Installation Instructions



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.
- Instructions are for typical wood frame wall construction.
- 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.
- Wall and sill must be structurally sound with a weatherresistant barrier.
- · Window must be installed to be plumb, level and square.
- · 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.

Notes:

- Please disregard all other installation instructions included with individual windows.
- If cable support system and/or knee braces are not used, product warranty will be null and void.
- Do not install screws into the sill of the individual windows or product warranty will be null and void.
- If bay/bow frame was ordered unfinished, finish all wood surfaces immediately after installation.

Tools & materials required:



3" wood screws, 1-5%" wood screws and/or 3/4" plywood

Warnings, Cautions and Important Notes:

A 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.

A 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.

AWARNING

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.

A 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.

AWARNING

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.

A WARNING

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

A WARNING

Cable clamp must be secured directly to header, rafter or truss. Securing to, or over, plywood or sheathing may result in inadequate support.

A WARNING

Install cable clamps as high as possible, making sure they anchor into solid framing. Failure to anchor into solid framing may result in unit sagging and/or product malfunction, causing injury and product damage.

CAUTION

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

CAUTION

Do not drill or fasten through sill. Product and/or property damage will result and product warranty will be null and void.

CAUTION

Screw holes should be pre-drilled to ease the installation of #10 x 5" wood screws while securing bay/bow unit to opening.

CAUTION

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

CAUTION

Installation screws, nails, clips and/or gusset plates must be securely attached to the rough opening. Failure to do so will reduce the structural performance resulting in product/property damage.

CAUTION

Screws used to fasten the assembled roof to the bay/bow unit must be no longer than 1-%". Longer screws will penetrate the interior head causing irreparable damage to the visible interior surface of the head.

CAUTION

Do not cover weep holes. Property damage may result.

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

Do not block soffit ventilation! Do not block 2" airflow space between insulation and roof deck! Unwanted condensation may occur resulting in product and/or property damage. Install insulation stop if necessary to maintain air space.

CAUTION

Finished surfaces of the head and seatboard are exposed throughout the installation process. Take care to prevent damage to these surfaces. Cut and place a piece of corrugated board on the surface of the seatboard. Use the top of the bay/bow unit as a template for cutting the corrugated board.

CAUTION

Finish wood surfaces immediately after installation if needed. Unfinished wood will deteriorate, discolor, and/or may bow and split.

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

- ► Apply interior casing to complete installation.
- Do not overload brush with stain/ paint when finishing.
- Read and follow finishing product instructions and warnings on finish material.
- ► Film is not a substitute for masking.

Warnings, Cautions and Important Notes:

NOTICE

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

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

Be aware of any electrical or ventilation requirements. Be aware of clearance dimension from top of unit to soffit for hand and arm access to cable supports. If necessary, cut outside the actual projection line far enough to provide access.

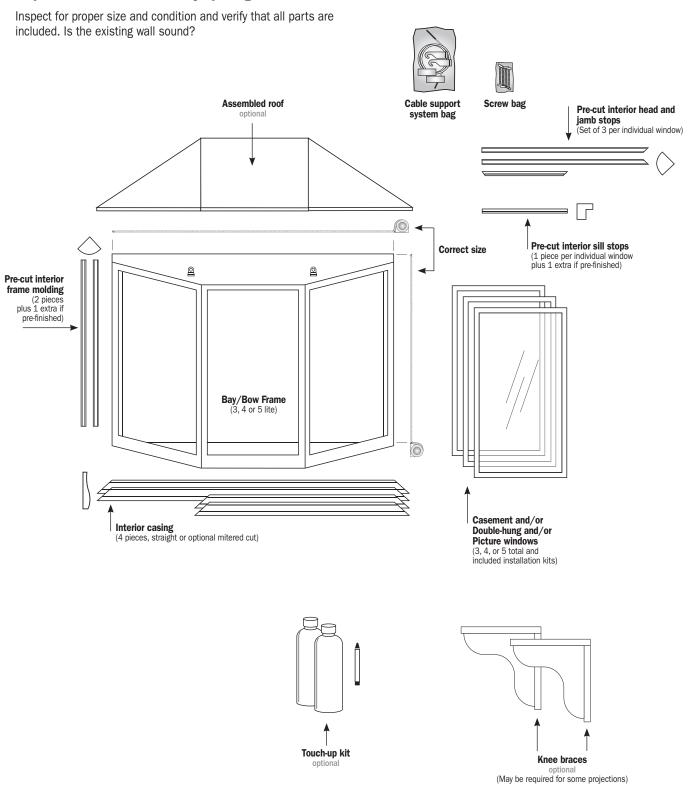
NOTICE

Cut the soffit opening before removing the old unit to reduce interior mess.

NOTICE

Please disregard all other installation instructions included with individual windows. You may have additional screws remaining after this installation.

Inspect new window and verify opening.



Standard parts included:

1 Bay/Bow Frame (3, 4 or 5 openings)

Windows - number coordinates with number of openings in bay/bow frame (3, 4 or 5 total)

A. Double-Hung Window (if ordered)

• 4 per window #8 x 2" pan head screws

B. Picture with Double-Hung (if ordered)

- 12 per window #8 x 1-3/4" pan head screws
- 12 per window 3/8" vinyl plugs

C. Casement Window (if ordered)

- 1 per window folding handle
- 8 per window #8 x 2" pan head screws
- 4 per window #8 x 2-½" flat head screws (not used in this installation)

D. Picture with Casement (if ordered)

- 8 per window #8 x 2" pan head screws
- 4 per window #8 x 2-½" flat head screws (not used in this installation)

10 each #10 x 5" Flat Head Screws (may need additional)

Cable Support System

- 2 cable clamps
- 4 #12 x 3-1/4" flat head screws
- $2 60 \frac{1}{8}$ " cables with rods
- 2 1/4" hex nuts
- 2 adjustment arms
- 2 lock washers
- 1 #3 square bit

Interior Stops

- 1 per opening 1" x 3/4" sill stops, plus 1 extra if pre-finished
- 2 per opening 3/4" x 5/8" pre-mitered jamb stops
- 1 per opening 3/4" x 5/8" pre-mitered head stops

Interior Frame Molding

• 2 – 3/4" x 5/8" interior frame molding, plus 1 extra if pre-finished

Optional parts included:

Knee Braces

- 2 knee braces
- 13 #10 x 3" pan head screws
- 9 #8 x 1-1/2" pan head screws
- 22 screw covers

Interior Casing

- 2 vertical interior casings
- 2 horizontal interior casings

Finishes

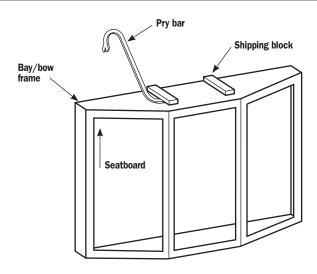
- 1 touch-up stain or paint
- 1 touch-up sealer (not included with paint)
- 1 putty stick

Assembled Roof

Unpack bay/bow frame from pallet.

Use pry bar to remove bay/bow frame from pallet and shipping blocks from bay/bow frame. Be careful not to damage bay/bow frame. Rotate bay/boy frame so the seatboard is on the bottom.

NOTE: If cable support system will attach directly to soffit, proceed to Step 3.1 No Roof, page 8. If an assembled roof or knee braces are included in this installation, or if you are building your own roof, proceed to Step 4, page 10.

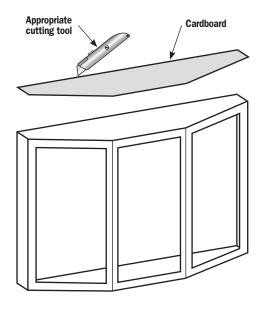


NOTE: Frame ships upside down.

Step 3.1 No Roof

Create template.

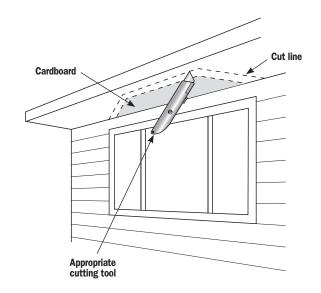
Create a cardboard template by tracing top of bay/bow frame.



Step 3.2 No Roof

Mark and cut soffit.

Determine and mark location of cut line using cardboard template ensuring there is adequate access to install and adjust cable support system after bay/bow frame is installed. Cut soffit opening.



NOTE

Cut the soffit opening before removing the old unit to reduce interior mess.

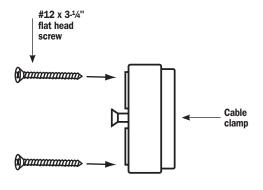
Step 3.3 No Roof

Install cable clamps.

Identify two structurally sound points on house framing that are in as straight a line as possible above eye brackets on bay/bow frame to adequately support cable clamps.

If adequate anchoring points are not present, add additional framing as needed. Four examples are shown (see illustrations A-D). Actual installation may vary from these.

Mount cable clamps as high and in as straight a line above position of eye brackets on top of bay/bow frame as possible. Do NOT drive screws in completely. Use 1 each #12 x $3-\frac{1}{4}$ " flat head screws at top and bottom of each cable clamp.

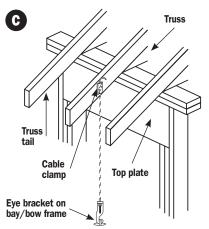


A WARNING

Cable clamp must be secured directly to header, rafter or truss. Securing to, or over, plywood or sheathing may result in inadequate support.

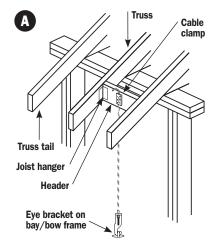
A WARNING

Install the cable clamps as high as possible, making sure that they anchor into solid framing. Failure to anchor into solid framing may result in unit sagging and/or product malfunction, causing injury and product damage.



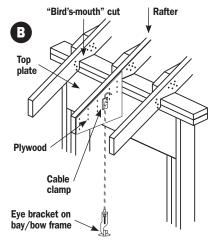
Truss Tail Option

If truss tail is located vertically above eye bracket, mount cable clamp to it.



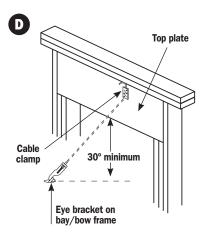
Header Option

If truss tails are not located vertically above eye bracket on bay/bow frame, install a header between them and secure with joist hangers. Anchoring point will be on this header located vertically above eye bracket.



"Birds-Mouth" Rafter Option

Do not use rafters with a "birds-mouth" cut as is. Cut a piece of 3/4" plywood to fit over rafter as a gusset.
Attach cable clamp to plywood and rafter.

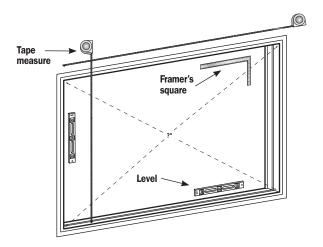


Top Plate Option

If necessary, mount cable clamp to header or top plate above the opening. Angle of support cable cannot be less than 30 degrees.

Remove old window and verify opening.

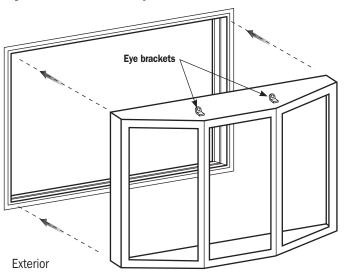
Remove old window. Ensure existing window frame/opening is still intact and watertight. Sill must be flat and adequate to support bay/bow window. Adjust as needed. Inspect opening for size, plumb, level and square.



NOTE: If using a partially insulated seatboard, proceed to Step 5. Otherwise proceed to Step 6.

Step 6

Place the bay/bow frame into rough opening ensuring eye brackets are on top.

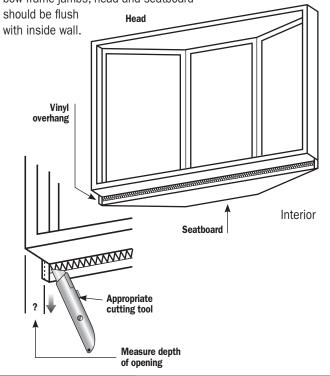


Bay and Bow Windows

Step 5

Trim vinyl overhang (optional).

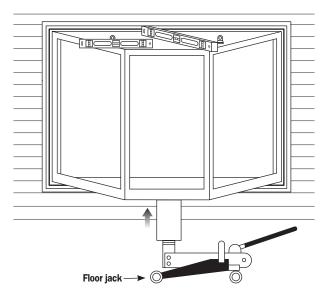
Trim vinyl overhang of optional partially insulated seatboard flashing as needed so vinyl overhang fits snugly against outside of opening. Measure depth of window opening, including any exterior trim. Bay/bow frame jambs, head and seatboard



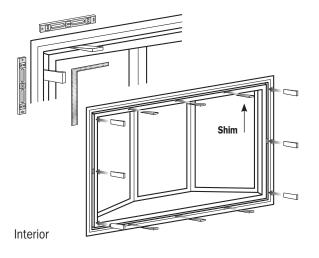
Step 7

Temporarily support bay/bow frame.

Place floor jack and/or temporary supports securely under bay/bow frame to make level.



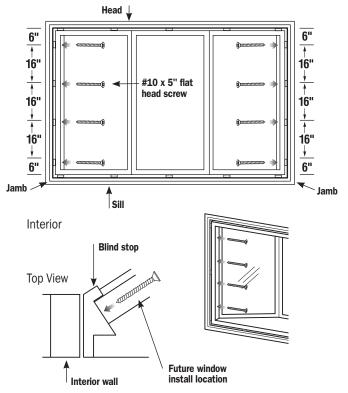
Check for plumb, level and square. Shim as necessary.



Step 10

Fasten jambs.

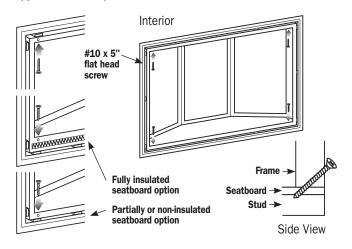
Drive a minimum of 3 $\#10 \times 5$ " flat head screws through shims in each jamb where outer windows will be installed, 6" up from sill, 6" down from head, and every 16". Add more shims as needed.



Step 9

Drill pilot holes and countersink screws in corners.

Drill 4 pilot holes for $\#10 \times 5$ " flat head screws. Fasten through head and sill through shims near each corner at 45 degree angle. Shorter or longer screws than included may be needed to provide adequate support and to not penetrate outside wall. Countersink screws.

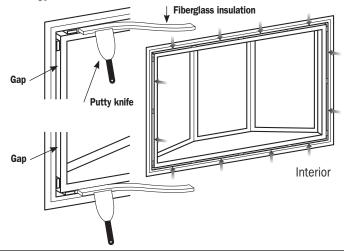


CAUTION

Screw holes should be pre-drilled to ease the installation of #10 x 5" wood screws while securing bay/bow unit to opening.

Step 11

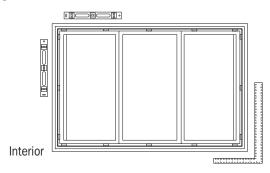
Add fiberglass insulation to gap at perimeter of bay/bow frame.



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.

Verify that bay/bow frame is level. Adjust as needed.

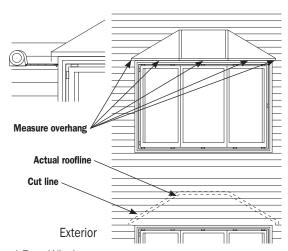


NOTE: If installing an included assembled roof, proceed to Step 13.1 Optional Roof. If assembled roof not purchased but roof needed, build roof using appropriate materials and following manufacturer's instructions and then proceed to Step 14.1 Cable System on page 14 for cable support system instructions. If using only knee braces for support, proceed to Step 16.1 Optional Knee Braces on page 16.

Step 13.2 Optional Roof

Mark roofline on side of house.

Place assembled roof on top of bay/bow frame. Measure roof overhang in several locations, including center of each opening to make sure they are equal. Mark a line along top edge of assembled roof on house. Mark a cut line 2" outside marked roofline to allow for flashing and roofing materials. Remove assembled roof and set aside.

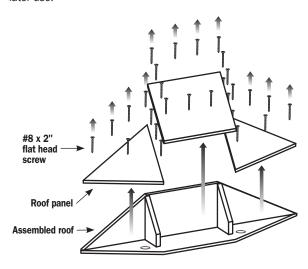


Bay and Bow Windows

Step 13.1 Optional Roof

Remove roof panels.

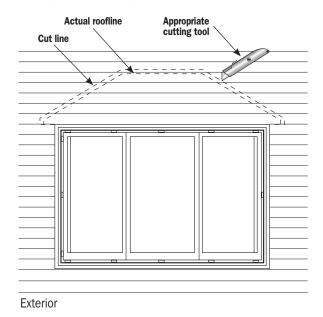
Remove all roof panels from assembled roof by backing out all $\#8\ x$ 2" flat head screws and finish nails. Retain screws and roof panels for later use.



Step 13.3 Optional Roof

Cut siding to reveal sheathing.

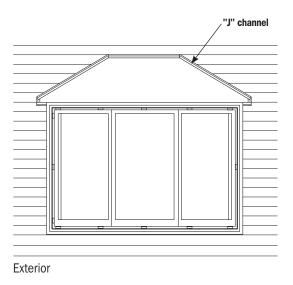
Cut siding along cut line to reveal sheathing. Do not cut through sheathing. Remove siding.



Step 13.4 Optional Roof

Install "J" Channel.

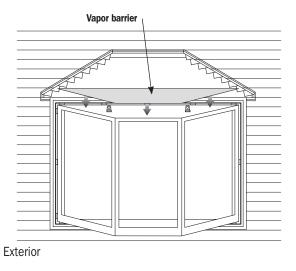
If necessary, install "J" channel over cut edge of siding following manufacturer's instructions.



Step 13.6 Optional Roof

Install vapor barrier.

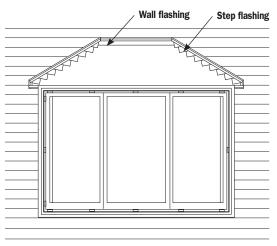
Install vapor barrier over top surface of bay/bow frame following manufacturer's instructions. Ensure eye brackets are accessible.



Step 13.5 Optional Roof

Install flashing.

Tuck step flashing and wall flashing under cut edge of siding and/or "J" channel following manufacturer's instructions. Ensure flashing is folded up and out of the way before continuing.

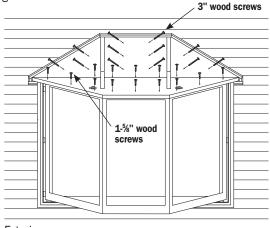


Exterior

Step 13.7 Optional Roof

Fasten roof to bay/bow frame and house.

Set assembled roof on top of bay/bow frame. Fasten assembled roof to bay/bow frame head using 1^{-5} /s" wood screws. Use a minimum of 12 3" wood screws to fasten assembled roof to wall framing studs or header.



Exterior

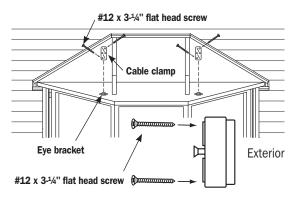
CAUTION

Screws used to fasten the assembled roof to the bay/bow unit must be no longer than 1-5%". Longer screws will penetrate the interior head causing irreparable damage to the visible interior surface of the head.

Step 14.1 Cable System

Mount cable clamps.

Mount cable clamps as high and in as straight a line above position of eye brackets on top of bay/bow frame as possible. Do NOT drive screws in completely. Use 1 each #12 x $3-\frac{1}{4}$ " flat head screws at top and bottom of each cable clamp. Make sure screws are driven into a stud or header to support weight of bay/bow window.



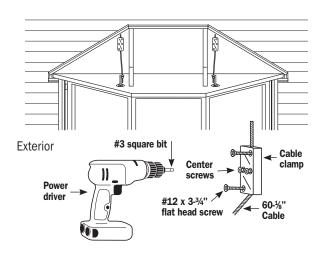
A WARNING

Install cable clamps as high as possible, making sure they anchor into solid framing. Failure to anchor into solid framing may result in unit sagging and/or product malfunction, causing injury and product damage.

Step 14.3 Cable System

Run cables through cable clamps.

Run cable through cable clamp until cable is taut. Snug two center screws to lock cable with #3 square bit and power driver. Repeat for other cable clamp. Fully drive all $4 \pm 12 \times 3^{-1}/4$ " flat head screws through top and bottom holes into solid framing. Re-tighten center screws as needed.

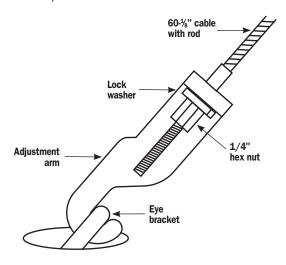


Bay and Bow Windows

Step 14.2 Cable System

Assemble cable support system.

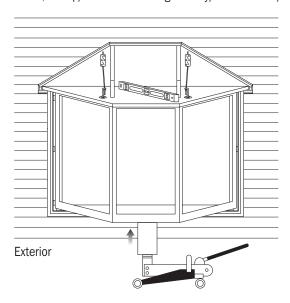
Insert threaded end of 60^{-1} /s" cable with rod through slotted hole in adjustment arm. Screw lock washer and 1/4" hex nut onto threaded rod approximately 1/2". Hook adjustment arm onto eye bracket. Repeat for other cable.



Step 14.4 Cable System

Adjust level of bay/bow frame.

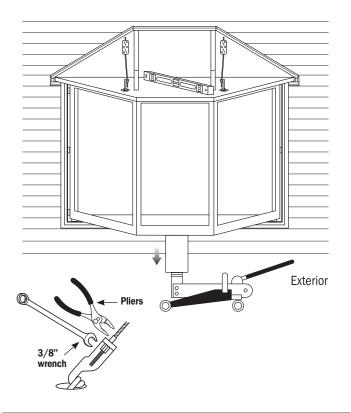
If using knee braces, make sure bay/bow frame is level. If not using knee braces, toe-up/raise outside edge of bay/bow frame 1/8".



Step 14.5 Cable System

Secure cables and remove floor jack.

Tighten 1/4" hex nuts on both cables with 3/8" wrench and pliers. Carefully lower floor jack to place weight of bay/bow frame onto cable support system. Check level and adjust cables as needed.

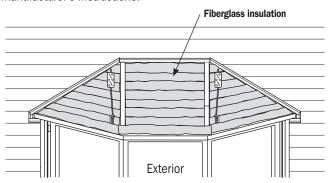


NOTE: If installing an included assembled roof, proceed to Step 15.1 Optional Roof. If using knee braces, proceed to Step 16.1 Optional Knee Braces, page 16. Otherwise proceed to Step 17, page 17.

Step 15.1 Optional Roof

Add insulation.

Add fiberglass insulation to fill head platform following manufacturer's instructions.



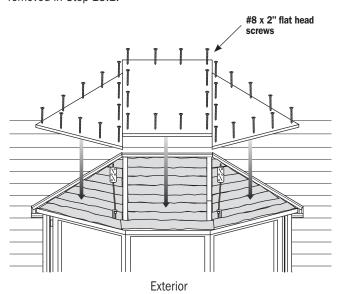
CAUTION

Do not block soffit ventilation! Do not block 2" airflow space between insulation and roof deck! Unwanted condensation may occur resulting in product and/or property damage. Install insulation stop if necessary to maintain air space.

Step 15.2 Optional Roof

Reinstall assembled roof panels

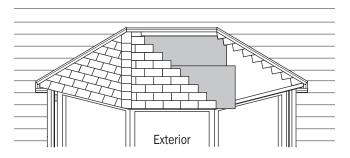
Reinstall assembled roof panels re-using #8 x 2" flat head screws removed in Step 13.1.



Step 15.3 Optional Roof

Install roofing materials following roofing manufacturer's instructions.

Ensure step and wall flashing are placed between roofing paper and shingles.

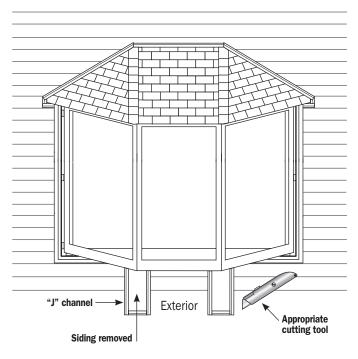


NOTE: If installing knee braces, proceed to Step 16.1 Optional Knee Braces, page 16. If no knee braces, proceed to Step 17, page 17.

Step 16.2 Optional Knee Braces

Remove siding behind knee brace locations and reinforce house wall as needed.

The wall must be able to support the weight of the bay/bow window. Add "J" channel if necessary.



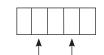
Step 16.1 Optional Knee Braces

Determine appropriate locations for knee braces (3, 4, or 5 lite bay/bow frame).

Knee Brace Location –

3 lite Bay or Bow	4 lite Bow	5 lite Bow
Directly under 2 vertical mullions	Directly under 2 outer vertical mullions	Under center of 2nd and 4th openings

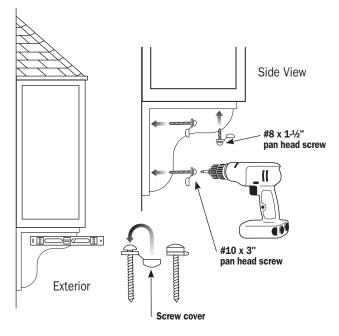




Step 16.3 Optional Knee Braces

Attach knee braces.

Ensure bay/bow frame is level. Install knee braces using supplied $\#10 \times 3$ " pan head screws and supplied screw covers into knee brace and house. Install $\#8 \times 1.1/2$ " pan head screws and supplied screw covers through knee brace and bay/bow frame. Then cover screw heads with screw covers.



Determine your window types.

Determine which windows will be installed in the bay/bow frame and where. Follow instructions for all appropriate window types:

Casement Step 18.1, page 17

Picture window Step 19.1, page 18

Double-hung Step 20.1, page 20

After all individual windows are installed, proceed to Step 21, page 21.

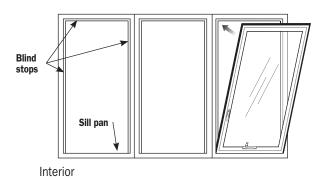
NOTE

Please disregard all other installation instructions included with individual windows. You may have additional screws remaining after this installation.

Step 18.2 Casement

Check window fit.

Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and check for fit. Then carefully remove window, tilting out from the top.

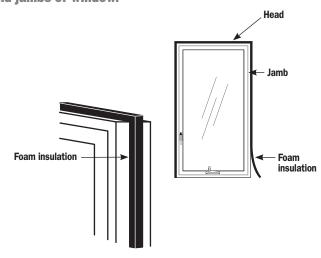


CAUTION

Do not damage sill pan.

Step 18.1 Casement

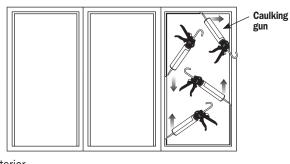
Apply foam insulation around head and jambs of window.



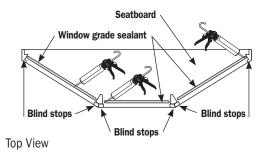
Step 18.3 Casement

Apply sealant.

Apply generous bead of window grade sealant to face of blind stops at both jambs and head and on seatboard even with blind stop. Only caulk one opening at a time.



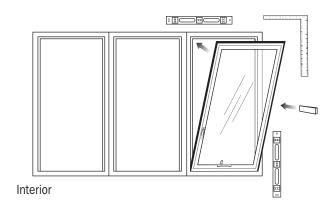
Interior



Step 18.4 Casement

Set window in opening.

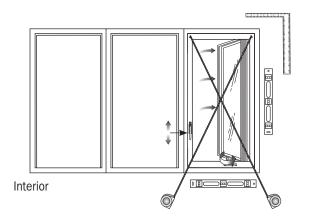
Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and window grade sealant. Shim so window is plumb, level and square.



Step 18.6 Casement

Check for plumb, level, square and for proper operation.

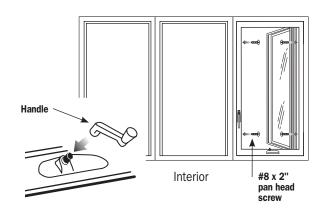
Remove excess sealant from exterior.



Step 18.5 Casement

Fasten window in opening.

Fasten using 4 supplied #8 x 2" pan head screws into all pre-drilled holes in each jamb. Be careful not to over tighten screws. If necessary, install handle.

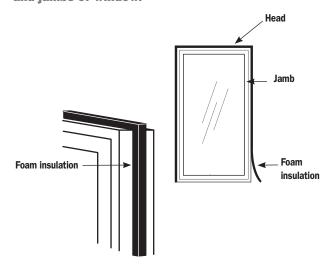


CAUTION

Do not drill or fasten through sill. Product and/or property damage will result and product warranty will be null and void.

Step 19.1 Picture

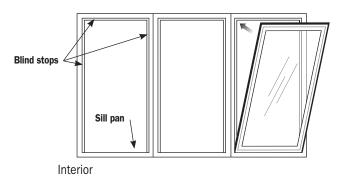
Apply foam insulation around head and jambs of window.



Step 19.2 Picture

Check window fit.

Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and check for fit. Then carefully remove window, tilting out from the top.



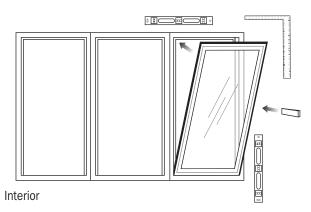
CAUTION

Do not damage sill pan.

Step 19.4 Picture

Set window in opening.

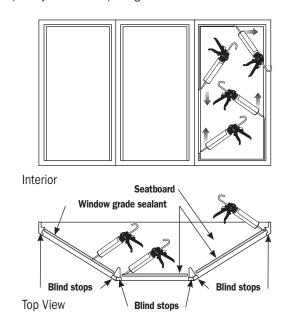
Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and window grade sealant. Shim so window is plumb, level and square.



Step 19.3 Picture

Apply sealant.

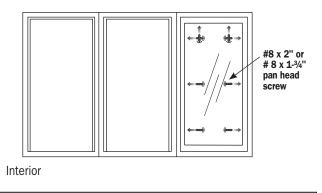
Apply generous bead of window grade sealant to face of blind stops at both jambs and head and on seatboard even with blind stop. Only caulk one opening at a time.



Step 19.5 Picture

Fasten window in opening.

Fasten using supplied #8 x 2" or #8 x 1-34" pan head screws into all pre-drilled holes in head and each jamb. Be careful not to over tighten screws. Fill holes with 3/8" vinyl plugs (if applicable).



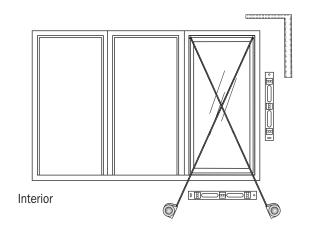
CAUTION

Do not drill or fasten through sill. Product and/or property damage will result and product warranty will be null and void.

Step 19.6 Picture

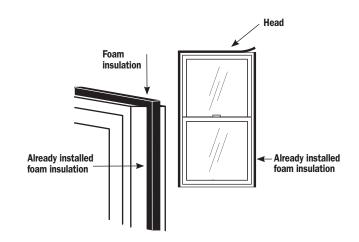
Check for plumb, level and square.

Remove excess sealant from exterior.



Step 20.1 Double-Hung

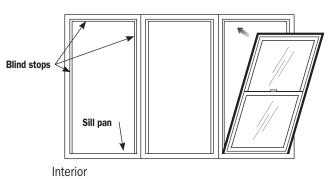
Apply foam insulation along head of window.



Step 20.2 Double-Hung

Check window fit.

Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and check for fit. Then carefully remove window, tilting out from the top.



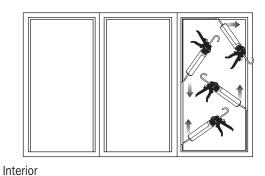
GAUTION

Do not damage sill pan.

Step 20.3 Double-Hung

Apply sealant.

Apply generous bead of window grade sealant to face of blind stops at both jambs and head and on seatboard even with blind stop. Only caulk one opening at a time.



Seatboard
Window grade sealant

Blind stops

Blind stops

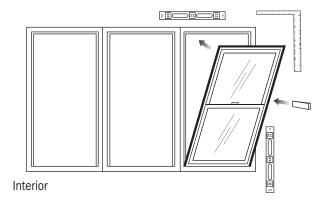
Blind stops

Top View

Step 20.4 Double-Hung

Set window in opening.

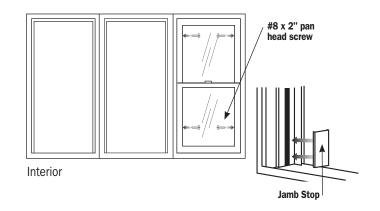
Tilt top of window toward you. Carefully place bottom of window into sill pan, then tilt top of window into place against blind stops and window grade sealant. Shim so window is plumb, level and square.



Step 20.5 Double-Hung

Fasten window in opening.

Fasten using 4 supplied #8 x 2" pan head screws into all predrilled holes in each jamb. Remove jamb stops near sill to access lower, pre-drilled screw holes. Be careful not to over tighten screws. Reinstall jamb stops.

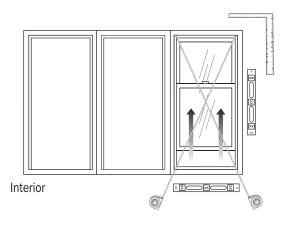


CAUTION

Do not drill or fasten through sill. Product and/or property damage will result and product warranty will be null and void.

Step 20.6 Double-Hung

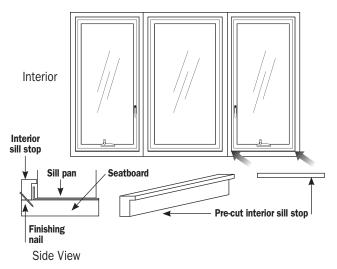
Check for plumb, level, square and for proper operation. Remove excess sealant from exterior.



Step 21

Install interior sill stops.

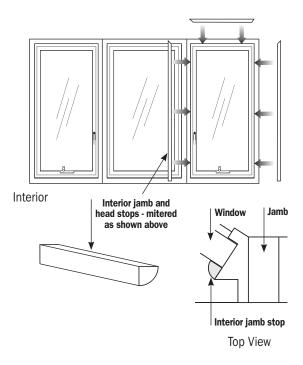
Install pre-cut 1" x 3/4" interior sill stops (L-shaped trim) against sill of each window opening with finishing nails. Pre-drill as needed. Trim will cover sill pan. If pre-finished molding is selected, one extra pre-cut interior sill stop is included. Do not penetrate sill pan.



Bay and Bow Windows

Install interior head and jamb stops.

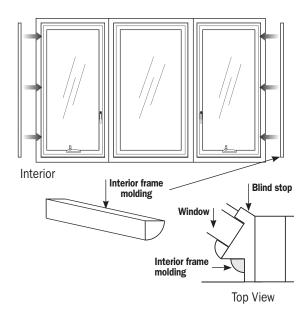
Install pre-cut 3/4" x 5/8" interior jamb and head stops (quarter round pre-mitered as shown) to each window opening with finishing nails. Pre-drill as needed.



Step 23

Install interior frame molding.

Install pre-cut 3/4" x 5/8" interior frame molding (straight cut quarter round) on both sides of the bay/bow frame with finishing nails. Pre-drill as needed. If pre-finished molding is selected, one extra interior frame molding is included.

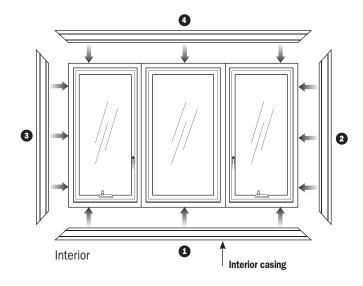


NOTE: If optional pre-mitered interior casing is included, proceed to Step 24 Optional Pre-Mitered Interior Casing, page 23. If optional non-mitered interior casing is included, proceed to Step 25 Optional Interior Casing, page 23. If interior casing is not included, finish interior as desired and proceed to Step 27, page 24.

Step 24
Optional Pre-Mitered
Interior Casing

Install pre-mitered interior casing.

Install pre-mitered interior casing on all sides of the bay/bow frame with finishing nails. Begin with the sill, then jambs and then head. Pre-drill as needed.

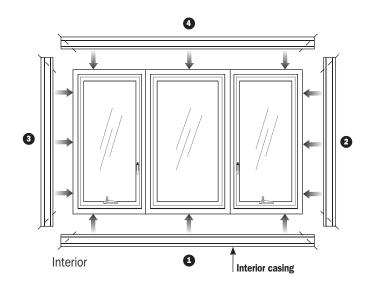


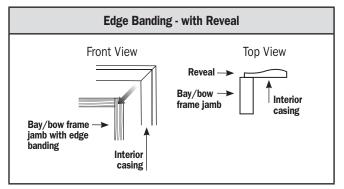
Proceed to Step 26.

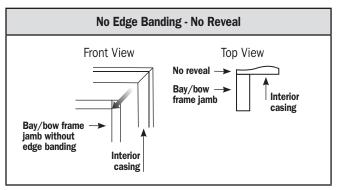
Step 25 Optional Interior Casing

Install non-mitered interior casing.

Measure and miter interior casing. If bay/bow frame does not include optional edge banding, interior casing will be installed flush with the interior surface of the bay/bow frame. If optional edge banding is included, interior casing will be installed with a reveal. Install interior casing on all sides of the bay/bow frame with finish nails. Begin with the sill, then jambs and then head. Pre-drill as needed.





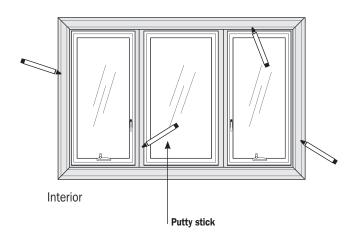


American Craftsman Installation Instructions

Step 26

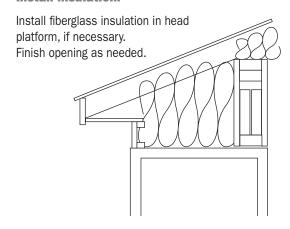
Finishing.

Set and fill nail holes on interior stops, interior frame molding and interior casing with color coordinated putty stick or as desired.



Step 27

Install insulation.



CAUTION

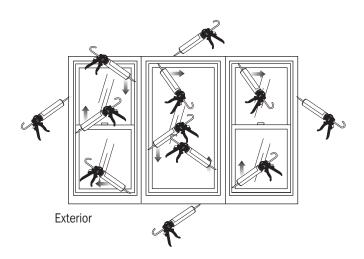
Do not block soffit ventilation! Do not block 2" airflow space between insulation and roof deck! Unwanted condensation may occur resulting in product and/or property damage. Install insulation stop if necessary to maintain air space.

Step 28

Install exterior trim at discretion of builder.

Step 29

Apply bead of window grade sealant around exterior perimeter of each window and bay/bow frame.



888-504-0005 www.AmericanCraftsmanWindows.com

Installation InstructionsBay and Bow Windows