

**Novatech®**

# Assembly and Installation Guide

## Victorian



Vinyl Patio Door

**IMPORTANT NOTES**

MESSAGE TO THE INSTALLER

In order to experience all of the benefits of this Novatech Patio Doors Ontario product, it is important that all steps for assembly, installation and maintenance are followed properly. Please read this guide in all of its entirety for detailed instructions and important notes during the various steps in assembly, installation and maintenance.

For inquiries or questions about this Novatech Patio Doors Ontario product, call Toll-Free [1.800.561.1910](tel:18005611910) or visit our [website](#). Thank you for choosing Novatech Patio Doors Ontario.

**IMPORTANT**

The rough opening should be ½” wider and ½” higher ( $\pm \frac{1}{8}$ ” each way) than the actual door frame size. (Refer to the catalogue for standard frame sizes.) The base of the opening must be solid, level, and of sufficient width and depth to support the entire door sill in a continuous and uniform manner. It is important that the opening be plumb, level, and square, as the door will not perform to its potential if installed into an improperly prepared opening.

**WARNING!**

While it may not seem like it, patio doors can be large and heavy. It is essential that the correct technique is used when lifting or moving a patio door, to prevent injury or product damage. Be proactive and use multiple people to lift or move patio doors to prevent injury and product damage.

**WARNING!**

Always follow the manufacturers’ instructions when using hand or power tools. Make sure to wear the appropriate personal protective equipment (PPE) for the task at hand. It is always a good idea to wear safety glasses to prevent injury or product damage when using hand or power tools.

**SAFETY AND WARNINGS**

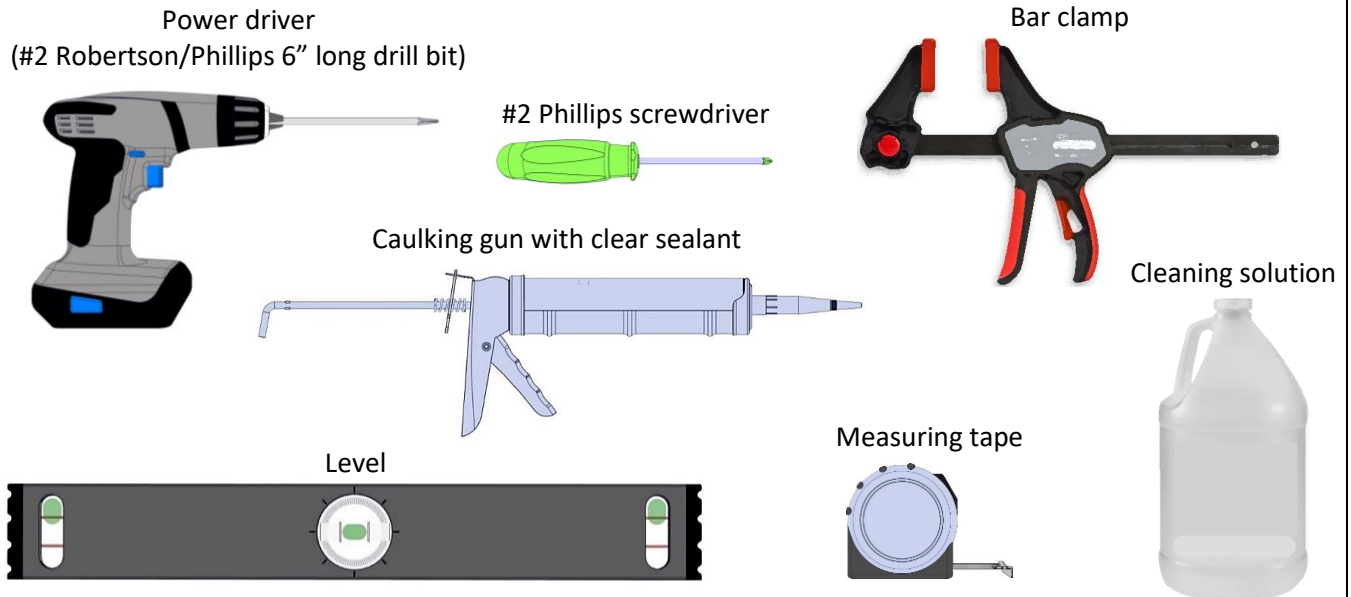
Make sure to inspect the patio door for signs of damage, and ensure it is the correct size and type. Contact the distributor if there are any problems **prior** to installing the door.

Always follow the manufacturer’s instructions for proper use for all materials. Ensure that the materials used are compatible with one another (i.e. flashing, primers, sealants, etc.) and appropriate for the application.

**TOOLS AND SUPPLIES**

**REQUIRED TOOLS/SUPPLIES:**

**NOTE:** The tools and supplies listed below are all required for successful assembly and installation of the patio door. Isopropyl alcohol is a recommended cleaning solution. See the table below for recommended sealants.



**RECOMMENDED SEALANTS:**

Purpose	Recommendations
Exterior perimeter caulking	Dow Corning CWS, Tremco 600, GE Silicone II, <u>or equivalent</u>
Sealing fixed panel to frame, Metal-to-metal sealing, Covering screws	Dow Corning 795, Tremco Spectrem 2, GE Supreme Silicone, <u>or equivalent</u>

**WARNING!**

It is important to use the correct metal fasteners for each application. Novatech Patio Doors Ontario recommends using the fasteners that are provided in the hardware kit. In the event that alternative fasteners are to be used for the assembly and installation of the patio door, ensure the fasteners meet the necessary strength and corrosion resistance requirements. Novatech Patio Doors Ontario does NOT take any responsibility for injury or product damage caused by the use of alternative screws.

**WARNING!**

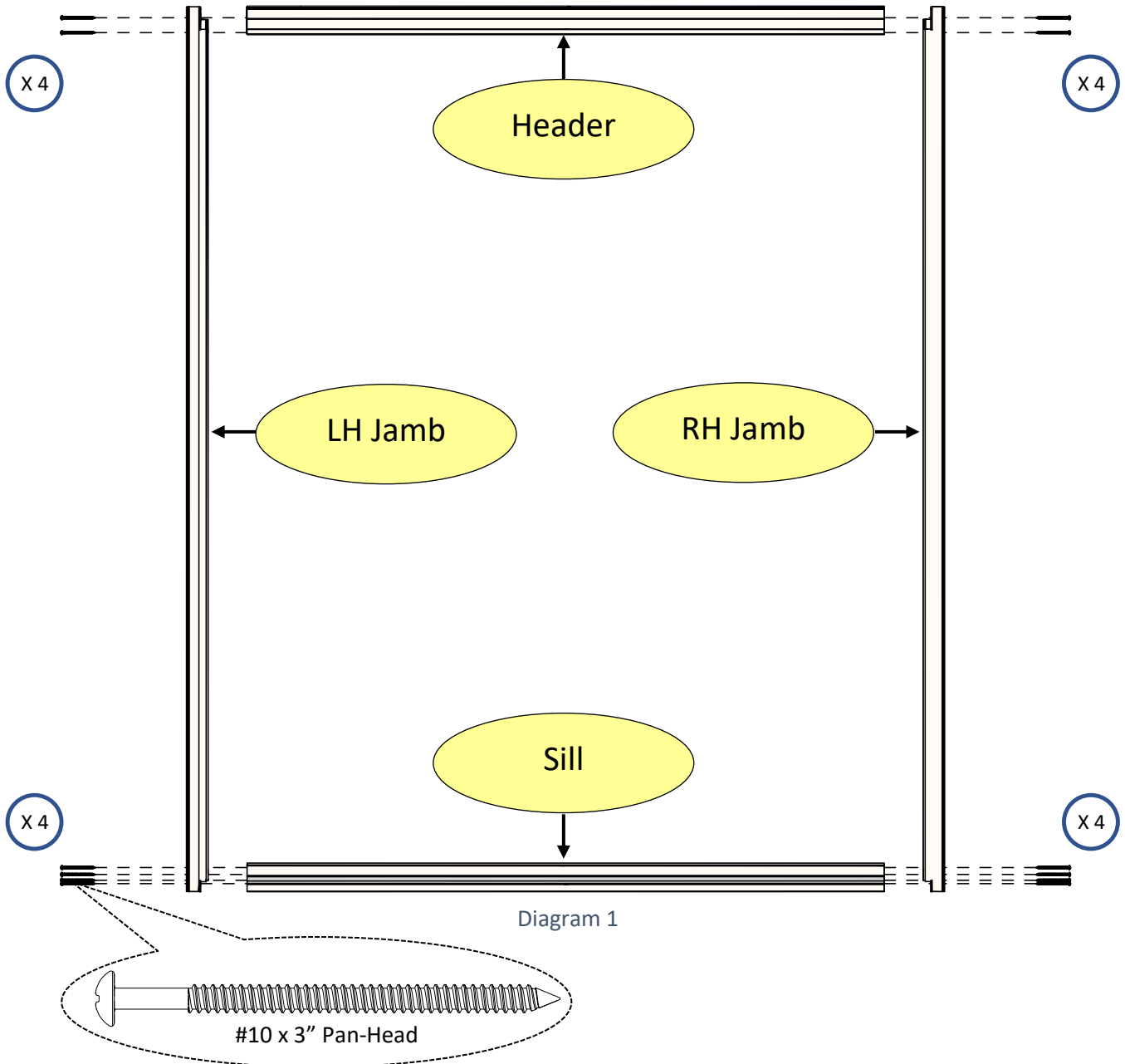
Remove the protective film from the door immediately after installation. Exposure to direct sunlight will cause permanent adhesive bonding to the surface. Failure to remove the protective film may also result in permanent adhesive bonding to the surface.

**MAIN FRAME ASSEMBLY**

**PROCEDURE:**

- Lay members on a flat protective surface as shown in Diagram 1

**NOTE:** All images are shown as viewed from the exterior.



**NOTE:** Diagram 1 shows the correct placement of the components on the floor, as seen from above.

**MAIN FRAME ASSEMBLY CONTINUED...**

- Use the #10 x 3" screws to fasten the frame components as shown below

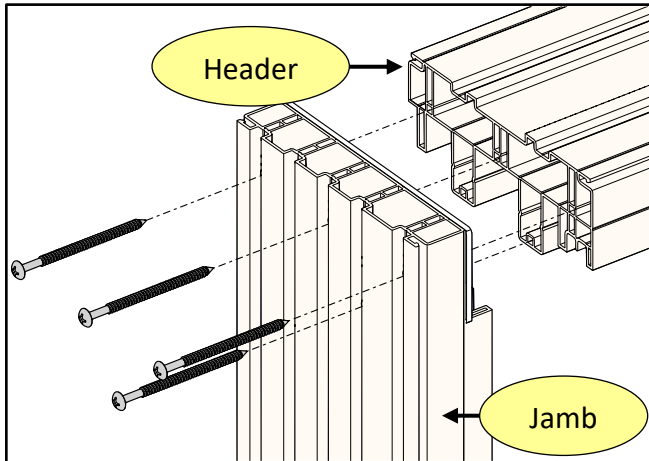


Diagram 2

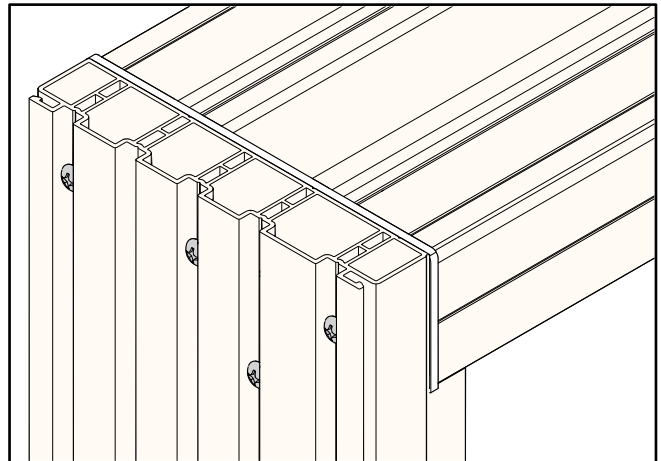


Diagram 3

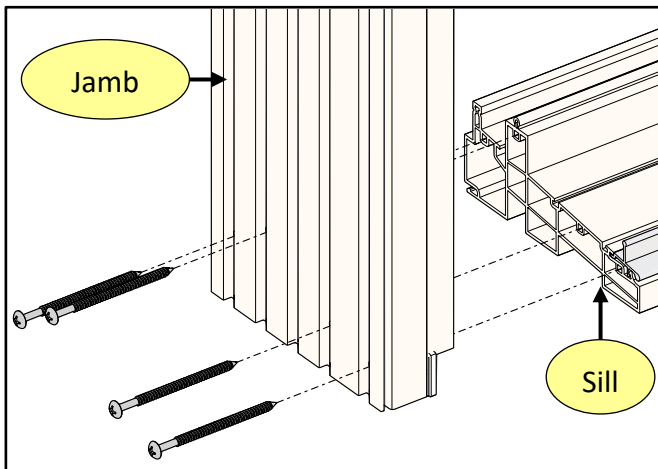


Diagram 4

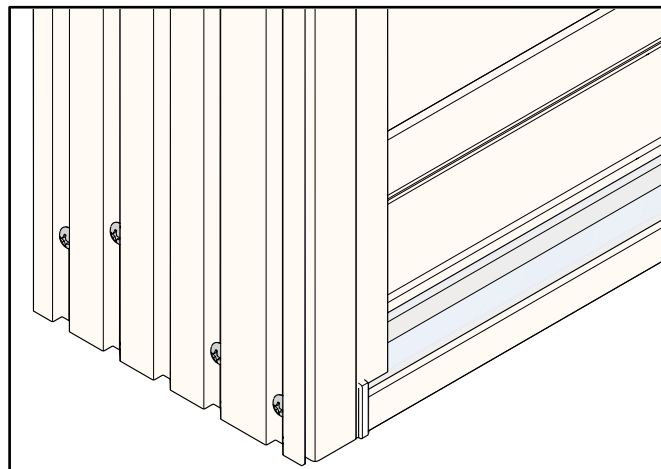


Diagram 5

- Repeat the previous steps to assemble the remaining jamb to the frame

**NOTE: Overtightening the screws can lead to the screw head shearing off. Removing the broken screw will be a very difficult and detrimental task. Exercise caution, and do NOT over-torque the screws.**

**FRAME INSTALLATION**

**NOTE:** The drainage ports face the exterior.

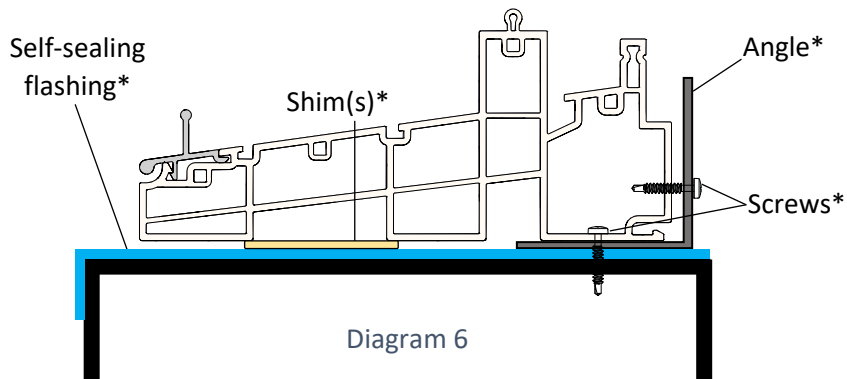
**PROCEDURE:**

**NOTE:** There are different ways to secure the sill to the substrate. Novatech Patio Doors Ontario recommends using method 1 or 2, as seen below. Method 3 and 4 are not preferred, but are acceptable if done correctly. Shimming is optional unless otherwise stated.

**\*Any materials/supplies with an asterisk in the diagrams below are not provided.**

Method 1:

- Install self-sealing flashing on the opening (i.e. Blueskin, etc.)
- Secure the angle to the substrate by drilling through it
- Shim the sill
- Insert the frame into the rough opening
- Centre the frame within the rough opening
- Ensure there is equal clearance at both jambs
- Secure the angle to the sill by drilling through the interior leg as shown below
- Apply sealant along the exterior edge as shown below

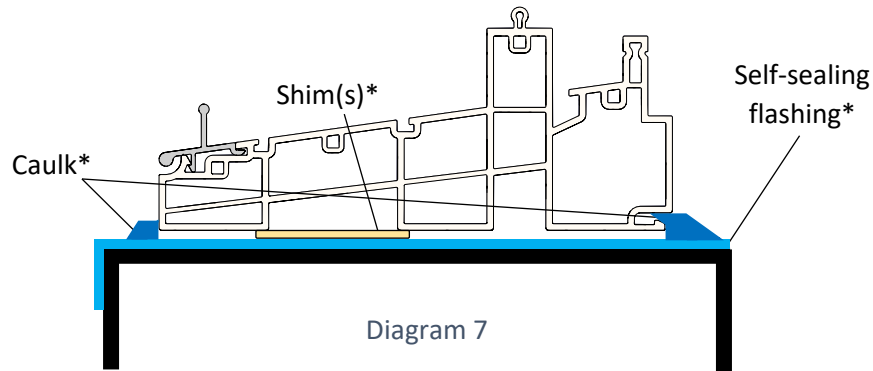


Method 2:

- Install self-sealing flashing on the opening (i.e. Blueskin, etc.)
- Shim the sill
- Insert the frame into the rough opening
- Centre the frame within the rough opening

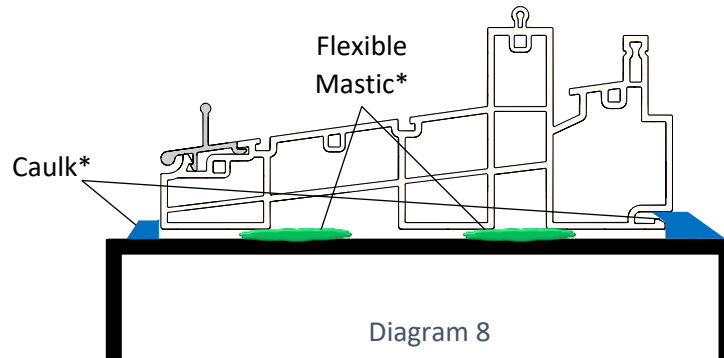
**FRAME INSTALLATION CONTINUED...**

- Ensure there is equal clearance at both jambs
- Apply sealant along the interior and exterior edges, as shown below



Method 3: (Not preferred)

- Apply flexible mastic (i.e. acoustical sealant) on the opening
- Insert the frame into the rough opening
- Centre the frame within the rough opening
- Ensure there is equal clearance at both jambs
- Apply sealant along the interior and exterior edges, as shown below

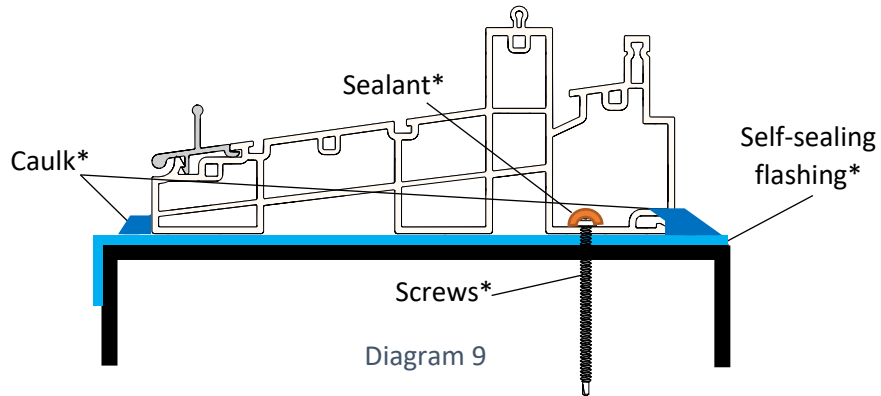


Method 4: (Not preferred)

- Install self-sealing flashing on the opening (i.e. Blueskin, etc.)
- Insert the frame into the rough opening
- Centre the frame within the rough opening
- Ensure there is equal clearance at both jambs

**FRAME INSTALLATION CONTINUED...**

- Apply sealant along the interior and exterior edges, as shown below
- Secure the sill to the substrate by drilling downwards, as shown below
- Cover the screws in the sill with a generous amount of caulk (see table on page 5)



**CAUTION**

Do **not** puncture the top of the sill.

If the use of fastening screws **cannot** be avoided, ensure the following conditions are met:

- Screws are back sealed (see table on page 5 for recommendations)
- Screws are covered with tooled sealant
- The sill is fastened to the surrounding structure at each meeting/parting rail

**IMPORTANT**

The sill must be installed level and uniformly supported from end to end, and front to back. Use a level and solid shim(s) to compensate for unevenness in the opening.

**IMPORTANT**

Novatech Patio Doors Ontario **does not** provide fasteners for the frame installation steps. Due to the variety of substrates to which doors can be installed to, it is not possible to predict and provide the appropriate fastener.



**FRAME INSTALLATION CONTINUED...**

**IMPORTANT**

Follow the requirements below to ensure that the frame installation is completed correctly:

- Header is anchored at the centre
- Jamb are fastened within 6" of each corner, and at every 24"
- All screws engage the surrounding structure at least 1-½"

It is recommended that two (2) fasteners are installed at each location for the header and jambs; one in the inner track, and the other in the outer track.

Use a countersink drill bit to make the installation holes so that the flat head installation screws sit flush with the vinyl surface.

For enhanced security, consider installing solid blocking between the jamb and structure at the location of the lock keeper. Put installation screws through, above, and below the keeper.

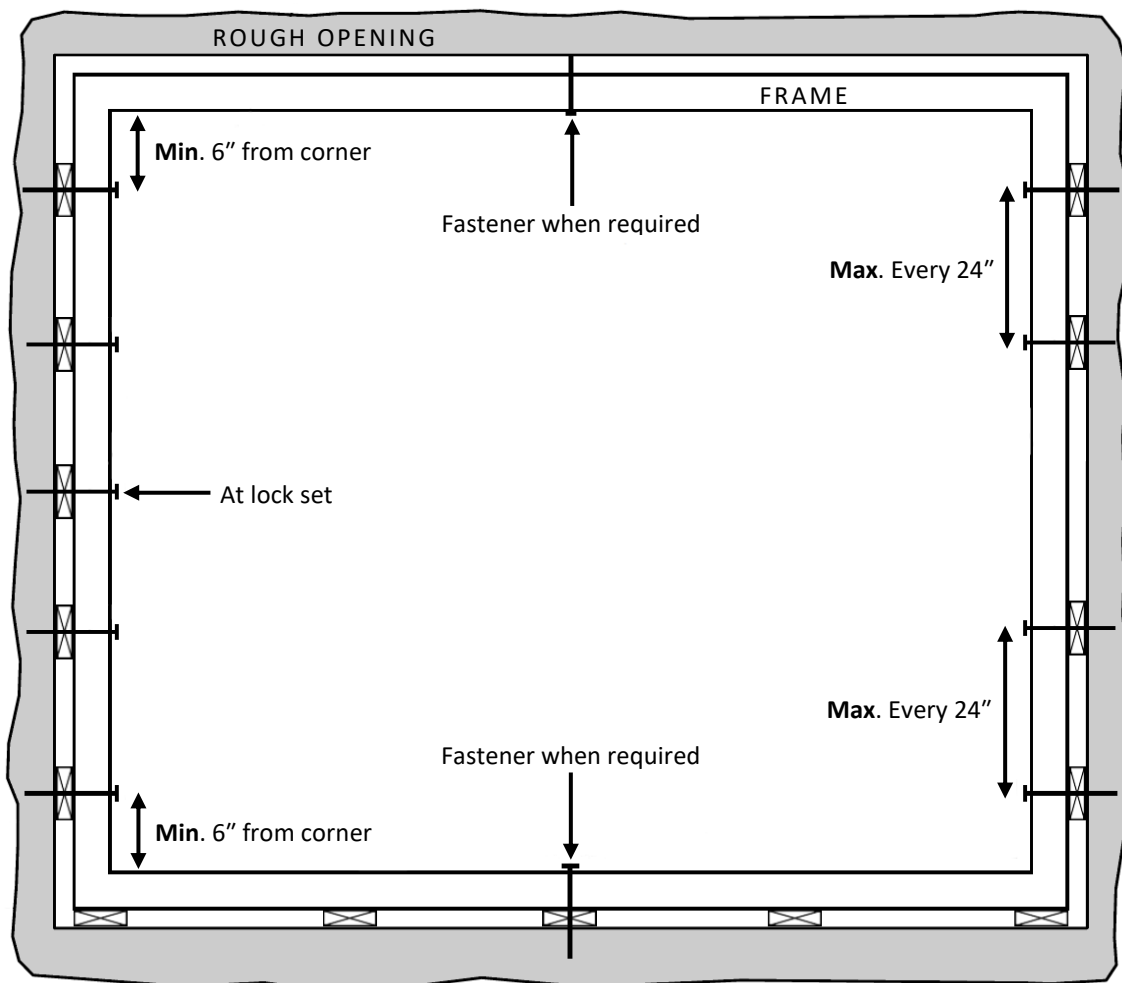


Diagram 10

**FRAME INSTALLATION CONTINUED...**

**NOTE:** It is the responsibility of the installer to drill the installation holes.

- Set shims behind the frame installation holes
- Temporarily fasten the frame to the surrounding structure
- Use a level (laser recommended) and measure frame to ensure it is plumb, square and level
- Adjust the shims as necessary
- Securely fasten all screws
- Insulate the gap between the frame and rough opening
- Seal the gap with either backer rod and sealant, or batt insulation

**IMPORTANT**

It is extremely important that the perimeter of the door be sealed thoroughly. This step will ensure air and water tightness.

When applying insulation (low expanding spray foam or batt insulation) between the frame and rough opening, **do not** overfill. Too much insulation will result in bowing of the frame components, and will reduce the performance of the door.

**IMPORTANT**

The quantity, size, type, and engagement of the fasteners/supporting shims must be engineered, and is the responsibility of the installation contractor for the following cases:

- High rise buildings
- High wind areas
- Attaching to window systems
- Using oversized doors

**FIXED PANEL SUPPORT ADAPTER INSTALLATION**

**NOTE:** The fixed panel support adapter is installed against the same jamb to which the fixed panel is installed.

**PROCEDURE:**

Installing the Fixed Panel Support Adapter:

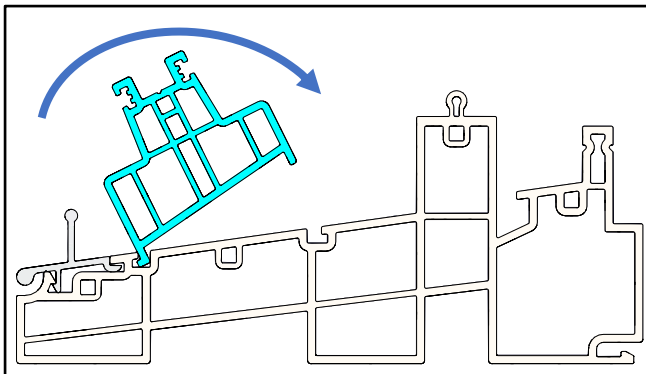


Diagram 11

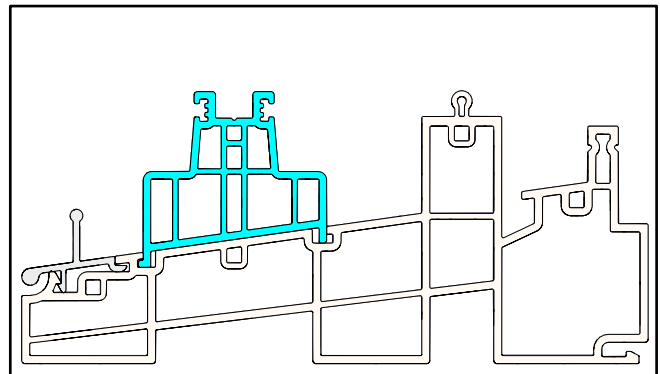


Diagram 12

- Place the fixed panel support adapter in the sill groove and rotate it in place as shown above
- Lift the bulb seal on the fixed panel side as shown below
- Slide the fixed panel support adapter tightly against the jamb (use a rubber mallet if required)

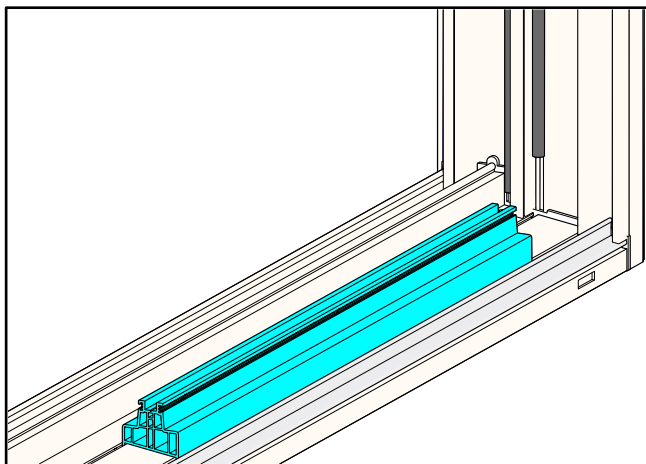


Diagram 13

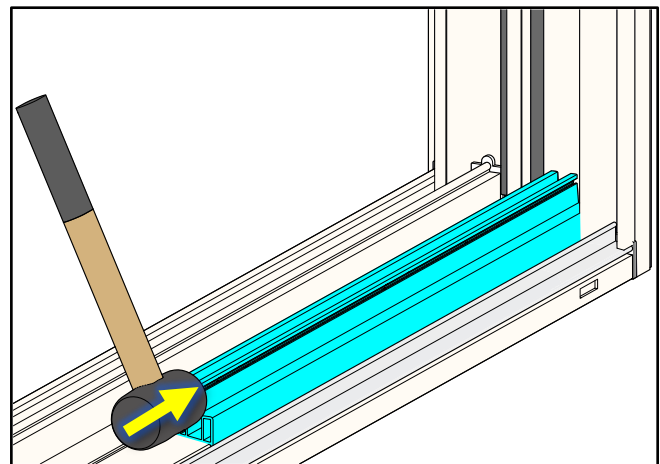


Diagram 14

- Use #10 x 1- $\frac{3}{4}$ " screws every 12" to secure the fixed panel support adapter to the sill as shown

**FIXED PANEL END CAP INSTALLATION**

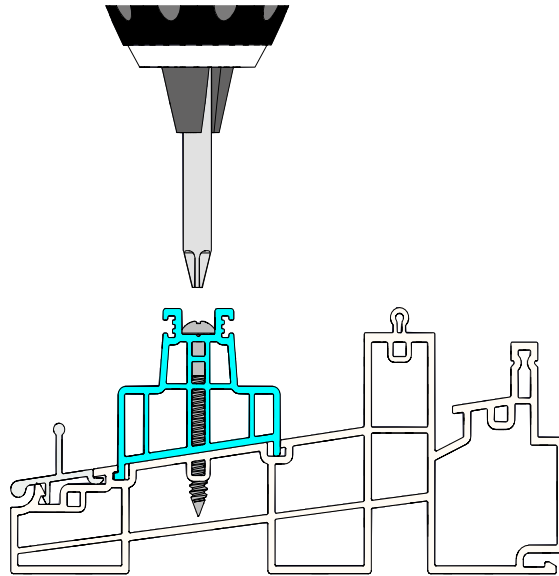


Diagram 15

Installing the Fixed Panel End Cap:

- Peel the backing on the carpet plug to expose the adhesive side
- Attach the carpet plug on top of the end cap as shown below
- Place the fixed panel end cap against the open end of the fixed panel support adapter

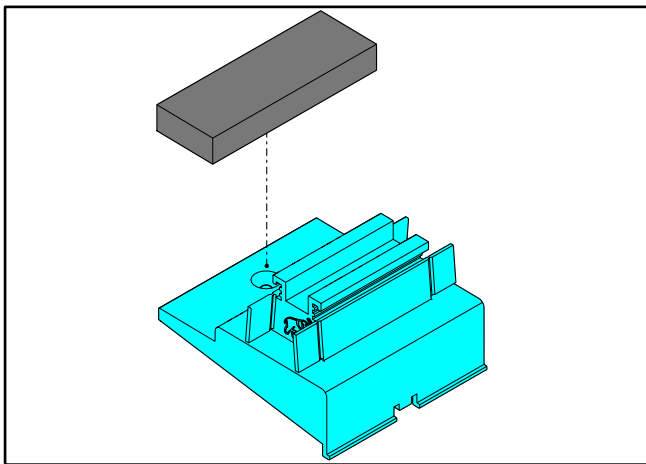


Diagram 16

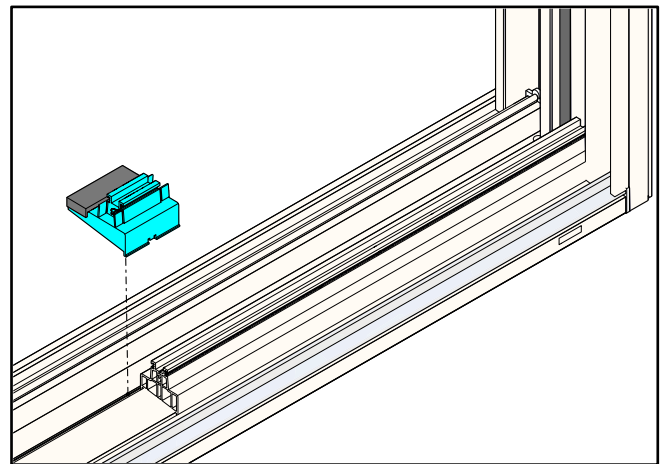


Diagram 17

- Drill a #10 x 1-3/4" screw into the end cap in the location shown

**FIXED PANEL END CAP INSTALLATION CONTINUED...**

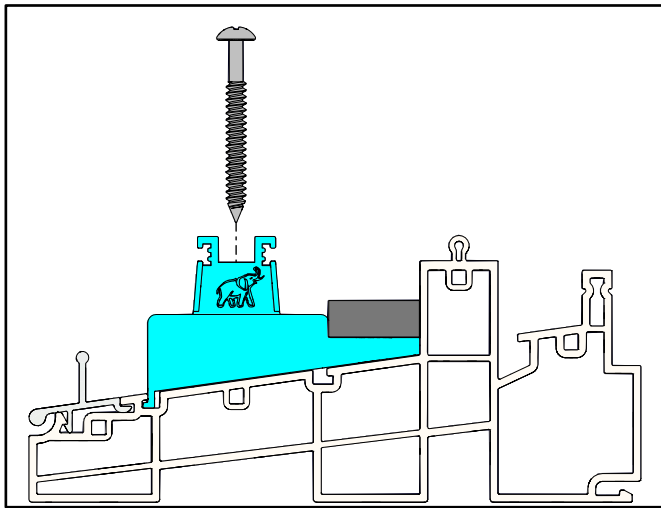


Diagram 18

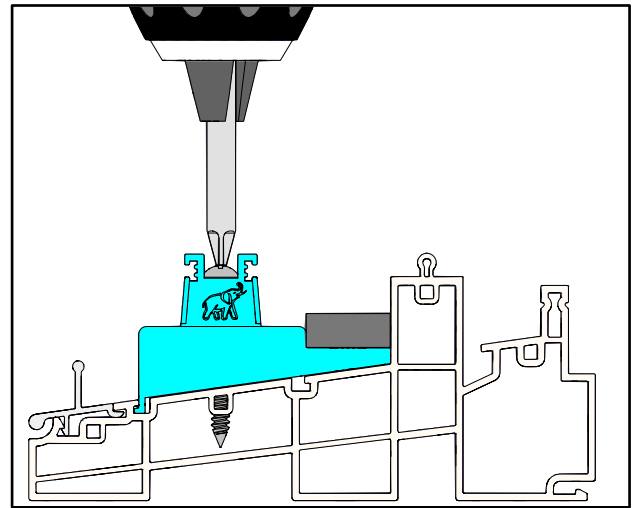


Diagram 19

- Drill a #8 x 1/2" screw through the carpet pad and into the end cap as shown below

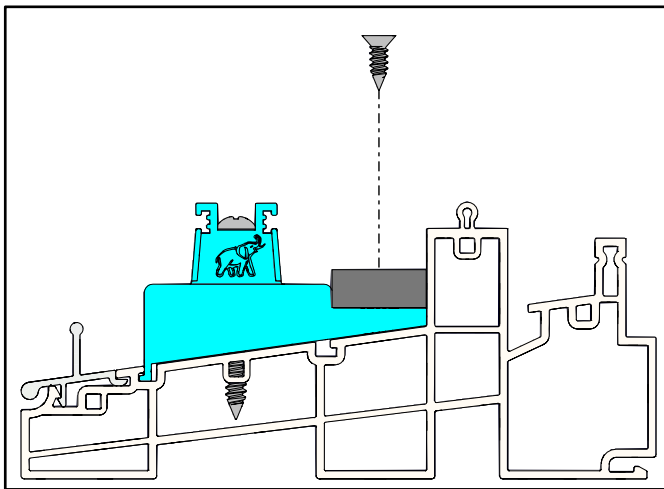


Diagram 20

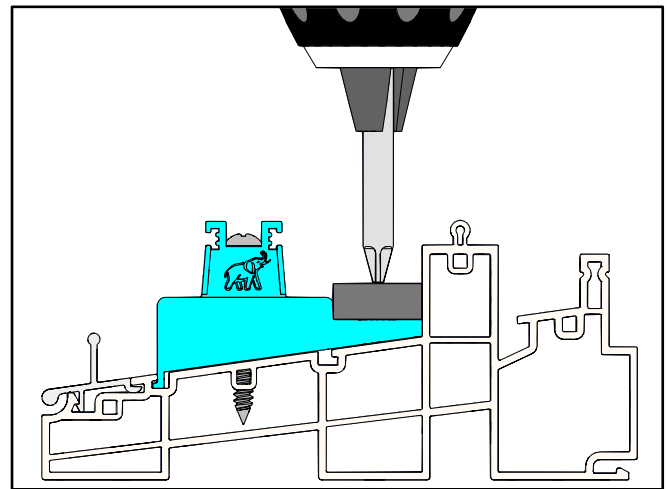


Diagram 21

- Ensure the screws are completely covered with silicone and watertight

**FIXED PANEL INSTALLATION**

**NOTE:** Do not hesitate to use multiple people to install the fixed panels. Incorrect handling can lead to injury and damage to the door.

**PROCEDURE:**

- Lift the fixed panel into the centre track of the frame header

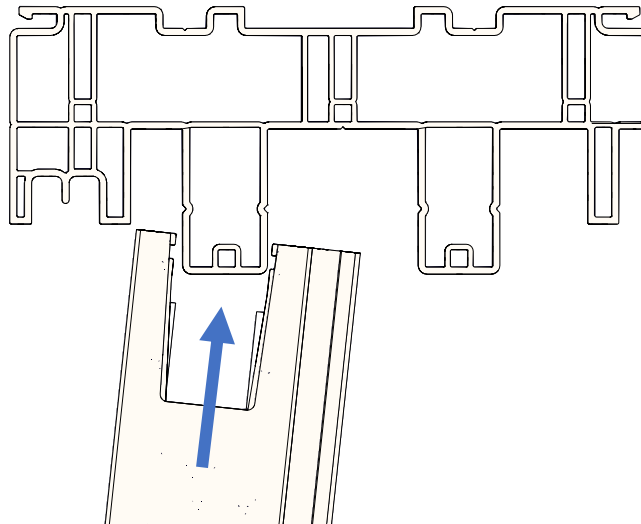


Diagram 22

**NOTE:** Slide the top and bottom screw covers away from the top and bottom edge of the meeting rail for easier panel installation.

- Carefully lower fixed panel onto sill as shown below

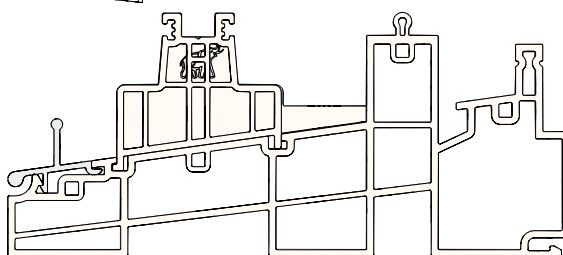
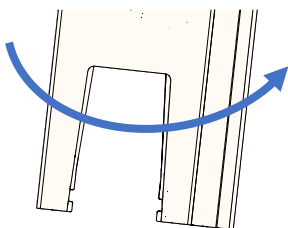


Diagram 23

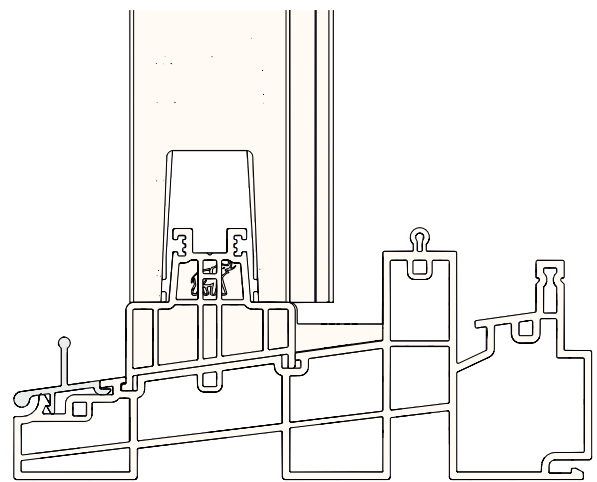


Diagram 24

## FIXED PANEL INSTALLATION CONTINUED...

- Push the fixed panel securely and completely into the jamb
- Ensure that the vinyl panel is revealed by  $1\frac{7}{8}$ " to the vertical jamb

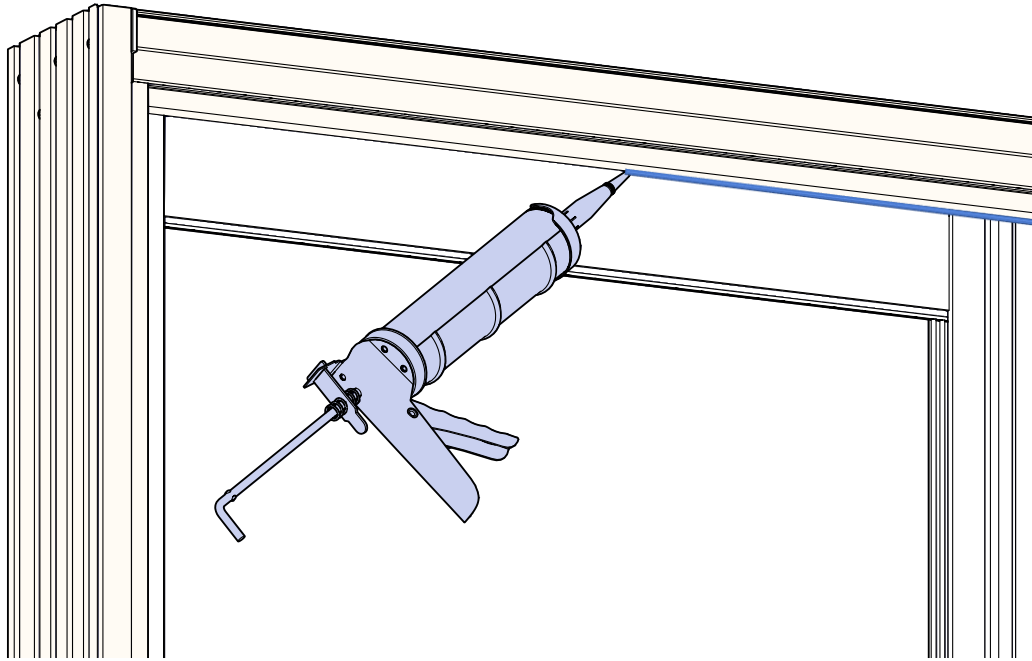


Diagram 25

- Fasten the fixed panel to the jamb by installing five (5) #8 x 1" flat-head screws as shown in the overhead view below

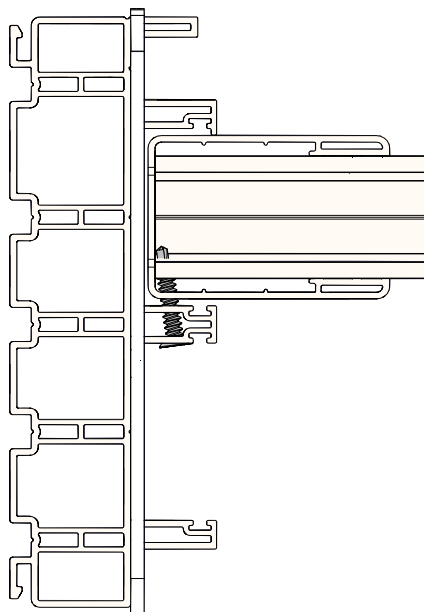


Diagram 26

**JAMB POCKET COVER INSTALLATION**

**PROCEDURE:**

- Align the pocket cover in the correct location as shown below
- Snap the pocket cover into place (use a mallet if necessary)

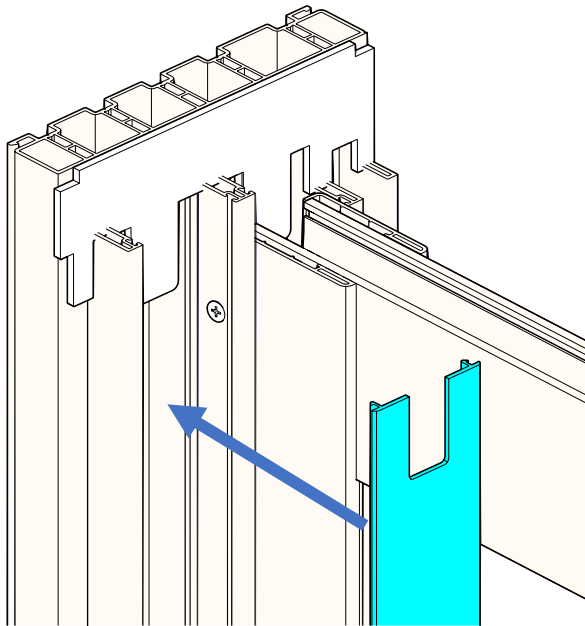


Diagram 27

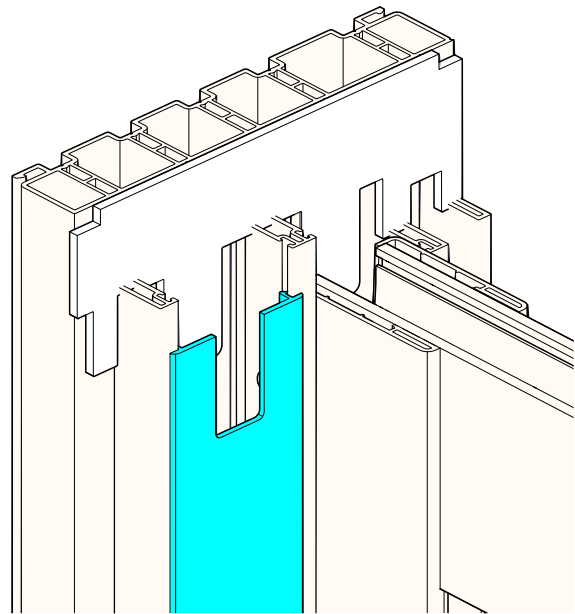


Diagram 28

**NOTE:** The pocket cover must be installed on the operating panel side. See the diagram below for more clarification.

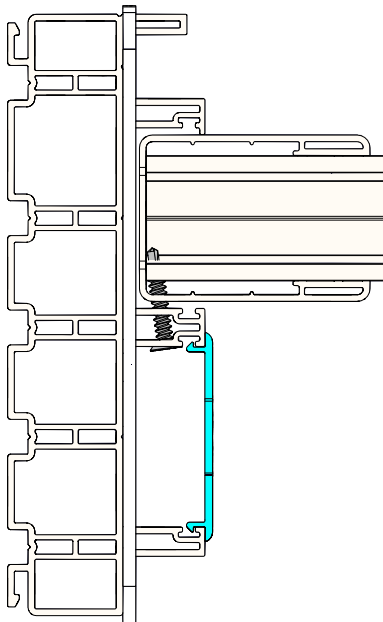


Diagram 29



**OPERATING PANEL INSTALLATION**

**NOTE:** Do not hesitate to use multiple people to install the fixed panels. Incorrect handling can lead to injury and damage to the door.

**PROCEDURE:**

- Lift the operating panel into the inside track of the frame header

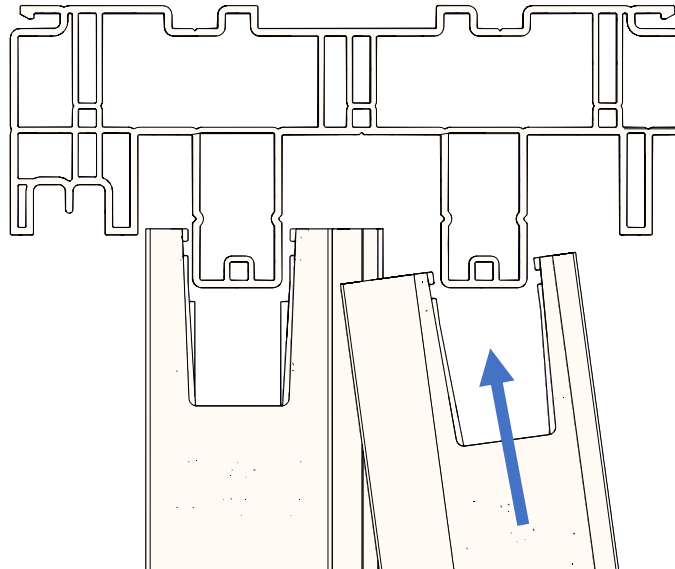


Diagram 30

**NOTE:** Slide the top and bottom screw covers away from the top and bottom edge of the meeting rail for easier panel installation.

- Carefully lower the panel onto the roller track of the sill frame as shown below.

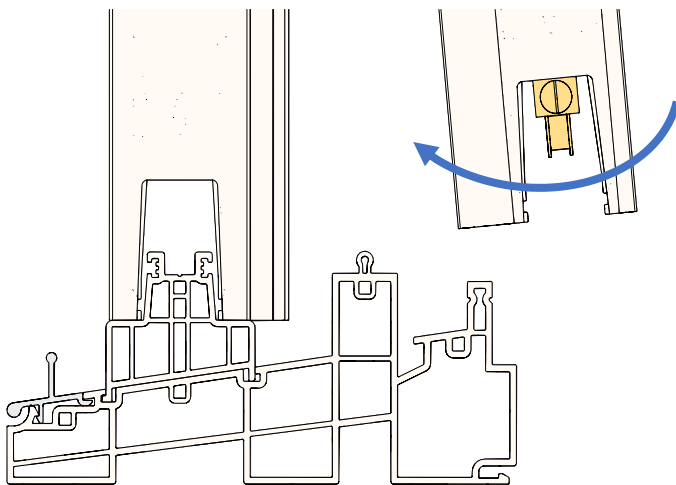


Diagram 31

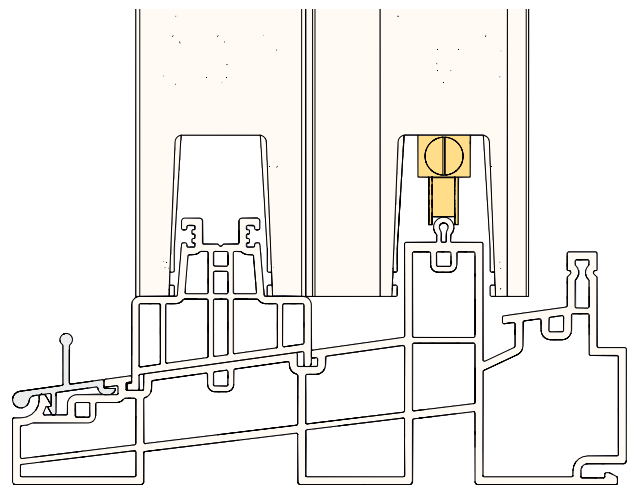


Diagram 32

**OPERATING PANEL INSTALLATION CONTINUED...**

- Adjust the rollers (upwards or downwards) with a screwdriver (see diagram below)

**NOTE:** It is recommended to lift the panel slightly when adjusting the wheels. This makes it easier to turn the screw, and prevents stripping of the adjustment mechanism.

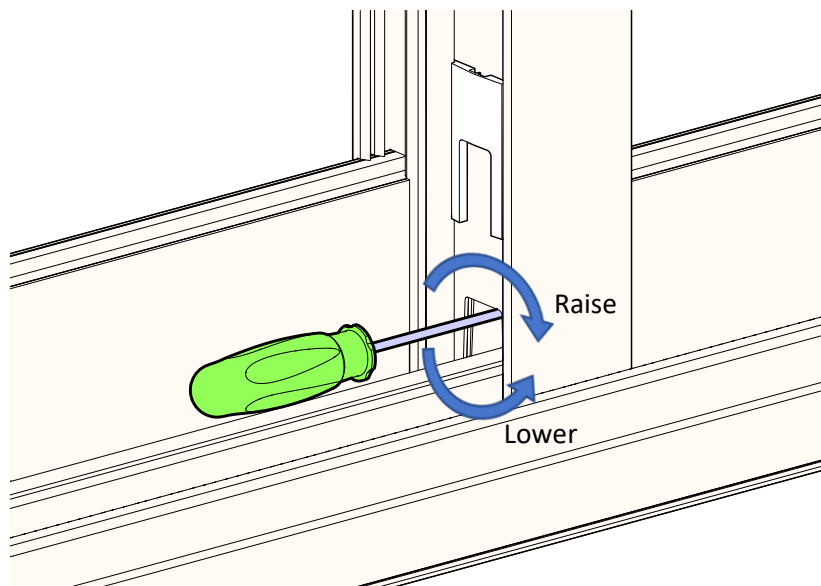


Diagram 33

- Align the top of the weather-stripping (outside of bottom rail) to the top of the sill
- Slide the panel in the closing direction within ¼" of the jamb

**IMPORTANT**

The joint between the panel and jamb should be uniform from top to bottom. If not, adjust the panel downward at one corner, until the panel aligns with the jamb. If the jamb is bowed, remove the installation screws, adjust the shims, and refasten.

**NOTE:** Ensure the interlocks of both panels are parallel. This will help ensure the panels are installed correctly.

**SCREW COVER ADJUSTMENT**

**NOTE:** Ensure the screw covers are pushed all the way to the top or bottom of the panel as required. The screw covers should be out of place prior to this step for easier installation and adjustment of the panels.

- Align the screw covers with the top or bottom edge of the panel as shown below

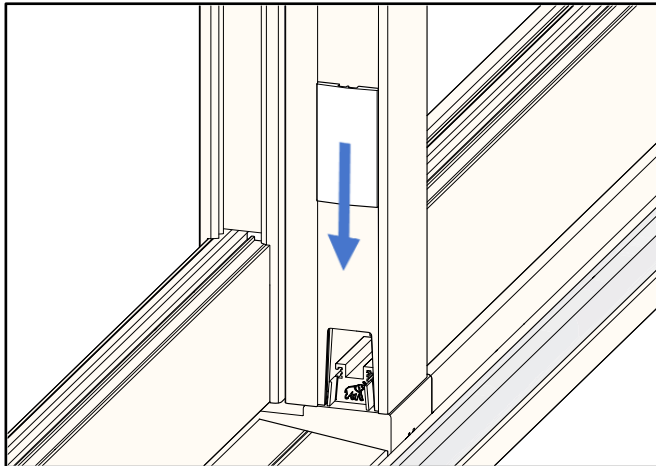


Diagram 34

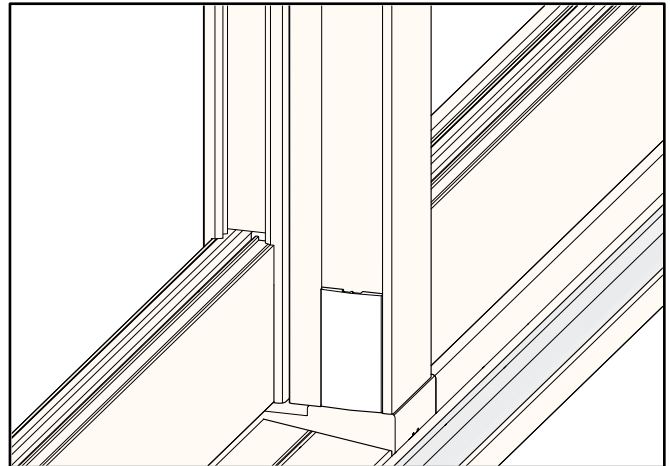


Diagram 35

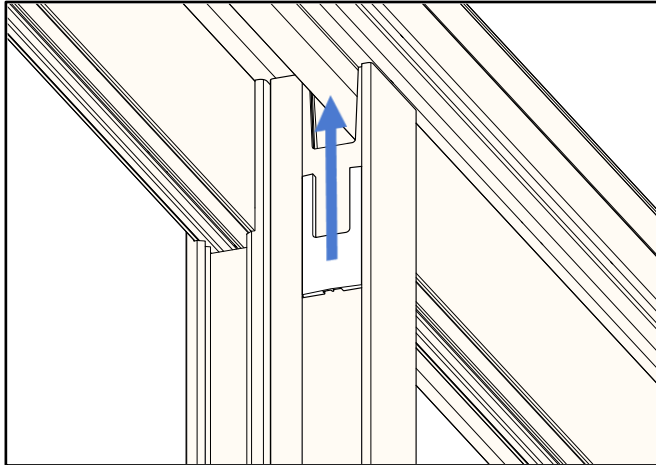


Diagram 36

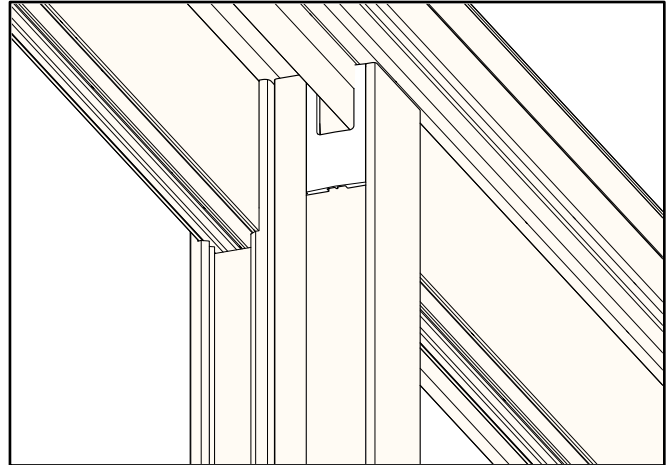


Diagram 37

- Repeat the previous step for the screw covers on the other panel

**NOTE:** Make sure to adjust all four (4) screw covers. The screw cover on the bottom of the operating and fixed panels do not have the same profile.

**ANTI-LIFT BLOCK INSTALLATION**

- Ensure that both the operating and fixed panels are installed
- Place the anti-lift block inside the centre pocket of the header in the orientation shown
- Align the raised edge of the anti-lift block with the edge of the interlock stile
- Ensure the anti-lift block fits as shown in the diagram below

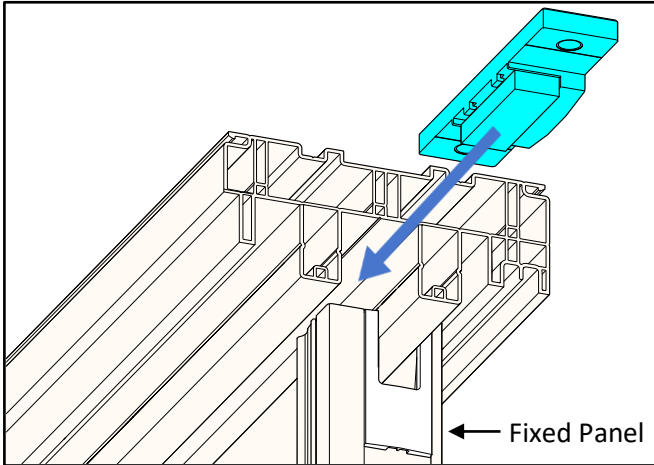


Diagram 38

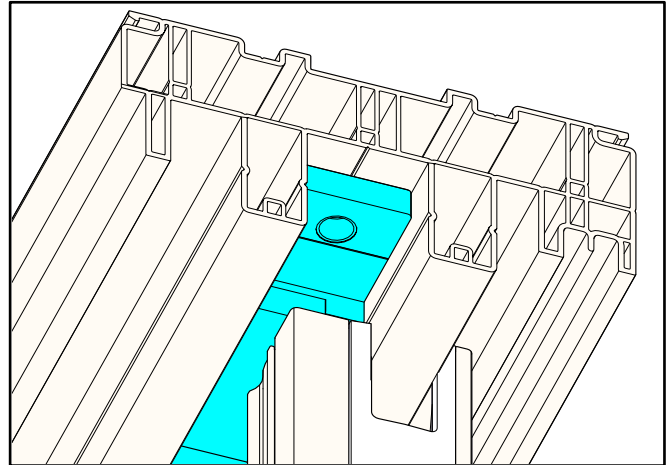


Diagram 39

- Secure the anti-lift block with two (2) #8 x 1 pan-head screws
- Affix two (2) plastic screw caps to the openings as shown

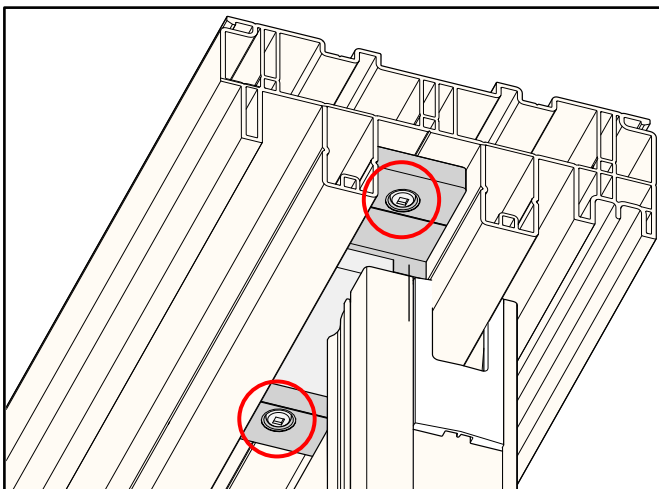


Diagram 40

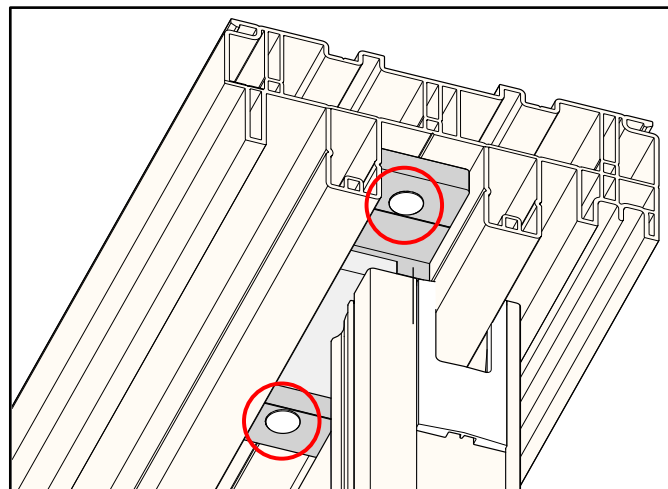


Diagram 41

**HARDWARE AND KEEPER INSTALLATION**

**NOTE:** All hardware is packaged separately. Follow the instructions in the hardware package for the hardware options provided.

**PROCEDURE:**

Installing the Elite Lock:

- Attach the operating mechanisms and handles as shown
- Ensure the striker hook is facing upwards

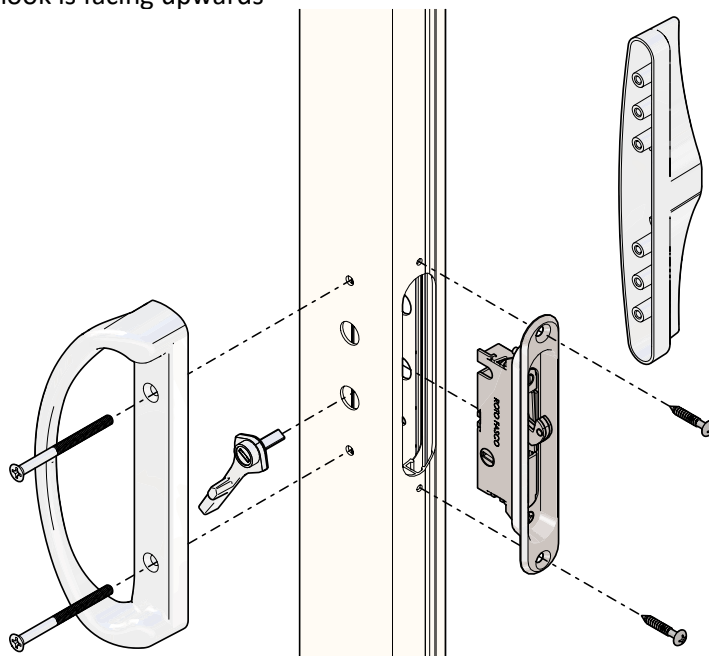


Diagram 42

Installing the Latch Keeper:

- Open the operating panel
- Nest the keeper into the lock mechanism
- Engage the thumb turn to hold the keeper within the lock mechanism
- Remove the backing on the 2-sided tape
- Firmly close the panel into the jamb
- Disengage the thumb turn
- Slide the operating panel away

**NOTE:** The latch keeper should now be held in the jamb by the 2-sided tape.

- Attach the keeper to the jamb with 2 self-drilling tek screws

**NOTE:** Install the screws through the centre of the adjustment slots in the keeper. This will allow future adjustments to be made easier. Use longer screws for enhanced security.

**SCREEN INSTALLATION**

**NOTE:** Before loading the screen, raise all four wheels by turning the adjustment screws counterclockwise (CCW).

**PROCEDURE:**

- Insert screen in the outside track of frame header
- Swing bottom of screen toward the sill
- Depress bottom rollers with a flat-head screw driver
- Snap rollers over sill screen track
- Slide the screen in the closing direction within ¼" of the jamb
- Ensure the joint between the screen and jamb is uniform
- Adjust the rollers with a screwdriver, to align the screen as shown
- Adjust the top rollers to snug the screen in the top track
- Ensure the rollers operate smoothly

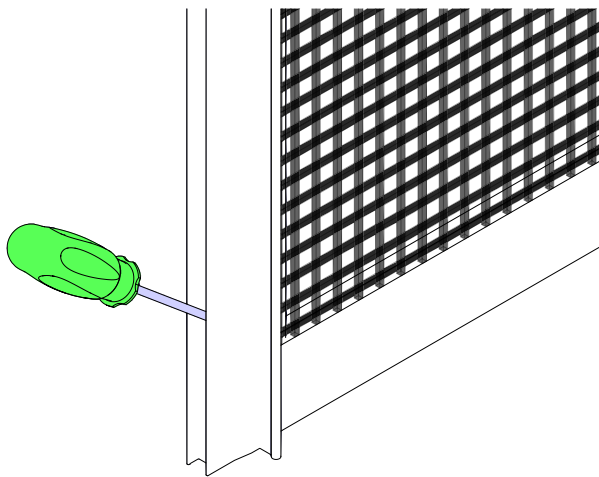


Diagram 43

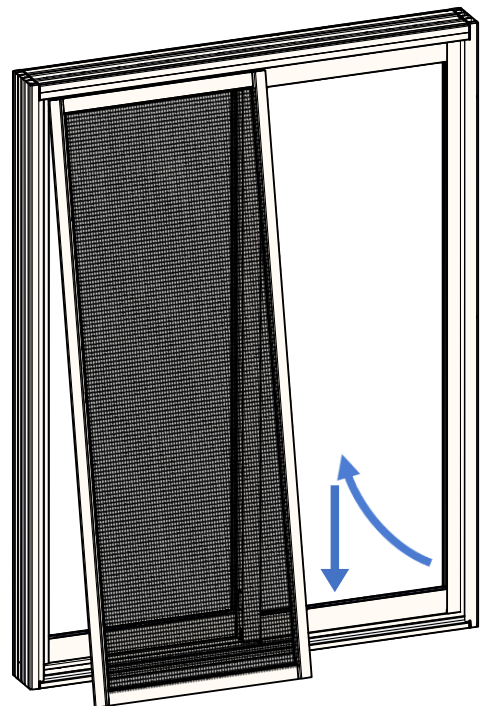


Diagram 44

**SUPPLEMENTAL INSTRUCTIONS: PRE-TEST INSPECTION CHECKLIST**

1. Confirm the sill and header are level and flat. Confirm the jambs are plumb and straight. Check the diagonal distances between opposite corners of the frame. They should be within  $\frac{1}{4}$ ".
2. If any installation holes have been drilled in the sill, they must be completely and thoroughly sealed.
3. Confirm that the orientation of the door is correct
4. Confirm the drainage is functioning but pouring approximately 4 litres of water into the interior sill track. Water should be essentially drained out through the exterior drains in approximately 45 seconds. If not, remove the fixed panel and sill track cover and remove any debris blocking the drains. Confirm that the weeper covers are in place and that they flap open and closed easily.
5. Check that the fixed panel is fully engaged into the side jamb pocket. The fixed panel rail should project past the jamb leg by:
  - a.  $1-\frac{9}{16}$ " for the Victorian and Buckingham doors
6. Close the door. Check that the weather-stripping around the moving panel is engaged with the frame. Open the door slightly and check that the vertical lock rail on the moving panel is parallel to the frame lock jamb. Check that the vertical interlocking rail on the moving panel is parallel to the interlocking rail on the fixed panel. If necessary, adjust the height of the rollers to make the rails parallel and engage the weather-stripping.
7. Adjust the lock hook so that the moving panel is held snugly when the door is locked. There is an adjustment bolt (slot screwdriver) on the face of the lock assembly.
8. In order to minimize air leaks, it is highly recommended that the fixed panel is caulked to the sill, jamb and header with a thin bead of clear silicone.

## SUPPLEMENTAL INSTRUCTIONS: MAINTENANCE

Regular cleaning and maintenance will extend the life of your Novatech patio door. It is important to follow the guidelines below to ensure that all patio door components function as intended.

### CLEANING THE GLASS:

Consumer and commercial grade cleaning products can be used to clean the glass on our patio doors. Some recommended products include:

- Windex®
- Vinegar and water mixture
- Professional glass cleaner

### CLEANING THE HARDWARE:

Do **not** use harsh chemicals or cleaners for the hardware, as it may tarnish the finish of the hardware.

- Use clean water to remove grit and grime
- Do **not** use acidic and caustic substances

### CLEANING THE DRAINAGE HOLES:

Always check for dirt and debris that might be blocking the drainage holes regularly.

- Clear drainage holes of any blockages to ensure water can drain effectively

### MAINTAINING THE SLIDING TRACK:

It is critical to clean the sliding track regularly to ensure performance. It is recommended that the owner:

- Vacuum the sill monthly
- Clear out any debris in sliding track
- Check the sliding track for any deposits that may affect smooth sliding

### CLEANING THE WEATHER-STRIP:

The weather-strip plays an important role in energy efficiency and thermal performance. Maintain it by doing the following things:

- Clean monthly
- Remove any dust and dirt from weather-strip regularly