EuroLine Windows INC.

SERIES 1400

INSTALLATION & MAINTENANCE INSTRUCTIONS

Fixed "Picture" Windows

Casement Windows

Awning Windows

Rev. 1 2003

Contents

Introduction

Important Instructions

Please read before you start installation

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 bead.**

WARNING

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 wall to prevent any damage.

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:
To minimize 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 similar design professional. This manual does not address such items, and EuroLine is not responsible for the proper design or installation of these.

WARNING

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

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. Failure to do so may void the warranty.**

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 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 Ongoing maintenance and adjustments are described in our maintenance section, starting on page 6..

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.

CONTACT INFORMATION

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Materials and Tools Required

Tools

- Spirit level
- Framing hammer
- Screwdriver/screw gun
- Tape measure

Materials

- Shims: use non-deteriorating, non-swelling, hard plastic (4" x 1½") of several thicknesses to suit. Shims may be purchased from EuroLine Windows in thicknesses of 2,3,4,5 and 6 mm.
- 2" Galvanized Roofing Nails (10½ ga.)
- 1½" #10 Pan Head Tapping Screws (cadplated)

Rough Openings

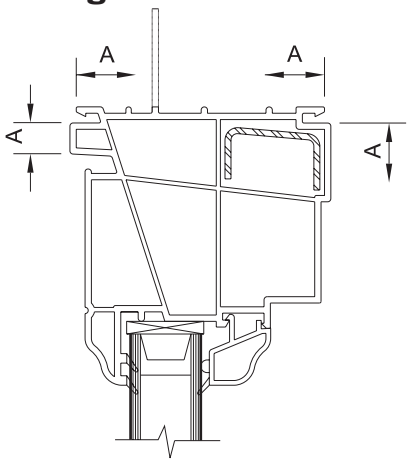
Make sure that the rough openings are square, and that they have a level sill and plumb (vertical) jambs. Make sure that the outside face of the wall is straight and plumb. If a rough opening is out-of-square, adjust the thickness of the shim blocks as necessary to make sure that you install the window 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 window frames in unacceptable openings.

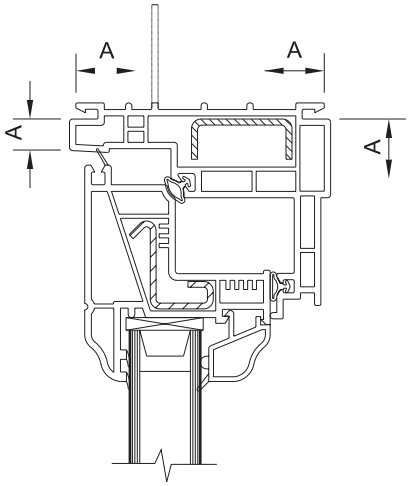
Make sure that the general contractor corrects the rough opening if you find the rough opening does not allow you to install the frame perfectly level, square, straight in every direction and plumb, and does not provide a minimum of 3/8" (10 mm) and no larger than 1/2" (12 mm) clearance between the top of the window frame and the top of the rough opening.

Sealant Joint Placement

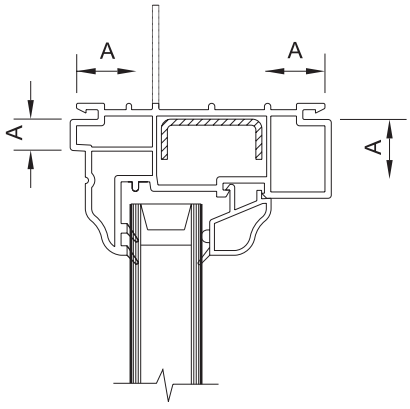
Large Picture Frame



Casement/Fixed Sash



Small Picture Frame



CAUTION:

1. To ensure an air and water seal, joint placement is as shown in one or more of the locations shown as "A". Sealant joints must be 5/8” below drain caps or drain holes.
2. Check with your sealant supplier that materials are compatible with the extrusion or laminate film.
3. Design of the sealant joints is not the responsibility of EuroLine Windows.

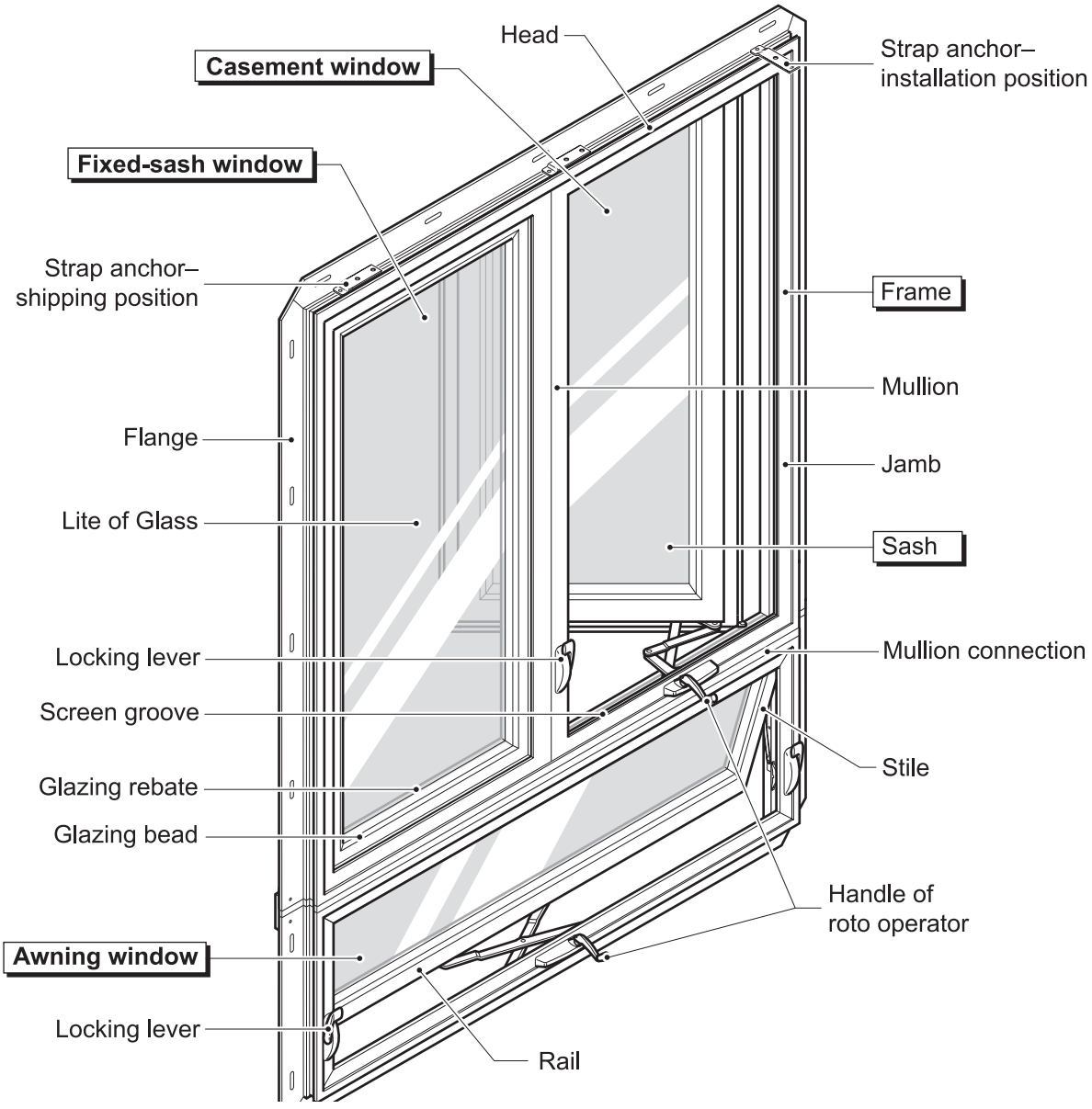
Terminology

Frame

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

Sash

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



Section 1 Window Installations

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 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 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, Casement and Awning Windows

1. Prepare The Frame – Read Important Instructions on Page 1.

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. Most windows will have strap anchors at the head.
Note: Some windows do not have strap anchors.
If shop drawings are required for the project, refer to these drawings for supplemental 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 head of 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 with 4" x 1 1/2" shims (See figs. 1-1, 1-2, 1-3). **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"). Shim the jamb on casement (See fig. 1-2)

CAUTION

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

Fixed/Picture Window

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

* Plus add shim at centerline of window pane

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

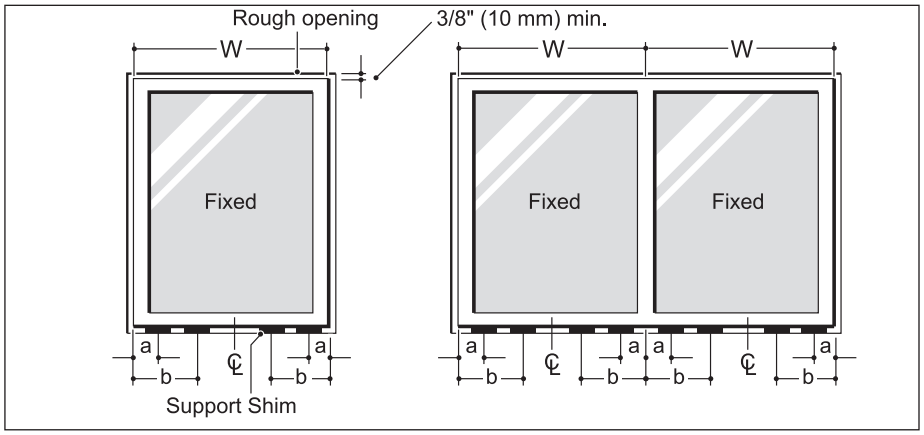


Figure 1-1. Where to put the support shims - Fixed Windows

Casement Window

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

* Plus add shim at centerline of window pane

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

Awning Window

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

* Plus add shim at centerline of window pane

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

WARNING!

DO NOT nail the top flange to the wall!

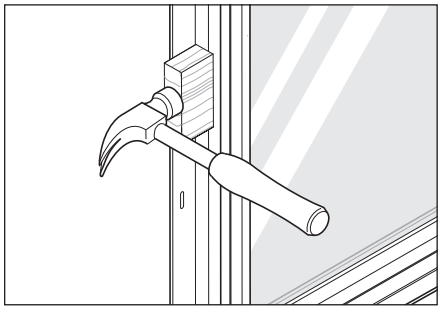


Figure 1-4. How to straighten a bowed frame

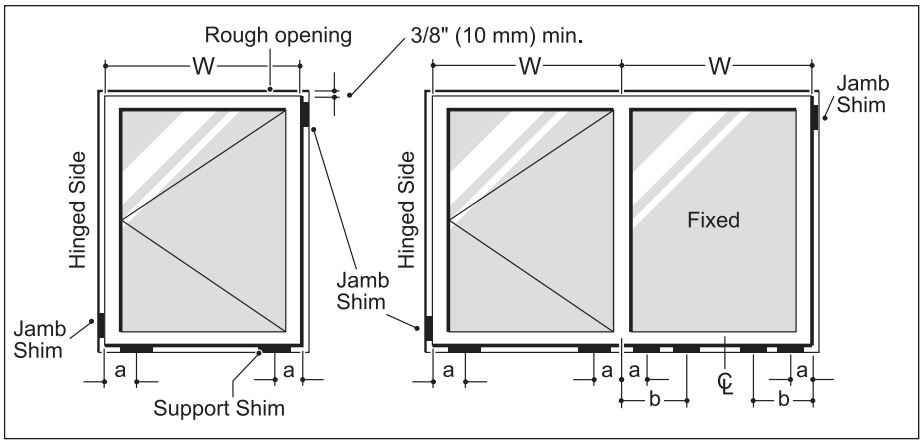


Figure 1-2. Where to put the support and jamb shims - Casement Windows

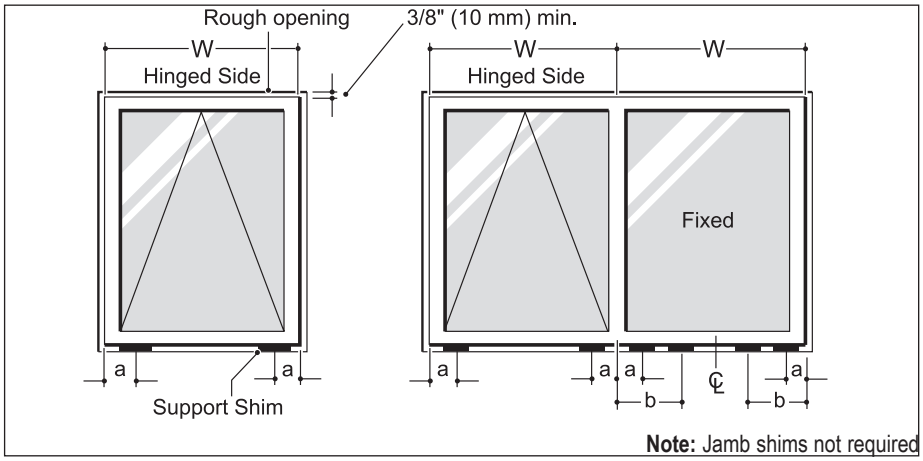


Figure 1-3. Where to put the support shims - Awning Windows

2.5 Fasten bottom corners of flange to the wall with 2" galvanized nails or 1 1/2" #10 tapping screws (See fig. 1-6 Ⓐ).

2.6 **Plumb the frame jambs with a level** and fasten the two top corners of the flange to the wall (See fig. 1-6 Ⓑ).

2.7 Use a straight edge to ensure the frame is straight on all four sides. Fasten the flange 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 to the wall. To adjust anchor offset see fig. 1-5.

2.9 Install drain caps in the small picture frame, and crank handles on casement and awning windows.

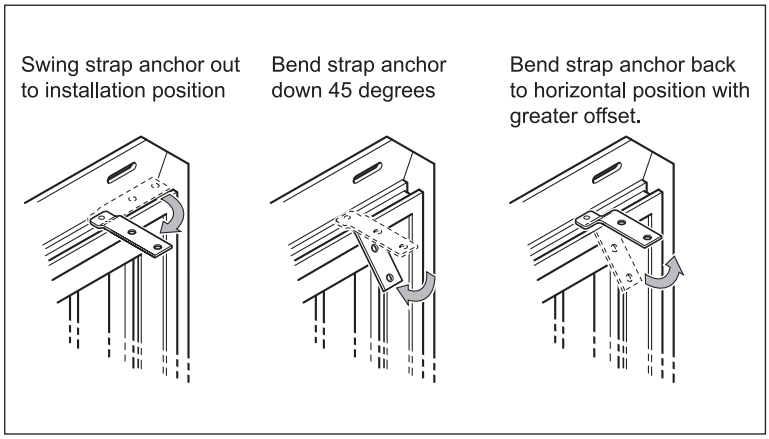


Figure 1-5. How to adjust the offset of the strap anchor.

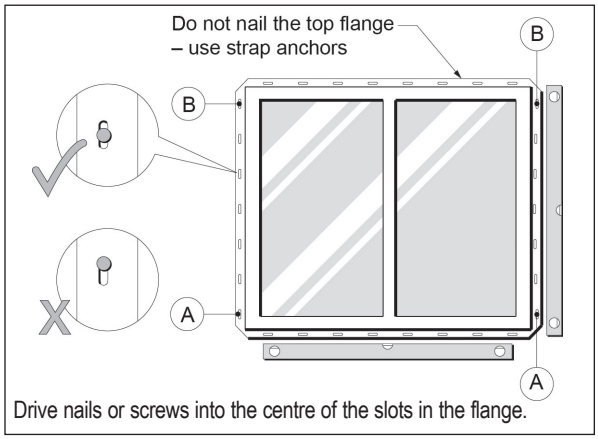


Figure 1-6. Where to fasten the flanges — exterior view

Section 2 Operating Tips

Casement Windows

Opening

Note:
Egress windows (escape during emergencies) do not allow the cleaning of the outside surface of the glass when in the 90 degree open position.

Lift the locking lever (see Terminology) to unlock the multi-point locking along the jamb of the window sash. Lift the handle on the operator to the position as shown in the Terminology section. Now, you may crank the handle to open the casement window. Small angles of opening are usually adequate for ventilation. The casement sash may be opened at full 90 degrees to clean the outside surface of the glass from inside the building. Do not force the crank when it comes to the end of travel in the open position as it places undue stress on the hardware.

Closing

Crank the handle of the operator until the sash closes into the frame snugly. Now push the locking lever down until it comes to a full stop. The window is now securely locked.

Awning Windows

Opening

Unlock the two locking levers (see Terminology), one on either side of the awning window. Crank open the window to the desired angle for ventilation. Do not force the operator when the window comes to the end of travel. Small angles (10 to 20 degrees) of opening will result in efficient ventilation.

Closing

Crank the handle of the operator until the sash closes into the frame snugly. Now push both locking levers down until they come to a full stop. The awning window is now securely locked.

WARNING!
Casement and awning windows open outwards and as such represent a hazard to pedestrians when they open onto decks or walkways.

Section 3 Caring for your Windows

Congratulations! You have chosen quality windows from EuroLine, manufactured with pride and care. The care and maintenance tips that follow will help you care for your windows in the best way.

A Word About Protection

Always protect your EuroLine windows from welding spatter, open flame, excessive heat, grinding, sparks, concrete, mortar, stucco, paint, and other harmful construction materials or processes. All of these can permanently damage both the frame finish and the glass surface. Such contaminants must be removed from the glass surface as soon as possible.

How To Clean The Glass

Use an approved window cleaning agent, following the instructions provided with the product. The cleaning agent must not be acidic or caustic since damage could result to the frame or hardware.

To remove glue, caulking or paint from the glass, contact a glass cleaning professional.

How To Clean The Frame and Sash Profiles

1. Vinyl (uPVC) Surfaces

Note:
Do not use a dry cloth to wipe the frame. This causes static electricity to build up, which attracts dust and dirt to the frame.

For uPVC white or beige frames, remove light stains with a mild, non-abrasive household cleaner and a soft cloth. Apply the cleaning solution to a damp cloth, not to the frame. Wipe the soiled frame surfaces to remove dirt build up. For heavily soiled areas use light pressure on the damp cloth. Dry the interior surfaces of the frame with a damp cloth. Rinse the exterior surfaces of the frame with clean water.

For grease or oil stains, use 99% isopropyl alcohol, but only on the immediate area of the stain.

Avoid aggressive cleaning methods such as sandpaper or steel wool: these will damage the smooth surface. **Do not use solvents such as acetone or paint thinner: these could affect the color of the frame.**

Scratches and dents can only be removed by qualified trades people.

2. Color or Wood-Grained Film (Laminated to the uPVC)

Clean with standard cleansing agents excluding abrasive products. The film on the frame is resistant to ammonia water, aliphatic benzene and light alcoholic-water solutions. **The film is not resistant to organic solvents or mixtures of organic solvents (e.g. varnish thinners, varnish removers, polish, adhesives and the like). Do not use organic solvents of any kind, since damage will result to the film.**

Scratches in the film that expose the underlying uPVC may be repaired with matching paint. Touch-up paint pencils are available from EuroLine windows.

A Word About Windows That Open

Keep the channel groove in the base of the frame free of dirt and debris. Make sure the drain holes are not blocked with dirt or debris. Blocked drain holes can affect the performance of the window.

How To Clean Your Operating Hardware

All of the hardware is protected or enhanced by special coatings and lubricants. These protective coatings and lubricants can be damaged or removed by common household products. Cleaners to avoid include: vinegar based cleaners; citrus based cleaners; industrial strength cleaners; and abrasive cleaners.

WARNING!
Glass cleaners and brick/siding washes, with the above ingredients, must not come in contact with the hardware for the above reasons.

It is recommended that window hardware be inspected once a year. In beach areas, rinse sand and grit from hardware as required, since wind-blown dust and dirt can cause the windows to be more difficult to operate, as well as cause the hardware to wear or corrode faster.

WARNING!
In coastal (salt water) locations, rinse the hardware every three months (or as conditions dictate) with fresh water, and re-lubricate.

Clean water should be used to flush the hardware clean. The hardware must be cleared of dirt and grime build-up. Particular care should be given to cleaning dirt in the slides of hinges. A mild (hand wash) dish soap and water mixture can be used to loosen stubborn dirt. Always rinse the hardware with clean water. Allow the hardware to dry completely before lubricating.

Lubrication of Hardware

How To Lubricate Your Operating Hardware

After the hardware is clean and dried, it must be lubricated to restore the smooth operation and corrosion resistance. It is recommended that the replacement lubrication be similar to the lubrication removed. For instance, if the gears were coated with grease before you cleaned them, relubricate only with grease, not a spray such as WD40, etc.

The following list of products will help you know where each should be used:

Lithium grease – Used on all gear drives, such as operators and locks.

WD40 – Used on all sliding or rotating joints; such as rollers, hinges and chains. It doesn't last as long as oil.

Automotive grease or petroleum jelly – Will work the same as white grease, but not as waterproof, and will attract dust. Can stain wood- be careful!

Light oil – Can be used on sliding and rotating joints. Can stain wood- be careful!

Graphite – Can be used on sliding or rotating joints. Also works well on cam locks and hinges.

WARNING!
Avoid the use of silicone based sprays or lubricants as they can damage plastic parts.

Oil and grease can stain wood surfaces. Take care to avoid contact with wood.

Gaskets

All gaskets must be examined periodically for damage. Windows or doors with damaged gaskets will not perform properly. If you have air or water leaks, inspect the gaskets carefully. Replace the gasket if required.

Section 4 Ventilation and Condensation

If your home was not designed with a continuous fresh air ventilation system, you may need to open your windows regularly to make sure that your living area is well ventilated, and to prevent condensation.

You will find that you have effective ventilation by opening your windows slightly.

Condensation and Household Humidity

Warm air can hold much more water vapor than cold air. Condensation will occur when warm, moist air makes contact with a cold surface. You can see this on a mirror in a bathroom. As the air cools, it releases the moisture onto the cold surface, and drops of water will appear.

Condensation depends on two factors: the relative humidity inside your home, and the temperature of the interior surface of your windows.

There are two things you can do to reduce the occurrence of condensation. The first thing is to choose energy efficient windows with glass that keeps the heat in your home. Energy efficient windows stay warmer in the winter. The second thing you can do is to reduce the humidity in your home.

Condensation is not always a sign of poor quality windows. New homes are often built very airtight, and may therefore have higher humidity levels than older homes. Condensation is more common on the indoor side of windows and doors. **It can also appear on the outdoor side of very energy efficient windows.**

What are some of the causes of humidity in the home? Warm room temperature increases the moisture-carrying capacity of the air. Plants release large quantities of water vapor. Certain cooking methods also release much moisture into the household air. Humidifiers, interior fountains, large fish tanks, and clothes dryers not vented to the exterior all contribute to high levels of household humidity.

If your EuroLine windows show room side condensation, consider how you could reduce the humidity level in your home. This will control the condensation. When the outdoor temperature is very low, even energy efficient windows will get colder, and condensation may appear.

The chart to the left shows the general relationship between interior humidity and the occurrence of condensation when the outside air temperature is low. The actual conditions under which condensation can occur depend on a number of factors, such as the type of glass in the windows, the air tightness of the home, the size of the windows and their position within the wall, the presence of blinds or window shades, and the interior humidity. In most cases, the interior humidity is the only factor which is under the homeowner's control.

Relationship Between Outdoor Temperature and Condensation for Double Glazed Windows (Clear Glass)

Outside temperature		Approximate interior humidity at which condensation occurs at center of glass.
Fahrenheit	Celsius	
40˚	4˚	63%
32˚	0˚	57%
20˚	-7˚	50%
10˚	-12˚	45%
0˚	-18˚	40%
-10˚	-23˚	36%
-20˚	-30˚	32%

Note:
These values are based on center-of-glass temperature. Condensation may occur at lower humidity levels on the edge of glass.

Section 5 Screen Installation

Screens are installed from inside the building. The bottom of the screen has clip springs. Insert the bottom of the screen into the screen groove shown in figure 5-1. Insert pressure downward on the springs so that the top of the screen slides into the groove. Once the screen is lined up vertically, release the downward pressure so that the springs hold the screen secure in the groove.

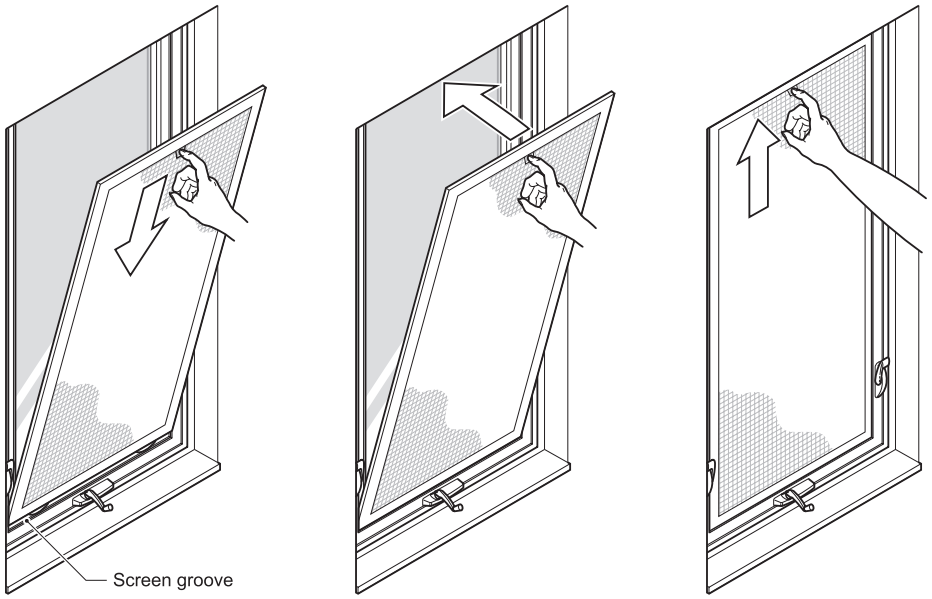


Figure 5-1. Screen Installation

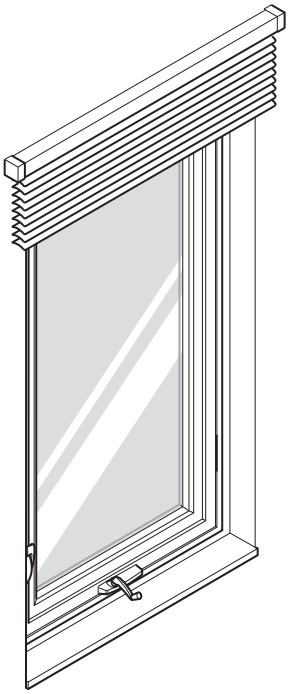
Section 6 Blind Installation

Most window coverings are outside-mounted: they are attached to the room side of the wall above the window, and are made to be wider than the window opening. Some window coverings can be inside-mounted: vertical mini-blinds and pleated shades can be attached to the wall above the window. Inside mounted blinds and shades are made to be narrower than the window opening.

Here are some things to consider when choosing the kind of blinds you will be using with your Series 1400 windows.

Outside Mounting (outside window return)

Outside-mounted window coverings are attached to the room side of the wall above a window, and are made to be wider than the window opening.



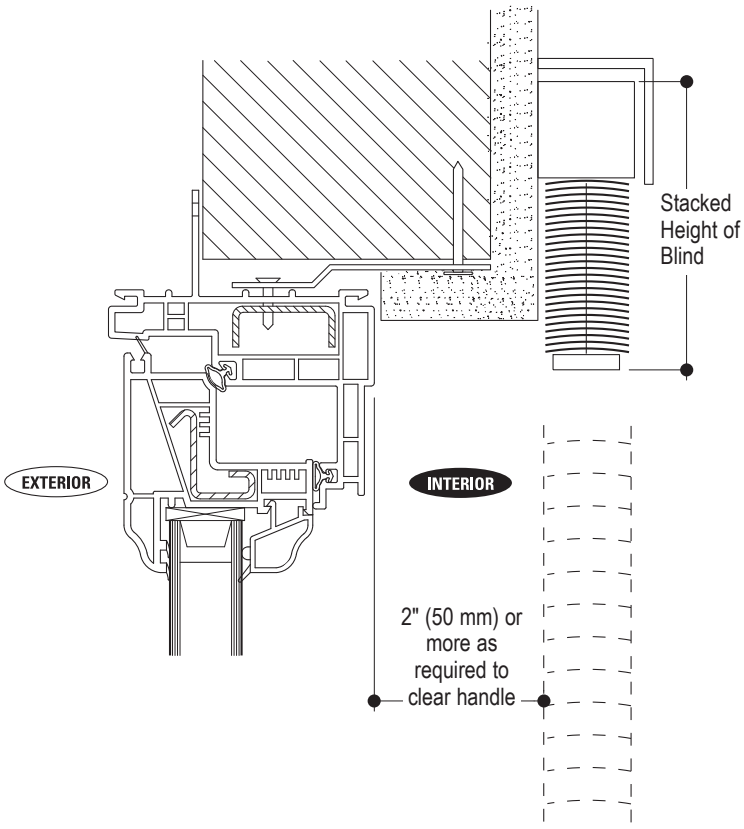
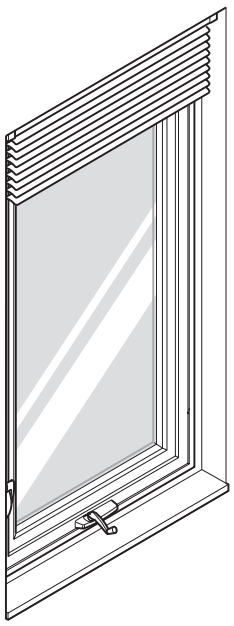


Figure 6-1. Outside mounted blinds

Note:
Interface details and flashings are not shown. Such details are the responsibility of others.

Inside Mounting (inside window return)



Inside mounted window coverings such as vertical mini-blinds and pleated shades can be attached to the wall above the window.

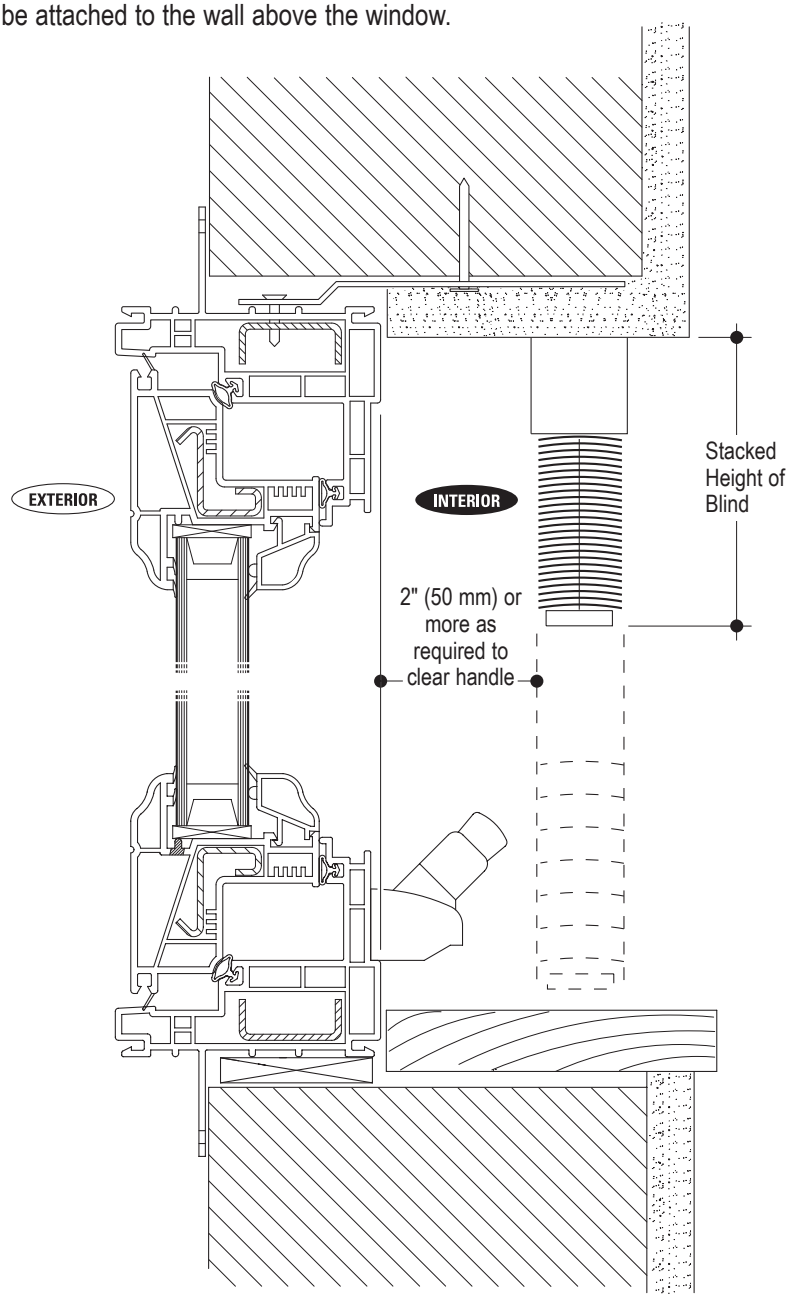


Figure 6-2. Inside mounted blind

Note:
Interface details and flashings are not shown. Such details are the responsibility of others.

Thermal Stress Considerations

There are several things you should consider before you choose to use frame mounted blinds.

CAUTION

Glass is not warranted if blinds are not at least 2" (50mm) from the glass surface and vented both top and bottom.

Because the blinds hang close to the glass, they can affect the window in several ways. In winter, they may shield the glass surface from room heat and increase the incidence of condensation. In winter and summer, they may trap solar heat against the glass and increase the risk of thermal glass breakage.

These effects also depend a great deal on the local climate. Consult your blind supplier for their experience in your area before you decide to use frame mounted blinds.

For more information on these quality products please contact:

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