



EUROLINE

W I N D O W S

*The Art and Practice
of Fenestration*

**INSTALLATION
INSTRUCTIONS**



INSTALLATION INSTRUCTIONS

FIXED WINDOWS

**4700 SERIES (TILT &
TURN) WINDOWS AND
DOORS**

**1800 SERIES CASEMENT
& AWNING (PUSH-OUT)
WINDOWS**

HINGED DOORS

CONTENTS

Page No.

Introduction	1
Important Instructions	1
Materials and Tools Required	2
Rough Openings	2
Terminology	3
Sealant Joint Placement	4
Protective Film Handling and Removal.....	5
Section 1 Fixed Windows	7
Rough Opening Clearances.....	7
How To Install Fixed Windows	7
Section 2 Tilt & Turn Windows and Doors	9
Rough Opening Clearances.....	9
Finish Material Clearances.....	9
How To Operate Tilt & Turn Windows and Doors.....	9
How To Install Tilt & Turn Windows and Doors	10
How To Adjust Tilt & Turn Windows and Doors.....	16
Section 3 Casement & Awning (Push-Out) Windows	21
Rough Opening Clearances.....	21
How To Install Casement & Awning Windows	21
Section 4 Hinged Doors	23
Rough Opening Clearances.....	23
Finish Material Clearances.....	23
How To Install Hinged Doors	25
How To Adjust Hinged Doors	30



INTRODUCTION

IMPORTANT INSTRUCTIONS

PLEASE READ BEFORE YOU START INSTALLATION

IMPORTANT

Leaving 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 a wall to prevent any damage

IMPORTANT

Improper installation may void all warranties expressed or implied. Installation Instructions are also available on our website.

CONTACT INFORMATION

EuroLine Windows Inc.
7620 MacDonald Road,
Delta BC V4G 1N2

Telephone: 604-940-8485

Fax: 604-940-8486

Toll-Free: 1-800-337-8604

Web Site: 1-800-337-8604

RECEIVING:

Carefully inspect all windows and doors at the time you receive them and again at the time you install them. Any visible defects with the product must be reported to EuroLine before installation begins.

HANDLING:

Window and door units are to be handled carefully to avoid damage. They must be moved in the vertical position. If the product is supplied with a flange it must rest on shipping blocks that are temporarily attached.

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

STORAGE:

Store the units at a slight lean against a wall on a flat, level area, undercover. 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:

To minimize the danger of leakage at window openings, various other items, such as properly configured head flashings, perimeter penetration flashings, sealant joints, building wraps, and similar components, are of critical importance. Typically, some of these components need to be installed prior to the window installation, while others must follow the window installation. The specific configurations of such flashings and similar components are dependent on the specific wall construction and assembly and should be determined by the project architect, a building envelope specialist, or a similar design professional. This manual does not address such items, and EuroLine is not responsible for the proper design or installation of these.

INSTALLATION:

Proper installation is necessary for this window or door to perform as designed and rated for water and air resistance. **EuroLine products must be installed plumb, level, and square.**

SHOP DRAWINGS:

If you have EuroLine shop drawings, refer to these for **specific installation instructions.**

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 the 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 on 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 are NFRC certified for thermal performance. Data is available upon request.

MATERIALS AND TOOLS

Tools

- Spirit level
- Framing hammer
- Screwdriver/screw gun
- Tape measure
- 11 mm wrench
- 4 mm Allen key

Materials

- Shims: use non-deteriorating, non-swelling, hard plastic (4"x1 ½ ") of several thicknesses to suit. Shims may be purchased from Euro-Line Windows in thickness of 2,3,4,5, and 6 mm.
- 2" Galvanized Roofing Nails (10 ½ ga.)
- 1 ½" #10 Pan Head Tapping Screws (cad plated)

ROUGH OPENINGS

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" (10 mm) and no larger than 1/2" (12 mm) clearance between the top of the frame and the top of the rough opening.

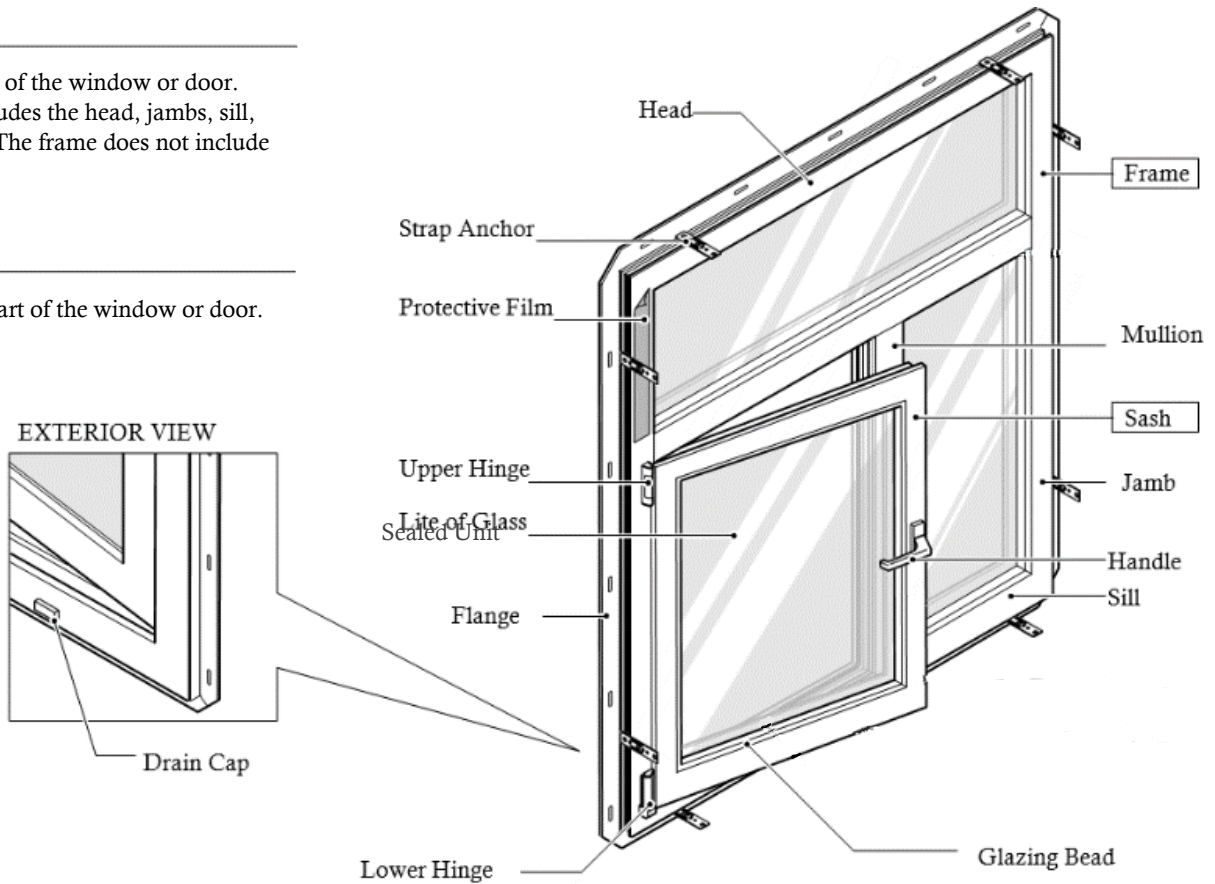
TERMINOLOGY OF TILT & TURN WINDOW

FRAME

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

SASH

The movable part of the window or door.



SEALANT JOINT PLACEMENT

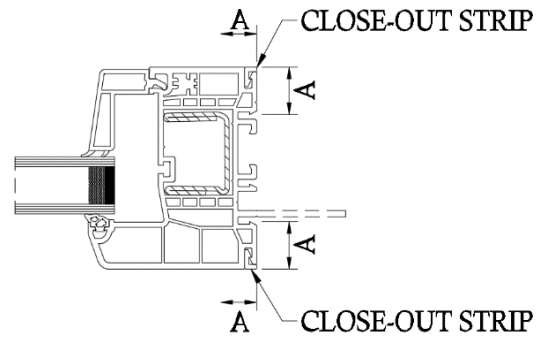
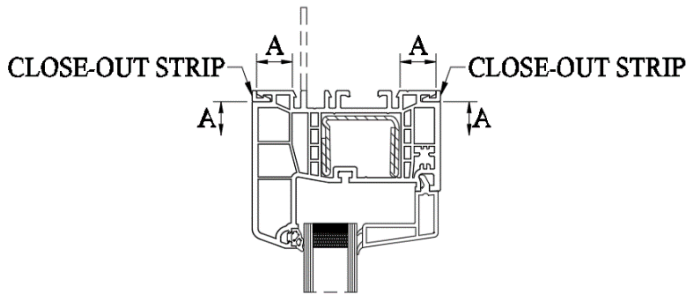
Sealants – Important Notes

Design of sealant joints and the selection of sealants are not the responsibility of Euroline Windows. Sealants must be compatible with the window materials to which they adhere. Check with your sealant supplier that the sealant is compatible with the uPVC, the laminate covering the uPVC, metal surfaces, caulked surfaces, or any other material of the window system to which you plan to have a sealant joint.

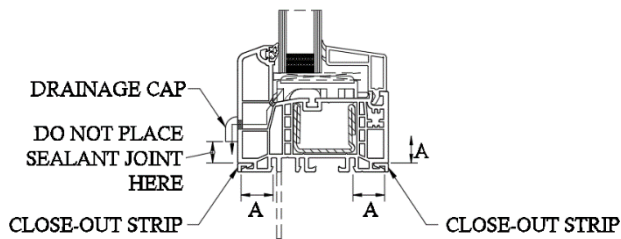
If you are unsure as to the material composition of the window, contact EuroLine Windows for more information.

The placement of the sealant joint must be located as shown on the cross-sections below (location “A”). Care must be taken not to bridge the closeout strip, or impede water exiting the drains on the face of the frame at the sill. The same practice applies to other frames that are not included below.

HEAD



JAMB



SILL

CAUTION:

The close-out strip is not designed for air and water tightness.

To ensure an air and water seal, joint placement is as shown in one or more of the locations shown “A”.

The sealant joint must be 7/8” (22mm) below drain caps on the sill.

PROTECTIVE FILM REMOVAL

CAUTION

Removing the film may result in static discharge. To help reduce the chances of static discharge, consider wetting the film and/or reducing the speed of removal. Do not remove film in the presence of flammable or explosive chemicals. Including materials or substances that come in contact with these chemicals.

PFG Protective Film protects glass surfaces against damage during shipping, handling, and damage caused by other trades during construction. This clear protective film can be applied to the outboard surface #1 or in combination with surface #4 of dual IGUs, or surface #6 for triple IGUs.

Timeline for Removal

PFG Protective Film applied to the outboard surface #1 should be removed within 9 months of delivery for best results. The film should be removed at a glass temperature between 0° and 60°F (-17 C° and 15C°). Typically, as the film is exposed to UV, humidity and heat, the adhesion of the film to glass will increase. In addition, as the temperature at removal decreases, the adhesion of the film to glass will typically increase. Under normal circumstances, removing the film within 9 months will help ensure easy removal with little to none of the film adhesive remaining on the glass.

Use of high absorption coatings, tints, or Cardinal i89 Low-E on surfaces #4 or #6, may affect adhesion. As such, it is advised to remove the film a few months less than the allotted 9 months.

CONSIDERATIONS

PFG Protective Film has been tested for resistance to chemicals commonly found in building and window manufacturing. These include, but was not limited to:

- Resistance to water and air based stains
- Paints and varnishes
- Adhesives
- Sealants
- Cement
- Stucco and brick wash solution (muriatic acid) 20 to 1 dilution

PFG Protective Film is applied in horizontal lengths overlapping from edge to edge. To facilitate removal, start from one edge of the overlapping regions and pull away from each strip of film. A plastic scraper or plastic putty knife can be used to help where removal requires assistance. Do not use knives, razors, or any sharp metal blades.

Any remaining adhesive can be removed using a citrus-based cleaner. Any residual lines left behind that are visible during wet conditions are similar to those of suction cup marks. They are not classified as defects.

Should you have any questions, please contact your EuroLine Windows Design Representative.

NOTE

The above list is not an exhaustive. The chemical makeup of products can be reformulated over time. If in doubt, test for exposure compatibility. Exposure to any chemicals should be kept to a minimum.

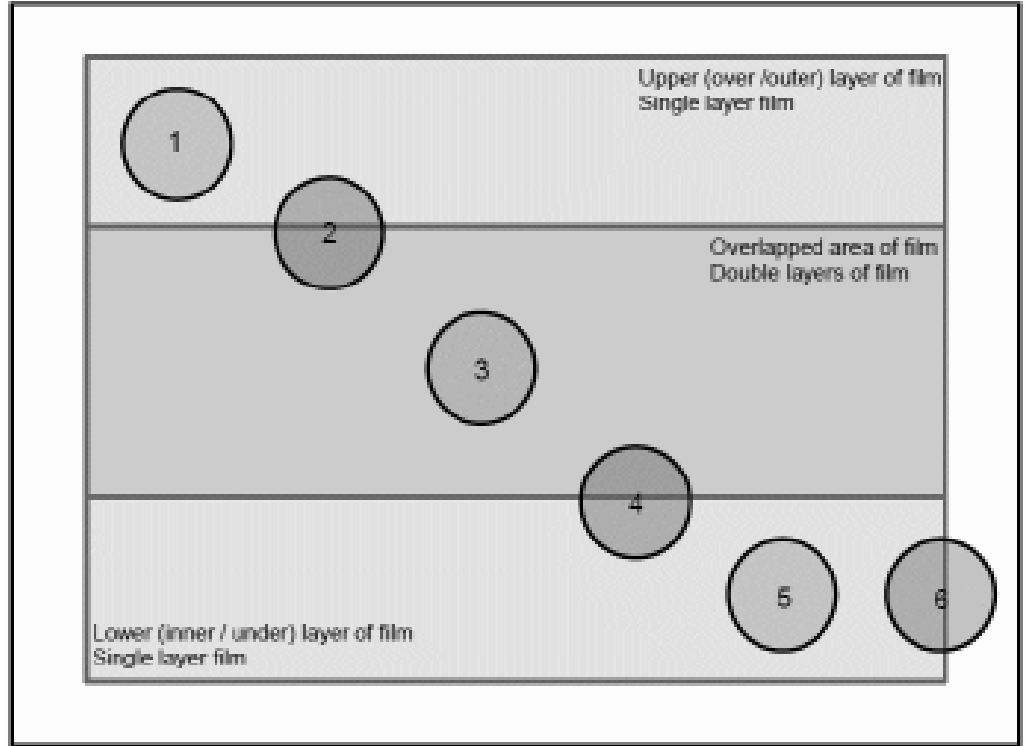
Buckling of film may occur if environmental or situational temperatures exceed 60°C.

Handling

NOTE

DO NOT pressure wash the film as it may cause the film to lose adhesion.

IGUs with PFG Protective Film can be handled using suction cups. Some air may become trapped under the film. This air will typically dissipate with time. Center the cups over the overlapping layers of film for best results.



Location Key

1. Suction cup completely on upper layer --- Recommended Placement
2. Suction cup partially on overlap area, partially on upper layer--- Not Recommended Suction cup on completely on overlap --- Recommended Placement
3. Suction cup partially on the overlap and partially on lower layer --- Not Recommended Suction cup completely on lower layer --- Recommended Placement
4. Suction cup over any edge of protected area --- Not Recommended

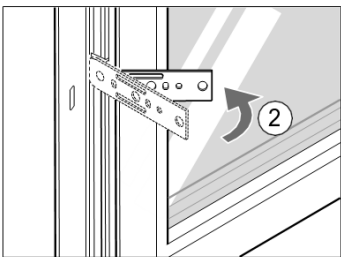
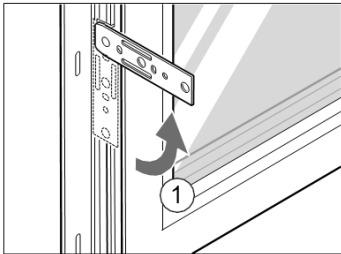
SECTION 1

FIXED WINDOWS

NOTE

EXPANDING FOAM INSULATION

Use of expanding foam is not recommended. Clearance around the window should allow for movement of the surrounding structure, so as not to affect the window. The foam may also block the flow of water around the window on the rain screen-designed interface. Consequential damage resulting from foam may void the warranty.



CAUTION

DO NOT put frame support shims under the strap anchors!

Window Width	Shim Spacing	
W	a**	B
<36"	2 1/2"	
36" – 70"	2 1/2"	10"
>70"*	2 1/2"	10"

** When 'a' = 2 1/2" shim end to be 1/2" from frame edge

Rough Opening Clearances

To allow for small defects in the size, level, or squareness of the rough opening, EuroLine recommends that you provide these clearances between the window frame (excluding flanges and accessory sills) and the rough opening.

Head (top of opening)	3/8" (10 mm) min	1/2" (12 mm) max
Jambs (sides of opening)	3/8" (10 mm) min	1/2" (12 mm) max
Sill (bottom of opening)	3/8" (10 mm) min	1/2" (12 mm) max

How To Install Fixed Windows

Read Important Instructions on Page 1.

1. Prepare The Frame

- 1.1 Remove the wooden shipping blocks that are attached to the flange (if supplied).
- 1.2 If strap anchors are included with the window, rotate them until they are at right angles to the frame. Bend the strap anchors inwards about 45°. See fig. 1-1.

Note: Some windows do not have strap anchors.

If shop drawings are required for the project, refer to these drawings for specific installation instructions.

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.**

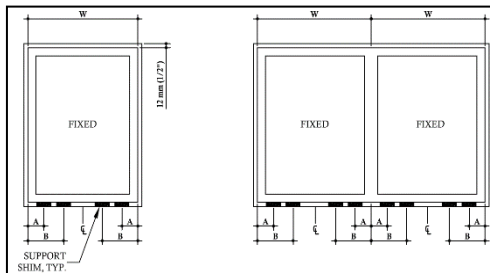


Figure 1-2. Where to put the frame support shims

CAUTION

Shims placed on a torch-on membrane, or similar waterproofing applications, may compress into the membrane, resulting in settlement of the window.

IMPORTANT

DO NOT nail the top flange to the wall!

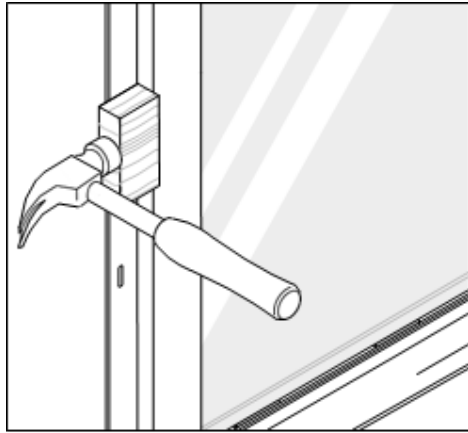


Figure 1-3. How to straighten a bowed Frame

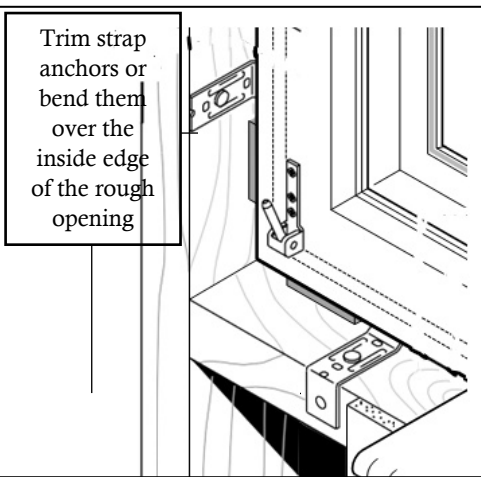


Figure 1-5. How to attach the strap anchors on 2x4 construction

- 2.3 Center window into opening, ensure the window is right-side up.
- 2.4 Shim sill of window on the corners and on both sides of any mullions with 4" x 1 1/2" shims (See fig. 1-2). **Adjust the height of the shims to obtain a level sill**, ensuring you have a 3/8" gap at the head (inter-storey deflection not to exceed $\pm 3/8"$).
- 2.5 Fasten bottom corners of the flange to the wall with 2" galvanized nails or 1 1/2" #10 tapping screws.
- 2.6 Plumb the frame jambs with a level and fasten the two top corners of the flange to the wall.
- 2.7 Use a straight edge to ensure the frame is straight on all four sides. Fasten the flange approximately every second slot. **DO NOT nail or screw too tight. DO NOT nail the top flange to the wall.**
- 2.8 Nail or screw all strap anchors all around to the wall at sill, jambs and head. The strap anchors alone are sufficient to structurally secure the window to the building. Therefore, the nail flange is optional but recommended.
- 2.9 Remove protective film from all profiles immediately after installation.
- 2.10 Install drain caps.

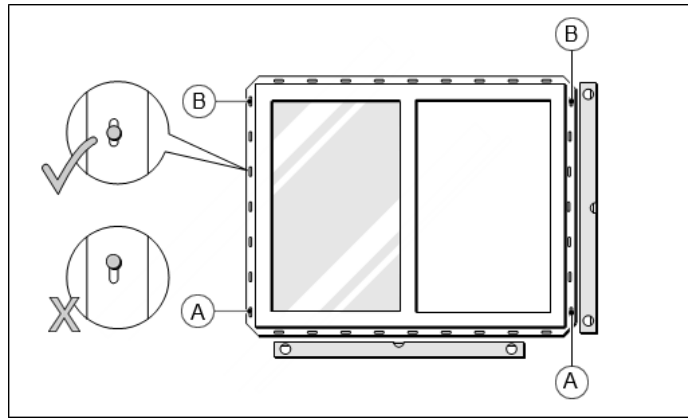


Figure 1-4. Where to fasten the flanges – exterior view

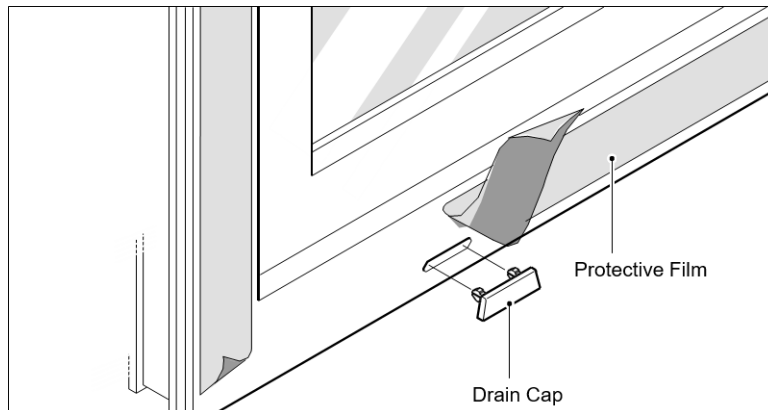


Figure 1-6. How to remove the protective film and install the drain caps- exterior view

SECTION 2

TILT & TURN WINDOWS & DOORS

NOTE

EXPANDING FOAM INSULATION

Use of expanding foam is not recommended. Clearance around the window/door should allow for movement of the surrounding structure, so as not to affect the window/door. The foam may also block the flow of water around the window/door on a rain screen designed interface. Consequential damage resulting from foam may void the warranty.

Rough Opening Clearances

To allow for small defects in the size, level, or squareness of the rough opening, EuroLine recommends that you provide these clearances between the frame (excluding flanges and accessory sills) and the rough opening.

Head (top of opening) 3/8" (10 mm) min 1/2" (12 mm) max
 Jambs (sides of opening) 3/8" (10 mm) min 1/2" (12 mm) max
 Sill (bottom of opening) 3/8" (10 mm) min 1/2" (12 mm) max

Finish Material Clearances

EuroLine recommends that you provide a clearance of at least 3/8" (10 mm) between the finish materials and the edge of a hinge. To do this, make sure the finish materials cover no more than 3/8" (10 mm) of the window frame on the hinge side. See Fig. 2-2.

HANDLE POSITIONS

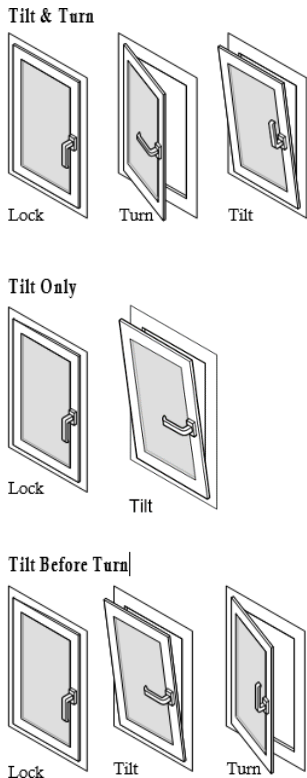


Figure 2-1. Handle Positions

If the rough openings are within acceptable tolerances, then EuroLine's standard installation clearances allow you to use finish materials up to 3/4" (19 mm) thick at the top and sides of the window, and up to 1" (25 mm) thick at the bottom. If you use thicker finish materials, you may need to provide larger rough openings to maintain the specified clearance between the finish material and the hinges.

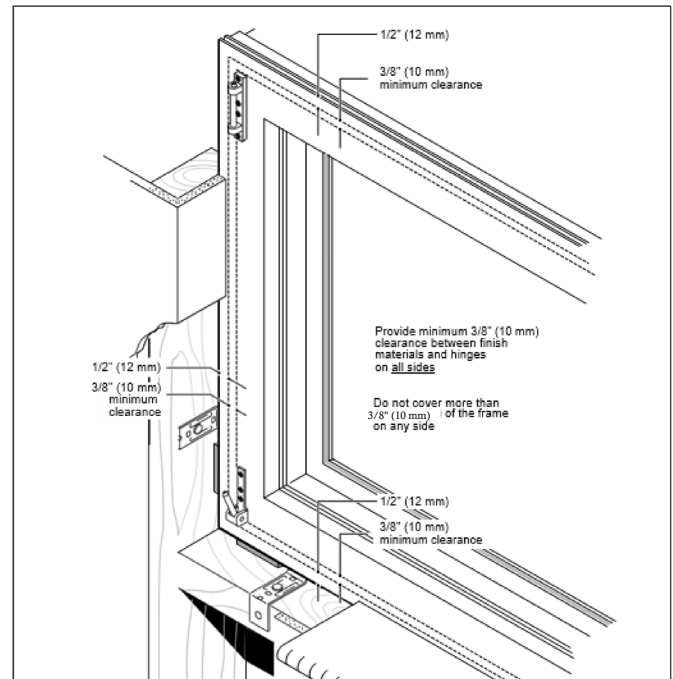


Figure 2.2. Finish materials clearances

How To Install Tilt & Turn Windows & Doors

Read Important Instructions on Page 1.

1. Prepare The Frame

- 1.1 Remove the wooden shipping blocks that are attached to the flange (if supplied).
- 1.2 If strap anchors are included, rotate them until they are at right angles to the frame. Bend the strap anchors inwards about 45°. See fig. 16.
Note: Some frames do not have strap anchors.
If shop drawings are required for the project, refer to these drawings for specific installation instructions.

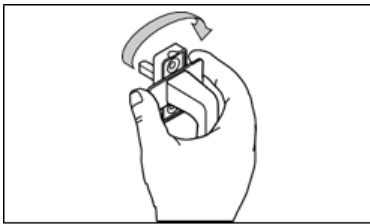


Figure 2-3. How to uncover the screw holes

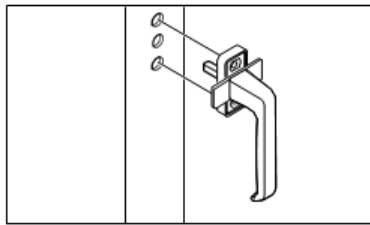


Figure 2-4. Euro-Handle in the Lock position

2. Install The Euro-Handle

Handles are usually shipped loose. Follow the steps below to install the Euro-Handles.

- 2.1 Pull the screw cover of the Euro-Handle base towards you and rotate it 90° to uncover the screw holes. See fig. 2-3.
- 2.2 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.
- 2.3 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.
- 2.4 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.

CAUTION

DO NOT over-tighten the screws. If you over-tighten the screws, you can damage the hardware and make the Euro-Handle difficult to operate.

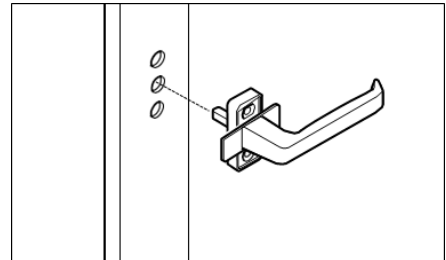
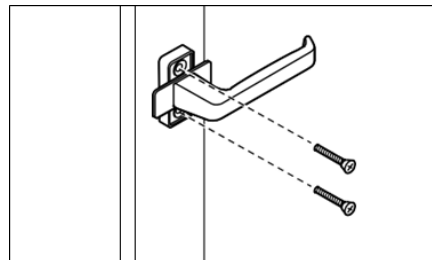


Figure 2-5. Where to install the mounting screws Figure 2-6. Euro-Handle in the horizontal position

- 2.5 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.
- 2.6 Insert the screws that came with the handle and tighten them. See fig. 2-5.
- 2.7 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.

3. Remove The Sash From The Frame

- 3.1 Rotate the Euro-Handle to the Turn position. Partially open the sash. See fig. 2-1.
- 3.2 Pull off the hinge cover. If you do not partially open the sash, you cannot remove the hinge cover. See fig. 2-7.

NOTE

If you must remove the sash prior to installation, follow steps 3.1 through 3.6. Proceed to step 4 if not removing sash.

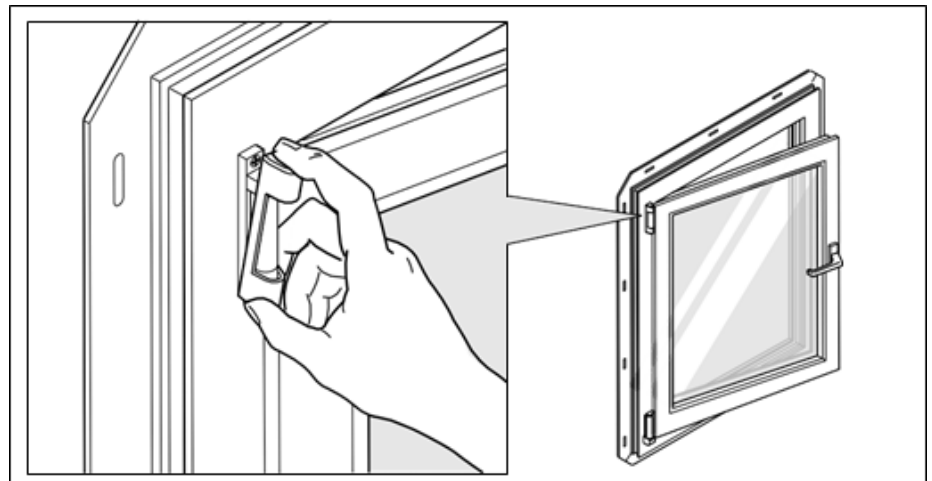


Figure 2-7. How to remove the hinge cap

IMPORTANT

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

- 3.4 Slightly tilt the sash towards you. Lift the sash up off the lower hinge pin. See fig. 2-8.
- 3.5 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.
- 3.6 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.

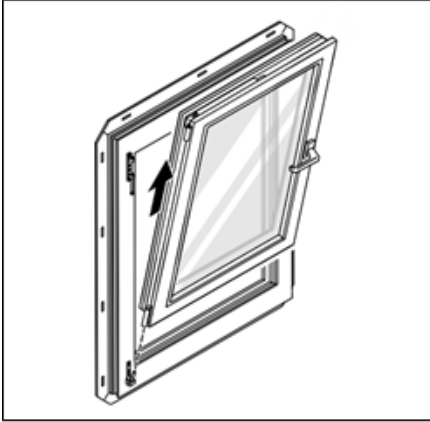


Figure 2-8. How to remove the sash from the frame

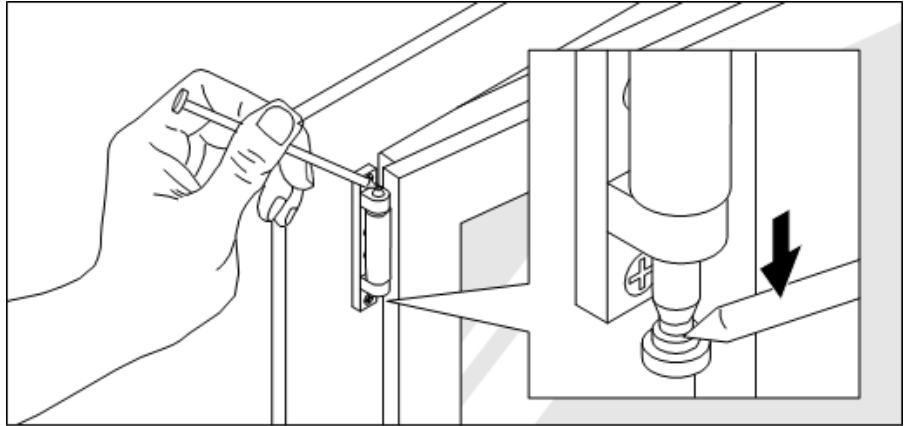


Figure 2-9. How to pull down the hinge pin

CAUTION

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

4. Put The Frame In The Rough Opening

- 4.2 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 4.8.**
- 4.3 Center frame into opening, ensure the frame is right-side up.
- 4.4 Shim sill of the frame with 4" x 1 1/2" shims (See fig. 2-11). **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 $\pm 3/8$ ").

CAUTION

DO NOT put frame support shims under the strap anchors!

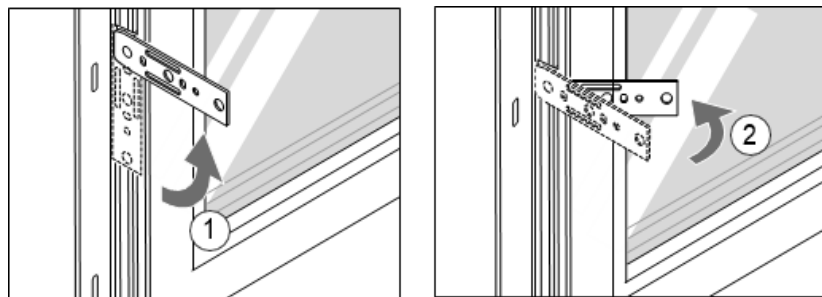


Figure 2-10. How to rotate and bend the strap anchors

CAUTION

A window/door not installed plumb, level and square, may compromise the window/door's water-resistance performance, and voids any warranty.

CAUTION

DO NOT put frame support shims under the strap anchors!

Window Width	Shim Spacing	
	a**	b
W		
<36"	2 1/2"	
36" – 70"	2 1/2"	10"
>70"	2 1/2"*	10"*

* Plus add shim at the centerline of window pane

CAUTION

Shims placed on torch-on membrane, or similar waterproofing applications, may compress into the membrane, resulting in settlement of the window or door.

CAUTION!

DO NOT set the nails too tight!

IMPORTANT

DO NOT nail the top flange to the wall!

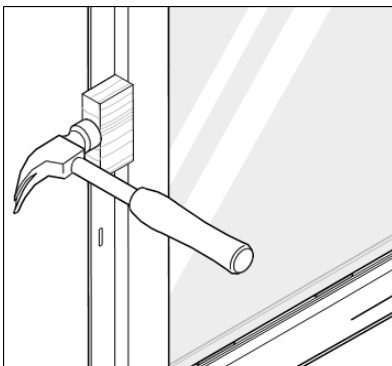


Figure 2-12. How to straighten a bowed frame

- 4.5 Fasten bottom corners of flange to the wall with 2" galvanized nails or #10 1 1/2" tapping screws.
- 4.6 Use a straight edge to ensure the frame is straight on all four sides. Fasten the flange approximately every second slot. **DO NOT nail or screw too tight. DO NOT nail the top flange to the wall.** See fig. 2-13.

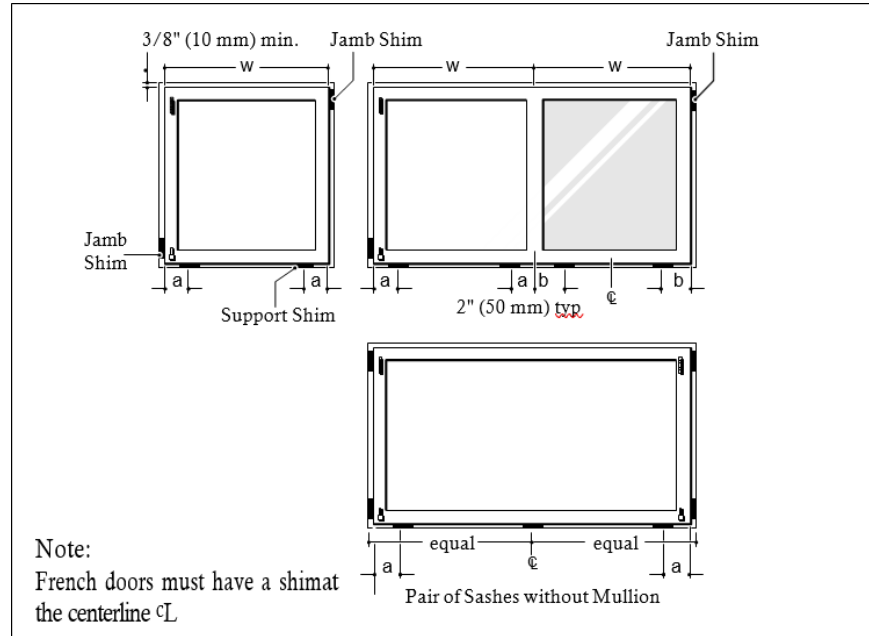


Figure 2-11. Where to put the frame support shims and jamb shims – interior view

- 4.8 Nail or screw all strap anchors all around to the wall at sill, jambs and head. The strap anchors alone are sufficient to structurally secure the window to the building. Therefore, the nail flange is optional but recommended.

- 4.9 Remove protective film from all profiles immediately after installation. See fig. 2-16.
- 4.10 Install drain caps.

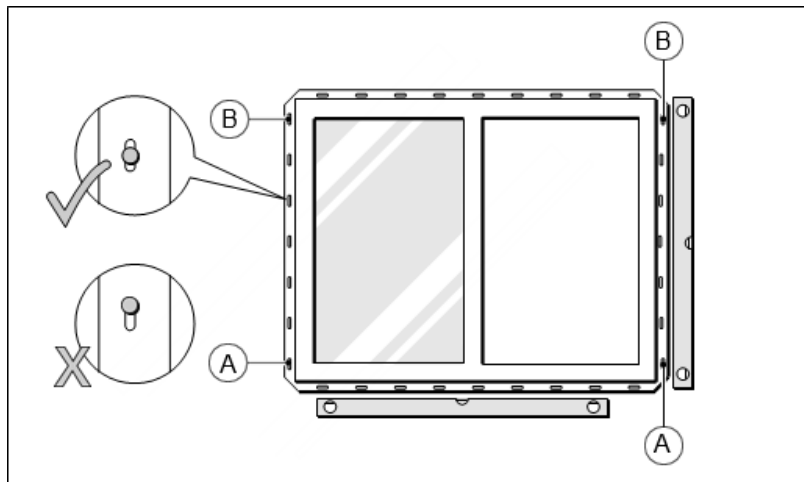


Figure 2-13. Where to fasten the flanges – exterior view

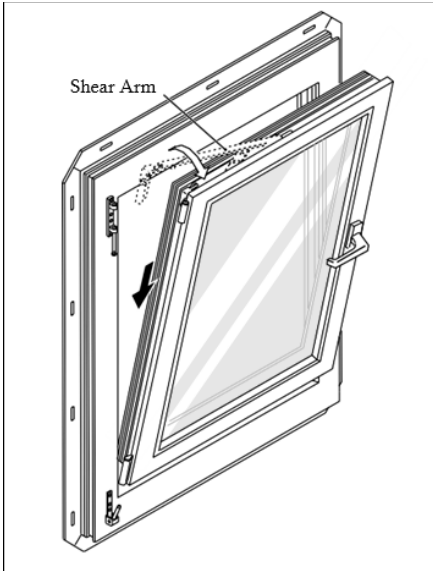


Figure 2-14. How to install the sash, and put the shear arm back into position

5. Install The Sash(es)

- 5.1 Pull off the hinge cover. Use a nail to pull the hinge pin down as shown in Step 3.3.
- 5.2 Tilt the lower hinge pin forward approximately 30°.
- 5.3 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.
- 5.4 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.
- 5.5 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.
- 5.6 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, with the cone-shaped tip fully visible at the top.
- 5.7 Replace the plastic hinge cover. Close the sash. Rotate the Euro-Handle downward to the Lock position. This secures the sash.

CAUTION!

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

IMPORTANT

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

6. Operate The Sash(es)

EuroLine 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. An incorrect installation may compromise the window’s water-resistance performance and void any warranty.

- 6.1 Open and close the sash several times, in both the Tilt and Turn positions. If the sash operates freely, go to Step 4.11. 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:
- 6.2 If the sash hardware binds at the top jam lock or at the bottom handle side, the frame may not be level, or it may be out of square. See fig. 2-15 Item A. Use a 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.

NOTE

Inswing windows/doors may swing against the jamb returns. Damage may result to the window/door or the jamb return if care is not taken when opening the sash in the full open position.

Inswing arch or round top windows/doors will require special detailing on the jamb returns in order for the window/door sash to open inward 90 degrees.

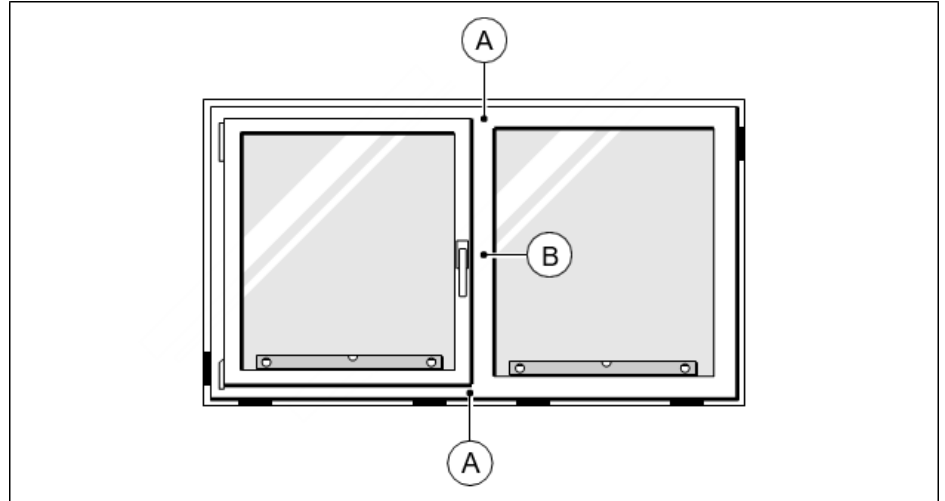


Figure 2-15. Where sashes sometimes bind

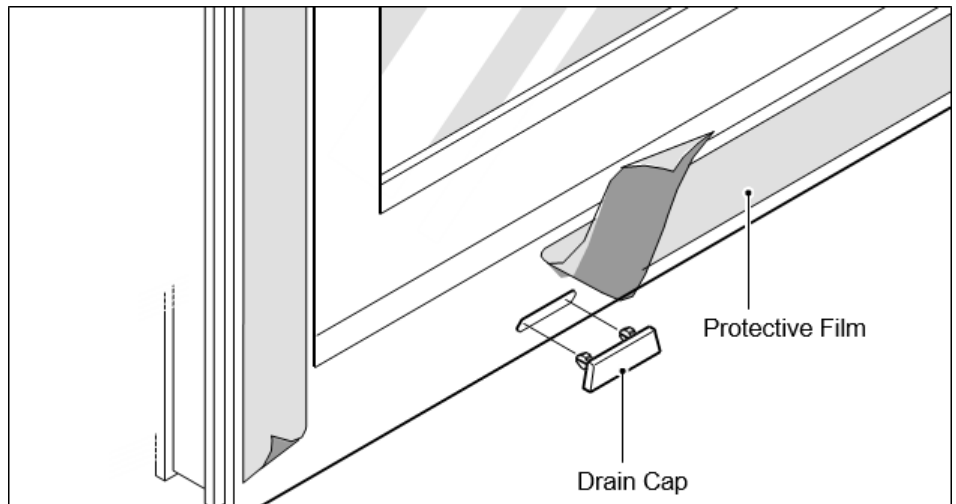


Figure 2-16. Remove the protective film and install the drain caps – exterior view

TOOLS REQUIRED:

11 mm wrench
4 mm Allen key

How To Adjust Tilt & Turn Windows & Doors

With EuroLine's 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.

NOTE

In addition to these instructions, you can access videos showing how to do adjustments and troubleshooting at www.euroline-windows.com/support-videos/

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

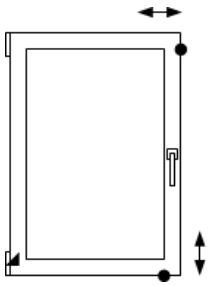
Adjustment 5: Shear Closing Tightness

Adjustment 6: Corner Drive Closing Tightness

HOW TO CORRECT SASH BINDING PROBLEMS

Use a 4 mm Allen key for Adjustments 1 - 3. Insert the key into the appropriate adjustment screw as indicated in figures 2-17, 2-18, or 2-19, depending on the adjustment. 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.



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

Adjustment 1: Upper Hinge Offset

Maximum Adjustment: Moves the sash 2 mm to the right or left. 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 4 mm 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.

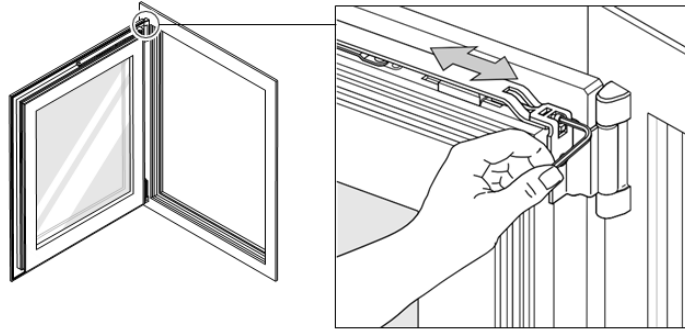
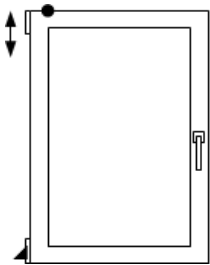


Figure 2-17.



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

Adjustment 2: Sash Height

Maximum Adjustment: Raises or lowers the sash 3 mm.

This adjustment raises or lowers the sash.

With the Euro-Handle in the Turn position, open the sash approximately 2" (50 mm). Remove the plastic cover from the top of the lower hinge body. Insert the 4 mm 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.

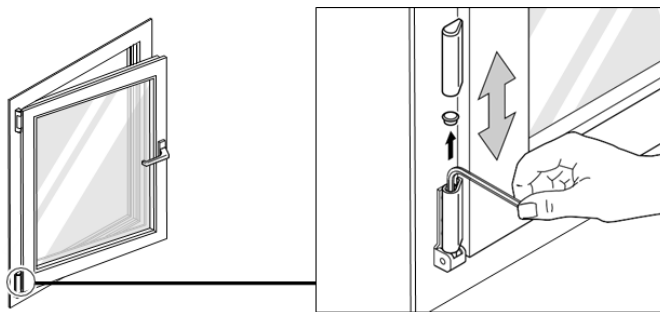
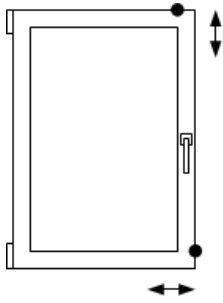


Figure 2-18.



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

Adjustment 3: Lower Hinge Offset

Maximum Adjustment: Moves the sash 2 mm to the right or 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 4 mm 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.

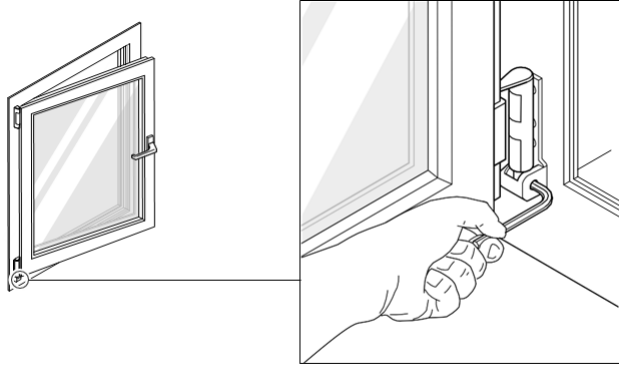


Figure 2-19.

HOW TO CORRECT CLOSING TIGHTNESS PROBLEMS

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 4: Locking Cam Closing Tightness

Maximum Adjustment: Moves the sash 0.8 mm towards the frame. Moves the sash 0.8 mm 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.

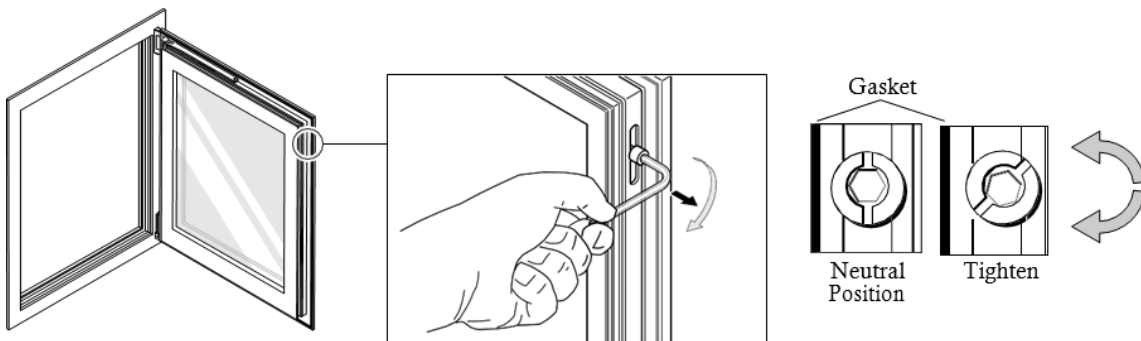


Figure 2-20.

CAUTION

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

Adjustment 5: Shear Closing Tightness

With the Euro-Handle in the bottom (Tilt) position, tilt the sash. Insert the 4 mm 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. First turn the screw 1/4 turn, then operate the sash to see if you have corrected the problem. Repeat if necessary, turning the screw approximately 1/4 turn each time until you have corrected the problem.

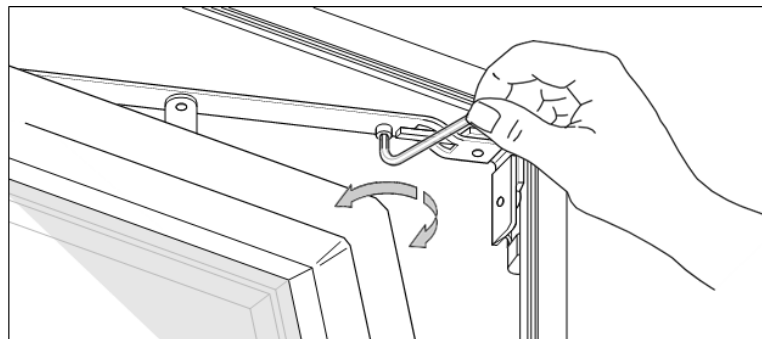


Figure 2-21.

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.

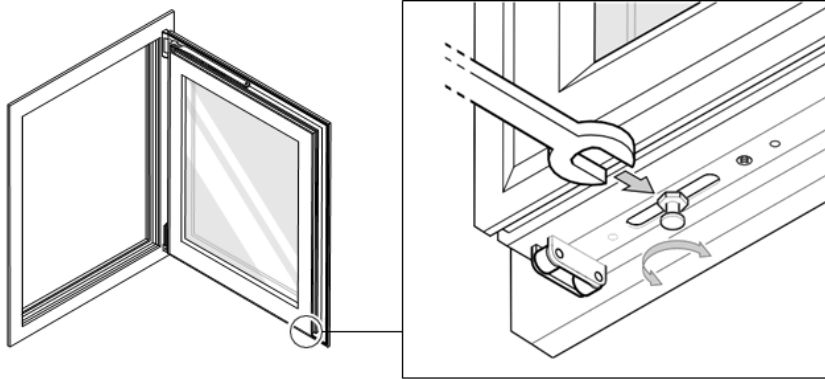


Figure 2-22.

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.

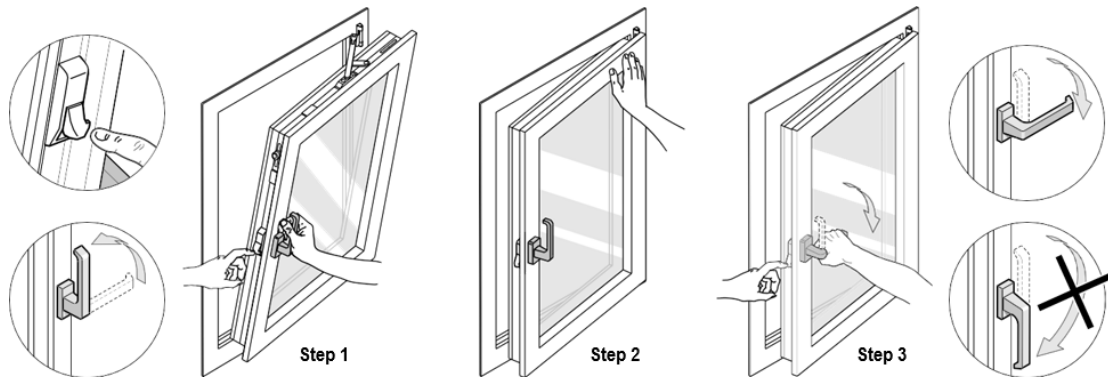


Figure 2-23.

SECTION 3

CASEMENT & AWNING WINDOWS

NOTE

EXPANDING FOAM INSULATION

Use of expanding foam is not recommended. Clearance around the window/door should allow for movement of the surrounding structure, so as not to affect the window/door. The foam may also block the flow of water around the window/door on a rain screen designed interface. Consequential damage resulting from foam may void the warranty.

IMPORTANT

Care must be taken so that head flashings do not interfere with the operation of the sash.

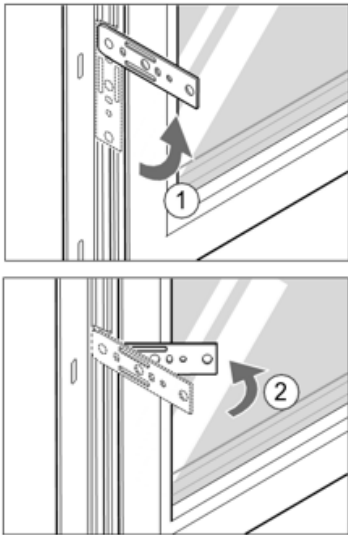


Figure 3-2. How to rotate and bend the strap anchors

Rough Opening Clearances

To allow for small defects in the size, level, or squareness of the rough opening, EuroLine recommends that you provide these clearances between the window frame (excluding flanges and accessory sills) and the rough opening.

Head (top of opening) 3/8" (10 mm) min 1/2" (12 mm) max
 Jamb (sides of opening) 3/8" (10 mm) min 1/2" (12 mm) max
 Sill (bottom of opening) 3/8" (10 mm) min 1/2" (12 mm) max

How To Install Casement and Awning Windows

Read Important Instructions on Page 1.

1. Prepare The Frame

- 1.1 Remove the wooden shipping blocks that are attached to the flange (if supplied).
- 1.2 If strap anchors are included with the window, rotate them until they are at right angles to the frame. Bend the strap anchors inwards about 45°. See fig. 3-2.

Note: Some windows do not have strap anchors.

If shop drawings are required for the project, refer to these drawings for specific installation instructions.

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 are 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 the window is right-side up.

CAUTION

DO NOT put the frame support shims under the strap anchors!

CAUTION

Shims placed on a torch-on membrane, or similar waterproofing applications, may compress into the membrane, resulting in settlement of the window.

IMPORTANT

DO NOT nail the top flange to the wall!

CAUTION

A window not installed plumb, level, and square, may compromise the window's water-resistance performance, and void any warranty.

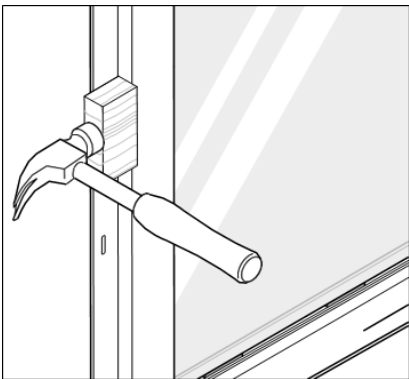


Figure 3-4. How to straighten a bowed frame

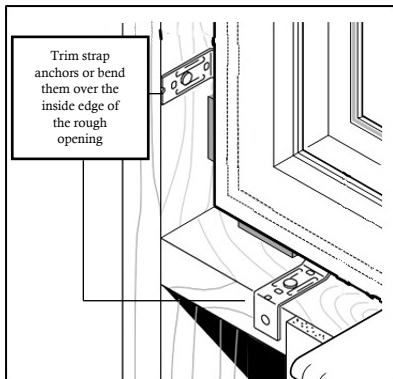


Figure 3-4. How to straighten a bowed frame

2.4 Shim sill of window 2 1/2" from the corners and on both sides of any mullions with 4" x 1 1/2" shims (See fig. 3-3). **Adjust the height of the shims to obtain a level sill**, ensuring you have 3/8" gap at the head (inter-story deflection not to exceed $\pm 3/8"$).

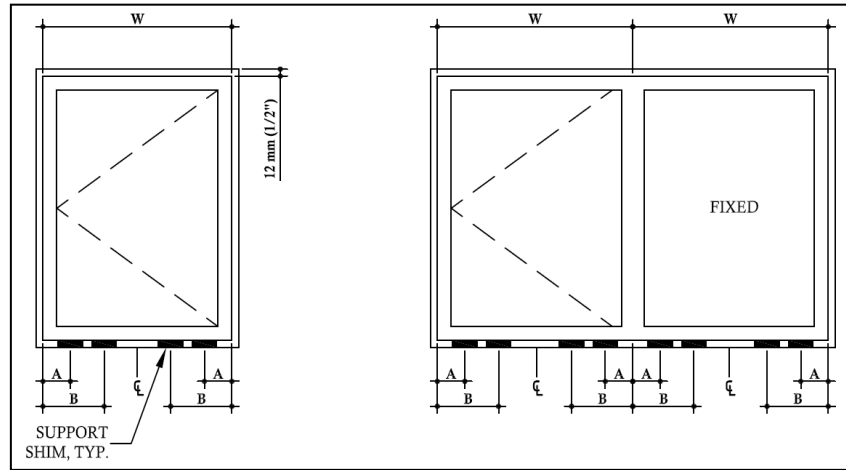


Figure 3-3. Where to put the frame support shims- Interior view

- 2.5 Fasten bottom corners of the flange to the wall with 2" galvanized nails or 1 1/2" #10 tapping screws.
- 2.6 **Plumb the frame jambs with a level** and fasten the two top corners of the flange to the wall.
- 2.7 Use a straight edge to ensure the frame is straight on all four sides. Fasten the nail flange through approximately every second slot. **DO NOT** nail or screw too tight. **DO NOT** nail the top head flange to the wall.
- 2.8 Nail or screw all strap anchors all around to the wall at sill, jambs and head. The strap anchors alone are sufficient to structurally secure the window to the building. Therefore, the nail flange is optional but recommended.
- 2.9 Remove protective film from all profiles immediately after installation.
- 2.10 Install drain caps.

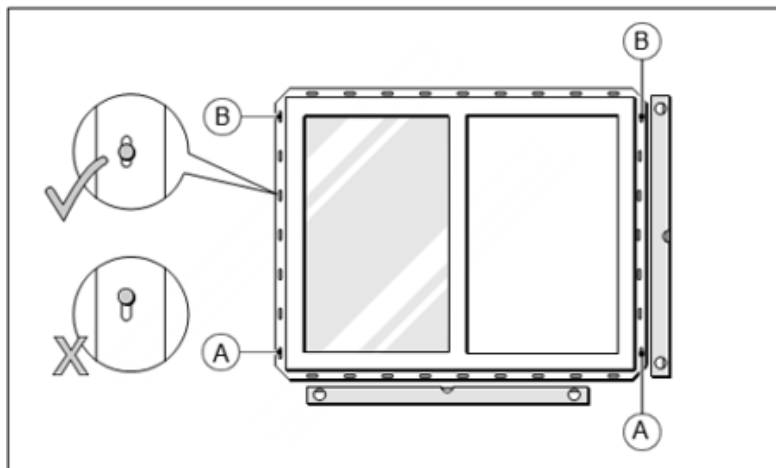


Figure 3-5. Where to fasten the flanges- exterior view

SECTION 4

HINGED DOORS

NOTE**EXPANDING FOAM INSULATION**

Use of expanding foam is not recommended. Clearance around the window should allow for movement of the surrounding structure, so as not to affect the window. The foam may also block the flow of water around the window on the rain screen-designed interface. Consequential damage resulting from foam may void the warranty.

Rough Opening Clearances

To allow for small defects in the size, level, or squareness of the rough opening, EuroLine recommends that you provide these clearances between the window frame (excluding flanges and accessory sills) and the rough opening.

Head (top of opening) 3/8" (10 mm) min 1/2" (12 mm) max
Jambs (sides of opening) 3/8" (10 mm) min 1/2" (12 mm) max
Sill (bottom of opening) 3/8" (10 mm) min 1/2" (12 mm) max

Finish Material Clearances

There are two types of hinged doors: inswing doors that swing open into a building, and outswing doors that swing open to the exterior of the building. The finish material clearance requirements for each type of door are different.

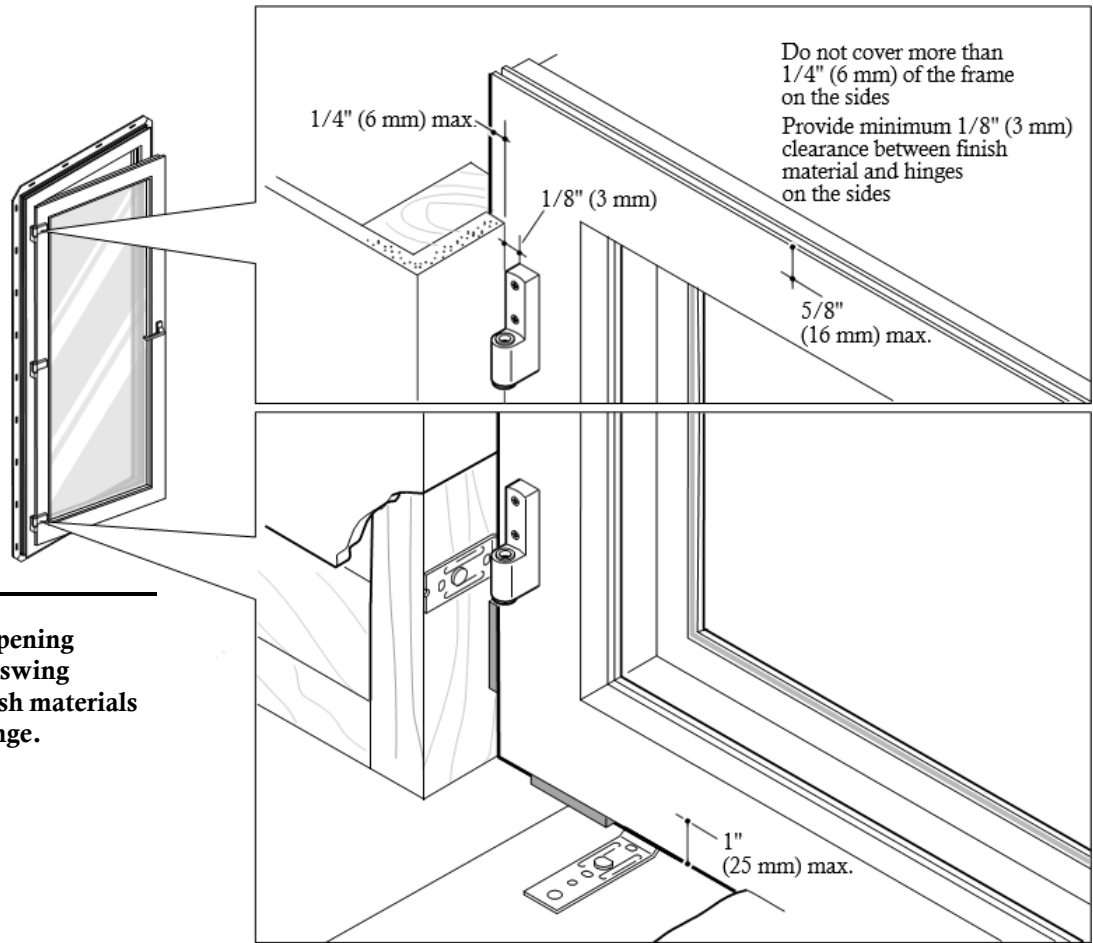
Outswing Doors

Outswing doors swing open to the exterior of a building and have the hinges mounted on the exterior side of the door frame. You do not need to worry about interior finish material clearances for outswing doors.

Inswing Doors

Inswing doors swing open into a building and have hinges mounted on the interior side of the door frame. EuroLine recommends that you provide a clearance of at least 1/8" (3 mm) between finish materials and the edge of each hinge of an inswing door. You will do this if you make sure that the finish materials cover not more than 1/4" (6 mm) of the door frame on the jambs. See fig. 4-1.

If the rough openings are within acceptable tolerances, then EuroLine's standard installation clearances allow you to use finishing materials up to 5/8" (16 mm) thick on the hinge side of the door, and up to 1" (25 mm) thick at the head and bottom. 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.



IMPORTANT

DO NOT reduce rough opening clearance at the jambs (inswing doors). If you do, the finish materials will interfere with the hinge.

Figure 4-1. Finish material clearances

How To Install Hinged Doors

Read Important Instructions on Page 1.

1. Prepare The Frame

- 1.1 **Remove the wooden shipping blocks that are attached to the flange (if supplied).**
- 1.2 If strap anchors are included, rotate them until they are at right angles to the frame. Bend the strap anchors inwards about 45°. See fig. 4-10. **Note:** Some frames do not have strap anchors.

If shop drawings are required for the project, refer to these drawings for specific installation instructions.

2. Install The Euro-Handle

Handles are usually shipped loose. Follow the steps below to install the Euro-Handles.

- 2.1 Pull the screw cover of the Euro-Handle base towards you and rotate it 90° to uncover the screw holes. See fig. 4-2.
- 2.2 Determine if the sash hardware is in the Lock position or in the Turn 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 position. Go to Step 2.5.
- 2.3 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. 4-3.
- 2.4 Lock position: rotate the Euro-Handle to the horizontal Turn position. This gives you access to both of the screw holes. See fig. 4-5. Insert the screws that came with the handle and tighten them. See fig. 4-5. Go to step 2.7.
- 2.5 Turn position: rotate the Euro-Handle to the horizontal Turn 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. 4-4.
- 2.6 Turn position: insert the screws supplied and tighten them. See fig. 4-5.
- 2.7 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.

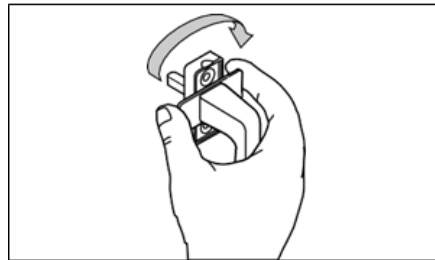


Figure 4-2. How to uncover the screw holes

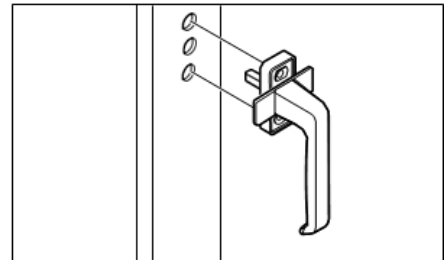


Figure 4-3. Euro-Handle in the Lock position

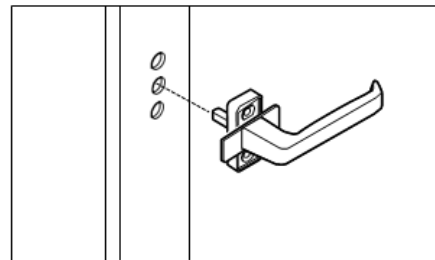


Figure 4-4. Euro-Handle in the Turn position

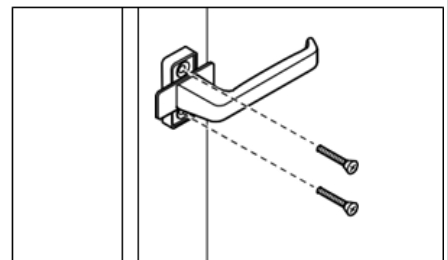


Figure 4-5. Where to install the mounting screws

CAUTION

DO NOT over-tighten the screws. If you over-tighten the screws, you can damage the hardware and make Euro-Handle difficult to operate.

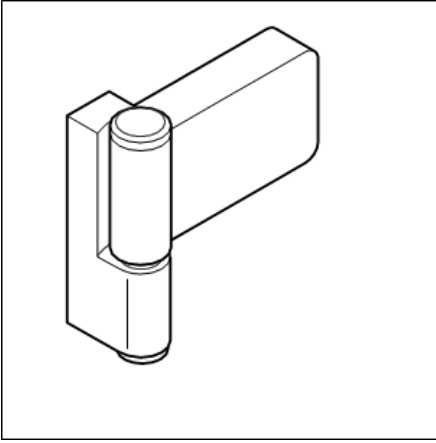


Figure 4-7. A typical offset pivot hinge – style of the hinge may vary

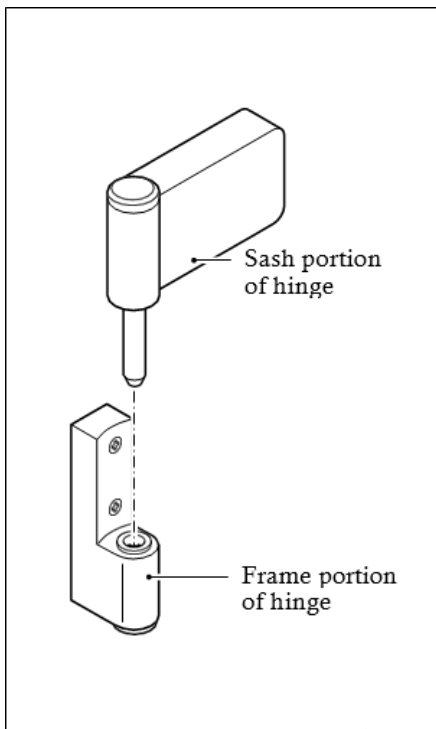


Figure 4-8. The parts of an offset pivot hinge

3. Remove The Sash From The Frame

- 3.1 Unlock the sash. If the sash has a Euro-Handle, unlock the dead bolt, and rotate the handle sideways to the Turn position to open the sash.
- 3.2 If the sash has a Euro-Luxe handle, unlock the dead bolt, and gently depress the Euro-Luxe handle to open the sash. See fig. 4-6.
- 3.3 Open the sash approximately 90°.
- 3.4 With the help of an assistant, gently lift the sash up and free of the hinges. Move the sash away from the frame. See fig. 4-9.

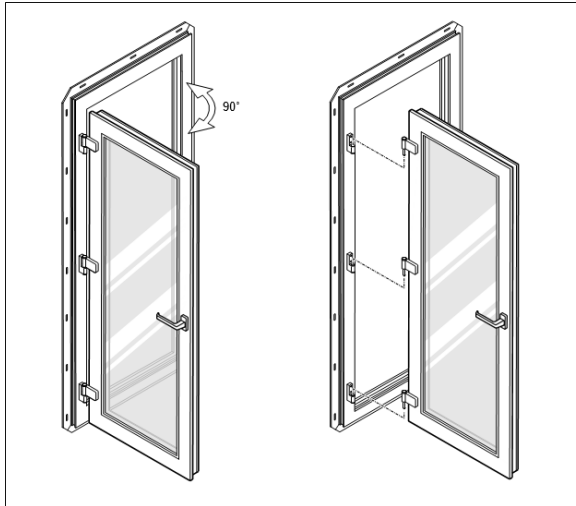


Figure 4-9. How to remove the sash from the hinges

- 3.5 When you lift the sash free of the hinge pins, some of the pins may come out of the sash. Take any pins that come out and put them in the sash portion of each hinge. Make sure that each hinge pin is in place in the sash portion of each hinge.

Note: The door sashes are mounted to the frame with three offset pivot type hinges.

- 3.6 Put the sash in a safe place, on a clean and dry surface. Make sure that dirt and sand do not enter the hole in the frame portion of each hinge.

IMPORTANT

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

CAUTION

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

CAUTION

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

CAUTION

DO NOT put frame support shims under the strap anchors!

CAUTION

A door not installed plumb, level and square, may compromise the window's water-resistance performance, and voids any warranty.

4. Put The Frame In The Rough Opening

- 4.1 Having prepared the rough opening as per building codes and/or Architect/Building Envelope Specialist, ensure that the door is installed in a weather-tight manner. **See Important Instructions on Page 1.**
- 4.2 If supplied, swing-out strap anchors are attached to the frame. Strap anchors should point to the interior of the building. **DO NOT nail or screw strap anchors until step 4.8.**
- 4.3 Center frame into opening, ensure the frame is right-side up.
- 4.4 Shim sill of frame approximately 2 1/2" from the corners and on both sides of any mullions with 4" x 1 1/2" shims (See fig. 4-11). Adjust the height of the shims to obtain a level sill, ensuring you have a 3/8" gap at the head (inter-story deflection not to exceed $\pm 3/8"$).

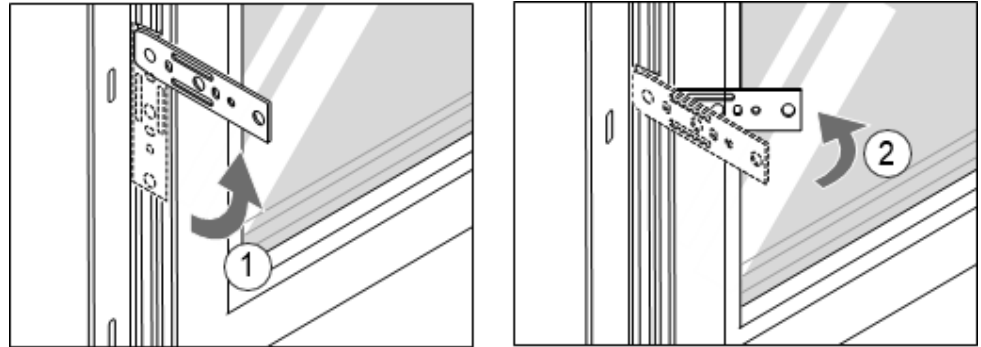


Figure 4-10. How to rotate and bend the strap anchors

- 4.5 Fasten bottom corners of flange to the wall with 2" galvanized nails or 1 1/2" #10 tapping screws.
- 4.6 **Plumb the frame jambs with a level** and fasten the two top corners of the flange to the wall.

IMPORTANT

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

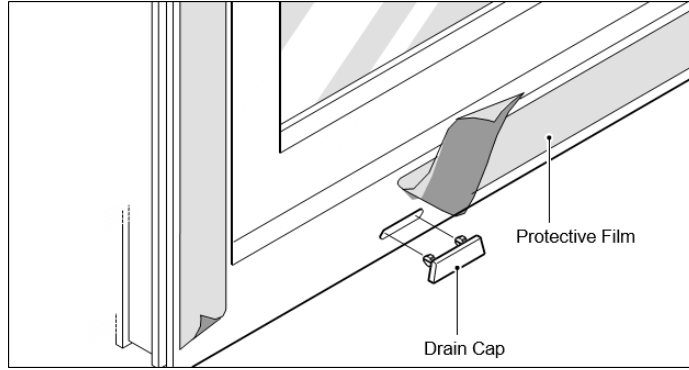


Figure 4-15. Remove the protective film and install the drain caps – exterior view

NOTE

Inswing doors may swing against the jamb returns. Damage may result to the door or the jamb return if care is not taken when opening the sash in the full open position.

Inswing arch or round top doors will require special detailing on the jamb returns in order for the door sash to open inward 90 degrees.

5. Install The Sash(es)

- 5.1 Make sure the hinge pins are clean and free of sand or other construction debris.
- 5.2 With the help of an assistant, lift the sash. Put the sash **in the open position**: make sure that the hinge pins correctly engage in the frame portion of the hinge. See fig. 4-9.
- 5.3 Close the sash. If the sash has a Euro-Handle, rotate the Euro-Handle down-wards to the Lock position. This secures the sash. If the sash has a Euro-Luxe handle, the handle automatically springs back to the normal position.

6. Operate The Door(s)

EuroLine 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. A non-level installation may compromise the door's water-resistance performance and void any warranty.

- 6.1 Open and close the sash several times. If the sash does not operate freely, go to Step 4.11 to make sure the frame is level and square. If further adjustments are needed, go to the adjustment section.

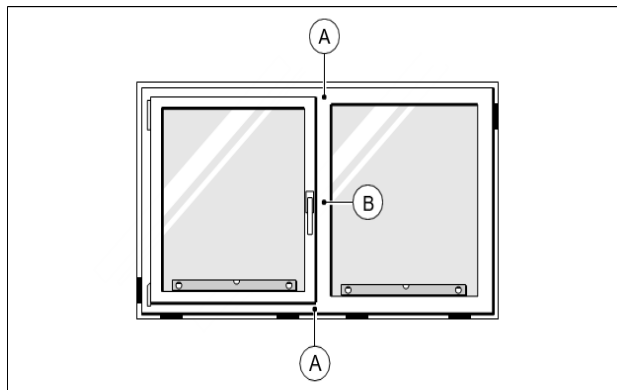
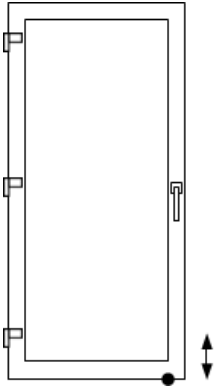


Figure 4-14. Where sashes sometimes bind

How to Adjust Hinged Doors



If the sash binds at the bottom, use this adjustment to raise the sash.

Adjustment 1: Vertical Clearance

Maximum Adjustment: Raises the sash 4 mm from the factory setting.

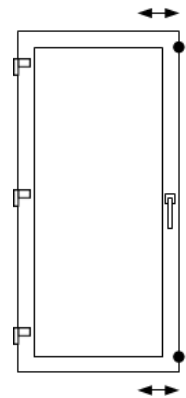
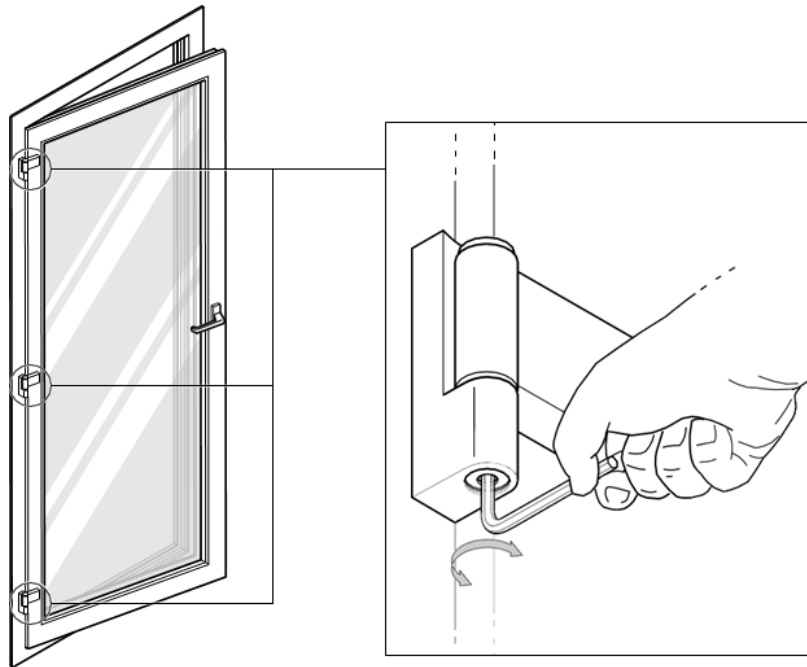
This adjustment moves the sash up or down.

Open the sash approximately 2" (50 mm). Insert the 4 mm Allen key into the recessed screw head in the bottom of the hinge. To raise the sash height, rotate the screw in a clockwise direction. To lower the sash height, rotate the screw in a counter-clockwise direction.

Make sure that you **raise or lower all three hinges by the same amount.**

NOTE

In addition to these instructions, you can access videos showing how to do adjustments and troubleshooting at www.euroline-windows.com/support-videos/



If the sash binds at the handle side, use this adjustment to move the sash towards the hinges.

Adjustment 2: Horizontal Clearance

Maximum Adjustment: Moves the sash 5 mm to the left. Moves the sash 5 mm to the right.

This adjustment moves the sash from side to side.

How To Remove The Security Cover

Most EuroLine pivot hinges have a tamperproof security cover. One screw holds the cover in place. To find the concealed screw, open the sash 90°. The screw is on the back side of the hinge body. Use a 4 mm Allen key to loosen the screw.

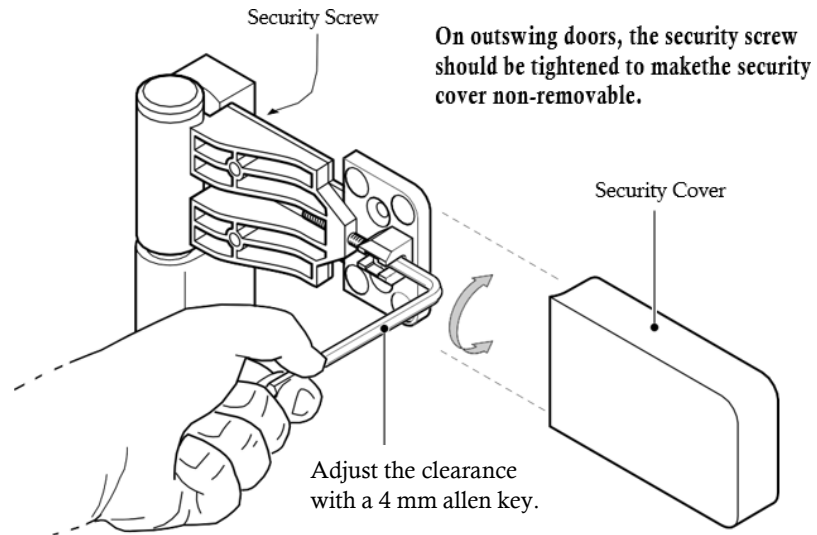
How To Make The Horizontal Clearance Adjustment

CAUTION

Do not adjust the sash more than 2 mm to the left or 2 mm to the right. If you adjust the sash more than 2 mm, you will reduce the coverage of the sealing gaskets.

Open the sash approximately 2" (50 mm). Insert the 4 mm Allen key into the recessed screw head on the edge of the hinge body. To move the sash away from the hinge, rotate the screw in a clockwise direction. To move the sash towards the hinge, rotate the screw in a counterclockwise direction.

Make sure that you **adjust all three hinges by the same amount.**



There are different hinge styles. The hinge may not look exactly as shown.

Figure 4-17.

How To Correct Closing Tightness Problems

Use these adjustments to reduce air leakage around the sash, or to make the Euro-Handle easier to operate.

If you have an air leakage problem, try to correct it by increasing the closing tightness of the nearest locking cam(s) using Adjustment 3. If this does not correct the problem because the air leakage occurs at a hinge, increase the closing tightness of that hinge 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 Adjustment 3 to decrease the closing tightness of the locking cams.

Adjustment 3: Locking Cam Closing Tightness

Maximum Adjustment: Moves the sash 0.8 mm towards the frame. Moves the sash 0.8 mm away from the frame.

Open the sash. Notice the cylindrical locking cams along the vertical edge of the open sash. You may find one or more cams along the top or along the bottom of the sash as well. Notice that each cam has an index groove stamped into its 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.

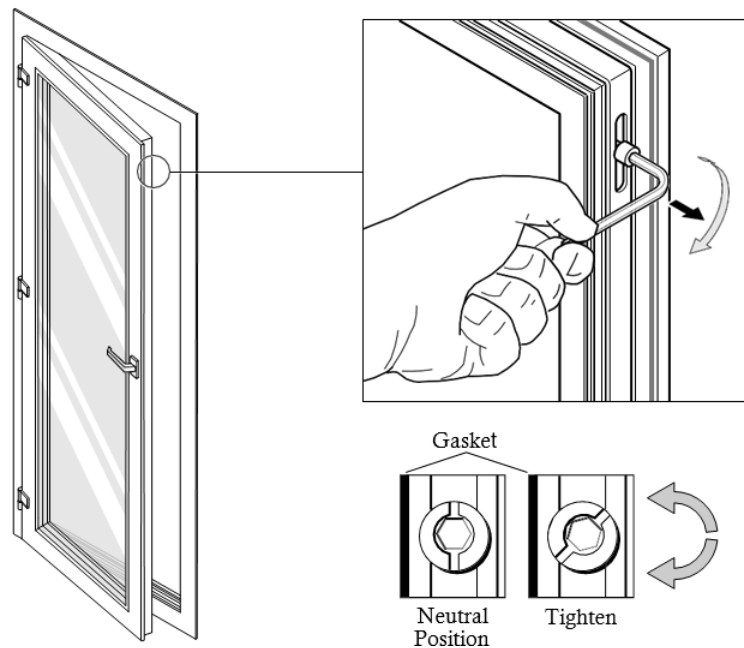


Figure 4-18.

Adjustment 4: 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 11mm wrench as shown in fig. 4-19 on the next page.

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.

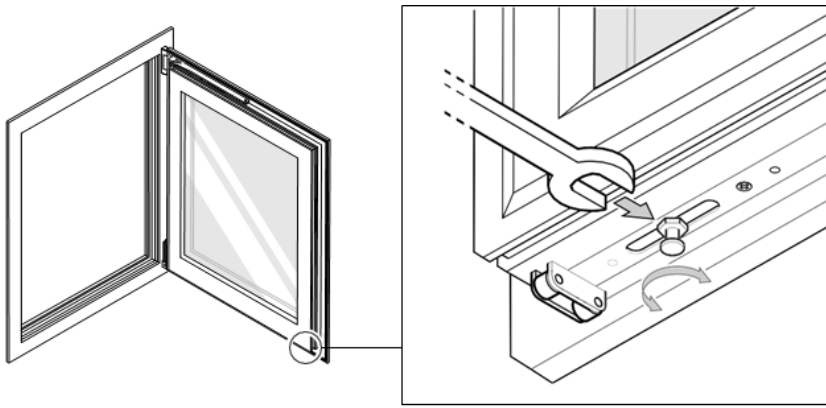


Figure 4-19. Corner Drive Closing Tightness

NOTE

Do not adjust the sash more than 2 mm to the left or 2 mm to the right. If you adjust the sash to more than 2 mm, you will reduce the coverage of the sealing gaskets.

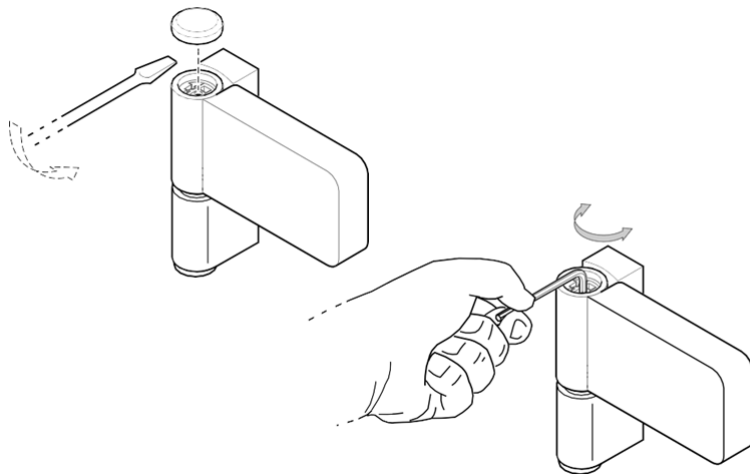
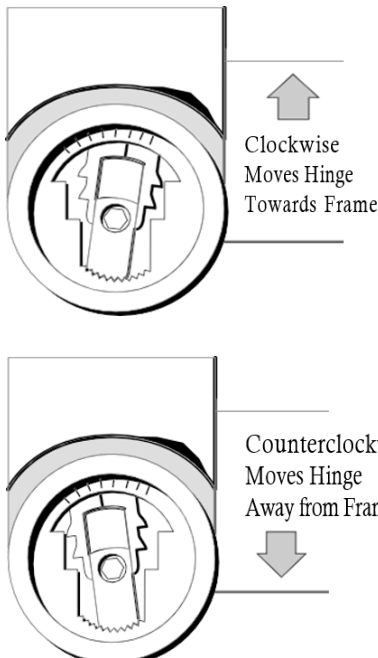
Adjustment 5: Hinge Closing Tightness

Maximum Adjustment: Moves the sash 0.8 mm closer to the frame. Moves the sash 0.8 mm away from the frame.

Use a small knife blade or a flat head screwdriver to remove the plastic cap from the top of each hinge.

Open the sash approximately 2" (50 mm). Insert the 4 mm Allen key into the recessed screw head on the top of the hinge pin. To move the sash closer to the frame or to move it farther away, rotate the screw. This adjustment also moves the sash slightly to one side or to the other. You can rotate the screw in either direction.

You can measure the distance between the moving part of the hinge and the fixed part of the hinge that is attached to the frame. **Adjust all three hinges to the same distance.** Replace the plastic cap to the top of each hinge.



There are different hinge styles. The hinge may not look exactly as shown.

Figure 4-21.

Figure 4-21.

For more information on these quality products
please contact:

EuroLine Windows Inc.
7620 MacDonald Road
Delta, BC. Canada V4G 1N2

T. 604.940.8485
F. 604.940.8486
E. service@euroline-windows.com
W. www.euroline-windows.com
Toll Free: 1 800 337.8604

Other publications available from EuroLine Windows Inc. can be
found on our website (www.euroline-windows.com).

Do not reproduce this manual without prior written permission from Euroline Windows Inc.