

WINDOW
WAREHOUSE

Pioneering Service, Quality & Security

Imagine Bi-fold Door Glazing and Installation

Imagine Bi-fold Door

Glazing and Installation

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Guidelines, Advice and General Information

Bi-fold doors are a specialist product, thought needs to be given in regards to installation.

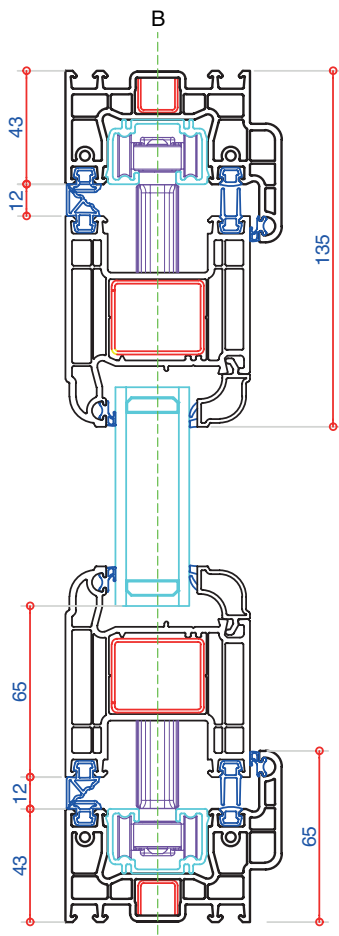
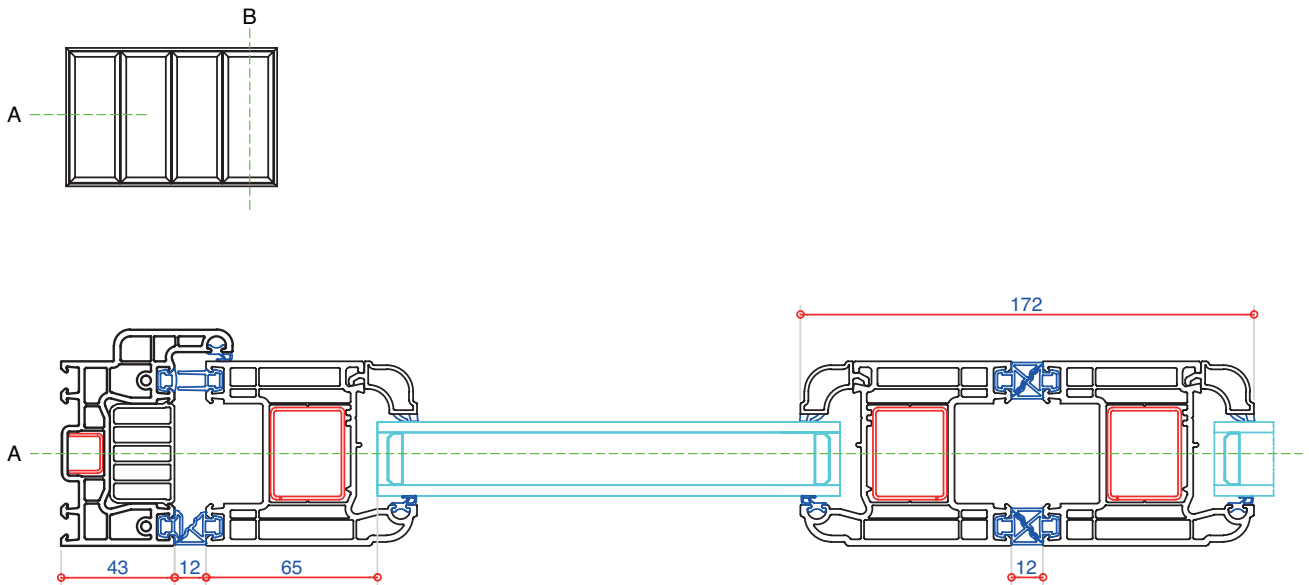
A lintel or structural reinforcement may be required over large spans. Suitable strength must be available to ensure a solid fixing at the correct centres along the head of the frame, a structural engineer may need to be consulted to ensure this. It is recommend to use a portal frame in conservatories, please consult the roof supplier for advice on this.

Due to the nature of PVC-U Bi-folding doors and their assembly they should be classed as domestic products only and the location in which they are installed should be clarified in advance. Window Warehouse therefore recommend that Bi-folding doors are not installed above 3 floors or in exposed locations.

INSTALLERS IGNORE THIS ADVICE AT THEIR OWN RISK. Where the design window pressure category is known to be 1200 Pascals or greater it is recommend that the advice of the technical department is sought prior to manufacture and installation.

The information provided by Window Warehouse should be treated as guidance only. Window Warehouse cannot control how the information is interpreted and therefore cannot be held responsible for any failure. Regulations regarding health and safety of installers along with relevant building regulations should be strictly adhered to. Window Warehouse Ltd therefore cannot be held responsible for any failure to comply with them. This statement does not affect the installer's statutory rights.

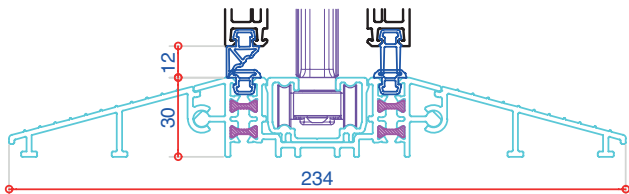
Profile Combinations



65mm Outer frame
 80mm Feature Sash

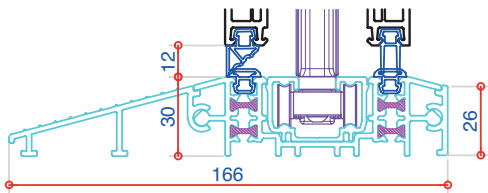
I05174
 I05175

Alternative Threshold Options



Low Threshold
 (2x) Threshold Ramp
 80mm Feature Sash

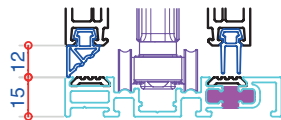
I04392
 I04391
 I05175



Low Threshold
 (1x) Threshold Ramp
 (1x) Threshold Blank
 80mm Feature Sash

I04392
 I04391
 I04394
 I05175

⚠ NB: For internal use only.

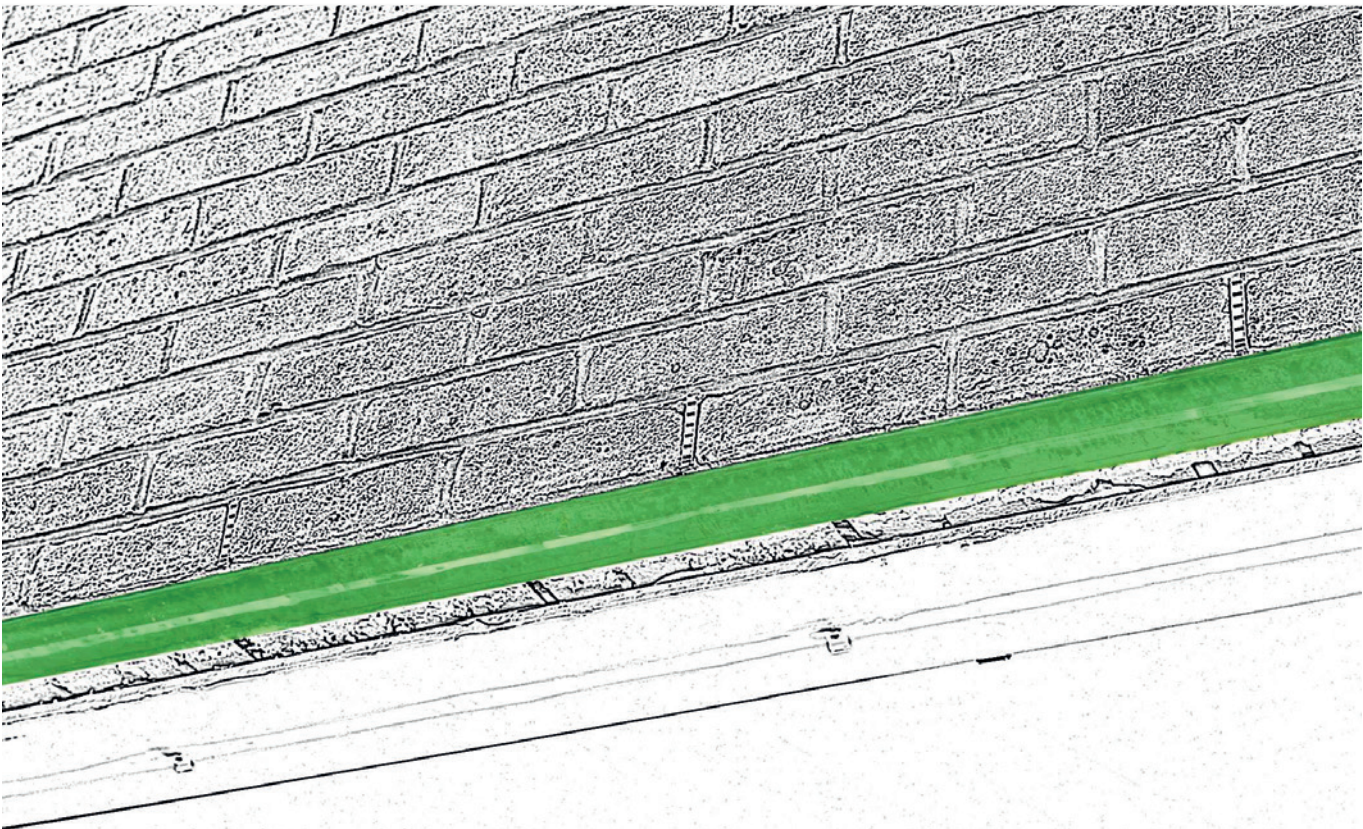


Room Divider Threshold
 80mm Feature Sash

I04390
 I05175

Dimensions apply chamfered sash also.

Survey



The following document should be treated as a guide only, the installation should comply with all elements of BS8213-4 code of practice for the survey and installation of windows and external door sets. Please also observe all relevant health and safety regulations.

Good surveying is the basis of ensuring a quality installation. The opening should provide a solid structure for the frame to

be fixed into. PVC Frames are not designed to be structural, no load should be transferred to the frame, and therefore it is essential that sufficient support is provided above the frame by use of a lintel or portal frame, a structural engineer or conservatory roof supplier may need to be consulted for advice on this. A portal frame would be recommended when installing a Bi Fold into a conservatory or where all 4 sides cannot be fixed direct into the building.

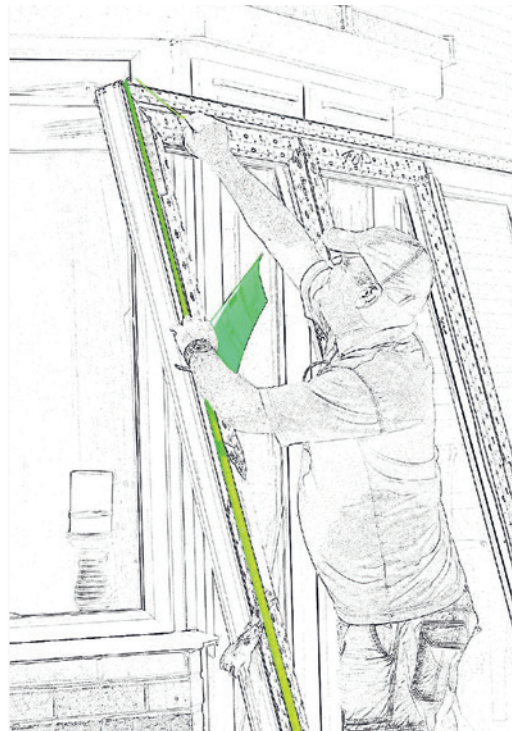
Sufficient expansion allowance should be taken into account, refer to this table for recommended deductions.

	1.5m to 3.0m	3.0m to 4.5m	4.5m +
White PVC	10mm	15mm	20mm
Dark Coloured PVC	15mm	Not recommended	Not recommended

Pre Installation Checks

Before removal of the existing frame can commence check the specification of the new frame and glass is correct.

- Measure the existing opening and check the size of new frame to ensure it is correct.
- Check the size of the glazing units to ensure these are the correct size for the frame.
- Check all ancillary items and fittings such as cills or handles are available. If a cill is required check the concealed drainage is present, if no cill has been specified face drain slots and caps will be required.
- Remove any furniture that may cause an obstruction or could be damaged during installation.
- Cover any furniture or flooring that cannot be moved with protective sheets.



Removal Of The Old Frame

Carefully remove the old frame taking care to avoid any unnecessary damage to the building structure and its finishes. Ensure the area is clear of debris and loose brickwork, render or plaster is repaired.



Assembling Mechanical Jointed Frames

Track 104393

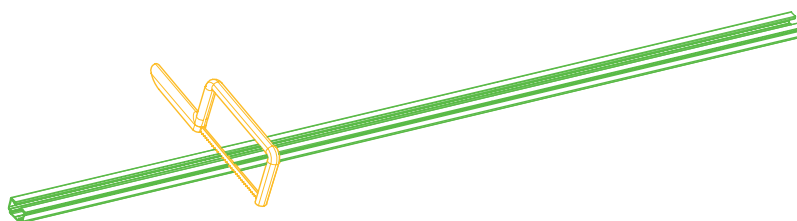


In order to attach the sashes to frame it is necessary to fit the top and bottom track in two pieces

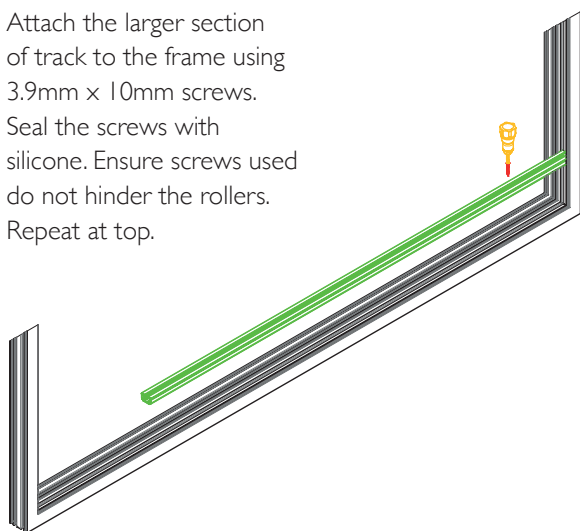
1. Measure the rebate of the frame.



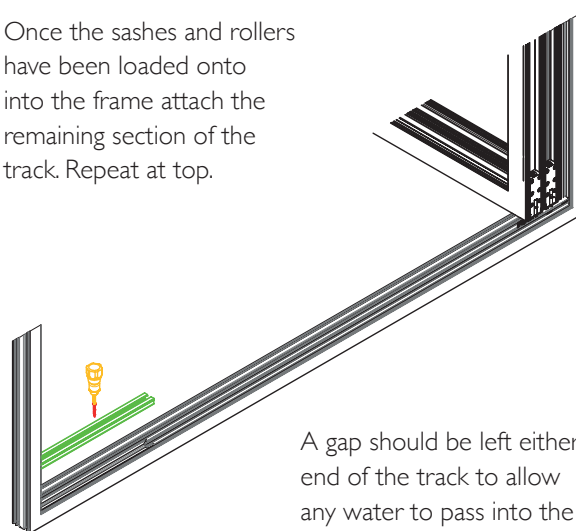
2. Cut two lengths of 107393 Track.
3. Select an appropriate point on the track to make a cut. This must be greater than 400mm to allow the roller to be easily loaded into the track avoiding any point which will affect the smooth operation of the rollers.



4. Attach the larger section of track to the frame using 3.9mm x 10mm screws. Seal the screws with silicone. Ensure screws used do not hinder the rollers. Repeat at top.



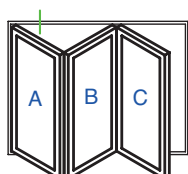
5. Once the sashes and rollers have been loaded onto into the frame attach the remaining section of the track. Repeat at top.



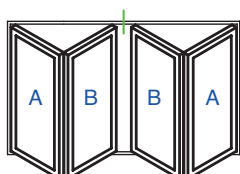
A gap should be left either end of the track to allow any water to pass into the drainage channel.

Suggested positions for breaks in tracks.

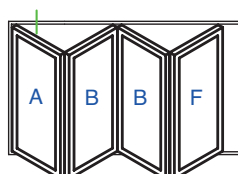
330



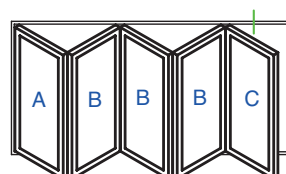
422



440



550

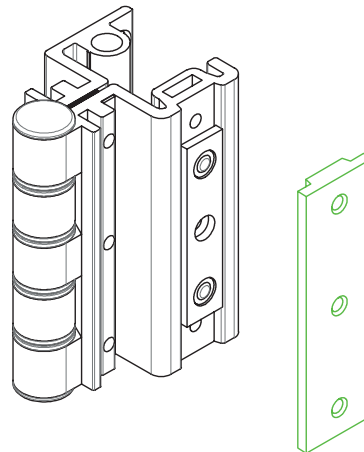
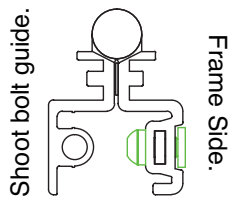


Connecting the Sash to frame

Extended Butt Hinge 17655 (01 = white, 10 = black)

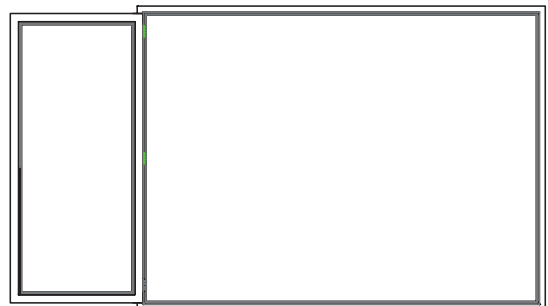
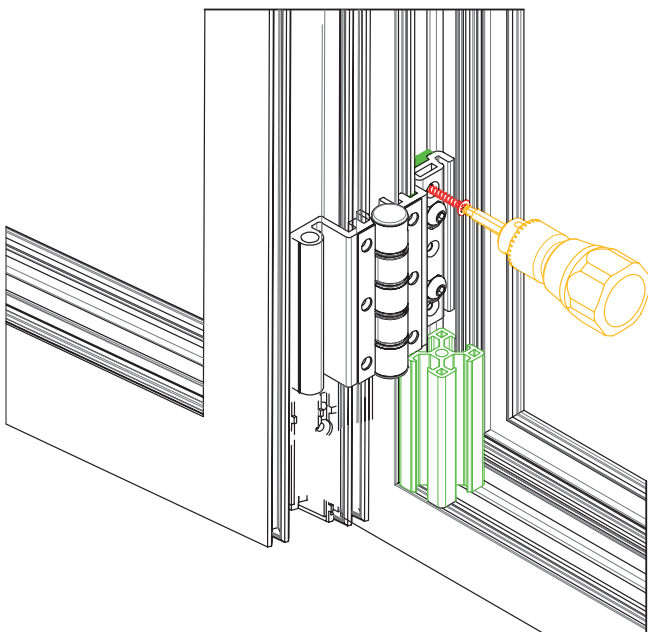
Std Butt Hinge 17651 (01 = white, 10 = black)

Hinges are factory set for a 12mm gap between the rebate of the frame and the edge of the sash.



FITTING HINGE FOR SASH TO FRAME

1. Snap on the frame packer supplied to all hinges that re attached to the frame. This packer is not required for sash to sash hinges.
2. Attach the first sash by fixing the screws through the pre drilled holes or by using the short hinge guide against the frame rebate to set the height attach hinges to the frame using 3 x 3.9 x 32mm steel screws & 3 x 3.9 x 45mm PVC Screws. Ensure the packers are on the part of the hinge attached to the frame.
3. Attach the centre and top hinges to the frame using 3 x 3.9 x 32mm steel screws & 3 x 3.9 x 45mm PVC Screws in each hinge.



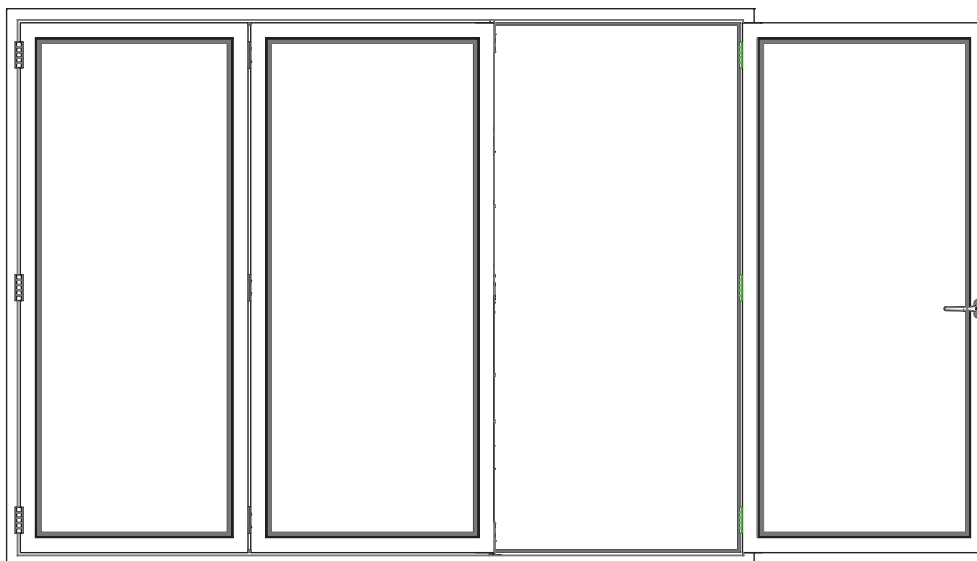
Assembling Mechanical Jointed Frames

Connecting sash to sash

Connect the each adjacent pair of sashes using the hinges with $3 \times 3.9 \times 32\text{mm}$ steel screws & $3 \times 3.9 \times 45\text{mm}$ PVC Screws to each hinge.

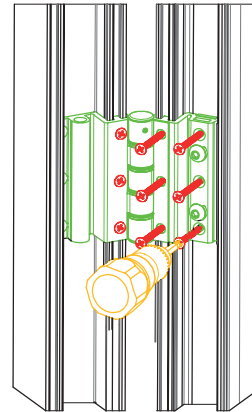


Connect the remaining sash to either the frame or adjacent sash were required.

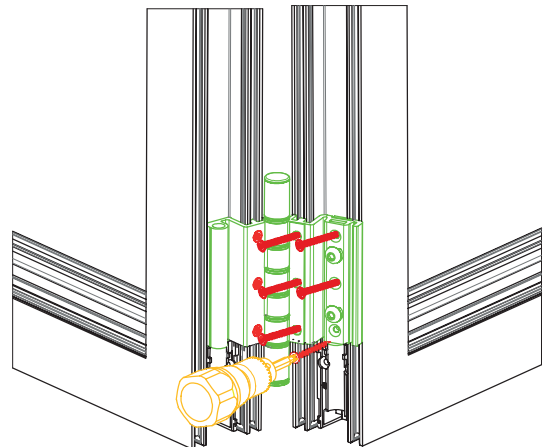


For sash to sash hinges are factory set to allow a 12mm gap when closed.

Attach hinges to sash using 3 × 3.9 × 25mm steel screws
& 3 × 3.9 × 45mm PVC Screws.



Attach hinges to sash using 3 × 3.9 × 25mm steel screws
& 3 × 3.9 × 45mm PVC Screws.



Repeat at top.

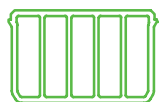
Assembling Mechanically Jointed Frames

105177 Outer Frame Thermal Insert

105177.100101 - White

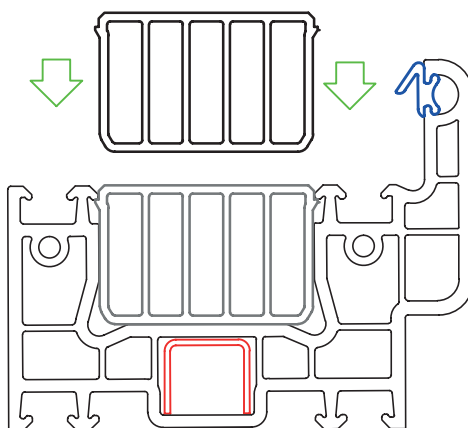
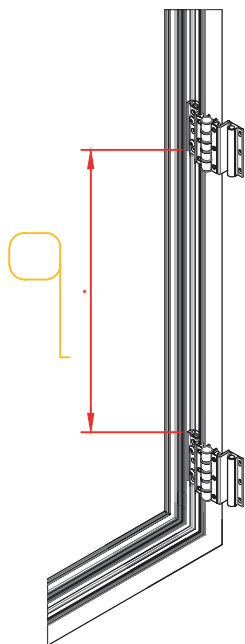
105177.180201 - Brown

105177.180701 - Caramel

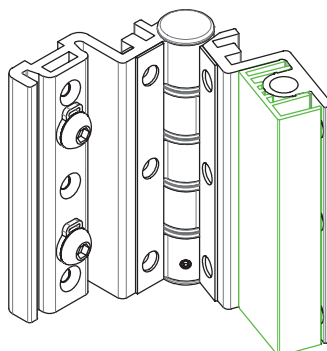
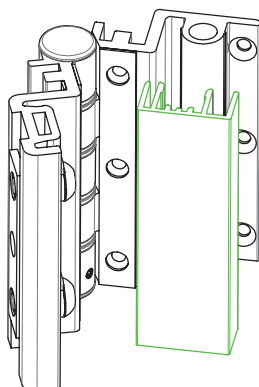
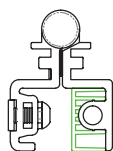


Use the outer frame thermal insert to fill the channel between the hinges.

1. **X** = Measure the distance between hinges on the outer frame.
2. Cut the 105177 to this size.
3. Firmly snap into place between the hinges.



OPTIONAL Snap on Plastic Hinge Covers 17693 xx (01 = White, 10 = Black).



Installation of the New Frame

Install the cill if one is required. Great care should be taken to ensure the cill or bottom rail of the frame is fully supported along the total length and is completely level without any evidence of twist or distortion. Due to the width of most Bi folding doors being above 2m a laser level or similar would

be advantageous to check this. Where an aluminium threshold has been used the threshold ramps or blanks must be fitted prior to securing the bottom rail. Any fixings through the cill or bottom rail must be sealed to prevent water seepage. Suitable fixings should be used to secure the frame.

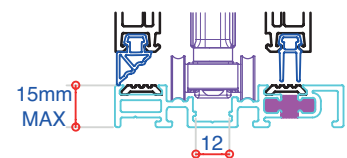
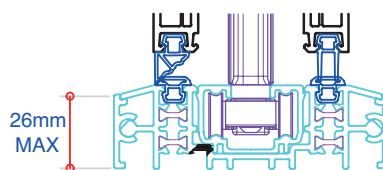
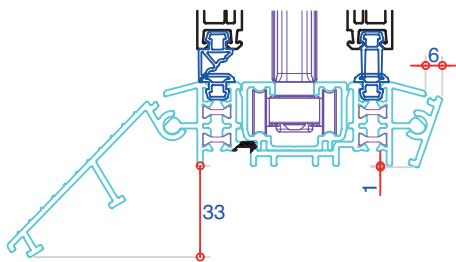


Aluminium Threshold

OPTIONAL I04391 (Threshold Ramp required to comply with document M).

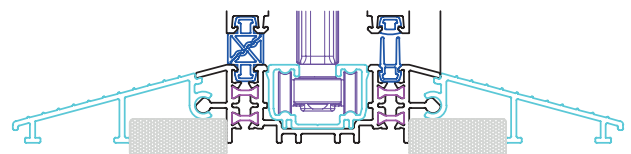
OPTIONAL I04394 (Threshold Blank).

The threshold ramp I04391 & Threshold Blank may not be fitted to prevent damage during transportation and must be fitted before installation unless sufficient access is available.



Burying the low document M & Room Divider Thresholds
(not suitable for weather applications).

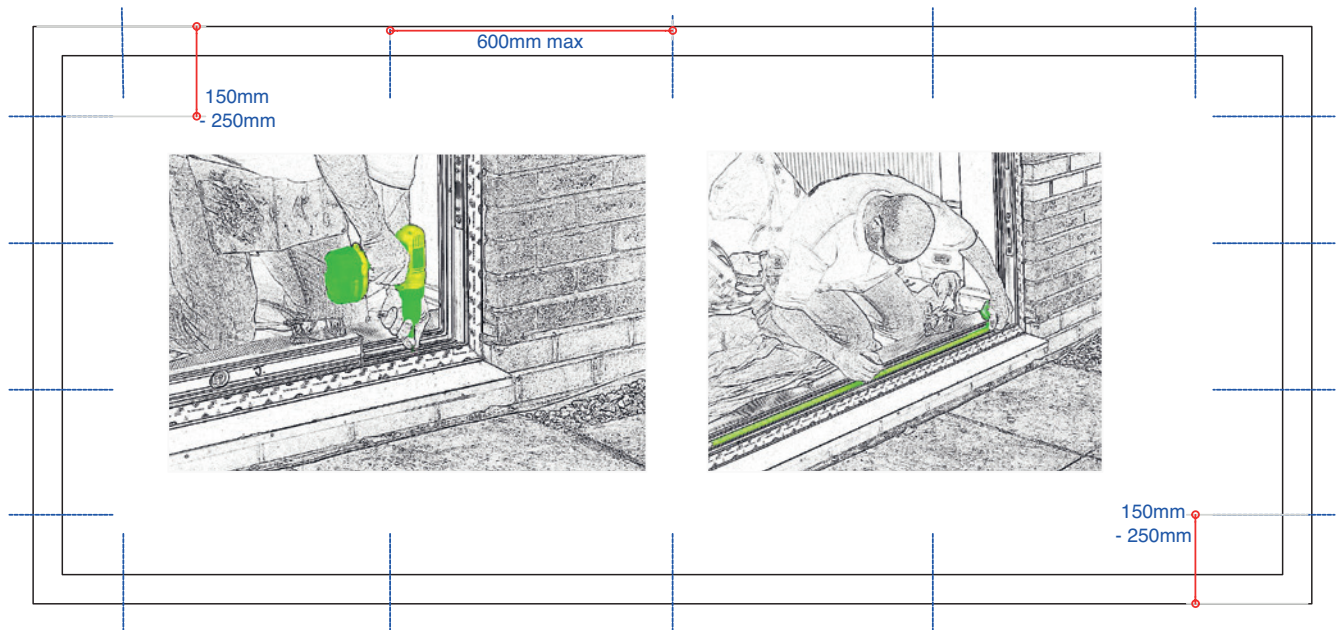
The threshold ramps can be held in position during installation by inserting a 38mm packer as illustrated. A soft foam or Styrofoam packer is recommended. Take care to avoid any drainage holes if the packer can not be removed after installation.



Installation of the New Frame

All four sides of the frame should be secured as follows:-

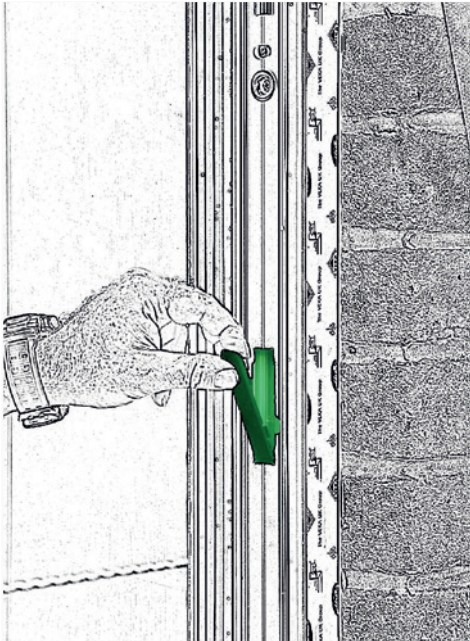
- Corner fixings should be between 150 mm and 250 mm from the external corner.
- Intermediate fixings should be at centres no greater than 600mm



It is imperative the head of the frame is fixed parallel with the bottom rail again ensuring the frame is free from distortion or twist. This can be checked by use of a level along with a length of timber or similar cut to the size of the rebate positioned at fixing points along the frame.



Where a fixing is required on a jamb fitted with a keep, fixings should be placed through the Allen Key adjustment bolts & behind the removable plastic covers.

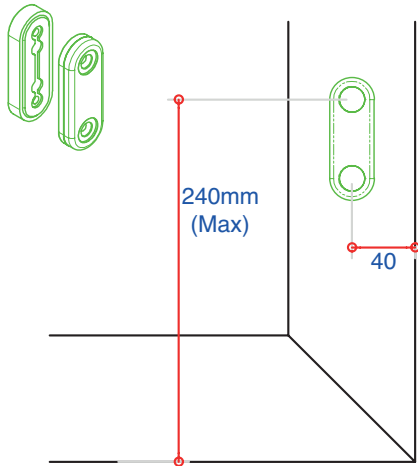


Adequate support by use of glazing packers or similar should be positioned between the frame and brickwork to prevent any twist or distortion of the frame when tightening the fixings.

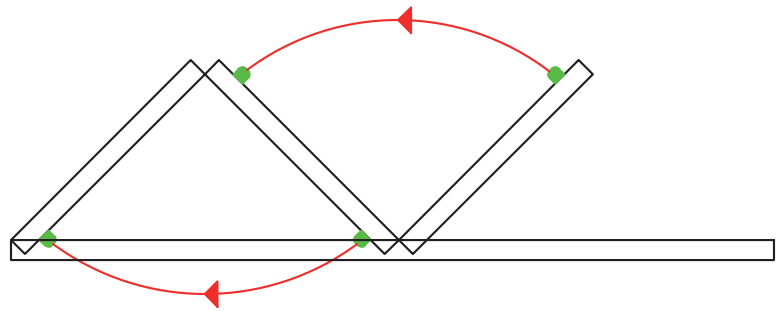


Panel Retention

18031xx (01 = White, 10 = Black, 34 = Chrome, 35 = Gold).

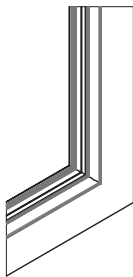


Suggested positions for magnets.

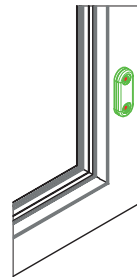
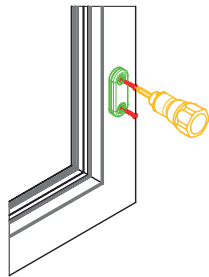


Magnets may be fitted either at the top or bottom of the sash. The magnets are designed to retain the sashes in the open position in normal weather conditions.

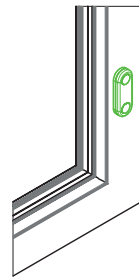
Standard assembly when 17998 Rose handle is used.



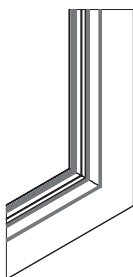
1. Attach using 2 x 3.9 x 32mm steel screws.



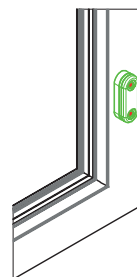
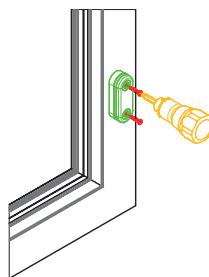
2. Conceal the fixings using snap on covers provided.



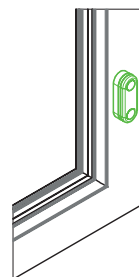
Assembly option when a larger handle is used using packer provided.



1. Attach using 2 x 3.9 x 45mm steel screws.



2. Conceal the fixings using snap on covers provided.



Glass Packing & Packer Positions

Prior to installing any glass unit or panel, the Clip In Packer, 109.377 must be fitted into the glazing rebates of the sash wherever the glazing unit has to be packed or spaced.

The Clip In Packer:

- raises the unit above the rebate and level to the bead groove.
- acts as a Bridge Block when used in the bottom rails to allow drainage of the rebate.
- provides a flat surface from which to pack or space the glass.
- prevents the glazing unit standing in water; helping to prolong the integrity of the seals to the glazing unit.

Bridge Packer are to be used on lower horizontal rails, with a minimum of 2 per rail. Position not to interfere with drain slots.

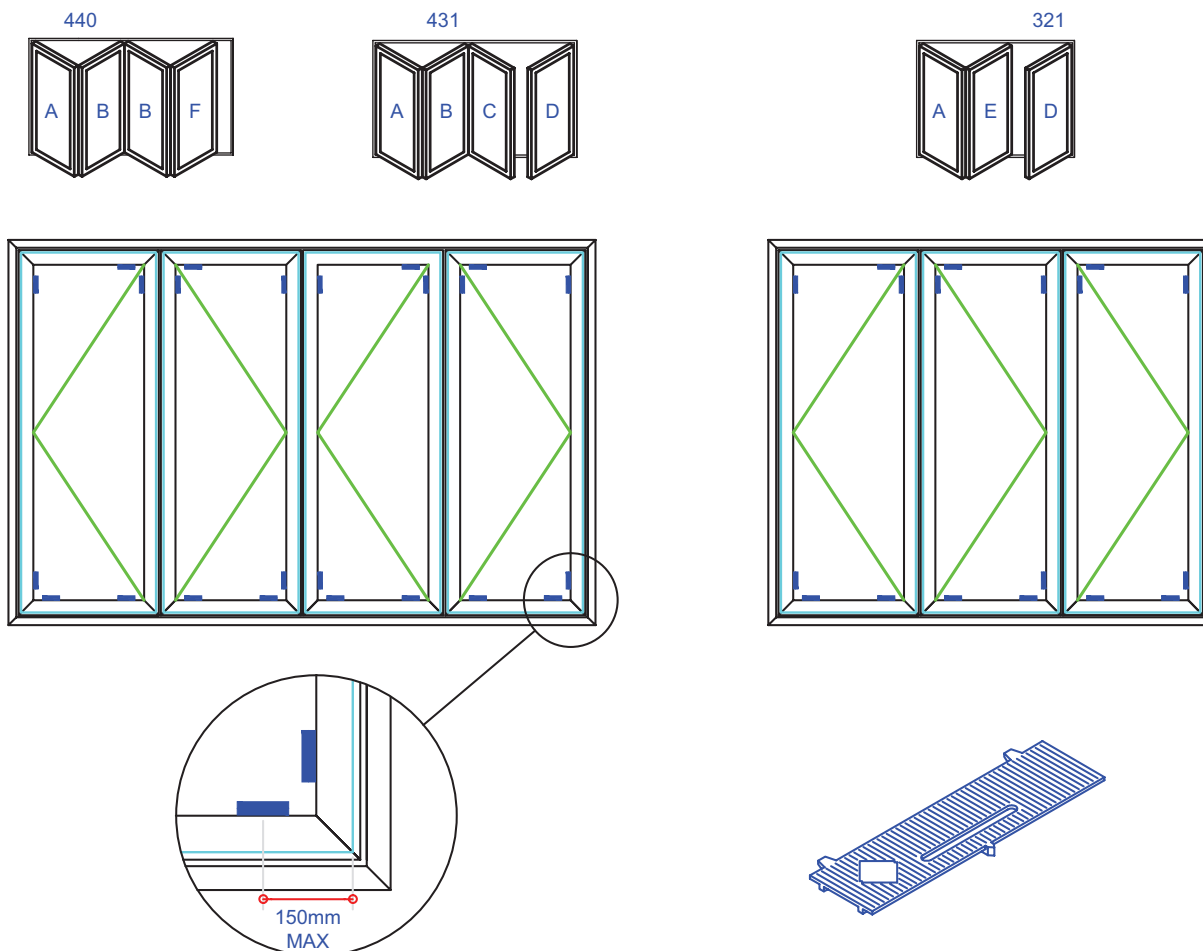
Glazing Packers are used to pack the glass unit into the apertures. These packers are to be positioned adjacent to locking points, additional glazing packers must be used to support the glass on longer lengths.

Always ensure the packing blocks that are wider than the glass unit or panel, e.g. for a unit 28mm wide, use a packer 30mm wide. If factory glazing, apply a small amount of silicone adhesive to hold the packing blocks in position whilst being transported, but care should be taken this does not interfere with the drainage.

The Clip In Packers must be placed in the appropriate packing positions shown on the diagram below prior to placing the glazing unit or panel into the opening.

GT Security Glazing Clips are necessary to meet PAS 24 requirements. Care must be taken to ensure:

- All Bi Fold Doors are fitted squarely.
- There is sufficient support at the head such as a lintel.
- The head of the frame is secured as firmly as possible.

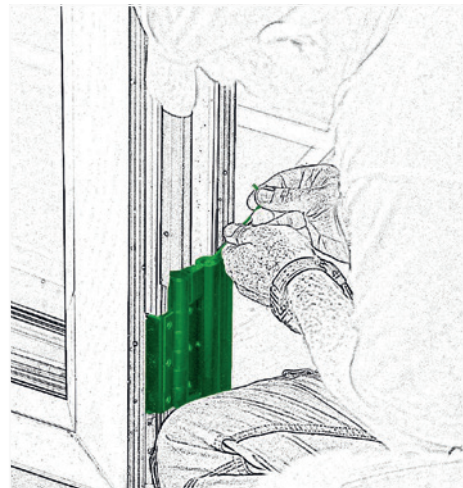
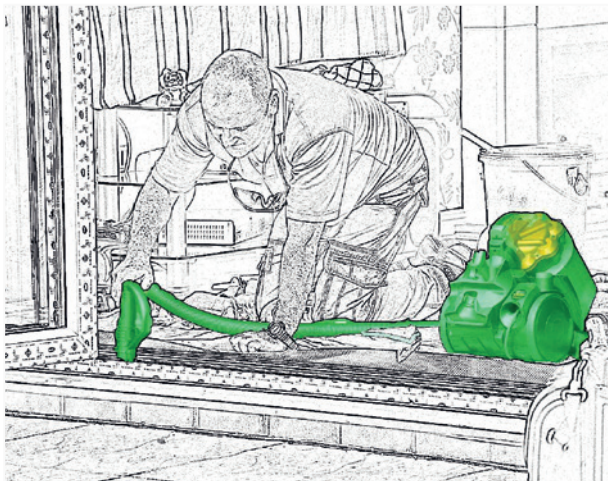


Final Checks

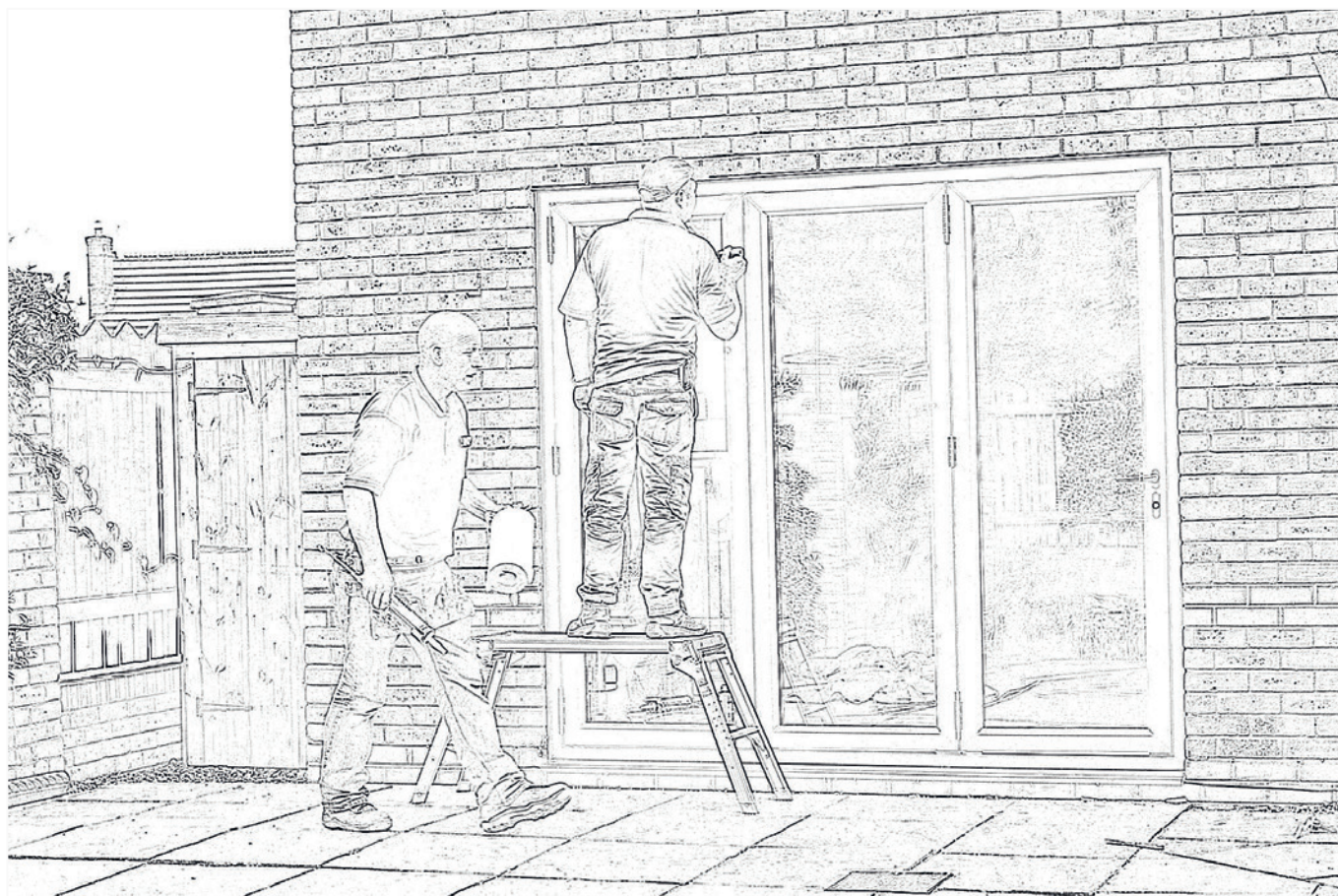
- Debris must be removed from all drainage channels and tracks.
- It is recommended that all security grubs on all hinge types are tightened. It is important that the security grub screw is never loosened after installation.
- Whenever a Pivot Roller is fitted, it is important that the two grub screws that hold the carrier body are fastened tightly so they cannot move. This only applies to the Bottom Pivot Roller.
- Check all operations of the door set ensuring locks can be operated easily, rollers operate smoothly and are free from obstructions.
- The slave door must be fully locked for the main lock mechanism to operate.

Care must be taken to ensure:

- All Bi Fold Doors are fitted squarely.
- There is sufficient support at the head such as a lintel.
- The head of the frame is secured as firmly as possible.
- All glass should be in accordance with BS6262.



Clean the site before trimming and sealing where necessary.



Adjustment

Vertical adjustment +/-2mm

Pivot Rollers - Remove the bolt screw from the top of the hinge. Remove the screw locking block. Adjust using a 8mm Allen key. Re-insert screw locking block. Re-fit screw bolt back into top.

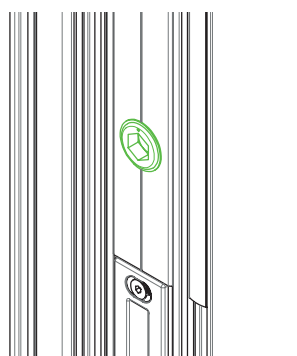
Vertical adjustment of the hinges is not possible.

Horizontal adjustment

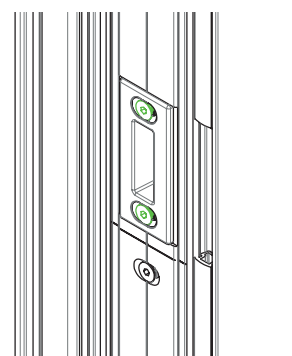
Keep - horizontal + 1 to 4mm: Using a 10mm Allen Key - ¼ turn = 1mm, Full turn = 4mm

Keep - compression +/- 2mm: Using a 2mm Allen Key the latch plate can be altered to increase or decrease compression.

Keep - Horizontal adjustment



Keep - Compression adjustment



Hinges - sash to sash - horizontal + 1mm: Loosen the 6 fixing screws that is attaching the adjustment flag of the hinge to the sash. Loosen adjustment bolts with Allen Key. Remove the 2mm C-clips. Remove the 1mm narrow strip packer from the back of the hinge plate. Continue loosening the adjustment bolts so that the metal adjustment plate sits flush with rest of the hinge.

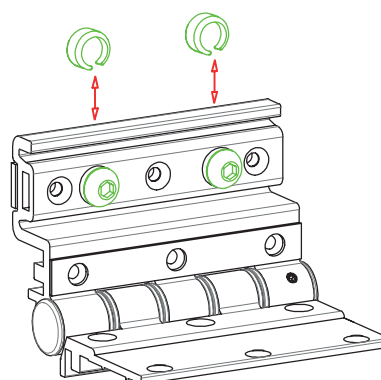
Carefully tighten back up the 6 fixing screws ensuring you do not strip the profile. Recommended to use a screwdriver rather than a torque gun.

Hinges - sash to frame & sash to sash - horizontal + 1mm to 2mm: Loosen the 6 fixing screws that is attaching the adjustment flag of the hinge to the sash. Loosen adjustment bolts with Allen Key. Replace the 2mm C-clips with the 1mm C-clips supplied separately. Re-tighten the adjustment bolts using an Allen key.

Add either a 1mm or 2mm narrow strip packer supplied separately depending on the amount of adjustment required.

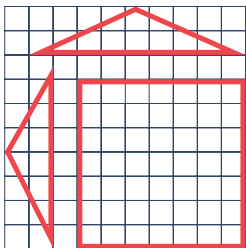
Place on top of the current 1mm narrow strip packer. Carefully re-tighten the 6 fixing screws ensuring you do not strip the profile. Recommended to use a screwdriver rather than a torque gun.

Hinge - Horizontal adjustment



Maintenance

- The stainless steel rollers and bearings require no lubrication.
- Top and bottom tracks should be kept free of debris.
- Locking mechanisms may require a small amount of light machine oil around once a year.
- Periodically clean the glass with warm soapy water (washing up liquid). Dry with a lint free cloth and remove any excess water.
- PVC parts should be cleaned regularly with soapy water.
- Do not use any type of harsh cleaning agents such as white spirit, WD40, automotive dashboard wipes, acids, brick wash solutions or alkalis.
- To prevent damage of the adjacent door sash remove the key from the cylinder immediately after locking or unlocking.



WINDOW
WAREHOUSE

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