Ultimate Double Hung G2

Standard Wood Frame Construction-Method A1

ABSTRACT: Please read these instructions in their entirety before beginning to install your Signature window product. These installation instructions demonstrate the installation of a Signature wood window in new wood frame construction using an industry approved water management system. For installation using other construction methods, such as remodeling, replacement, and recessed openings refer to “ASTM E2112-01, Standard Practice for Installation of Exterior Windows, Doors and Skylights,” for installation suggestions. Information for ASTM E2112 can be found on the ASTM website, www.astm.org.

For product specific issues visit our website at www.marvin.com, or contact your Marvin representative. When special circumstances arise, this document may not cover these instances- contact manufacturer at www.marvin.com or your Marvin representative.

Regional standard practices, environmental conditions, and codes may vary and supersede the procedures contained within. The responsibility for compliance is yours: the installer, inspector, and owner(s).

The procedures within these instructions are consistent with those used in testing to achieve the advertised DP rating.

The English language version of this Installation Instruction is the official version and shall take precedence over any translation.

Using a smartphone or similar device, scan the QR code or click here to access a playlist of relevant installation related videos.

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Hazard Notations

⚠WARNING!

Always practice safety! Wear the appropriate eye, ear, and hand protection, especially when working with power tools.

⚠WARNING!

Older homes may contain lead-based paint, which may be disturbed when replacing windows or performing renovations. Consult state or local authorities for safe handling, disposal, or abatement requirements. For information, go to www.epa.gov/lead.

⚠WARNING!

Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

⚠WARNING!

This product can expose you to chemicals including titanium oxide, which is known to the state of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

⚠WARNING!

This product can expose you to chemicals including methanol, which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

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

Installer and Builder Information

- Always provide a copy of these instructions for the current homeowner.
- Plan sizing of rough opening and clearance from exterior finishing systems to allow for normal materials shrinkage or shifting (e.g. wood structure with brick veneer; allow adequate clearance at sill). Failure to do so can void the Marvin warranty coverage.
- Refer to the Technical Installation Specifications section regarding the installation of this product. These installation requirements as well as the details in this section must be followed to achieve the advertised design press (DP) rating of this product.
- It is the responsibility of the builder, installer and subcontractors to protect the interior and exterior of windows or doors from contact with harsh chemical washes, construction material contamination and moisture. Damage to glazing, hardware, weather strip and cladding/wood can occur. Protect with painters tape and/or protective sheathing as required. Follow all guidelines regarding material use, preparation, personal safety and disposal.
- Refer to the enclosed painting and staining instructions on the last page for exterior and interior finish instructions.
- Contact your Signature supplier if you have any questions regarding product and materials used in manufacturing or questions on replacement parts.
- Please refer to the PDF version of this instruction for further information regarding best practices, installer and builder information, code, and other legal requirements. The PDF version is the official document of record.
- Attention to detail on the clearance provisions are critical to the performance and operation of the unit.

IMPORTANT

Please consult with local authorities to properly dispose and/or recycle all packaging, materials, and waste.

After Market Products

Alterations to Marvin products including window films, insulating or reflective interior window treatments or additional glazings can cause excessive heat buildup and/or condensation. They may lead to premature failures not covered under warranty by Marvin Windows and Doors.

Before purchasing or applying any product that may affect the installation or performance of Marvin windows or doors, contact the manufacturer of after-market product/glazings that are not supplied by Marvin and request written product use, associated warranties and damage coverage. Provide this information and warranties to the end user and/or building owner for future reference.

Technical Installation Specifications

The following details are specified for proper installation and for the unit to meet the advertised design pressure (DP) rating.

- Rough Opening Width: 1/4" - 1" (6-25)
- Rough Opening Height: 1/4" - 1/2" (6-13) higher than window/door frame outside measurement.
- Masonry Opening Width: 1/4" - 1/2" (6-13) higher than window/door frame outside measurement.
- Masonry Opening Height: 1/8" - 1/4" (3-6) higher than window/door frame outside measurement.

*NOTE: **Architectural Detail Manual Specifications** Rough Opening: Width 1" (25); Height 1/2" (13). Masonry Opening: Width 1/2" (13); Height 1/4" (6).*

- If using less than a nominal 2" x buck in masonry openings; the rough opening must be no more than 1/2"(13) wider and 1/4" (6) taller than the outside measurement of the frame. Installation methods are limited to Jamb Screw method using 3/16" concrete screws
- Marvin recommends the use of sloped sills on all concrete openings (either pre−cast or poured).
- **Regarding recessed masonry openings:** the window frame must not come in direct contact with masonry/concrete/concrete block. Construct

framing from treated lumber or plywood and fasten to the masonry opening jambs, header, and sill. This framing must be designed (and anchored to the opening) properly to withstand certified and advertised DP ratings for your particular unit.

- For installations in typical wood frame construction (with sheathing and building paper or air barrier material) where a continuous air barrier system is used, refer to ASTM E2112 or reference the “Continuous Air Barrier Systems” section for details on preparing the rough opening and sealing the installation.
- For installations in concrete block, or masonry construction, etc., follow local codes for sealing and water management details.

⚠ CAUTION!

Be aware that the use of sill pans and other barriers will decrease the rough opening height clearance. Adjust opening dimensions accordingly.

- Properly flash and/or seal all windows at the exterior perimeter.
- Sealants used for installation must be Grade NS Class 25 per ASTM C920 and compatible with the building exterior, window exterior surface, and flashing/water management materials.
- Flashing materials must comply with ASTM E2112-01, section 5.13 and be compatible with all materials used in installation including panning systems, air barriers and building papers, sheathing, and the window unit. **Flashing material must not contain asphalt and must be compatible with flexible PVC (vinyl) when used in conjunction with nailing fin**.
- Optional foams used for installation must be low expansion only. Foam and foam application must comply with ASTM E2212.
- Shims are required between the window frme and framing members at all locking points and at every point of attachment (excluding nailing fin and brick mould casing) as well as at all points detailed within these instructions.
- For units with flat casing install with installation brackets, structural masonry brackets, or jamb screws.
- Do not use chemically treated products for shim material. Fasteners penetrating chemically treated lumber must be a minimum of 0.90 oz/ft2 zinc hot dipped galvanized or stainless steel type 304 or 316.
- Clad window frames must not come into direct contact with chemically treated wood products

IMPORTANT

Flashing material must not contain asphalt and must be compatible with flexible PVC (vinyl) such as that found in Marvin vinyl nailing fin.

You Will Need to Supply

- Insulation
- Tape measure
- Perimeter sealant
- Sill pan flashing
- Backing material (foam backing rod)
- Low expansion foam insulation
- Flashing materials
- Weather Resistant Barrier
- Safety Glasses
- Hearing protection
- Level
- Square
- Hammer
- Composite shims
- 2" Roofing nails

Materials Used

The following materials were used to develop these instructions:

- Weather Resistant Barriers (WRB): DuPont™ Tyvek® HomeWrap and Zip System™ Wall Sheathing.

- Panning Material: DuPont™ FlexWrap NF®, Zip System™ Stretch Tape
- Flashing Materials: DuPont™ Flashing Tape (butyl) or Zip System™ Flashing Tape
- Insulation: Dow™ Great Stuff Pro™ foam insulation, loose fill fiberglass insulation
- Foam should be minimal expanding, low compression, closed cell foam and compliant with ASTM E2112-07, sec. 5.9.2.
- Sealant: OSI® Quad Pro-Series®; solvent release butyl rubber sealant or DAP DynaFlex230™
- Sealant must be compliant with ASTM C920 Grade NS Class 25
- Other Materials: DuPont™ Seam Seal Tape®, beveled siding product, and various fasteners noted within

Rough and Masonry Opening Requirements

1. Rough openings (RO) should be 1/2" (13) higher and 1" (25) wider than the outside measurement of the frame (1/2" on each side of the frame). See Figure 1.

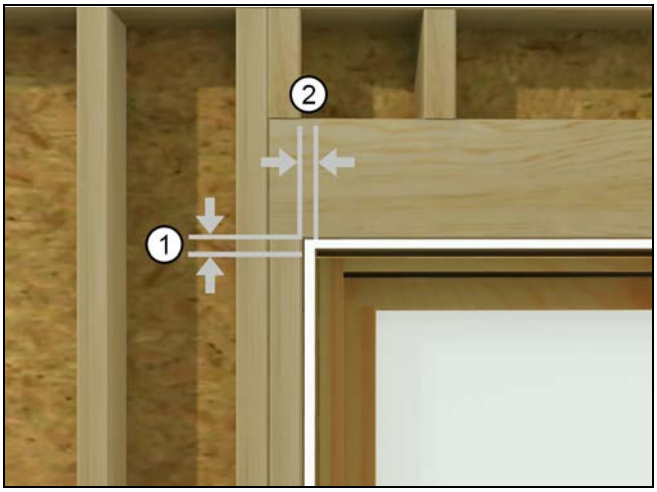

Figure 1

1	1/2" (13)
2	1/2" (13)

NOTE: When framing rough opening, care should be taken to ensure the sill plate is level and the opening is square, straight and plumb.

2. On shapes such as polygons, round tops, and octagons, make sure there is proper bracing. See Figure 2.

Figure 2 Typical rough opening.

IMPORTANT

Using an optional beveled sill wedge or other sill panning to create a positive drainage plane will affect clearance between your window and the header framing. Adjust R.O. height as necessary to maintain a proper gap.

3. Masonry openings (MO) should be 1/2" (13) wider than the outside measurement of the frame and casing and 1/4" (6) higher than the outside measurement of the frame or casing. See Figure 3.

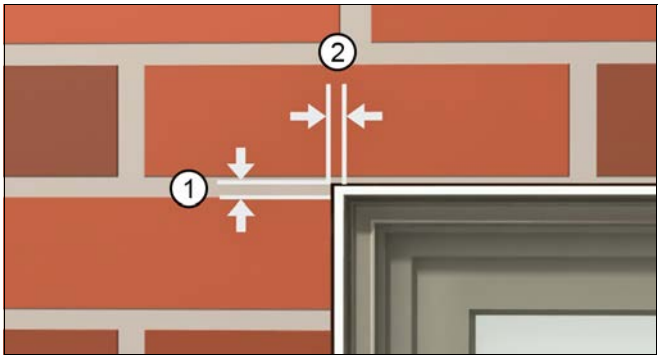

Figure 3 Typical Masonry Opening

1	1/4" (6)
2	1/4" (6)

NOTE: On standard wood frame construction with brick veneer, make sure there is at least 1/2" (13) between bottom of window sill (or eventual placement of the window) and the top row of brick to avoid "brick bind". See Figure 4.

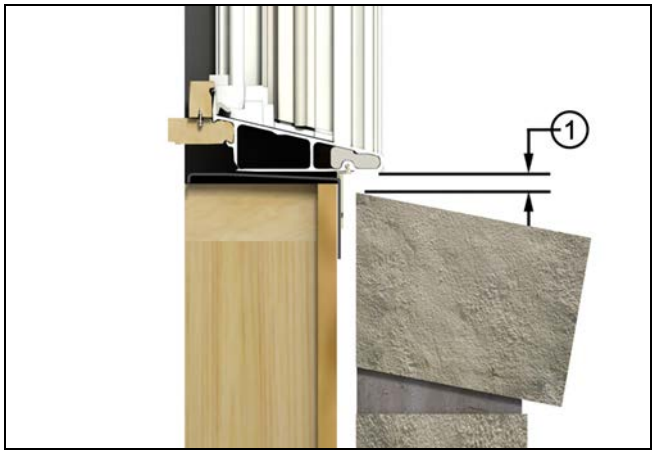

Figure 4 Avoid brick bind, maintain 1/2" gap

1	1/2"

⚠ CAUTION!

If the previous conditions are not met, the installer must take corrective actions to alter the opening(s) before proceeding. It is also essential that the sheathing behind the wall be a solid surface to ensure that the unit can be secured firmly to the wall.

Remove Packaging

Using a smartphone or similar device, scan the QR code below or click here to play a video of this procedure.

1. Remove exterior plastic wrap and cardboard protectors.

2. Remove shipping clips by pulling upward to release them. See Figure 5.

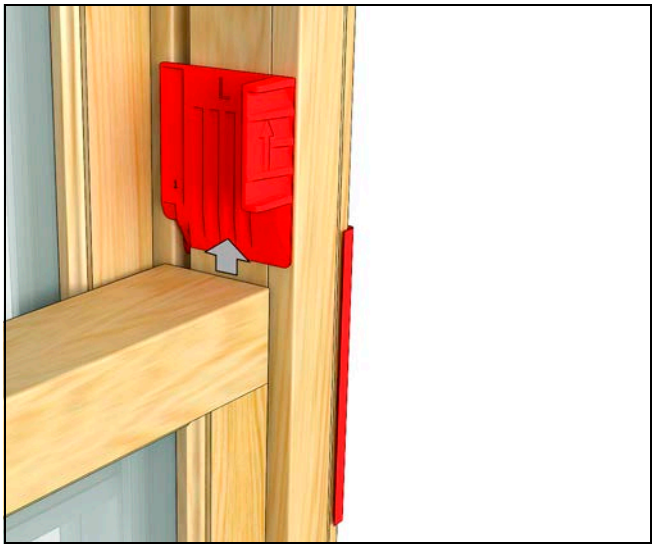

Figure 5

3. Rotate handle to 135° to unlock, then push center button to allow handle to rotate to 180° for tilting. See Figure 6.

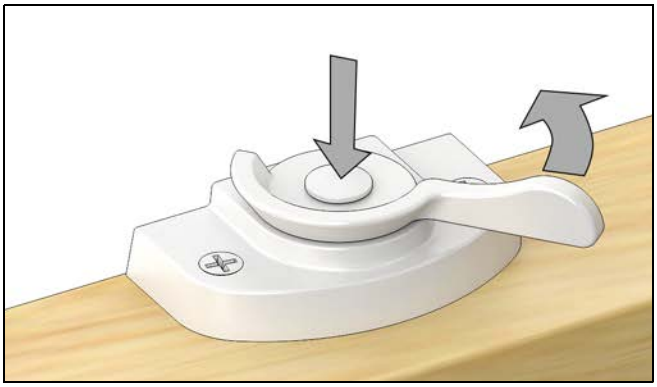

Figure 6

4. Tilt the sash out, then remove shipping tube assembly and tilt sash back into frame with center button depressed and handle rotated to 180°. See Figure 7

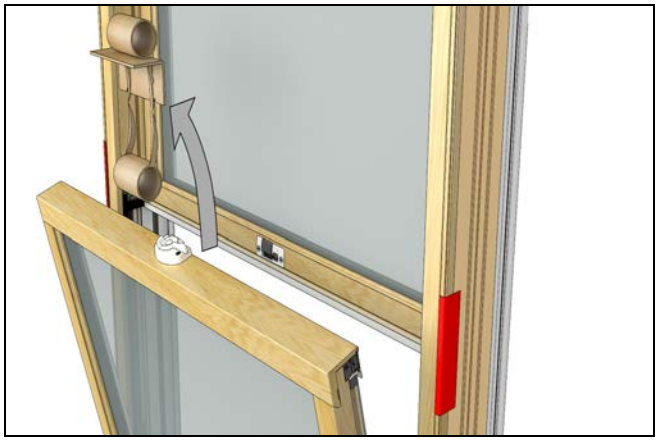

Figure 7

5. Raise the bottom sash and remove the foam blocks from the sill.See Figure 8.

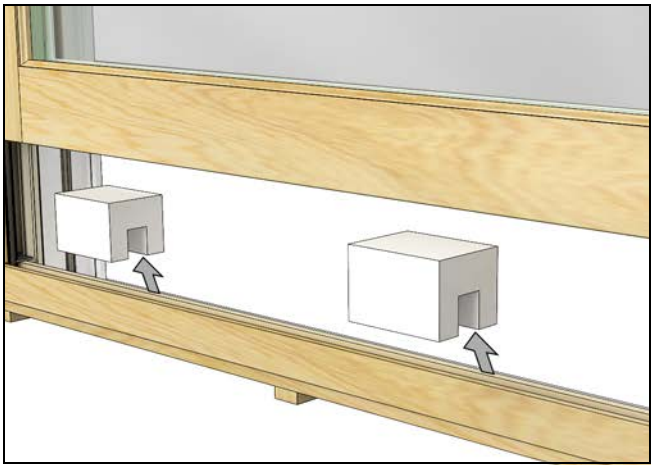

Figure 8

6. Inspect the unit for any hidden damage and report it immediately to your Marvin representative. Provide the customer service number etched on one of the top corners of the glass. See Figure 9.

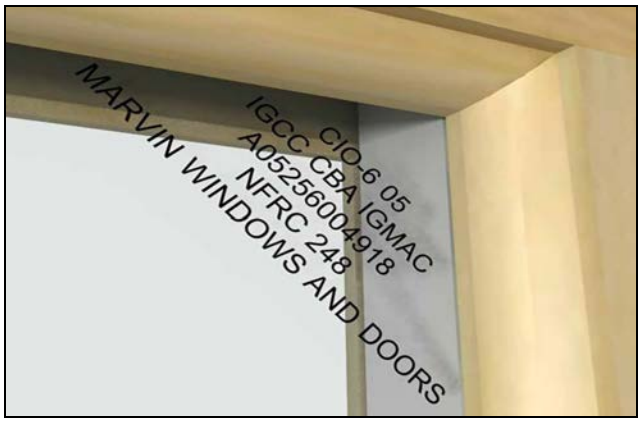

Figure 9

Rough Opening Preparation

Cutting the Weather Resistive Barrier (WRB) and Pan Flashing

NOTE: This does not apply to self-adhering WRB sheathing systems.

1. Make horizontal cuts to the Weather Resistive Barrier (WRB) across the top and bottom of the Rough Opening. Make a vertical cut down the center of the RO. then make 45 degree cuts away from the corners of the top of the RO. See Figure 10.

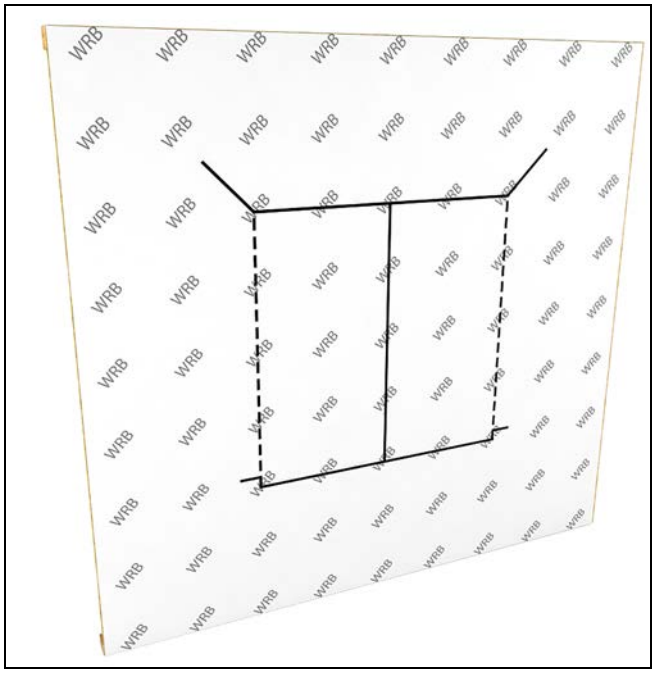

Figure 10

2. Trim up from the bottom corners about 2" (51) and then make an additional horizontal cut about 3 1/2" (89) wide. See Figure 11.

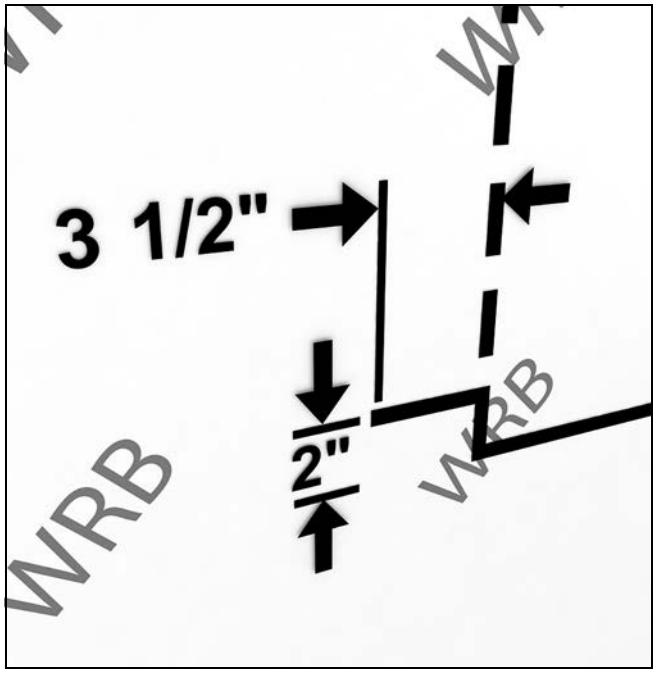

Figure 11

3. Flip the top up and side flaps away and tack temporarily. See Figure 12.

Figure 12

4. Optional: Add a continuous "Sill Wedge" out of cedar siding or similar water resistant material to create a

positive drainage slope. Glue it to the RO sill with two beads of adhesive and screw in place. See Figure 13.

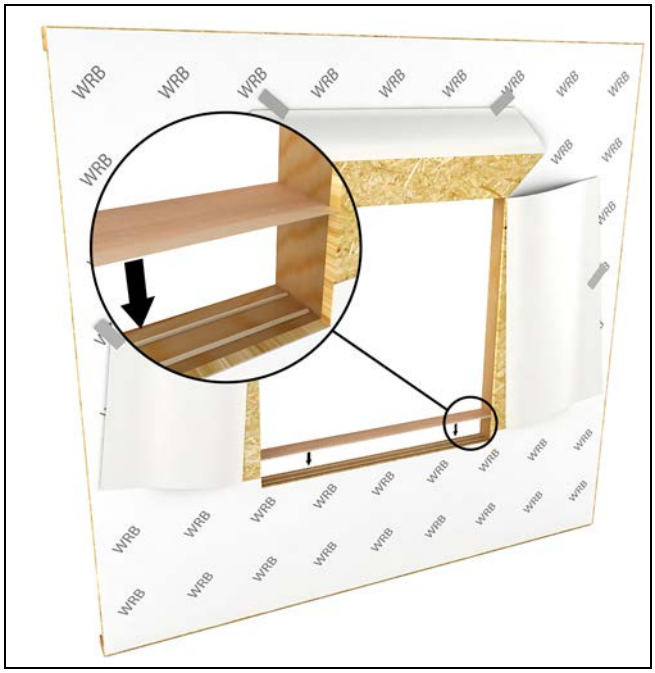

Figure 13

NOTE: This will affect your RO height, plan accordingly.

5. TYPE III Sill Pan Flash: Apply self sealing flexible membrane slope. See Figure 14.

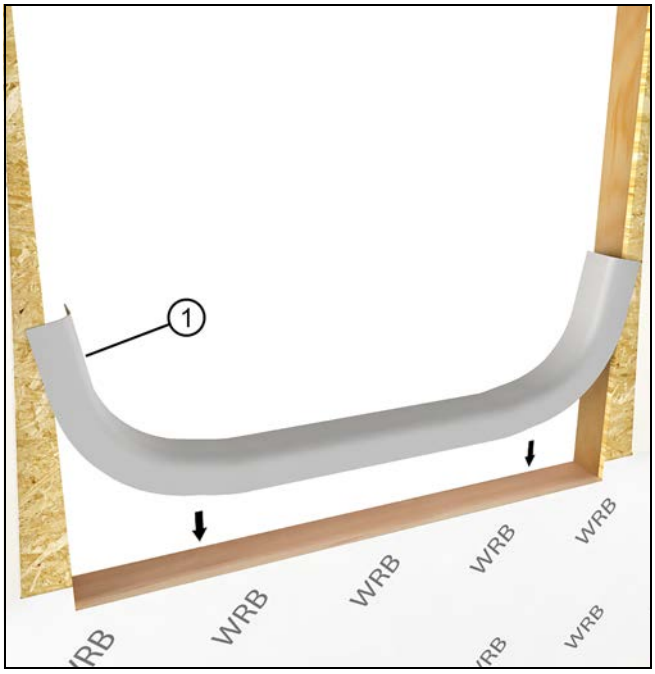

Figure 14

1	Flexible flashing membrane

NOTE: Some situations call for an upturned leg at the interior. If that is the case, do so using the excess sill flashing membrane to the interior.

6. Wrap side flaps to the interior and staple in place about 1 1/2" (38) from the interior edge of the opening. Cut the excess off near the staple so that a 1" -1 1/2" (25-38) strip of bare wood is exposed. Tape this edge with seam seal tape. See Figure 15.

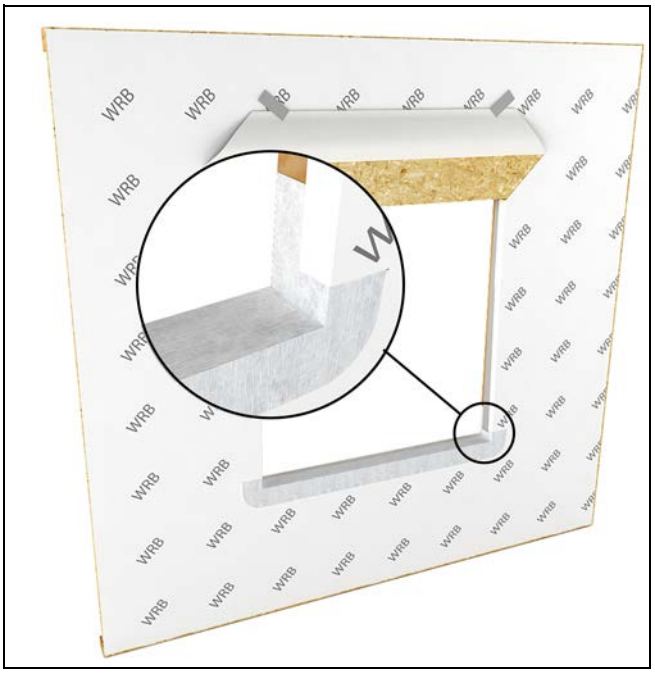

Figure 15

7. Apply seam seal tape over the corners. Place plastic or composite shims at the ends and in the middle of the RO to counter the slope of the sill wedge and support the unit. Fasten with adhesive or finish nails. If using finish nails, place adhesive under shim where the nail will penetrate. See Figure 16.

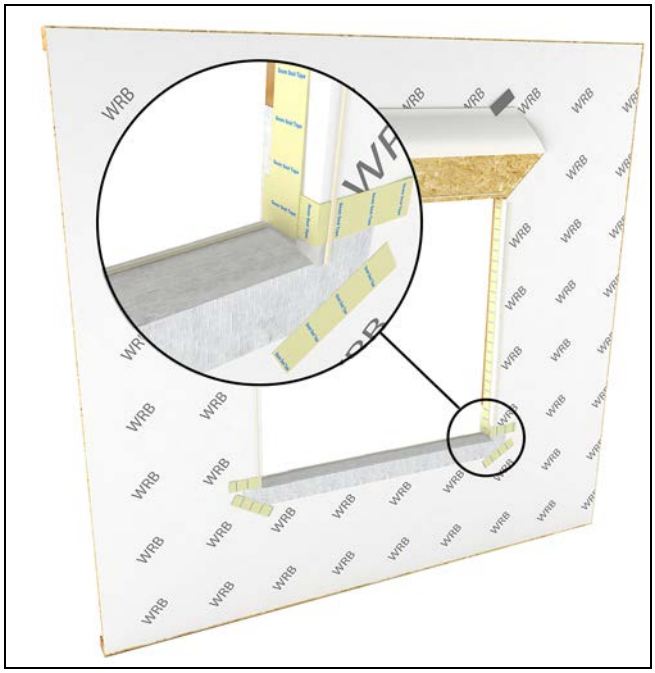

Figure 16

Nailing Fin Installation

Using a smartphone or similar device, scan the QR code below or click here to play a video of this procedure.

NOTE: On units with optional aluminum nail fin: manually fold out nail fin until it is perpendicular with the frame Take care during handling and installation not to damage the corner gasket. After unit is secured in the opening for supplied drip cap to "L" shape and install per unit flashing instructions.

1. Center the window in the opening. Level at the sill and plumb the frame (interior/exterior). Shim under the jambs to bring to level if necessary. See Figure 17.

Figure 17

2. Once square, fasten the lower corner of the nailing fin and recheck for square. If necessary remove the nails and adjust shims until the unit is square. See Figure 18.

Figure 18

⚠ CAUTION!

Proper shimming is extremely important. Under-shimming or over-shimming will result in bowed jambs and or head jamb. Both conditions can contribute to improper window operation.

3. From the interior, square the frame in the opening by installing shims between the jamb and framing. Shim 4"-6" (102-152) from the head jamb and sill. Measure the diagonals and adjust shims until the unit is square in the opening. See Figure 19.

Figure 19

4. Once level, tack the jamb nailing fin with 2" (51) roofing nails within 4" (102) from the head jamb (or fasten top brackets if applicable, follow instructions sent with brackets). See Figure 18.

Figure 20

5. Measure at head jamb, center of unit, and sill to make sure all dimensions are equal. If they are not, you will have to adjust the shims accordingly. See Figure 21.

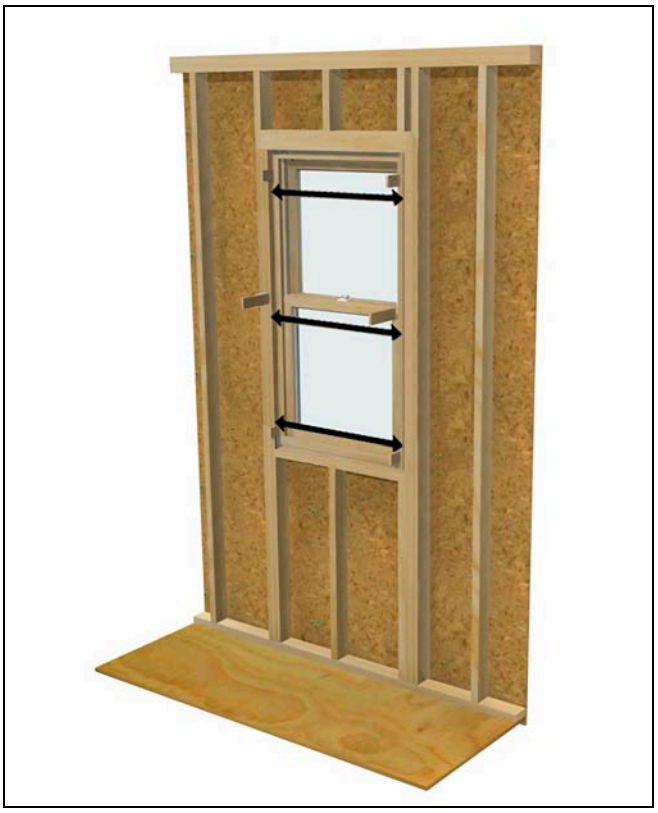

Figure 21

6. On operating units make sure it is operable. If not, make adjustments to the shims.

Tip

On operating units, one way to make sure that the unit is installed square is to check the reveal (gap) between the operating sash and the frame. An even reveal around the entire sash generally means a square unit and will ensure smooth operation.

7. Complete fastening of the nailing fin around the perimeter of the unit with 2" (51) roofing nails 4" (102) from each corner and spaced every 6"- 8" (152-203) on center.

Through Jamb Fastening Method

Using a smartphone or similar device, scan the QR code below or click here to play a video of this procedure.

Operator units larger than CN4040 and CW Performance Grade require through jamb installation. For sash removal instructions please refer to Operating Sash Removal on page 30

NOTE: For units installed with installation screws through the jambs, be sure to shim at each fastening location to avoid bowing/distorting jambs.

1. Remove the interior wood covers using a flat blade screwdriver, carefully pry the wood cover loose from the recess on the top side of the jamb receiver assembly. See Figure 22.

Figure 22

2. Once the cover is released, carefully pull down on it to remove it from the end of the head jamb parting stop. See Figure 23.

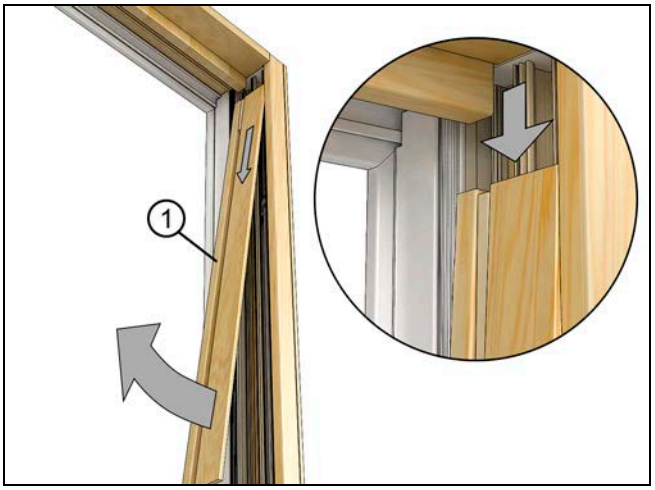

Figure 23

1	Interior wood jamb cover

3. Using a pliers, remove jamb receiver assembly. See Figure 24.

Figure 24

4. Using screwdriver, pry behind aluminum/vinyl mid cover assembly to release it from frame. See Figure 25.

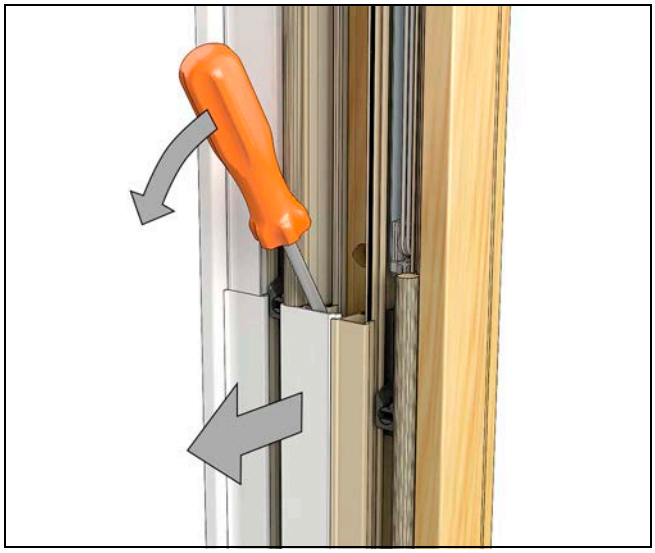

Figure 25

5. Install jamb receiver assembly onto jamb, making sure that it is properly aligned with alignment hole in jamb and pressed firmly against jamb. See Figure 26.

Figure 26

6. Ensure unit is centered in opening, level, and plumb. There are pre-marked installation holes. Properly shim the unit behind the pre-marked installation holes and behind the jamb receiver assembly.

7. Secure the frame to the opening using #8 X 3” screws through the pre-marked installation holes and through the center of the jamb receiver assembly. See Figure 27.

Figure 27

8. Units with performance brackets, fasten with screws in the center of brackets. See Figure 28.

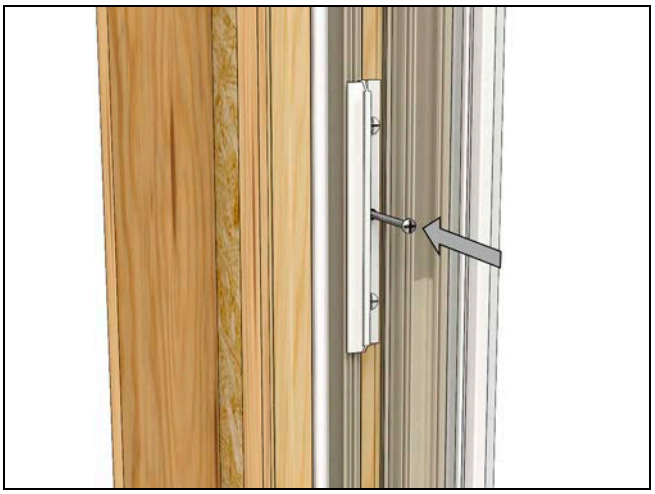

Figure 28

9. For Commercial Performance (CW) and operating windows wider than FS 59 1/4" (CN54) or taller than FS 59 1/4" (CN56): Install a #8 x 3" screw at the center through the head jamb. See Figure 29.

Figure 29

1	#8 x 3" screw

10. Replace aluminum/vinyl mid cover and press it firmly on the jamb ensuring that it is fully seated along its entire length.

11. Replace wood jamb cover and press firmly in place, being sure that it properly seated behind wood jamb liners. Install the top sash first, then the bottom sash. Reverse the procedures found in the section on Operating Sash Removal on page 30.

Optional Jamb Jack Installation

Using a smartphone or similar device, scan the QR code or click here to play a video of this procedure.

Operator units larger than CN4040 and CW Performance Grade require through jamb installation. For sash removal instructions please refer to Operating Sash Removal on page 30

GRK Top Star™ jamb jack fasteners can be used with the jamb receiver on these windows.

1. Remove bottom sash. (For sash removal instructions, please refer to Bottom Sash Removal on page 30). Lower the top sash (no need to remove). Using a 5/16" bit, drill out the center of the jamb receiver and jamb wood. See Figure 30.

Figure 30

2. Using GRK's Top Star™ Crown and T15 Star bit system install the Top Star™ fastener into the jamb/ jamb receiver. Using Torx bit, adjust the jamb position as needed. See Figure 31.

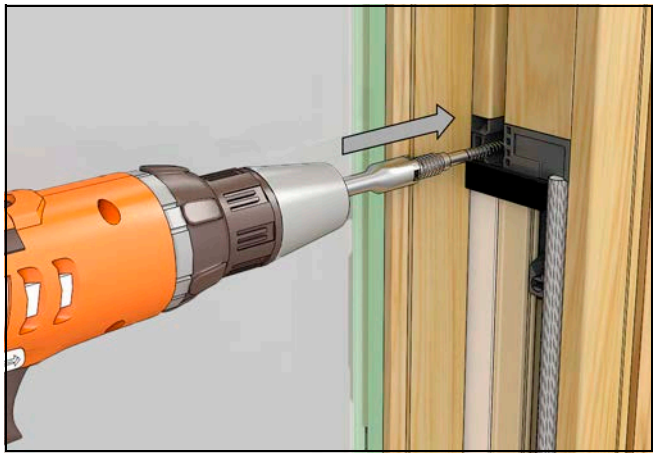

Figure 31

3. Install the bottom sash.

Round Top Installation

1. All Round Top picture and transom units are installed with screw through jamb only. Operator units with a frame size of CN4040 (45 1/4" (1149) x 87 1/2"(2222)) or less can be installed with nailing fin method. Remove packaging and shipping clip. Refer to the Remove Packaging on page 8.

Figure 32

2. Remove the interior wood cover using a flat blade screwdriver, carefully pry wood cover loose from provided recess on top side of jamb receiver. See Figure 33.

Figure 33

3. Once cover is released, carefully pull down on it to remove it from the head jamb parting stop. See Figure 34.

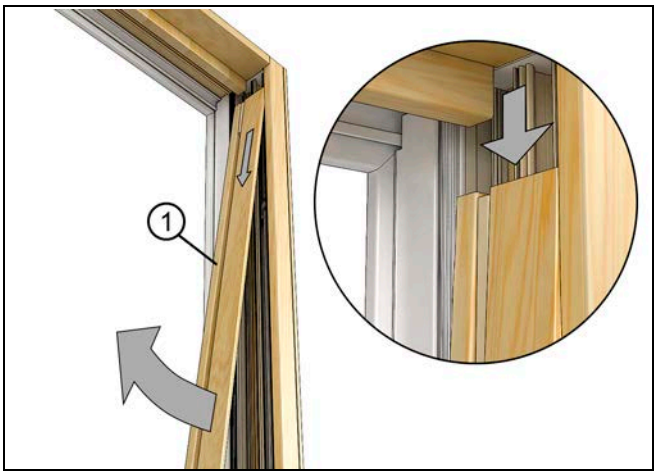

Figure 34

4. Using a pliers, remove jamb receiver. See Figure 35.

Figure 35

5. Using a screwdriver, pry behind aluminum/vinyl mid-cover assembly to release it from frame. See Figure 36.

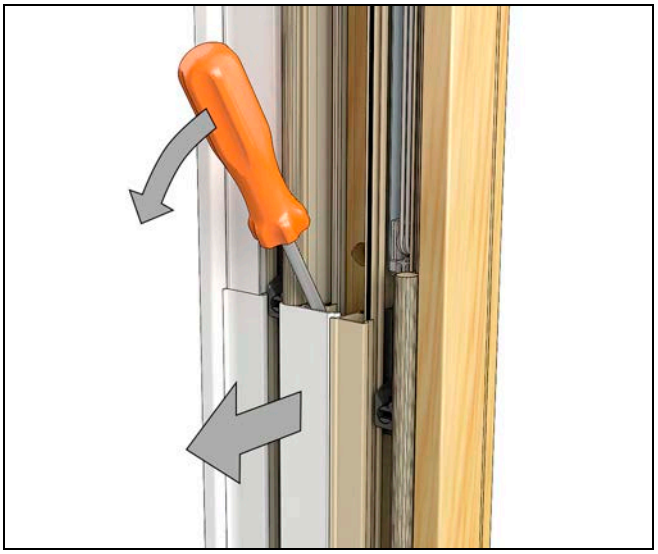

Figure 36

6. Install jamb receiver assembly onto jamb, making sure that it is properly aligned with alignment hole in jamb and pressed firmly against jamb. See Figure 37.

Figure 37

7. Remove the head jamb stop. See Figure 38

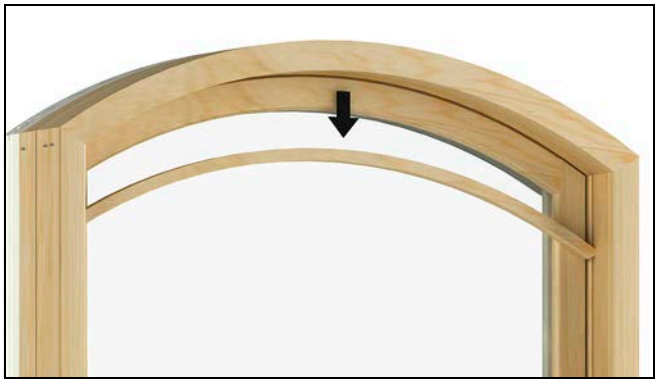

Figure 38

8. *Center the window in the opening.* Jambs need to be straight and level. Apply #8 X 3" screws until snug through the pre-marked holes, do not over tighten, to permanently secure the unit to the framing members. See Figure 39

Figure 39

9. On Round Top CW units: Apply #8 X 3" screws through the head jamb. See Figure 40.

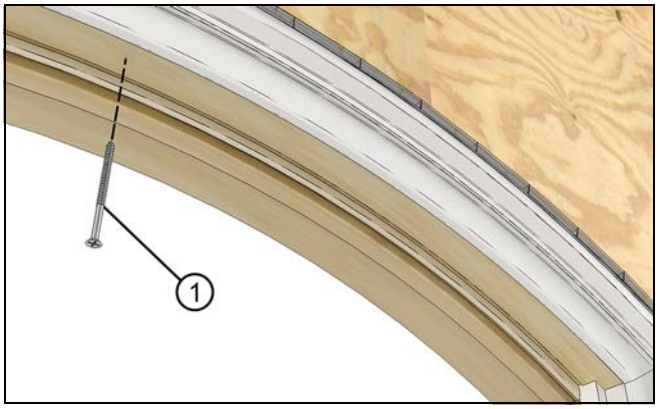

Figure 40

1	#8 x 3" screw

10. Operator units that have performance brackets require a screw through center of each lower jamb bracket(s). See Figure 41.

Figure 41

11. Take diagonal measurements to ensure that the frame is square. See Figure 42.

Figure 42

12. Shim and secure at the apex of the unit frame. See Figure 43.

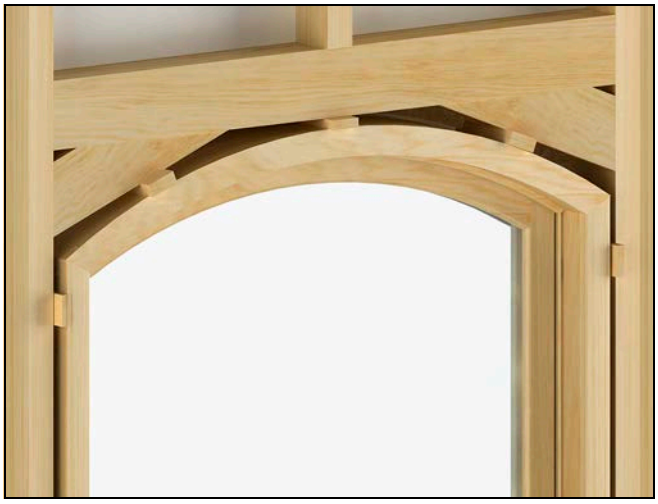

Figure 43

13. Replace the wood cover and press firmly in place, properly seating the cover behind the wood jamb liners. Re-install top and then bottom sash, refer to Operating Sash Removal on page 30.

Other Installation Methods-Casing, Clips, Brackets

ATTENTION

For units installed with masonry clips or installation brackets. Bend bracket around framing member and attach with the #8 x 1 5/8" screws. Angle screws approximately 15° from the window. Always shim above or below brackets.

1. Depending on construction method or wall type, you may need to modify the clip/bracket to fit the opening. Fastening holes should be no more than 1/4" from the bend in the bracket. If necessary, drill two 5/32" (3) holes in the bracket. See Figure 44.

Figure 44

2. On Units with Flat Casing: must be installed using installation brackets, masonry clips or screw through jamb. For more details on structural fastening, refer to the structural installation instructions found online at www.marvin.com or contact your Marvin representative. See Figure 45

Figure 45

3. On Units with Space Mull Assemblies: must be anchored with #8 sheet metal screws or structural masonry brackets within 4" (102) of each side of the space mull on both ends of the mull. When using screws, make sure there is 1 1/4” (32) or more penetration into the framing material.

Final Installation Procedures

Flashing the Installation

IMPORTANT

Nailing fin is not designed to be a weatherproof flashing.

IMPORTANT

Follow the flashing tape manufacturer's recommended instructions for attaching to the building materials under the WRB. For example, priming wet or frozen wood, application temperature, etc.

1. On units that use nailing fin, apply nailing fin corner gaskets. Follow the instructions on the back of the gasket. See Figure 46.

Figure 46

2. If using the factory applied vinyl drip cap, make sure it extends about 1/8" (3) beyond the edge of the window on each side.

3. Apply a bead of sealant beneath the vinyl drip cap along the top of the head jamb as shown in Figure 47

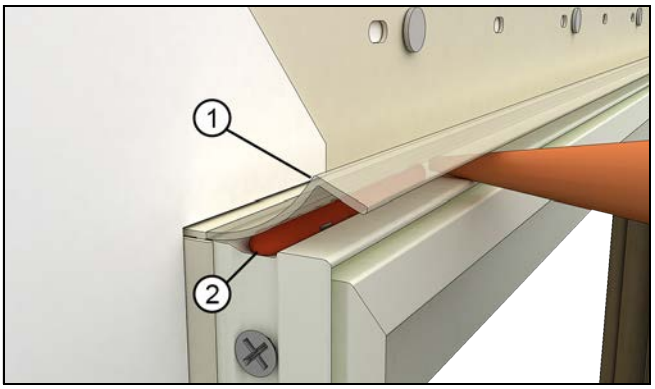

Figure 47

1	Vinyl drip cap
2	Sealant

4. Install a rigid head flash. Seal both horizontal and vertical legs of the rigid head flash. See Figure 48.

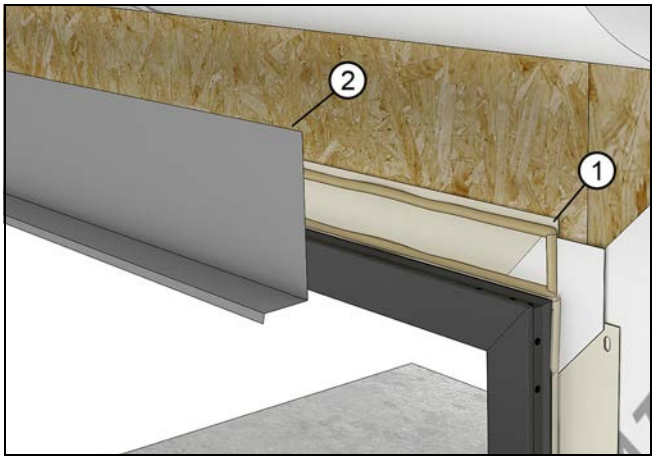

Figure 48

1	Rigid head flash
2	Sealant

5. Optional Skirt: Install an optional "skirt" in applications with exposure to wind driven rain/climate. Use flashing material or a 12" (305) strip of WRB and attach to the sill of the window with seam seal tape or flashing tape. See Figure 49.

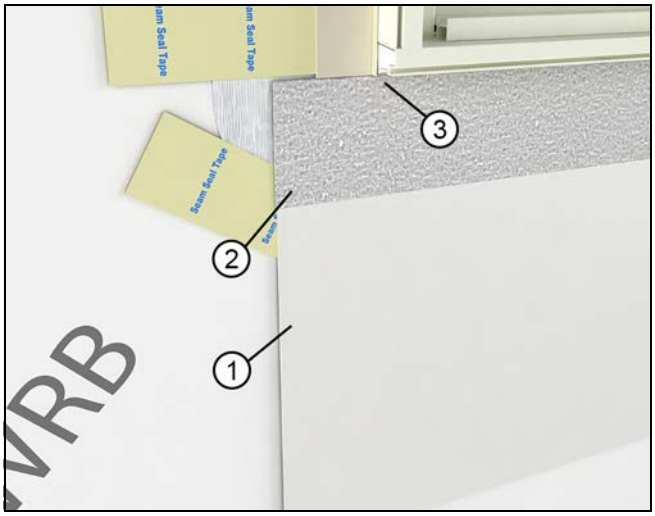

Figure 49

1	Skirt (WRB material or other)
2	Adhesive tape
3	Attached to sill of window

6. Lap vertical strips of adhesive flashing tape onto the unit and out over the WRB. Make small diagonal cuts at the head jamb as in Figure 50 to allow the membrane to fold back onto the exterior and frame.

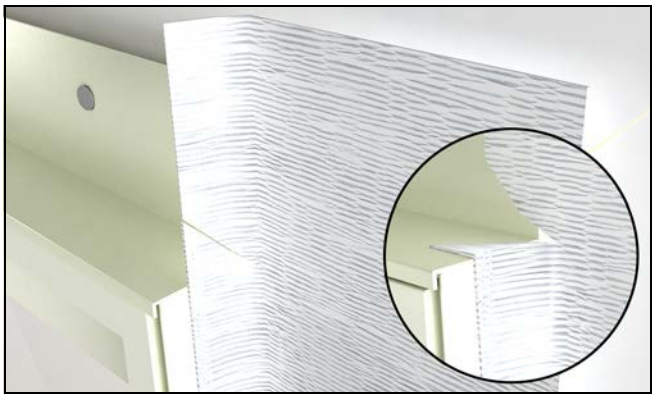

Figure 50

7. Install another layer of adhesive membrane lapping onto the head jamb of the unit and over the sheathing. The membrane flashing at the head jamb should extend and cover the flashing previously installed at the jambs. Make relief cuts and fold down so that it wraps around the jamb See Figure 51 and Figure 52.

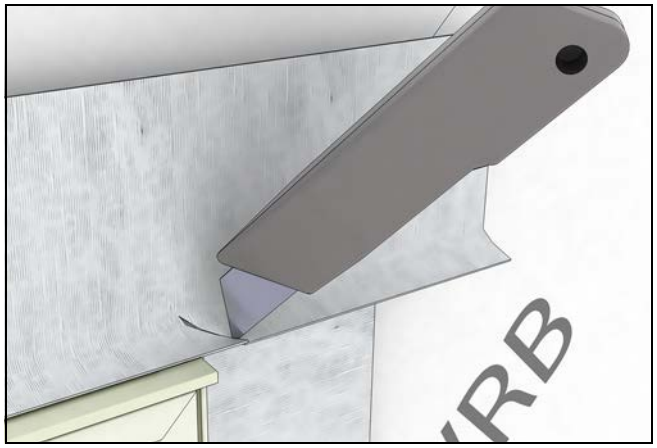

Figure 51

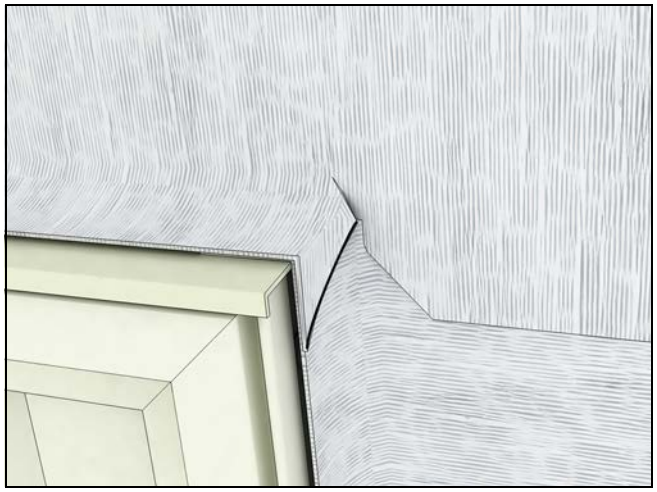

Figure 52

8. Tape the top edge of the head jamb flashing with seam seal tape. See Figure 53.

NOTE: This does not apply to self adhered WRB.

Figure 53

9. Seal the ends of the rigid head flash by injecting sealant at each end. See Figure 54.

Figure 54

10. Seal the ends of the vinyl drip cap or rigid head flash, by injecting sealant at each end. See Figure 55.

Figure 55

11. Fold the head jamb WRB down over the head jamb flashing. Apply seam seal tape over the diagonal cut in the WRB. Make sure the seam seal tape laps onto the unit or casing. Tape any seams and fasteners directly above the unit with seam seal tape. See Figure 56.

NOTE: This does not apply to self adhered WRB.

Figure 56

12. On Round Top units, flash the head jamb using a flexible membrane.

Figure 57

Insulating and Sealing the Installation-Nailing Fin

We recommend two ways of insulating and sealing the rough opening cavity. Both follow the principle that stopping air intrusion will aid in managing water intrusion into the RO.

1. Loose Fill Fiberglass Insulation. Insulate the RO cavity with loose fill fiberglass insulation. Install a backer rod and sealant at the interior plane of the RO to create a continuous air seal. See Figure 58.

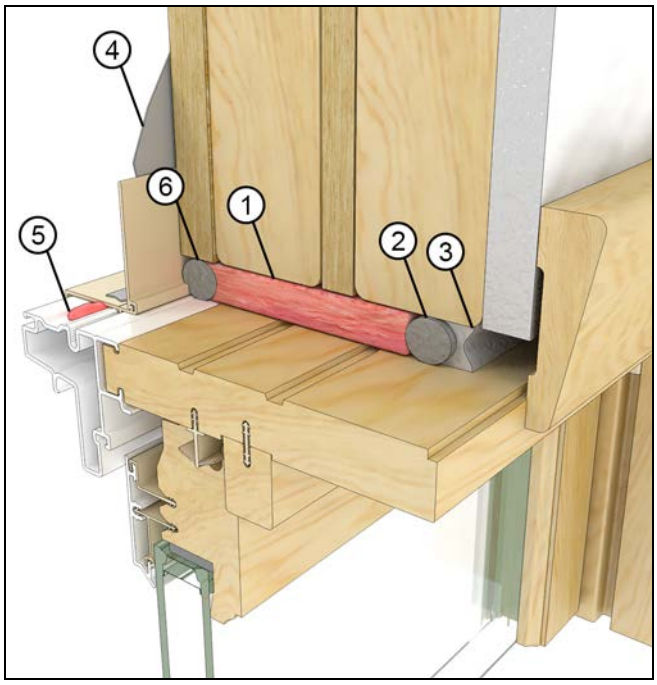

Figure 58

1	Loose fill fiberglass insulation
2	Backer rod
3	Continuous air seal (sealant)
4	Flashing
5	Sealant underneath drip
6	Backer rod

2. Low Expansion Foam. Install a backer rod at the exterior plane of the RO. Apply a low expansion/low compression closed cell foam in the cavity. Install a backer rod and sealant at the interior plane of the RO to create a continuous air seal. See Figure 59.

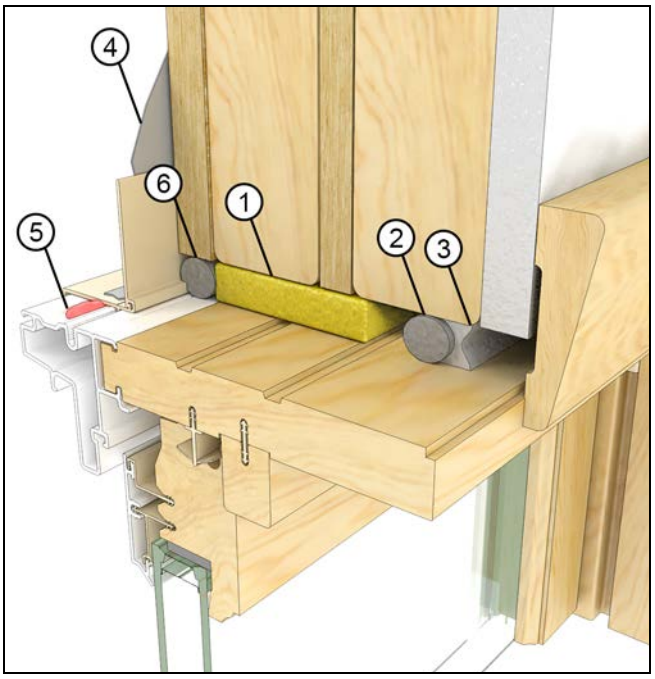

Figure 59

1	Low expansion foam
2	Backer rod
3	Continuous air seal (sealant)
4	Flashing
5	Sealant underneath drip cap
6	Backer rod

Insulating and Sealing the Installation-Casing

We recommend two ways of insulating and sealing the rough opening cavity. Both follow the principle that stopping air intrusion will aid in managing water intrusion into the RO.

1. Loose Fill Fiberglass Insulation. Insulate the RO cavity with loose fill fiberglass insulation. Install a backer rod and sealant at the interior plane of the RO to create a continuous air seal. See Figure 58.

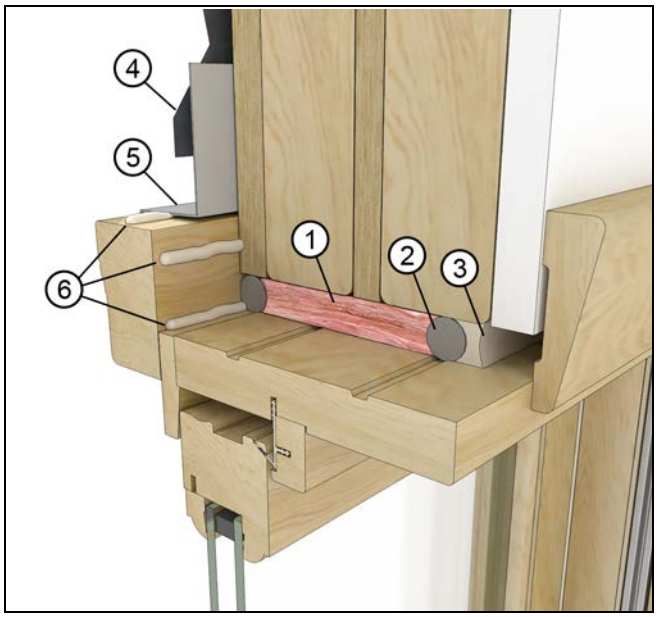

Figure 60

1	Loose fill fiberglass insulation
2	Backer rod
3	Continuous air seal (sealant)
4	Flashing
5	Rigid head flash
6	Sealant

2. Low Expansion Foam. Install a backer rod at the exterior plane of the RO. Apply a low expansion/low compression closed cell foam in the cavity. Install a backer rod and sealant at the interior plane of the RO to create a continuous air seal. See Figure 59.

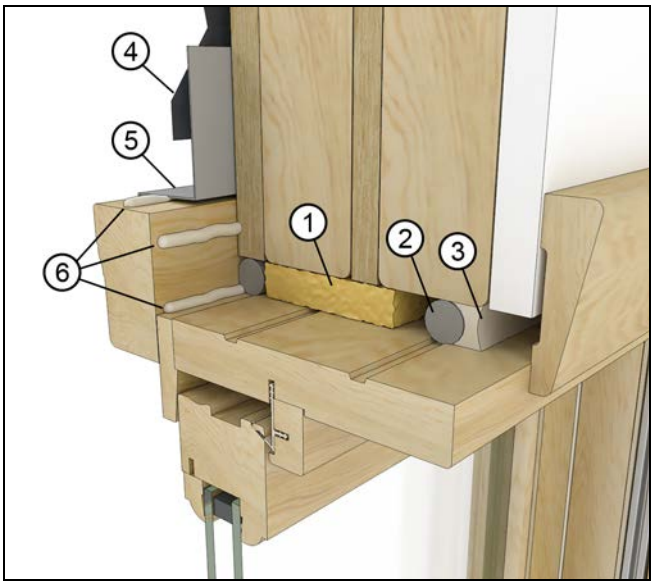

Figure 61

1	Low expansion foam
2	Backer rod
3	Continuous air seal (sealant)
4	Flashing
5	Rigid head flash
6	Sealant

Exterior Sealing Procedures

1. For ALL applications: Once the exterior finish such as siding or brick veneer is installed, apply bead of sealant between the finish and the frame exterior or casing along the sides. Apply additional beads approximately 1"- 2" (25-51) at the ends on top of the drip cap. Use a backer rod when necessary. See Figure 62 and Figure 63.

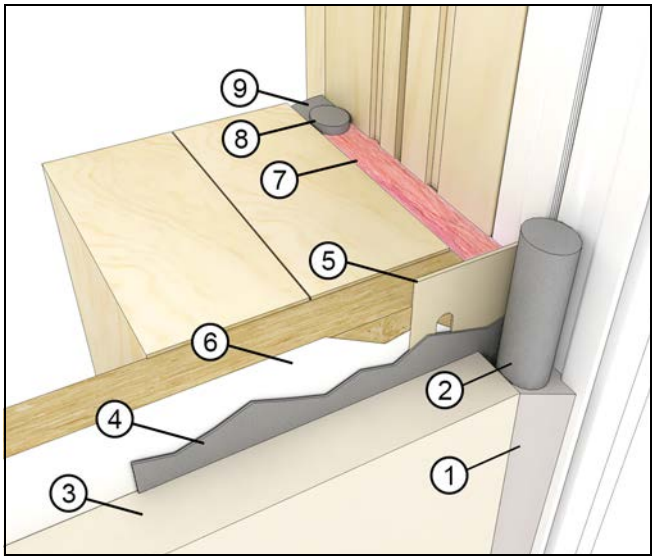

Figure 62

1	Exterior sealant
2	Backer rod
3	Exterior cladding/finish
4	Flashing
5	Nailing Fin
6	Weather resistive barrier
7	Insulation
8	Backer rod
9	Interior air seal

Figure 63 Apply sealant between window and exterior finish at head jamb.

⚠ CAUTION!

Perimeter sealant must be Grade NS Class 25 per ASTM C920 and compatible with the window product and the finished exterior(s) of the building. Using improper sealant could result in sealant failure casing air and water infiltration.

Interior Trim

1. When installing interior trim, keep fasteners between the groove in the jamb liners and the exterior of the frame. Keep the fastener about 1 3/16" (29) away from the interior edge of the interior jamb liner. See Figure 64.

IMPORTANT

Placing fasteners to the interior of the jamb liner groove could result in damage to the balance tubes and restrict or eliminate movement on operable sash.

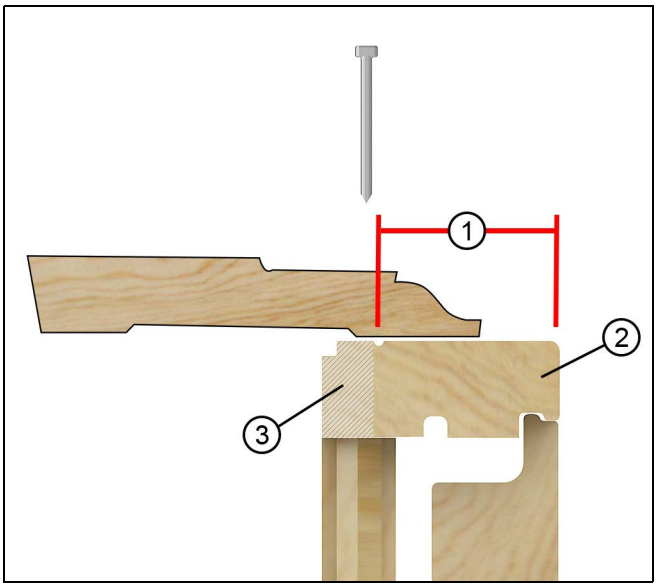

Figure 64 Keep trim fasteners to the outside of the liner kerf.

1	1 3/16" (Do not nail in this area)
2	Jamb liner
3	Nail in this area

Mullion Trim

1. Install mullion trim after interior trim or casing is applied. Be sure to use nails and staples that are no longer than 3/4” (19). Place fasteners at least 1 3/16" (29) from the edge of interior jamb liner. See Figure 65.

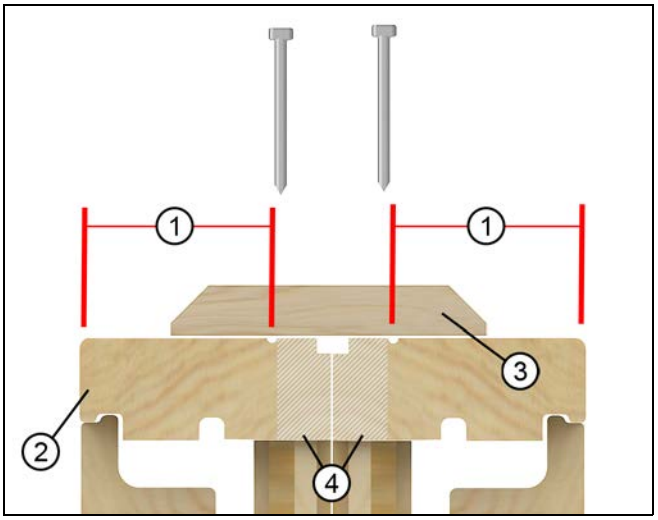

Figure 65

1	1 3/16" (Do not nail in this area)
2	Jamb liner
3	W1065 Mull trim
4	Nail in this area

Sash Shipped Separate-Single Hung

1. Remove exterior single hung covers with flat screw driver. See Figure 66.

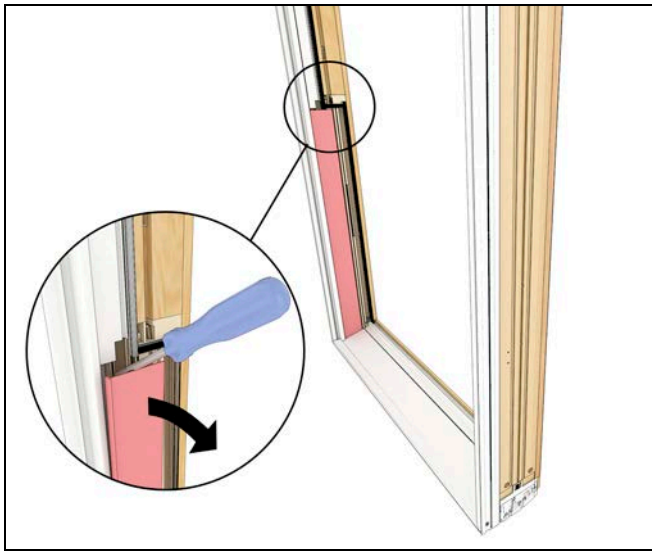

Figure 66

2. Pull down and lock the clutches. See Figure 67.

Figure 67

3. Ensure that the clutches are level with one another prior to installing the top sash. See Figure 68.

Figure 68

4. Install the top sash and raise it to its fullest extent. See Figure 69.

Figure 69

5. Snap the exterior single hung covers into place. For ease of installation, slide the top of the exterior single hung cover behind the top sash.

6. Install the bottom sash.

Sash Shipped Separate-Transoms

You Will Need to Supply:

- Drill
- Sealant
- Caulking Gun
- #6 x 1 5/8 trim head screws

1. Place the bottom of the sash into the frame and tip into place until sash is seated against the exterior stop. The sill bracket will fit into the groove in the bottom of the sill. See Figure 70.

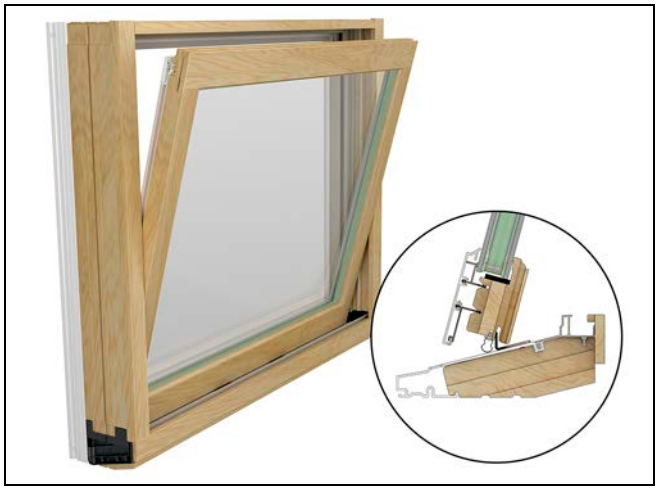

Figure 70

2. Apply a 3/8” (10) bead of sealant between the sash and corner key continued around to the corner key and sill joint as shown in Figure 71. Tool the sealant into the joinery areas.

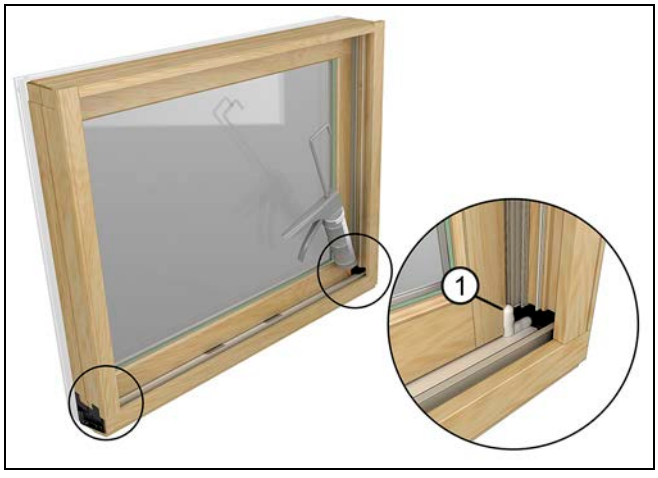

Figure 71

1	Sealant

3. Fit the foam sill filler block between the sash and the sill thermal break, note the angle of the foam block matches the angle of the sill. See Figure 72.

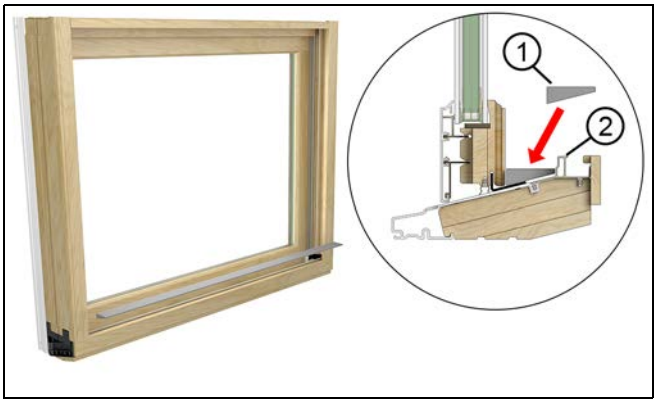

Figure 72

1	Foam sill filler block
2	Thermal break

4. Fit the wood sill filler block over the foam block and thermal break. See Figure 73.

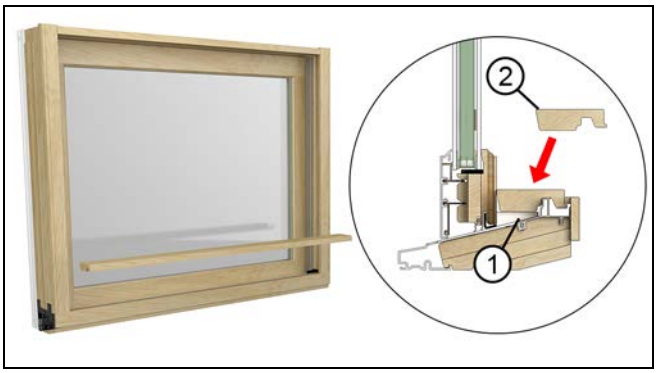

Figure 73

1	Foam block
2	Wood sill filler block

5. Install the side stops that barb into the jamb. Rotate the stop around the jamb liner and seat the stop with a rubber mallet. See Figure 74

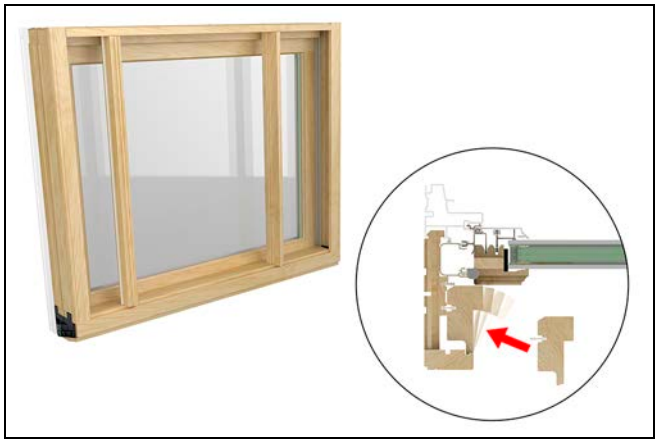

Figure 74

6. Insert the head jamb parting stop into the head jamb seating the barb on the stop into the kerf. See Figure 75.

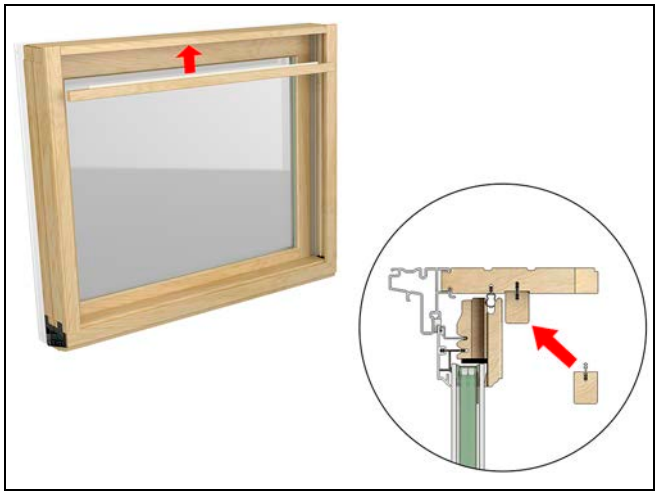

Figure 75

7. For IZ3 Transoms, drive #6 x 1 5/8" trim head screws through the parting stop and into the head jamb. Space the screws 2-4" (51-102) from the ends and 6-8" (152-203) on center. See Figure 76.

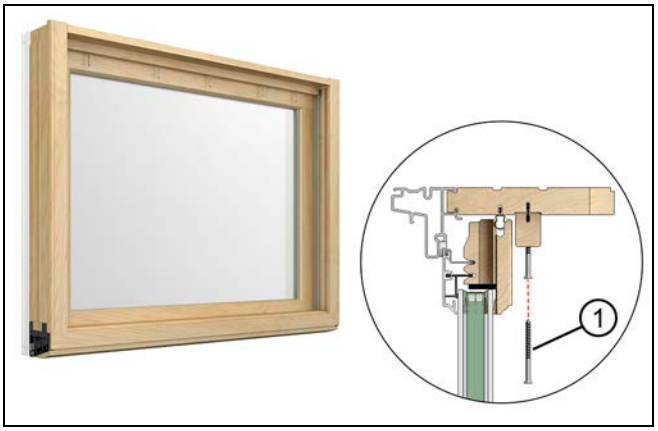

Figure 76

1	#6 x 1 5/8" trim head screw

Sash Shipped Separate-Picture Windows

Large picture units require screws that go through the sash and into the exterior aluminum covers of the window. Sash shipped separate units will have pre-drilled holes for sash installation, these do not take the place of jamb installation screw.

1. Place the bottom of the sash into the frame and tip into place until sash is seated against the exterior stop.See Figure 77

Figure 77

2. Fasten sash to frame with supplied #8 x 1-5/8" screws in each pre-drilled hole. Place the bottom of the sash into the frame and tip into place until sash is seated against the exterior stop. See Figure 78.

Figure 78

3. After the sash has been secured to the frame, install the jamb and head jamb stops by placing the barbed side of the stop into kerf. See Figure 79.

NOTE: Stops are shipped loose with the sash.

Figure 79

Operating Sash Removal

Seek Assistance

Get help from another person when removing and replacing large heavy sash.

Bottom Sash Removal

Using a smartphone or similar device, scan the QR code below or click here to play a video of this procedure.

1. Rotate lock handle to 135° position to unlock. See Figure 80.

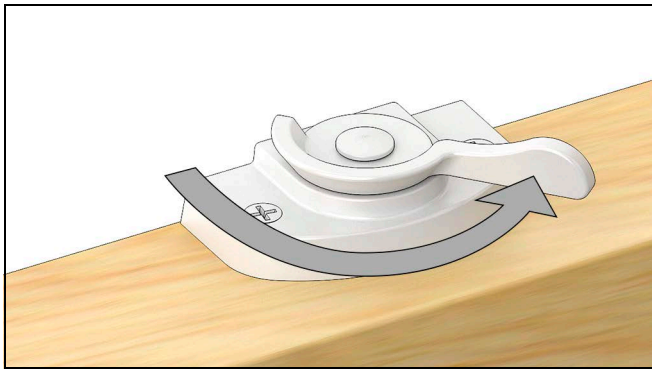

Figure 80

2. Raise sash to a comfortable position. Hold button in center of lock handle down while rotating handle to 180° position. See Figure 81.

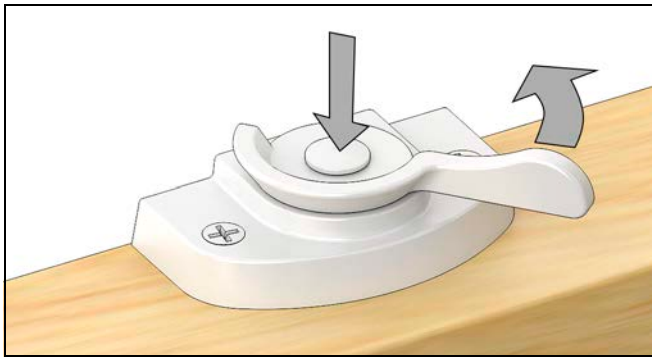

Figure 81

3. While holding handle in the 180° position, tilt sash inward so that it is perpendicular to frame (90° angle). Release lock handle and pull upward on one side of sash to rotate it out of the frame. Once one side of sash is released, repeat for other side. Remove sash while being careful not to damage interior surfaces of frame or sash. See Figure 82.

Figure 82

Top Sash Removal

Using a smartphone or similar device, scan the QR code or click here to play a video of this procedure.

1. Lower top sash to a comfortable position. Retract both latches simultaneously and tilt sash inward so that it is perpendicular to frame (90° angle). See Figure 83.

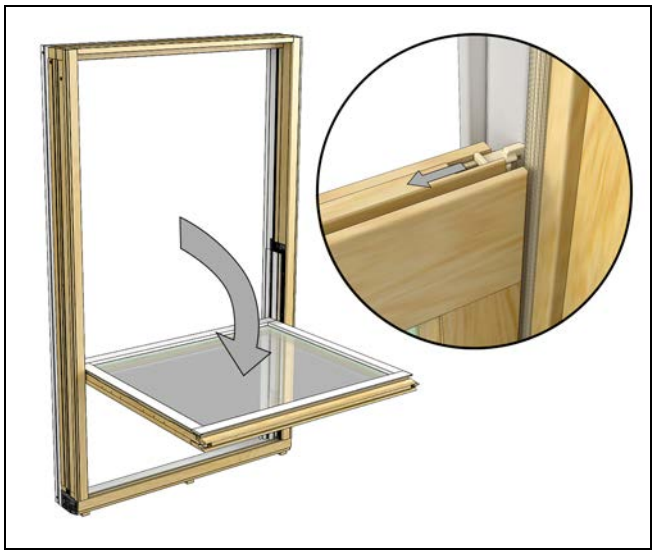

Figure 83

2. Release latches and pull upward on one side of sash to rotate it out of the frame. Once one side of sash is released, repeat for other side. See Figure 84.

Figure 84

3. Remove sash while being careful not to damage interior surfaces of frame or sash.

Non-Tilt Sash Removal

1. Remove bottom sash. Rotate lock handle to 135° position to unlock. See Figure 85.

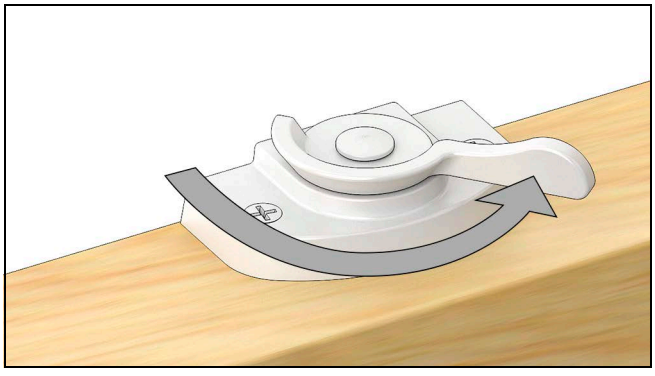

Figure 85

2. If the window has performance brackets, raise sash so that performance brackets are visible beneath bottom sash. See Figure 86.

Figure 86

3. Install tilt tool into both wood jamb covers. Cover wood jamb covers and liners with painters tape or similar material near tilt tools to protect the frame. See Figure 87.

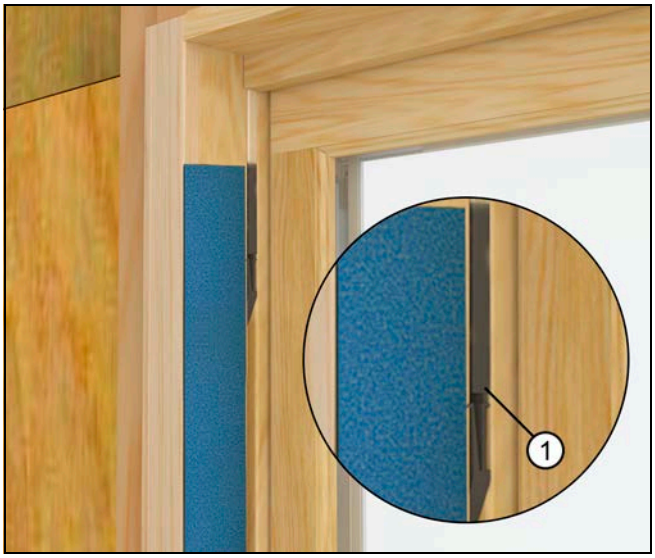

Figure 87

1	Tilt tool

4. Raise the sash so the latch bolts ride up onto the tilt tools. Then tilt the sash inward so that it is perpendicular to frame (90° angle). See Figure 88 and Figure 89.

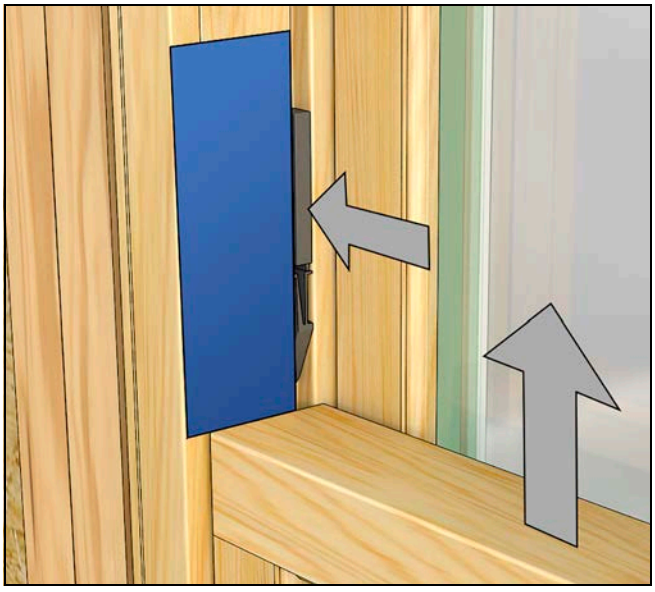

Figure 88

Figure 89

5. Remove sash while being careful not to damage interior surfaces of frame or sash. If unit has performance brackets, lower top sash so that performance brackets are visible above top sash.

6. Retract both latches simultaneously and tilt sash inward slightly. See Figure 90.

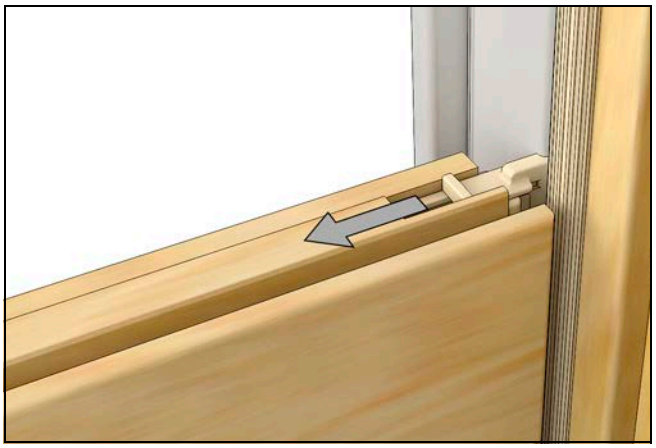

Figure 90

7. If unit has performance brackets for bottom sash also, top sash will now need to raised to clear lower frame brackets while it is partially tilted in.

8. Retract both latches simultaneously and tilt sash inward so that it is perpendicular to frame (90° angle). Release latches and pull upward on one side of sash to rotate it out of the frame.

Removing Hardware

Using a smartphone or similar device, scan the QR code or click here to play a video of this procedure.

1. Unlock handle to 135°. See Figure 91.

Figure 91

2. Remove both screws with a Phillips screwdriver. See Figure 92.

Figure 92

3. Lift lock off of sash, finish as desired. See Figure 93

Figure 93

Lift Lock Operation

1. To unlock, lift up on the Lift Lock handle. See Figure 94 or Figure 95.

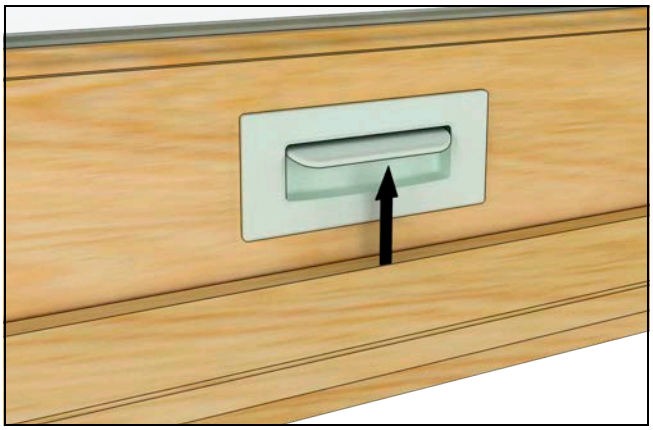

Figure 94

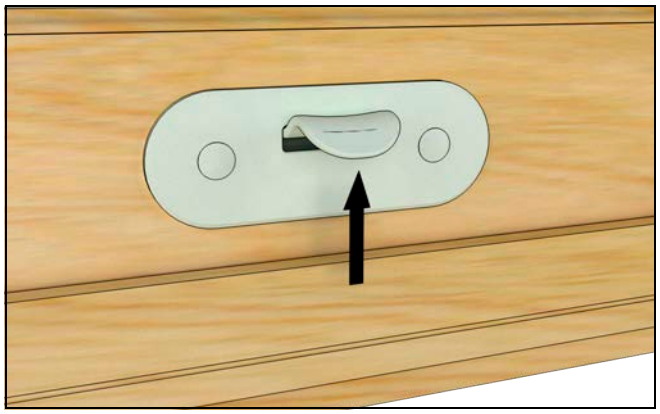

Figure 95

2. When sash is in unlocked and in lifted position, reach around top of check rail and slide manual tilt latches toward middle of sash. To tilt, gently pull top of sash from window jamb. See Figure 96.

Figure 96

Lift Lock Removal

1. When sash is in unlocked and in lifted position, reach around top of check rail and slide manual tilt latches toward middle of sash. To tilt, gently pull top of sash from window jamb.See Figure 97.

Figure 97

2. Remove escutcheon by placing a flat screwdriver in notch at the bottom between the escutcheon and plastic housing. Use a turning motion to release the escutcheon. See Figure 98.

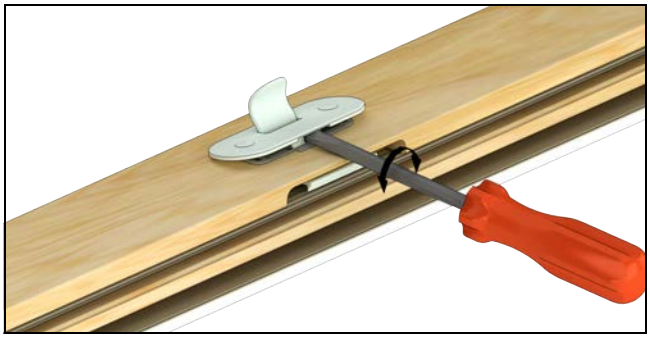

Figure 98

3. Remove the screws from the housing. See Figure 99.

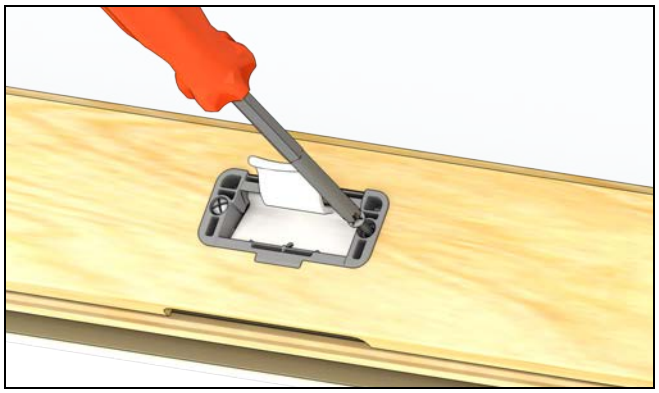

Figure 99

4. Place a putty knife between weather strip and latch. Gently pull Lift Lock at slight angle out of sash route. See Figure 100.

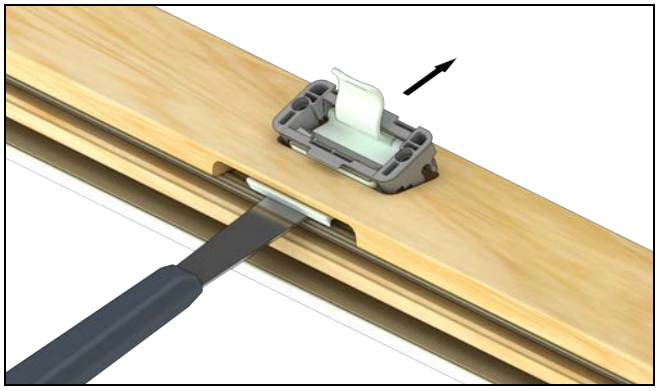

Figure 100