SEEMRAY
YOUR HOME YOUR WAY

SEEMRAY LLC

Installation manual

for windows & doors

www.seemray.com

Introduction

Terminology

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Introduction

Important Instructions, Notes, Warnings

Read These Instructions Completely Before Attempting Any Installation.

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NOTICE:
Improper installation (Failure to install and maintain our product according to these instructions) will void any warranty, written or implied. The installer is responsible for consulting the contractor, structural engineer, architect, or consumer, for proper installation according to local codes and/or ordinances.

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WARNING:
Improper use of hand/power tools could result in personal injury and/or product damage. Follow manufacturer's instructions for safe operation of equipment.

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NOTICE:
Same Seemray window unit could be used for new home construction and for replacement proect.

DISCLAIMER:
Seemray makes no warranties, expressed or implied, nor assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of installation instructions, or any portion thereof. Further, Seemray cannot be held liable for defects or deficiencies resulting from the proper or improper application of installation instructions.

DISCLAIMER:
Seemray makes no warranty, expressed or implied, with respect to these instructions or any third party instructions, and Seemray shall not be liable for a ny damage or liability that may arise in connection with the installation of this product not performed by Seemray

WINDOWS COULD BE INSTALLED ANYWHERE INSIDE R.O. :

a) All the way inside R.O. flash with drywall
b) All the way out of R.O. (3/4" outside)
c) Anywhere in between R.O.

WARNING: Storing tightly spaced windows/doors in the sun can result in overheating of the sealed units and extrusions, which may result in damage. Ensure that product is secured to wall to prevent any damage.

RECEIVING: Carefully inspect all windows and doors at the time you receive them and again at the time you install them. Remove the shipping packaging, skid plates or factory applied bracing. Place window vertically facing exterior side on a clean, flat work surface. Make sure the unit is not damaged and the dimensions are appropriate for the rough opening. Check that you have all necessary hardware. Any visible defects with the product must be reported to Seemray immediately before installation begins.

Never Carry Window / Door Unit Horizontaly →

HANDLING: Window and door units are to be handled carefully to avoid damage. They must be moved in the vertical position.

COLD WEATHER CAUTION: Use special care when handling or installing below 5° C (40°F). Avoid any impact to frames, sash or glazing bead.

STORAGE: Store the units at a slight lean against a wall on a flat, level area, under cover. Allow adequate spacing between the products for ventilation.

BUILDING CODES: It is the responsibility of the owner, architect or builder to select and install products in compliance with applicable laws, regulations and building codes.

BUILDING ENVELOPE: The design of the building envelope is the responsibility of the owner, architect, builder or building envelope consultant. The attachment of the window/door assembly to the building envelope, assurance continuity of the water/air/vapor barriers, is not the contractual obligation of Seemray LLC

INSTALLATION: Proper installation is necessary for this window or door to perform as designed and rated for water and air resistance. If you have Seemray shop drawings, supplemental information is provided. Seemray products must be installed plumb, level and square.

CARE AND MAINTENANCE: Protect windows/doors from welding splatter, grinding sparks, concrete, mortar, stucco, paint and other harmful construction materials. To clean vinyl, use a mild soap and water solution. To clean the glass, use a soft, grit free cloth and glass cleaner. On all operable windows and doors, keep channel at sill free of debris and protect sills from traffic damage. Keep all weep holes open for proper drainage. The protective film must be removed upon completion of installation. Clean and lubricate all hardware after construction. Ongoing maintenance and adjustments are described in our maintenance manual, available by contacting our sales office or visiting our website.

Performance Data: Our products are tested to ASTM test standards, CSA A440 Standards, and for NFRC thermal performance. Data is available on www.seemray.com or upon request.

Contact Information:

Web page: www.seemray.com,
Toll Free: +1 888-315-9973,
Email: info@seemray.com

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A successful Seemray window installation has the following objectives: anchoring the window securely to the building while keeping the frames perfectly square -creating an airtight connection from the inner part of the window frame to the airtight layer of the house -waterproofing the outside of the window -insulating any space between window and building, and, if desired, overinsulating the frame to increase thermal performance.

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Tools and materials required:

- Hearing protection device
- Safety glasses/goggles
- Sealant
- Caulk gun
- Level
- Square
- Hammer
- Shims
- Tape measure
- Flat head screwdriver
- Phillips head screwdriver #3
- Power drill
- Flashing tape
- Foam insulation
- Putty knife
- 11 mm wrench
- 4 mm allen key
- Soft Rubber Hammer

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PREPARE ROUGH OPENING (RO): The material/lumber quality and fasteners must be structurally adequate for design load requirements. Make sure that the rough openings are square, and that they have a level sill and plumb (vertical) jambs. Make sure that the outside face of the wall is straight and plumb. If a rough opening is out-of-square, adjust the thickness of the shim blocks as necessary to make sure that you install the window or door frame in a square, level and plumb way. If you see any rough openings that are not acceptable for frame installation, tell the general contractor or the party responsible for the construction. Get written authorization from the general contractor or from the responsible party before you install frames in unacceptable openings. Make sure that the general contractor corrects the rough opening if you find the rough opening does not allow you to install the frame perfectly level, square, straight in every direction and plumb, and does not provide a minimum of 3/8" (10mm) and no larger than 1/2" (12 mm) clearance between the top of the frame and the top of the rough opening.

Recommended RO dimensions: If window is installed anywhere inside RO or even with drywall, typically, the rough opening should be sized ¾" -1" wider and 1 1/4" (30 mm) higher than the outside measurement of the window frame. The masonry opening should typically be sized 1" wider and 1 1/4" (30mm) taller than the nosing/exterior casing. Individual construction members should not be twisted. The sill plate beneath the unit must be level for proper unit operation.

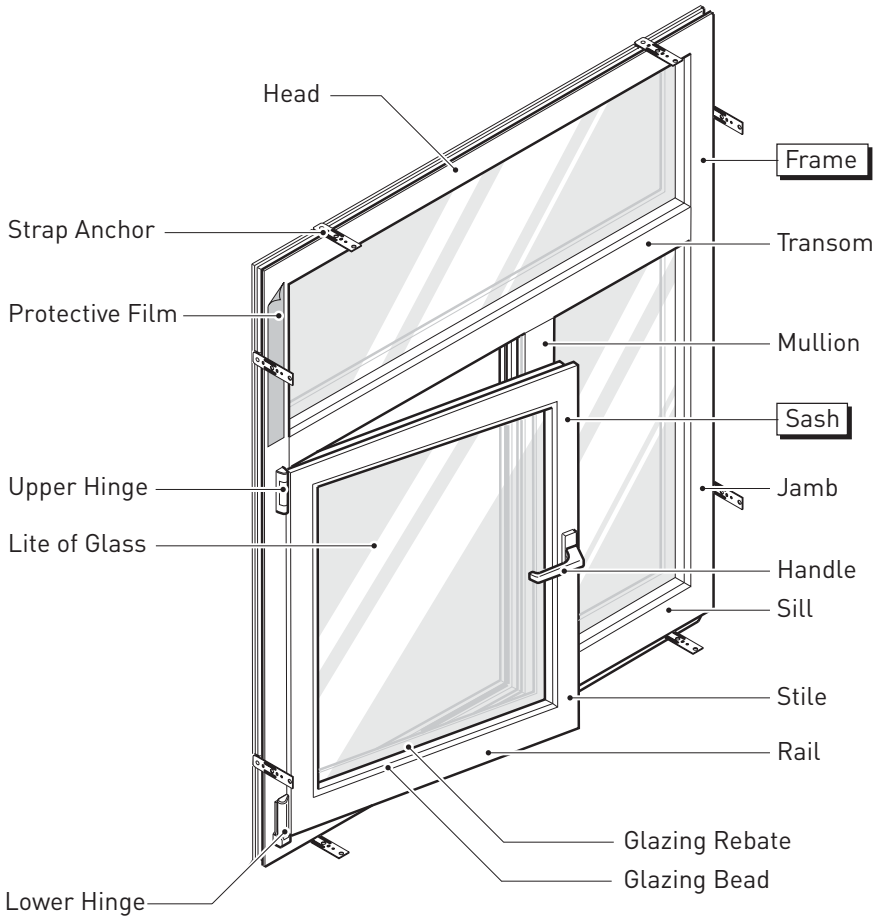
If window is installed 3/4" OUTSIDE RO or even with exterior plywood, typically, the rough opening should be sized ¾" -1" wider and 3/4"-1 " taller than the outside measurement of the window frame.

Terminology

Frame:
The fixed parts of the window or door. The frame includes the head, jambs, sill, transoms, and mullions. The frame does not include the sash.

Sash:
The movable part of the window or door. The sash includes the top and bottom rails, and the left and right stiles.

- Jamb Sill
- Sash
- Frame
- Handle Stile
- Transom
- Mullion
- Upper Hinge
- Protective Film
- Strap Anchor
- Head
- Lower Hinge
- Flange
- Lite of Glass
- Drain Cap
- EXTERIOR VIEW
- Rail
- Glazing Rebate Glazing Bead



Section 1

FIXED WINDOWS INSTALLATION

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Recommended spacing between brackets- no more than 24"'. Place blockings in the rough openings at each bracket locations. Brackets are recommended for use in fixed window assemblies where the screw head cannot be hidden by the sash, or in earthquake zones where it is desired to sufficiently decouple building movement from impacting the window frames. The disadvantage of using brackets is the greater potential creation of thermal bridge.
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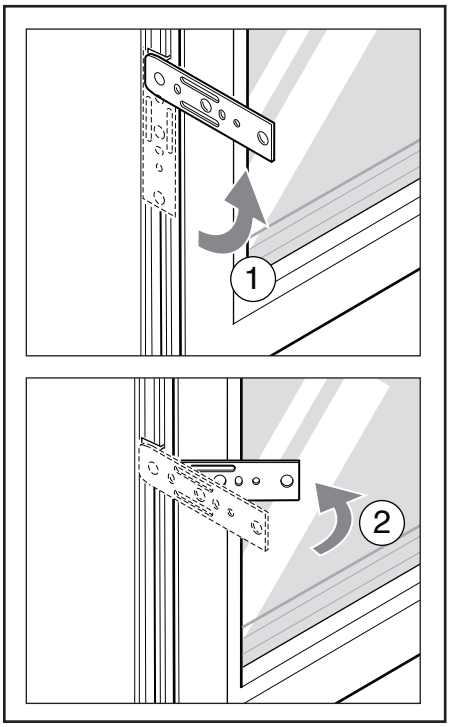


Figure 1-1. How to rotate and bend the strap anchors

CAUTION!
—
DO NOT put shims under the strap anchors!

1. **Prepare The Frame**

1.1. Seemray bracket strap anchors are included with every fixed window. Seemray Brackets. Seemray brackets provided oversized and could be cut to size by regular metal scissors.

1.2. Wings of the bracket must be placed into the grooves on the frame and secured by screw (picture 1). Use 1 " screws (provided by Seemray with every order) to mount bracket to the window with at least one screw, and suitable screws to mount the bracket to your wall system. Bend the strap anchors inwards about 45°. See fig. 1-At least one bracket must be placed 2-3 " from each corner of the frame.

2. **Put The Frame In The Rough Opening**

2.1. Having prepared the rough opening as per building codes and/or Architect/Building Envelope Specialist, ensure the window is installed in a weather tight manner.

2.2. If supplied, swing out strap anchors attached to the frame. Strap anchors should point to the interior of the building. Do not nail or screw strap anchors until step 2.8.

2.3. Center window into opening, ensure window is right side up.

2.4. Shim sill of window on the corners and on both sides of any mullions (See fig. 1-2). Adjust the height of the shims to obtain a level sill, ensuring you have 3/8" gap at the head (inter-storey deflection not to exceed ±3/8").

2.5. Plumb the frame jambs with a level and fasten the two top corner straps to wall.

2.6. Use a straight edge to ensure the frame is straight on all four sides.

2.7. Nail or screw all strap anchors to the wall. DO NOT nail or screw too tight.

2.8. Remove protective film from all profiles immediately after

2.9. Install drain caps.

IF WINDOW IS INSTALLED INSIDE R.O.MAKE SURE THERE IS ENOUGH SPACE BETWEEN BOTTOM OF THE FRAME AND R.O. to build adequete slope (exterior finish)

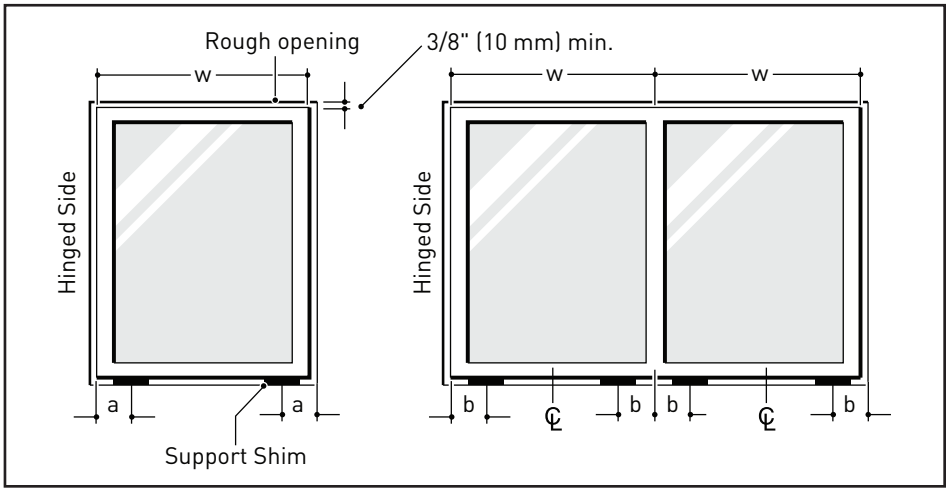


Figure 1-2. Where to put the support shims

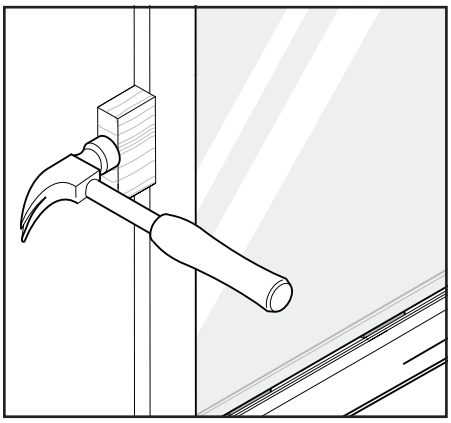


Figure 1-3. How to straighten a bowed frame

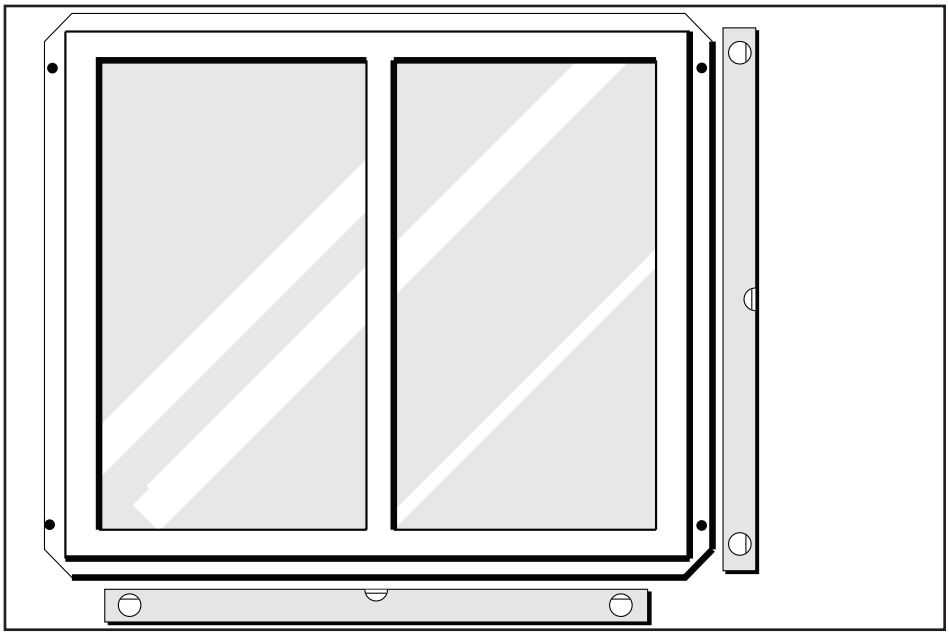


Figure 1-4. Must be plumbed and level — exterior view

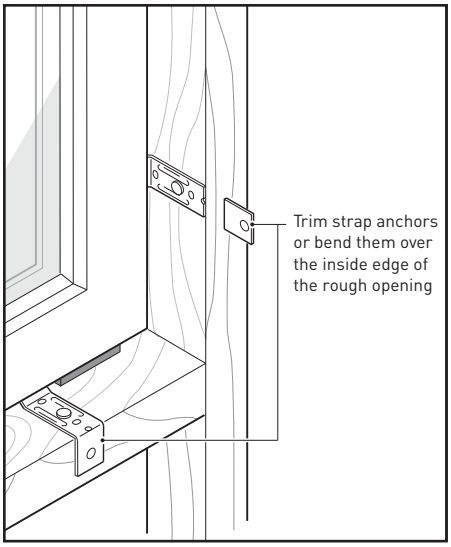


Figure 1-5. How to straighten a bowed frame

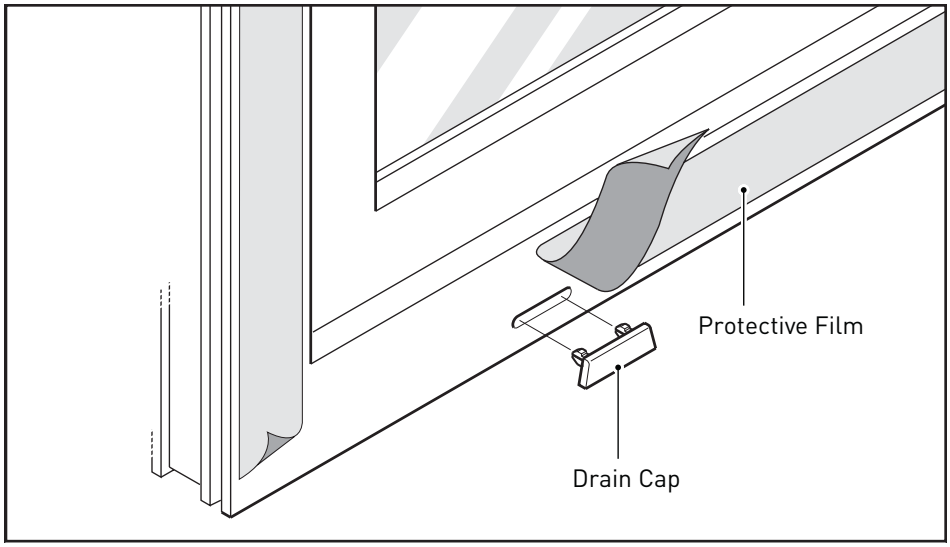


Figure 1-6. How to remove the protective film and install the drain caps — exterior view

"Strap Bracket" installation method of the "FIXED PICTURE" Seemray window could be combined with "SCREW THROUGH THE FRAME" installation method. Especially for big units weighing too much . To do so, please remove glass package and follow instructions for TILT AND TURN SEEMRAY WINDOW

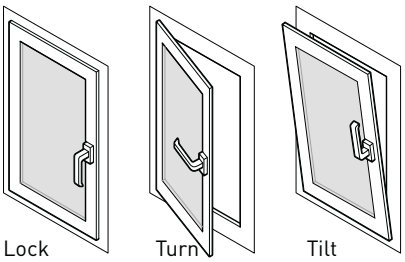
Section 2

TILT-&-TURN WINDOWS & DOORS

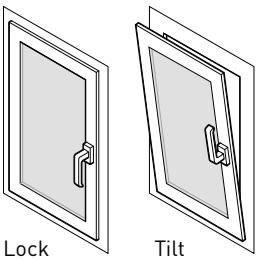
TOOLS AND MATERIALS REQUIRED:

Hearing protection device • Safety glasses/goggles • Sealant • Caulk gun • Level • Square • Hammer • Shims • Tape measure • Flat head screwdriver • Phillips head screwdriver #3 • Power drill • Flashing tape • Foam insulation • Putty knife • 11 mm wrench • 4 mm allen key • Soft Rubber Hammer

Tilt & Turn



Tilt Only



Tilt Before Turn

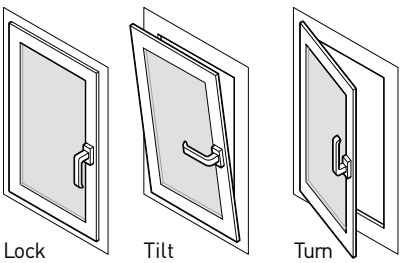


Figure 2-1. Handle Positions

PREPARE ROUGH OPENING (RO)

The material/lumber quality and fasteners must be structurally adequate for design load requirements. Make sure that the rough openings are square, and that they have a level sill and plumb (vertical) jambs. Make sure that the outside face of the wall is straight and plumb. If a rough opening is out-of-square, adjust the thickness of the shim blocks as necessary to make sure that you install the window or door frame in a square, level and plumb way. If you see any rough openings that are not acceptable for frame installation, tell the general contractor or the party responsible for the construction. Get written authorization from the general contractor or from the responsible party before you install frames in unacceptable openings. Make sure that the general contractor corrects the rough opening if you find the r ough opening does not allow you to install the frame perfectly level, square, straight in every direction and plumb, and does not provide a minimum of 3/8" (10mm) and no larger than 1/2" (12 mm) clearance between the top of the frame and the top of the rough opening.

Recommended RO dimensions:

If window is installed anywhere inside RO or flush with drywall, typically, the rough opening should be sized ¾" -1" wider and 1 1/4" (30 mm) higher than the outside measurement of the window frame. The masonry opening should typically be sized 1" wider and 1 1/4" (30mm) higher than the nosing/exterior casing. Individual construction members should not be twisted. The sill plate beneath the unit must be level for proper unit operation.

If window is installed 3/4" OUTSIDE R.O. or even with exterior plywood, typically, the rough opening should be sized ¾" -1" wider and 3/4"-1 " higher than the outside measurement of the window frame

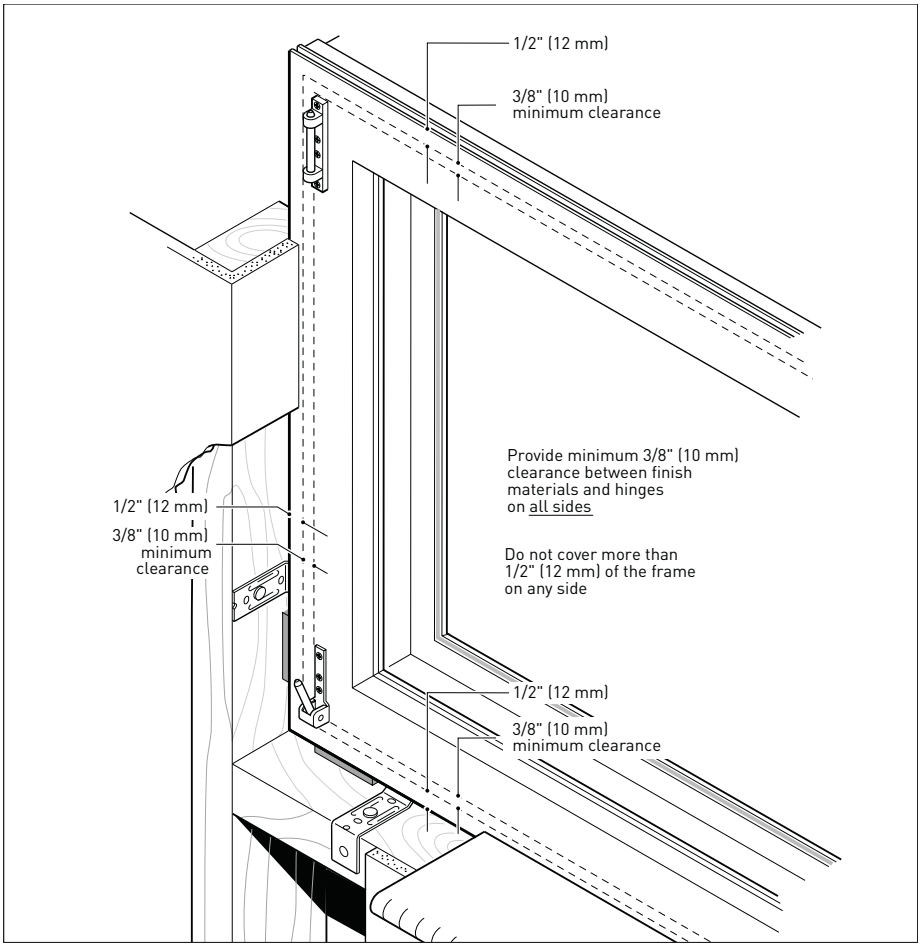


Figure 2-2. Finish materials clearances

HOW TO INSTAL TILT AND TURN WINDOW

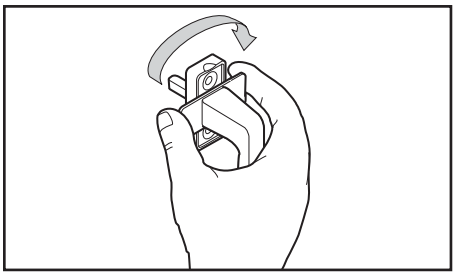


Figure 2-3. How to uncover the screw holes

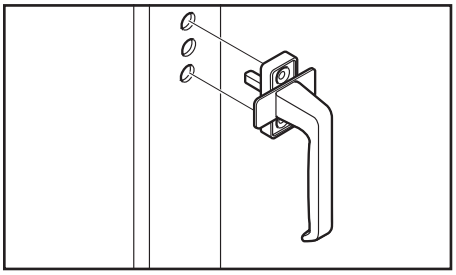


Figure 2-4. Euro-Handle in the Lock position

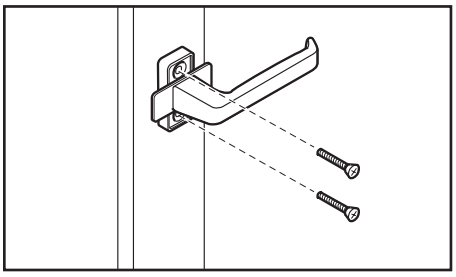


Figure 2-5. Where to install the mounting screws

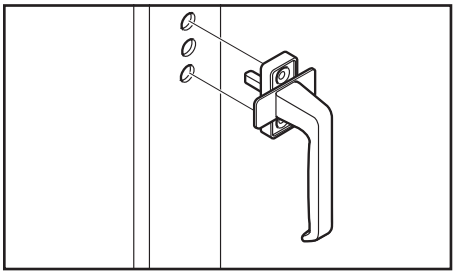


Figure 2-6. Euro-Handle in the horizontal position

CAUTION!

—

DO NOTover-tighten the screws. If you over-tighten the screws, you can damage the hardware and make the Euro-Handle difficult to operate.

1. **Install The Euro-Handle.**
   Handles are usually shipped loose. Follow the steps below to install the Euro-Handles.

   1.1. Slightly pull the screw cover of the Euro-Handle base towards you and rotate it 90°to uncover the screw holes. See fig. 2-3.

   1.2. Determine if the sash hardware is in the Lock position or in the Turn (Open) position. If the sash is installed in the frame and cannot open, the sash hardware is in the Lock position. Go to Step 2.3. If the sash swings open on its hinges, the sash hardware is in the Turn (Open) position. Go to Step 2.5.

   1.3. Lock position: install the Euro-Handle on the sash in the vertical Lock position, with the handle pointing down. Insert the shaft into the center hole. See fig. 2-4.

   1.4. Lock position: rotate the Euro-Handle to the horizontal position (Note: The handle should be pointing towards the hinge side of the sash). This gives you access to both of the screw holes. Insert the screws that came with the handle and tighten them. See fig. 2-5. Go to step 2.7.

   1.5. Turn (Open) position: rotate the Euro-Handle to the horizontal position, with the handle pointing toward the hinge side of the sash. Install the Euro-Handle on the sash: insert the shaft into the center hole. See fig. 2-6. Note; If you are installing a Tilt before Turn product install the Euro-Handle on the sash in the vertical Turn (Open) position, with the handle pointing up. Insert the shaft into the center hole and then turn the handle to the horizontal position.

   1.6. Insert the screws that came with the handle and tighten them. See fig. 2-5.

   1.7. Rotate the screw cover on the Euro-Handle base to the vertical position. Rotate the Euro-Handle to the vertical Lock position with the handle pointing down.

2. Remove The Sash From The Frame:

2.1. Rotate the Euro-Handle to the Turn position. Partially open the sash. See fig. 2-1.

2.2. Pull off the hinge cover. If you do not partially open the sash, you cannot remove the hinge cover. See fig. 2-7.

WARNING!

—

The sash is heavy! DO NOT try to remove the sash alone. Seemray recommends an installation crew of at least two people.

2.3. One installer supports the weight of the open sash. The other pulls the hinge pin down: use the point of a nail and push down the top of the hinge pin. Then, use the point of the nail and pull the bottom of the pin down until the head of the hinge pin "clicks" into place in the lowest flange of the hinge. Do not continue to pull the hinge pin lower, or it will fall out. See fig. 2-9.

2.4. Slightly tilt the sash towards you. Lift the sash up off the lower hinge pin. See fig. 2-8.

2.5. Put the sash in a safe place, on a clean and dry surface. Make sure that dirt and sand do not enter the lower hinge hole.

2.6. Push the upper hinge pin into its original position: push it up from below until it "clicks" into place. Put the hinge cap back on the hinge so it does not get lost.

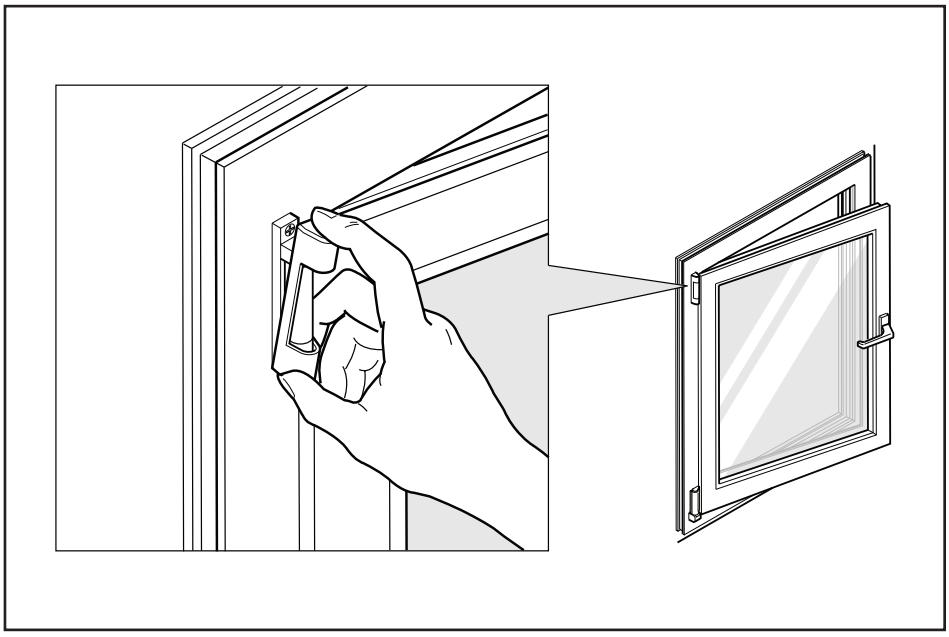


Figure 2-7. How to remove the hinge cap

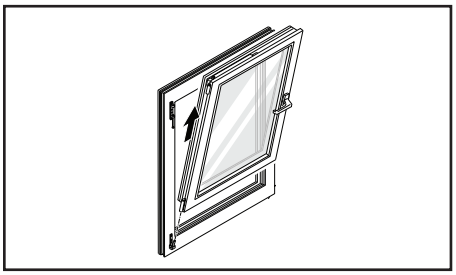


Figure 2-8. How to remove the sash from the frame

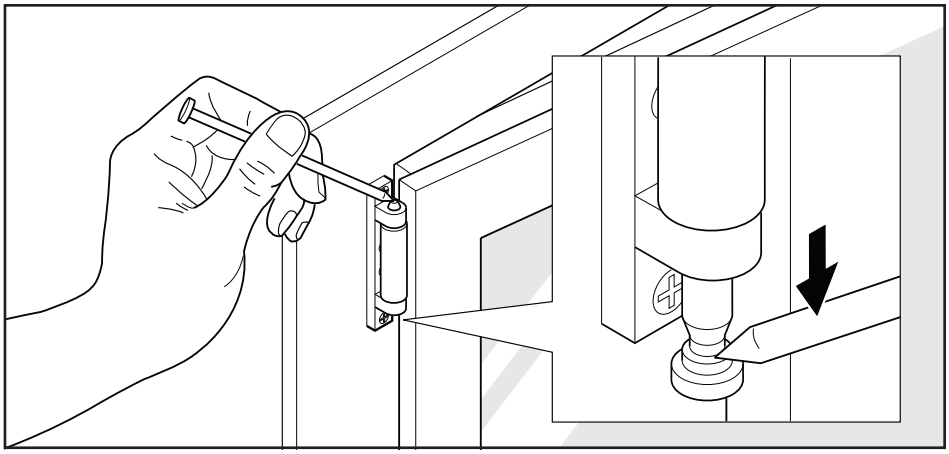


Figure 2-9. How to pull down the hinge pin

2.7. Put The Frame In The Rough Opening

2.8. Having prepared the rough opening as per building codes and/or Architect/Building Envelope Specialist, ensure that the frame is installed in a weather tight manner.

For operable TILT AND TURN WINDOWS AND DOORS SEEMRAY recommends "SCREW THROUGH THE FRAME" method:

1. Center frame into opening, ensure frame is right side up.
2. Shim frame with shims (See fig. 2-11). Adjust the height of the shims to obtain a level sill, top and sides, ensuring you have 3/8" -1/2" gap at the head and sides, and at least 3/4" at the bottom to make sure enough slope for exterior finish provided. (if window is installed 3/4" outside, space between bottom of the frame and wall is 1/2") . Check frame one more time to make sure it is plumbed and square

CAUTION!

—

Make sure the frame is LEVEL. If the sill is not level, the sash will not operate properly.

3. Place shims right next to predrilled holes to insure frame stays straight after installation. Screw frame to the walls through factory predrilled holes. DO NOT OVERTIGHT. Check frame position and straightness again. Use a straight edge to ensure the frame is straight
4. Place shims right next to predrilled holes to insure frame stays straight after installation. Screw frame to the walls through factory predrilled holes. DO NOT OVERTIGHT. Check frame position and straightness again. Use a straight edge to ensure the frame is straight on all four sides

CAUTION!

—

Keep the bottom hinge of the sash free of dirt and sand! When you install the sash again, dirt and sand in the hinge can cause operational problems. Dirt and sand will cause premature wear of the lower hinge.

5. For reinforcement “SCREW THROUGHT THE FRAME” method could be combined with STRAP BRACKET INSTALLATION. If you choose to combine both methods, please follow instructions for FIXED PICTURE windows installation above

6. Install sash and check for operation.

7. Remove protective film from all profiles immediately after installation. See fig. 2-16.

8. Install drain caps.

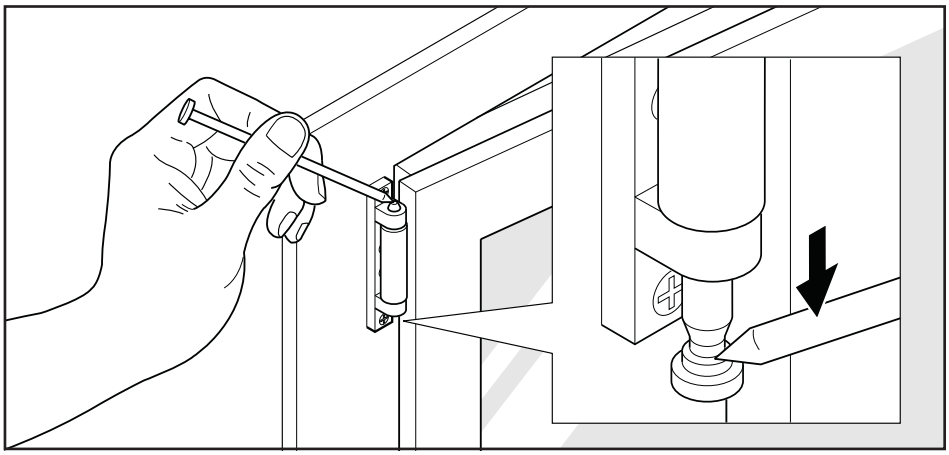


Figure 2-11. Where to put the support shims and jamb shims

Install The Sash(es)

CAUTION!

—

BEFORE INSTALLING SASHES BACK, make sure the frame is LEVEL. If the sill is not level, the sash will not operate properly.

1. Pull off the hinge cover. Use a nail to pull the hinge pin down as shown in Step 3.3.

2. Tilt the lower hinge pin forward approximately 30°. 2.14 Prepare the sash for installation: make sure that there is no dirt or sand in the lower hinge. Make sure that the Euro-Handle is horizontal in the Turn position.

3. With the help of an assistant, lift the sash. Lower the sash into position on the lower hinge pin. Tilt the sash up until you align the two parts of the upper hinge.

4. As you do this, the shear arm at the top of the sash may disengage. If this occurs, gently lift the arm upwards, align the arm parallel to the sash, and press the arm downward until it “clicks” into place. See fig. 2-14.

5. Install the upper hinge pin: push the pin upwards until it clicks firmly into place. Make sure that the hinge pin is all the way up,

WARNING!

—

The sash is heavy! DO NOT try to install the sash alone. Seemray recommends an installation crew of at least two people.

CAUTION!

—

Make sure the shear arm is in position before you install the sash. See fig. 2-14

with the cone-shaped tip fully visible at the top.

6. Replace the plastic hinge cover. Close the sash. Rotate the Euro-Handle downward to the Lock position. This secures the sash.

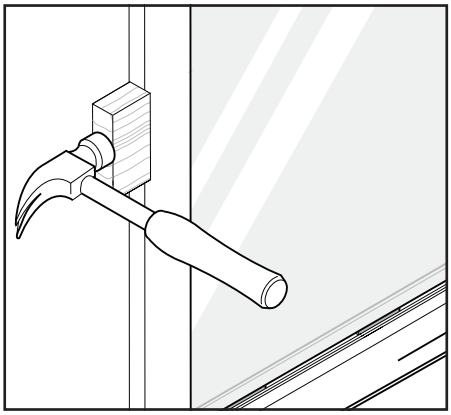


Figure 2-12. How to straighten a bowed frame

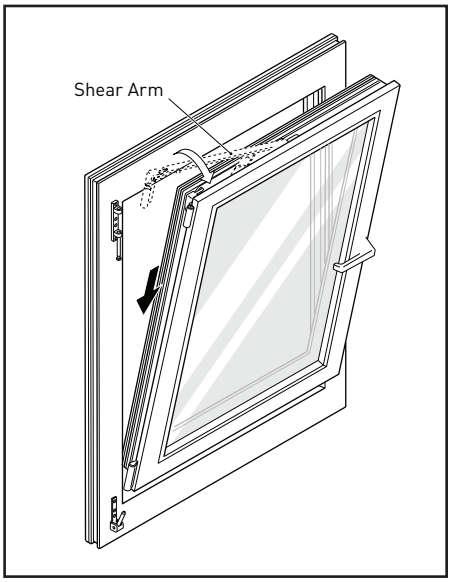


Figure 2-14. How to install the sash, and put the shear arm back into position

Operate The Sash(es)

SEEMRAY squares the sashes and aligns them with the hardware at the factory. Operating problems occur when the frame is not installed level and square, or when the frame or sash members are not straight because of handling.

1. Open and close the sash several times, in both the Tilt and Turn positions. If the sash operates freely, go to Step 4.7. If the sash does not open and close freely, but binds or strikes the frame at one or more points, then you may not have a level or square frame. To correct the problem, do the steps that follow:

2. If the sash hardware binds at the top of the lock stile or at the bottom of the rail, the frame may not be level, or it may be out of square. See fig. 2-15 Item A.

3. Use a spirit level and make sure that the sill is level and that the mullions and jambs are square. If the frame is not level or square, adjust the thickness of the shims to make it level and square. 6.3 If the sash hardware binds at the midpoint either the sash or the mullion became bowed during handling or installation. See fig. 2-15 Item B. Use a straight edge and make

sure that the sash and the mullion are not bowed. If either the sash or the mullion are bowed, make them straight as shown in fig. 2-12. 6.4 If you cannot correct the binding problems with these methods, adjust the operating hardware. See following.

4. Figure 2-16. Remove the protective film and install the drain caps — exterior view

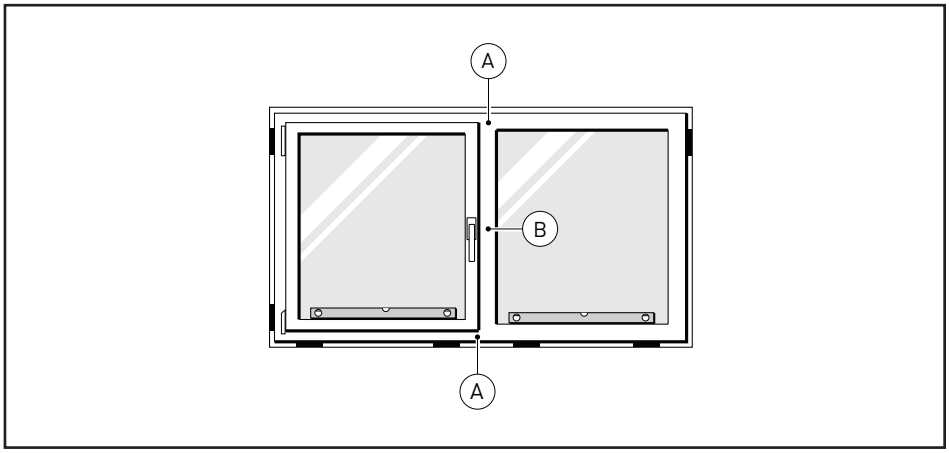


Figure 2-15. Where sashes sometimes bind

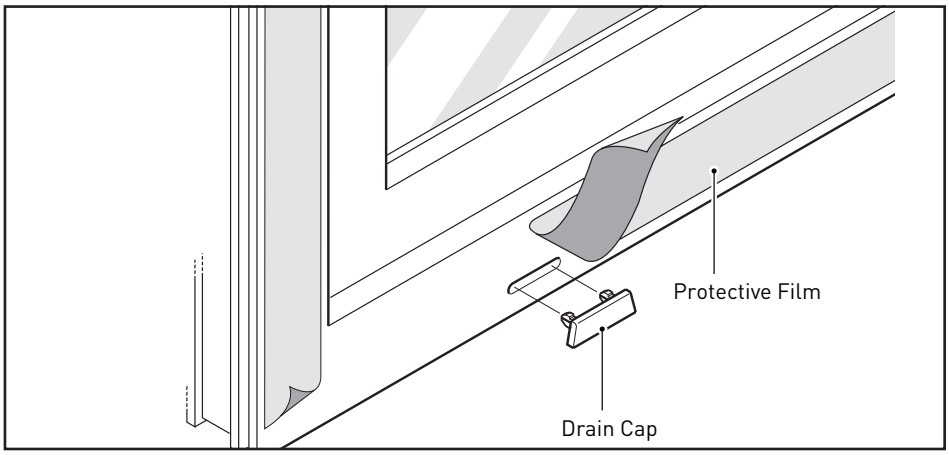


Figure 2-16. Remove the protective film and install the drain caps — exterior view

How To Adjust Tilt & Turn Windows and Doors

With SEEMRAY unique Tilt & Turn hardware system you can adjust window or door sashes to compensate for the effects of small settlements, heavy use, and for wear of the hardware components and the sealing gaskets. These adjustments allow you to maintain the performance of your windows and doors much longer than conventional hardware systems allow.

Sash Binding Problems?

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

Adjustment 1: Upper Hinge Offset
Adjustment 2: Sash Height
Adjustment 3: Lower Hinge Offset

Closing Tightness Problems?

The sash may close less tightly after many years of use. These adjustments make the sash close more tightly or less tightly. To reduce air leakage around the sash, make the sash close more tightly. To make the Euro-Handle easier to operate, make the sash close less tightly. You can increase or decrease the closing tightness with one or more of these adjustments:

Adjustment 4: Locking Cam Closing Tightness
Adjustment 5: Shear Closing Tightness
Adjustment 6: Corner Drive Closing Tightness

How To Correct Sash Binding Problems

Use a 4 mm allen key for Adjustments 1 - 3. For all of these adjustments, first turn the allen screw 1/4 turn, then operate the sash to see if you have corrected the problem. Repeat if necessary: turn the screw approximately 1/4 turn each time, until the sash stops binding. When you correct the binding with one adjustment, you may cause the sash to bind in another place. You may have to make more than one adjustment to correct all of the binding problems.Tools Required: 11 mm wrench and 4 mm allen key

Adjustment 1: Upper Hinge Offset Maximum

Adjustment: Raises the bottom corner of the sash 3mm. Lowers the bottom corner of the sash 1.5mm This adjustment moves the top of the sash towards the upper hinge or away from it. With the Euro-Handle in the Turn position, open the sash as far as it will open. Insert the 4mm allen key into the head of the screw at the end of the shear arm. To tilt the sash towards the upper hinge, rotate this screw in a counter-clockwise direction. This raises the bottom corner of the sash on the handle side. To tilt the sash away from the upper hinge, rotate the screw in a clockwise direction. This lowers the bottom corner of the sash on the handle side.

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

Adjustment 2: Sash Height Maximum

Adjustment: Raises the sash 3mm. Lowers the sash 3mm This adjustment raises or lowers the sash. With the Euro-Handle in the Turn position, open the sash approximately 2" (50mm). Remove the plastic cover from the top of the lower hinge body. Insert the 4mm allen key into the top of the exposed screw head. To raise the sash, rotate the screw in a clockwise direction. To lower the sash, rotate the screw in a counter-clockwise direction. After adjusting, check that the tilt function operates correctly.

If the sash binds at the top when you open it in the Tilt position, use this adjustment to lower the sash. See Fig. 2-16

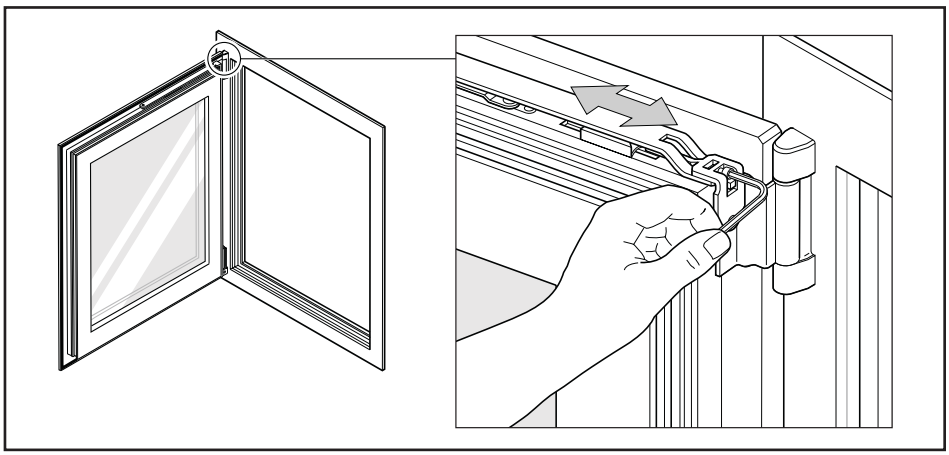


Figure 2-17

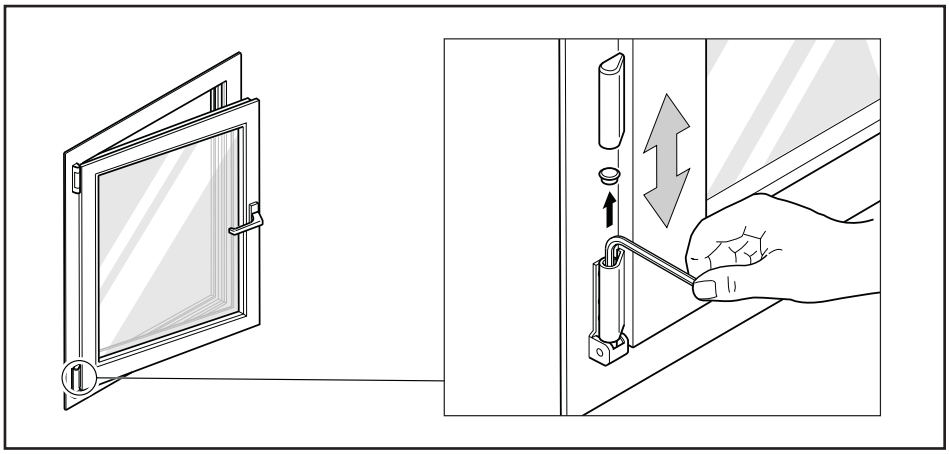


Figure 2-16

How To Correct Closing Tightness Problems

Use these adjustments to reduce air leakage around the sash, or to make the EuroHandle easier to operate. If you have an air leakage problem, you need to adjust the hardware that is closest to the location where the air leaks in. First, try to correct the problem by increasing the closing tightness of the nearest locking

cam using Adjustment 4. If this does not correct the problem, you will need to do one of the adjustments that follow. If the air leaks at the upper hinge, increase the closing tightness using Adjustment 5. If the air leaks at the corner of the sash below the handle, increase the closing tightness using Adjustment 6. If you have air leakage at another location, increase the closing tightness of the nearest locking cam(s) using Adjustment 4. Do not increase the closing tightness any more than you need to in order to control the immediate problem, or the Euro-Handle will become difficult to operate. If the Euro-Handle is difficult to operate, use these adjustments to decrease the closing tightness. Do the adjustments in the following order: first, use Adjustment 4 to decrease the closing tightness of the locking cams. If this does not correct the problem, use Adjustment 5 to decrease the shear closing tightness. If this does not make the handle operate more easily, undo the adjustment. Then use Adjustment 6 to decrease the corner drive closing tightness.

Adjustment 3: Lower Hinge Offset Maximum

Adjustment: Moves the sash 2mm to the right. Moves the sash 2mm to the left. This adjustment moves the bottom of the sash towards the lower hinge, or away from it. With the Euro-Handle in the Turn position, open the sash. Insert the 4mm allen key into the pivot screw below the lower hinge. To move the sash towards the hinge, rotate the screw in a clockwise direction. This lowers the top of the sash. To move the sash away from the hinge, rotate the screw in a counter-clockwise direction. This raises the top of the sash.

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

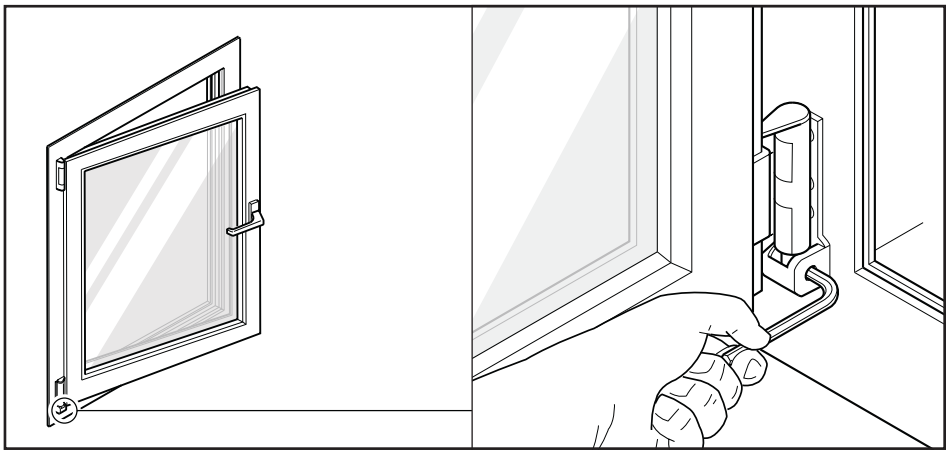


Figure 2-19

Adjustment 4: Locking Cam Closing Tightness Maximum

Adjustment: Moves the sash 0.8mm towards the frame. Moves the sash 0.8mm away from the frame. Open the sash, notice the cylindrical eccentric locking cams along the top and along both sides of the open sash. Close the sash. With the Euro-Handle in the Turn position, open the sash. You may also find one or more cams along the bottom of the sash. Notice that each cam has an index groove stamped into its head. There are many different positions for each locking cam head. The index groove shows the current position. Refer to the position of the index groove before you adjust a cam. With the sash in the most convenient Tilt or Turn position, adjust the closing tightness of a locking cam using the 4 mm allen key. To increase the closing tightness, turn the fat side of the cam towards the gasket. To decrease the closing tightness, turn the fat side of the cam away from the gasket.

CAUTION!

—

When you increase the closing tightness with Adjustments 5 and 6, the EuroHandle will become more difficult to operate. Increase the closing tightness only if you have excessive air leakage.

Adjustment 5: Shear Closing Tightness Maximum

Adjustment: Moves the sash 1.5mm closer to the frame. Moves the sash 1.5mm away from the frame. Use a 4 mm allen key to make this adjustment. When you use the allen key, first turn the screw 1/4 turn, then operate the sash to see if you have corrected the problem. Repeat if necessary: turn the screw approximately 1/4 turn each time, until you correct the problem.

With the Euro-Handle in the bottom (Tilt) position, tilt the sash. Insert the 4mm allen key into the screw head on the underside of the shear arm. To increase the closing tightness, rotate the screw in a clockwise direction. To decrease the closing tightness, rotate the screw in a counter-clockwise direction.

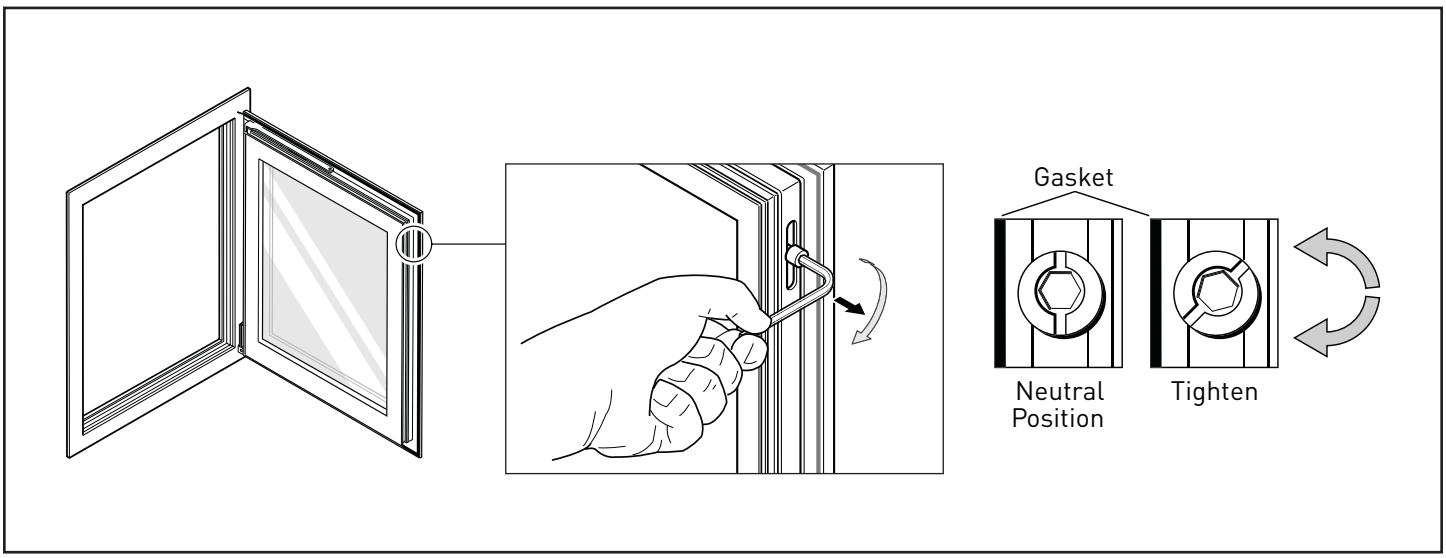


Figure 2-20

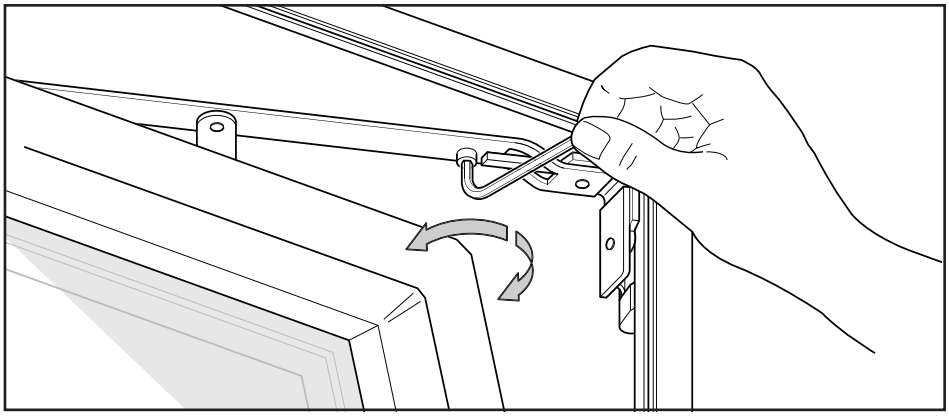


Figure 2-21

Adjustment 6: Corner Drive Closing Tightness Maximum

Adjustment: Moves the sash 1.5 mm closer to the frame. Moves the sash 1.5 mm away from the frame. With the Euro-Handle in the Turn position, open the sash. On the Euro-Handle side of the sash, at the bottom corner, find the screw head located on the sliding plate. Insert the 11 mm wrench as shown in figure 2-22. When you use the wrench, first turn the screw 1/4 turn, then operate the sash to see if you have corrected the problem. Repeat if necessary: turn the screw approximately 1/4 turn each time, until you correct the problem.

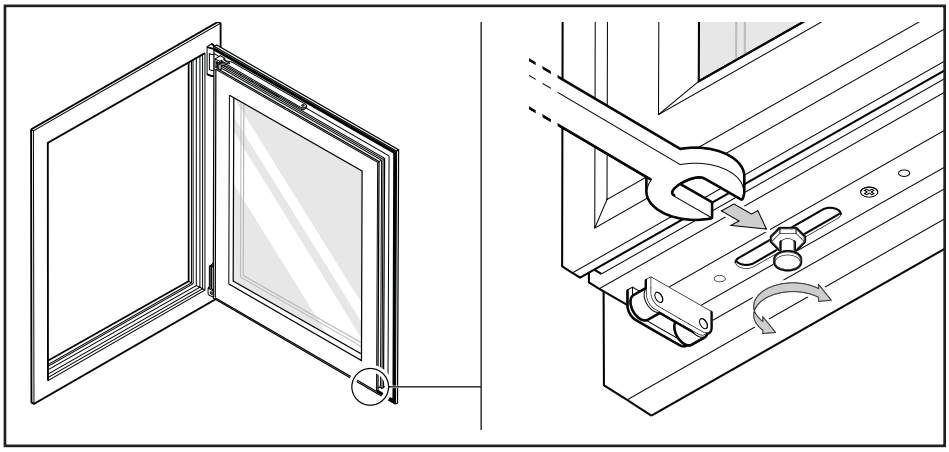


Figure 2-22

How To Reset A Hung Sash

Step 1 Depress the fail safe switch and turn the handle to the tilt position. See fig. 2-23.

Step 2 Gently push the upper hinge corner of the sash against the frame, while leaving the sash open.

Step 3 While depressing the fail safe switch, rotate the handle

to the turn position. Release the fail safe switch. The window is now reset in the turn position. Note: The above figures are for a Tilt & Turn window. For a Tilt Before Turn window, use the above instructions, using the handle positions shown in fig. 2-1.

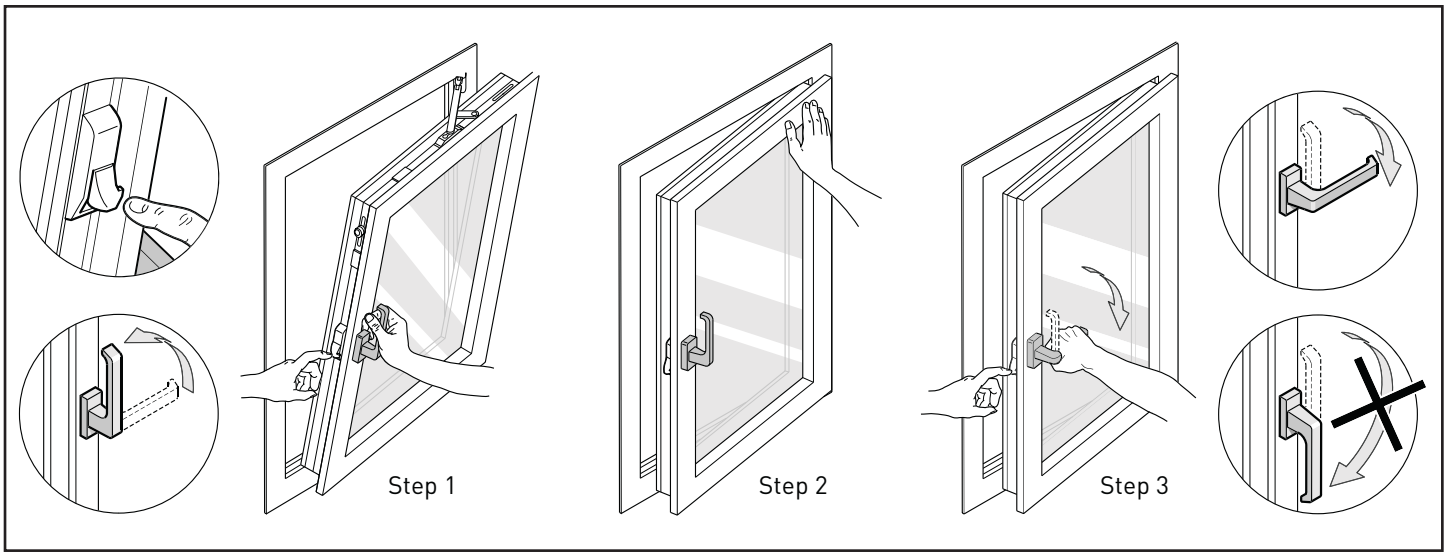


Figure 2-23