



INSTALLATION INSTRUCTIONS

VINYL CASEMENT WINDOW

WITHOUT NAIL FIN

(ASPECT™ AND ENDURE™)



** Find QR Codes inside for additional information, helpful installation tips, and videos.*



Contact the local recycling waste management center for waste disposal in the area. Always check local waste requirements and carefully dispose of waste in accordance with Federal and other regulations.



Homes built before 1978 may contain lead paint. All replacement installations must comply with the U.S. EPA's Lead-Based Paint Renovation, Repair, and Painting Program (RRP Rule). Read more about the RRP Rule and lead-safe work practices, on the U.S. EPA's website at: www.epa.gov/lead



GETTING STARTED

TOOLS & MATERIALS YOU WILL NEED

- Tape Measure
- Pencil
- Shims
- Drill & Drill Bits
- Utility Knife
- Putty Knife
- Square
- Level
- Hammer or Mallet
- AAMA approved Low-Expanding Window Insulation Foam in accordance with ASTM C1620
- High Quality Silicone Caulking in accordance with ASTM C920, Class 25 & Caulking Gun



REMEMBER: ALWAYS USE THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.



Read these instructions carefully before starting installation. Product warranty does not cover damages resulting from improper installation.



IMPORTANT NOTES BEFORE YOU BEGIN

- Inspect your package(s) for any visible damage to the product. In addition, double check your paperwork with label on product(s) and verify all information is a match. Open packaging to confirm style, color and that order was shipped complete. Double check size of new unit by comparing it for fit to opening.
- If damage or irregularities are found, please scan the product's packaging QR Code label using your phone's QR Code Scanner to access ProVia's After Sale Product Support to enter a request and post pictures/videos to the order, or you can call the Customer Support Team at 1-800-669-4711.
- If you have ordered optional items, verify that they are included in packaging contents. This includes checking for multiple packages (For example, 1 of 2 and 2 of 2).
- For a helpful video on "Critical Steps: Casement Window Installation", SCAN or TAP the QR Code.





VINYL WINDOW CASEMENT CONTENTS

NOTE: Please refer to information below for assembly and installation contents.

Assembly Contents

Vinyl Window Unit (3¼" Main Frame Depth)

Sill Extender (Bottom Only), shipped loose, Part #: S-VE-4473-CC (*Refer to Section 'D'*)

OPTIONS:

- Sill Extender (4 Sides), Part #: S-VE-4473-CC (*Refer to Section 'D'*)
- Stucco Flange, Part #: S-VE-4485-CC (*Refer to separate instruction*)

MULLION KIT (Only included when field mulling is necessary): (*Refer to separate instruction*)

- Zero Mull Rebar, Part #: S-AE-4710-00
- Zero Snap Mulls, Part #: S-VE-4492-CC
- Header Cover, Part #: S-VR-461-CC (Flat)
- Stacking Plate Pack, Part #: S-HG-604P-00

Installation Pack

S-HS-515S-CC

(6) ⅜" Low Profile Hole Plug, (Color Matched), Part #: S-HG-698-CC



(6) #8 x 2" Phillips Pan Head Screws, Part #: S-HS-046-00



WINDOW INSTALLATION GUIDELINES

- Windows achieve maximum performance from proper installation methods. It is critical to maintain consistent margins between sash and master frame.
- A window gains strength from the surrounding wall structure. This is obtained with proper sizing, support and installation methods.
- Use a high quality grade of silicone with a neutral base.
- Approved sealants for this use must meet the requirements of ASTM C-920, Class 25.
- The plastic applied to UV resistant paint finish windows is for the protection of the paint finish and should remain on the window until the installation is complete.
- **DO NOT OBSTRUCT WEEP HOLES** with flashing or sealant. The weep holes located at the bottom sill area of window are necessary to prevent water accumulation. Covering or applying trim to the product will need to allow for proper drainage. Failure to do so will create a risk of water infiltration.
- Windows should be stored in a cool location. **DO NOT** store in direct sunlight or in non-vented hot containers.
- **IMPORTANT!** Allow for expansion and contraction of the window unit when contacting exterior finish material. For installation of the finished exterior material surrounding the window, scan or tap the QR code shown for all gap recommendations per exterior material type.

THIS INFORMATION MUST BE PASSED TO THE EXTERIOR FINISH INSTALLER.





IMPORTANT INFORMATION!

• ProVia® understands there are various methods and conditions affecting the installation of a replacement window. We feel the most critical steps to follow are securing and shimming as instructed in this document.

FIELD MULLED WINDOW UNITS:

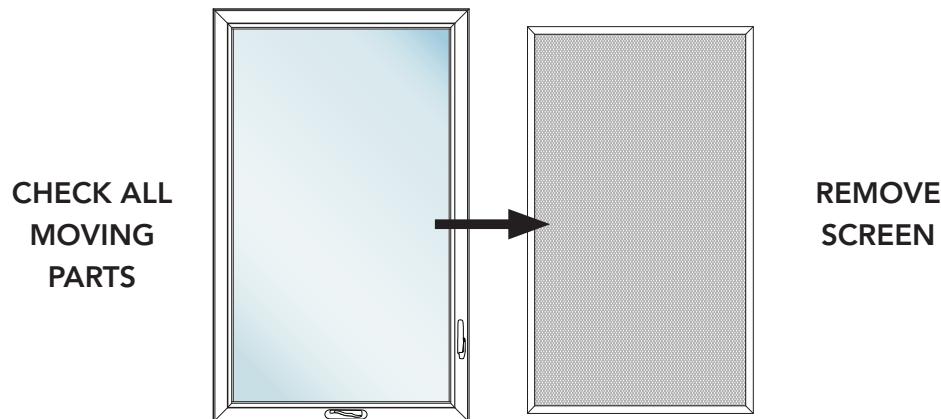
- Refer to the separate document, "Field Instruction For Mulling Vinyl Windows". Units must be mulled together before window unit is set into the opening.

STUCCO FLANGE:

- Refer to the separate document, "Field Instruction for Window Accessory Installation". Stucco flange must be installed and prepped on field mulled units and units ordered with flange shipped loose before setting in opening. Factory installed stucco flange must be prepped on a single unit before setting in the opening.

A. INSPECT AND PREPARE VINYL WINDOW UNIT

INSPECT AND CHECK WINDOW UNIT



(Figure A.1)



IMPORTANT! For window units with painted exterior, **DO NOT** remove the protective plastic cover until after installation is completed.



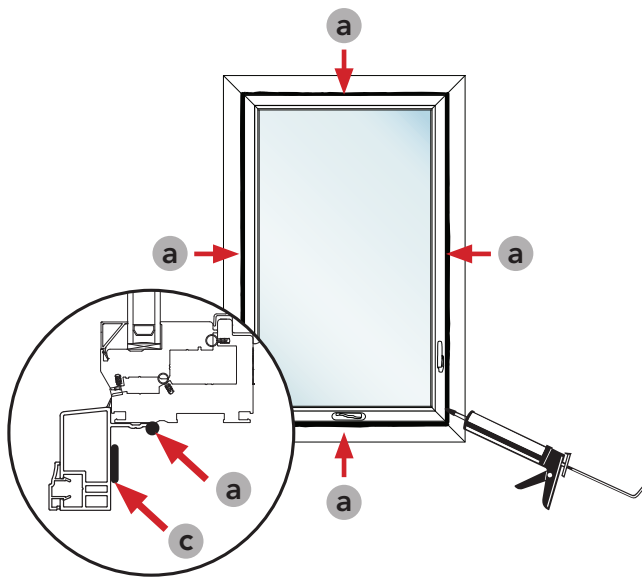
For units to be field mulled, refer to the included document, "Field Instruction for Mulling Vinyl Windows". After mulling is complete, resume this instruction to complete Sections A - E.

- 1 Inspect new window unit and screen for any material damages. Check all moving parts: locks, all operational hardware, glass, etc. **NOTE:** Moving parts can be repaired **AFTER** window is installed. Scan the product packaging QR Code label to access ProVia's **After Sale Product Support** to enter a request and post pictures to order, or call Customer Support. (Figure A.1)
- 2 Remove screen. Carefully set aside. Screen will be re-installed after installation. (Figure A.1)
- 3 After inspection, close and lock window unit to engage seals, locks, interlocks, and weatherstripping.

A. INSPECT AND PREPARE VINYL WINDOW UNIT (CONT.)

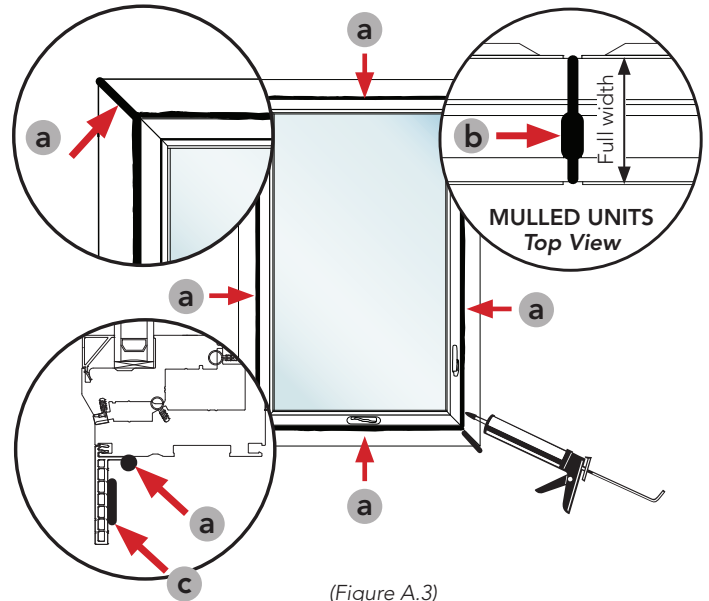
ACCESSORY PREP

WELDED BRICKMOLD Interior View



(Figure A.2)

STUCCO FLANGE Interior View



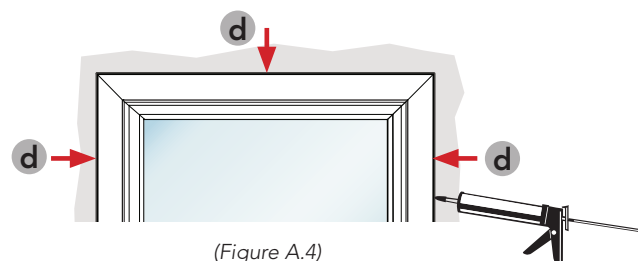
(Figure A.3)

4 If unit is ordered with the optional **welded brickmold** or **stucco flange**, the accessory must be prepped as instructed below. If the accessory is shipped loose, refer to the included "Field Instruction for Window Accessory Installation" then return to this step for prep. *Note, if stucco flange is used as trim only, no prep is required.*

- a. On the interior side, apply a bead of caulking around the perimeter joint. In addition, apply caulk to the interior side of the stucco flange miters as shown. (Figure A.2 & A.3)
- b. For side-by-side mulled units with stucco flange, apply sealant along top mull joint(s) for the full width to seal. (Figure A.3)
- c. **Before unit is set in the opening**, apply a generous amount of caulking to the interior side of the accessory. (Figure A.2 & A.3)
- d. **After the window installation is complete**, apply a bead of caulking to edge of the accessory, where the flange meets the finished exterior surface. (Figure A.4)

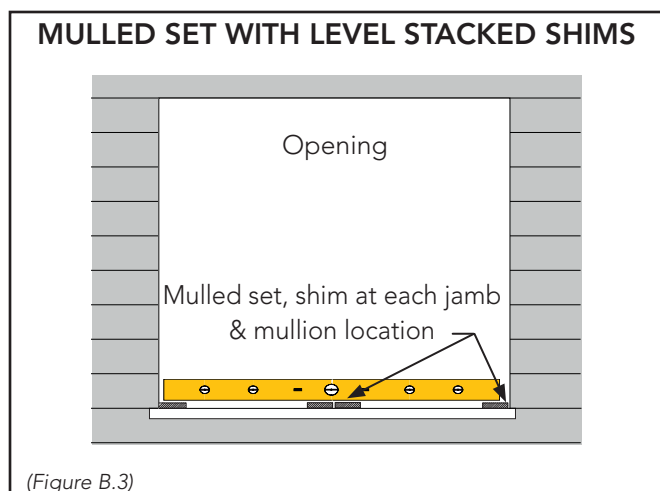
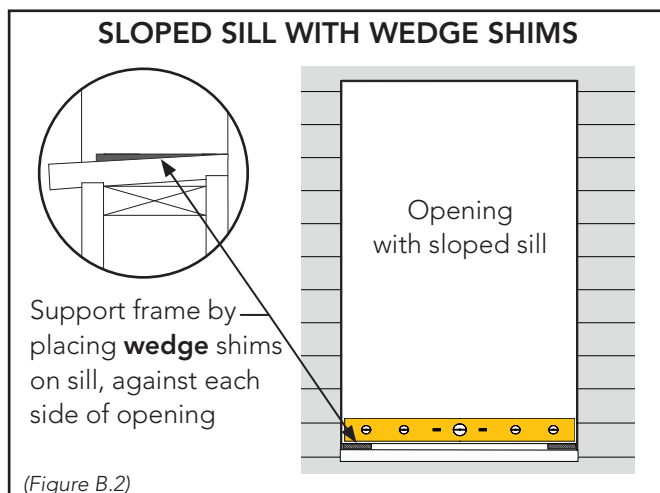
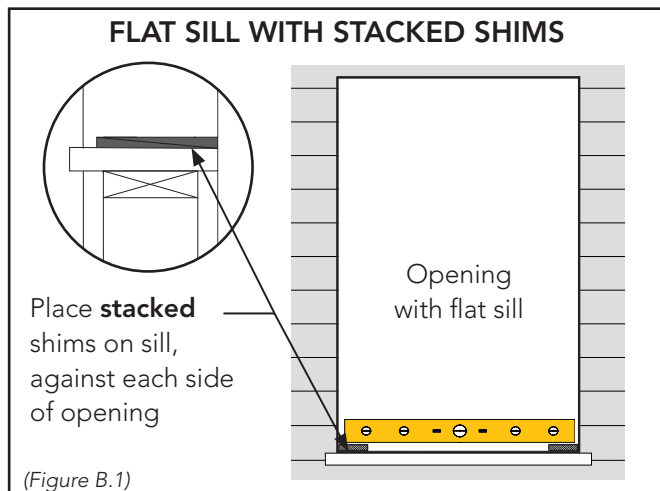
AFTER INSTALLATION - ACCESSORY FLANGE

Exterior View



(Figure A.4)

B. PREP OPENING



- 1 Clean opening of all dirt, debris and obstructions.
- 2 Fill all voids or open cavities, found after removal of old window, with AAMA approved low-expanding window insulation foam that complies with ASTM C1620.
- 3 Check sill for level, flat, and for proper structural support of opening to ensure a proper installation and seal of window unit. For flat sill plate, refer to Step 4. For sloped sill plate, refer to Step 5.

NOTE: Consider the $\frac{7}{8}$ " distance from bottom of operator to bottom of window. Be sure the operator clears any existing window sill when setting.

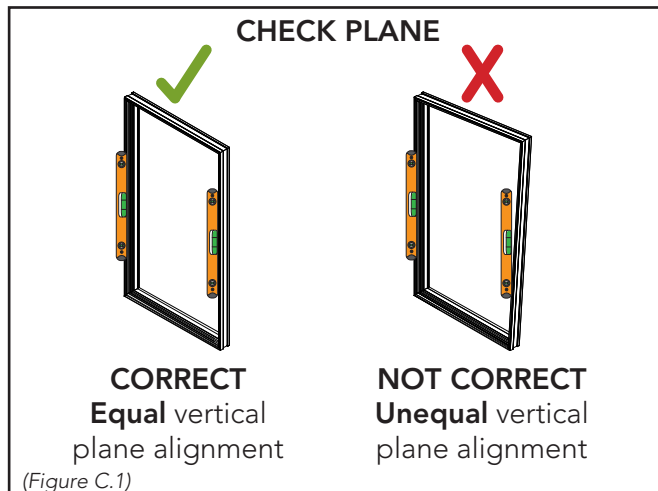
- 4 For flat sill plate, place **stacked** shims on sill, against each side of opening. Be careful shims **DO NOT** tilt sill toward inside of home. For mulled sets, place stacked shims under all side jamb locations. (Figure B.1 & B.3)

NOTE: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent foam wrap from crowning the sill. Be careful to not push frame into head of opening.

- 5 For sloped sill plate, place **wedge** shims on sill, against each side of opening. Wedge shims are critical to provide full support of frame bottom. Be careful shims **DO NOT** tilt sill toward inside of home. For mulled sets, place stacked shims under all side jamb locations. (Figure B.2 & B.3)

NOTE: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent foam wrap from crowning the sill. Be careful to not push frame into head of opening.

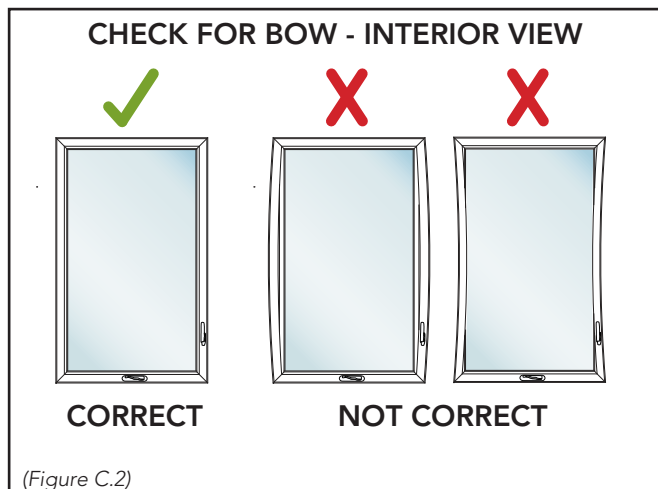
C. INSTALLATION



Frame alignment is critical for the success of the installation and sash operation. Steps 1-3 provide critical frame alignment reference checks to identify and correct if needed through the full installation procedure.

1

Check the plane of the window unit. Each vertical jamb side frame should be equal and parallel to the other. See illustration for equal and unequal plane. *(Figure C.1)*

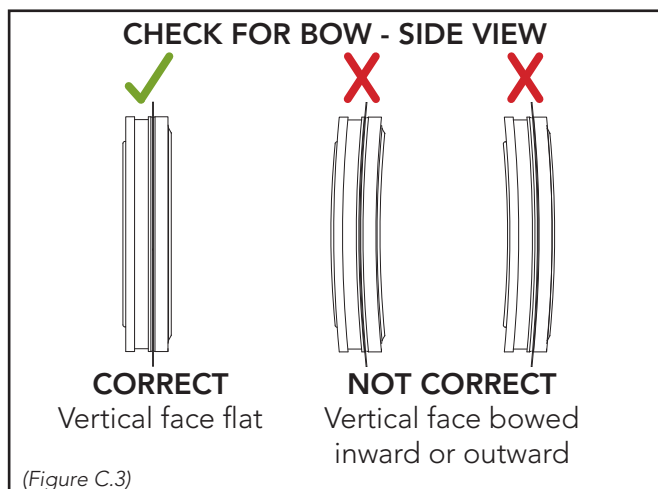


2

Check to be sure frame jambs do NOT bow inward or outward of the sash, resulting in sash and hardware interference. *Note, window hardware should not be visible between exterior sash weather strip and frame. (Figure C.2)*

3

Check to be sure the vertical face of the window unit is flat, the vertical face can **NOT** bow towards the interior or exterior. A bowed vertical face will cause the frame to be out of alignment, resulting in sash to frame hardware interference. *(Figure C.3)*

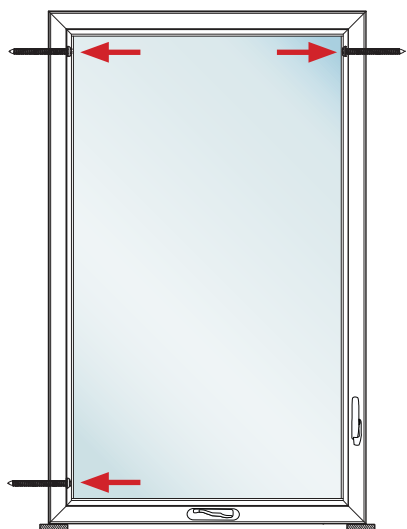


IMPORTANT! The frame alignment will need to be **CONTINUOUSLY** monitored throughout full installation.

C. INSTALLATION (CONTINUED)

SECURE - INTERIOR VIEW

Install a screw into each top screw location



Install a screw into bottom HINGE side screw location

(Figure C.4)

- 4 Set window unit directly onto shimmed sill. Center unit in the opening. *If top of window is against top of opening, reduce height of bottom shims. Shims are still required below sill as specified*

- 5 Unlock sash and carefully open. Install a #8 x 2" Phillips pan head screw into each factory prepped TOP jamb screw location and BOTTOM HINGE side screw location to hold in place. **DO NOT OVER TIGHTEN screws causing frame to pull!** Be sure to check for proper operation of the sash throughout the full installation process. (Figure C.4)

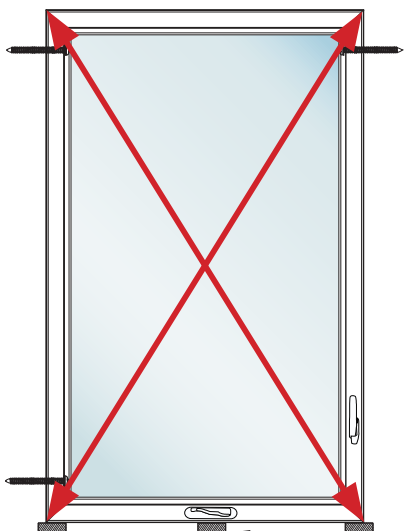
- 6 Install shims directly below operator. **DO NOT install screws through sill!** (Figure C.2)

NOTE: DO NOT OVER SHIM below side jambs. Over-shimming will press unit head tight against opening head, resulting in vinyl expansion issues.

NOTE: For egress units, operator will not be centered below window.

INTERIOR VIEW

Adjust jamb screws as needed for square



Install shims directly below operator
Adjust shims under each side jamb for level

(Figure C.5)

- 7 Check for overall square of window unit by measuring diagonally from corner to corner, each side. Adjust top jamb screws as needed. *Recommended tolerance for the diagonal measurement is 1/8".* (Figure C.5)

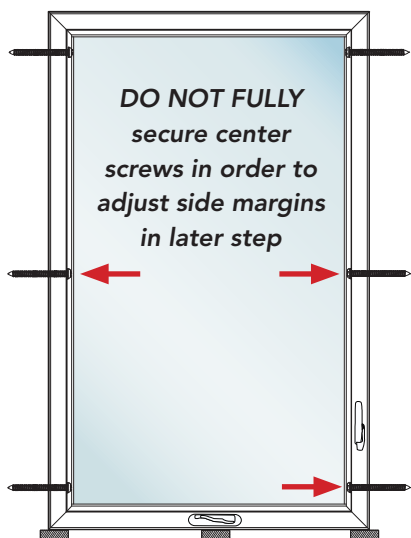
- 8 Use sill shims to adjust/re-adjust sill to level as needed. For mulled units, be sure shims are placed directly under mull location for support. (Figure C.5)

REMINDER: If foam wrap is used under sill, shim thickness **MUST** be increased to prevent sill from crowning.

C. INSTALLATION (CONTINUED)

SECURE - INTERIOR VIEW

Install screws in remaining factory prepped screw locations



***Continuously monitor margins**

(Figure C.6)



IMPORTANT! Shims can be installed prior to installation of screws. It is critical to monitor margins throughout this installation method.

9

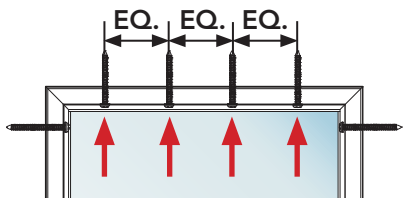
Install bottom screw. Install (2) middle screws until screws are close but NOT seated to the vinyl (this will allow for side margin adjustment in a later step). Inspect all margins. **DO NOT OVER TIGHTEN SCREWS!** (Figure C.6)

NOTE: If spacing between jamb screws is greater than 24", additional jamb screws may need added to stabilize frame. Pre-drill a $\frac{1}{8}$ " thru-hole followed by a $\frac{3}{8}$ " hole through first wall of frame.

NOTE: Additional jamb screws may need added if foam wrap is used on jambs, causing difficult sash operation.

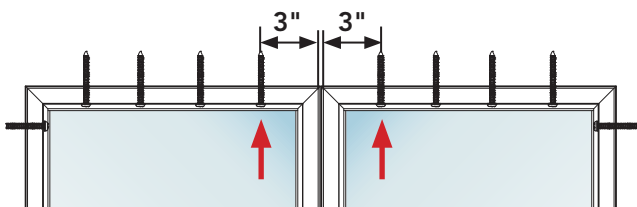
SECURE - INTERIOR VIEW

UNITS 28" WIDE OR GREATER, may need secured with (4) screws



MULLED UNIT OR T-MULL UNIT,

a screw **MUST** be installed 3" from each side of mullion on ALL mullioned sets



***If mullioned set is greater than 56" overall, additional head screws may need added as shown**

(Figure C.7)

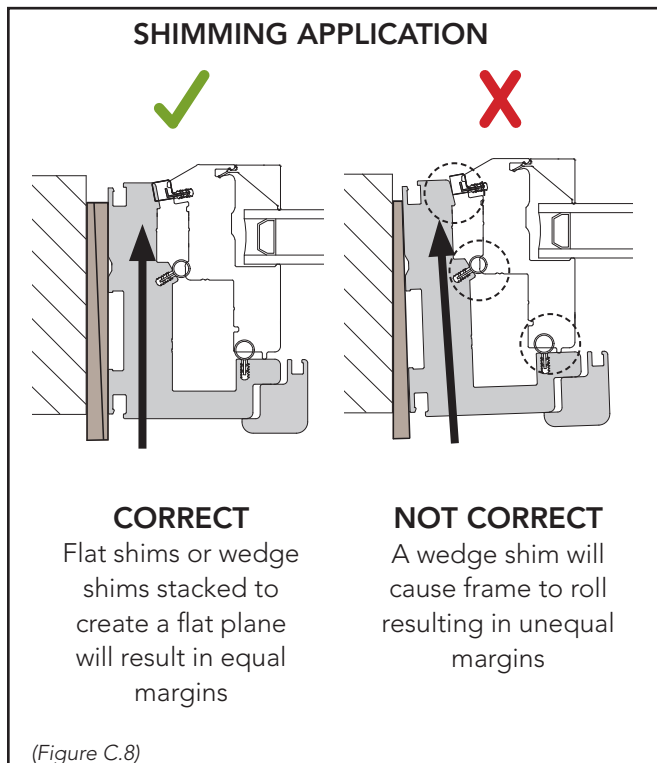
10

Securing the frame header:

For units 28" wide or greater, the header may need secured to the opening header. Install (4) #8 x 2" Phillips pan head screws. Position in same frame channel as jamb screws. Space equally. *Additional header screws and hole plugs are not provided.* (Figure C.7)

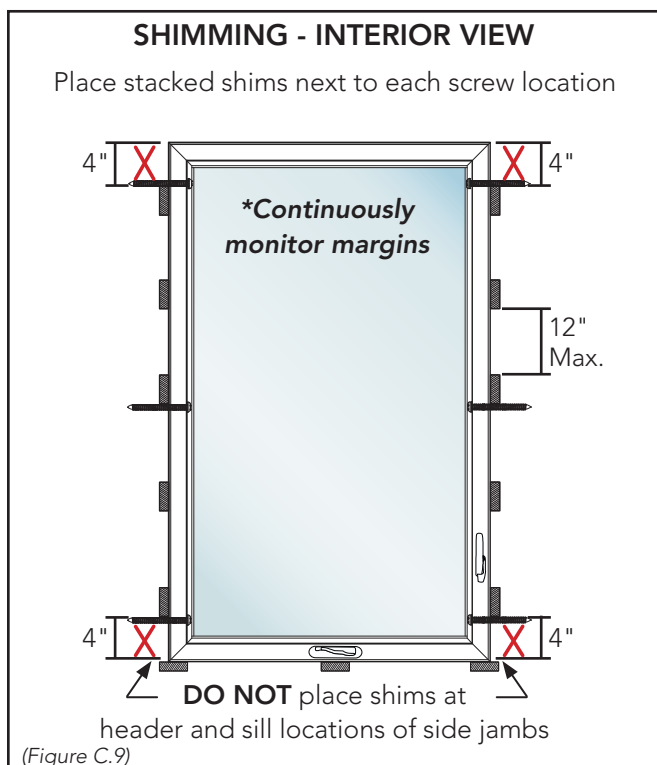
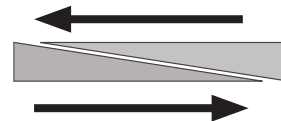
For ALL MULLED UNITS or T-MULL UNITS, a #8 x 2" screw **MUST** be installed into the frame header 3" from each side of the mullion. For a mullioned unit with corner drive system, install screw through open hole in the corner drive. *If mullioned set is greater than 56" overall, additional head screws may need added as shown.* (Figure C.7)

C. INSTALLATION (CONTINUED)



! IMPORTANT! Shims are needed to achieve required margins. All margins need to be **CONTINUOUSLY** monitored throughout installation. Shimming as instructed in Step 11 is critical to maintain stability of the frame.

! IMPORTANT! **CORRECT** shimming application; stack wedge shaped shims contrasting and plane to plane. See diagram below. **DO NOT** use a single wedge shim. This will cause the frame to roll, resulting in unequal margins. (Figure C.8)



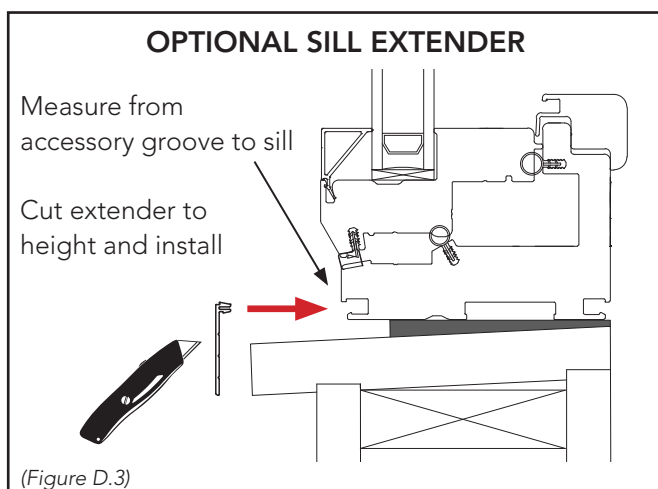
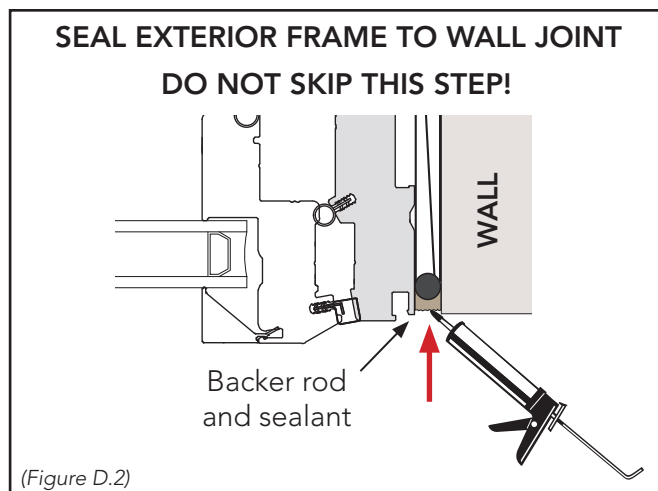
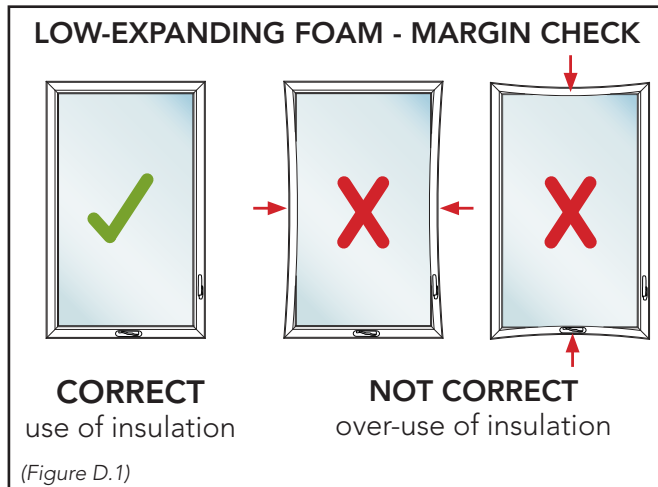
11 Place shims next to all screw locations. **DO NOT PLACE SHIMS WITHIN 4" OF TOP OR BOTTOM CORNERS.** This will cause frame distortion. If spacing between side jamb shims is greater than 12", additional shims may be needed to maintain margins and stabilize frame. **CONTINUOUSLY CHECK SASH TO FRAME MARGINS WHILE SHIMMING.** Note, window hardware should not be visible between exterior sash weather strip and frame. (Figure C.9)

12 Final check on frame alignment. Adjust shims and screws as needed to achieve and maintain equal and straight alignment, all sides. **Refer back to Figures C.1, C.2 and C.3.**

13 Check for proper operation of sash. For sash operation issues, refer to Troubleshooting Section.

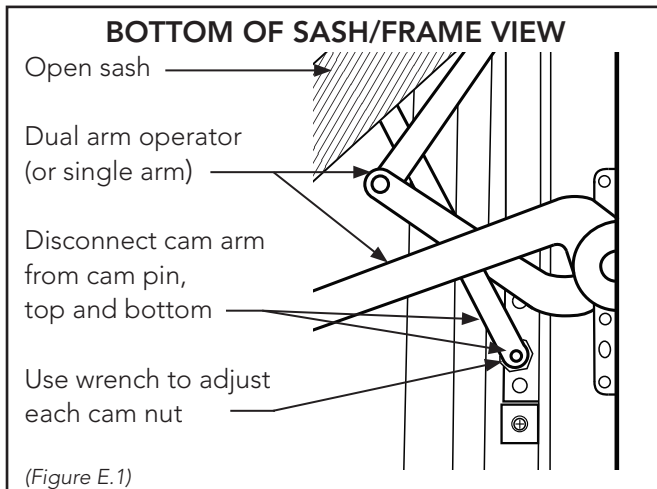
14 Fully secure each center/middle screw. **DO NOT OVER TIGHTEN.**

D. INSULATE AND FINAL ADJUSTMENTS



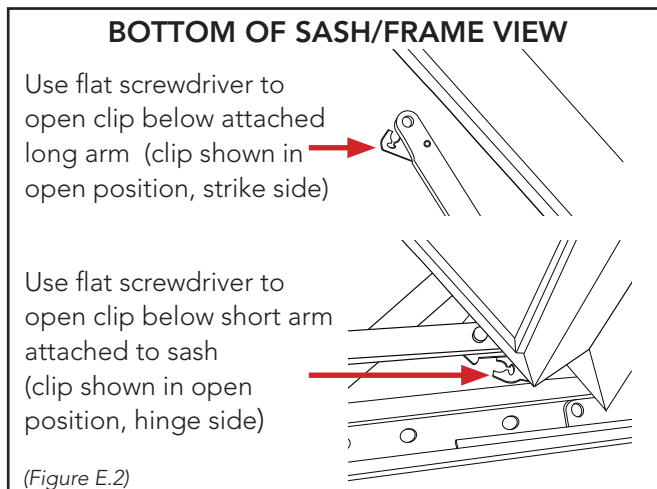
- 1 Install hole plugs into all jamb screw locations.
 - 2 Close and lock sash.
- ! IMPORTANT!** Sash must operate properly before and after application of foam insulation.
- 3 Insulate by using an AAMA approved ASTM C1620 low-expanding foam to fill all cavities between frame and opening. Check and maintain all margins during insulating. **Over use of low-expanding foam may cause frame to bow, jeopardizing operation of window.** (Figure D.1)
 - 4 Apply caulking to seal the **EXTERIOR** window frame to wall joint. Use backer rod if needed. **DO NOT SKIP THIS STEP.** Note: if stucco flange is used, apply sealant from the interior. Be sure the sealant is inserted far enough into the wall joint to meet the backside of the stucco flange. (Figure D.2)
- ! IMPORTANT!** This is a weeping sill. Maintain weep hole clearance when trimming exterior. **DO NOT** screw through sill! (Figure D.3)
- 5 If optional **sill extender** is to be used, measure distance from sill accessory groove to existing sill or edge of rough opening. Cut fin to height required and install. **DO NOT** install until foam has fully cured. (Figure D.3)
 - 6 If **MasterFit™ Trim** is ordered, **DO NOT** nail trim to jamb extension. Refer to QR code on back for measuring assistance.

E. SASH TO FRAME ADJUSTMENTS



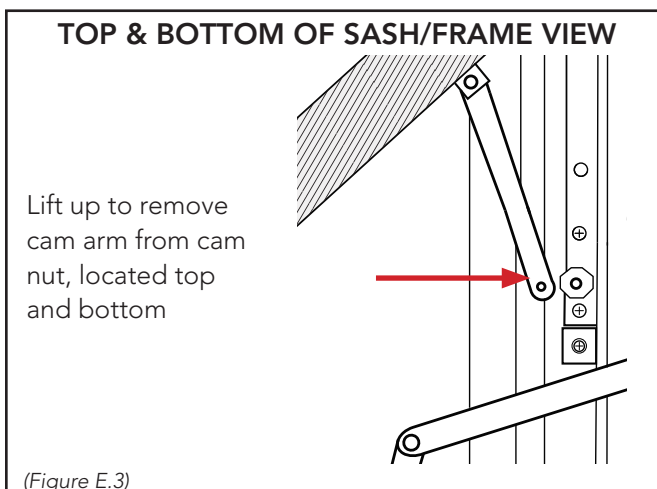
- 1 For SASH ADJUSTMENT, unlock and open sash. Use a flat head screwdriver to remove arm from each cam nut located on top and bottom hinge track. Use a crescent wrench to slightly rotate each cam nut $\frac{1}{16}$ " to the exterior or $\frac{1}{32}$ " to the interior. (Figure E.1)

NOTE: The ProVia HG05 hinge wrench can be ordered from our Customer Support Team for adjustment of the cam nut without removal of the arm. (Request part # S-HG-0111-00)



- 2 For SASH REMOVAL, unlock and open sash. Use a flat head screwdriver to open the clip located below the attached LONG arm, near the strike side. Use a flat head screwdriver to open the clip located below the SHORT arm, attached to the sash near the hinge side. Move each arm away from sash. Lift below cam arm to remove arm from cam nut, both top and bottom. Move each cam arm away from sill. Hold sash secure, slide the top and bottom sash shoes towards the open side of hinge track. Remove sash from frame. Reverse order for re-installation. (Figure E.2 & E.3)

NOTE: Smaller casement windows will use a single arm operator.



NOTE: Refer to the QR codes at the end of this document for a more detailed, complete instruction of sash removal 'Casement Sash Removal with ROTO Hardware' and a helpful video 'Removal and Installation of a Casement Window Sash'.



TROUBLESHOOTING & TIPS

PROBLEM	CAUSE	SOLUTION
Top of sash leans outward while closing	Normal/typical.	This is a normal occurrence as long as the top of the sash pulls in tight when closed. If sash does not pull tight, adjust keepers to engage tie rod post in succession, to achieve a zipper like effect from bottom to top. Lift block may be missing.
Lock lever becomes hard to operate halfway down	The keepers are not properly aligned with the tie rod post. Multiple keepers are engaging the tie rod post at the same time.	Adjust keepers to engage tie rod post in succession, to achieve a zipper like effect from bottom to top. Lift block may be missing.
Sill bows upward	1. No shims below jambs. Critical on mulled units. 2. Over insulating or over shimming below sill. 3. Installing sill extender before foam below sill has cured. 4. Insufficiently shimming under jambs when foam wrap is used under sill. 5. Exterior trim is tight against window, not allowing for vinyl expansion in the heat. 6. Jamb side shims placed too close to bottom sill locations, not allowing for vinyl expansion in heat.	1. Add shims to window sill per this instruction. 2. Remove foam. Re-square and level window unit. Refer to this instruction for proper insulation procedure. 3. Remove sill extender and foam below sill. Re-foam and let cure completely before re-installation of sill extender. 4. Re-shim window unit per this instruction. 5. Refer to "Installing Exterior Veneers to Windows" QR code at end of this instruction. 6. Remove shims at bottom jamb side sill locations. Shim per this instruction.
Header bows downward	1. Excessive foam or over insulating above header. 2. Jamb side shims placed too close to top header location, not allowing for vinyl expansion in heat.	1. Remove foam above header. Re-foam per this instruction. 2. Remove shims at top jamb side header. Shim per this instruction.
Frame racked or out of square	Improper or no shims below the jambs.	Re-shim window unit per this instruction.
Tall unit side jamb margins are not consistent in width	Under shimmed and under secured.	Add additional jamb screws. Place shims at additional jamb screw locations.
Sash alignment is restricted	Outside corners of sash have an excess weld build-up.	Remove the excess weld on corners and from both sides of the bulb seal until a square corner is achieved.
Sash is leaning downward and unable to pull in at the bottom	Lift block is missing.	Locate lift block next to sill slide track, with bevelled edge facing the exterior side.



TROUBLESHOOTING & TIPS

PROBLEM	CAUSE	SOLUTION
Window leaks water at accessory corners	1. Improper or no caulking on backside corners of accessory. 2. Improper or no caulking at accessory to frame joint.	1. Caulk accessory per this instruction. 2. Caulk accessory per this instruction.
Water leaks on multi-level muller units	Missing or improper caulking behind exterior mull strip at T-joint or cross joint.	Caulk zero snap mulls. Refer to the "Field Instruction for Mulling Vinyl Windows" QR code below.
Condensation is present on inside or outside glass of window	Various normal conditions/reasons.	Refer to the "Condensation, Humidity and Dew Point Temperature" QR code below for a detailed explanation of normal condensation conditions.
Hardware is visible between exterior sash and frame	Frame is rolled due to lack of proper shimming.	Re-set side jambs per Section C.

****Please call Customer Support for additional installation inquiries at 1-800-669-4711.***

****For additional information and helpful videos, SCAN or TAP the QR Codes.***

VISIT OUR INSTALLATION SUPPORT HOMEPAGE



**Field Instruction
Mulling Vinyl Windows
(Aspect & Endure)**



**Field Instruction for
Window Accessory
Installation**



**Install. Instruction
Vinyl Window
Stacking Plate #604**



**Measuring
Instruction
MasterFit™ Trim**



**Installing
Exterior Veneers
to Windows**



**Condensation,
Humidity and Dew
Point Temperature**



**Casement Sash
Removal with ROTO
Hardware**



**Video: Removal
and Installation of a
Casement Window Sash**



**Video: How to Adjust
ProVia Casement
Window Sash**

