EUROLINE

WINDOWS

The Art and Practice of Fenestration

Bi-Folding Doors
installation instructions

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 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 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 s**pecific installation instructions.**

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

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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

Materials

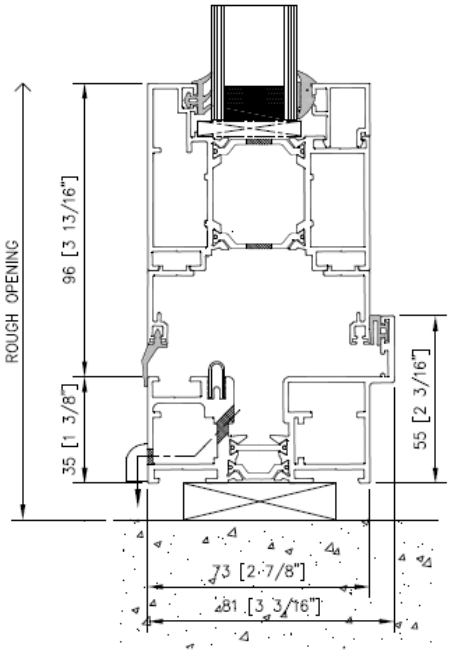
- Shims: use non-deteriorating, non-swelling, hard plastic (4"x 2") of several thicknesses to suit. Shims may be purchased from Euro-Line Windows in thickness of 2,3,4,5, and 6 mm.
- 2" Galvanized Roofing Nails (10 ½ ga.)
- 1 ½" #10 Pan Head Tapping Screws (cad plated)

Rough Openings

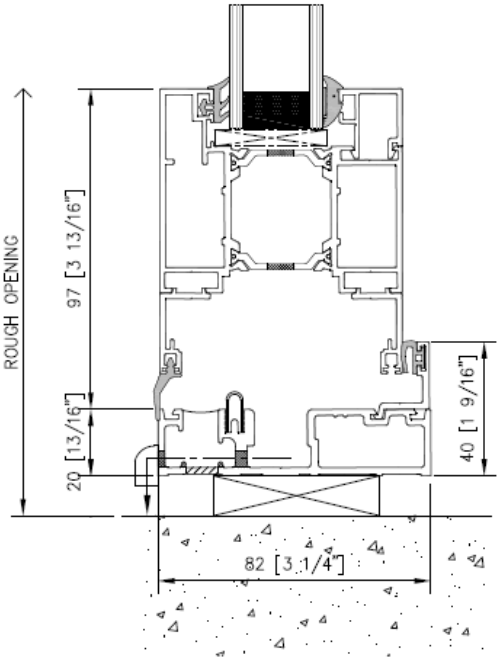
Make sure that the rough openings are square, and that they have a level sill and plumb (vertical) jambs. Make sure that the outside face of the wall is straight and plumb. If a rough opening is out-of-square, adjust the thickness of the shim blocks as necessary to make sure that you install the window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

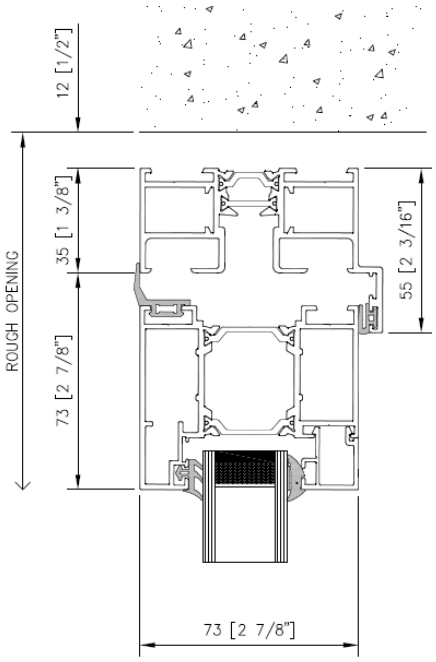
Make sure that the general contractor corrects the rough opening if you find the rough opening does not allow you to install the frame perfectly level, square, straight in every direction and plumb, and does not provide a minimum of 3/8" (10 mm) and no larger than 1/2" (12 mm) clearance between the top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



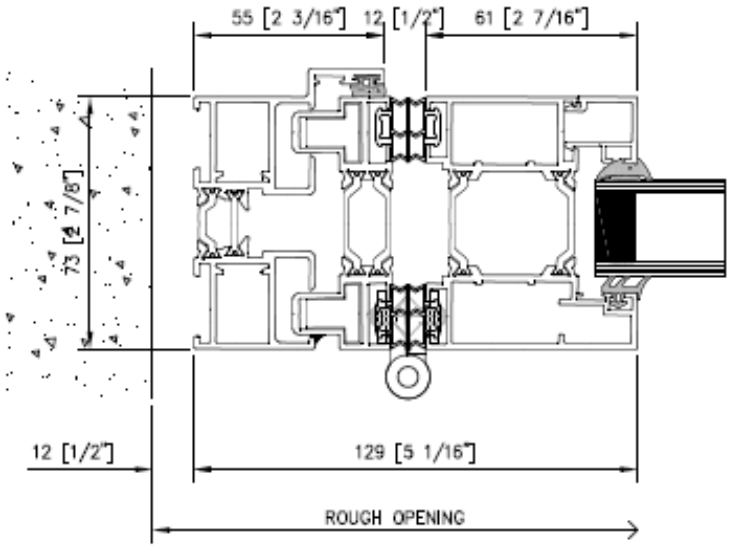
A: Sill Detail- Standard Sill



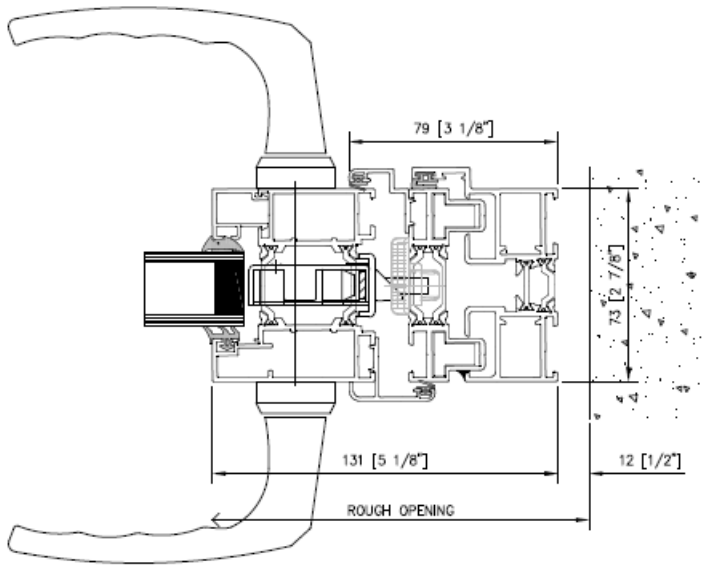
A: Sill Detail- Low Sill



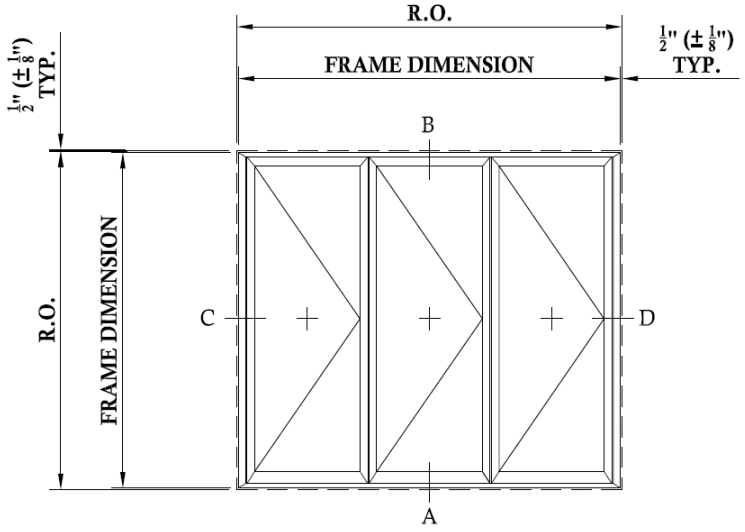
B: Header Detail
Note: DO NOT Shim At Head



C: Jamb Detail



D: Jamb Detail



Elevation

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 door materials to which they adhere. Check with your sealant supplier that the sealant is compatible with the aluminum, the laminate covering the aluminum, metal surfaces, caulked surfaces, or any other material of the door system to which you plan to have a sealant joint.

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.

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

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 60ºC.

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 0º and 60ºF (-17 Cº and 15Cº). 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.

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.

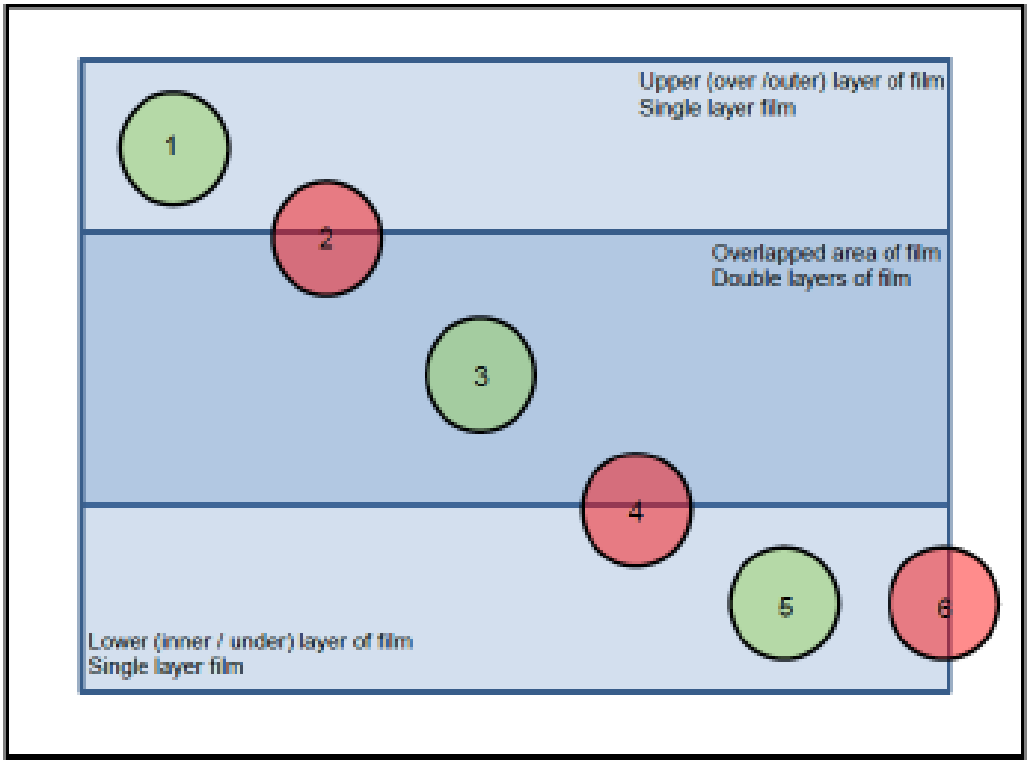
Any remaining adhesive can be removed using a citrus-based cleaner. Any residual lines left behind that are visible during wet conditions are similar to those of suction cup marks. They are not classified as defects.
Should you have any questions, please contact your EuroLine Windows Design Representative.

NOTE

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

Handling

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

GENERAL INSTALLATION INSTRUCTIONS

1. ASSEMBLY INSTRUCTIONS

IMPORTANT. Read these assembly instructions before beginning any installation work. Install as recommended otherwise the door unit may not function properly and any warranty, written or implied, will be void.

2. QUALIFICATIONS

The assembly instructions are only for the attention of qualified installers who are trained and qualified in window and doors installation techniques, and are aware of the manufacturer's recommendations for the system used.

3. TRANSPORT AND STORAGE

Parts that could come lose during transportation can be damaged or cause accidents.

All packaging opened to allow the goods to be inspected must be closed and properly sealed for further transport.

Any goods that will be further transported must be loaded safely and securely.

4. INCOMING GOODS

All goods received must be inspected for any transport damage prior to being removed from the vehicle. The goods received must match the delivery note.

Any wet packaging may cause damage to the goods, and therefore must be removed immediately.

5. SITE SURVEY

It is important to check the conditions on site before starting the assembly.

- Check for any apparent defects and deficiencies around the structural opening. If any defects are found, then the customer must be notified, and agreement reached as to who is responsible for rectifying these defects prior to the new window/door installation.
- Check structural conditions such as the wall construction, the load capacity or adhesiveness of the edges for adhesive sealing systems, evenness, building moisture, a possibility for load transfer and mounting, constructional tolerances and height reference points.
- Check for contractual agreements, supplied assembly detail, planning guidelines, heat protection, humidity proofing, and interferences to other assembly sections.

RECOMMENDED TOOLS

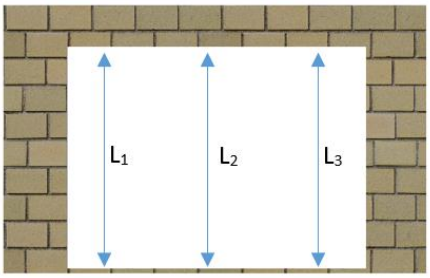
- Appropriate fixings into structural opening.
- Mixed selection of frame packers.
- Mixed selection of glazing packers.
- Rubber mallet or plastic mallet
- Set of HSS drill bits.
- Drill / SDS hammer drill.
- Long spirit level
- String line
- Tape measure
- 2.5mm; 3mm; 4mm Allen keys.
- Level or Laser Level
- Gloves
- Vacuum Cups

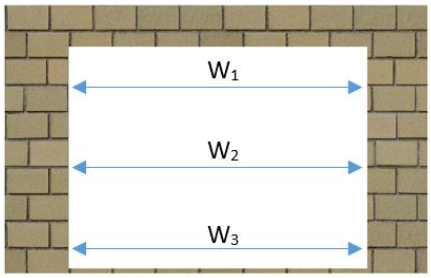
SITE SURVEY

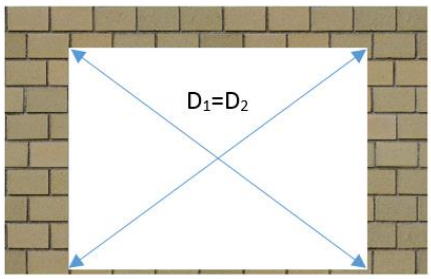
OPENING INSPECTION

- The aperture for the new doors must be flat, level, straight, plumb and square at every single side. There should be a solid structure to fix the frame.
- The aperture load bearings must not be transferred to any part of the frame when fitted.
- Prepare the aperture by making sure it is clean.
- Remove any old silicone and brush down the threshold.
- The internal and external reveal sizes should be checked and any variations must be determined to ensure enough opening light for the area where doors will fold and will not be obstructed by plaster, tiles or etc.
- Check the aperture's height, width and diagonals to ensure the opening is equal on all sides and square.
- Generally three measurements should be taken.

- See Also Section "Aperture height using laser level.







Internal finished floor level and datum line position

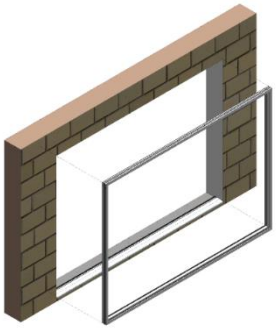
- Select a point within the agreed/existing structure finished floor level from where the builder can after determine the internal floor level i.e. tiles, carpet, timber.
- Take into account the agreed internal floor finish i.e. tiles, carpet, timber.
- Check if the existing threshold needs to be lowered taking into account if the internal edge of the aluminium threshold sits flush, or is set at a certain height with the new internal finished floor level.

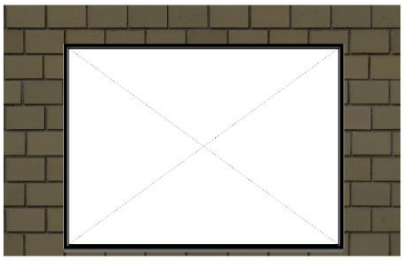
FRAME INSTALLATION

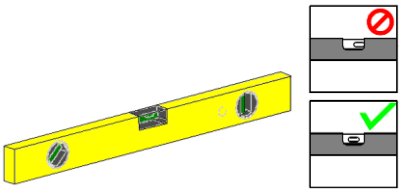
Outer frame installation

- Insert the frame into prepared structural opening and pack as necessary to ensure that the frame is held plumb and square inside the opening.

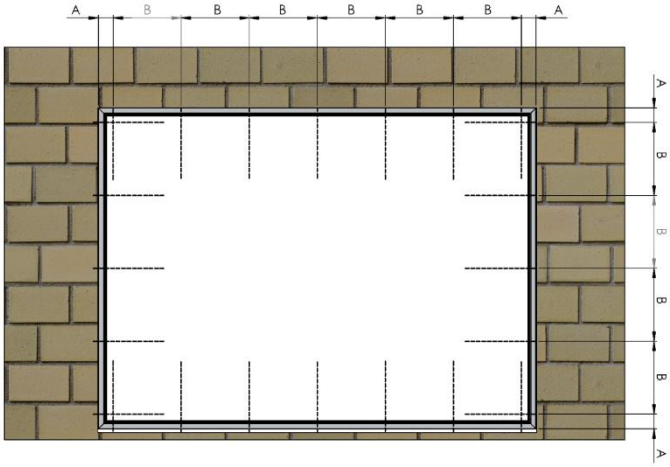
NOTE: - ***If sub-sill installed.*** Run a silicone bead along the sub-sill rebate to ensure weather tight joint.

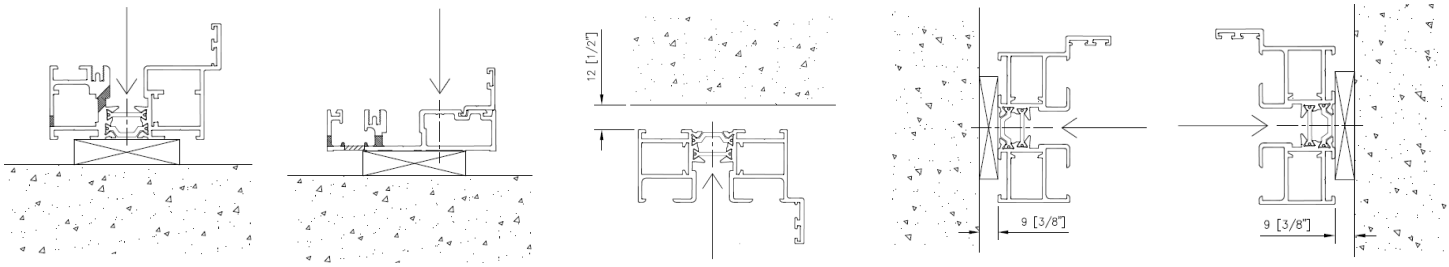






- Pack out all fixing points to ensure tight and supported fixings.
- Secure frame using suitable fixing screws and plugs.
  A = Anchor distance from corner of frame approximately 150mm.
  B = Anchor spacing generally at maximum 500 mm.
- Ensure the top and bottom frame remain plumb and square over the complete length.





Regular Sill | Low Sill | Header | Jamb | Jamb

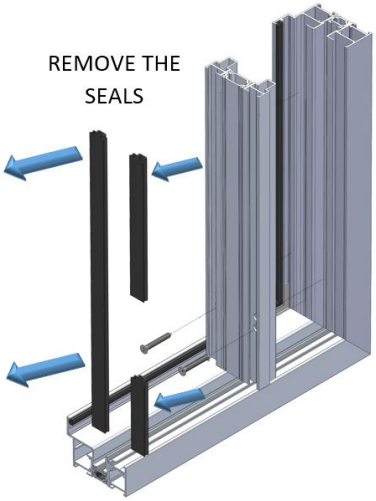
*Arrows indicate specified anchor fix

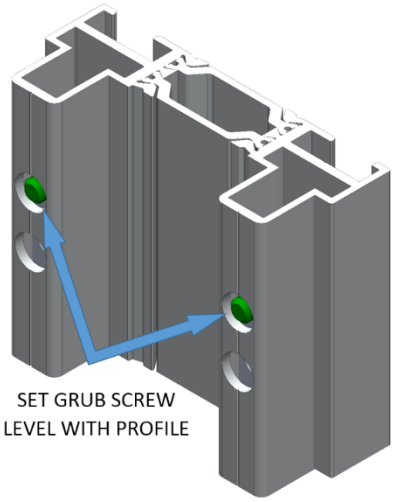
Typical outer frame installation

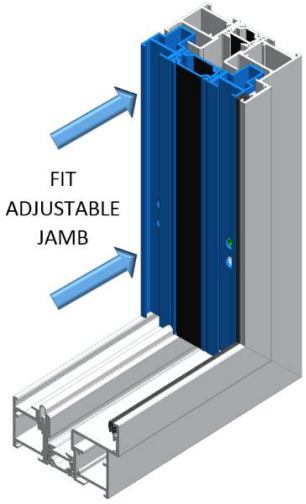
- Check the level and make sure that the frame is set plumb and square.
- Using low modulus silicone ensure that the perimeter is sealed against water penetration at both inside and outside of the opening. Done by a contractor or self.
- Clean away all debris from bottom rail, especially guide channel.

ADJUSTABLE JAMB INSTALLATION AND REMOVAL

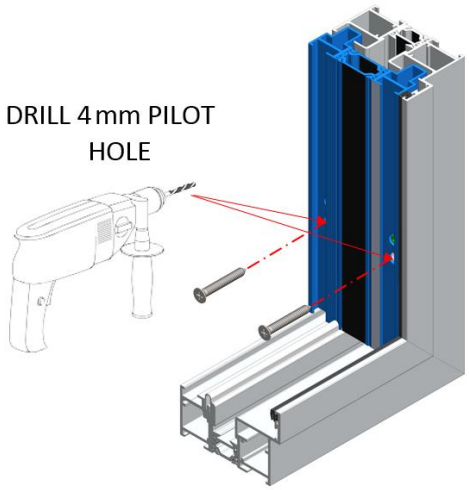
- Remove any weather seals or rebate profiles attached to adjustable jamb.
- Set all grub screws flush with back wall of the adjustable jamb.
- Fit the adjustable jamb profile into outer frame up to the end.

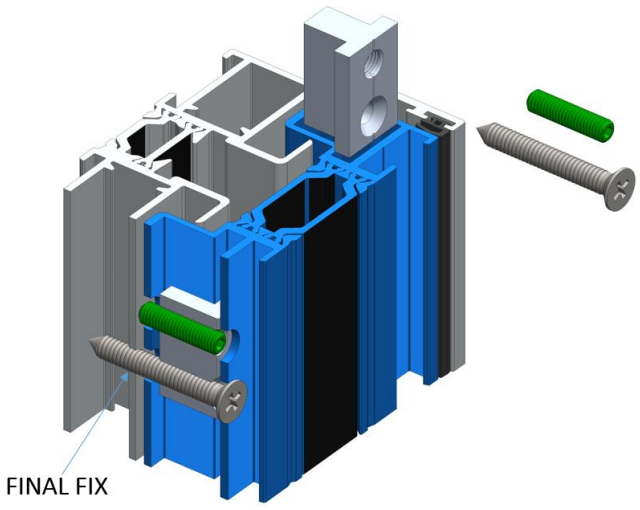






- Use factory pre-drilled holes at adjustable jam profile and drill Ø4.0mm pilot holes in the outer frame for self-tapping fixing screws.
- Fix the adjustable jamb in place using Ø4.8 x 48mm self-tapping screw.





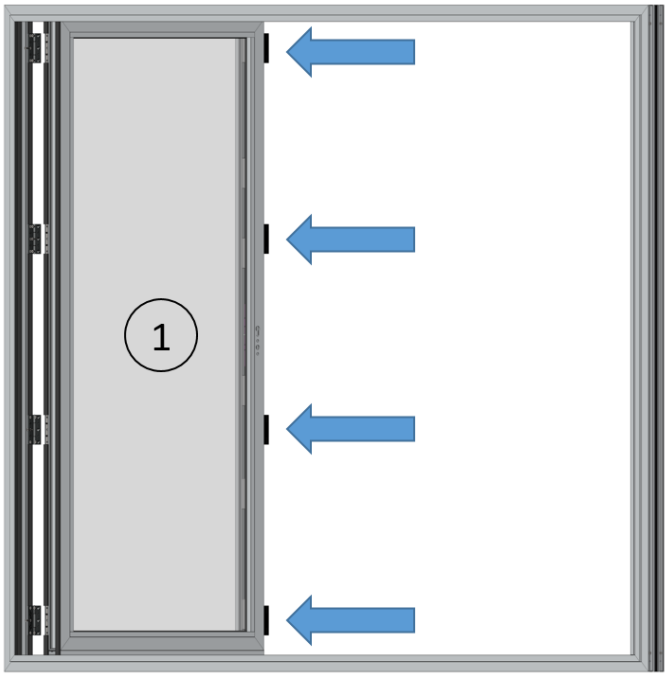
DOOR LEAF INSTALLATION

GENERAL INSTALLATION RECOMMENDATIONS

- Before installing any door panels check for all the components. Make sure there is no missing components.
- Look for the panel glass beads to determine the interior side.
- Look for the panel drainage holes to determine the bottom side.
- All panels are numbered and must be installed with accordance to the factory drawing.

Panel No.1 Installation

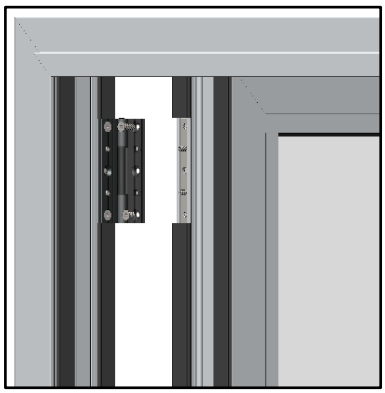
- Align the side of panel No.1 that has clamping plates on with hinges attached to outer frame adjustable jamb.

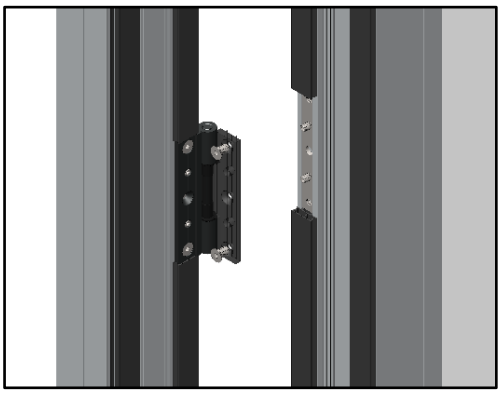


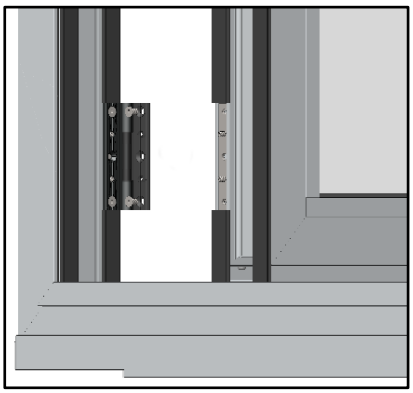
- Locate the hinge leaf over the clamping plate and secure with M5x10mm machine screws using top and bottom countersunk hinge holes.

TOOL REQUIREMENT: - 3mm Allen key is required.

NOTE: - Do not use 4.2x25mm self drilling screws at this point.

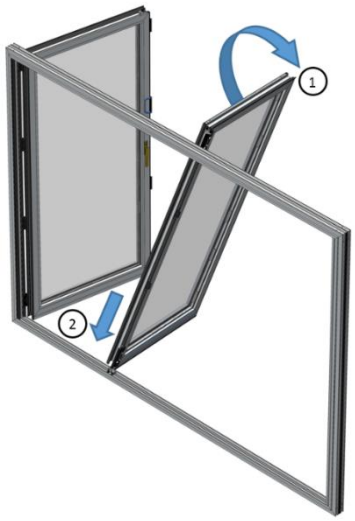


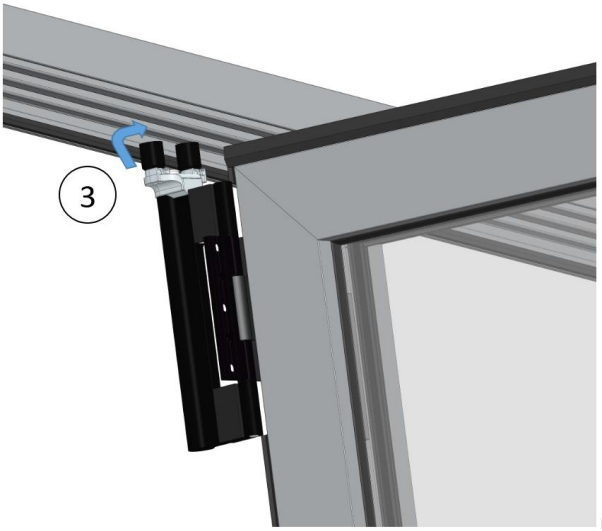




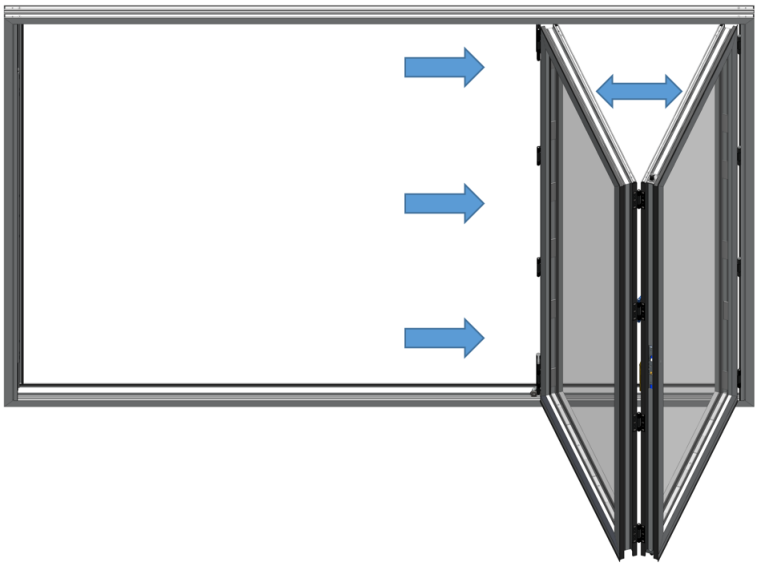
Panel No.2 Installation

- Slightly lean panel No.2 and fit the bottom roller guides into middle channel of the bottom track.
- Align the top guides of panel No.2 and fit them into middle channel at the top.





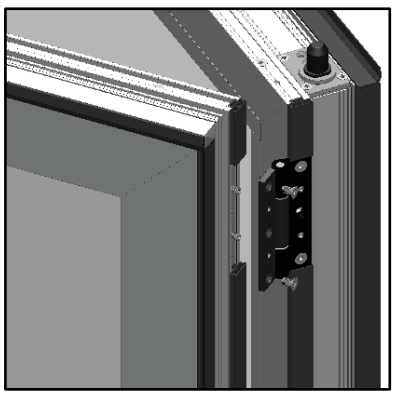
- Slide panel No.2 to align clamping plates with hinges attached to the first panel.
- Keep both doors on an angle for better access to hinges.

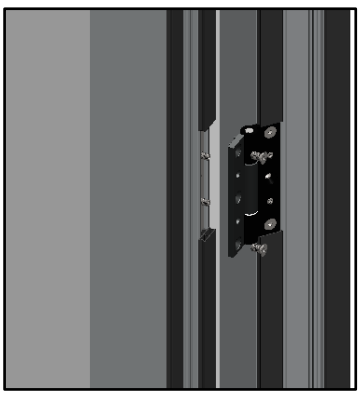


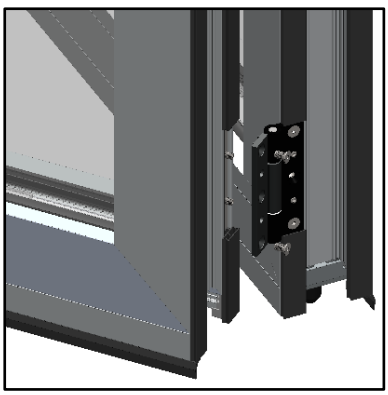
- Locate the hinge leaf over the fixing plate and secure with M5x10mm machine screws at top and bottom holes.

TOOL REQUIREMENT: - 3mm Allen key is required.

NOTE: - Do not use 4.2x25mm self drilling screws at this point.

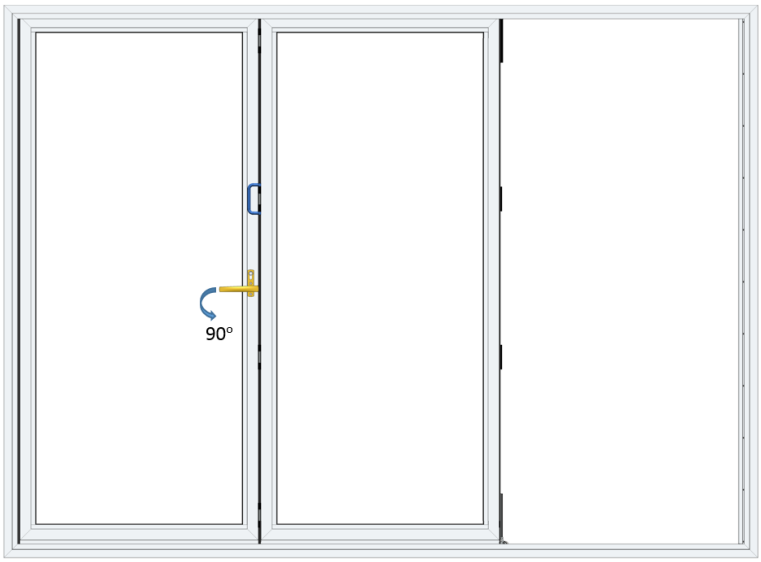




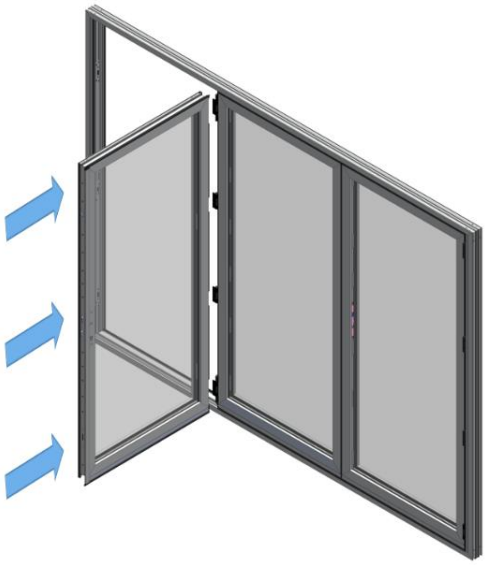


Panel No.3 Installation

- Lock first two panel doors together before installing door No.3.



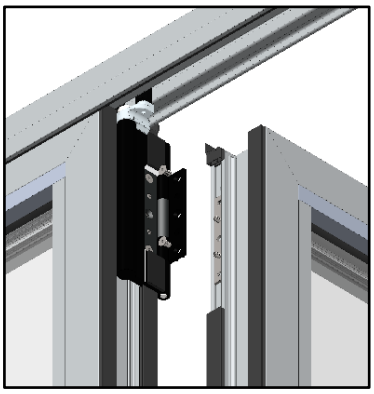
- Align panel No.3 clamping plates with hinges attached to second panel.

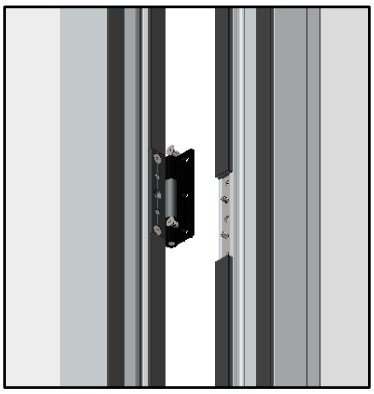


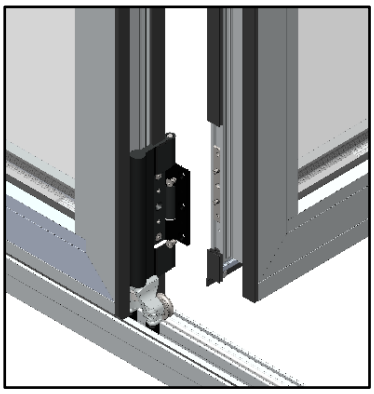
- Locate the hinge leaf over the fixing plate and secure with M5x10mm machine screws at top and bottom position.

TOOL REQUIREMENT: - 3mm Allen key is required.

NOTE: - Do not use 4.2x25mm self drilling screws at this point.



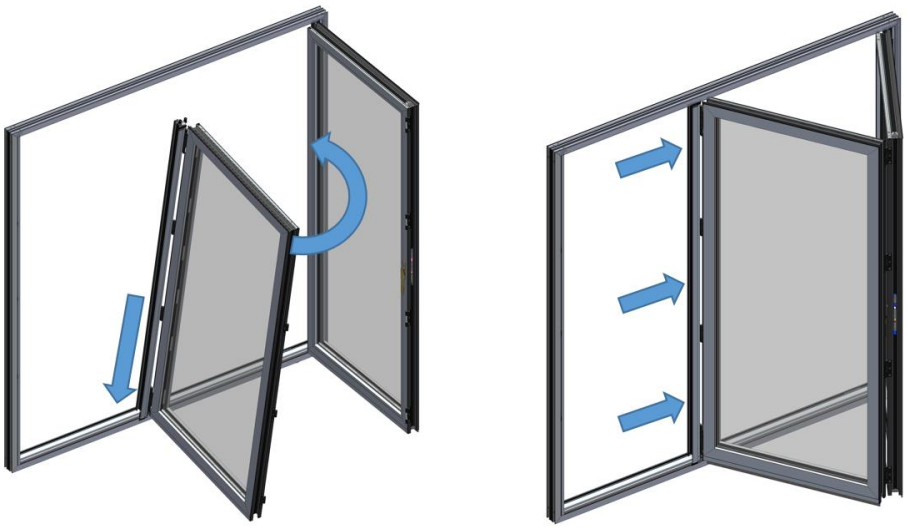




Sliding post installation

- Open the sliding post attached to the door panel as shown below.

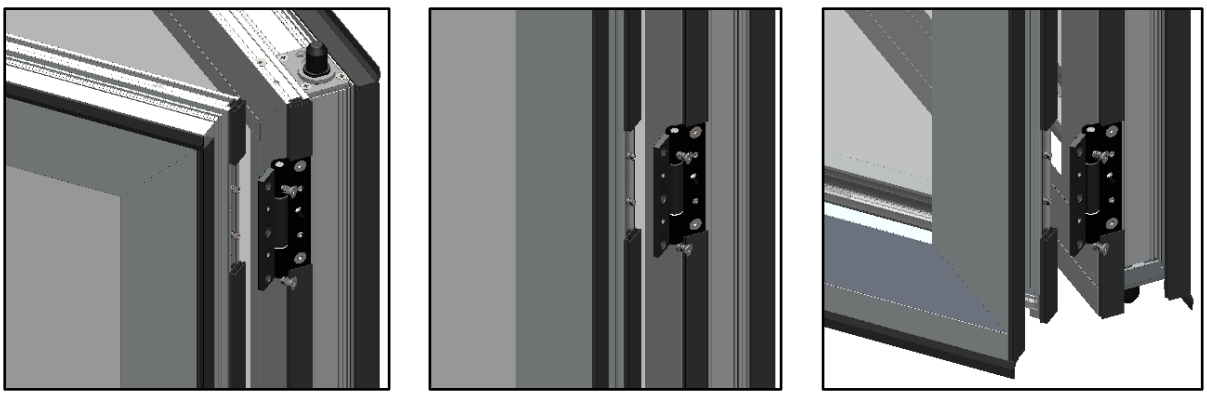
- Slightly lean the panel with sliding post and fit the bottom roller guides into middle channel of the bottom track.
- Align the top guides of panel with sliding post and fit them into middle channel at the top.
- Slide the panel to align clamping plates with hinges attached to the first panel.
- Keep both doors on an angle for better access to hinges.



- Locate the hinge leaf over the fixing plate and secure whith M5x10mm machine screws at top and bottom holes.

TOOL REQUIREMENT: - 3mm Allen key is required.

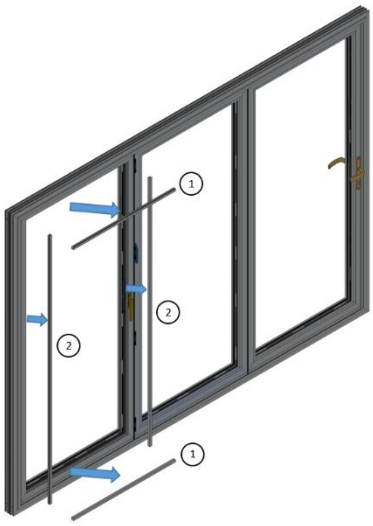
NOTE: - Do not use 4.2x25mm self drilling screws at this point.



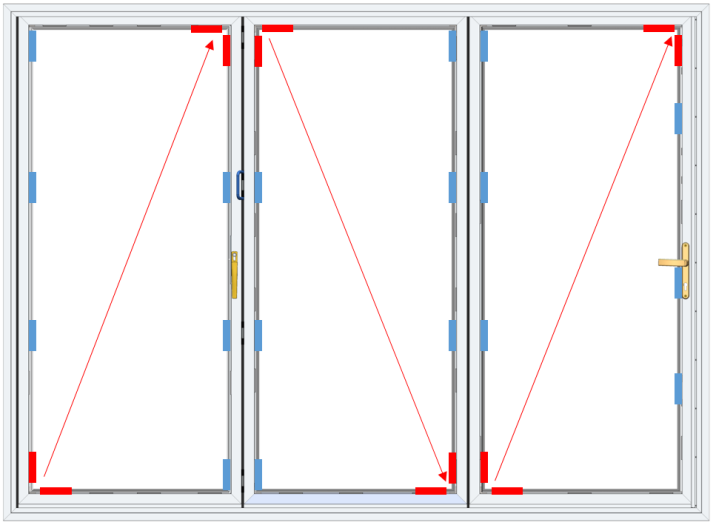
GLAZING INSTRUCTIONS

NOTE: - All glazing should conform in the requirements of BS 6262. In addition any instructions given by glass manufacturers should be followed.

- Before glazing, lock all doors panels and fully engage the locks.
- Starting from the first panel hinged to the jamb remove all beads, taking care to note where the beads are removed.



- Install the glass into the frame and pack it appropriately using various thickness glass setting blocks. Ensure to support inner and outer layers of the glass.
- All panels should be *'toe and heeled'* to maintain equal and parallel gaps between outer frame and panel at the top and bottom.
- Add silicone between each vertical set of packers to help keep them in place. Make sure that all packers do not obstruct any of the drainage or decompression holes.



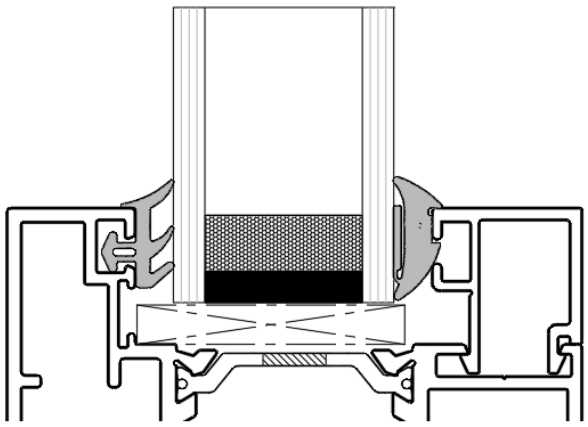


Figure 1. Close up gasket to IGU

- 'Toe and Heel'. Load caring packer must be used to keep panels square and level.

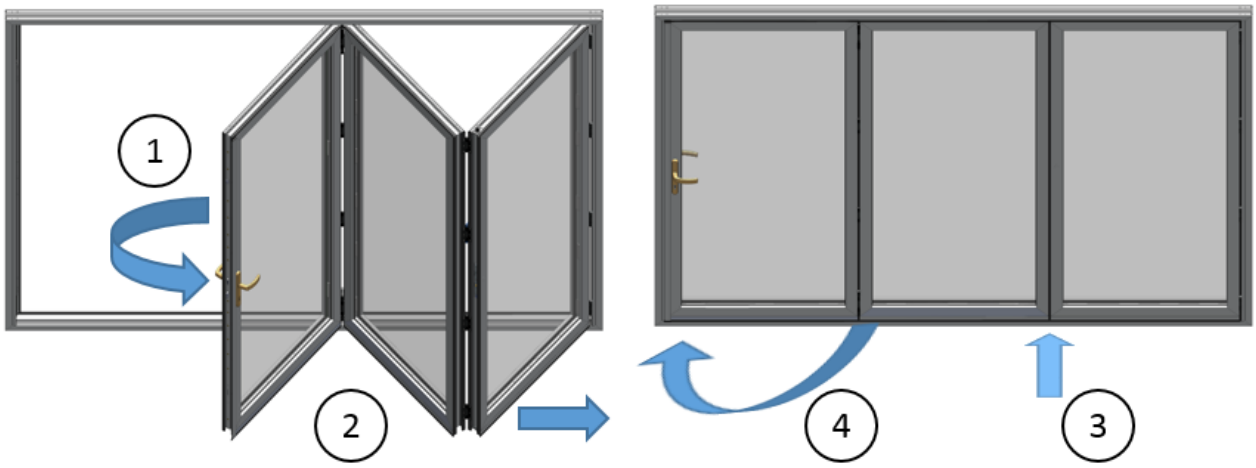
- Supporting packers to prevent movement and provide rigidity to panel. Should be installed between all hardware components

- Replace beading, starting with shortest pieces first and tapping into place with a plastic mallet.
- Replace wedge gaskets into position (See Figure 1).
- Repeat the 'toe and heeling' process for all panels, ensuring that all door gaps are equal and parallel.
- Check for door running operation and adjust if necessary.

OPERATION CHECKING AND ADJUSTMENT

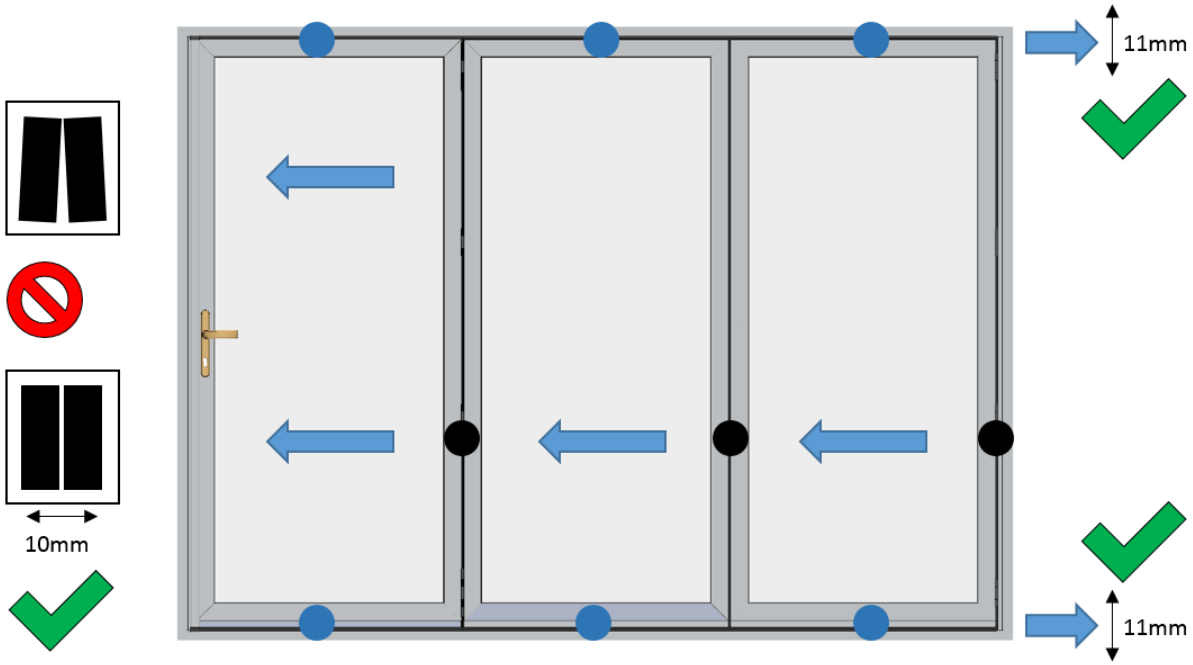
DOOR UNIT OPERATION INSPECTION

- Check the basic running operation of the doors to make sure the mechanisms are working properly.



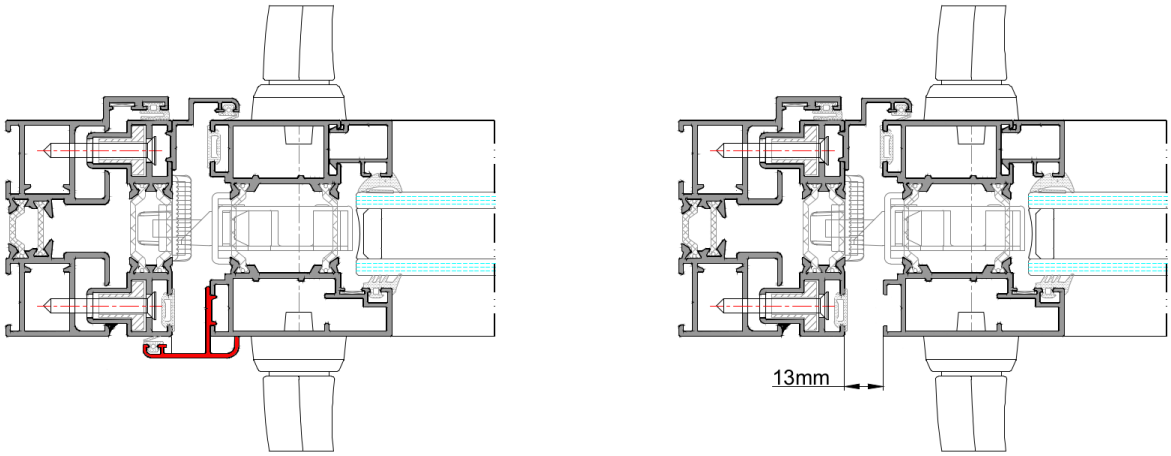
OVERALL GAP SIZE INSPECTION

- Assess the horizontal gaps between the outer frame and sash at the top and bottom ensuring they are even and equal to 11mm.
- Assess the vertical gaps between the panel frames ensuring they are even and equal to 10mm.



MASTER DOOR ADJUSTMENT

- Remove the rebate profile attached to the master door to see the gap where the lock and the keep are.
- Check the distance between the locking door and the outer frame. The distance should be 13mm.

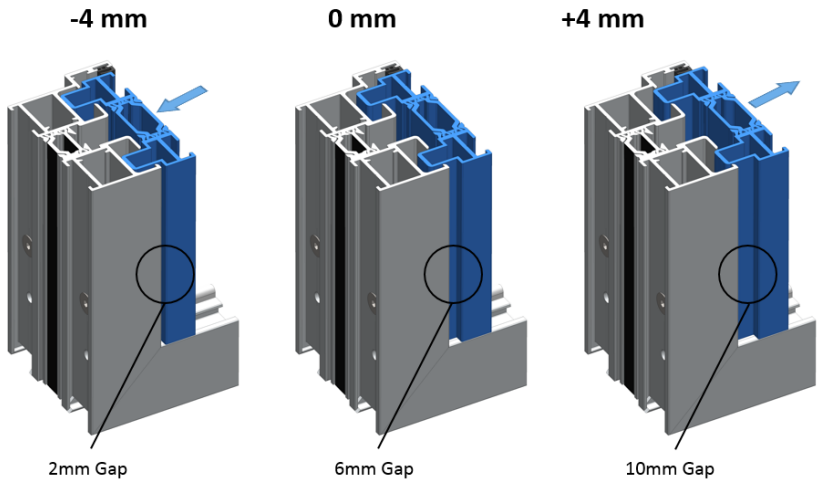


- If the lock and keep are clashing regulate the distance by adjusting adjustable jambs as shown below.
- Once the correct gap is achieved and the lock is locking perfectly fix the rebate profile back on the master door panel.
- Double check if the lock is latching properly.

WIDTH ADJUSTMENT USING ADJUSTABLE JAMBS

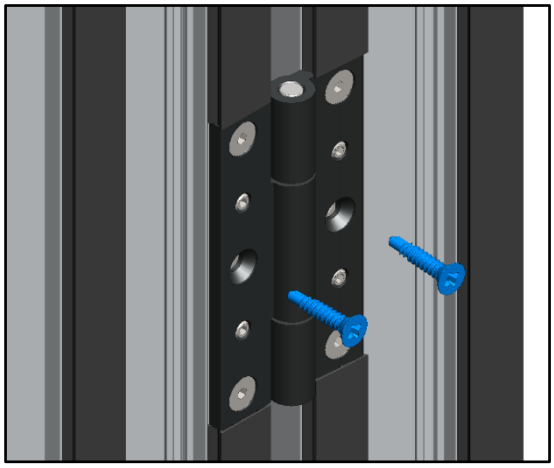
- To adjust the width release all bottom self-tapping screws that secures the adjustable jamb.
- Use grub screws to change the position of the adjustable jamb.
- Check the gaps to be equal and adjustable jamb is set square and level.
- After completing adjustment fix the adjustable jamb in position by securing self-tapping screws.

- Adjustable jamb is designed to have both positive and negative adjustment as shown below.



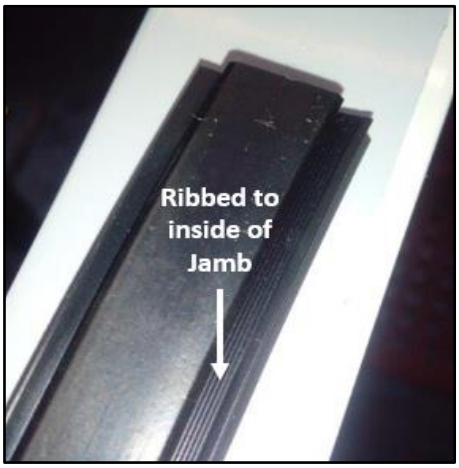
SECURING HINGES WITH FINAL FIXING SCREWS

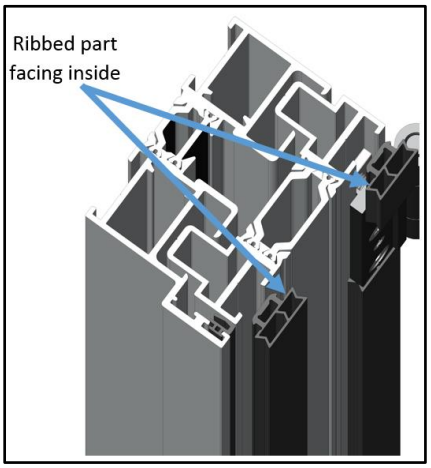
- After completing all the installation and the doors are glazed and operate properly, ensure to secure all hinges with final fixing screws as shown below.



WEATHER SEAL APPLICATION

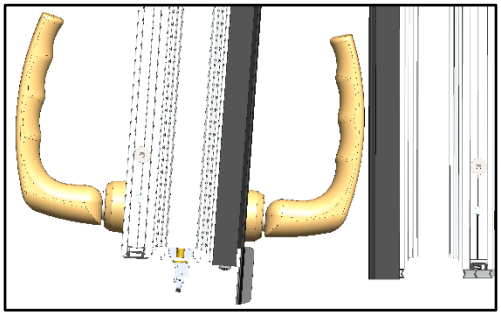
- Apply missing or any removed weather seals on all panels and jambs. Ensure that the ribbed part of the seal would always be installed facing inner part of the profile.



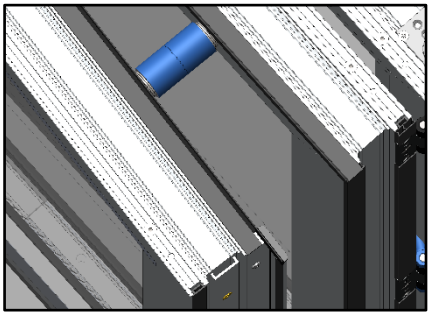


PANEL CATCH INSTALLATION

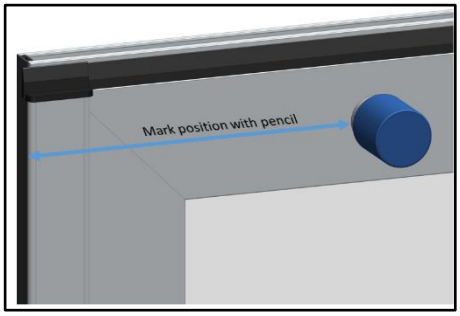
- Position the swing door at the point where it will stop.
- Ensure some clearance between the lever handle and next door.
- Use fully assembled panel catch pair to locate the position between two doors.
- Mark with pencil the position for panel catch on swinging door first.



1. Position the door



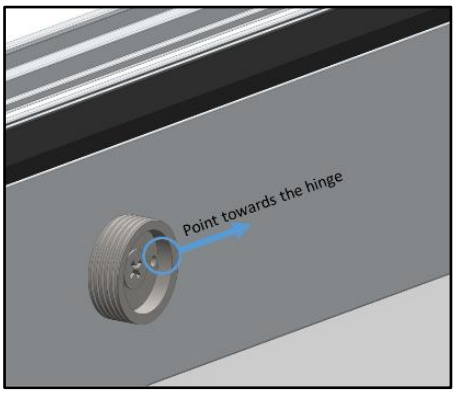
2. Locate panel catch



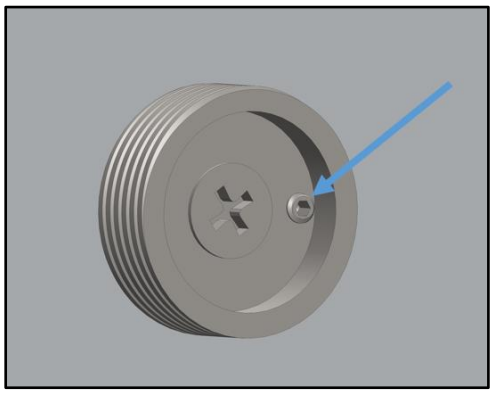
3. Mark position on swing door

- Unscrew panel catch back plate and fix it with choice of fixings provided in the box.
- Ensure the position for anti-rotation screw is pointed towards the hinge side.
- Secure the 3mm pointed anti rotation grub screw.
- Screw the outer sleeve.

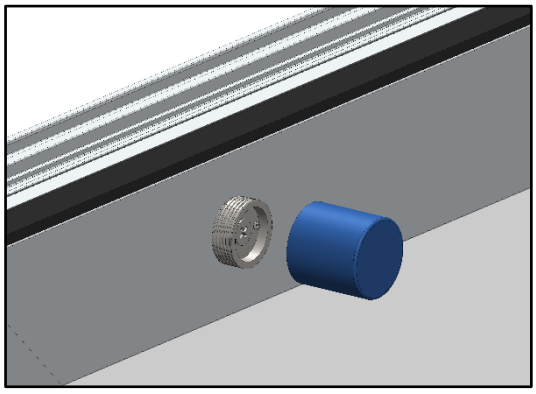
4. Fix the plate



5. Position anti-rotation point



6. Fix anti-rotation screw



7. Screw the outer sleeve

- Mark the perfect position for panel catch on the opposite panel.
- Ensure anti rotation screw is pointed to the nearest swinging door hinge.
- Fix the second panel catch by repeating steps 4 - 7

FINISHING TOUCHES

- Check that the handles and locking mechanisms operate smoothly on each door.
- Check the bi-fold action is smooth and free running.
- Check that the locks operate correctly when closed.
- Check the door magnets are fully engaged when the doors are open.
- Check the hinges and ensure that there are no screws missing.
- Check the weather seal and ensure that the doors are fully sealed.
- Check the perimeter and ensure that the door unit is weather tight.
- Clean the bottom track and ensure it is free of any debris.
- Ensure that the homeowner is instructed and knows exactly how to use and look after bi-fold doors.

OPERATION AND MAINTENANCE

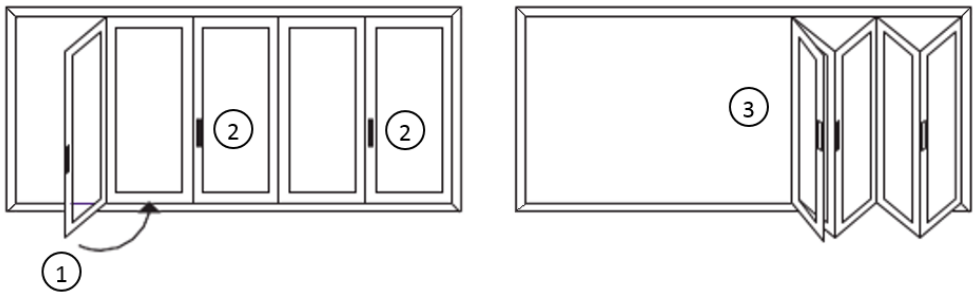
OPENING AND CLOSING OPERATION FOR BI-FOLDING DOOR WITH SWINGING DOOR

To open doors

- Open the swinging door and connect it to the panel catch located on the next door.
- Release the shoot bolt locks on all other panels.
- Slide the folding panels starting from the pair nearest to the swinging door.

To close doors

- Slide each pair of folding panels back to align with frame
- Secure the panels by locking with shoot bolt lock.
- Close the swinging door last, ensure that all other panels have been locked in frame first.



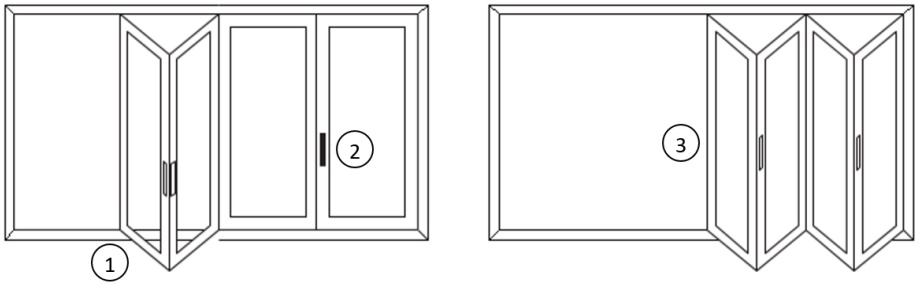
OPENING AND CLOSING OPERATION FOR BI-FOLDING DOOR WITHOUT SWINGING DOOR

To open doors

- Release the shoot bolt locks on all other panels.
- Slide each pair of folding panels away to one side.

To close doors

- Slide each pair of folding panels back to align with frame
- Secure the panels by locking with shoot bolt lock.



MAINTENANCE

- Ensure top and bottom tracks are kept clean and free of any debris or foreign objects that can stop the function of the folding door.
- Ensure all door locking mechanisms are kept clean and any moving parts are regularly lubricated with light machine oil at least once a year.

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