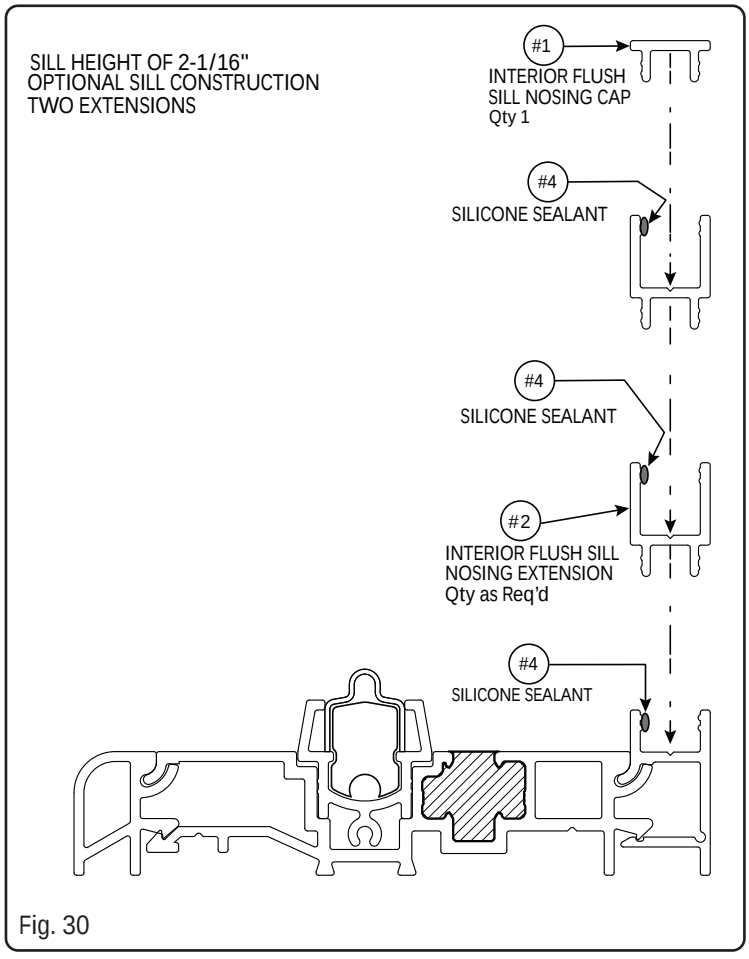


Fig. 30

The maximum sill dam height is 5-9/16". You can add up to 9 extensions to the sill, with each extension increasing the height by 1/2". Each extension is an interior flush sill nosing extension.

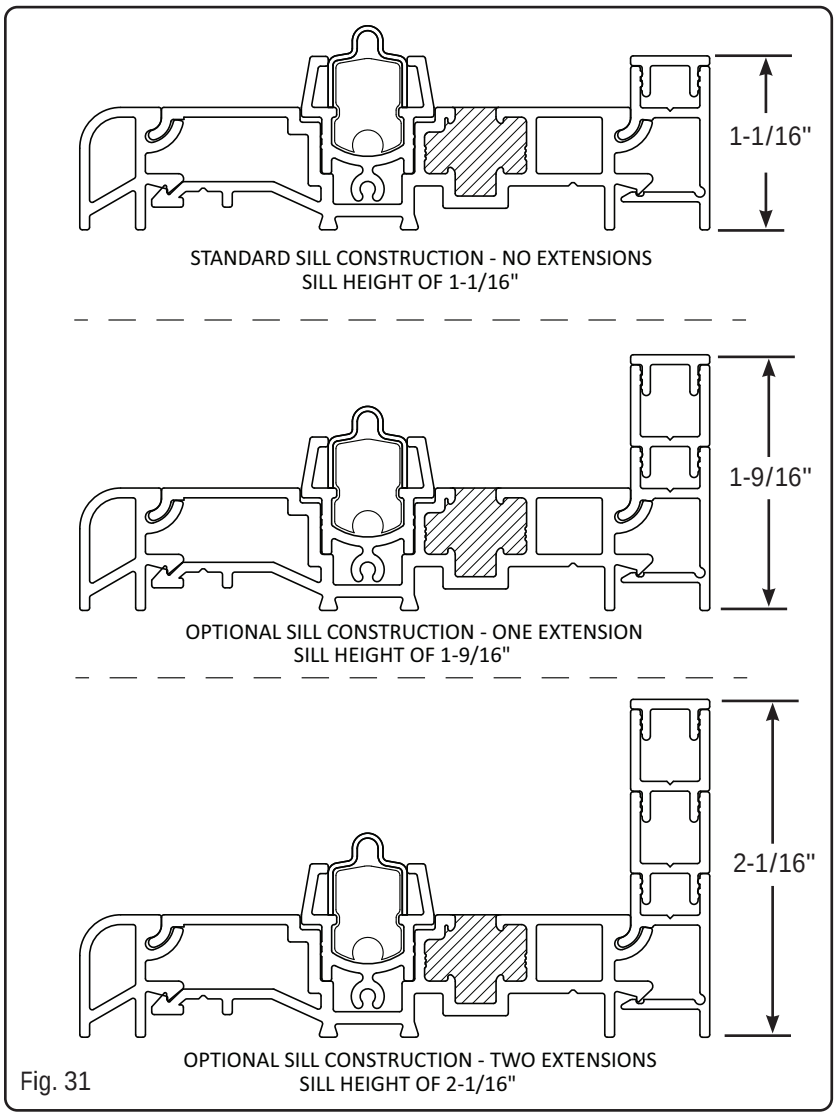


Fig. 31

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

THANK YOU
FOR PURCHASING KOLBE PRODUCTS

Kolbe & Kolbe Millwork Co., Inc.
reserves the right to change specification without notice.