



Synergy Group

Innovative Windows & Doors™

**INSTALLATION
GUIDE FOR
ALL SYNERGY GROUP
ALUMINUM / CLAD / WOOD
WINDOWS**

TABLE OF CONTENTS

Pre-Installation Information and Warnings.....	2
Parts Included, Tools and Supplies Needed	3
Glass Information and Warnings	3
Glass Film Removal	4
Glass Cleaning	4
Glass Maintenance.....	4
Finishing	5
Step 1: Unit Preparation	5
Step 2: Prepare Rough Opening	6
Step 3: Apply Corner Gaskets	7
Step 4: Position Installation Clips	8
Step 5: Install Unit	9
Step 6: Secure Unit in Opening	10
Step 7: Insulate Around Unit.....	12
Step 8: Flash and Seal Unit.....	12
Step 9: Apply Exterior Finish.....	15
Special: Window Operation: Tilt & Turn	16

Installation Instructions for all Synergy Group Aluminum / Clad / Wood Windows

INSTALLER; PLEASE LEAVE THIS GUIDE WITH THE BUILDING OWNER TO FILE FOR FUTURE REFERENCE

Congratulations! You have just purchased one of the many fine Synergy Group® products. Proper assembly, installation and maintenance are essential if the benefits of your Synergy product are to be fully attained. Please read and follow this instruction guide completely. If your abilities do not match this procedure's requirements, contact an experienced contractor. You may direct any questions about this or other products to your local Synergy dealer.

Contact Synergy Monday through Friday, 8 a.m. to 4:30 p.m. Eastern Standard Time (519-951-0909) or email us at customerservice@synergywd.com. Thank you for choosing Synergy.

IMPORTANT SAFETY, ASSEMBLY, AND INSTALLATION INFORMATION

Every assembly and installation is different (wind loads, structural support, etc.). Synergy strongly recommends consultation with a Synergy supplier or an experienced contractor, architect, or structural engineer prior to the assembly and installation of any Synergy product. Synergy has no responsibility regarding the post-manufactured assembly and installation of Synergy products.

WARNING!

Use caution when working at elevated heights and around unit openings. Follow manufacturers' instructions for ladders and/or scaffolding. Failure to do so may result in injury or death.

WARNING!

Follow manufacturers' instructions for hand or power tools. Always wear safety glasses. Failure to do so may result in injury and/or product damage.

WARNING!

Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install our products to avoid injury and/or product damage.

WARNING!

Unless specifically ordered, Synergy windows are not equipped with safety glass, and if broken, could fragment causing injury. Many laws and building codes require safety glass in locations adjacent to or near doors. Synergy windows are available with safety glass that may reduce the likelihood of injury when broken. Information on safety glass is available from your local Synergy dealer.

WARNING!

- Factory supplied Head Flashing and Installation Flanges DO NOT take the place of standard window flashing. Unit must be properly flashed and sealed with silicone for protection against water and air filtration. Use non-reflective flashings.
- Do not apply any type of film to glass. Thermal stress conditions, resulting in glass damage, could occur.
- Use of movable insulating materials, such as window coverings, shutters, and other shading devices, may damage glass. In addition, excessive condensation may result, causing deterioration of windows.

⚠ WARNING!

Metal fasteners and other hardware components may corrode when exposed to preservative-treated and fire-retardant treated lumber. Obtain and use the appropriate metal fasteners and hardware as specified by the installation guide to fasten unit to any rough opening made from pressure treated and fire-retardant treated lumber. Failure to use the appropriate materials for the installation may cause a failure resulting in injury, property damage and/or product damage.

⚠ WARNING!

Windows can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install window and door products to avoid injury and/or product damage.

⚠ WARNING!

Follow instructions from foam, sealant and flashing manufacturer regarding material application and compatibility with this product.

Parts Included

- Installation Guide
- Window Unit

Tools Needed

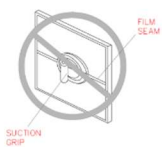
- Safety Glasses
- Tape Measure
- Level
- Utility Knife
- Caulk Gun
- Hammer
- #2 Phillips Bit Knife
- Flat Blade Screwdriver
- Drill/Driver
- Staple Gun
- 3/16" Drill Bit

Supplies Needed

- Formable Self-Adhering Sill Flashing
- Flashing
- House Wrap Tape
- Drip Cap (full width)
- Shims (waterproof)
- Foam Backer Rod
- Staples
- Low Expanding Foam
- Sealant
- Fasteners (SS, if required)
 - 1 ¾" Roofing Nails
 - #10 x 1 ½" Screws
 - #10 x 2 ½" Screws

Glass

⚠ WARNING!



Suction grips will not hold if placed over seam of film to lift or move unit. Unit will fall causing injury and/or product damage

- Laminated safety glass is not standard and must be special ordered. Check local building codes
- Leave protective film in place until after construction is finished. Leave (NFRC) performance label in place until final inspection.
- Argon gas blend not available with high altitude glass.

⚠ WARNING!

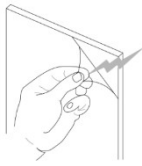


Sealants will damage exterior coating on glass.

Film Removal

WARNING!

Static created when removing film can ignite flammable materials or cause a shock.



See warning label on glass!



- Remove protective film from seam or corner using plastic scraper if needed.
- Remove protective film within **nine months** of installation and when temperature is above 0°C (32°F)

WARNING!

**Dispose of film immediately after removal.
Film may pose suffocation hazard to children.**

Cleaning

WARNING!

Acid solutions used for cleaning masonry or concrete will damage glass, fasteners, hardware, and metal flashing. Protect unit and follow cleaning product instructions carefully. If acid contacts unit, wash all surfaces with water immediately.

- Clean glass using liquid glass cleaner
- Clean exterior frame, sash and insect screens using mild detergent and water with a soft cloth or brush.
- For hard to clean areas, use a non-abrasive cleaner, alcohol-and-water or ammonia-and-water.

WARNING!

Abrasive cleaners will damage glass surface.

WARNING!



Metal razor blades can damage glass surface and exterior coating.

Maintenance

- Do not apply any type of film to insulate glass. Thermal stress and glass damage can result. Shading devices (insulated covers, shutters, etc.) may also cause thermal stress and condensation damage.
- For more information contact your local Synergy dealer or visit www.synergywd.com.

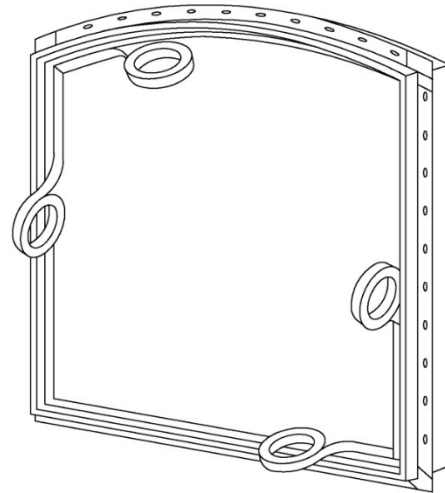
Finishing

WARNING!

Finish wood surfaces immediately after installation. Unfinished wood will deteriorate, discolour, and/or may bow and split. Do not stain or paint weatherstrip, vinyl, glass, or hardware. Product damage may occur.

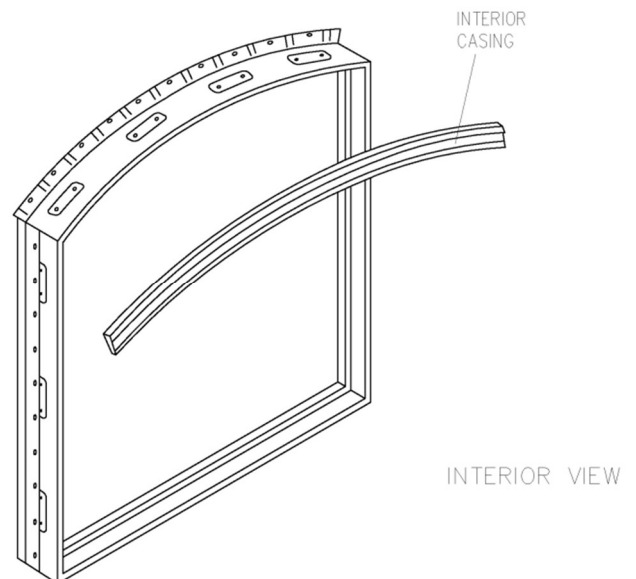
- Apply interior casing before finishing.
- Finish all hidden wood surfaces
- Do not overload brush with stain/paint when finishing.
- Finish may wick between glass stop/grille on glass.
- Read and follow “Care Guide”.
- **Read and follow finishing product instructions and warnings on finishing materials.**

- Film is not a substitute for masking.



1. Unit Preparation

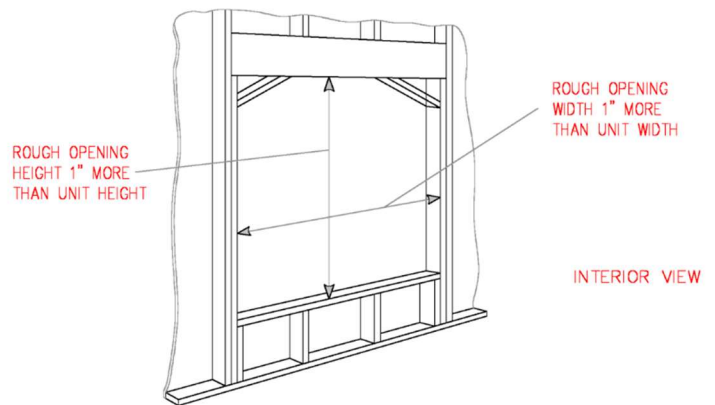
- Remove unit from packaging, being careful not to damage unit. Place unit exterior side down on a clean, flat work surface.
- Remove loose items such as interior casing. Extension jambs are factory applied unless ordered loose.



2. Prepare Rough Opening

WARNING!

Size of rough opening should allow minimum $\frac{1}{4}$ " - $\frac{1}{2}$ " clearance around entire unit, with roughly $\frac{1}{2}$ " to 1" larger than the actual window frame dimension. Width of the rough opening should be $\frac{1}{2}$ " to 1" more than the unit width. Height of rough opening should be $\frac{1}{2}$ " to 1" more than the unit height. This allows space for flashing and expansion.



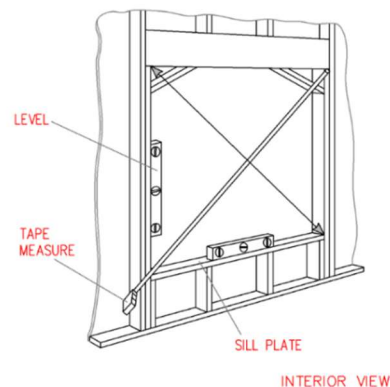
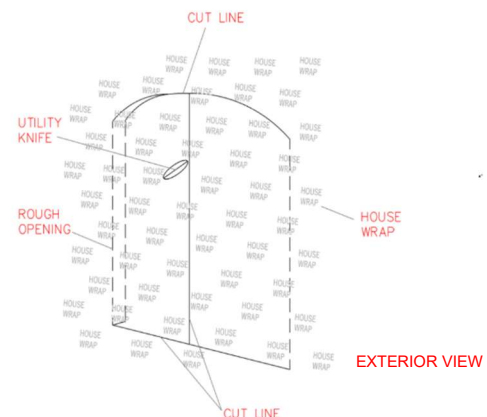
Masonry Construction



WARNING!

DO NOT install unit with unfinished wood in direct contact with masonry/concrete. Apply proper finish to wood surface, or place barrier (i.e. ice/water membrane/protector) between wood and masonry/concrete surface. Failure to do so may result in product and/or property damage.

- Cut house wrap along sill and head of rough opening.
- Cut house wrap vertically in center of rough opening from head to sill.
- **DO NOT** cut house wrap diagonally
- Check sill plate for level. Sill **must** be level. Shim if needed.
 - Shims should be placed at the location where the vertical members meet the lower window plate.
 - Shim the sill at least 4 inches from each end and at every mullion (if applicable)
 - Apply shims 4 inches from the bottom and top and one at the centre
 - Use shims in pairs, one in each direction, to ensure even support
- Check rough opening for plumb and level. If rough opening is **not** plumb or level, correct as needed.
- Check rough opening for square by measuring diagonally across, upper left to lower right and upper right to lower left corner. If measurements are within $\frac{1}{8}$ ", opening is square. If rough opening is **not** square, correct as needed.



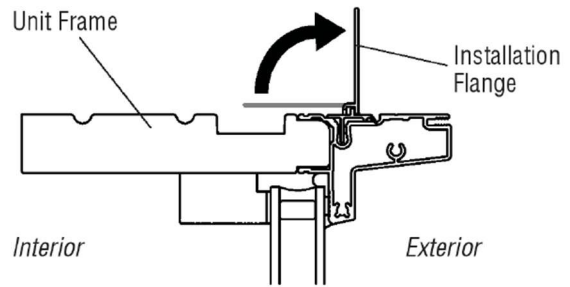


3. Apply Corner Gaskets

WARNING!

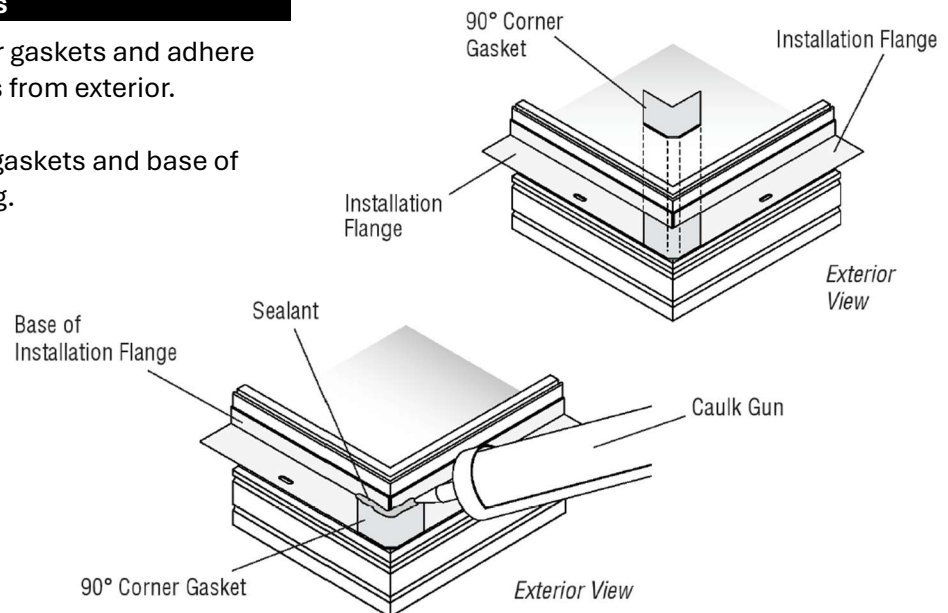
Installation Flanges are recommended for installing all units. If installation Flanges cannot be used, for example, replacement situations where exterior finish is already applied, remove them and proceed to Step 4.

- Lift installation Flanges from unit frame and snap into position perpendicular to frame.
Not required on curved frame section(s).



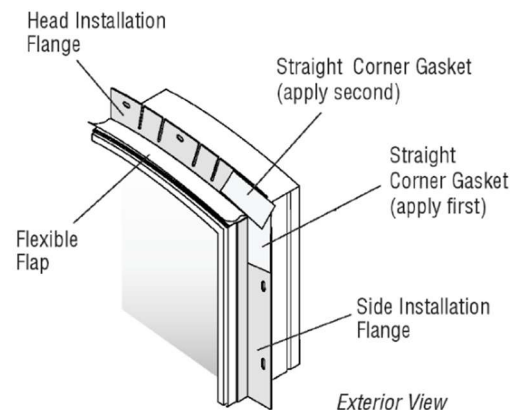
90° Corners

- Remove backer from 90° corner gaskets and adhere to adjacent Installation Flanges from exterior. See drawing.
- Apply sealant between corner gaskets and base of Installation Flange. See drawing.



Non-90° Corners

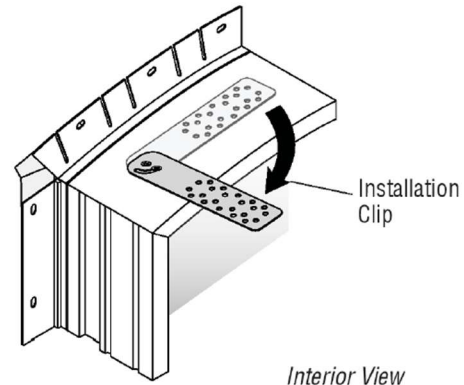
- Remove backer from straight corner gaskets.
- Adhere first straight corner gasket to side jamb Installation Flange extending half the gasket between head and side Installation Flanges from exterior.
- Adhere second straight corner gasket to head Installation Flange overlapping onto first straight corner gasket from exterior.
- Apply sealant between corner gaskets and base of Installation Flange.



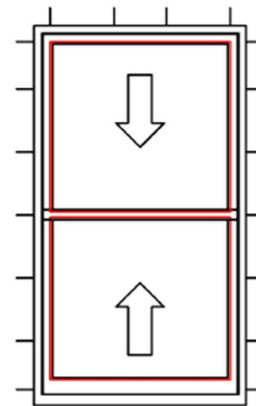
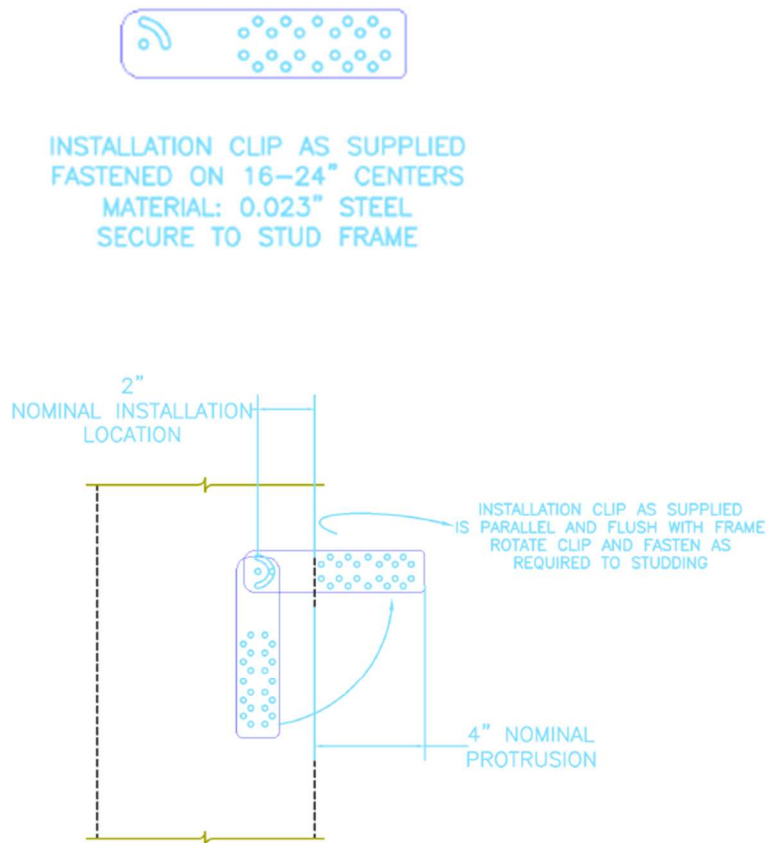


4. Position Installation Clips

- Rotate Installation Clips 90° into position around frame, as shown, before placing unit into rough opening.
- For arch units, relocate Installation Clips on radius head jamb for securing to building framing as needed.



For Single and Double Hung Window Applications



CLIPS ON
16–24" CENTERS
AS APPROPRIATELY SPACED

5. Install Unit

WARNING!

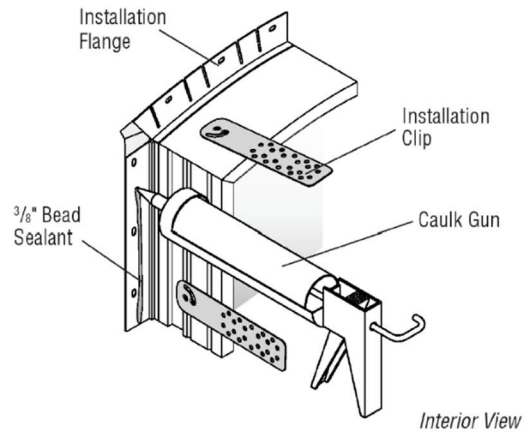
Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install window and door products to avoid injury and/or product damage.

WARNING!

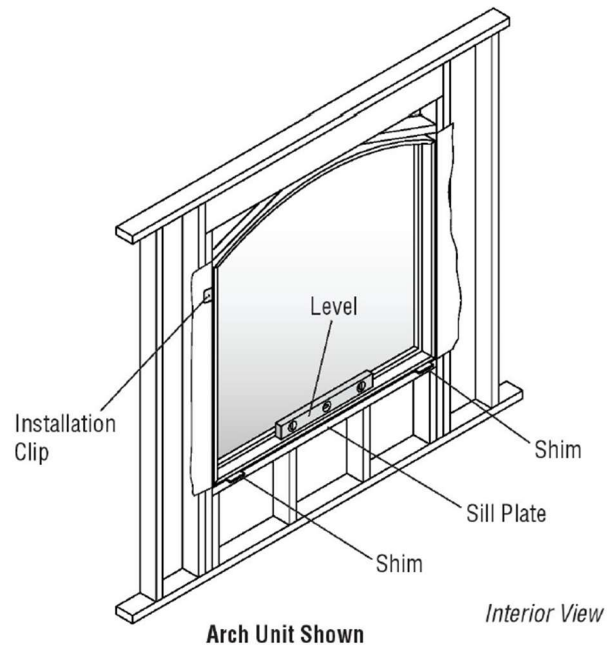
A minimum space of ¼" is required around exterior perimeter of unit between frame and rough opening.

WARNING!

Follow sealant manufacturer's instructions regarding surface cleaning and preparation, application, and temperature when applying sealant. Failure to do so may result in water infiltration.



- Apply a 3/8" bead of sealant to back of Installation Flanges at sides and head only. **Do not** apply sealant to sill Installation Flange. Apply extra sealant at corners.
- Set and level shims on sill plate at all side jamb locations. Add shims on sill plate to support and level unit as needed. For joined units, shims must be placed under mullion post(s) at the sill.
- Center and level unit in opening.
- Bend and fasten Installation Clip at highest point using a #10 x 1 ½" screw. For rectangular and arch units, fasten one corner.

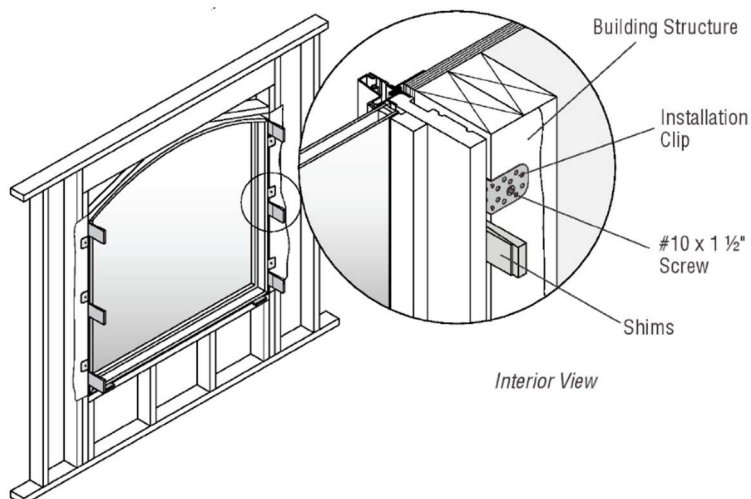
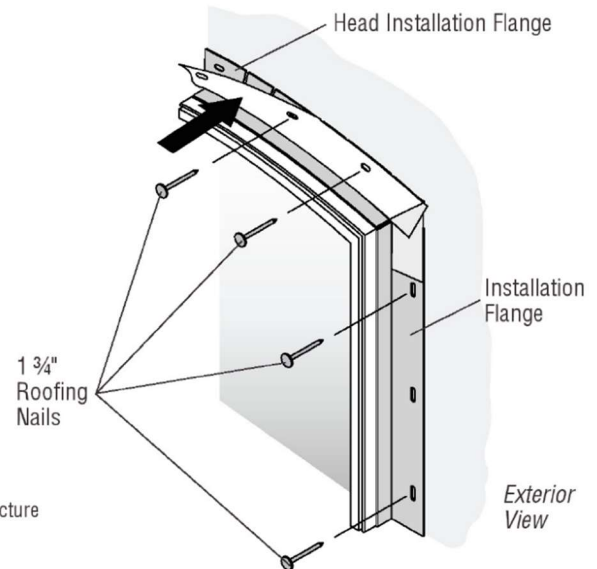
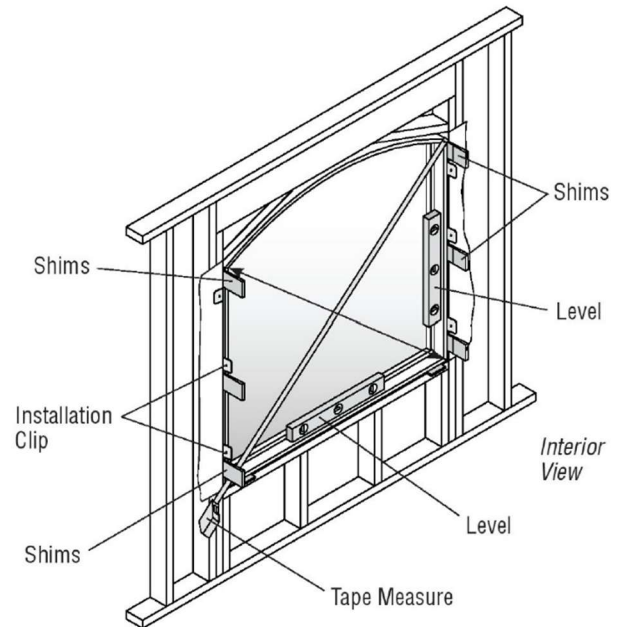


6. Secure Unit in Opening

WARNING!

Both Installation Clips and Installation Flanges are recommended for installing all units. If Installation Clips or Installation Flanges cannot be used, unit must also be secured to building structure through frame.

- Insert shims between frame and rough opening along side jambs, just above or below Installation Clips.
- Check unit for plumb and level. Adjust shims as needed.
- Check unit for square by measuring diagonally, upper left to lower right and upper right to lower left corner. Both measurements must be within 1/8". If unit is not square, adjust as needed.
- Nail through every other hole around Installation Flange using 1 3/4" roofing nails.
- Bend and fasten Installation Clips to building structure using #10 x 1 1/2" screws.
- Recheck plumb, level, and square of unit. Adjust shims as needed.

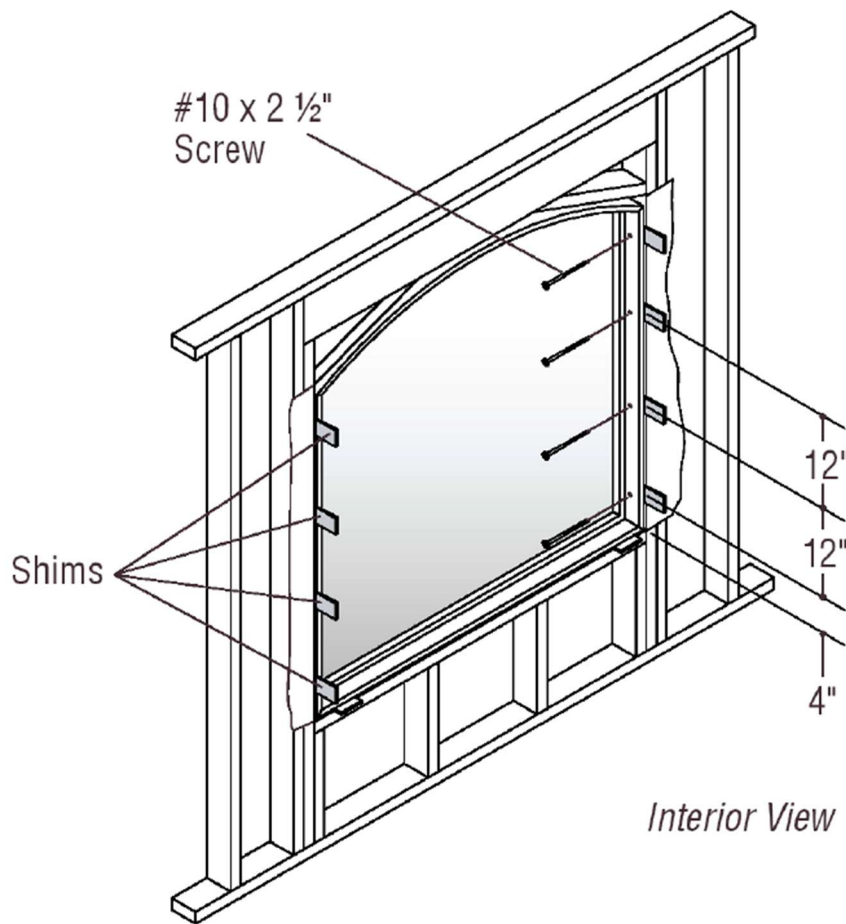
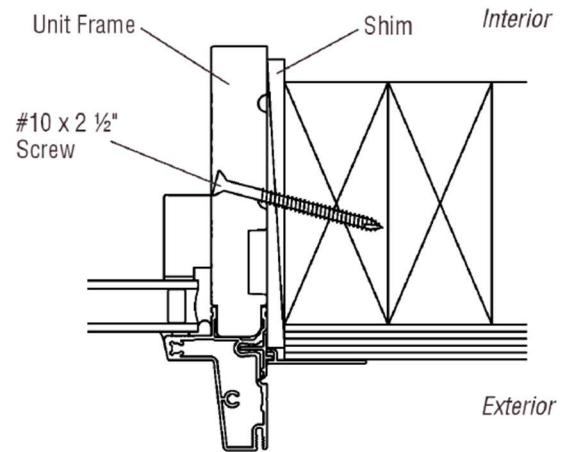




6. Secure Unit in Opening, continued

Securing Through Frame

- If securing through frame (where Installation Clips or Installation Flanges cannot be used), predrill 3/16" holes through unit frame 4" from each corner and every 12" between. If securing directly to masonry, predrill for masonry screws.
- Insert shims between frame and rough opening near 3/16" holes.
- Check plumb, level, and square of unit. Adjust shims as needed.
- Secure unit through predrilled holes in frame using #10 x 2 1/2" screws. If securing directly to masonry, use masonry screws.
- Recheck plumb, level and square of unit. Adjust as needed.



7. Insulate Around Unit

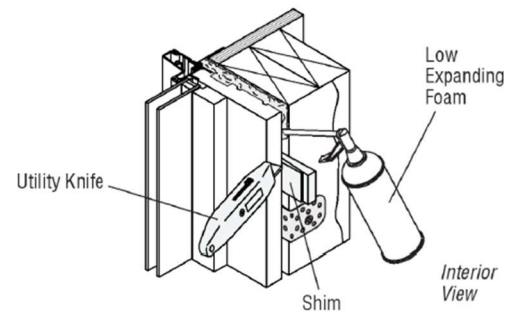
⚠ WARNING!

Caution: When insulating between unit frame and rough opening, or between units when joining, DO NOT overpack batt insulation or overfill with expandable foam. Bowed jambs will result affecting product performance and/or unit operation.

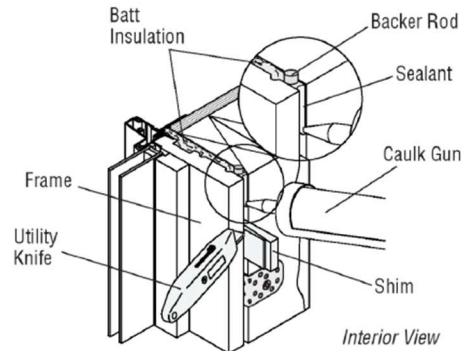
⚠ WARNING!

Do not completely fill void at sill to allow for drainage.

- Cut shims flush with frame interior.
- Insulate between frame, extension jambs, and rough opening on all sides. DO NOT overpack batt insulation or overfill with expandable foam; bowed frame may result.
- Seal gap between frame and rough opening with backer rod and sealant from interior. (Optional; batt insulation)

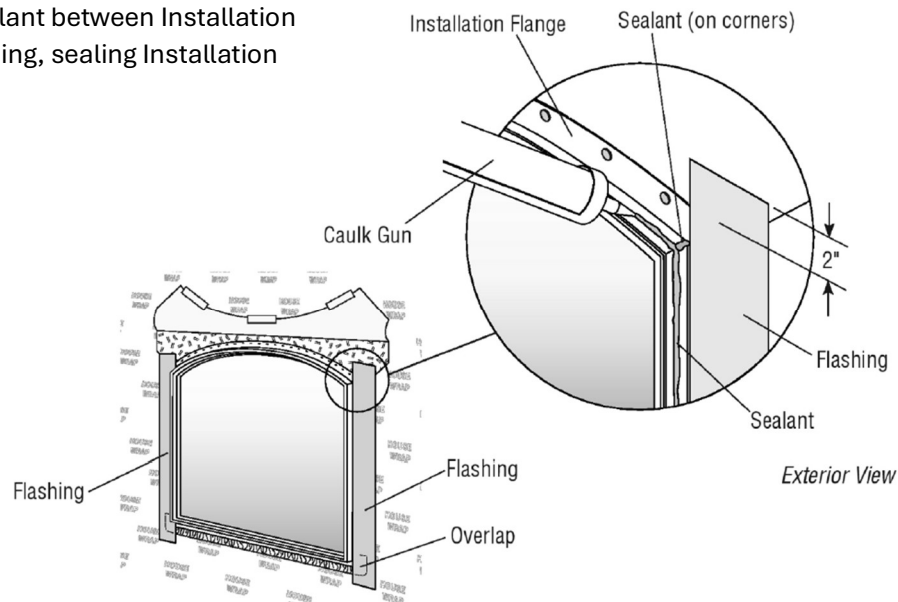


OR



8. Flash and Seal Unit

- Apply flashing over Installation Flange at sides, overlapping sill flashing and extending 2" above Head installation Flange and 2" below sill flashing.
- Apply a continuous bead of sealant between Installation Flange and exterior frame cladding, sealing Installation Flange to unit frame.

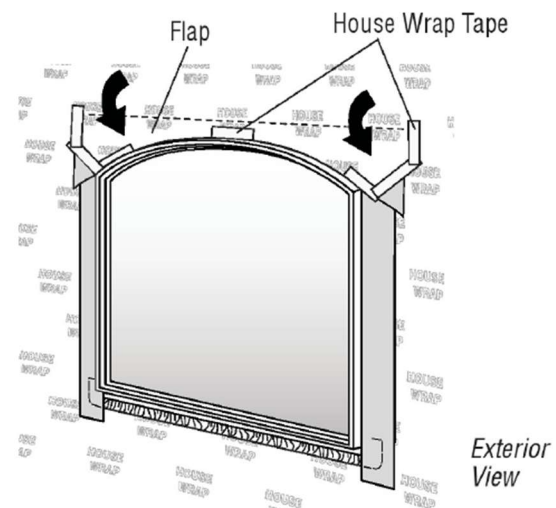
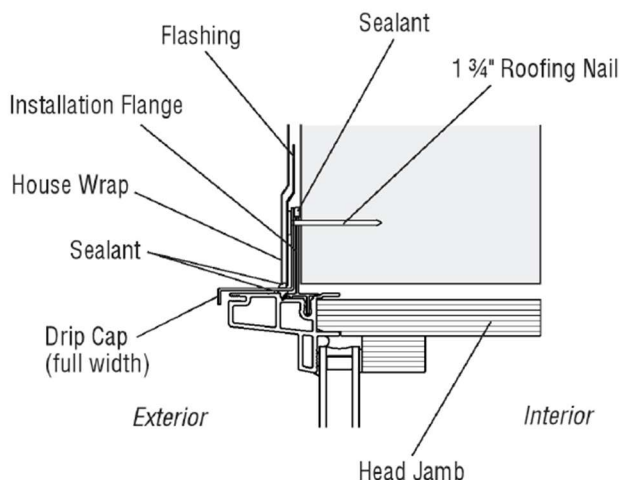
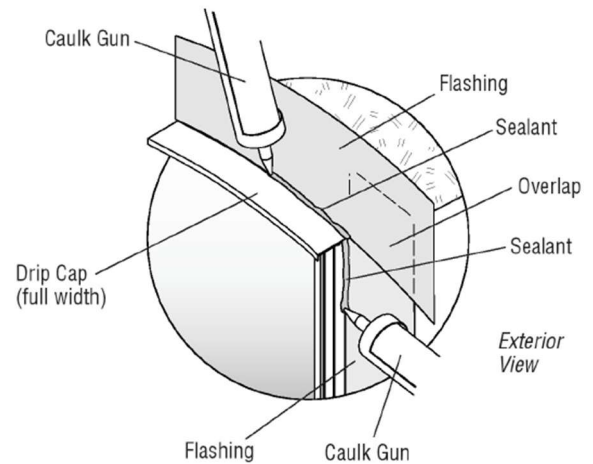
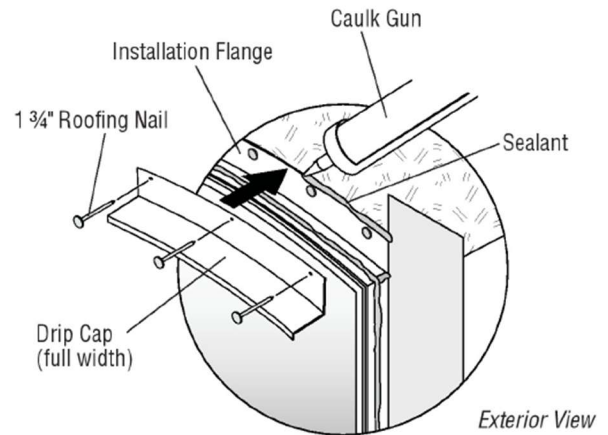


8. Flash and Seal Unit, continued

- If not installing drip cap (full width), proceed to units without drip cap (full width) on Page 14.

Units with Drip Cap (full width)

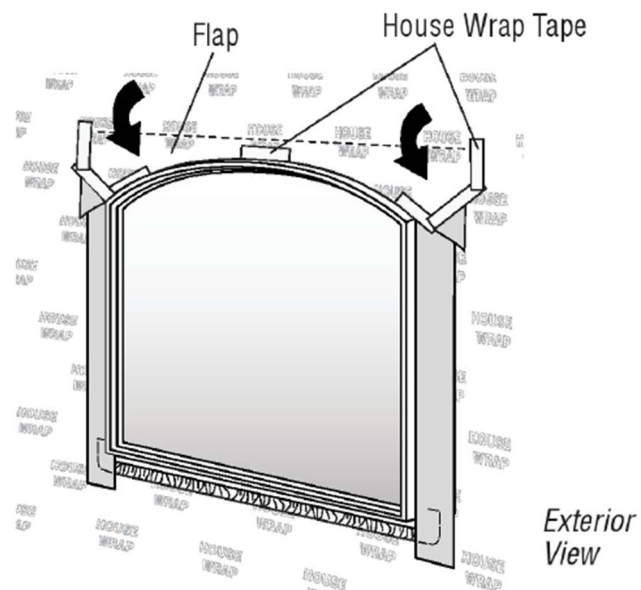
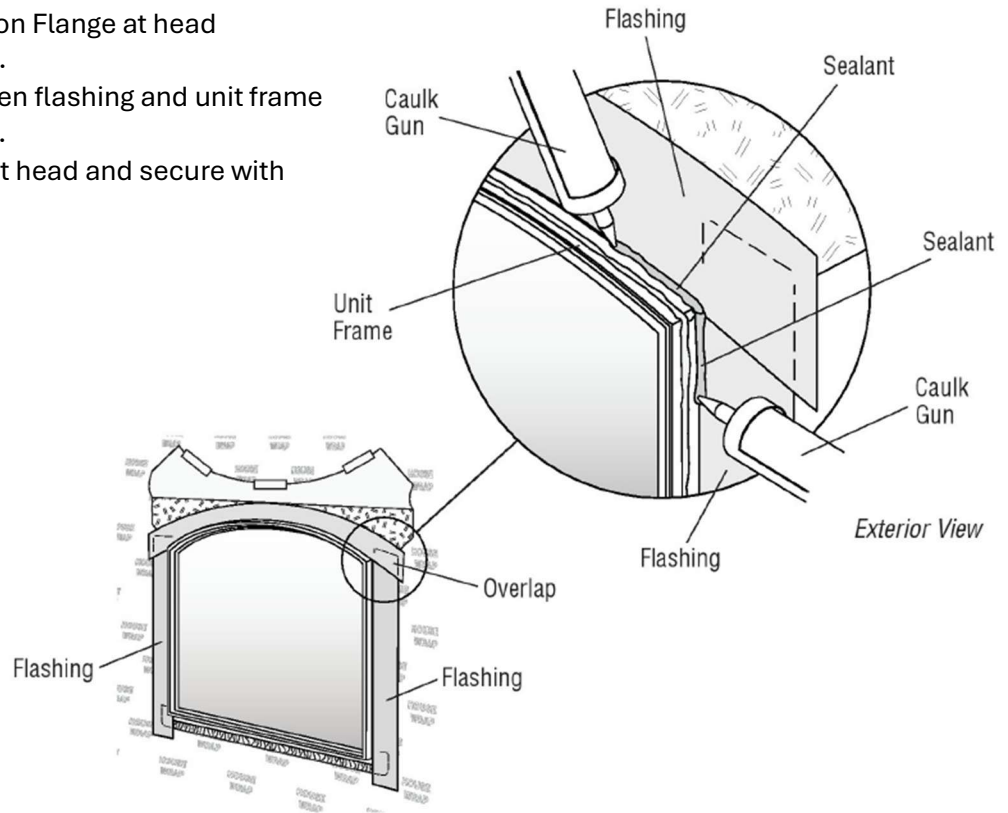
- Apply 3/8" bead of sealant along top edge of Head Installation Flange.
- Place drip cap (full width) in sealant at head, centered over unit. Secure to building structure using 1 3/4" roofing nails through the predrilled holes.
- Apply flashing over drip cap (full width) leg at head, overlapping flashing at sides.
- Apply sealant between flashing and unit frame down sides and between flashing and drip cap (full width) along head.
- Fold house wrap flap down at head and secure with house wrap tape.



8. Flash and Seal Unit, continued

Units without Drip Cap (full width)

- Apply flashing over Installation Flange at head overlapping flashing at sides.
- Apply bead of sealant between flashing and unit frame down sides and across head.
- Fold house wrap flap down at head and secure with house wrap tape.



8. Flash and Seal Unit, continued

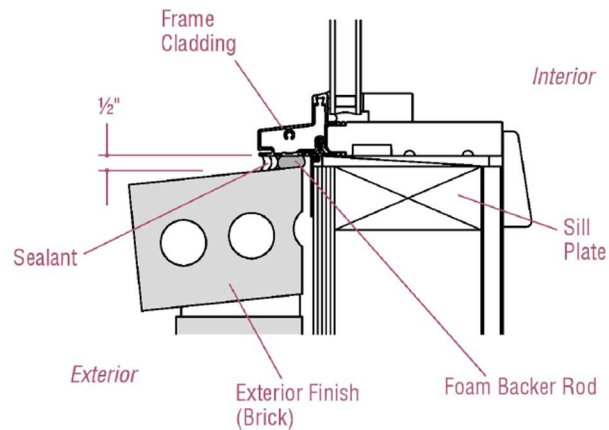
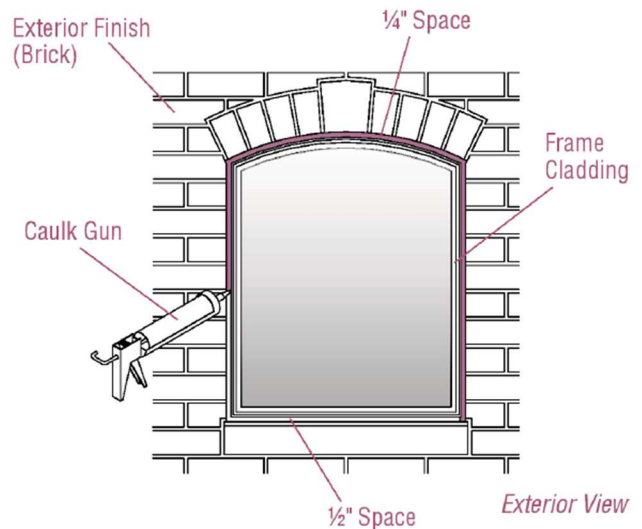
⚠ WARNING!

A minimum space of ¼" is required around exterior perimeter of unit between frame and siding. Masonry/brick veneer installations require a minimum ½" space along sill and ¼" space around the remaining perimeter. Failure to do so may result in product and/or property damage.

⚠ WARNING!

Use foam backer rod to seal and reduce the depth of gap before filling with sealant. Follow sealant manufacturer's instructions.

- Apply backer rod and a continuous bead of sealant around exterior perimeter of window unit between exterior window frame cladding and building's exterior finish.



9. Apply Exterior Finish

For exterior finish instructions, please refer to the care and maintenance guide.

Special Instructions:

Window Operation: Tilt & Turn

! WARNING!	! WARNING!	! WARNING!
The window must always be fully shut before changing the handle position.	Do not try to open the window when the handle is between the standard positions ➤ Closed ➤ Tilt ➤ Turn	If a locking handle has been fitted, unlock the window prior to operating the handle to avoid product damage.



Closed

Tilt and Turn window in the closed position.



Tilt

From the closed position, unlock and turn the handle 90° to the horizontal position and pull to allow the top of the sash to tilt in for ventilation.



Turn

From the closed position, unlock and turn the handle 180° to the vertical position and pull to allow the side of the sash to turn in for ease of cleaning and escape in case of fire or another emergency.