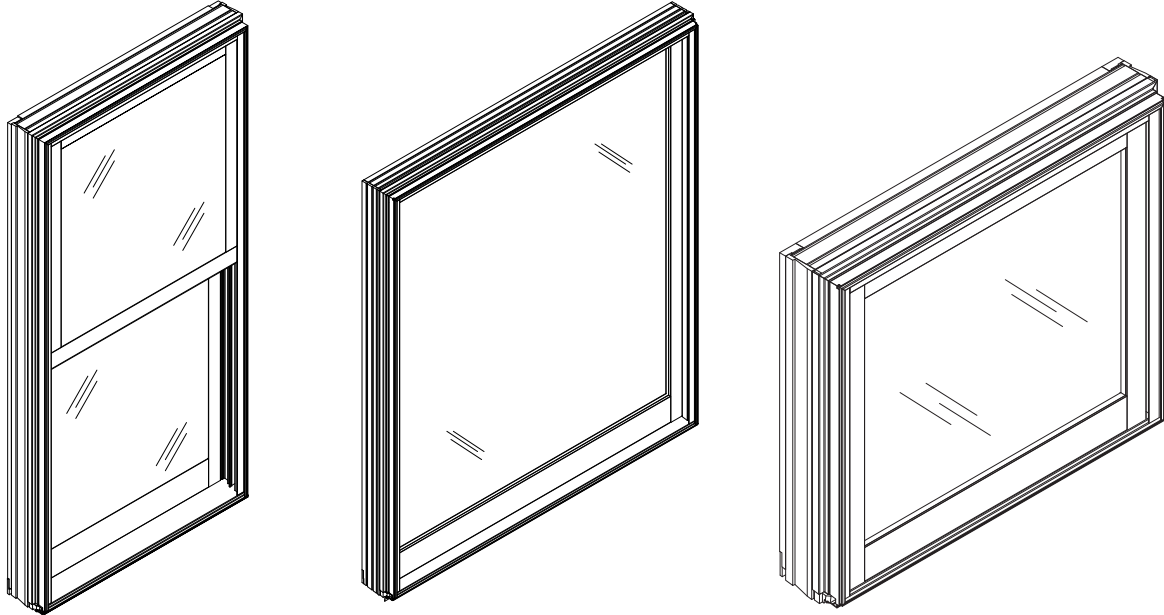


Ultimate Double Hung Insert

Installation Instruction



These instructions are applicable for the following products:

Ultimate Double Hung Insert

Ultimate Double Hung Insert Transom

Ultimate Double Hung Insert Picture

Note to the Installer:

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

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

Contact your Marvin supplier if you have any questions regarding product and materials used in manufacturing. Before purchasing or applying any product that may affect the installation or performance of Marvin windows and doors contact the manufacturer of 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.

Thank you for your time and attention to detail. Questions? Contact your Marvin dealer or visit us at www.marvin.com.

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You Will Need to Supply

Tape measure	Level
Pry bar	Stiff putty knife
Utility knife	Fiberglass insulation
Composite shims	1/8" (3) drill bit
Reciprocating saw	Safety glasses
Power drill/driver w/ #2 Phillips head bit	
Silicone sealant - grade NS Class 25 per ASTM C920 and compatible with building exterior and window surfaces.	

Before You Begin

- Read these instructions thoroughly before beginning to install the Ultimate Double Hung Insert. Failure to install as recommended will void any warranty written or implied.

IMPORTANT

UDHIN Operators may be installed from either the interior or exterior. It is recommended that Picture or Transom units be installed from the **INTERIOR** only!

ATTENTION

Chemicals, solvents, paint, and other substances should never come in contact with vinyl jamb carrier. To clean, use only warm soapy water.



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.



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.

Replacement Parts

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

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

ATTENTION

Specifications and technical data are subject to change without notice.

For information on parts and installation kits please refer to the [Marvin Parts Manual](#).

Removing the Old Sash and Preparing the Opening

NOTE: The UDHIN Operators may be installed from either the interior or exterior. It is recommended that Pictures and Transoms be installed from the **INTERIOR** only. Procedures for both applications are covered in the following instructions.

ATTENTION

Remove screen from insert prior to installation.

ATTENTION

The following instruction detail the removal of sash and jamb hardware on windows that utilize a pulley and weight system. Your existing window may differ from those shown. All jamb hardware and/or jamb liners must be removed prior to installation of the UDHIN.

Exterior Installation - Preparing the Opening

1. Using a reciprocating saw, remove the jamb blind stop by cutting it even with head jamb blind stop and flush with exterior casing and jamb frame. See figure 1.

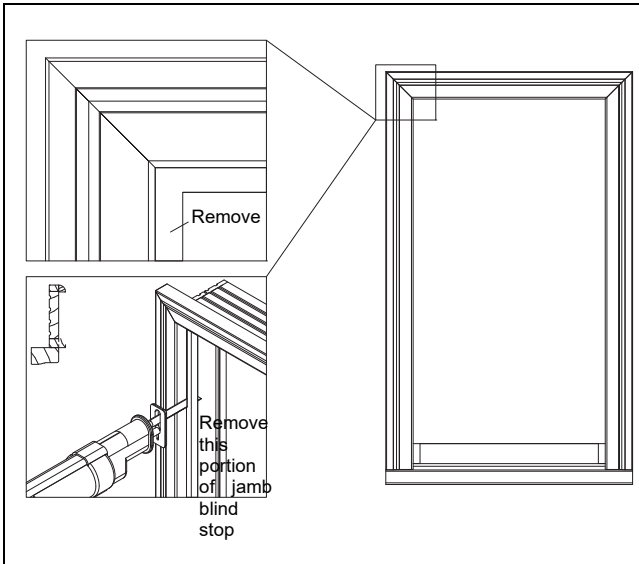


Figure 1

NOTE: Some existing window frames may require removal of the header blind stop in order to properly insulate the cavity above the insert unit.

2. Lower the top sash and cut the balance cords. Remove the top sash, disconnect and remove any balance mechanisms attached to existing window frame.

3. Remove the head and side jamb parting stops with a pry bar. See figure 2.

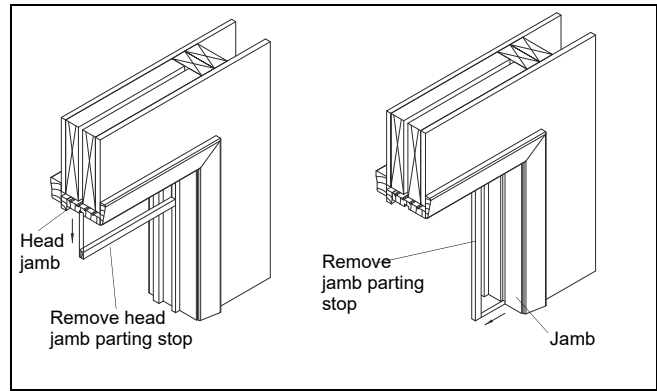


Figure 2

4. Cut the balance cords on the lower sash and remove from frame.
5. Remove any remaining balance mechanism hardware from the existing frame (such as balance cords, balance cord pulleys, etc.) that may hinder installation. If your frame utilized weight pockets at the jambs, remove weights (if possible) and fill cavity with fiberglass insulation.

IMPORTANT

Before proceeding, inspect existing frame for rot or deterioration of frame members. Repair or replace as needed.

6. Apply a 1/4" (6) bead of sealant at both sill to jamb joints and on the back of the interior sash stops or moulding. Apply a secondary continuous bead of sealant on sill as shown in figure 3. Proceed to Installing the Insert Window.

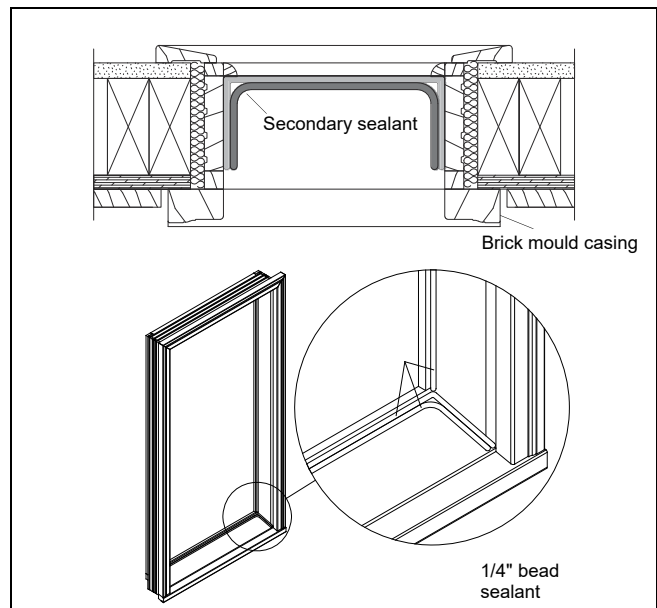


Figure 3

Interior Installation - Preparing the Opening

1. Remove all interior stops with a pry bar or stiff putty knife. See figure 4.

IMPORTANT

Do not break or damage interior stops as they may be reused.

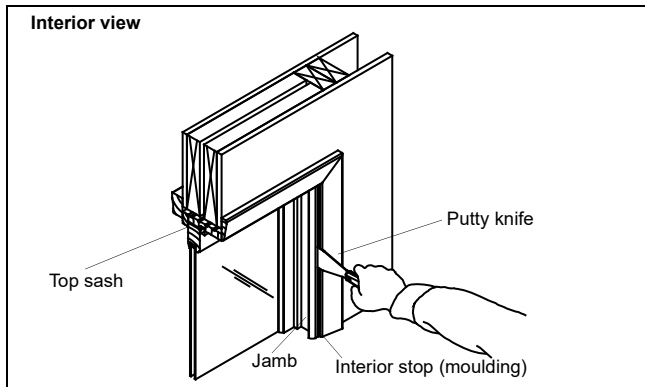


Figure 4

2. Cut balance cords on the lower sash and remove from frame.
3. Remove the parting stop from head jamb with a stiff putty knife or pry bar. See figure 5.
4. Remove parting stops from both side jambs. See figure 5. Lower top sash and cut balance cords. Remove the top sash, disconnect and remove any balance mechanisms attached.

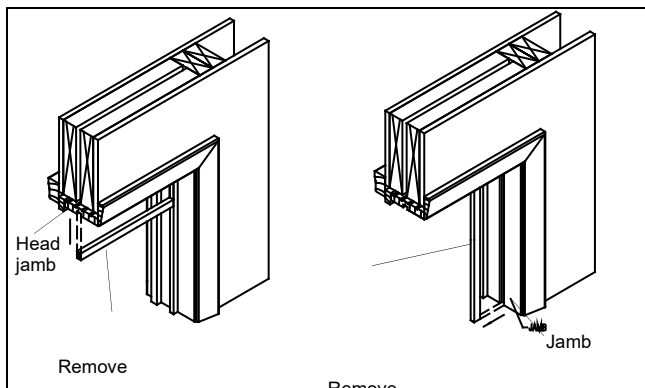


Figure 5

5. Remove any remaining balance mechanism hardware from the existing frame (such as balance cords, balance cored pulleys, etc.). If your frame utilized weight pockets at the jambs, remove weights (if possible) and fill cavity with fiberglass insulation.

IMPORTANT

Before proceeding, inspect existing frame for rot or deterioration of frame members. Repair or replace as needed.

6. Apply a 1/4" (6) bead of sealant at sill to jamb joints, sill to sill liner/stool joints, and on the back of the blind stop of existing window frame. Apply a secondary continuous bead of sealant on sill as shown in figure 6.

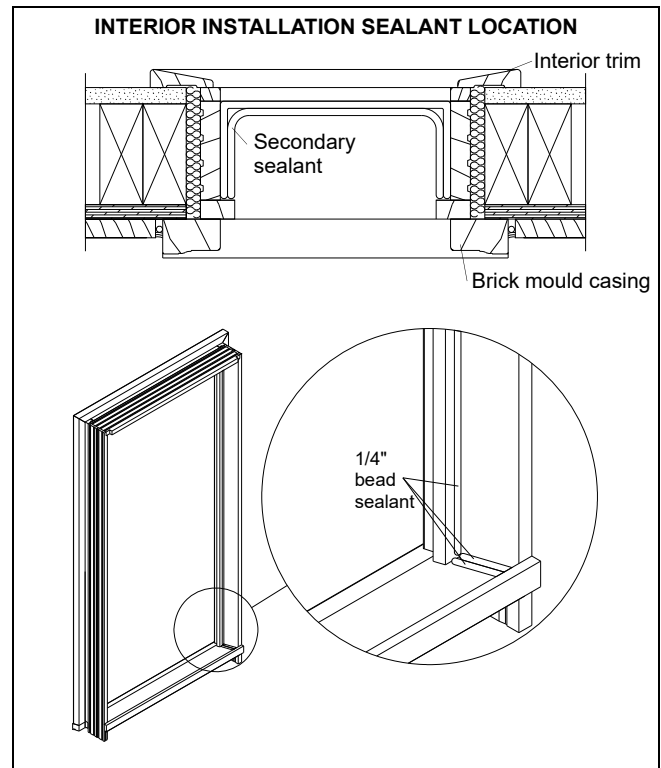


Figure 6

Installing the Insert Window

NOTE: Do not cut banding at check rail (operator units until all shims are applied and unit is square in the opening.

1. Before installing insert unit into opening, bend sill fin forward to the exterior as shown in figure 7. Units with 4° sills or less do not take sill fin.

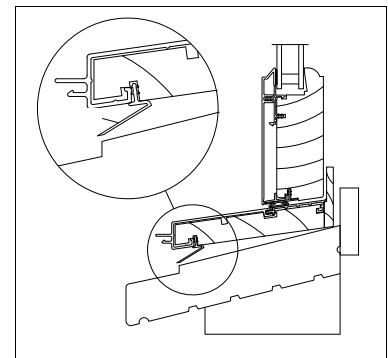


Figure 7

2. Remove shipping blocks from sill. Remove screws and shipping blocks from side jambs and head jamb (picture units). See figure 8.

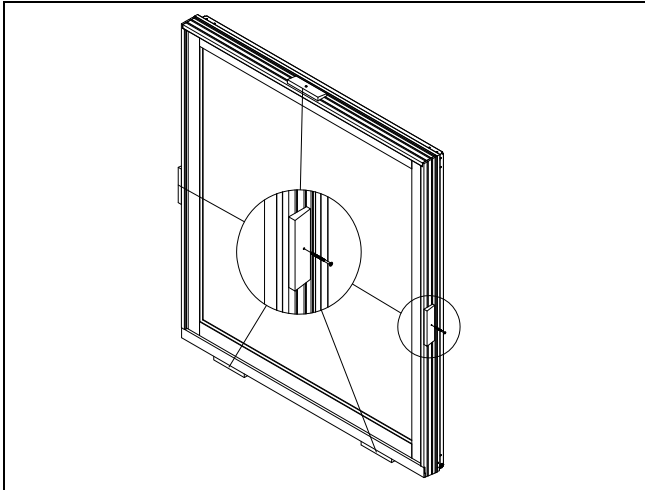


Figure 8

3. Center unit in opening. Depending on interior or exterior installation, press unit against interior sash stop or blind stop. See figure 9. It is recommended that Picture and Transom units be installed from the INTERIOR only.

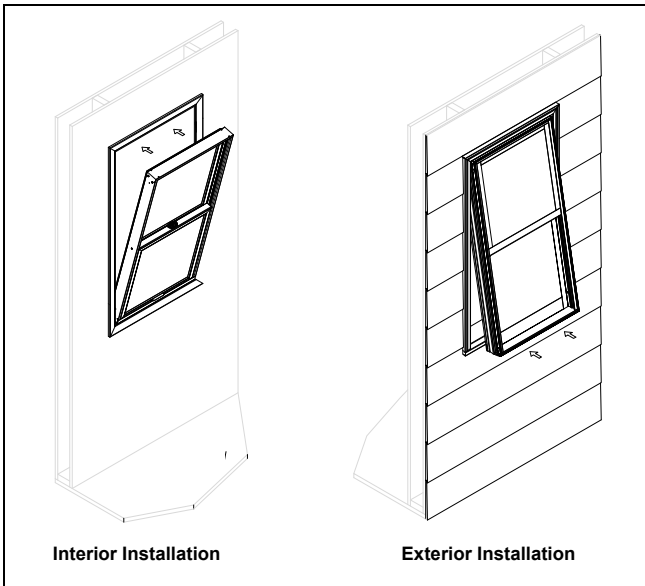


Figure 9

4. If necessary place shims under sill of unit to level. Level unit horizontally from jamb to jamb at sill of unit. See figure 10.

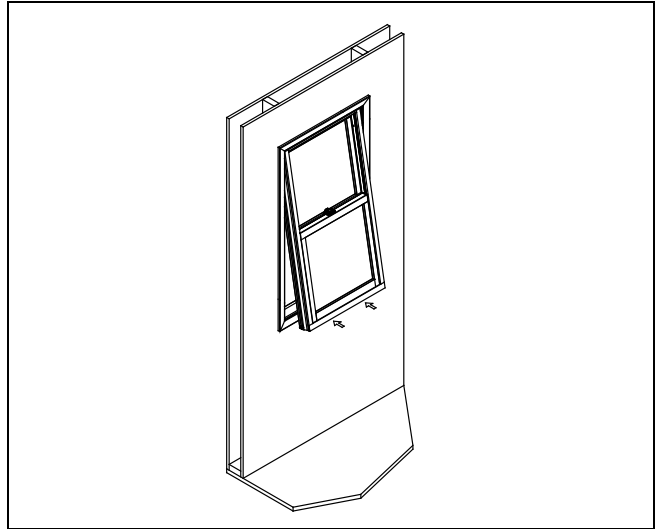


Figure 10 Interior installation shown but shim locations also apply to exterior installation as well.

5. Place shims at bottom corners of jambs above the pre-drilled screw holes in jamb liners. See figure 12.

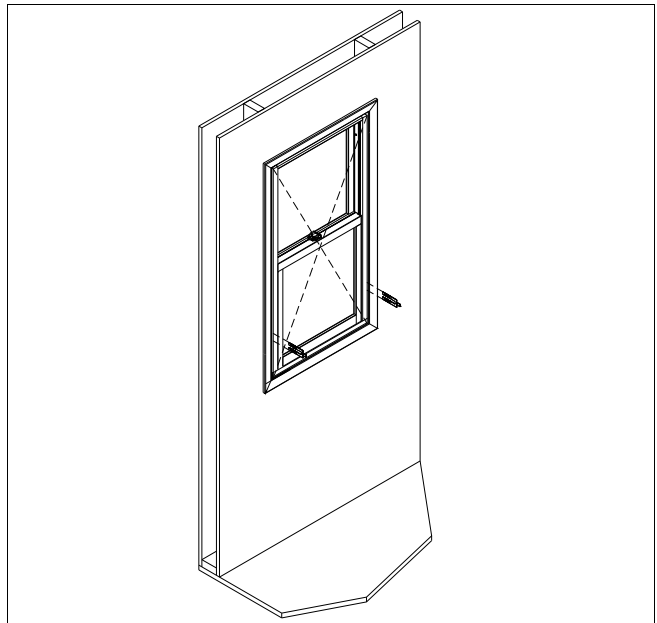


Figure 11

6. Square frame by taking diagonal measurements. Measurements should be equal. Adjust frame by applying shims to the top above pre-drilled screw holes in jamb liners as shown in figure 8. Adjust lower shims as necessary to obtain frame squareness.

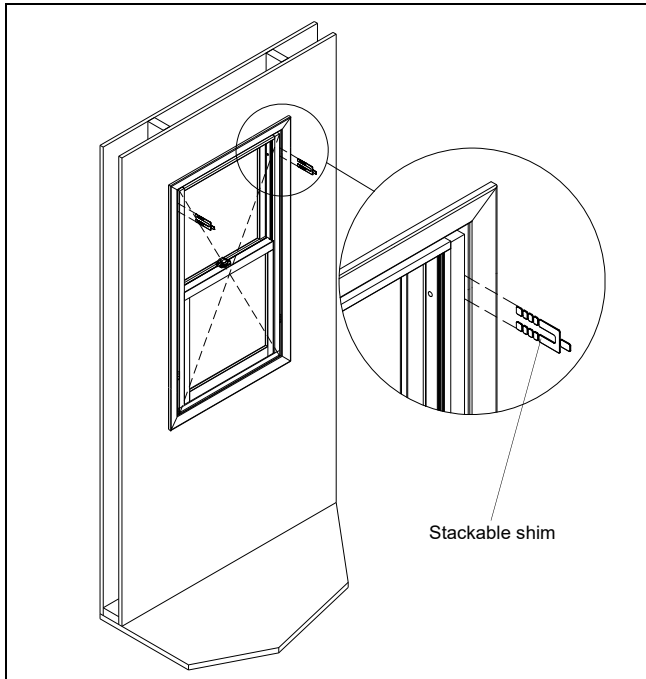


Figure 12

7. Raise bottom sash 3-4" and lower the top sash slightly to access pre-drilled screw holes. When insert is square and plumb, hold unit firmly against blind stop or interior stop (depending on installation method), drive the four #7x2" screws provided through pre-drilled holes in jamb liner at top and bottom corners. Do not over-tighten screws, some adjustment may be necessary later. See figure 8.

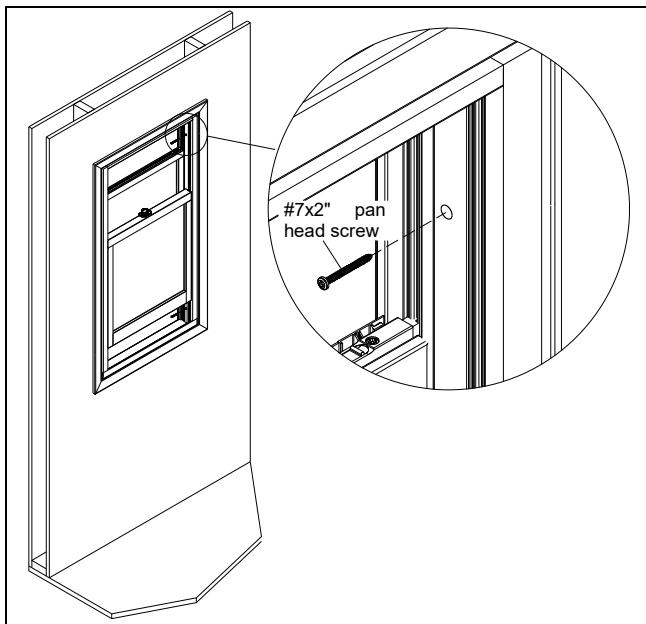


Figure 13

8. Recheck diagonal measurements again. Adjust screws as necessary to obtain frame squareness. If square, apply shims between side jambs and existing window opening above pre-drilled holes at the check rail. DO NOT OVER-SHIM.

9. For transom or picture units, skip to step 13. Tilt bottom sash (see Tilt Feature Operation). Remove shipping clips from jambs. Cut banding at check rail with a utility knife and push the remaining portion into holes in jamb at check rail.

10. Using the pre-drilled holes in jambs at check rail as a guide, drill pilot holes in existing window jambs with a power drill and 1/8" drill bit. Insert jamb jacks in holes and drive until the jamb jack is firmly seated. See figure 14.

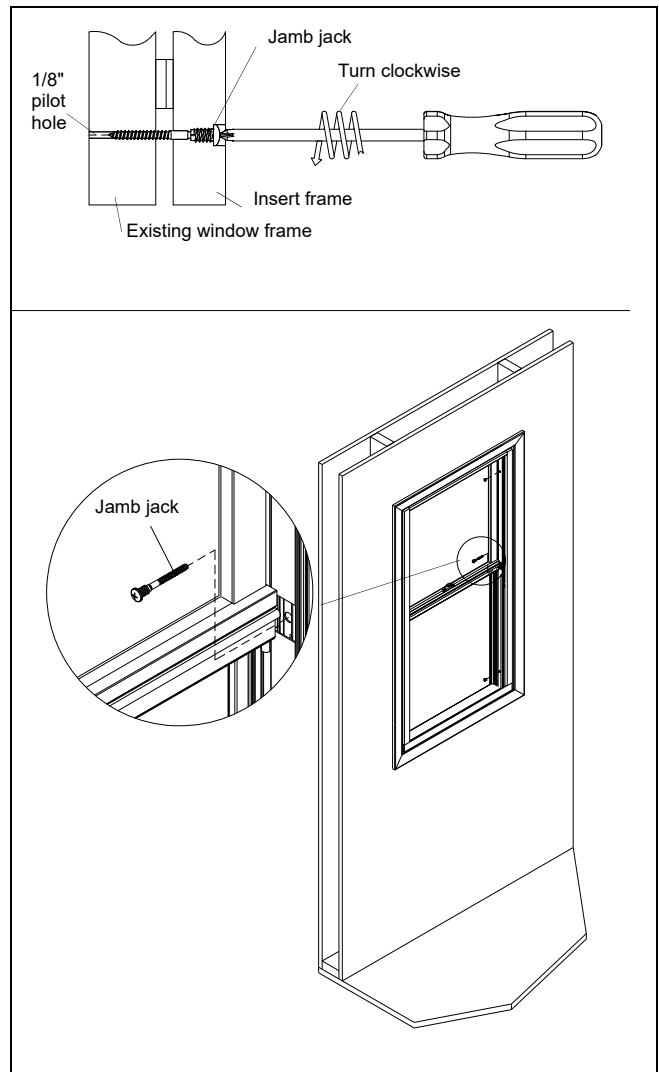


Figure 14

11. Measure width at head jamb, sill, and check rail. Jamb jacks allow for adjustment to obtain an even reveal and proper sash operation. Using a #2 Phillips screwdriver, turn the jamb jack clockwise to move jambs away from the sash or counterclockwise to move jambs toward the sash. Adjust until measurements at head jamb, sill, and check rail are equal. Adjust shims at check rail as necessary. See figure 15.

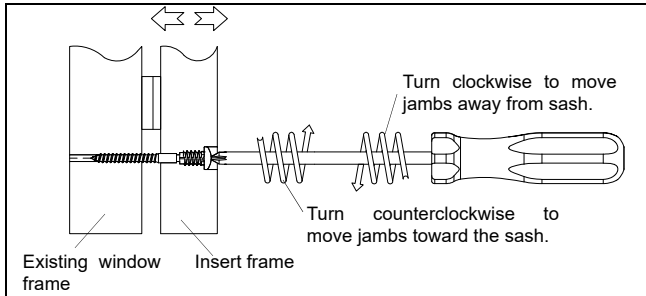


Figure 15

12. If shimming at head jamb is necessary, remove head jamb parting stop from insert unit. Pre-drill and countersink a wood screw through insert frame and into existing window frame to bring to level (screw not provided). Replace parting stop. Be careful not to damage jamb weather strip during removal and replacement. Skip to step 15.

13. On picture and transom units, fasten unit in opening by inserting the #7x2" Phillips pan head screws (provided) into pre-drilled screw holes and tighten with a power driver/drill. Be sure shims are placed near every screw location to avoid bowing of jambs. Do not over-tighten screws. See figure 16. Recheck frame for squareness. Adjust as necessary by either loosening or tightening screws. On picture units, install the interior sash stop by pressing the connecting barb into the jamb kerf as shown. Start with the jambs first, then install the head jamb stop last.

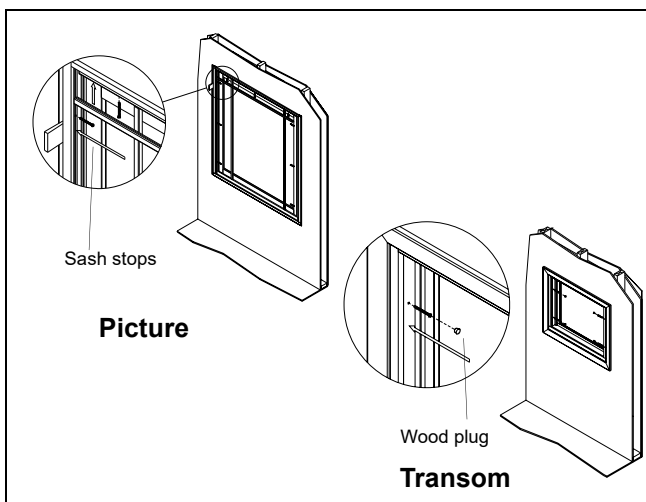


Figure 16

14. Once the insert unit is flush, square, and plumb in opening and sash works properly, cut shims off flush with interior jamb or exterior of frame depending on installation technique. Fill the gaps between the insert window frame and existing window frame with fiberglass insulation. Do not pack tightly.

NOTE: Foam type insulation may be used to form an infiltration seal as required by some building codes. However, a low expansion type foam should be used in combination with fiberglass insulation.

CAUTION

When using expanding foam insulation, it is very important not to bow the head jamb and/or side jambs of the insert unit.

15. On transom units, cover screw holes in jambs by inserting the wood hole plugs until they are flush with the jambs. See figure 16. On operator units, insert color matched plugs in lower screw holes and wood plugs in upper screw holes. Insert the check rail pad over the jamb jack hole at check rail. See figure .

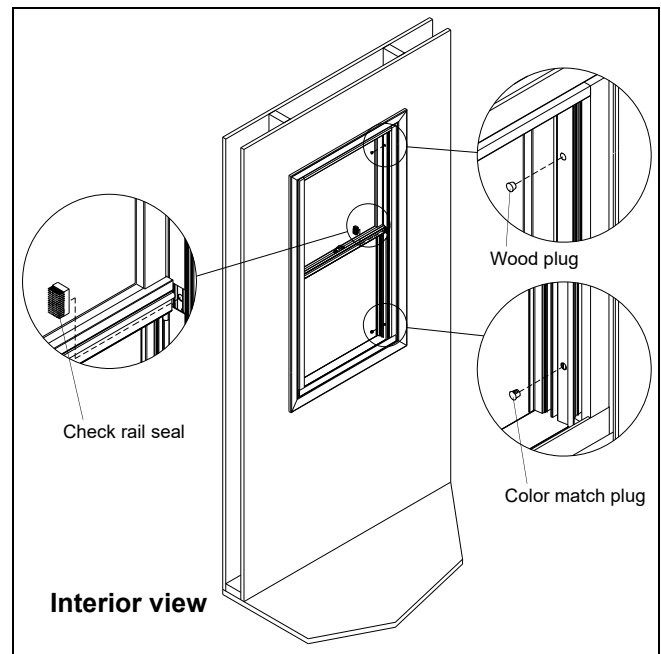


Figure 17

16. For interior installed applications, run a bead of sealant between the insert frame and existing frame around the entire interior perimeter. (If necessary, install backer rod prior to sealant application.) See figure 18. Replace interior sash stops or new trim as desired.

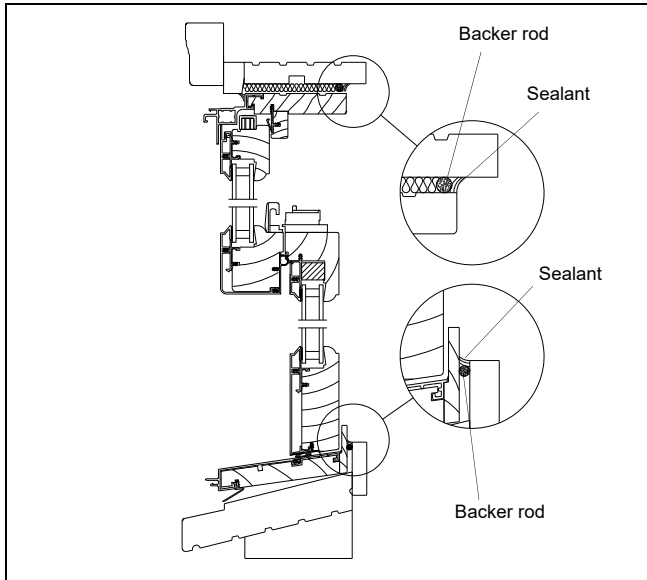


Figure 18

17. Run a bead of sealant between the insert unit frame and existing frame blind stop. See figure 19. If necessary, install backer rod prior to sealant application.

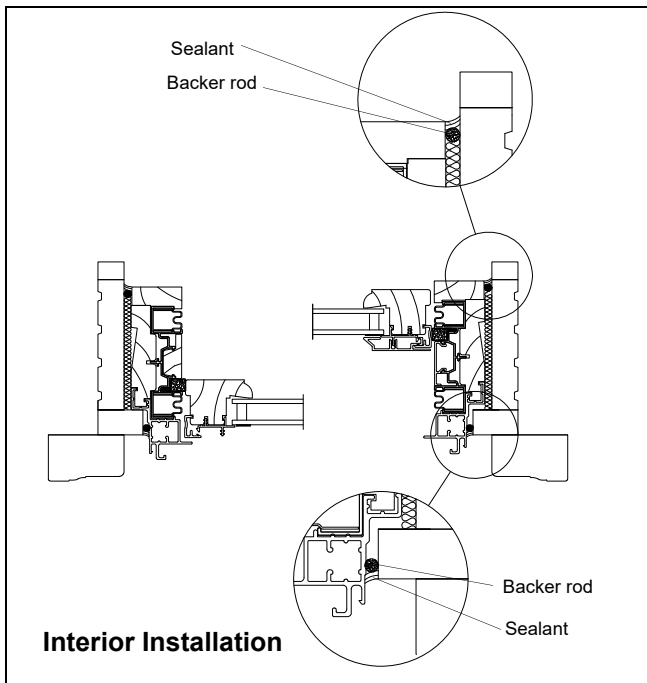


Figure 19

18. For **exterior installed applications**, apply backer rod between insert frame and existing window frame. Run a bead of sealant to bridge the gap between existing window frame and/or exterior casing. See figure 20.

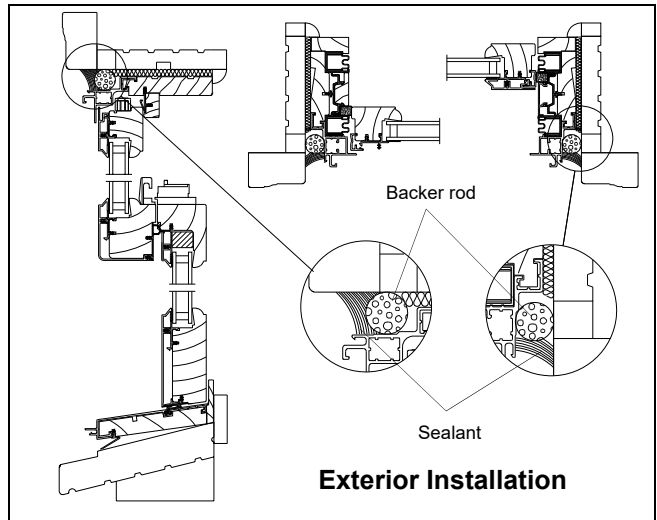


Figure 20

19. If applying frame expander or a panning system, do so at this time.

Tilt Feature Operation

The Ultimate Double Hung Insert is designed with a tilt feature that allows the consumer to wash the exterior of sash without removing sash from the frame.

NOTE: Only the bottom sash may be tilted on a Single Hung unit.

20. To tilt the bottom sash, simply raise sash about 4" (102). Pull the tilt lever (nested in the sash lock base) until it clicks. Hold lever until latches clear the unit frame when tilting. Ease top edge of bottom sash out toward you to a horizontal position. The sash will pivot in the hardware near the bottom. Support top of tilted sash carefully with a stable support such as a padded step stool or chair to guard against damage or personal injury. See figure 21.

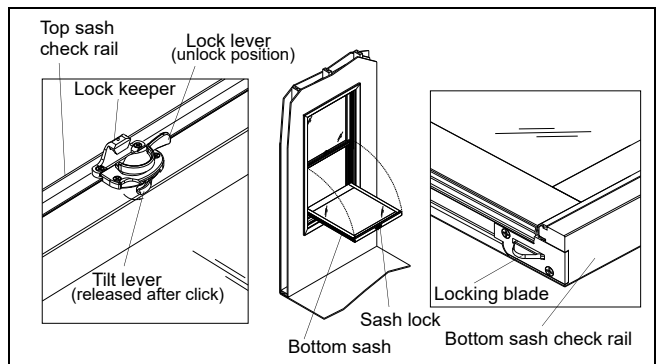


Figure 21 Interior view

21. To tilt the top sash, lower top sash about 1/2 way. Pull the tilt latches (in the edge of sash top rail) until they release on each side. Hold latches until they clear unit frame when tilting. ease top of sash toward you to horizontal position. See figure 22.

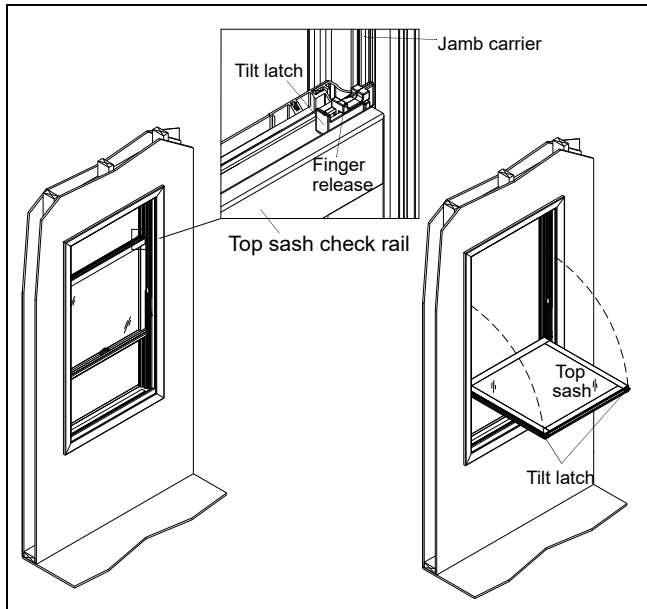


Figure 22 Interior view

22. To tilt the top sash back to the original position, tilt upward and pull the tilt latches (in the top edge of sash top rail) until they retract fully on each side. Hold until sash is at installed position. Ease sash into jamb carrier track. Check the nose of each tilt latch to ensure they are fully engaged in the sash guide track of jamb carrier assembly. To tilt bottom sash back to original position, follow procedures listed above.

Removing the Operator Sash

23. Raise bottom sash about 4" (102). Pull the tilt lever (nested in the sash lock base) until it clicks. Hold lever until locking blades clear the unit frame when tilting. See figure 23.

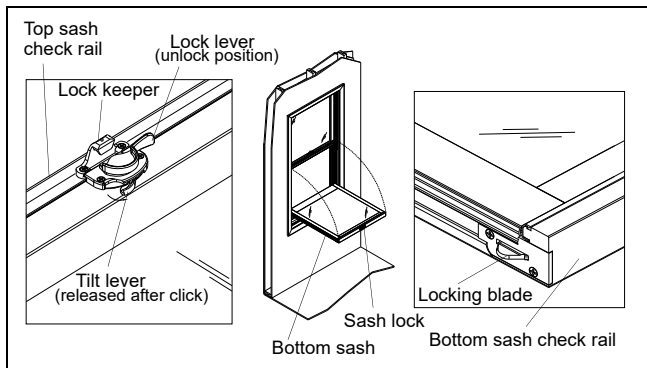


Figure 23

24. Ease top of sash toward you to a horizontal position (flat). Lift both sides of the sash upward 2"-3" (51-76) (raising pivot pins out of each clutch). See figure 24.

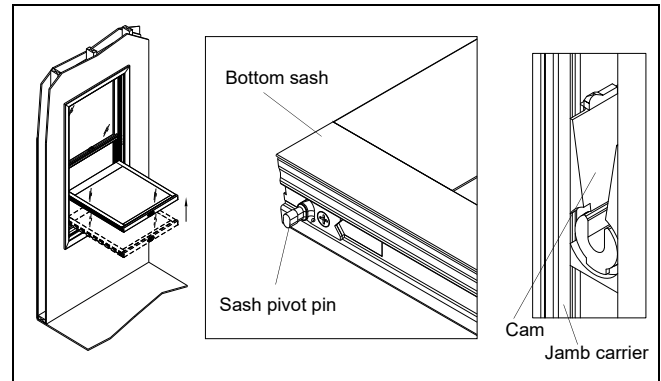
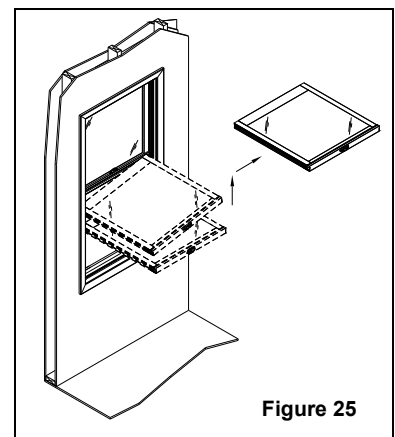


Figure 24 Interior view

25. Rotate the sash counterclockwise until pins clear the jambs and remove sash. See figure .

NOTE: The Single Hung top sash is not removable.



26. Lower top sash about 1/2 way. Pull the tilt latches (in the top edge of sash top rail) until they retract fully. Hold latches until they clear unit frame when tilting. See figure 26.

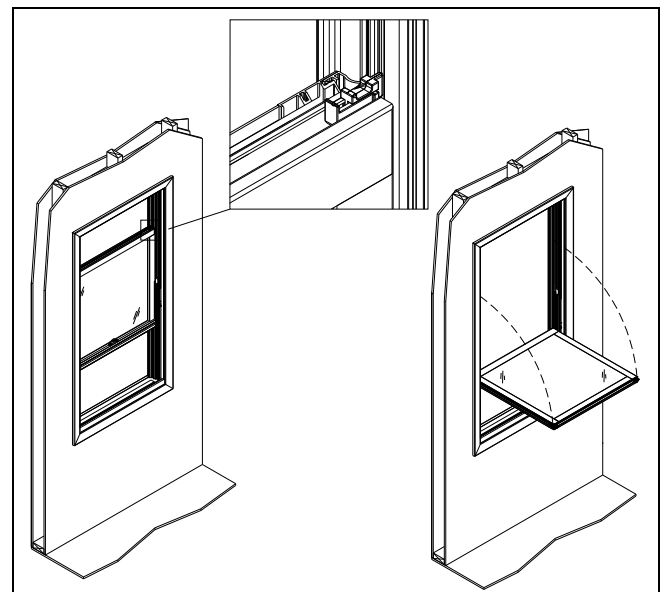


Figure 26 Interior view

27. Ease top of sash toward you to a horizontal position. Lift both sides of the sash upward 2"-3" (51-76) (raising pivot pins out of each clutch). See figure 27.

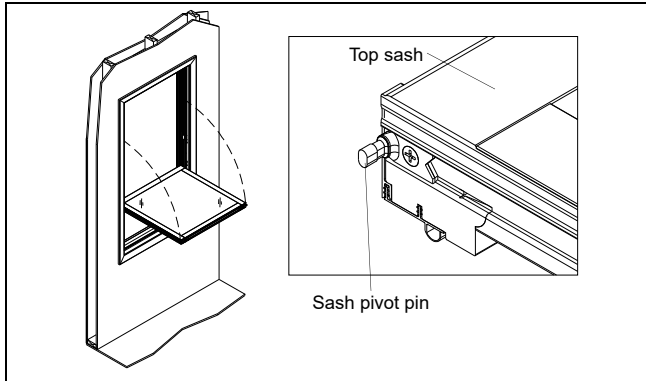


Figure 27 Interior view

28. Rotate the sash counterclockwise until pins clear the jambs and remove sash. See figure 28.

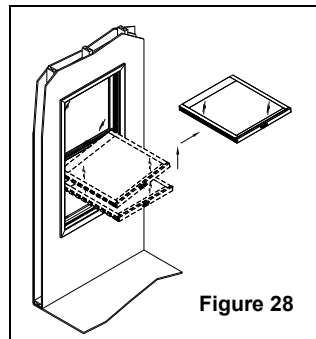


Figure 28

Installing the Operator Sash



CAUTION

When replacing sash, both sash pins must be positioned above the balance clutch assembly located in the jamb carrier track.

NOTE: Should a balance clutch assembly slip upward toward the head jamb, the following procedures can be accomplished in order to properly reposition. Measure the clutch dimension from the sill for opposing balance assembly (MUST be within 1/8") and temporarily mark that dimension on the jamb carrier that contains the released clutch. Using a flat screwdriver, rotate the balance clutch cam in the clutch assembly to the released position. Hold the screwdriver firmly and slide the clutch assembly down the jamb carrier to the mark.



CAUTION

The clutches are under extreme spring tension.

NOTE: Rotate the balance clutch cam to the open locked position (cam opening up) as shown in figure 29. Release the screwdriver carefully from the clutch assembly (it must lock in place or damage will occur). Compare clutch heights from the sill for the sash affected they MUST be within 1/8" (3) of each other or damage may occur when sash are reinstalled, adjust height as needed.

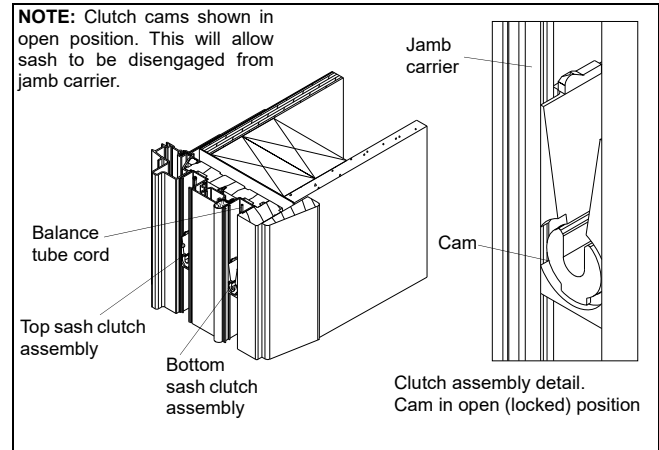


Figure 29 Interior view

29. Hold the top sash in a horizontal position, top rail toward you, exterior face up. Sash pivot pins must be placed 21-31 (51-72) above the clutch assemblies when relocating in jamb carrier tracks. Pivot one side of the sash up to enable pivot pins to clear jamb carrier assemblies when aligning sash in tracks, pivot sash back to horizontal (flat) position. Lower sash pivot pins into balance clutch cams. Check pins to ensure they are fully engaged in the clutch cams before proceeding.

30. Tilt sash up, pull the tilt latches (in the top edge of sash top rail) until they retract fully on both sides, hold them and ease sash into place. Check the nose of each tilt latch to ensure they are fully engaged in the sash guide track of jamb carrier assembly. Raise the top sash to the top of frame. Repeat above procedures for bottom sash, except retract sash check rail guides with the tilt lever in the sash lock base when installing.

Removing Screen

NOTE: Unit is shipped with screen installed backwards to avoid shipping damage (plungers to the exterior). Screen should be installed with plungers to the interior for normal operation.

Marvin Windows and Doors suggests that you remove the operating sash (bottom sash only on Single Hung units) before attempting to remove the screen. Removing sash will allow easier removal of the screen.

31. Grasp plunger bolts and pull inward as shown in figure 30. Push screen outward, grasp screen frame, pull down slightly. Turn screen sideways and bring into dwelling.

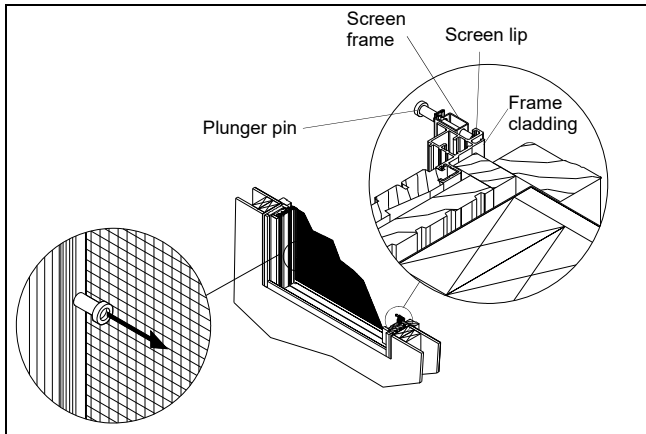


Figure 30

Installing the Screen

32. When installing full screen, place screen sideways through window frame, turn to an upright position and place top plunger bolts against screen lip at head jamb. Pull screen towards the interior, holding plunger in the open position. When screen is flush against frame, release plungers to lock against screen lip.
33. When installing half screen, place screen sideways through window frame, turn to an upright position. Pull screen towards the interior, holding both plungers on one side in the open position. When screen is flush against blind stop, release plungers to lock into frame. See figure 31.

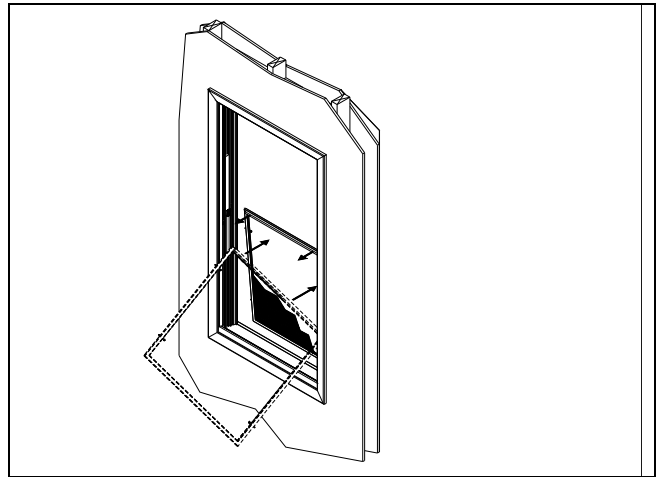


Figure 31 Sash not shown for illustrative purposes only.

Interior Finishing Guidelines

- Paint or stain/seal all wood surfaces with a high quality top coat system.
- Follow manufacturers recommendations for proper surface preparation and application.
- Apply at least two coats of paint or polyurethane/varnish to form an adequate moisture vapor barrier.
- To access all wood surfaces easily, remove both sash from frame.
- It is essential to coat exposed wood along sides of both sash and at head jamb between part stop and frame cladding on this product.
- Use extreme caution when applying finishing products near weather strip or vinyl components. **DO NOT** allow contact, solvents in most formulas **will** cause damage.
- Allow ample drying time before reinstalling sash to ensure complete evaporation of solvents and to reduce bonding with mating surfaces.
- **DO NOT** apply over metal sash guides along jambs.
- Avoid excessive contact with exterior clad finish.