

Installation Guide Single-Hung, Fixed, & Specialty Windows

Masonry Flange Windows
with Non-Impact & Storm
Defense™ Protection with
Impact-Resistant Glass



americancraftsmanwindows.com

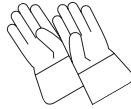
Project Requirements:

- Read guide before starting installation. Read all warnings and cautions during installation.
- Check with your local building code official to identify and confirm compliance with local building code requirements.
- These instructions show images of a masonry flange single-hung window installation into a wood buck unless otherwise noted.
- Instructions may not be right for all installations due to building design, construction material or methods used and/or building site conditions. Consult a contractor or architect for recommendations.
- Existing window frame, wall and weather-resistant barrier must be adequate and window frame and wall must be structurally sound.
- Window must be installed to be plumb, level and square.
- Joined combination units must be individually supported to the rough opening.
- Anchoring screws must attach to framing members.
- Failure to follow these instructions may void product warranty.
- Contact local authorities or waste management companies for proper recycling and/or disposal of removed window or patio door.
- Due to ongoing product changes, updated test results and/or new industry best practices, this installation procedure may change over time. Visit the manufacturer's website for current installation instructions.
- Visit the manufacturer's website for removal instructions, additional installation information and/or guides.

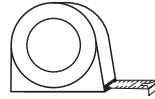
Tools & materials required:



Safety glasses



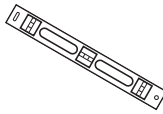
Work gloves



Tape measure



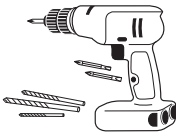
Framer's square



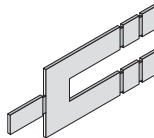
Level



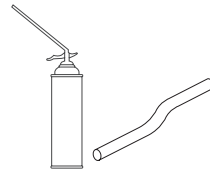
Putty knife



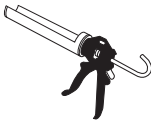
Drill/Driver
and Bits



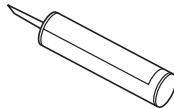
Shims



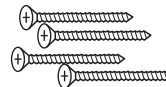
Low expanding foam or
backer rod with sealant



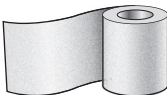
Caulk gun



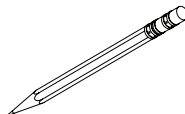
Interior & exterior window
grade sealant



Approved fasteners
(See fastener chart)



Formable self-
adhering sill flashing
(Minimum 6" wide)



Pencil

Warnings and Cautions:

⚠ WARNING

Use caution when working at elevated heights and around window and door openings. Follow the manufacturers' instructions for ladders and scaffolding. Failure to do so could result in injury or death.

⚠ WARNING

Follow manufacturers' instructions for hand and power tools. Always wear safety glasses. Failure to do so could result in injury, product or property 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 window and door products. Heavier windows and doors will require mechanical assistance. Failure to do so could result in injury, product or property damage.

⚠ WARNING

Windows and doors have small parts (e.g. hole plugs, operator spline caps, fasteners, etc.). Small parts if swallowed could pose a choking hazard to young children. Dispose of unused, loose, or easily removed small parts. Failure to do so could result in injury.

⚠ WARNING

Support window or door in opening at all times until fully fastened. Failure to do so could result in window or door falling out causing injury, property or product damage.

⚠ WARNING

Unless specifically ordered, 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. Windows are available with safety glass that could reduce the likelihood of injury when broken. Information on safety glass is available from your local dealer.

CAUTION

The use of movable insulating materials such as window coverings, shutters, and other shading devices may damage glass and/or vinyl.

CAUTION

Follow instructions of foam, sealant, and flashing manufacturers regarding safety, material application, compatibility, and periodic maintenance for continued weather resistance of their products. Failure to do so could result in injury, product or property damage.

CAUTION

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

Warnings and Cautions:

CAUTION

DO NOT drill into the sill of the window or door unless otherwise directed. Doing so could result in product or property damage.

CAUTION

DO NOT store windows flat or in the sun or product damage may occur.

CAUTION

Remove or cut ventilation holes in plastic shipping wrap if windows are not installed immediately or product damage may occur.

CAUTION

Weep holes must face the exterior and must be located at the bottom of the window or product and/or property damage may occur.

CAUTION

Use masonry screw when fastening directly into masonry or through a buck into masonry.

CAUTION

Do not cover weep holes. Property damage may result.

NOTICE

Buildings constructed prior to 1978 could contain lead paint which could be disturbed during window or door replacement. For more information on proper management of lead paint, go to: www.epa.gov/lead

NOTICE

DO NOT apply any type of film to insulating glass. Doing so could cause thermal stress conditions and result in glass damage. Shading devices (e.g. insulated coverings, shutters, etc.) could also cause thermal stress and condensation causing deterioration of windows or doors.

NOTICE

Important safety information. Leave this information for the building occupant.

Installation Instructions

FASTENER CHART						
INSTALLATION THROUGH THE JAMB ANCHORING REQUIREMENTS (select one)						
Fastener	Substrate	Minimum Head	Minimum Shank	Minimum Embedment to Structural Framing	Steel Type/Coating	Spacing
Wood Screw	Wood	5/16"	#10	1-1/2"	Galvanized, Zinc Chromate, *Stainless Steel, *Ceramic Coated	Every Hole
Self-Tapping Metal Screw	Metal	5/16"	#10	3 Full Threads		
**Concrete Screw	Masonry	5/16"	3/16"	1-1/4"	n/a	
INSTALLATION GUSSET PLATE ANCHORING REQUIREMENTS (select one)						
Fastener	Substrate	Minimum Head	Minimum Shank	Minimum Embedment to Structural Framing	Steel Type/Coating	Spacing
Wood Screw	Wood	5/16"	#10	1-1/2"	Galvanized, Zinc Chromate, *Stainless Steel, *Ceramic Coated	Every Hole
Self-Tapping Metal Screw	Metal	5/16"	#10	3 Full Threads		
**Concrete Screw	Masonry	5/16"	3/16"	1-1/4"	n/a	

- Use the correct fastener driver based on the selected fastener's head type.
Size pilot and clearance holes based on the selected fastener's shank diameter as needed.
*Use 300 series stainless steel or ceramic coated fasteners when fastening to treated lumber.
**Follow fastener manufacturer's anchoring recommendations (i.e. spacing, edge distance, hole depth, etc.)

Finishing, Cleaning and Maintenance Instructions:

CAUTION

DO NOT stain or paint weatherstrip, vinyl, glass, or hardware. Doing so could result in product damage.

- **Read and follow finishing product instructions and warnings on finish material.**

CAUTION

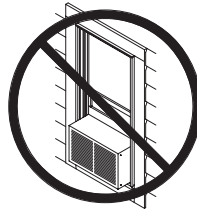
Acid solutions used for cleaning masonry or concrete will damage glass, fasteners, hardware, and metal flashing. Protect window or door and follow cleaning product manufacturer's instructions. If acid contacts window or door, wash all surfaces immediately with clean water.

CAUTION

DO NOT use or apply solvents, abrasives, harsh chemicals or cleaners to glass, sash, panels, frame, or window or door components. Doing so will result in product damage.

- **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 nonabrasive cleaner, alcohol-and-water or ammonia-and-water.

⚠ WARNING



DO NOT install air conditioner in window. Doing so could result in injury, product or property damage.

- Do not apply any type of film to insulating glass. Thermal stress and glass damage can result. Shading devices (insulated coverings, shutters, etc.) may also cause thermal stress damage.
- For continued weather resistance of sealant joints, follow the sealant manufacturer's recommendations for periodic maintenance.

Installation Instructions

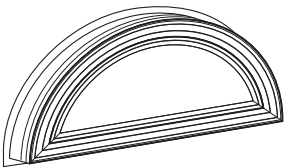
Step 1

Inspect unit.

Remove unit from packaging. Place unit on a clean, flat work surface.

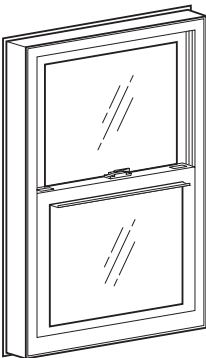
Close and lock sash if applicable to keep unit rigid and square during installation.

Windows with Masonry Flange



Specialty Window

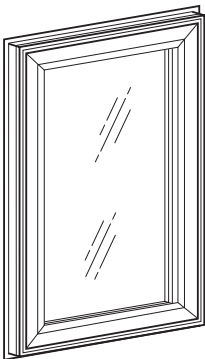
Interior



Single-Hung Window

Interior

Installation Hole Plugs
(single-hung window
with factory-drilled
installation holes only)



Picture Window

Interior

NOTE: Impact-resistant picture and specialty windows also have separate interior fastener covers.

Parts Included:

(1) Installation hole plugs bag containing:

Quantity	Item
8	Installation Hole Plugs White or Beige (single-hung window with factory-drilled installation holes only)

⚠ WARNING

Windows and doors have small parts (e.g. hole plugs, operator spline caps, fasteners, etc.). Small parts if swallowed could pose a choking hazard to young children. Dispose of unused, loose, or easily removed small parts. Failure to do so could result in injury.

Step 2

Prepare rough opening.

Inspect opening for correct size. Opening should be 1/2" larger than window size in width and height.

Check rough opening sill plate for level. Sill plate **MUST** be level. If sill plate is not level, correct before continuing.

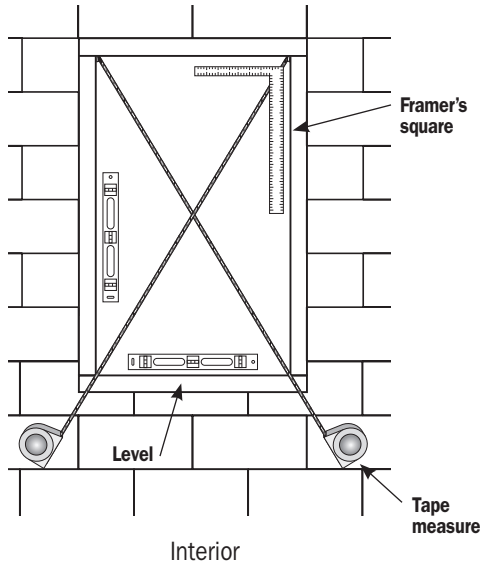
Check rough opening for plumb and level. If rough opening is **not** plumb or level, correct as necessary.

Check opening for square by measuring diagonally, upper left to lower right and upper right to lower left corner. Measurements must be within 1/8". If rough opening is not square, correct as necessary.

NOTICE

For masonry installations using wood bucks, follow wood buck installation instructions as specified by local building code.

Masonry with Wood Buck



Installation Instructions

Step 3

⚠ 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. Heavier windows and doors will require mechanical assistance. Failure to do so could result in injury, product or property damage.

Check fit of window.

Temporarily place window into opening tilting in from bottom and check for fit.

For integral combination single-hung windows, locate and mark sill attachment plate location(s).

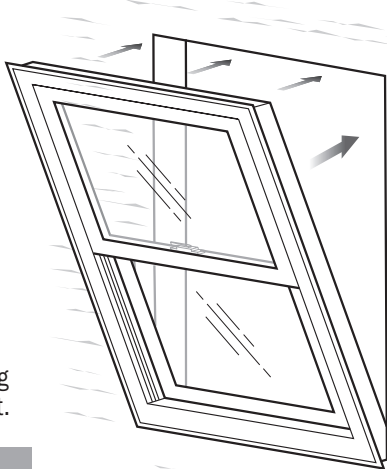


Mark sill attachment plate location(s).

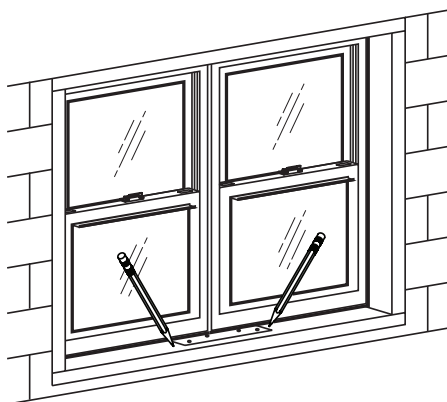
If window has sill attachment plate(s) mark edge location(s) as shown. Then remove window.

Adjust opening as needed.

Single-Hung windows shown for illustration purposes. These instructions cover Single-Hung, Picture and Specialty Windows.



Exterior



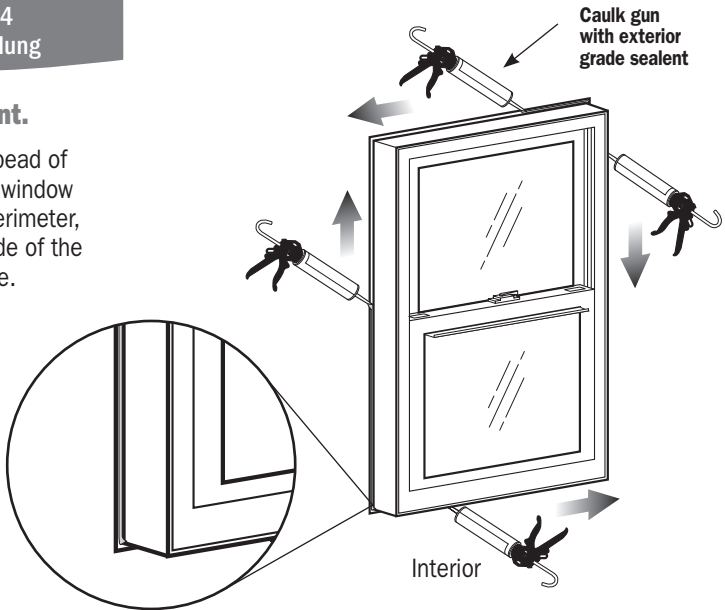
Interior

If installing a single-hung window, proceed to **Step 4 Single-Hung**.
If installing a picture or specialty window, proceed to **Step 11 Picture & Specialty Windows**.

Step 4 Single-Hung

Apply sealant.

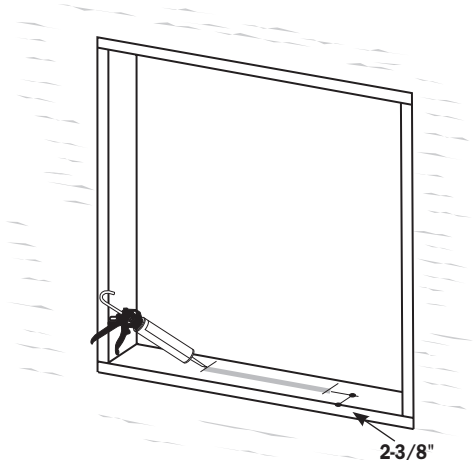
Apply a 3/8" bead of exterior grade window sealant, full perimeter, to the back side of the masonry flange.



For integral combination single-hung windows, sealant is needed on the sill for sealing under the sill attachment plate(s).



If window has sill attachment plate(s), apply a 1/2" bead of sealant 2-3/8" from the exterior edge of the opening, about 15" long, from one pencil mark to the other mark made in **Step 3**.



Installation Instructions

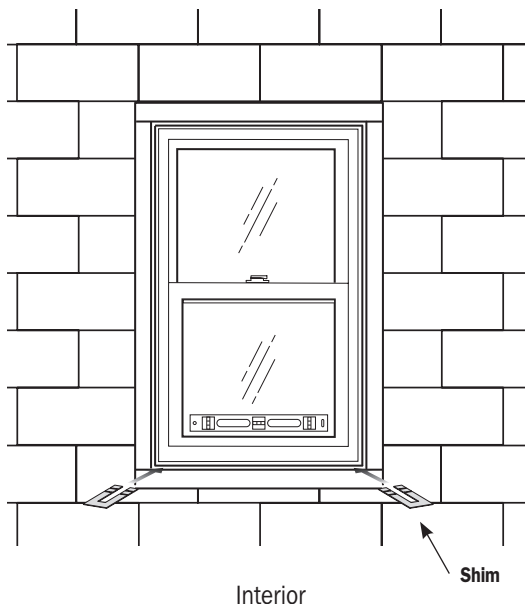
Step 5 Single-Hung

⚠ WARNING

Use caution when working at elevated heights and around window and door openings. Follow the manufacturers' instructions for ladders and scaffolding. Failure to do so could result in injury or death.

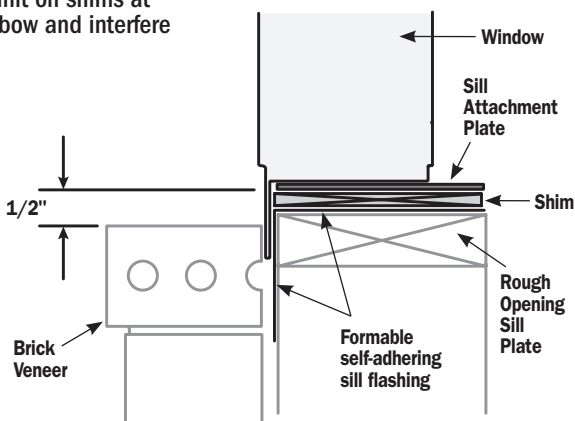
Place window in opening.

Set shims and lift window into rough opening from the exterior. Center side-to-side. Check level of unit from the interior. **DO NOT** set window unit directly on rough opening sill plate. Make sure shims are located properly under all side jambs and integral combination sill attachment plate(s).



CAUTION

- **DO NOT** set window unit directly on rough opening sill plate. Elevate unit on shims at side jambs. Sill plate may bow and interfere with window operation.
- Unit must be properly shimmed. If necessary, shim appropriately under sill attachment plate. Failure to do so could result in product damage.
- Provide a minimum clearance of 1/2" from top of brick masonry to the bottom of any portion of the window sill. Failure to do so could result in product damage.

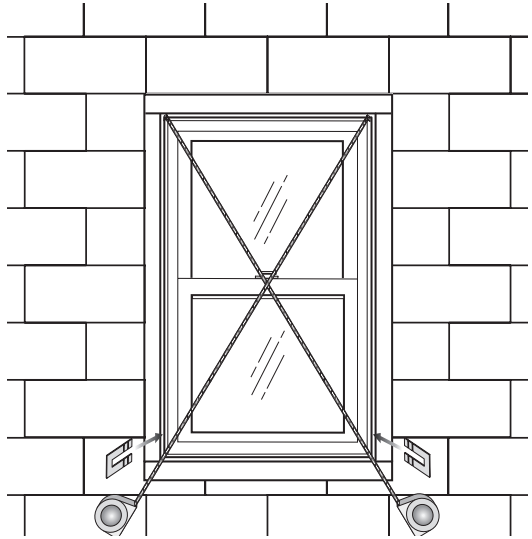


Single-Hung, Fixed, & Specialty Windows
Masonry Flange Windows with Non-Impact & Storm Defense™ Protection with Impact-Resistant Glass

Step 6 Single-Hung

Check for square.

Measure diagonally across unit, upper left to lower right and upper right to lower left corner. If measurements are within $\frac{1}{8}$ ", unit is square. If unit is not square, adjust by inserting shims behind installation holes (locate according to fastening instructions from local building code). **DO NOT** over shim.

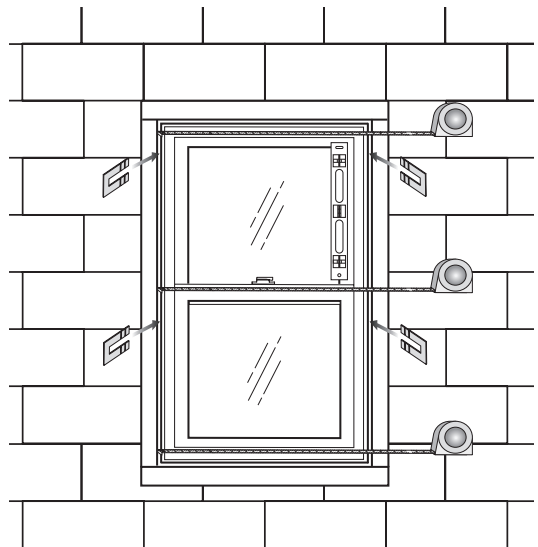


Interior

Step 7 Single-Hung

Check for plumb.

Measure across head, center and sill of unit. Center dimensions should match head and sill dimensions within $\frac{1}{8}$ ". Check for plumb. Shim to straighten side jambs behind installation holes (locate according to fastening instructions from local building code). **DO NOT** over shim.



Interior

Single-Hung, Fixed, & Specialty Windows

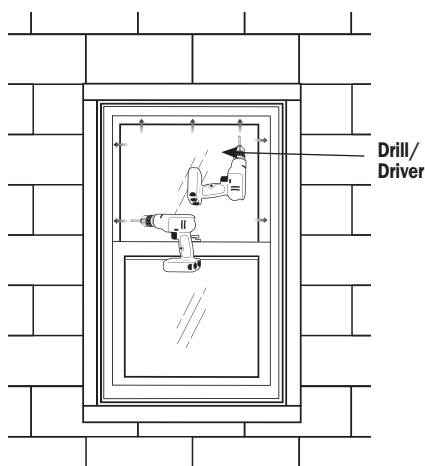
Masonry Flange Windows with Non-Impact & Storm Defense™ Protection with Impact-Resistant Glass

Installation Instructions

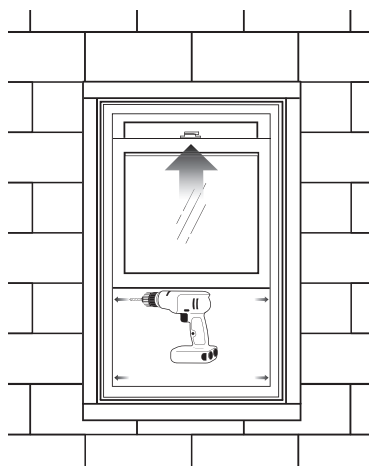
Step 8 Single-Hung

Drill installation holes as needed.

If single-hung window does not have factory-drilled installation holes, follow the fastening instructions from local building code to drill installation holes. If local building code does not provide fastening instructions, reference locations in this step. Countersink the installation holes through the first wall of vinyl only. **DO NOT** countersink through second wall of vinyl. **DO NOT** damage the balancer cords. Open sash as necessary to provide access to drill installation holes.



Interior



⚠ WARNING

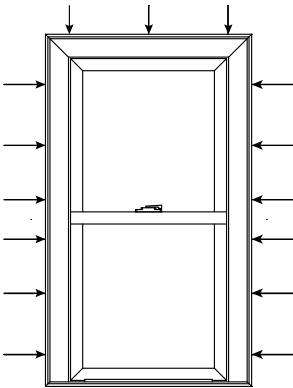
Damaging the balancer cords will result in a non-usable product.

Step 8 *continued* Single-Hung

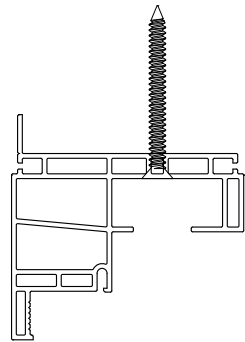
Drill installation holes as needed *continued*.

For 2111 Series, drill holes as shown.

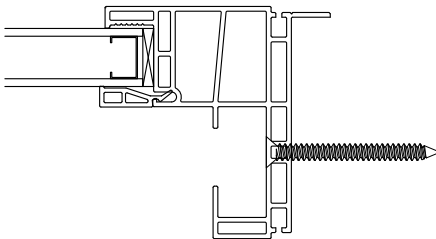
At head, space screws 6" from each corner and at midpoint



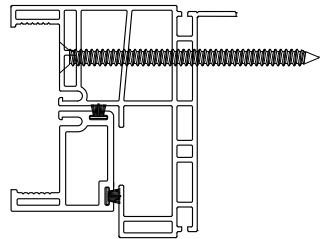
At sides, space screws 6" from each corner, 3" above and below meeting rail, and every 14" on center.



Head Jamb Screw Location



**Side Jamb Screw Location
(above meeting rail)**



**Side Jamb Screw Location
(below meeting rail)**

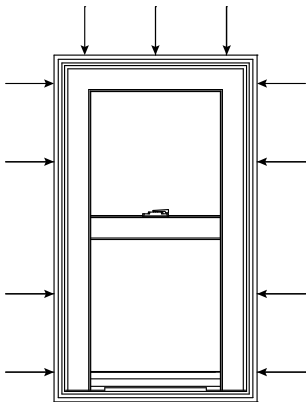
Installation Instructions

Step 8 *continued* Single-Hung

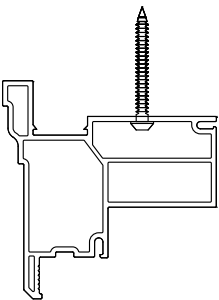
Drill installation holes as needed *continued*.

For 2900 Series, drill holes as shown.

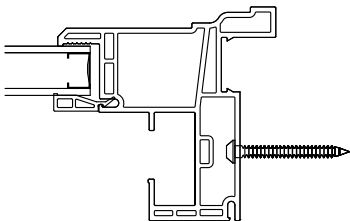
At head, space screws 6" from each corner and every 12" on center.



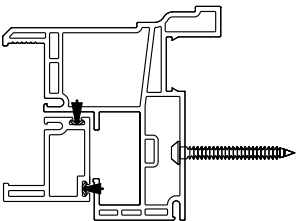
At sides, space screws 6" from each corner and every 16" on center.



Head Jamb Screw Location



Side Jamb Screw Location
(above meeting rail)



Side Jamb Screw Location
(below meeting rail)

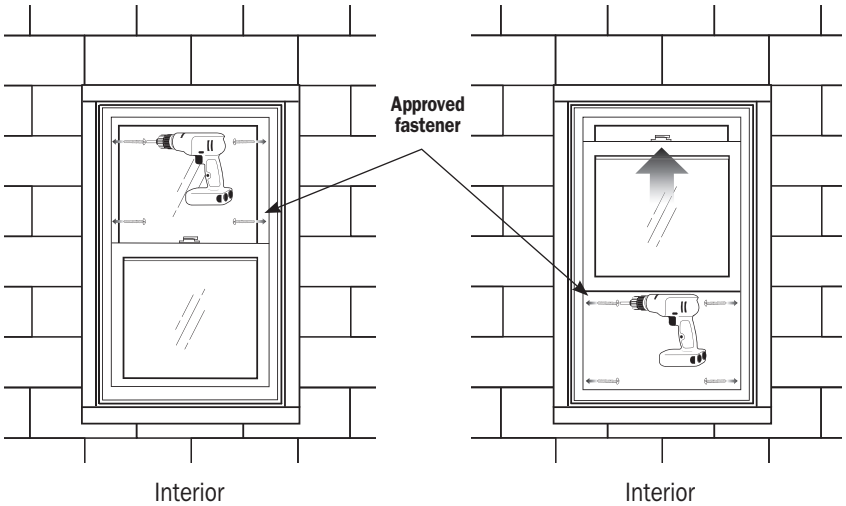
Step 9 Single-Hung

⚠ WARNING

Damaging the balancer cords will result in an inoperable product.

Fasten window.

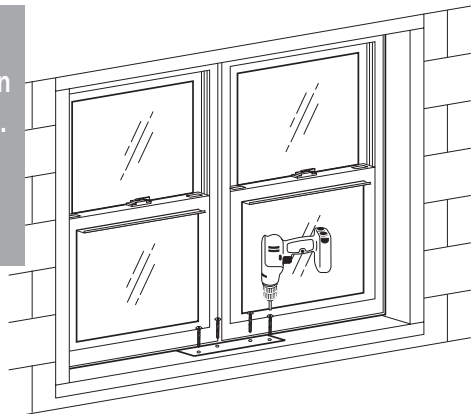
Fasten window to opening. Follow fastening instructions as specified by local building code. If local building code does not provide fastening instructions, reference fastener schedule at beginning of instructions. **DO NOT** drive the fastener heads through the second wall of vinyl. **DO NOT** damage the balancer cords. Open sash as necessary to provide access to installation holes. For 2127 & 2111 Series windows, a flat head screw is required in the jamb, **ABOVE** the meeting rail only. Failure to use a flat head screw will impede operation.



For integral combination single-hung windows, fasten the sill attachment plate(s).



Fasten sill attachment plate(s).



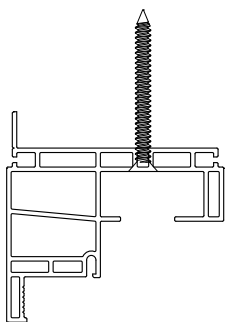
Single-Hung, Fixed, & Specialty Windows

Masonry Flange Windows with Non-Impact & Storm Defense™ Protection with Impact-Resistant Glass

Installation Instructions

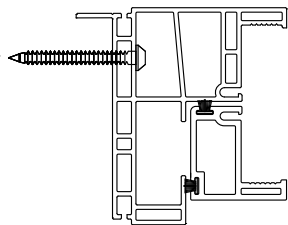
Step 9 *continued* Single-Hung

For 2127 Series, use pre-drilled installation holes to fasten window as shown.

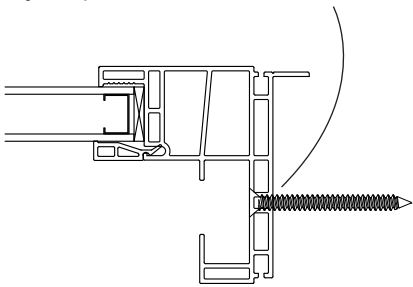


Head Jamb Screw Location

A flat head screw is required in the jamb, ABOVE the meeting rail only. Flat head screw must sit flush with jamb pocket wall as shown.



**Side Jamb Screw Location
(below meeting rail)**



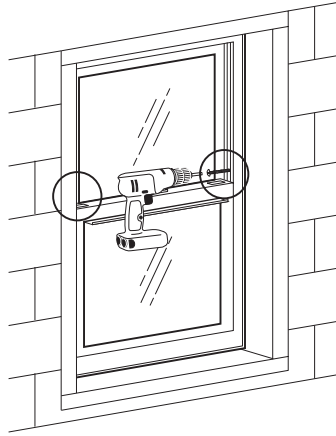
**Side Jamb Screw Location
(above meeting rail)**

Step 9 *continued* Single-Hung

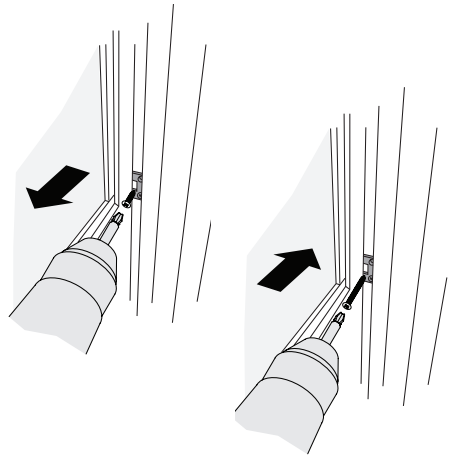
Fasten window *continued*.

For Impact Windows with Tilt Latch Support Blocks

For windows with constant force balancers, remove both screws on tilt latch support block and replaces with #10 x 2" flat head screws.



Interior

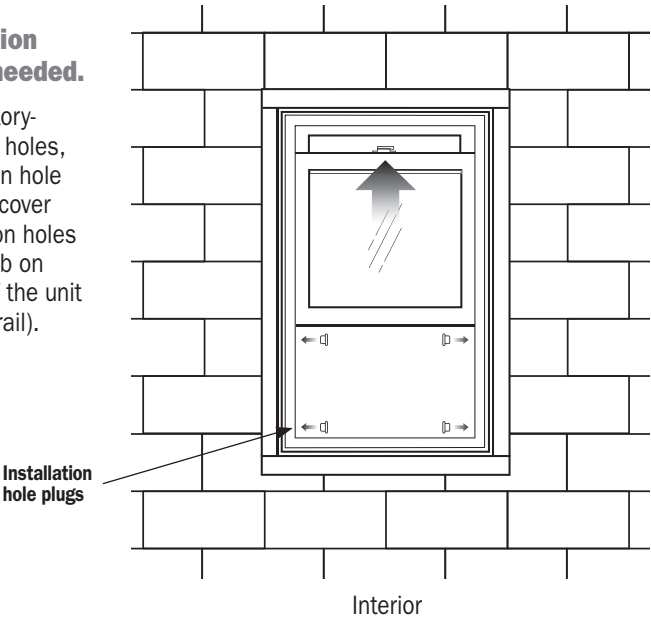


Installation Instructions

Step 10 Single-Hung

Insert installation hole plugs as needed.

If window has factory-drilled installation holes, use the installation hole plugs provided to cover only the installation holes located in the jamb on the bottom half of the unit (below the check rail).

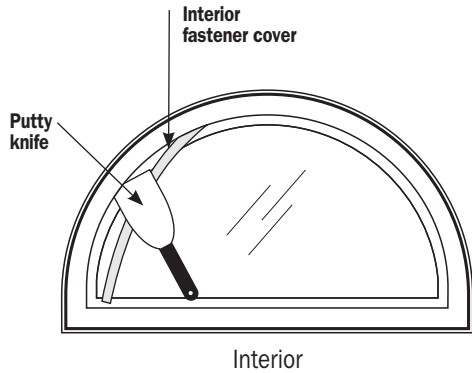


Proceed to Step 19.

Step 11 Picture & Specialty Windows

Remove interior fastener covers, if needed.

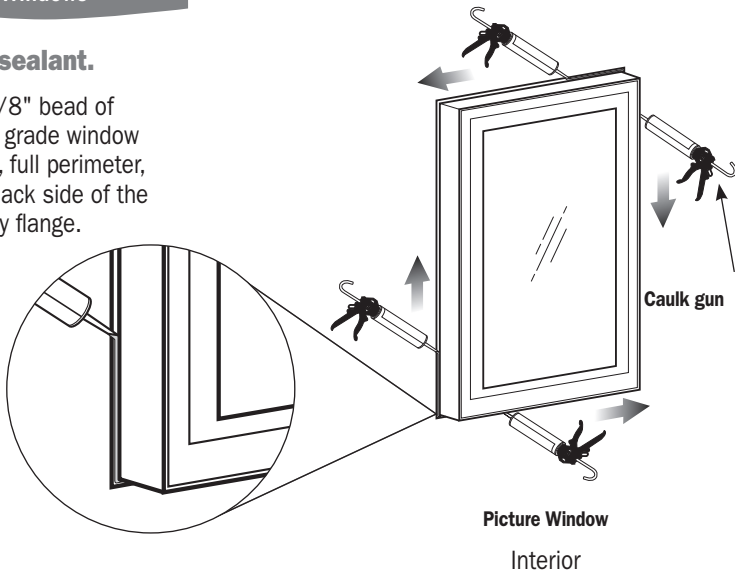
Using a putty knife, carefully remove the interior fastener covers if needed, starting at the corner, inside the jambs and sill along the perimeter, and set aside. If your interior fastener covers are not pre-applied, proceed to the next step.



Step 12 Picture & Specialty Windows

Apply sealant.

Apply 3/8" bead of exterior grade window sealant, full perimeter, to the back side of the masonry flange.



Installation Instructions

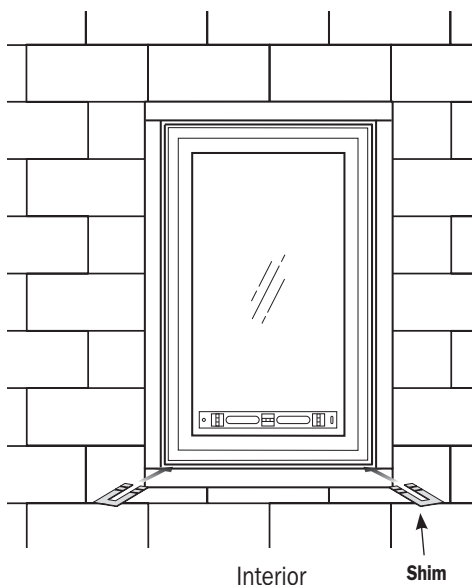
Step 13 Picture & Specialty Windows

⚠ WARNING

Use caution when working at elevated heights and around window and door openings. Follow the manufacturers' instructions for ladders and scaffolding. Failure to do so could result in injury or death.

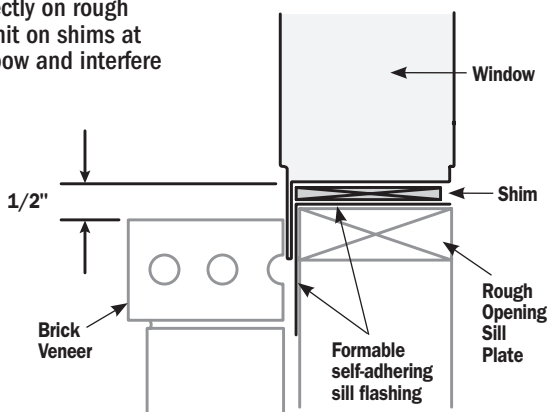
Place window in opening.

Set shims and lift window into rough opening from the exterior. Center side-to-side. Check level of unit from the interior. **DO NOT** set window unit directly on rough opening sill plate. Make sure shims are located properly under any vertical members.



CAUTION

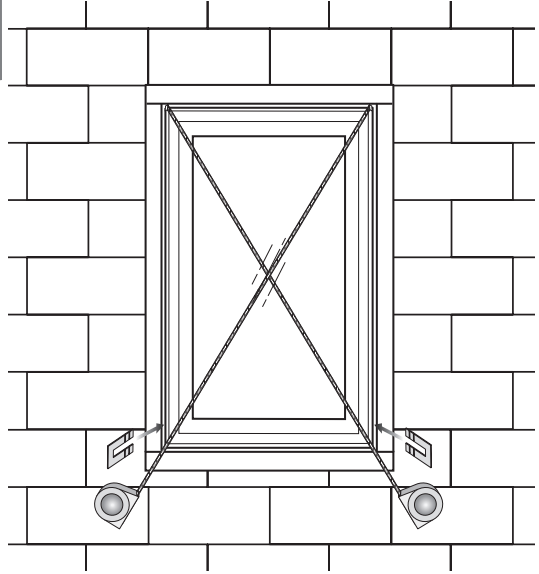
- **DO NOT** set window unit directly on rough opening sill plate. Elevate unit on shims at side jams. Sill plate may bow and interfere with window operation.
- Unit must be properly shimmed. Failure to do so could result in product damage.
- Provide a minimum clearance of 1/2" from top of brick masonry to the bottom of any portion of the window sill. Failure to do so could result in product damage.



Step 14 Picture & Specialty Windows

Check for square.

Measure diagonally across unit, upper left to lower right and upper right to lower left corner. If measurements are within $1/8"$, unit is square. If unit is not square, adjust by inserting shims behind installation holes (locate according to fastening instructions from local building code). **DO NOT** over shim.

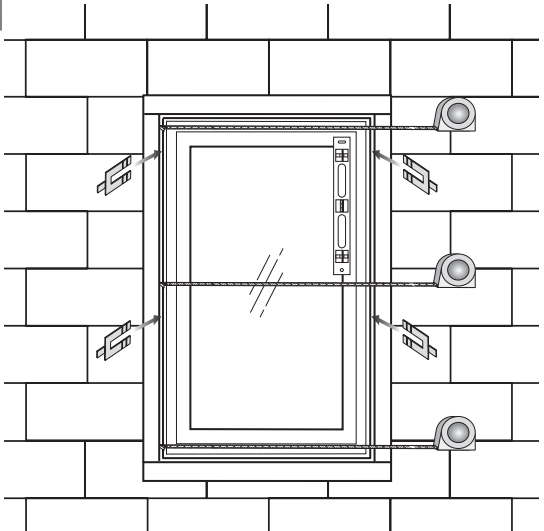


Interior

Step 15 Picture & Specialty Windows

Check for plumb.

Measure across head, center and sill of unit. Center dimensions should match head and sill dimensions within $1/8"$. Check for plumb. Shim to straighten side jambs behind installation holes (locate according to fastening instructions from local building code). **DO NOT** over shim.



Interior

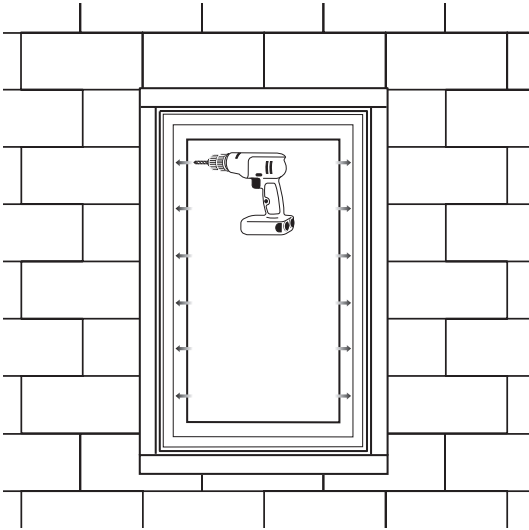
Installation Instructions

Step 16 Picture & Specialty Windows

Drill installation holes.

Drill the installation holes according to the fastening instructions from local building code. **DO NOT** countersink.

NOTE: Remove interior fastener covers before drilling the installation holes on picture and specialty windows.

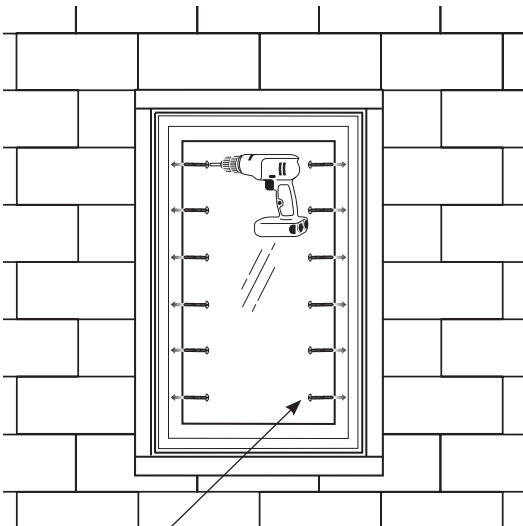


Interior

Step 17 Picture & Specialty Windows

Fasten window.

Fasten window to opening. See fastening chart on page 6 of this guide, if applicable. Follow fastening instructions from local building code. Fasteners should be snug to the window. **DO NOT** overdrive the fasteners.



Approved
fastener

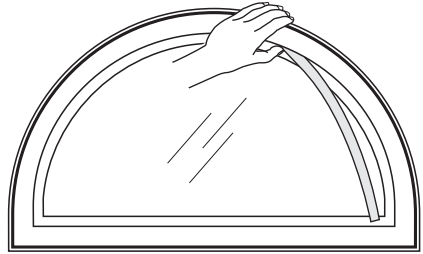
Interior

Step 18 Picture & Specialty Windows

Install interior fastener covers.

Starting at the sill, snap the interior fastener covers into the inside perimeter of the window to cover the installation holes.

NOTE: Different regions may require field inspection of fasteners before interior fastener covers are applied. Verify before applying.



Interior

Installation Instructions

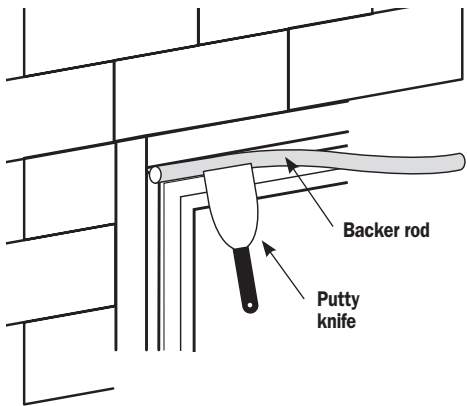
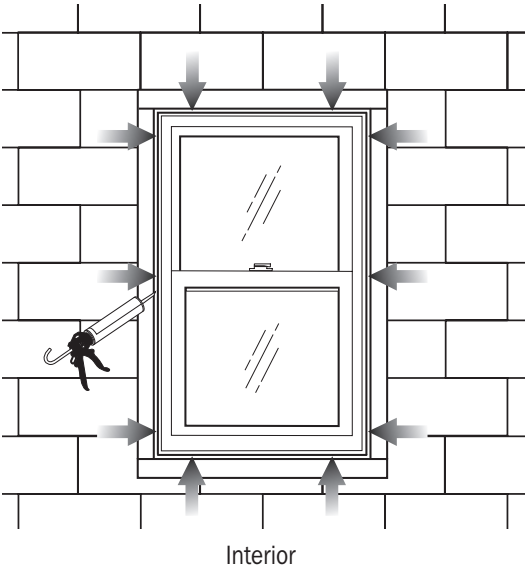
Step 19

Insulate and seal window.

Insulate between frame and rough opening on all sides from the interior.

DO NOT overpack with backer rod or overfill with foam insulation; bowed jambs may result. Insulation may expand and affect proper operation.

Complete the interior air seal with backer rod and sealant or low expanding foam around the entire interior of the window.



CAUTION

When insulating between unit frame and rough opening or between units when joining, **DO NOT** overfill with low expanding foam or overpack with backer rod. Bowed jambs will result affecting product performance and/or proper operation of unit.

Step 20

Finish interior and exterior.

Finish interior and exterior as appropriate.

NOTICE

A minimum of 1/4" is required around exterior perimeter of unit between frame and siding not including J channel or masonry flange. Masonry/Brick Veneer installations require a minimum 1/2" space along sill and 1/4" space around the remaining perimeter.

The space between the masonry/brick veneer should be finished with backer rod and sealant.

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Installation Guide

Masonry Flange Windows with Non-Impact &
Storm Defense™ Protection with Impact-Resistant Glass