



KÖMMERLING®

Installation Guide

Receiving, Handling, Storage, and Installation

System 76 MD

Fixed Windows

Dual Action Tilt + Turn Windows

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Unit details and specifications are subject to change without notice.

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1 Before you begin

1.1 Kommerling Windows and Doors — German engineered to perform

These are high quality windows that have unique operating features. The instructions for handling, storing, and installing these units may be different from other window units you have installed. Thoroughly read and understand these instructions before you begin installation. Proper installation is necessary for Kommerling windows to perform as designed. It is presumed that the installer possesses basic woodworking skills and an understanding of wall and roof installation, sheet metal work, and joint sealant guides.

Improper installation (Failure to install and maintain this unit according to these instructions) will void any warranty, written or implied as well as compromise the units rating for water and air resistance. The installer is responsible for contacting the contractor, structural engineer, architect, consumer, or other person having authority to obtain information concerning proper installation according to local codes and/or ordinances.

1.2 Receiving and inspection

Conduct a thorough inspection of the window products immediately after receiving them. The windows should be inspected to confirm correct type, size, and for any shipping damage. All damages or freight claims must be reported within 48 hours of receipt and submitted in writing within 5 business days of receipt Kommerling USA, Inc.

Verify that you have all necessary hardware and accessory items.

Inspect the units again before installation to make sure they have not been damaged on the jobsite.

1.3 Safely unloading units from wooden racks

Kommerling units are shipped on wooden racks and secured with banding straps. In order to avoid accidents, place the wooden rack on a level surface with enough surrounding free area to safely maneuver the equipment and units being unloaded.

Take care when unloading the windows as they may have shifted during transportation. The windows are heavy. Always unload with at least two people. Leave all windows secured to the rack until just before they are unloaded.

1.4 Handling and moving units

Kommerling units are heavy. Always use specialized equipment or at least two people to carry them. Do not drop these units. The installer is responsible for safe handling of the windows, for selecting appropriate handling equipment, and for the safety of the installation crew. Kommerling suggests using vacuum cups whenever moving window units.

Windows are delivered in a vertical position and must remain vertical when moved and put down. **Do not** carry Kommerling windows either tilted at a sharp angle or in a horizontal position. **Do not** lay the units flat. Do not lift the units by the top framing member or bend the frames to go around a corner. Do not rack, twist, drag or pull window frames. Installers should wear clean gloves when handling products.

Frames with no glass can be heavy. Always carry the frames by supporting the frame weight from the bottom or by grasping vertical members near the quarter points. Lift frames gently. Never lift units by the top framing member or by a horizontal framing member. When lifting frames with vertical mullions, support the joints between mullions and the horizontal framing members. If you lift the frames by the ends you will crack the frames.

Use vacuum cups to carry frames with glass as this is considered to be the safest way to carry heavy glass and window units. Kommerling windows may have the glass surfaces covered with protective plastic film and vacuum cups can be used safely with these units. When using vacuum cups on plastic film, do not attach the cups on the joint seams. If the plastic film is loose or peeling, or if there is a condition that causes you to believe it is unsafe to use the cups on the film surface, remove the film before applying vacuum cups.

Cold weather makes the windows brittle. Avoid any impact to the frames, sash or glazing bead when handling or installing at temperatures below 40°.

1.5 Storing Kommerling units

Please review this section carefully. You are responsible for damage to the units from the time they are delivered until they are installed and turned over to the owner.

Protect stored windows against other job site hazards and contamination such as welding splatter, grinding sparks, concrete, mortar, stucco, paint, dust and other harmful installation materials. Properly protecting the window units during storage is important to safeguard their intended function, aesthetics, and durability. Doing so can speed up or eliminate any cleanup and it can also prevent unnecessary damage.

Windows shall be stored out of the weather in a clean, dry, low-traffic area, away from direct sun light, extreme temperatures and temperature changes. Store windows inside if possible.

Do not leave wrapped windows exposed to weather, sunlight or heat. They must be well ventilated so that heat cannot be trapped under protective coverings. Heat trapped between surfaces and reflected by glass coatings can lead to permanent damage of frames, finishes, and glass.

Do not store windows in containers, trailers, or areas that might undergo dramatic fluctuations in temperature and humidity. Do not store near hazardous or chemical materials. Off-gassing of these materials may degrade the window finish or seals.

Store window units on a flat level surface in a way that will protect the integrity and perimeter of the unit. If windows must be stored so some lean against others, always stack the largest units at the back in a completely upright position and proceed forward with gradually smaller units. Never lean windows against each other without protective material between them. Always secure stacked units to prevent falling.

Units with a flange have shipping blocks on the bottom. Make sure windows are always supported on the blocks.

1.6 Kommerling windows and exterior finishes

The integral mounting flanges on Kommerling windows are **not** structural nailing flanges. They must **not** be used to anchor the window to the wall structure. Kommerling will provide anchoring straps to permanently mount the window into the window/wall assembly. Fasteners penetrating the flanges can cause operating problems and damage that is not covered by warranty. No permanent fasteners are to penetrate window flanges after the window installation. The builder or person of authority shall notify all trades of this requirement.

Exterior finish material must not restrict thermal movement of the window unit. Exterior finish material details must allow for movement between the exterior finish material and the window frames. Exterior finish material that restricts movement between the exterior finish material and the window frames can result in damage to the windows.

Kommerling strongly recommends that builder and building designer review exterior finishing details and coordinate the work of trades to ensure that fasteners used to attach exterior finishes and flashings do not penetrate Kommerling mounting flanges and to ensure that exterior finish material details allow for movement between the exterior finish material and the window frames.

1.7 Building codes

Kommerling builds quality units based on information provided by the purchaser. It is the responsibility of the owner, architect or builder to select and install units in compliance with all applicable laws, regulations and building codes.

1.8 Building interface detailing

These instructions show you how to place, shim and anchor the windows to the building. They do **not** show you how to prepare the building envelope and rough opening nor how to apply all the sealants, flashings, or barrier membranes required for a code compliant and weather-sealed installation. These requirements vary from one jurisdiction to another. It is presumed the installer has a working knowledge of the tools, equipment, and methods necessary for the installation of fenestration units. It further assumes familiarity with flashing and sealing, glazing procedures, finishes where applicable, and an understanding of the fundamentals of installation that affect the installation of these units.

Before installation the authority having jurisdiction (architect, building envelope consultant, local building department or building inspector) should be consulted about requirements for weather-tight installation, including use of flashings, sealants and barrier membranes. Kommerling recommends following ASTM E 2112-01 guidelines for sealing and flashing exterior windows.

1.9 Rough opening

The quality and installation of the material/lumber and fasteners of the rough opening must be structurally adequate for design load requirements. The structure above all window openings must be designed to limit deflection due to dead loads and live loads. The maximum allowable deflection of the structure above or below Kommerling windows is +/- 3/8".

Check all rough openings to see if they are square and 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 in a square, level and plumb way. Maintain a uniform space around the frame where possible, even if the rough opening is not. If the outside face of a wall is bowed or leaning, install the window to be vertical. If any conditions exist that would prevent the proper installation of the fenestration unit, or prevent application of materials and components in accordance with local codes, inform the general contractor or the party responsible for the installation. Make sure that the general contractor corrects the rough opening if you find the rough opening does not allow you to install the unit perfectly level, square, plumb, and straight in every direction.

The rough opening size for Kommerling windows should be 3/4" -1" wider and 3/4"-1" taller than the outside measurement of the window frame.

1.10 Compatibility of materials

Sealants, adhesives, adhesive tapes and barrier membranes used with Kommerling windows must be compatible and safe for use with rigid PVC and Kommerling painted and laminated color finishes. Installer or authority having jurisdiction is responsible to select compatible materials. The Kommerling warranty does not cover damage to Kommerling units or surrounding materials arising from the use of incompatible or unsuitable units.

If you are not sure what the finishes are on the Kommerling units you are installing, contact your Kommerling representative.

1.11 Protecting installed units

Use caution to avoid damage to windows before and after installation. Many field-applied protective coatings can damage fenestration gaskets and sealants, especially insulating glass sealants, and are not recommended. Contact Kommerling before applying any such coatings.

Do not block sashes in the open position with lumber or other materials.

Keep sills of operable windows free of dust, dirt and installation debris. Make sure gaskets are not damaged or dislodged and that drain slots are not blocked.

Protect installed windows from other installation activity such as welding spatter, grinding sparks, concrete, mortar, stucco, paint, acid solutions used to wash masonry and other harmful installation materials and practices.

Do not use metal scrapers, paint thinners, chemical solvents or abrasive cleaners to clean any part of the glass or framing on Kommerling units during or after installation.

1.12 Protective tapes and protective films.

Vinyl window frames may have protective plastic tape applied to interior and exterior surfaces to protect them during manufacturing and handling. Glass surfaces may have protective film applied to interior and exterior surfaces. Protective tape on exterior vinyl surfaces must be removed as soon as units are installed. Protective film on exterior glass surfaces must be removed within twelve months of installation.

Protective tape and masking tape should not remain on exterior vinyl surfaces for an extended period of time. They will begin to fuse to the unit surface making the adhesive residue difficult to remove. Failure to remove tape at the time the frames are installed may permanently damage the frame finish.

Do not remove the protective tape or film in the presence of flammable and explosive chemicals and gases. Removal can cause sparks that could ignite combustible liquids used nearby.

2 Tools and Materials Required

2.1 Tools required

- 🔧 24", 48" and 72" levels which are needed for tall windows. Substitute a cross line laser level for ultimate accuracy.
- 🔧 Framing hammer
- 🔧 Flat pry bar
- 🔧 Screw gun
- 🔧 Screw drivers
- 🔧 Tape measure
- 🔧 Caulking gun
- 🔧 Small adjustable crescent wrench or 11 mm open end/box wrench, 11mm socket wrench (may be needed for certain hardware adjustments)
- 🔧 Vacuum cups - Minimum two vacuum cups are recommended for handling large heavy windows.
- 🔧 3, 4, 5 and 8 mm Hex key or combination Hex-socket tool (required for hardware adjustments such as clearance and locking tightness adjustments).

2.2 Materials required

Treated wood products can be corrosive to many commonly used fasteners. All the fasteners are to be corrosion resistant and selected for compatibility with the substrate.

- 🔧 Fasteners for securing Kommerling strap anchors to wood substrates: #10-13 x 1-1/2" stainless steel Pan head screws.
- 🔧 Fasteners for securing Kommerling strap anchors to steel studs: #10-13 x 3/4" self drilling pan head screws.
- 🔧 Sealants and membranes - Sealants and barrier membranes for air and water seal at perimeter joints shall be compatible with rigid PVC, with building substrates, and with one another.
- 🔧 Sill support shims - Plastic or other non-deteriorating and non-swelling/non-compressing window support shims, min. 1-1/4" x 1-1/2". Shims may be purchased from Kommerling in various thicknesses.
- 🔧 Shim blocks - Synthetic, plastic, or treated plywood shim blocks to be used at jams.
- 🔧 Caulking and backer rod - Compatible sealant for second plane of protection at interior perimeter of each window.

2.3 Materials supplied by Kommerling

- 🔧 Strap anchors - Strap anchors are shipped loose with every order. The anchors are in one or more cardboard boxes and are identified on the packing slip. Make sure you have all the anchors you need before you start installing windows.
- 🔧 Drain caps - Drain caps are shipped loose with every order.
- 🔧 Hex keys
- 🔧 Tilt + Turn windows and: 4 mm hex key

- ❑ Outswing windows and: 3, 4, and 5 mm hex keys
- ❑ Assembly key: the assembly key is used to remove the pin from the top hinge of Tilt + Turn Windows. It can also be used as a temporary handle to open and close Tilt + Turn Windows.
- ❑ Handles and keys - Handles and screws are in pre-packaged plastic bags. Keys supplied for that have key lock cylinders.

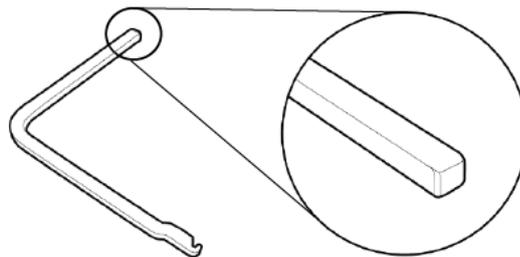
3 Installing Windows

3.1 Removing the sash before installation

Depending on the size of the unit, it may be helpful to remove the sash to make the units easier to handle. In order to remove a sash you need to install a handle or use the assembly key that will let you operate the hardware.

There are several possible operating modes. Dual action sashes have labels showing the operating mode of the unit. They are located on the handle side of the sash.

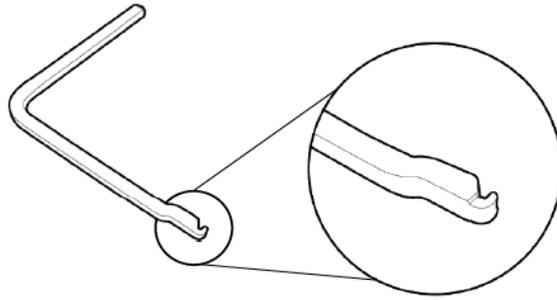
The sashes will need to be operated for removal. The window handles can become damaged during installation. It is advisable to use only the assembly key to operate all of the windows during installation. The square end of the assembly key can be used as a temporary handle to operate the windows. This ensures your handles are not damaged during installation.



The sash is heavy! **DO NOT** try to remove the sash by yourself. Kommerling recommends a crew of at least two people for this procedure.

To remove the sash, insert the square end of the assembly key into the center hole of the handle location. Partially open the sash and remove the hinge cover. Starting with the top hinge, grasp the top and bottom edges of the upper hinge cover and pull them towards you. Remove the hinge cover.

Once the hinge cover is removed, insert the hook end of the assembly tool into the bottom of the hinge.



With a gentle tug, pull the assembly key down to remove the pin from the hinge. The hinge on the sash will then detach from the frame.

Tilt sash towards you slightly then lift it off the lower hinge pin.

Put the sash in a safe place, on support blocks, on a clean and dry surface. Make sure dirt and sand do not enter the lower hinge hole while the sash is stored in this way.

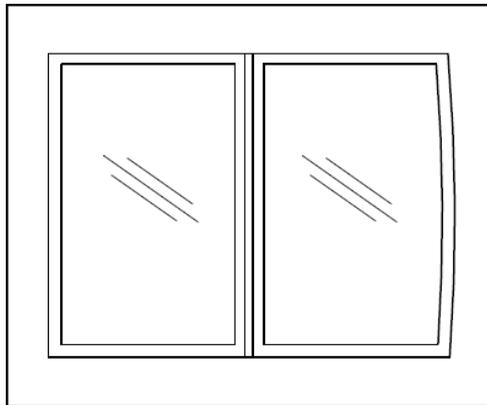
Push the upper hinge pin from below until it "clicks" in place. Put the hinge cap back on the hinge so it does not get lost.

3.2 Prepare the frames for installation

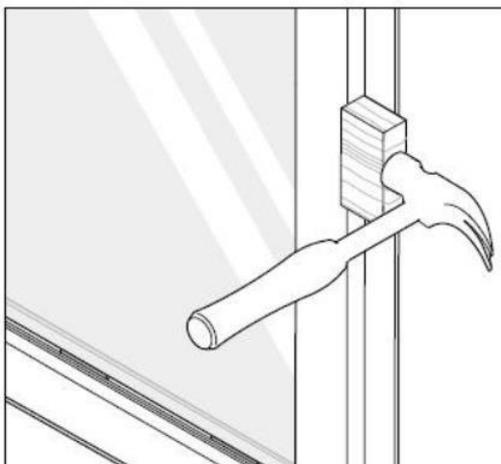
Remove the wooden shipping blocks that are attached to the flange (flanged windows only).

Sometimes a frame member may become bowed by actions such as dragging it by the edge of the frame.

See Bowed frame for an example.



The frame may be straightened by tapping it back into place with a wooden block and a hammer.



After straightening the frame, locate the anchor locations with reference to frame. Locate anchors on both sides of each frame corner at 6" from the corner. Locate anchors on both sides of each vertical and horizontal mullion at 6" from the mullion centerline. Locate intermediate anchors at a maximum spacing of 12" on center in between the corner and mullion anchors unless you have shop drawings that show a different spacing.

Typical anchor spacing – composite (one piece) frames

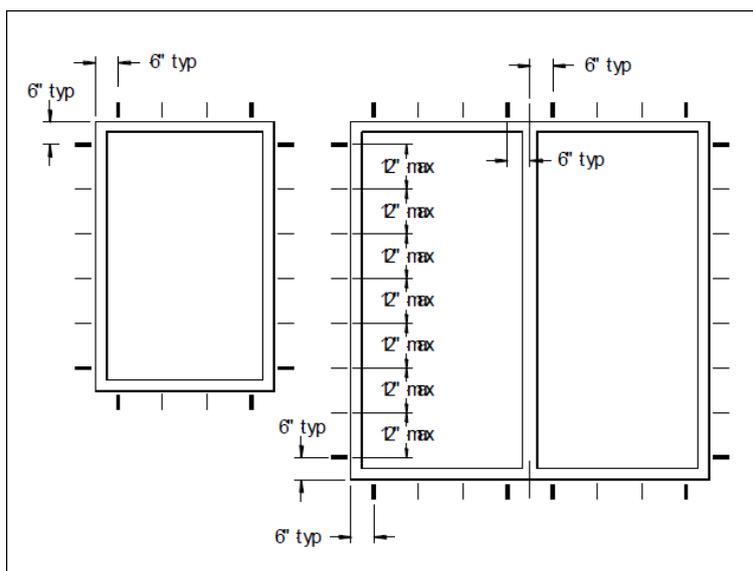


Figure 5

Typical anchor spacing – combination (coupled) frames

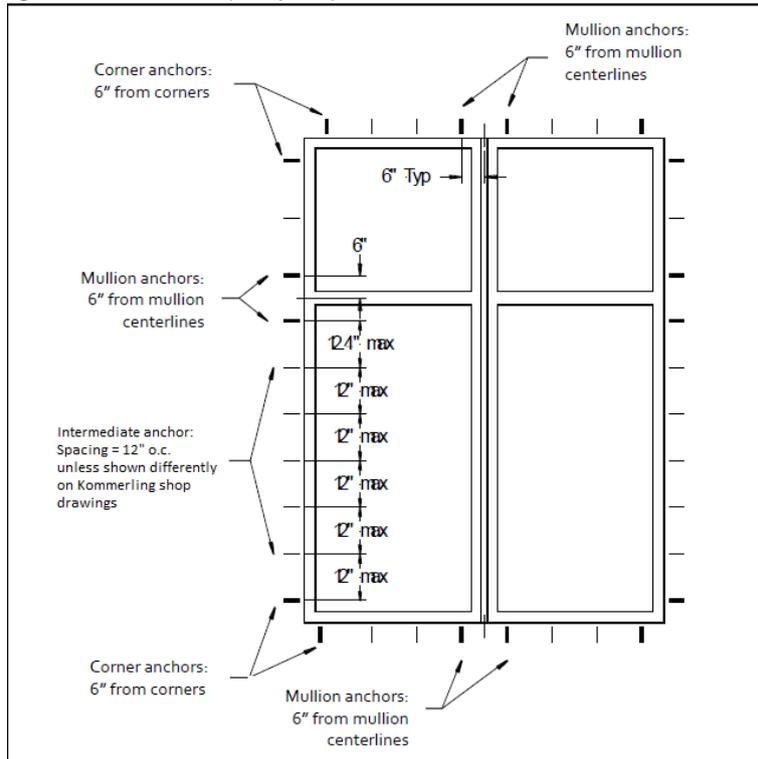
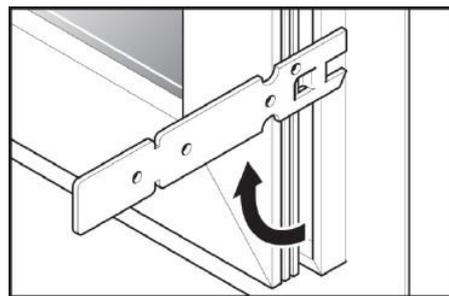


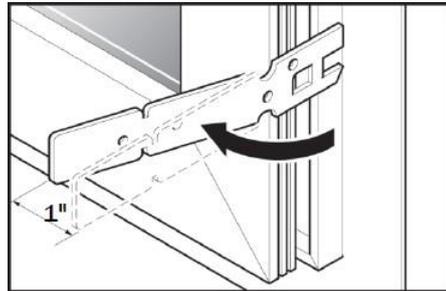
Figure 6

Install anchors at spacing shown in Figure 5 and Figure 6 or as indicated on Kommerling shop drawings. If no shop drawings are provided, follow anchor spacing shown.

Place the anchor in the groove so it can be turned clockwise. You cannot turn the anchors counterclockwise.



Bend the anchor 1" towards the center of the window/door. **DO NOT** over-bend. If you bend them more than 1", you may have problems with the installation later.

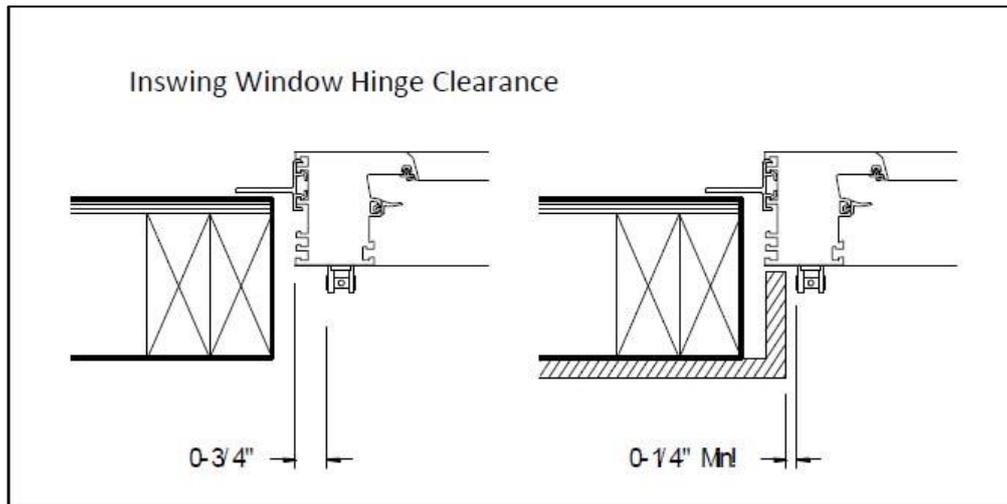


Continue to install the other anchors using the same technique.

4 Install Frames into openings

STOP AND READ BEFORE PROCEEDING!

- ❏ Measure the rough opening to ensure that it will allow installation of the window in a square, plumb, and level condition in accordance with manufacturer's instructions. If the opening will not allow correct installation, correct these deficiencies before proceeding.
- ❏ Check that the fenestration products are the correct size and type for the opening, including tolerances for plumb, level, and square installation.
- ❏ Verify that all interfacing components (such as panning systems, drip caps or moldings, and other weather barrier systems) have been installed.
- ❏ Follow the handling instructions in this document and on the Kommerling sticker that appears on each frame.
- ❏ For frames with hinges, make sure to position the frame in a way that will allow finish materials to clear the edge of hinge by at least 1/4". When jamb finish materials are thicker than 1/2" you may need to reposition the hinge side of the frame farther from the rough opening to allow finish materials to clear the edge of hinge by at least 1/4".



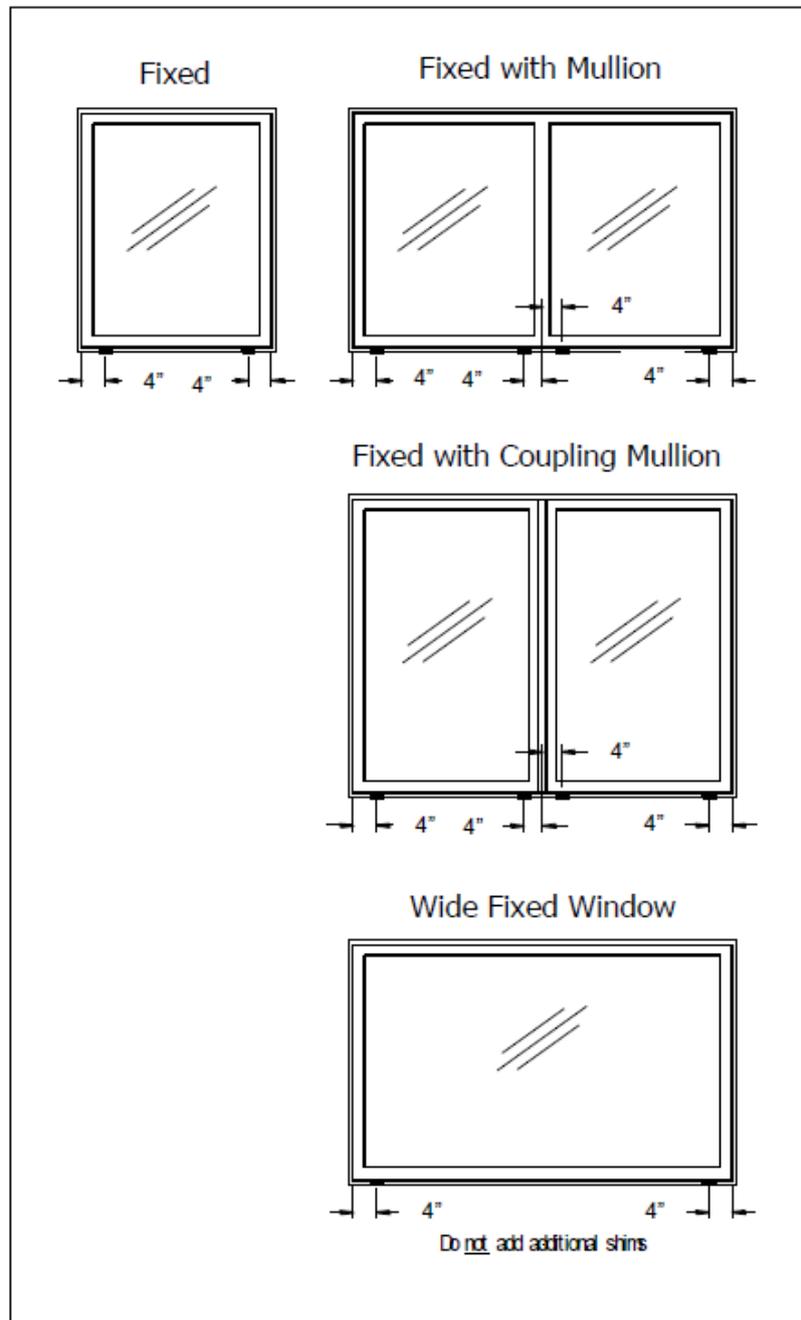
4.1 Position support shims

Kommerling recommends using composite or stackable plastic non-compression shims of different thicknesses to achieve the correct placement of the window in the rough opening. Minimum shim size: 2" x 1-1/2".

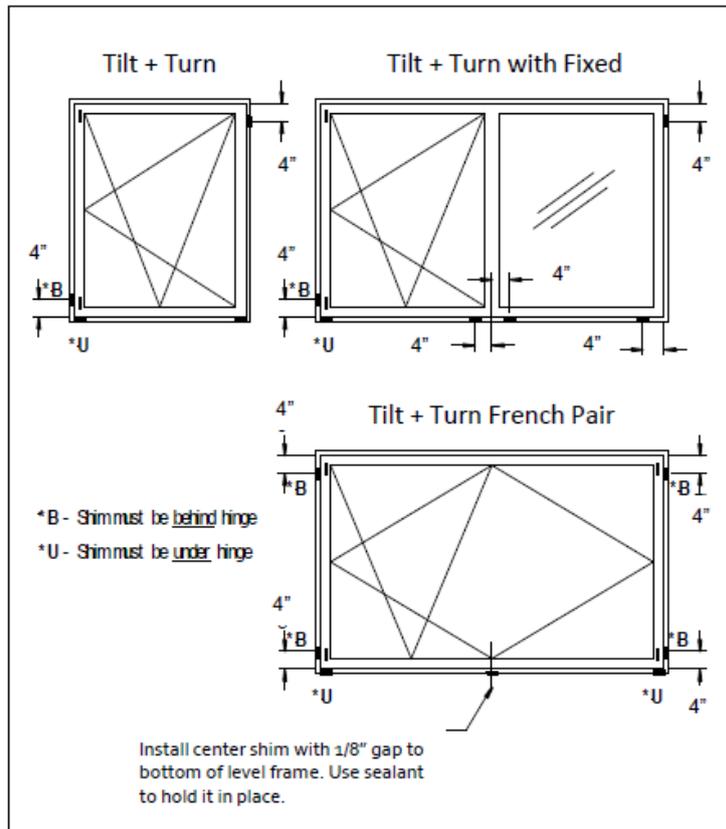
Place sill support shims under each frame where shown in the following diagrams. Adjust thickness of sill shims to ensure frame is level, straight, and plumb. Do not bend frames by forcing shims into place. Adjust the height of the shims to ensure there is a minimum 1/2" (13 mm) gap at the head.

Place lateral support shims at the jambs where shown in the following diagrams. Jamb shims are required near the tops of jambs opposite to the hinge side to prevent the frames from moving sideways from the weight of window sashes.

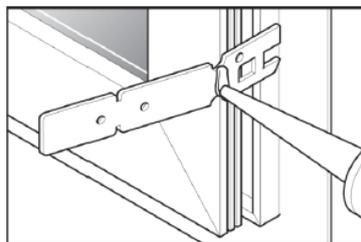
For fixed (non-operable) windows place shims 4 inches in from each corner and 4 inches from the center of each mullion to support the weight of the glass. These positions align the shims with the glass supports inside the frame. To prevent bending of the sill you must place the shims within 1" of the positions



For operable windows place shims under the vertical jambs to support the weight of the glass as transferred to the frame through the hinges. Then place shims where shown at the jambs to keep the frame from bending sideways. To prevent bending of the sill and jambs you must place the shims within 1" of the positions shown



4.2 Seal and adjust the anchors

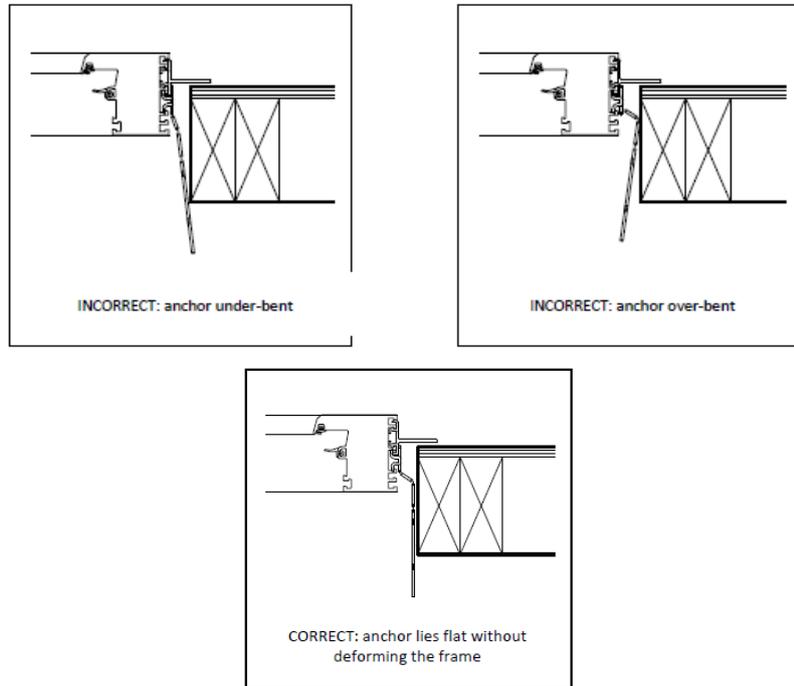


Apply sealant generously on the side of the anchor that will lie flat against the rough opening facing you (see drawing), near to the edge where it bends. Apply the sealant across the entire width of the anchor to maintain the continuity of the air barrier when the installation is finished. To ensure compatibility, use the same sealant that will be used for the entire installation.

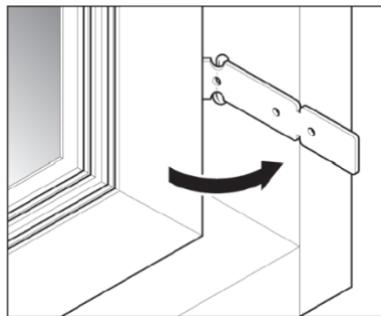
The anchors are designed to allow for anchoring the window securely for different gap widths. Adjusting the anchor to suit the gap is a two-step process: first you pre-bend the anchor towards the window, and then back against the side of the rough opening. The objective is to have the anchor lie flat against the side of the rough opening before it is screwed in place.

For narrower gaps, pre-bend the anchor less. For wider gaps, pre-bend the anchor more.

Start by pre-bending the anchor about 30 degrees from the face of the rough opening, then bend it back. If it does not lie flat, pre-bend it again, more than before. Continue until there is a consistent feel for how much you need to pre-bend the anchors for different sizes of gaps. Take a few minutes to practice how much or how little you need to bend the anchor towards the window in order to have it lie flat against the rough opening when you bend it back.



To prevent problems later on with wall finishing or window operation, all the anchors must lie flat against the sides of the opening before they are screwed to the wall. If the bend doesn't allow the anchors to lie flat against the opening, the frame will twist when screwed in to place.

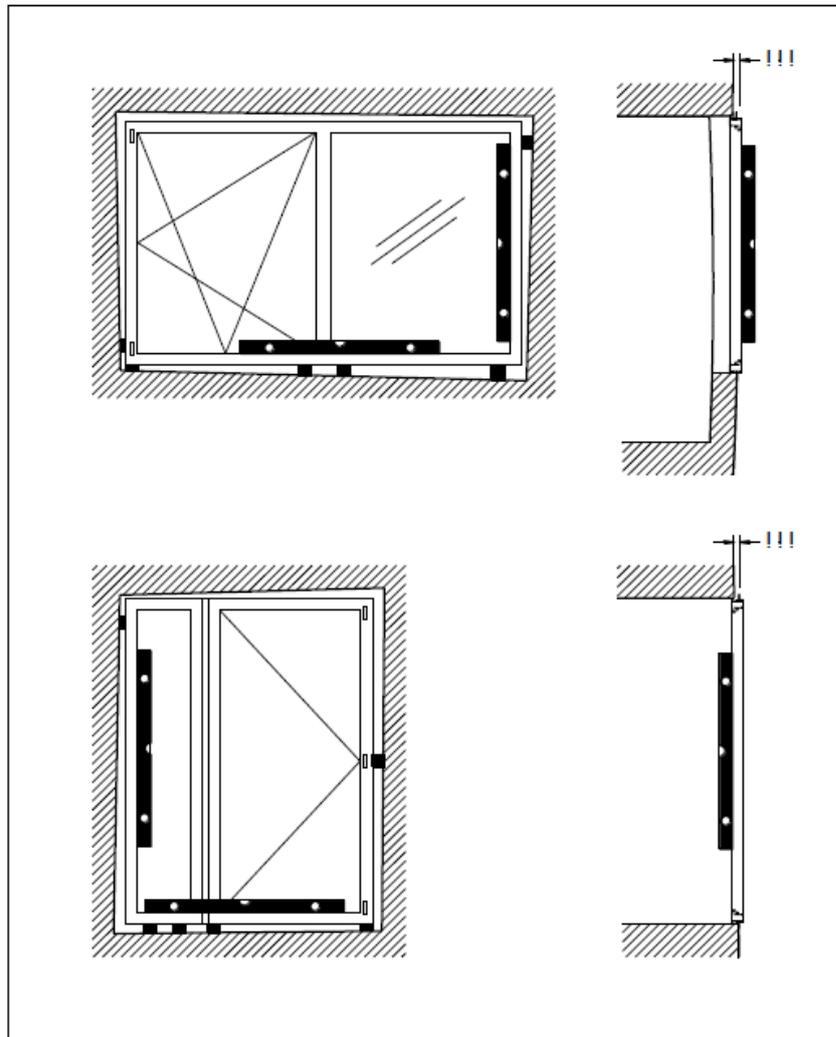


4.3 Place the frames into the rough opening

If the window is a fixed unit, center it in the rough opening with equal spacing on each side.

If the frame has hinges, first determine the thickness of the finish material. Then, position the frame to allow $\frac{1}{4}$ " clearance between the hinge and the finish material.

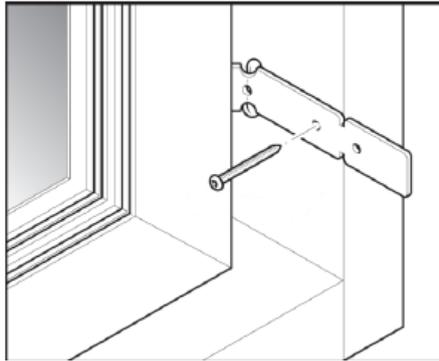
Before fastening anchors to the rough opening make sure the frame is plumb, level and square, even if the wall isn't.



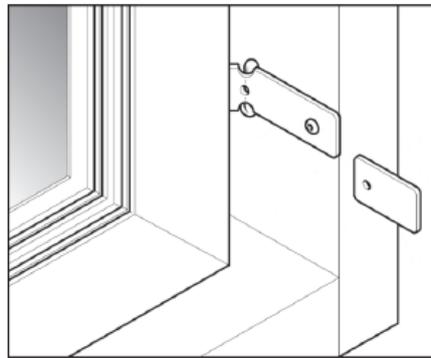
Do not fasten the anchors in sequence.

Start by loosely fastening the corners. Then fasten the anchors at the midpoints of the frame and at the mullions, installing the jamb shims at each anchor location. (there should be shims on either side of the anchors). Do not twist or deform the frame with the midpoint anchors. Finally, fasten the intermediate anchors. Alternate fastening from side to side and from top to bottom to lesson the chance of deforming or shifting the frame out of position.

Use the hole nearest to the window frame to fasten the anchor to the rough opening.



Remove the anchor tabs by bending or cutting the tabs where they extend past the inside face of the studs. Be careful to not damage the window or glazing.



Before moving to next step, recheck the frame to confirm it is plumb, level and square and not bowed or racked.

4.3 Re-Hang sash on frame

Remove the upper hinge cover and push the hinge pin down. Tilt the lower hinge pin towards you approximately 30 degrees. To prepare the sash for installation make sure there is no dirt in the lower hinge of the sash and make sure the handle is in the turn position (as when sash is swung open to one side). Get help to lift the sash, then set it down onto the lower hinge pin of the frame. Tilt the sash towards the frame carefully and align the top of the sash hinge with the slot in the hinge body on the frame.

As you tilt the sash into place, the shear arm at the top of the sash may disengage. If this occurs, gently lift the arm upwards and move it parallel to the sash, then press it downwards until it "clicks" into place. Push the upper hinge pin upwards until it "clicks" into place. The pin should easily click into place. Align the sash to the frame so the sash hinge is flush with the frame hinge. Make sure that the hinge pin is all the way up until the bottom is in line with the frame hinge. Replace the plastic upper hinge cover and close the sash.

4.4 Check sash operation

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

Open and close the sash several times. The sash should operate freely without binding at any point and all the hardware functions should operate smoothly.

If the sash does not operate properly or the hardware does not engage properly, the frames are not installed plumb, square and level, or the frames have become twisted during anchor installation. For help in diagnosing the cause of operating problems see section titled Troubleshooting sash operation problems.

If the sash binds or strikes the frame at some point, or if the handle cannot be fully rotated to lock the sash, there is a problem with the installation. Do not proceed with applying interior sealants until you have corrected the sash operating problems.

If the frame is twisted towards the side of the rough opening, loosen anchor screws and use a flat pry bar to straighten frame. Insert shims between frame and rough opening and re-tighten the anchor screws.

If the frame is twisted away from the rough opening, try to twist it into position. If that is not possible you may need to replace and re-bend the anchor so it does not deform the frame.

If the interior face of the frames is bowed, unscrew anchors in the affected area, straighten the frame, and re-fasten anchors.

If the outside edges of the frames are bowed, follow the same steps as for correcting twisted frames above.

If a sash has become out of square or has become bowed and cannot be straightened, it will have to be re-glazed and re-shimmed.

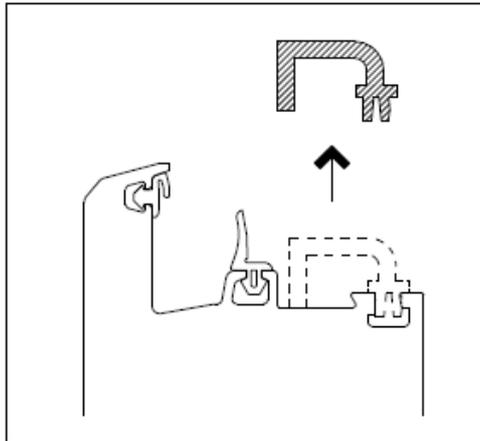
4.5 Establishing Continuity between the window unit and the other Components of the Building Envelope

The window installation system should integrate into the building envelope and provide a continuous air and water seal on all four sides of each window. To ensure success it is essential to have a thorough understanding of the building system employed to prevent water and vapor penetration through the envelope.

In the absence of this information, Kommerling recommends following ASTM E 2112-01 guidelines for sealing and flashing exterior windows. These guidelines provide instruction to achieve the best possible protection against unwanted air and water leakage.

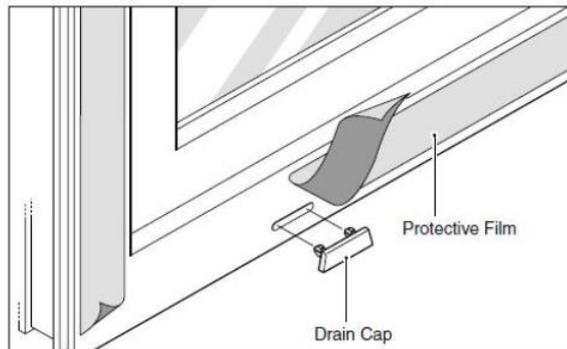
4.6 Remove sash spacer shims

Open each window sash and remove the spacer shims from all sides of the opening.



4.7 Remove protective tapes, install wind caps

Remove protective tape from frames and install wind caps to drain slots on the exterior of all windows and.



5 Troubleshooting sash operation problems

5.1 Operating problems

Operating problems include sashes binding in one or more places, sashes that cannot be closed or locked, and excessive air leakage.

Operating problems may have a number of causes, from faulty installation to building settlement to deformations arising from abuse or unusual environmental conditions. In most cases operating problems are due to deformations of the frame or sash that exceed hardware tolerances.

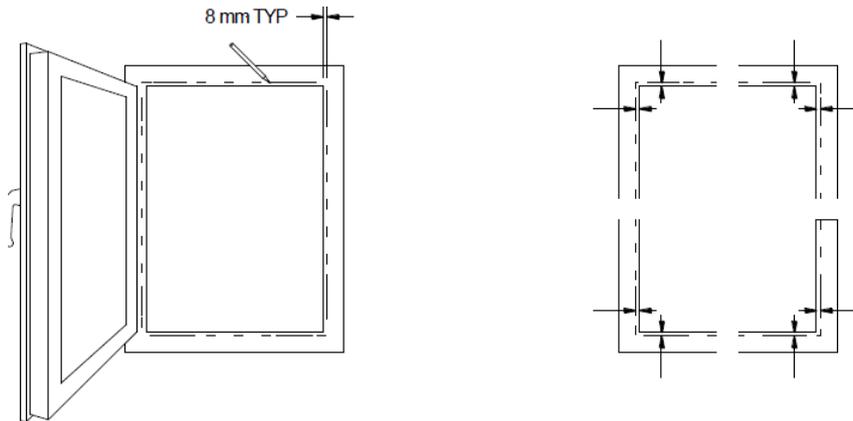
Do not make any assumptions about the cause of the problem. A common mistake is to start adjusting hardware before you have diagnosed the problem. This can add to existing problems and make them harder to correct.

Follow all the troubleshooting steps before making any hardware adjustments. Use the checklist to determine whether the operating problem can be corrected by adjusting the hardware, the frame members, or the sash.

5.2 Check the Overlap

Kommerling windows are designed for a 6.5–8 mm (1/4"–5/16") overlap of the sash to the frame. Trace an outline of sash corners onto the frame with a pencil.

If there is too little or too much overlap, the sash or the frame may be out of square.

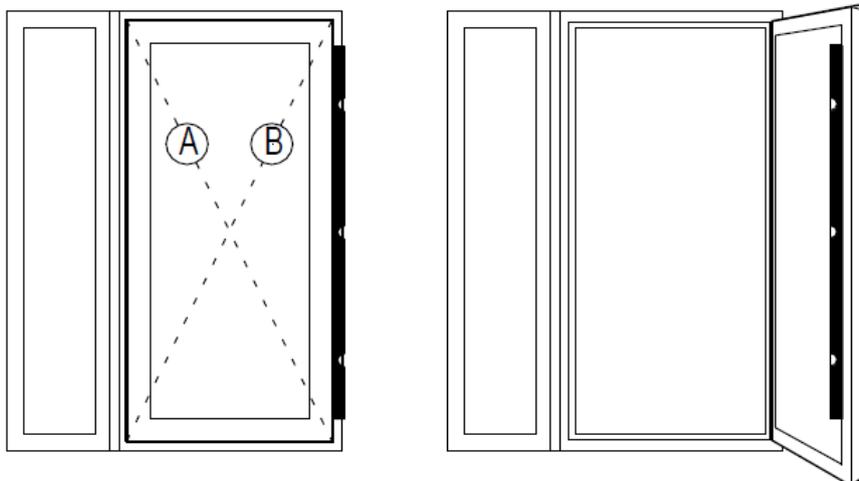


5.3 Check for squareness, level, plumb, bowing, racking, lean, or twist.

To determine if the sash is square measure the diagonals or from corner to corner. An out of square sash can cause operating problems.

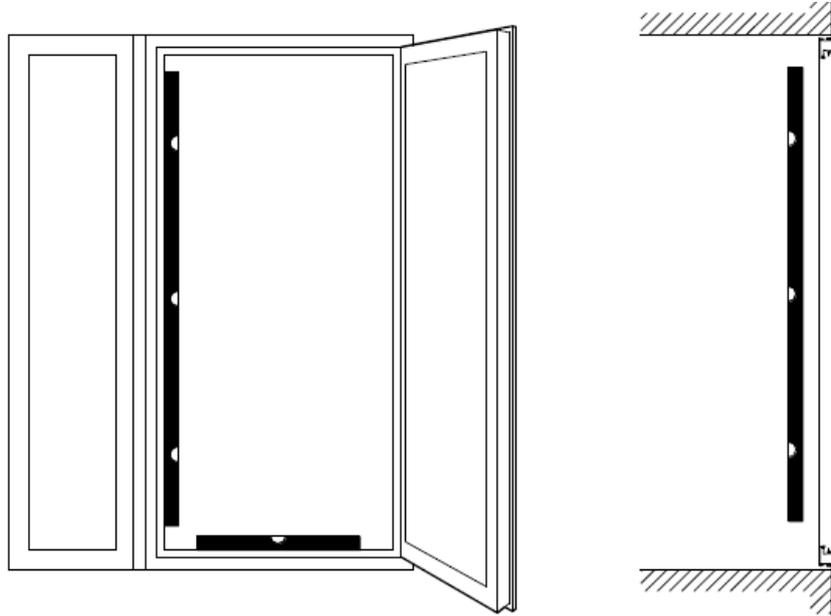
Use a 6 foot straight edge to determine if the vertical edges of the sash are straight when you are facing it. If edges are bowed, the hardware may not engage. If the sash is bowed towards the center of the glass, the glazing shims may have slipped.

Use a 6 foot straight edge on the face of the sash to determine if the top, middle and bottom are in line or bowed towards or away from the frame.



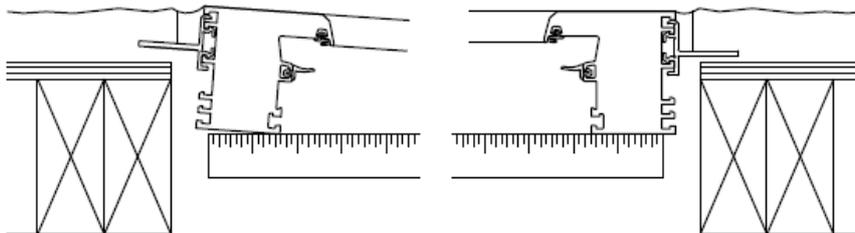
Use a 6 foot level to determine if frame and mullions are vertical when facing the window, and a shorter level to determine if the sill is level.

Use a 6 foot level on the face of the frame and mullions to determine if the frame members are leaning inwards or outwards at the top. Use a 6 foot straight edge on the face of the frame to determine if the top, middle and bottom are in line or bowed towards or away from the sash.

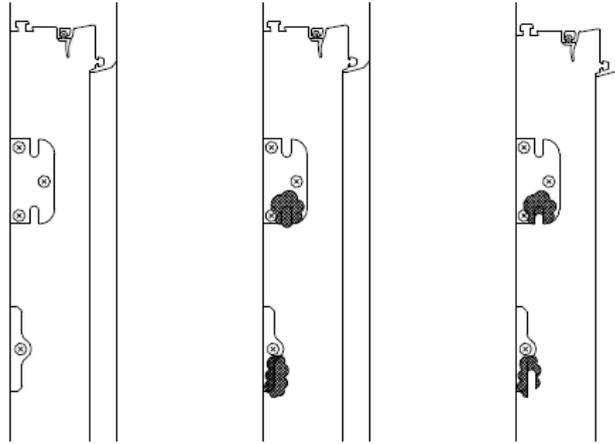


Incorrect bending of strap anchors can twist the frame, resulting in locking points that bind or don't engage. This is an installation problem that cannot be easily corrected after finishes are installed.

Use a straight edge to span between both jambs of an open sash to see if the jambs are twisted inwards (shown) or outwards.



It can be difficult to know whether locking points are engaged properly, especially on the hinge side of a sash. Apply putty to the slots where locking points are supposed to engage, close the sash, and then operate handle. Open the sash to see how far the keepers have traveled.



If frames are not plumb, level, square and straight, the frame installation must be corrected.

If sashes are out of square or bowed, they must be deglazed, re-shimmed, and re-glazed.

If hardware binds or does not close properly, the frame installation must be corrected. In some cases such problems can be corrected with minor hardware adjustments.

Contact your Kommerling representative for information about hardware adjustment and re-glazing or with questions about any of these instructions.

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