

Replacement Window Installation Guide

Non-Impact & Impact Resistant
Windows without Nailing Fin



americancraftsmanwindows.com

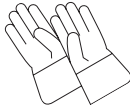
Project Requirements:

- Failure to follow these instructions may void product warranty.
- Read guide before starting installation. Read all warnings and cautions during installation.
- 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.
- This product is designed to be used as a replacement window installed into an existing "old style" wood double-hung window frame.
- Installation must comply with all applicable building codes.
- 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.
- The replacement window should be approximately 1/4" less in width and height than the existing window opening once the old sash and components have been removed. Head expander can be used if up to 1/2" less in height.
- Instructions are given for installation from the interior of the building.
- Contact local authorities or waste management companies for proper recycling and/or disposal of removed window or patio door.
- Visit the manufacturer's web site for removal instructions, additional installation information and/or guides.

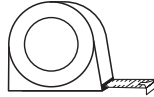
Tools & materials required:



Safety glasses



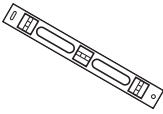
Work gloves



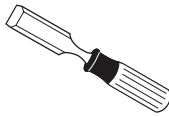
Tape measure



Framer's square



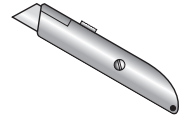
4' level



Chisel



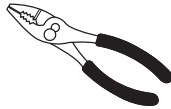
Putty knife



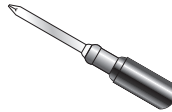
Utility knife or other cutting tool
(as needed)



Pry bar



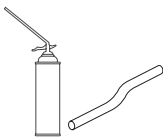
Pliers



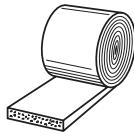
Phillips hand screwdriver



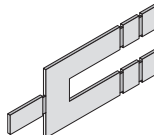
Power driver and bits



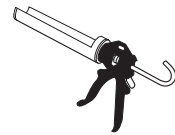
Backer rod/
Minimum expanding
foam sealant



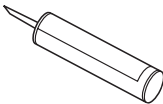
Fiberglass insulation



Shims



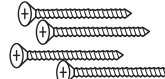
Caulk gun



Interior and exterior
window grade
sealant



Finish nails



4 - #8 x 2" flat head
screws
(for single-hung window
installation only)



Hammer

Warnings and Cautions:

⚠ 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 to move and install window and door products to avoid injury or product damage.

⚠ WARNING

Sill weep doors are small parts and, if swallowed, could pose a choking hazard to young children.

⚠ WARNING

Contains small parts. If swallowed could pose a choking hazard to young children. Remove and dispose of any loose or easily removed parts.

⚠ WARNING

Before, during, and after installation, place all tools as well as any casing or window parts on a drop cloth or in a location that will not pose a hazard to installers, customers, or property.

⚠ WARNING

Support window in opening while shimming. Failure to do so may result in injury and/or product/property damage.

⚠ WARNING

Do not leave the window opening unattended, especially when small children are present. A fall from the window opening could cause death or serious injury.

⚠ WARNING

Unless specifically ordered, this window does not have safety glass, and if broken, could cause injury. Many laws and building codes require safety glass in locations adjacent to or near doors. This window is available with safety glass that may reduce the likelihood of injury if broken. Information on safety glass is available from your sales representative.

CAUTION

Do not drill or fasten through sill. Product and/or property damage will result.

CAUTION

Do not overdrive screws or nails. Product damage may result.

CAUTION

Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jams.

Warnings and Cautions:

CAUTION

Do not cover weep holes. Property damage may result.

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 manufacturer regarding material application and compatibility with this product.

CAUTION

Do not apply any type of film to glass. Thermal stress conditions resulting in glass damage could 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

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.

CAUTION

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

CAUTION

Do not store windows flat or in the sun or product damage may occur.

CAUTION

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

NOTICE

Buildings constructed prior to 1978 may contain lead paint which could be disturbed during replacement. For more information on proper management of lead paint, visit www.epa.gov/lead

NOTICE

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

Fasteners:

⚠ WARNING

Metal fasteners and components may corrode when exposed to preservative-treated and/or fire-retardant treated lumber. Use approved fasteners and components to fasten unit. Failure to do so may cause a failure resulting in injury, property or product damage.

Finishing, Cleaning and Maintenance Instructions:

CAUTION

Do not stain or paint weatherstrip, vinyl, glass or hardware. Product damage may occur.

- ▶ **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, vinyl and metal flashing.

Protect unit and follow cleaning product instructions carefully. If acid contacts unit, wash all surfaces with water immediately.

CAUTION

Abrasive cleaners will damage glass and vinyl surfaces.

- ▶ **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.*
- ▶ *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.*

Florida Building Code Approved Fastener Chart

Application	Anchor Type	Anchor Size	Minimum Embedment	Minimum Clearance to Masonry Edge	Minimum Clearance to Adjacent Anchor
1X Buck or Masonry Frame	ITW	1/4"	1-1/4"	2-1/2"	3"
1X Buck or Masonry Frame	ELCO	1/4"	1-1/4"	1"	4"

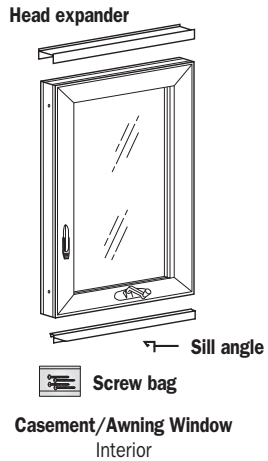
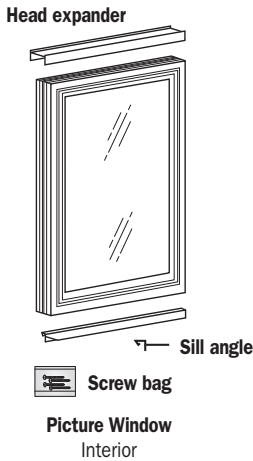
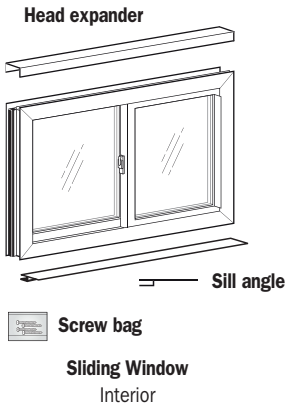
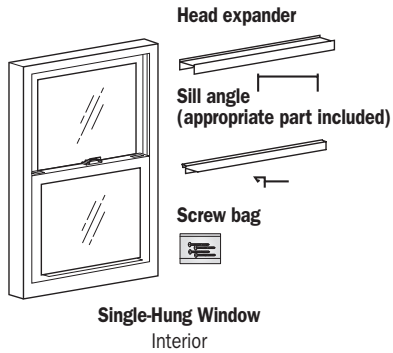
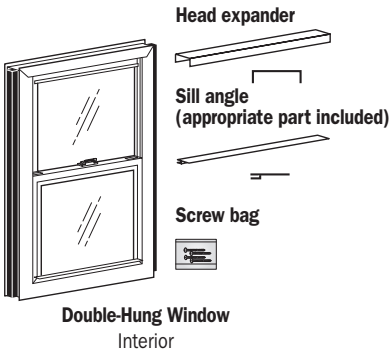
This fastener schedule is provided as an example of fastening requirements. Requirements may vary by product, building type, application and region. Contact your local building code official for requirements in your area.

Step 1

Inspect new window and verify opening.

Inspect for proper size and condition and verify that all parts are included. Inspect existing wall and rough opening for structural decay. Repair as needed.

Replacement Windows



Hardware Included:

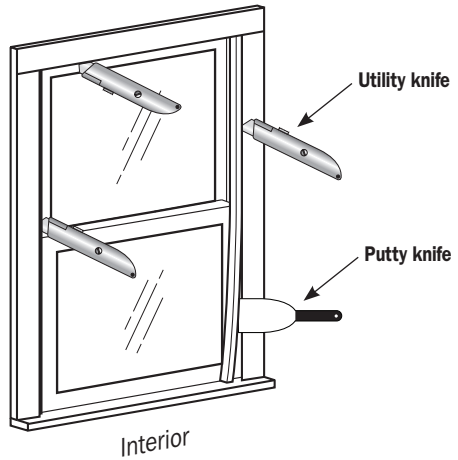
One hardware bag containing:

Quantity	Item
4	#8 x 2" Pan Head Screws

Step 2

Remove interior stops.

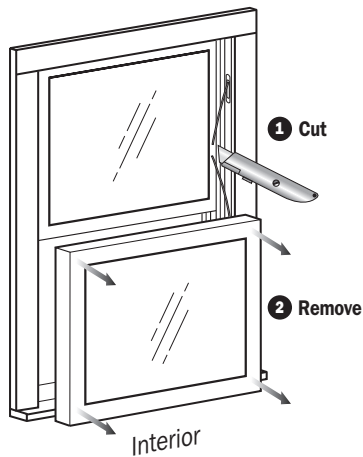
Carefully remove interior stops and save for later use.



Step 3

Remove bottom sash.

- 1 Cut bottom sash balance cords, if present. Balance systems may vary.
- 2 Remove bottom sash and dispose of properly.

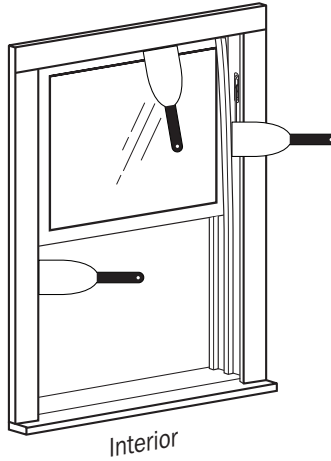


NOTE: If old window opening has wood top and side parting stops, proceed to Step 4 Wood Stops. If opening has metal tracks on the sides, proceed to Step 6 Metal Tracks.

Step 4 Wood Stops

Remove top and side parting stops.

Remove top and side wood parting stops and dispose of properly.

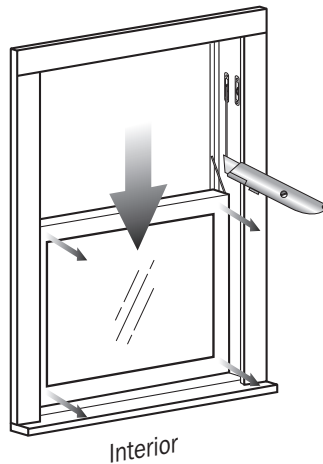


Step 5 Wood Stops

Remove top sash.

Lower top sash to sill. Cut top sash balance cords, if present. Balance systems may vary. Remove top sash and dispose of properly.

NOTE: Proceed to Step 7.

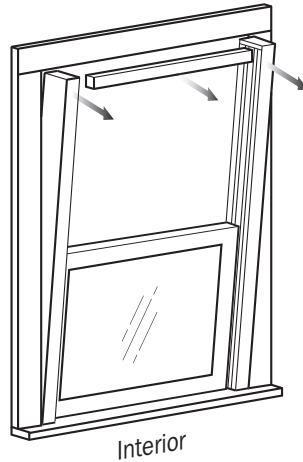


Step 6 Metal Tracks

Remove tracks and top sash.

Lower top sash to sill. Remove top wood parting stop. Remove fasteners that attach metal tracks/jamb liners to the sides. Remove metal tracks and top sash together and dispose of properly. Be careful when removing metal tracks/jamb liners as springs may be under tension.

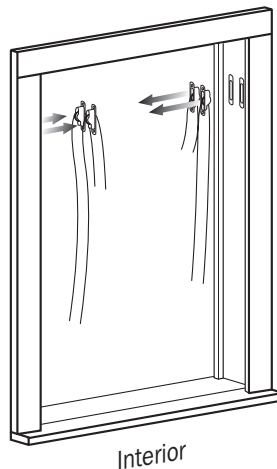
NOTE: Proceed to Step 7.



Step 7

Remove old balance system.

Remove old balance system including any pulleys and dispose of properly.



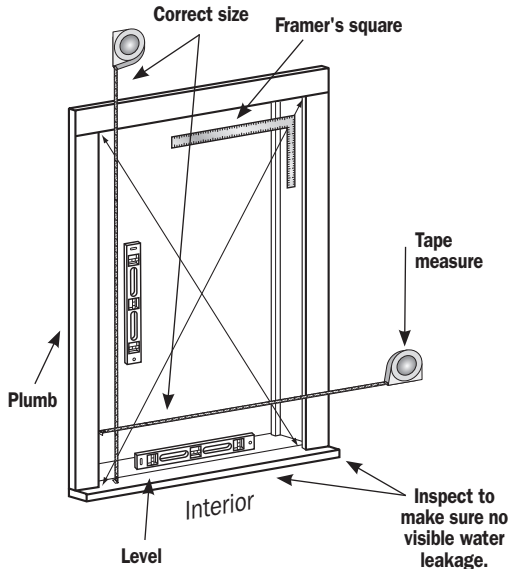
Step 8

Inspect opening.

Make sure opening is structurally sound.

Make sure opening is plumb, level and square.

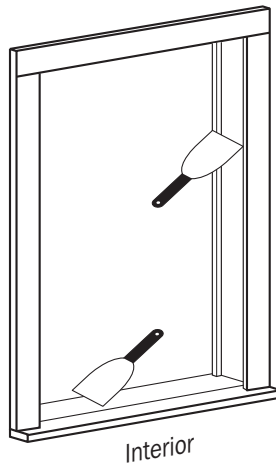
Measure the opening at the smallest width and height, vertically and horizontally to verify size. Remember to check to make sure the opening is square by measuring diagonally. Measurements must be within 1/8".



Step 9

Prepare opening.

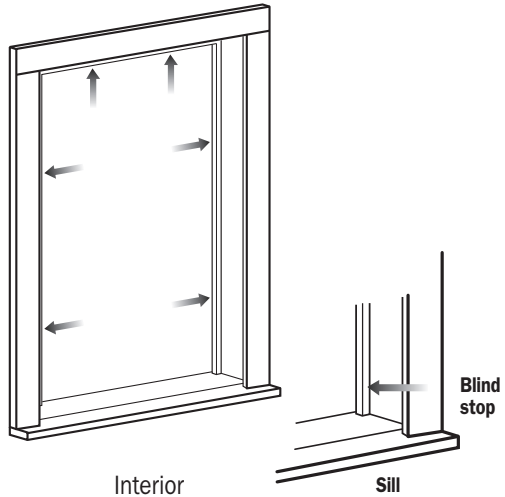
Clean opening of all debris. Remove any protruding fasteners. Insulate any large areas as needed. Cover or fill all holes.



Step 10

Verify blind stop.

Leave existing blind stop intact. If any portion of the blind stop is damaged, the entire stop will need to be replaced.

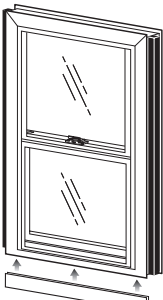


Step 11

Install sill angle if needed.

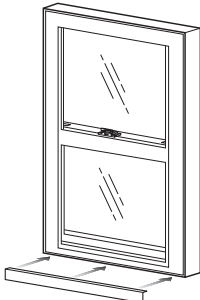
If sill of existing window opening is slanted, install supplied sill angle in the groove on the bottom of the window. Determine appropriate sill angle placement for either double-hung or single-hung as shown.

Double-Hung and Sliding



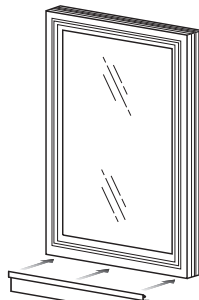
Sill angle

Single-Hung



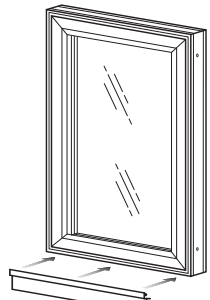
Sill angle

Picture



Sill angle

Casement and Awning



Sill angle

Exterior

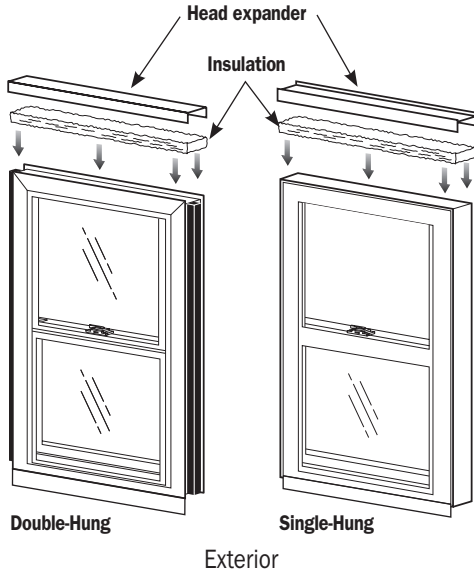
Replacement Windows

Step 12

Install head expander if needed.

If the height of the window opening is higher than what will be covered with interior stops, then place the supplied head expander on top of the window as shown. It is recommended to add fiberglass insulation between head expander and window.

NOTE: Procedure is identical for double-hung, single-hung, sliding, picture, casement or awning windows.



Step 13

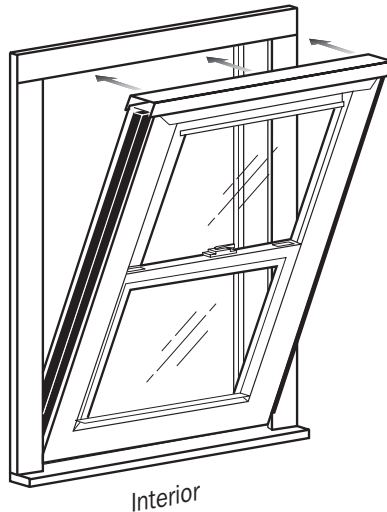
Check fit of window.

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

Then remove window.

Adjust and trim sill angle as needed.

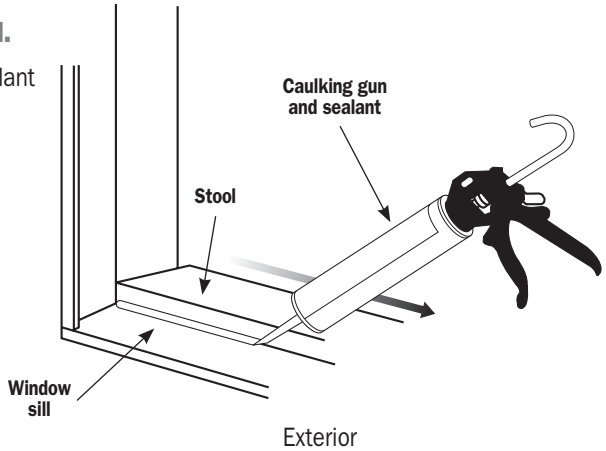
NOTE: Shown with optional head expander.



Step 14

Apply sealant to sill.

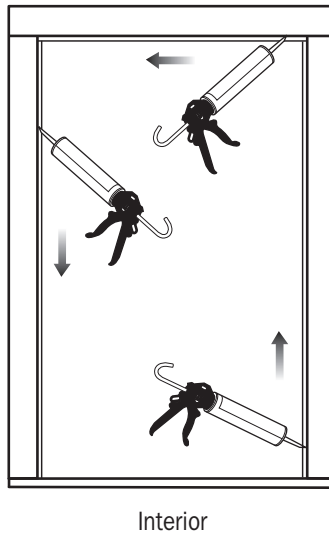
Apply 3/8" bead of sealant where the existing stool meets the window sill.



Step 15

Apply sealant to blind stop.

Apply 3/8" bead of sealant to inside edge of blind stop at top and both sides.

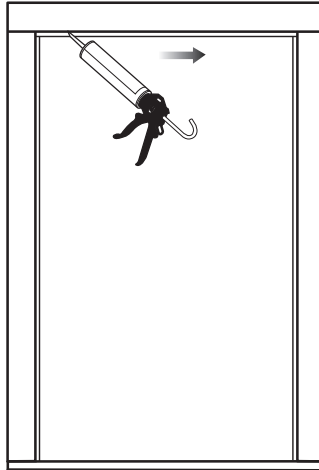


If using optional head expander, continue with Step 16. If not using optional head expander, proceed to Step 17.

Step 16

Apply sealant to head of window for optional head expander.

Apply 3/8" bead of sealant to top of window frame in middle across the entire width of the opening if using head expander.



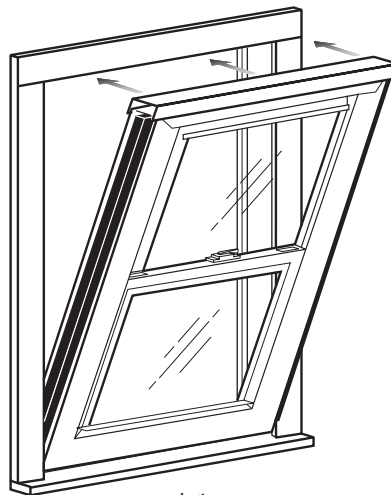
Interior

Step 17

Place window into opening.

Place window into opening, tilting in from bottom. Make sure sill angle and head expander remain in place if present. The bottom interior edge of the window should sit tight against the stool. If present, the head expander should be pushed up to meet the top of the opening.

NOTE: Shown with optional head expander.

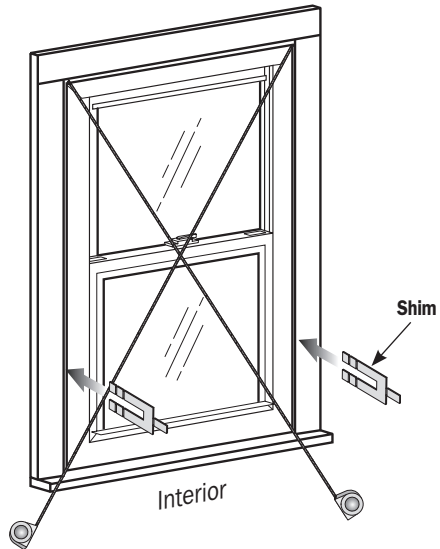


Interior

Step 18

Check for square.

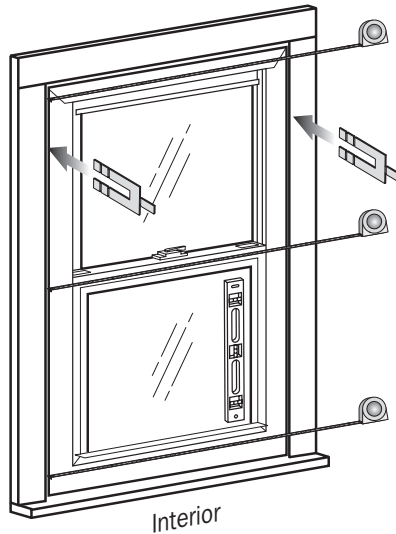
Close and lock window. Measure diagonally across unit, upper left to lower right and upper right to lower left corner. If measurements are within $1/8$ ", unit is square. If unit is not square, adjust by inserting shims as needed. Do not over shim.



Step 19

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 as needed. Do not over shim.

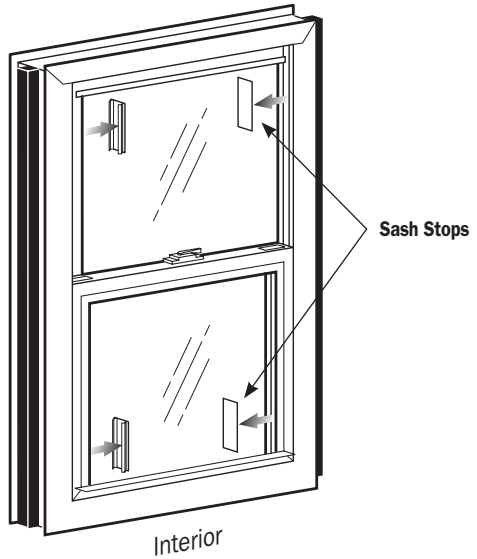


NOTE: If installing a double-hung window, proceed to Step 20 Double-Hung. If installing a sliding, picture, casement or awning window, proceed to Step 22 Double-Hung, Sliding, Picture, Casement or Awning. If installing a single-hung window, proceed to Step 27 Single-Hung.

Step 20 Double-Hung

Access screw holes.

Temporarily remove the top (if applicable) and bottom sash stops by gently prying them out of the jambs. Save them to re-install later, keeping track of location of each.



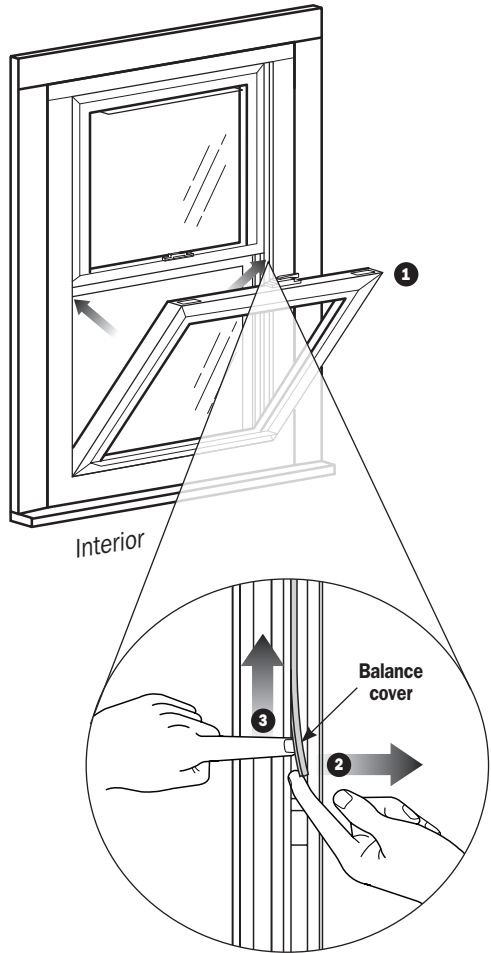
NOTE: If installing a double-hung window with 4 sash stops, proceed to Step 21 Double-Hung Balance Covers. Otherwise, proceed to Step 22 Double-Hung, Sliding, Picture, Casement or Awning.

Step 21 Double-Hung Balance Covers

Remove balance covers to access screw holes.

- 1 To access the balance covers, unlock and partially raise the bottom sash. Slide tilt latches and tilt the bottom sash in. Rest sash on sill.
- 2 Place your index finger at the bottom edge of the balance cover.
- 3 Pull the balance cover out of the jamb channel.

Repeat to remove the other balance cover. Then tilt the bottom sash back into place. Save both balance covers to re-install later.

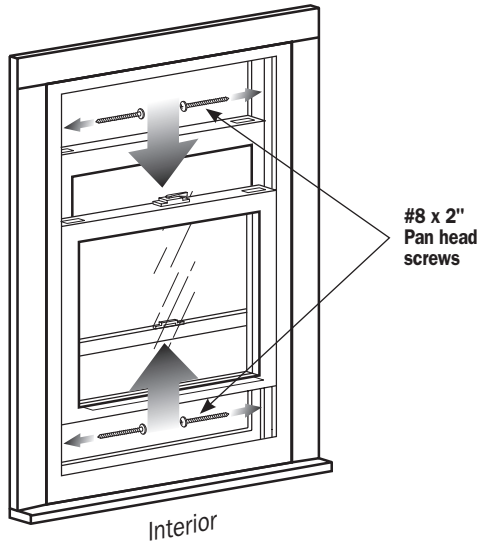


Step 22 Double-Hung, Sliding, Picture, Casement or Awning

Fasten window.

Unlock window and open sash to access screw holes.

Install supplied #8 x 2" pan head screws into the 2 screw holes in each jamb. Do not over tighten as this may distort the frame.



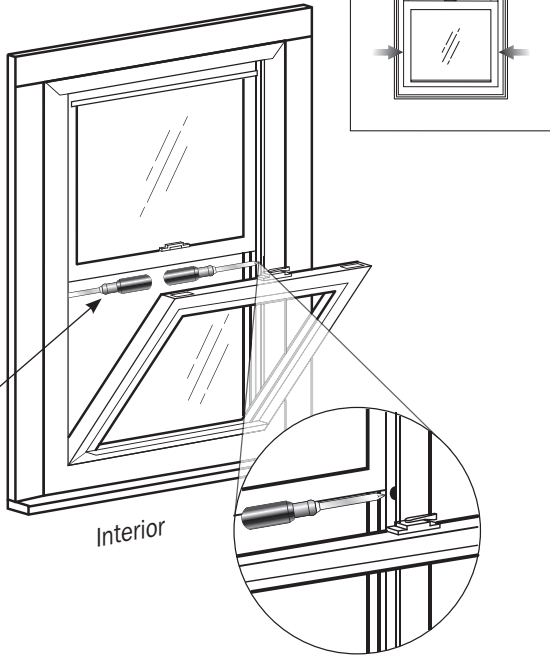
NOTE: If installing a double-hung window, proceed to Step 23 Double-Hung. If installing a sliding, picture, casement or awning window, proceed to Step 24 Double-Hung, Sliding, Picture, Casement or Awning.

Step 23 Double-Hung

Adjust sides.

To access the jamb adjusting screws, unlock and partially raise the bottom sash. Slide tilt latches and tilt the bottom sash in. Tighten the jamb adjusting screws located in the middle of the sides until the sight lines between the frame and sash are equal and uniform. Then tilt the bottom sash back into place.

Phillips
screwdriver

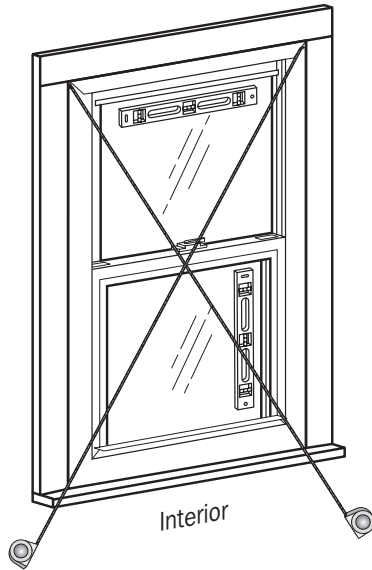


NOTE: Proceed to Step 24 Double-Hung, Sliding, Picture, Casement or Awning.

Step 24
Double-Hung, Sliding,
Picture, Casement
or Awning

Check window placement.

Close and lock window. Check window for plumb, level and square. Diagonal measurements must be within 1/8". Check sight lines. Check sash operation. Adjust screws and shims as needed.

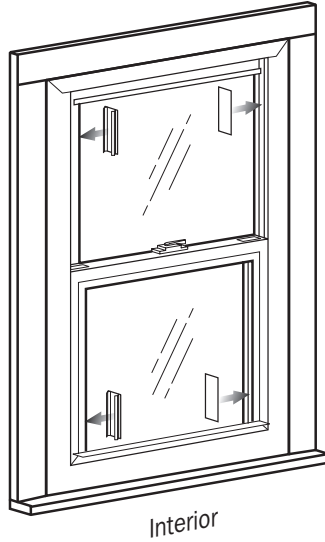


NOTE: If installing a double-hung window, proceed to Step 25 Double-Hung. Otherwise proceed to Step 30.

Step 25 Double-Hung

Install sash stops.

Replace the top (if applicable) and bottom sash stops by installing them in the top and bottom of both sides.



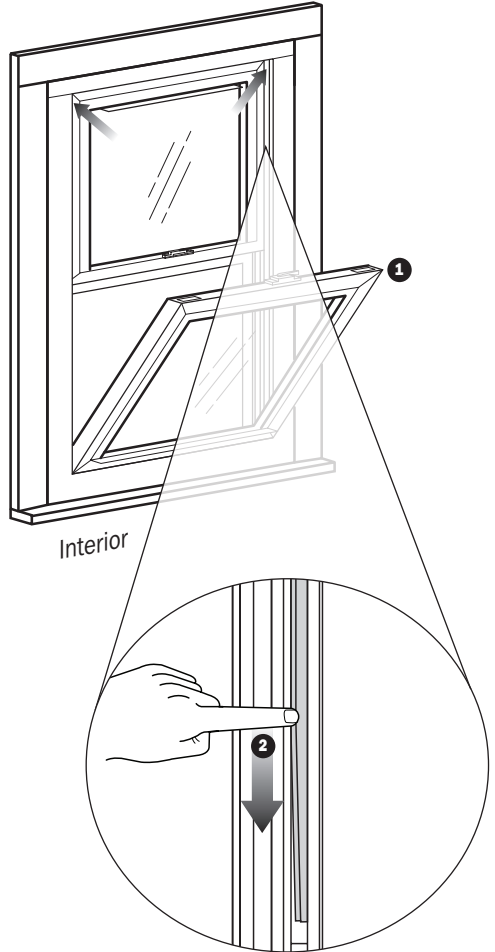
NOTE: If installing a double-hung window with 4 sash stops, proceed to Step 26 Double-Hung Balance Covers. Otherwise, proceed to Step 30.

Step 26
Double-Hung
Balance Covers

Install balance covers.

- 1 Tilt the bottom sash in.
- 2 Position the balance cover into the jamb, and make sure it is tight against the head of the unit. Insert the top portion of the balance cover into the jamb. Once attached, slide your finger along the balance cover down toward the sill, compressing the balance cover into the side jamb. Repeat to install the other balance cover.

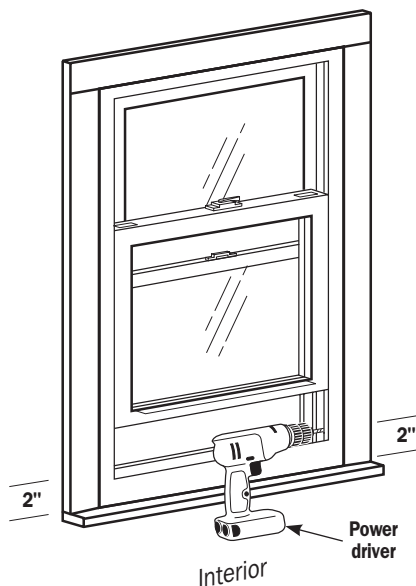
NOTE: Proceed to Step 30.



Step 27 Single-Hung

Drill installation holes.

Open bottom sash. Drill one $\frac{3}{32}$ " installation hole in each side approximately 2" up from the bottom to penetrate structural supports at least 1".



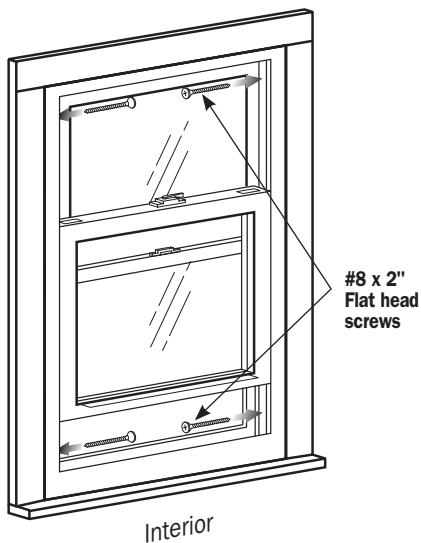
Step 28 Single-Hung

Fasten window.

Install #8 x 2" flat head screws (not supplied) into the 2 screw holes in each jamb. Do not over tighten as this may distort the window. Do not damage balance cords. Make sure screw heads are flush with surface of window to prevent interference with sash operation.

⚠ WARNING

Use caution to avoid damage to balance cords. Product failure may result.

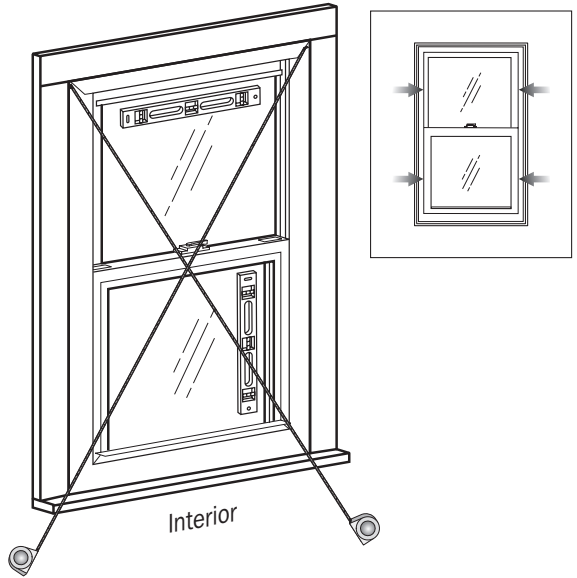


Step 29
Single-Hung

Check window placement.

Close and lock window. Check window for plumb, level and square. Diagonal measurements must be within 1/8". Check sight lines. Check sash operation. Adjust screws and shims as needed.

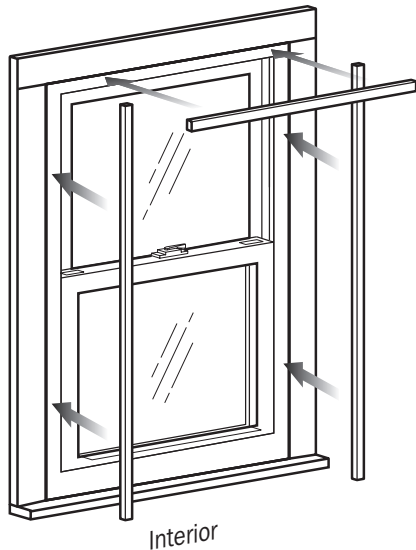
NOTE: Proceed to Step 30.



Step 30

Apply interior stops.

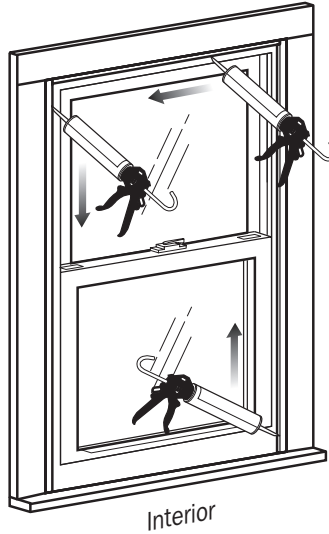
Replace or add, if needed, interior stops against the window. Be careful not to damage the window.



Step 31

Apply sealant to interior.

Apply interior grade sealant to the interior of the window where the interior stops meet the window and where the head expander, if present, meets the window to seal any gaps.

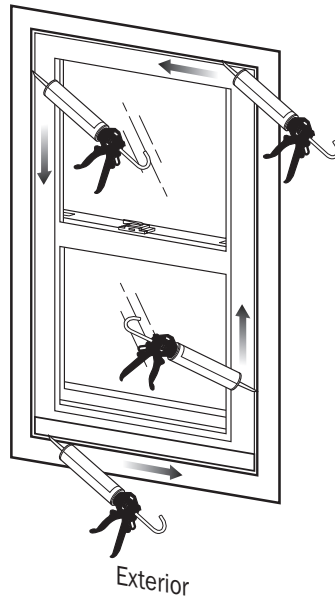


Step 32

Apply sealant to exterior.

Apply exterior grade sealant to the exterior of window where window meets framed opening around entire perimeter. Fill any old screw holes. Take care to make sure that all gaps and holes are sealed between the window and the wood frame.

Do not cover weep holes on bottom of window.



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Replacement Window Installation Guide