WINGATE
LUXURY WINDOWS

English version

TILT & TURN WINDOWS INSTALLATION INSTRUCTION

Energy-Efficient Thermal Break Aluminum Windows System

English version

TILT & TURN WINDOWS INSTALLATION INSTRUCTION

Energy-Efficient Thermal Break Aluminum Windows System

TILT & TURN WINDOWS
INSTALLATION INSTRUCTION

IMPORTANT NOTICES & INFORMATION

For Thermal-break Aluminum Tilt & Turn Windows

Before you begin:

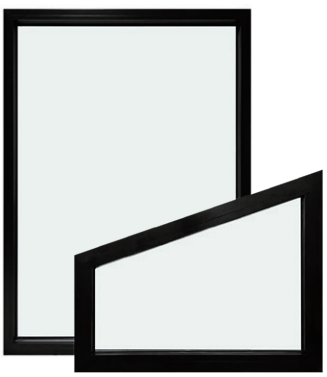
Ensure the building envelope is properly prepared with weather-resistant barriers that comply with local and state building codes. The frame and sill surfaces must be adequately prepared for air and water tightness, as well as structural stability, by the builder or contractor before installation.

We recommend employing a highly skilled installer or someone who has received training as a certified installer. Carefully read these instructions from start to finish before starting the installation, and consult with your local building code official to ensure compliance with all relevant local building code requirements.

WIN-GATE accepts no responsibility for on-site measurements or for meeting the structural and architectural specifications necessary for window installation. The specific design of your building, construction techniques, materials used, and unique site conditions may require different installation methods to those outlined in this instruction.

- Vista Series
  Tilt & Turn Windows

- Vista Series
  Tilt & Turn Windows



- Vista Series
  Fixed Windows

PART 1 HOW TO INSTALL TILT & TURN WINDOWS

REMOVE PACKAGING AND INSPECT WINDOWS

Remove Packaging

Open the wooden crates by following the instructions labeled on the outside. Begin by removing the top cover, then proceed to open the side as indicated.
You may require a pry bar to lever the crate open, or use a drill to remove the screws. Ensure the use of proper lifting techniques and sufficient manpower to safely lift and transport windows, preventing injury or damage to the product.

NOTE:

Windows should be properly stored if installation will not take place immediately.

Inspect Window

Each window has an identification label displaying the item number, description, dimensions, and other details to help you find the appropriate window for installation.

- **Visible Damage**
  Remove the packaging material from the frame and inspect for any damage or broken glass.
- **Correct Product**
  Verify that the product matches the shop drawings and specified requirements (size, color, grid pattern, handing, glazing, energy efficiency requirements, etc.).

WARNING:

DO NOT store windows horizontally or expose them to direct sunlight or rain; Avoid racking, twisting, dragging, or pulling window frames, as this may result in product damage. Improper on-site storage or handling can void the product warranty.

MATERIALS AND TOOLS

Materials Needed

- 1 3/4" aluminum or #10 x 1 1/2" flat head or washer head screws (stainless steel recommended). These fasteners should penetrate through the nailing flange or metal clips and secure them to the rough framing. Ensure that fasteners penetrate at least 1" into the framing (or comply with local code requirements).

WARNING:

Failure to use the appropriate materials for installation may result in a failure that could cause injury, property damage, or product damage.

NOTE:

This fastener table is provided as an example of fastening requirements. Requirements may differ depending on the product, building type, application and region.

NOTE:

The materials needed for installation will be supplied by the installation team, who will ensure the quality and adhere to the manufacturer's instructions.

WARNING:

Follow the manufacturer's instructions for using hand or power tools.

Make sure to use a LASER LEVEL, especially for windows with opening sashes and for every door. If you do not use a laser level and this results in difficulties with opening or closing doors and windows, these issues will not be covered under our warranty.

Always wear safety glasses. Failure to comply may result in injury and/or product damage.

WARNING:

Broken or cracked glass can cause serious injury. IF INJURY OCCURS, IMMEDIATELY SEEK MEDICAL ATTENTION!

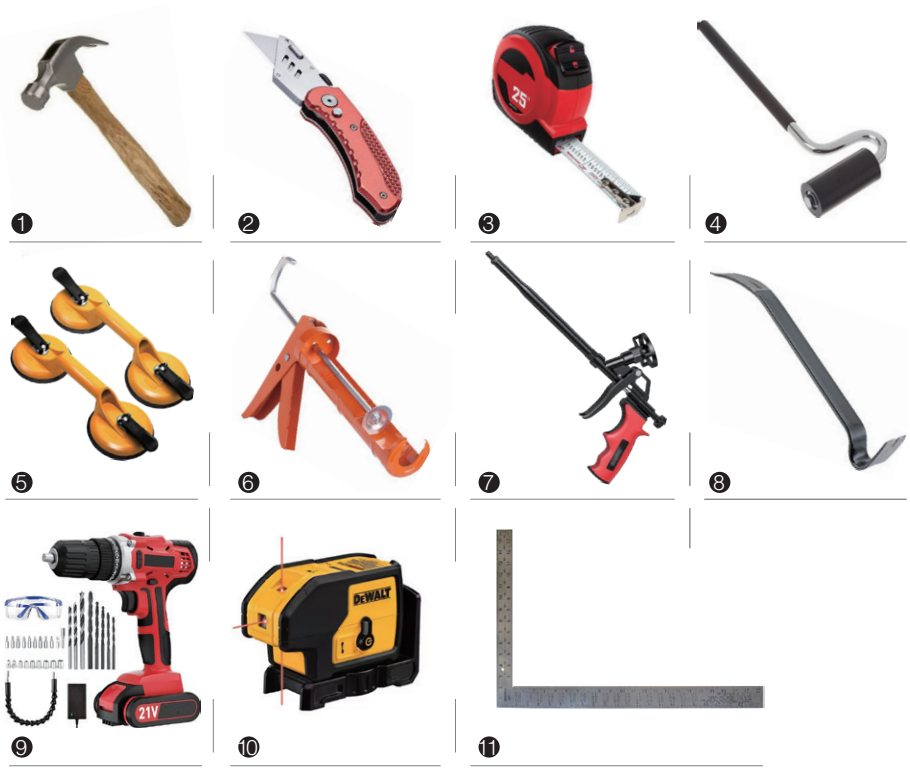
For installation on masonry or concrete walls, use appropriate masonry screws.

FASTENER TABLE		
Building materials	Minimum fastener size	Minimum embedment
Wood frame	#10 Wood screws	1 1/2
Concrete/Masonry	3/16" Masonry screw	1 1/4
Steel frame	#10 Self-tapping screw	3 Threads
*1 3/4" Aluminum can be used for fastening through installation flanges into wooden frame construction.		

- Interior and exterior window grade sealant
- Polyurethane low-expansion foam
- Non-compressible or non-water-degradable shims/Plastic shims
- Self-adhesive flashing tape (Minimum width of 6 inches)

Tools Needed

❶ Hammer ❷ Utility knife ❸ Tape measure ❹ J-roller
❺ Suction cups ❻ Sealant gun ❼ Caulking gun ❽ Prybar
❾ Drill with bits ❿ Laser level ⓫ Framer's square



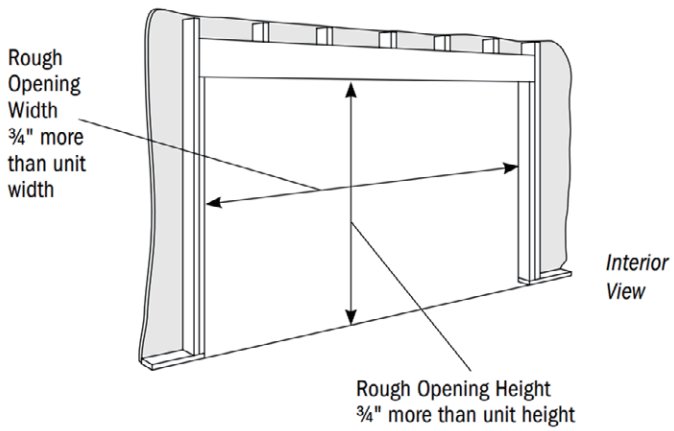
INSTALL WINDOWS (WOOD STUD-FRAMED WALL)

NOTE:

If the rough opening is uneven or consists of a masonry structure without a wooden frame, the rough opening size may need to be 1 inch wider and taller.

Step 1: Verify Rough Opening

Before you start, ensure that the rough opening dimensions are accurate. Typically, the RO dimensions should be 3/4" wider and taller than the actual size of the window/door (measured from frame to frame), as indicated in the shop drawings we provided.



- Ensure that the rough opening is perfectly square. The measurements for (A) and (B) should match exactly.
- Confirm that the rough opening is level and plumb (C, D, and E). The sill must be level and even. Use shims if necessary.

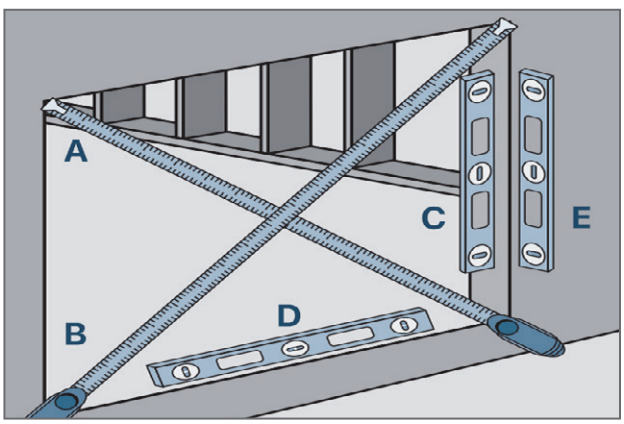
WARNING:

The rough opening must be level and square. If it is not, having a level and square rough opening is crucial for the product's performance.

In case the rough opening is not plumb or level, make the necessary corrections.

The exterior surface of the rough opening must be flat (E) and have less than a 1/8" twist from one corner to the other.

Ensure that it is square, level, and plumb.



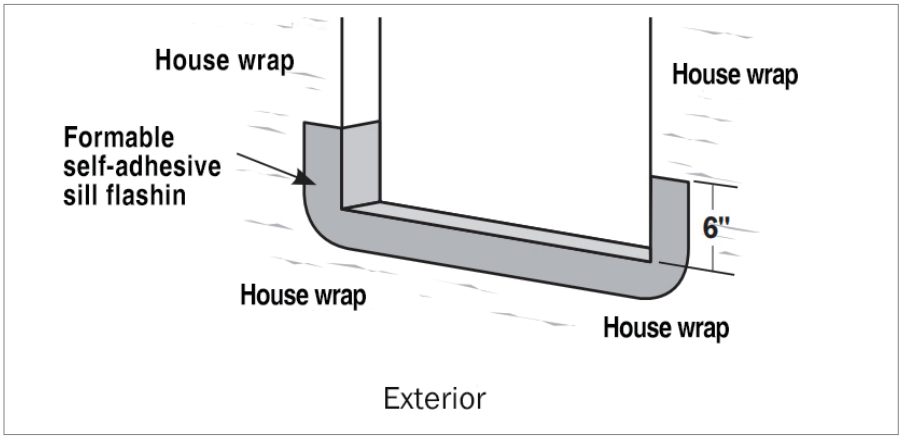
Verify square, level and plumb

NOTE:

Rigid sill pan and liquid sealant flashing can also be effective when proper application techniques are employed. Follow the flashing manufacturer's instruction.

Step 2: Apply Sill Flashing

Install the flexible self-adhesive sill flashing into the opening as indicated.
Extend the flashing 6 inches up both sides in a single continuous piece as demonstrated.
Use a J-roller to eliminate any air bubbles or wrinkles.

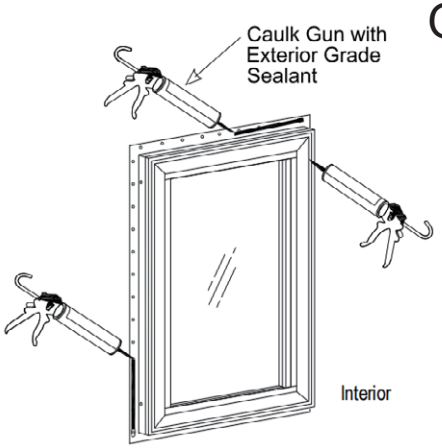


NOTE:

Use a high-performance sealant specifically designed for exterior windows and door installations. Follow the sealant manufacturer's instruction and ensure window installation is completed before the sealant dries.
Thoroughly clean the edges, including both the nailing fin and the surrounding walls, before sealant application.

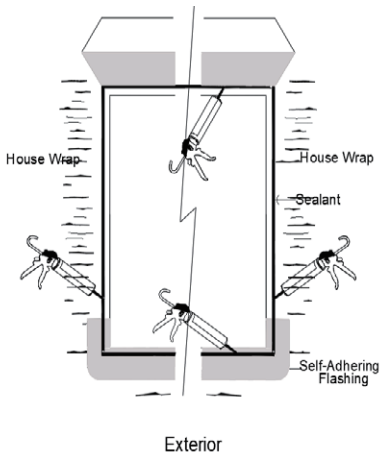
Step 3: Apply Sealant

Apply a continuous bead of exterior window-grade sealant to the backside of the nailing fin jamb and head, aligning it with the installation holes.



OR

Apply a thick 3/8" bead of window/door sealant around the rough opening, ensuring the sealant lines up with the flange holes.



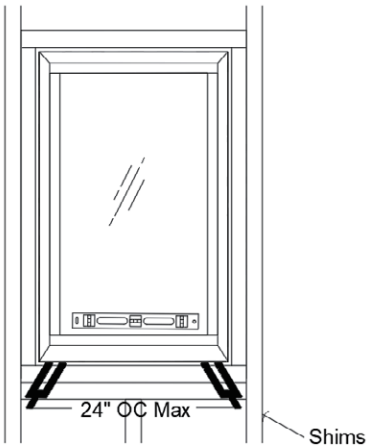
NOTE:

1. Ensure that in a later step, the foam applied under the window creates a continuous seal at the sill.

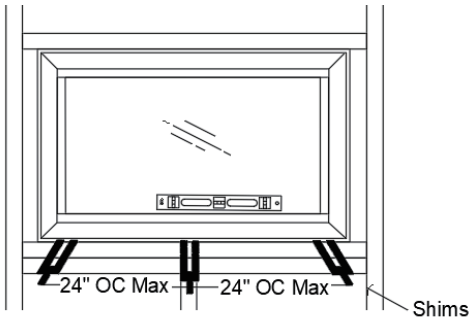
2. When placing the window into the opening, make sure NOT to place the window upside down. The label on the glass indicates the correct side up.

Step 4: Place Window in Opening

Place composite shims and carefully lift the window into the rough opening.
Ensure the unit is level from the interior before proceeding.
Do not set the window unit directly onto the sill without support.
Place shims on the sill 4 inches (100mm) from each end, at every mullion, and no further than 24 inches apart for additional shims.
Space the shims no more than 24 inches apart on center.
Adjust the height of the shims as necessary to achieve a level sill.
Make sure the sill is level by adjusting the shims accordingly.
Center the window in the rough opening and secure it with a 1 1/2 inch screw through the top corner of the flange.
Fasten the window by driving a 1 1/2 inch screw through the top corner of the flange.



Interior



Interior

NOTE:

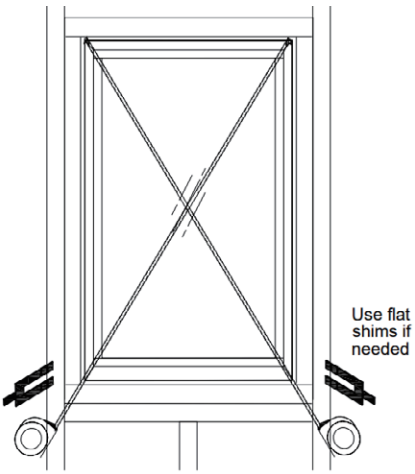
Make sure to use the Laser Level during the installation for accuracy.

WARNING:

DO NOT over shim. Excessive shimming can cause bowed jambs, affecting product performance and proper operation.

Step 5: Level the Window

- **Check for Square** Measure diagonally across the unit from the upper left corner to the lower right corner, and from the upper right corner to the lower left corner.
  If the measurements are within 1/8", the unit is square.
  If the unit is not square, adjust by inserting shims as needed. Do not over-shim.
  DO NOT over shim.



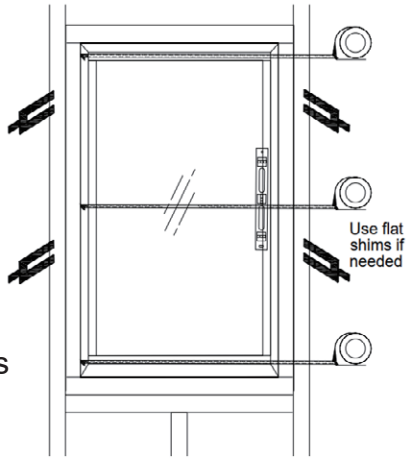
Interior

WARNING:

Improper installation of the window—if it is not plumb, level, and square—may compromise its water-resistance performance and will void any warranty.

- **Check for Plumb**

  Measure across the head, center, and sill of the unit.
  Ensure that the center dimensions match the head and sill dimensions within 1/8".
  Check for plumb.
  Shim to straighten the side jambs as needed, but do not over-shim.



WARNING:

To avoid injury, use at least two people for installation.

IF INJURY OCCURS, IMMEDIATELY SEEK MEDICAL ATTENTION!

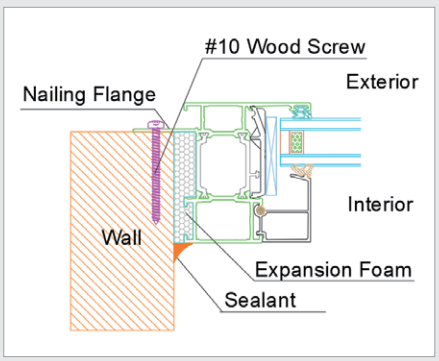
Step 6: Fasten Window

Fasten window to opening.
Ensure the head and sill are not crowned up or down, and that the jambs are not bowed in or out.
Use 1 3/4" aluminum or #10 x 1 1/2" wood screws to secure the window through every flange hole around the sill, jambs, and head to the wall.
DO NOT nail or screw too tightly.

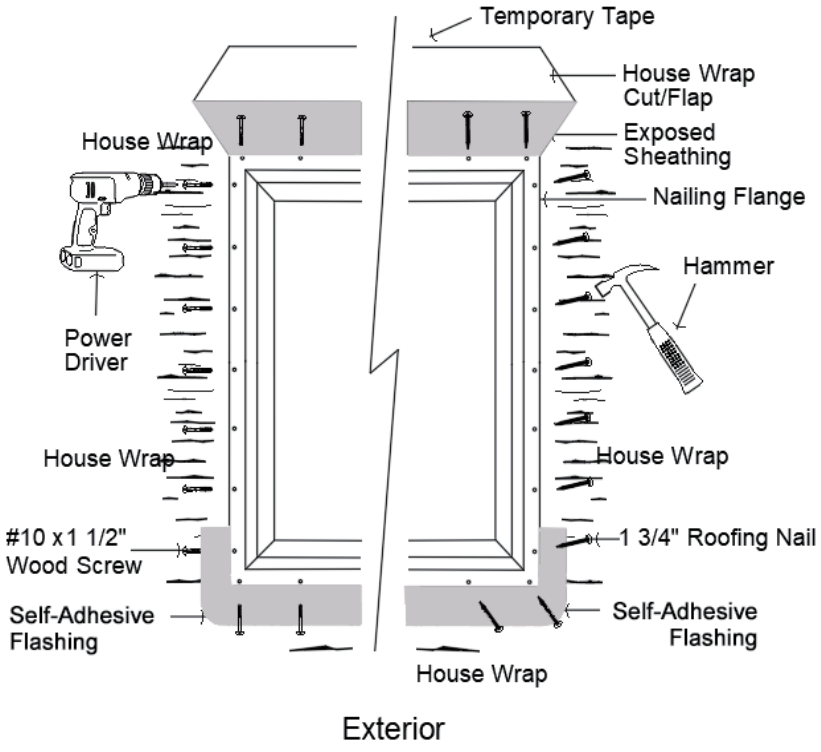
WARNING:

Installation screws, nails, or clips must be securely attached to the rough opening.

Adequately support the window until it is completely fastened. Failure to do so will reduce the structural performance and may result in product or property damage.



Section drawing with installation details



Use #10 wood screws or roofing nails

Step 7: Operate the Window

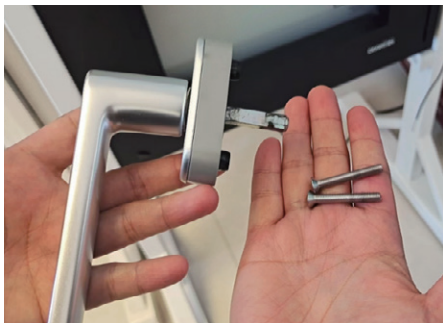
Operate the unit once it is completely fastened to ensure the window operates smoothly.

Install the handle (Vista Series Regular Frame with German Hoppe Handle)

WARNING:

DO NOT install the handle in the wrong direction.

The window is shipped in the locked position. When installing the handle, insert the spindle with the handle pointing downward.



***1**. Attach the handle with two screws*

***2**. Rotate the cover to reveal the screw holes*

***3**. Insert the spindle into the handle holes*

***4**. Tighten the screws*

WARNING:

DO NOT over-tighten the screws. Use a screwdriver instead of a power drill. Over-tightening the screws can damage the hardware

***5**. Ensure both screws are securely tightened*

***6**. Rotate the cover back into place*

WARNING:

DO NOT install the handle in the wrong direction. The window is shipped in the locked position. When installing the handle, insert the spindle with the handle pointing downward.

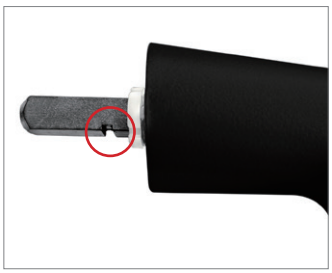
NOTE:

In addition to these instructions, you can contact your sales rep and request videos demonstrating how to perform adjustments and troubleshooting.

Install the handle (Vista Series Slim Frame with Belgium Sobinco Handle)

1. Before installing the handle, check the metal piece (as indicated by the circle in the drawing) in the handle hole to ensure it is at the bottom. If it is not at the bottom, use a spindle to turn it to the bottom. This metal piece must align with the groove (as indicated by the circle in the drawing) on the handle spindle.

Metal piece at the bottom



Groove on the handle spindle at the bottom

Insert the spindle with handle pointing downward

2. Make sure the circled metal piece is at the bottom, and insert the handle into the hole with the handle pointing downward. Push the handle in until it is fully installed.

Remove the handle

If you want to remove the handle from the window, follow the steps below:

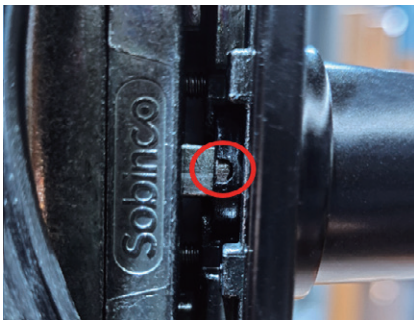
1. Turn the handle to open the window

Turn the handle to the horizontal position

Open the window

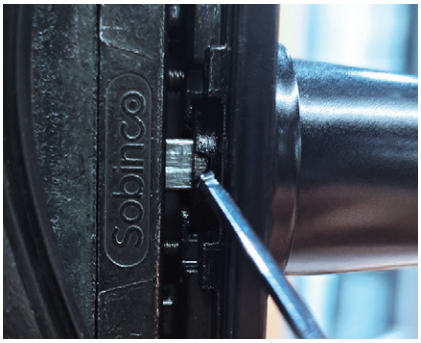
2. Remove the rubber seal on the side of the sash by the handle. You will see a small notch (as indicated by the circle in the drawing).

Remove the rubber Seal



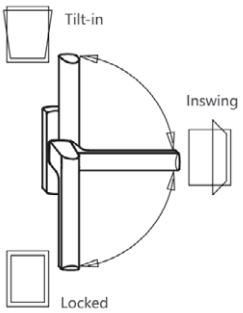
Find the small notch

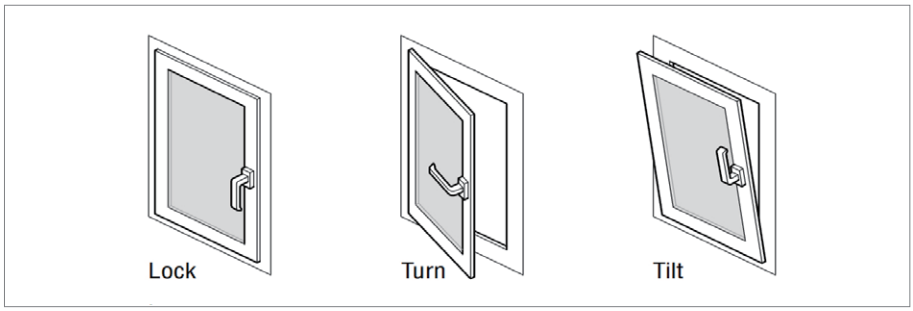
3. Use an Allen wrench to push into the notch, then the handle will come off.



Operate the Sash

A European classic, tilt & turn windows are inswing windows with a dual function. With a turn of the handle, they can either tilt inward or swing open.





1. When the handle is pointed downward at the floor, the window is in the Lock position.
2. Turn the handle 90 degrees, pointing to the right or left, the window is in the Turn position, allowing the window to swing inward.
3. Turn the handle upward to point at the ceiling, the window is in the Tilt position, enabling the window to tilt inward slightly.

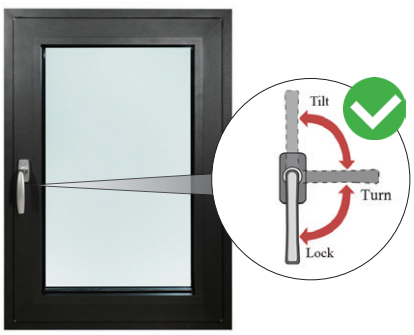
NOTE:

If the window can't be operated smoothly, first re-check the leveling, and then proceed to part 2 for necessary adjustments.

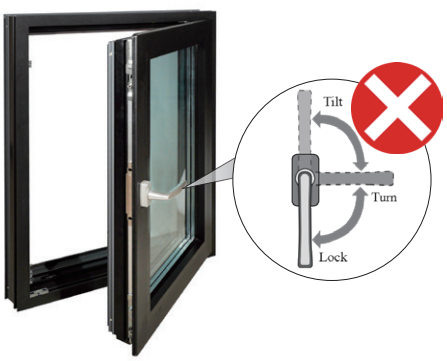
WARNING:

DO NOT turn the handle when the window is open, or product damage may occur.

The handle can only be turned when the sash is closed to the frame. When switching from one position to another, the sash has to be closed first, and then rotate the handle. **DO NOT** rotate the handle when the window is open.



Window closed



Window opened

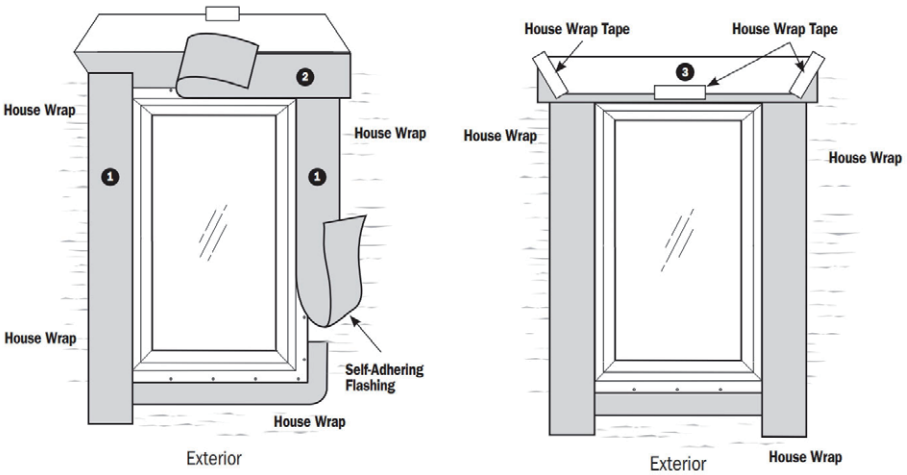
NOTE:

Keep the edge of the self-adhesive flashing as close to the window frame as possible and apply it over the nail fin. Follow the flashing manufacturer's instructions.

Step 8: Apply Remaining Flashing

If the window could be operated smoothly and no more adjustment is needed:

1. Apply flashing over both side jamb nailing fins, overlapping the sill flashing and the head nailing fin.
2. Apply head flashing overlapping side flashing.
3. Fold house wrap flap down over head flashing and apply house wrap tape.



NOTE:

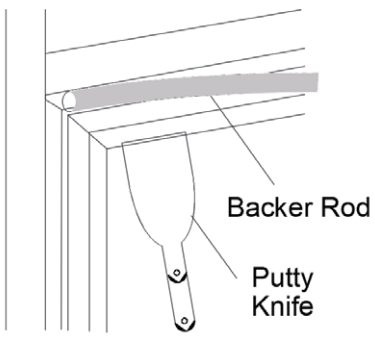
The rough opening should have enough tolerance to accept low-expansion polyurethane foam for insulating purposes.

Step 9: Complete Installation

Insulate between the frame and rough opening on all sides from the interior with low-expansion polyurethane foam or backer rod and sealant.

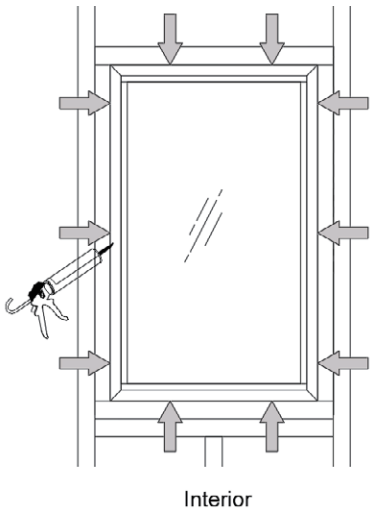
WARNING:

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



Use backer rod to fill the gap

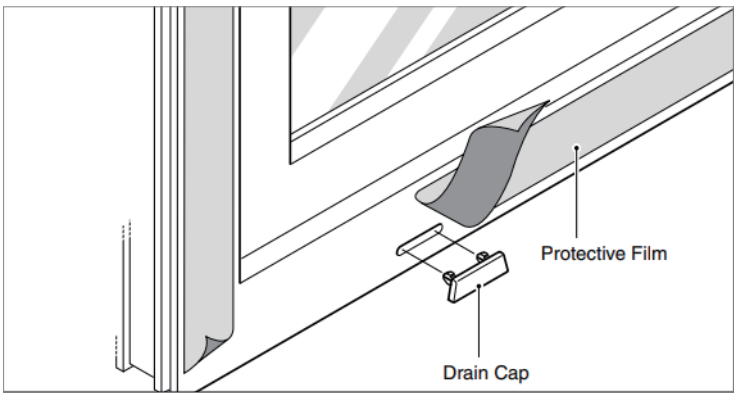
-OR-



Use low-expansion foam poly to fill the gap

Step 10: After Installation

- Ensure weep holes/channels are clear of debris for proper water drainage. Put the weep hole covers on and do not seal weep holes/channels.
- Protect recently installed units from damage from plaster, paint, etc. by covering the unit with plastic.



Remove the protective film and install the drain caps — exterior view

NOTE:

Weep holes must face the exterior and must be located at the bottom of the window and door.

WARNING:

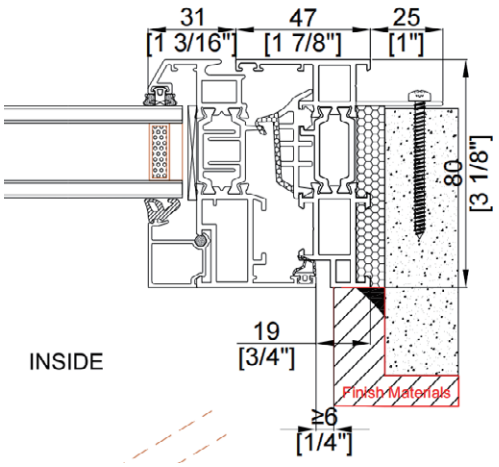
DO NOT block or seal the weep holes, or water leakage may occur.

WARNING:

DO NOT reduce the rough opening clearance at the jambs (Inswing Window / Door). Doing so may cause the finish materials to interfere with the hinges/sash operation.

- To avoid the finish materials interfering with the window sash (80S slim frame system), provide a minimum of 1/4" (6mm) clearance between the finish material and sash sides.

  DO NOT cover more than 3/4" (19mm) of the frame on the sides. If you use thicker finishing materials, you may need to provide larger rough openings to maintain the recommended clearance between the finish material and the hinges.



Vista Series slim frame system

NOTE:

Failure to follow these instructions may void the product warranty.

WARNING:

To avoid injury, use at least two people to install.

IF INJURY OCCURS, IMMEDIATELY SEEK MEDICAL ATTENTION!

WARNING:

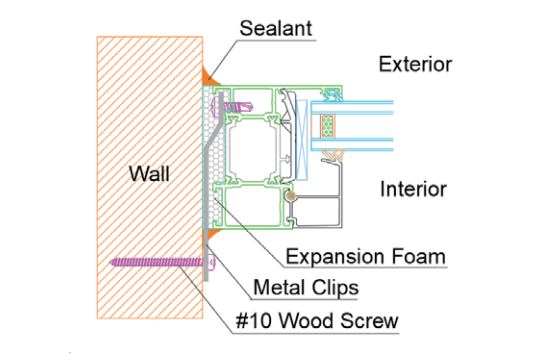
Installation screws, nails, or clips must be securely attached to the rough opening. Adequately support the window until completely fastened. Failure to do so will reduce the structural performance and may result in product/ property damage.

INSTALLATION WITHOUT NAILING FINS

If the window is to be installed into a masonry, concrete, ICF wall, or steel stud without Wood Buck, the nailing fins won't work for the installation. The installation will use metal clips/ straps around the window frame. Therefore, **step 3** is not needed, and **step 6** changes to:

Step 6: Fasten Window

Fasten the window to the opening. Make sure the head and sill are not crowned up or down, or the jambs bowed in or out. Use 1 3/4" roofing nails or #10 x 1 1/2" wood screws to screw through every metal clip/strap into the wall.



Section Drawing with installation details

Fasten the metal clips/straps to the wall

After the window is fastened to the wall, **go back to Step 7, then skip to Step 9 and Step 10.**

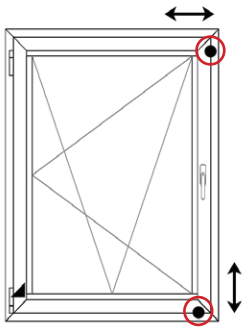
PART 2 HOW TO ADJUST TILT & TURN WINDOWS

SASH BINDING PROBLEMS

NOTE:

If the sash binds at one of these positions, use this adjustment to "tilt" the sash towards to the upper hinge.

The sash may bind against the fixed frame at one or more points after the building settles or due to heavy use. You can increase the clearance between the frame and the sash with one or more of these adjustments:



Upper Hinge Offset (Vista Series Regular frame Tilt & Turn window)

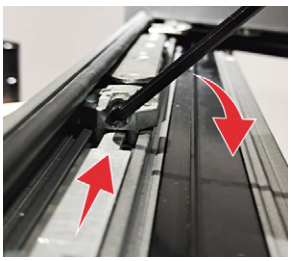
NOTE:

For our Vista Series slim frame tilt & turn window:

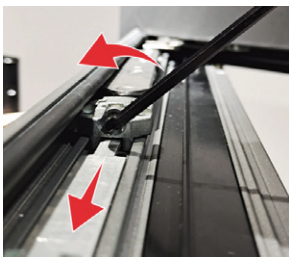
1. To tilt the sash towards the upper hinge, use 2.5mm Allen wrench to rotate the screw counter-clockwise;
2. To tilt the sash away from the upper hinge, use 2.5mm Allen wrench to rotate the screw clockwise.

Maximum adjustment: moving the sash 2mm to the right or left. This adjustment moves the top of the sash towards the upper hinge or away from it.

Screw on top of the sash



A clockwise turn will make the sash move to the hinge side



A counter-clockwise turn will make the sash move away from the hinge

NOTE:

This adjustment is made occasionally, typically due to the heavy sash weight.

1. Open the sash, you will see a screw (as indicated by thecircle in the drawing) on the top of the sash.
2. Insert the 4mm Allen wrench into the head of the screw.
3. To tilt the sash towards the upper hinge, rotate this screw clockwise. This raises the bottom corner of the sash on the handle side.
4. To tilt the sash away from the upper hinge, rotate the screw counter-clockwise. This lowers the bottom corner of the sash on the handle side.

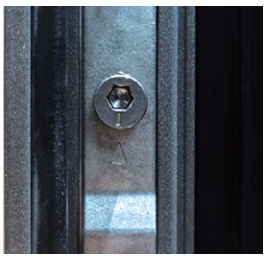
CLOSING TIGHTNESS PROBLEMS

- If you have an air leakage problem or feel looseness when closing the window, you need to adjust the hardware closest to the location where the air leaks in. First, try to correct the problem by increasing the closing tightness of the locking cams (Move the sash maximum 0.8mm towards or away from the frame).
- Open the sash, and you will notice the cylindrical eccentric locking cams (as indicated by the circle in the image) along the open sash.

Locking cams on the sash

- Each cam has an index groove stamped into its head, showing the current position. Refer to the position of the index groove before you adjust a cam.

Upper cam

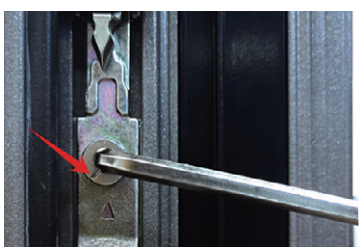


Lower cam

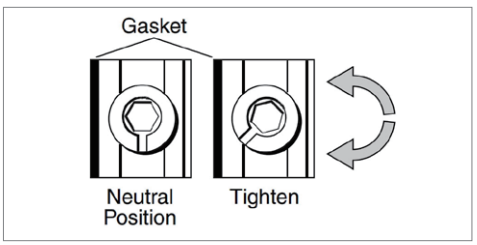
NOTE:

If you tighten the closure, the handle will become harder to use. Only increase the tightness if there is excessive air leakage.

- If you tighten the closure, the handle will become harder to use. Only increase the tightness if there is excessive air leakage.

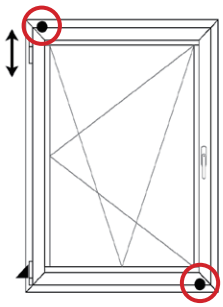


Index groove



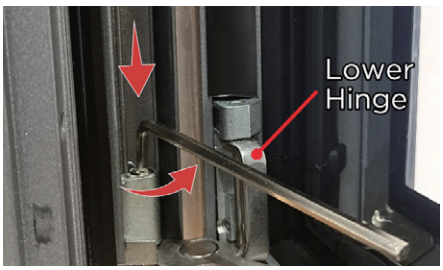
Turn the locking cams to tighten the sash

SASH HEIGHT ADJUSTMENT



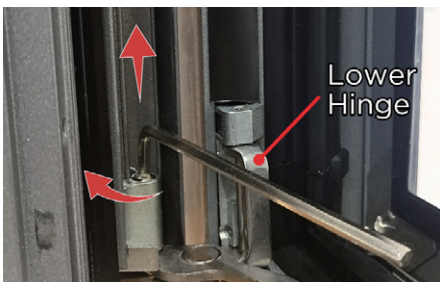
If the sash binds at the top when you open it in a tilt-in position, use this adjustment to lower the sash.

To lower the sash, open the window in the Turn position, you will see a screw at the lower hinge. Use a 4mm Allen wrench and rotate the screw counter-clockwise.



A counter-clockwise turn will make the sash go down

To raise the sash, open the window in the Turn position, you will see a screw at the lower hinge. Use a 4mm Allen wrench and rotate the screw clockwise.

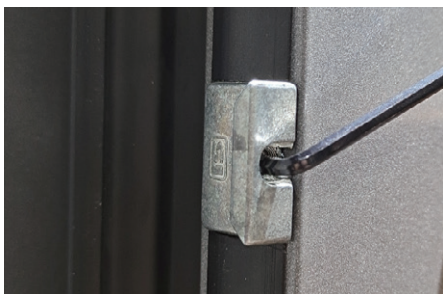


A clockwise turn will raise the sash

NOTE:

After adjusting, check that the tilt function operates correctly. Usually, the sash height doesn't need to be adjusted, as it is preset at the factory and typically won't change.

After raising or lowering the sash, you may need to adjust the locking blocks on the frame. Use a 2.5mm Allen wrench to loosen the blocks and slide them to the correct position. Test the window by closing it to ensure it can lock properly before tightening the locking blocks.



Upper locking block

Lower locking block

HOW TO RESET A HUNG SASH

Occasionally, the sash may open in both tilt-in and turn positions due to improper operation as shown in the image below.

NOTE:

In addition to these instructions, you can contact your sales rep and ask for videos showing how to do adjustments and troubleshooting.

To reset the sash back, follow below steps:

1. Locate the **Fail Safe Switch** on the side of the sash. (as indicated by the circle in the drawing)

2. Press down on the **Fail Safe Switch.**

3. Carefully press the upper hinge corner of the sash against the frame, while keeping the sash open.

WARNING:

The handle only can be turned when the sash is closed or the Fail Safe Switch is depressed. Force to turn the handle when the sash is open might result in product damage. See page12

4. Continue to press the **Fail Safe Switch** while turning the handle to the turn position. Then release the **Fail Safe Switch**. The window will now be reset to the turn position.

For more information or if you need any assistance with the installation, please feel free to contact your sales rep.

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