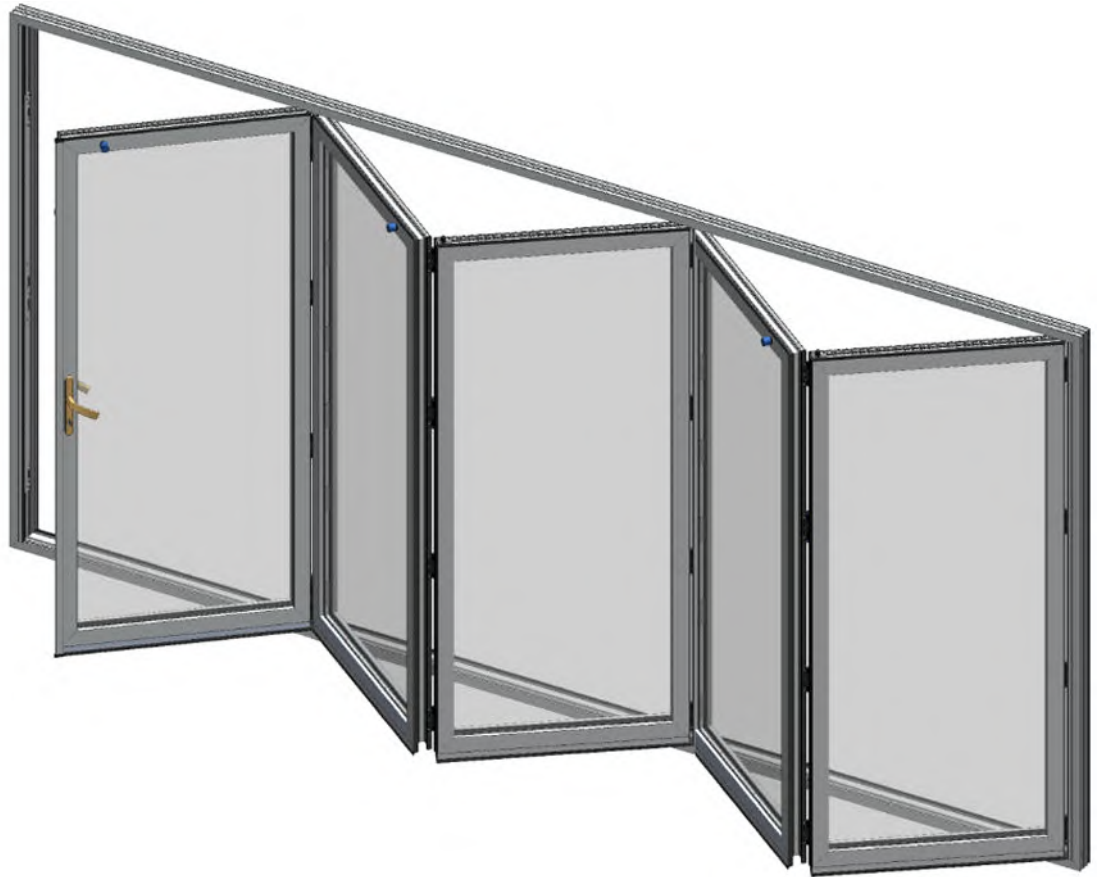


# 70

## EXTERNAL ALUMINIUM 5 DOOR BiFOLD DOOR SET

**Integrated Cill**  
**Assembly Instructions**  
**Bespoke and Standard Sizes**



All products must be installed in accordance with accepted good trade practice (and in accordance with supplied instructions where applicable), and maintained in accordance with these procedures or else the warranty shall be void.

## Important information

- We recommend that a competent tradesperson installs this product
- A single person must NEVER carry out the installation, as some components are heavy.

### Automatic closures and operators

- The hardware systems are designed for manual operation. Poorly adjusted automatic closures can impart significant destructive forces to tracks, bearings and stops. Such hardware used in installations is expressly excluded from warranty terms.

### Care of doors and frames on site

- Please check doors, frames and cill at the time of delivery and within 72 hours of delivery to ensure that they are acceptable and in good condition. If you find a component missing or damaged, please inform your supplier immediately. We keep replacement components of most set parts and these can be sent out to you quickly. This will save you having to repackage and return the whole set, and allows you to continue with the project. (See contents list on page 3 for full list).
- When storing prior to installation, the doors and frames should be handled with care and stored in a dry, ventilated building. Doors and frames should be stored flat and on a level surface (not on edge or on end).
- Should you need to store the doors before installation, they must still be fully inspected and checked for damage or faults and reported within 72 hours of delivery, repacking if necessary.
- Remove the blue plastic protective film immediately after installation. We do not recommend to leave this on for long periods of time as moisture can get trapped underneath the film, causing permanent marks on the aluminium powder coating.
- Do not leave masking tape on the aluminium powder coating for long periods of time. It is important it is removed within 24 hours of applying.

### Trimming

- This bi-fold door is not designed to be trimmed on site and should be fitted as supplied. Trimming the doors or frame will void the warranty.

### Conditions of sale

- We shall not be held responsible for any incidental work expenses arising out of or because of any defects in our product, or bad workmanship to our product. In the event of goods having manufacturing defects and requiring replacement, our liability will be limited to the value of the door or frame component only. These notes do not affect your statutory rights with the retailer of this product.

## Maintenance

The aluminium powder coating and bi-fold door hardware in buildings is subject to deterioration from everyday use, and also environmental attack due to atmospheric and other conditions. Maintenance of the powder coating and hardware is even more important in severe environments such as close to marine areas, and some industrial areas. Even stainless steel products require maintenance to prevent deterioration in some environments. We require the following minimum maintenance to be followed otherwise the warranty shall be void.

### Tracks and bearings

Using a spatula or similar (not your fingers), apply a small amount (typically a ½ teaspoon of white petroleum jelly, Vaseline or similar lubricant to the inner lip of each side of the track. Ensure that the wheels pass through the lubricant and it is evenly distributed along the track. Put additional lubricant around the bearings. Lubrication reduces wear, improves smoothness and further protects against corrosion of tracks and bearings. Remove all surface contaminants by wiping all visible track surfaces with a damp soft cloth and mild detergent, then wipe clean with a clean cloth. In severe environments, apply a thin film of corrosion preventative such as WD40, by wiping with a soft cloth moistened with one of these products.

Stainless steel bearings are manufactured from hardening-grade stainless steel and although this material performs considerably better than plated steels, it is susceptible to corrosion unless maintained as described as above.

### Hangers, pivots and brackets

A light spray application of a suitable lubricant such as WD40, followed by a light wipe with a dry cloth to remove excess, is recommended to all hinges, pivots and brackets. Exposed surfaces should first be wiped with warm soapy water and a soft rag, and then rinsed clean before applying preventative.

### Hinges

Wipe down the visible surfaces with warm soapy water on a soft rag and then rinse off by wiping with a clean damp rag. Application of a thin film of a light machine oil or WD40 will help maintain the original lustre of the metal finish.

### Twin point locks

Spray application of a suitable lubricant such as WD40 to the sliding pin inside the bolt and to the lock cylinder is recommended. A tube attached to the nozzle will help concentrate the spray where you want it to go. There are access holes or slots on all twin point locks, so that this can be done without removing the locks from the doors.

### Frequency

The procedures mentioned above need to be carried out as often as is necessary to prevent deterioration in the installed environment, however we recommend the following minimum frequency of application;

- General environment - 6 monthly
- Close to marine environment - 3 monthly

### Aluminium powder coating

Preferably, every time you clean your windows also clean the aluminium doors and frames, or at the minimum every 3 months (or monthly if within 5 miles of the sea, or in industrial areas.) Wash the outside of the doors and frames with soapy water using a mild detergent and soft lint free cloth. Dry the surface using a clean absorbent cloth or leather, then buff with a soft cloth.

# Introduction to Assembly

## QUICK GUIDE

Your aluminium bifold door set is supplied with the frame unassembled and in 4 pieces ready for assembly on site. The doors are all pre-glazed and the glazing is 'toe and healed' in the factory to balance the glazing in each door, then in the full set.

Every bifold door set is pre-assembled in our factory to ensure it is operating perfectly before we deliver it. We then dismantle the frame and remove some hardware, before carefully packing it for transportation to your home.

When you receive the bifold door set to install it, assemble the frame then install it into the brickwork opening.

Attach the hardware to the doors into the frame.

Because the bifold door set has already been assembled and operated in our factory, as long as the frame is installed securely into the brickwork opening, completely level and square in every plane, and the hardware is correctly attached, then the installed bifold door set should operate perfectly, without the need for further adjustment.

## Full and detailed installation instructions are contained within this Instruction booklet

### Contents

Please check the contents of the packages to ensure all parts are present before beginning assembly

#### Aluminium Parts

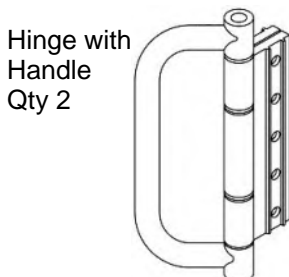
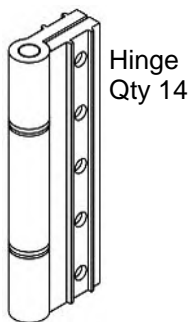
##### Doors

Door 1 (Door to frame jamb)	Quantity 1
Door 2	Quantity 1
Door 3	Quantity 1
Door 4	Quantity 1
Door 5 (Access Door)	Quantity 1

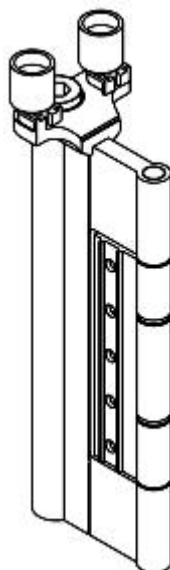
##### Frame Pack

Frame Head	Quantity 1
Frame Jamb	Quantity 2 (1x Left and 1x Right)
Integrated Cill	Quantity 1

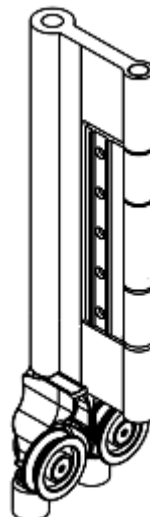
#### Hardware



Top Guide  
Qty 2



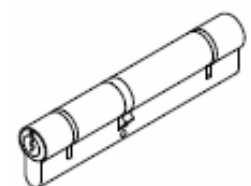
Bottom Roller  
Qty 2



Handles  
Qty 1 Pair



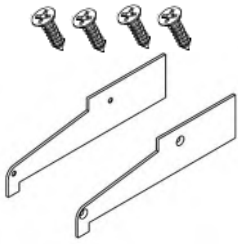
Handle Fixing  
Bolts Qty 2



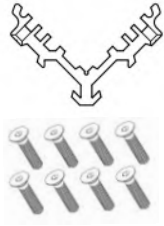
Anti Bump Cylinder  
Qty 1 (Keys Qty 3)

# Contents (2)

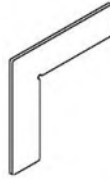
Cill End Caps  
Qty 2  
Fixings Qty 4



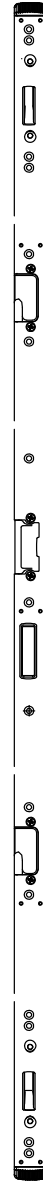
Mechanical Corner  
Cleat Qty 4  
With M6 x 16 Machine  
Screws Qty 8



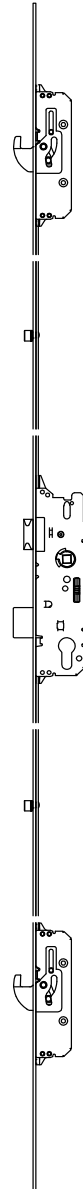
Corner  
Chevron  
Qty 2



Lock Keep  
Qty 1



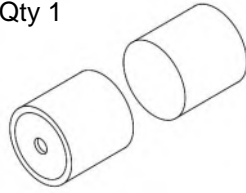
Multi Point  
Door Lock  
Qty 1



Black Bungs 12mm  
Qty 8



Extended Magnetic  
Catch  
Qty 1

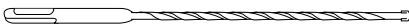


## Installation Bag Contents

A. Hardened steel direct frame fixings 7.5 x 90mm - Qty 30



B. SDS Drill bit 6.5mm x 210mm - Qty 1



C. HSS Drill bit 7mm x 105mm - Qty 1



D. Power bit 1/4 x 70mm TX30 - Qty 1



E. Insert bit 1/4 x 25 pozi No2 - Qty 1



F. Allen Key 3mm - Qty 1



G. Allen Key 4mm - Qty 1



H. Assorted bag of Packers and Wedges

## VERY IMPORTANT NOTE

To speed installation, we have pre-installed some components in production.

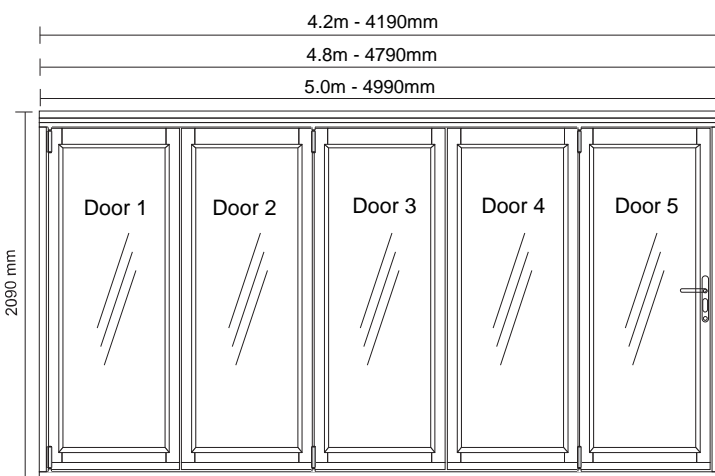
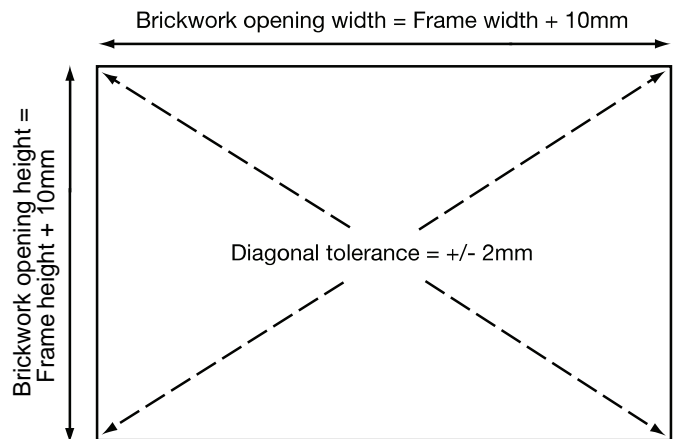
- The Twin point lock and handles is installed into Doors 1 & 3.
- The frame jamb / Door 1 hinges are installed onto the frame jamb.
- The hinges in between Doors 1 & 2 and the top guide and bottom roller are all installed on Door 2.
- The hinges in between Doors 3 & 4 and the top guide and bottom roller are all installed on Door 4.
- The multi point lock is installed into Door 5.
- The lock keep is installed onto the locking frame jamb.

## Preparing the site

### Brickwork opening:

When preparing the site, please prepare the brickwork opening to be 10mm more in height and width than the outside assembled frame size.

It is essential that all 4 internal surfaces of the brickwork be levelled before installation. Please ensure that all dimensions are correct for installation before proceeding, as the set must be installed square and level into the opening.



Shows left opening set

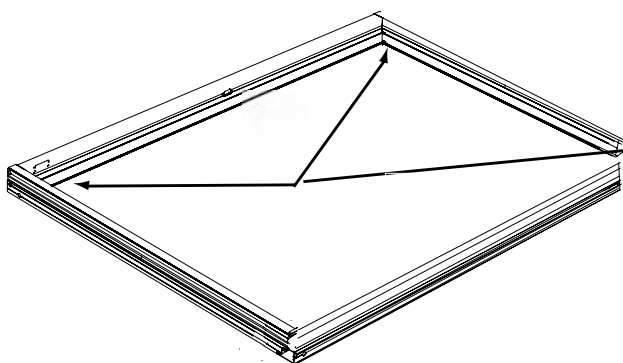
### Standard sized Aluminium door sets outer frame dimensions are as follows;

- 4.2m - Door set = 4190mm wide x 2090mm high
- 4.8m - Door set = 4790mm wide x 2090mm high
- 5.0m - Door set = 4990mm wide x 2090mm high

### The Brickwork opening sizes are:

- 4.2m - Door set = 4200mm wide x 2100mm high
- 4.8m - Door set = 4800mm wide x 2100mm high
- 5.0m - Door set = 5000mm wide x 2100mm high

## Assembling the frame



- 1 Lay the 4 pcs of frame on the floor on top of cardboard or a similar protective covering to prevent damage to the aluminium.

- 2 Assemble the complete frame by fixing the jambs to the head and bottom rail using the corner chevrons and mechanical corner cleats.  
The integrated cill screws into the jambs.

# Assembling the frame continued

## Mechanical Corner Cleat Assembly - Frame Head & Jambs

**2 a)** Insert the 2 corner chevrons into the grooves in the frame head (Fig 1).

**b)** Insert the mechanical corner cleats into the frame head (Fig 1).

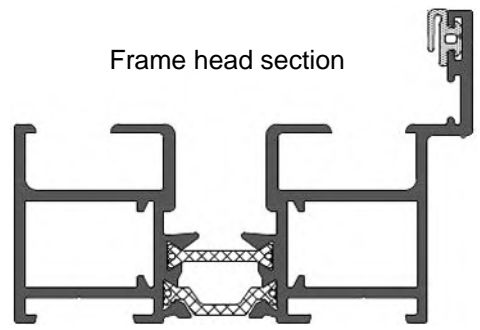
**c)** Apply low modulus silicone sealant to the aluminium profiles to be joined together.

**d)** Carefully align the mitre joints, then using the 4mm Allen Key (G), carefully tighten the machine screws at the side and bottom. Progressively tighten all 4 machine screws, bit by bit, to ensure a tight mitre joint, then clean off any excess silicone.

**e)** Fill in the remaining smaller holes with low modulus silicone or glue as shown below (Fig 2).

**f)** Repeat the process on the opposite corner of the frame (Fig 3).

Frame head section



Frame jamb section  
(with adjustable jamb attached)

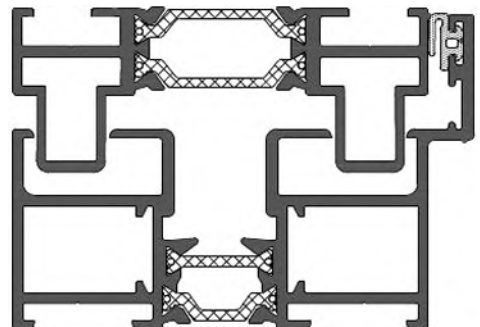


Fig 1.

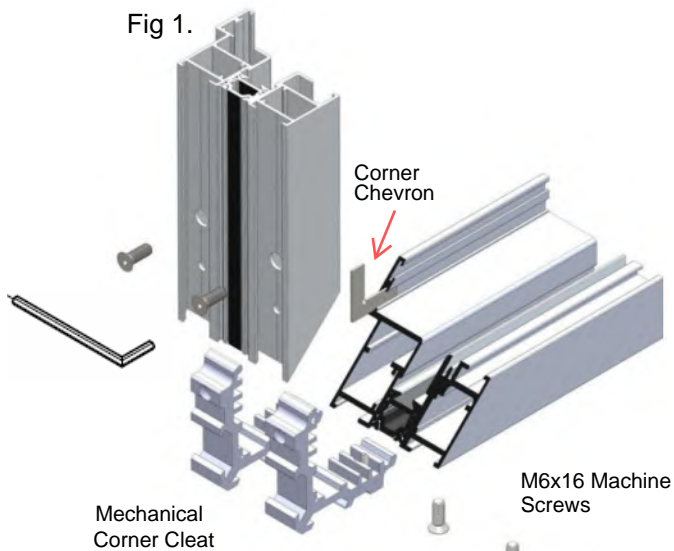


Fig 2.

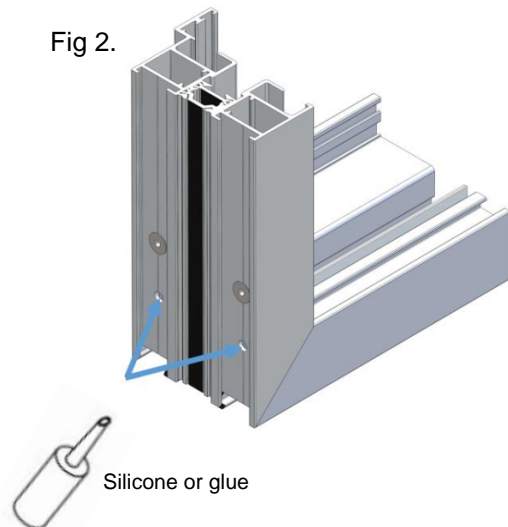


Fig 3.



## Assembling the frame continued

- 2 g)** Insert the foam sealing block supplied into the channel of the integrated cill (Fig 1).
- h)** Before locating the jambs onto the cill, mastic seal both ends of the jambs and the face of the thermal break.
- i)** Once the jambs are aligned onto the cill, silicone dip the machine screws provided and secure (Fig 1).
- j)** Any excess silicone should be wiped off at this point.
- k)** Silicone seal both end caps onto the cill. Silicone dip the screws and fix the caps in place using the 1/4 x 25 pozi bit (Fig 3).

**IMPORTANT-**

Ensure no water can escape from the ends of the cill past the jambs. Any fixings breaching the drainage channel (Fig 2) must be silicone dipped.

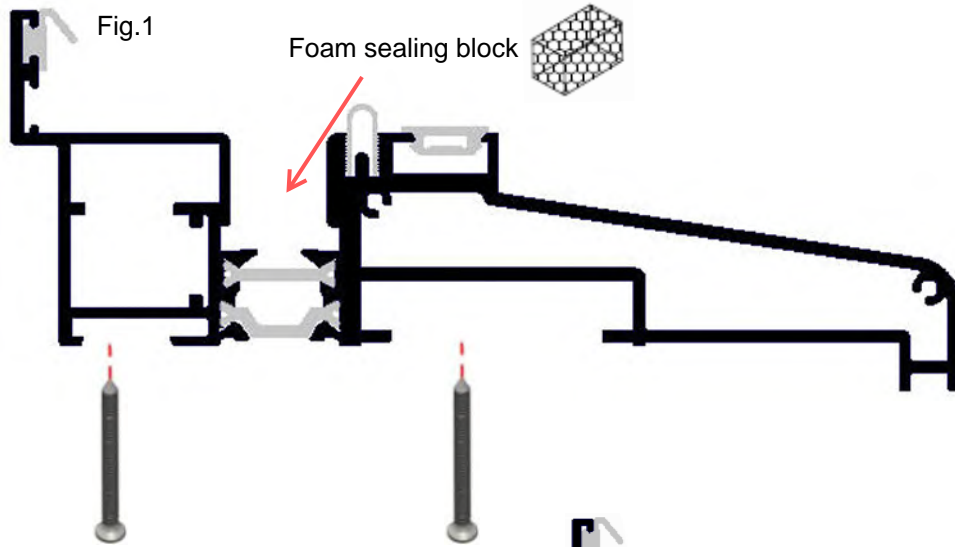


Fig 2.

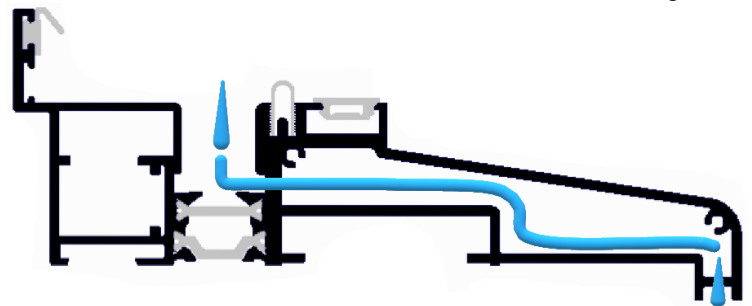
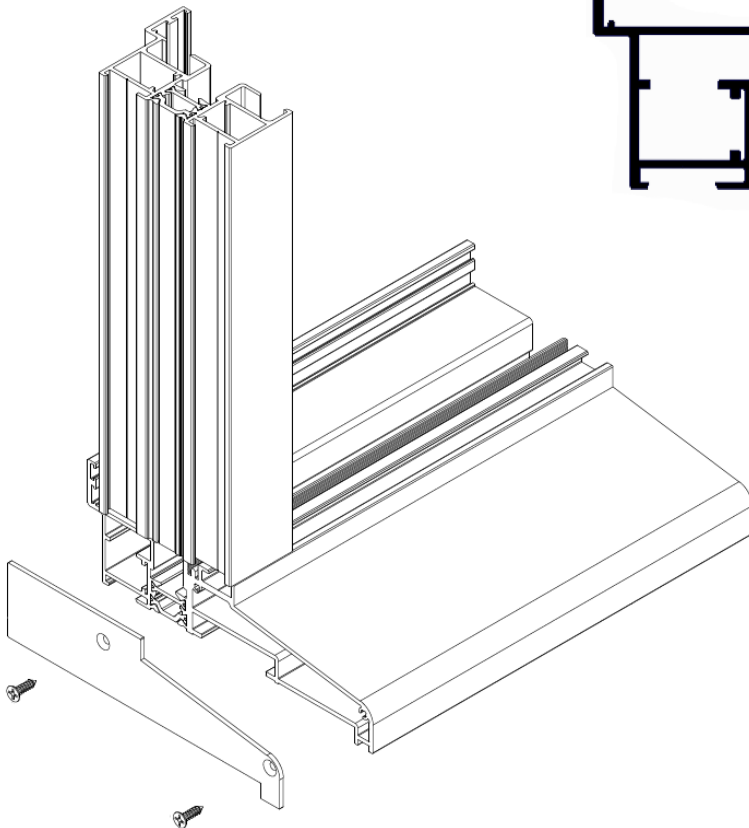


Fig 3.



## Installing the assembled frame

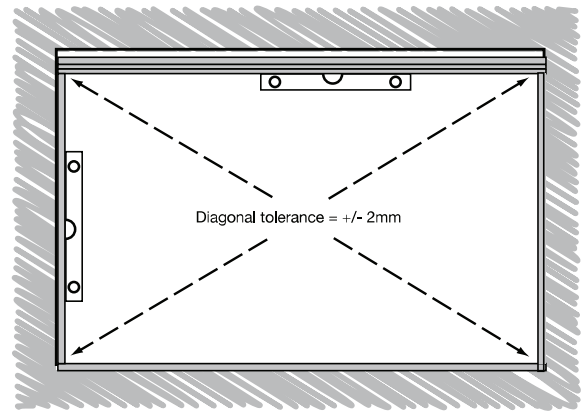
- 3** The frame should be installed with the outer edge of the frame jambs up to a maximum of 5-10mm back from the face of the brickwork.

*It is critical that the frame is fitted square and level.*

Use the packers provided to level the frame. Start at the bottom rail and insert the first packer **DIRECTLY UNDER THE FRAME JAMB** starting at the side of the frame which looks to be the highest

The diagonals must be the same, +/- 2mm.

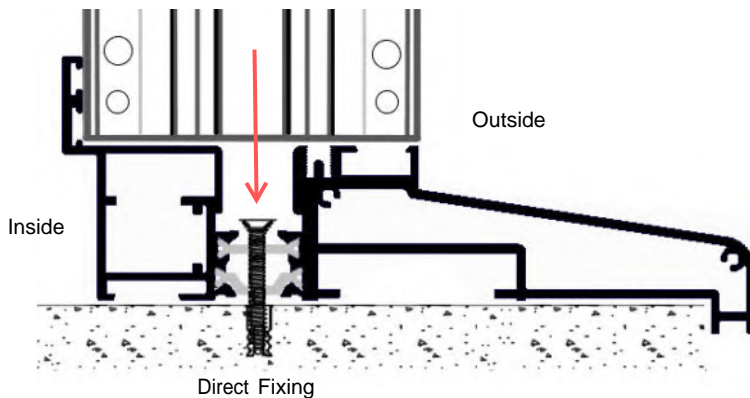
H  
(Height of opening)



The diagonals must be the same +/- 2mm.

### IMPORTANT NOTE:

The frame must be installed into the brickwork opening completely upright, square and level in every plane, before continuing with the installation. The door set uses a bottom rolling system so it is vitally important the cill is level and adequately supported by using packers as necessary.



- 4** Direct fix 150mm from all corners and every 500mm maximum centres, using the hardened steel direct frame fixings provided (A).

Ensure all fixings are silicone dipped and countersunk to ensure running gear is not obstructed.

**If the amount of packing is more than 4mm under the cill then reduce the maximum centres to 250mm.**

**Ensure you have a packer where both rollers come to rest in the closed position.**

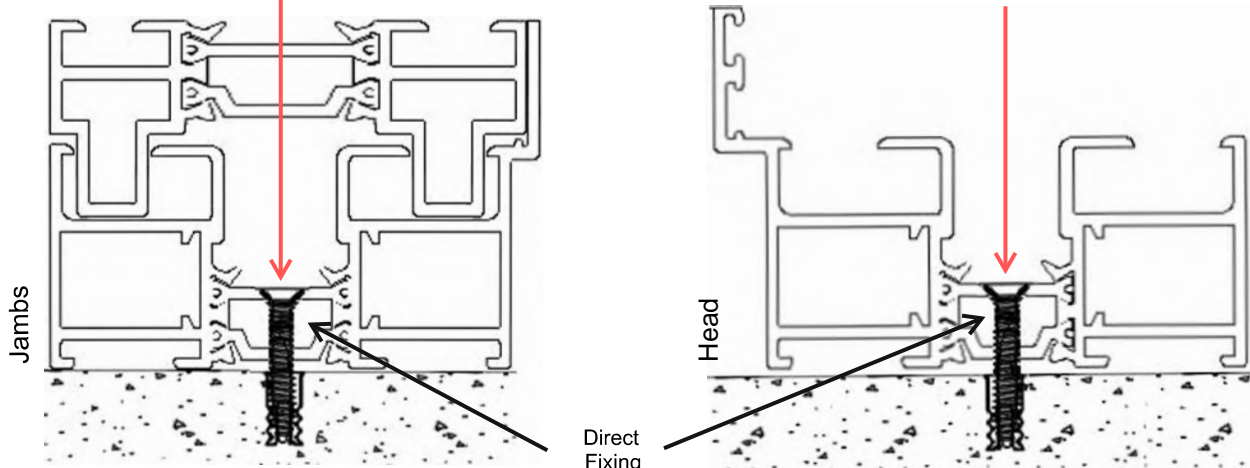
Fix directly through the cill, head and jambs into the brickwork. Holes will need to be drilled into the head cill and jambs for the fixings, using the HSS long 7mm drill provided (C).

The adjustable jambs have been pre-drilled with 13mm clearance holes to allow access to direct fix through the thermal break in the outer frame jambs. These 13mm holes should be plugged with the 12mm black bungs supplied.

For the lock keep jamb fixing, Qty 4 13mm holes are pre-drilled, 2 of which are accessible by removing the lock keep.

The hardened steel frame fixings fix directly into the brickwork without the need for plugs. After drilling the holes in the aluminium frame use the 6.5mm SDS masonry drill (B) to drill holes into the brickwork. Then fix using the hardened steel frame fixings with the T30 bit provided (D).

**DO NOT OVER TIGHTEN THE FIXINGS OR DISTORT THE ALUMINIUM FRAME**



Finally apply silicone to seal all around the perimeter of the frame - especially along the complete length of the bottom cill

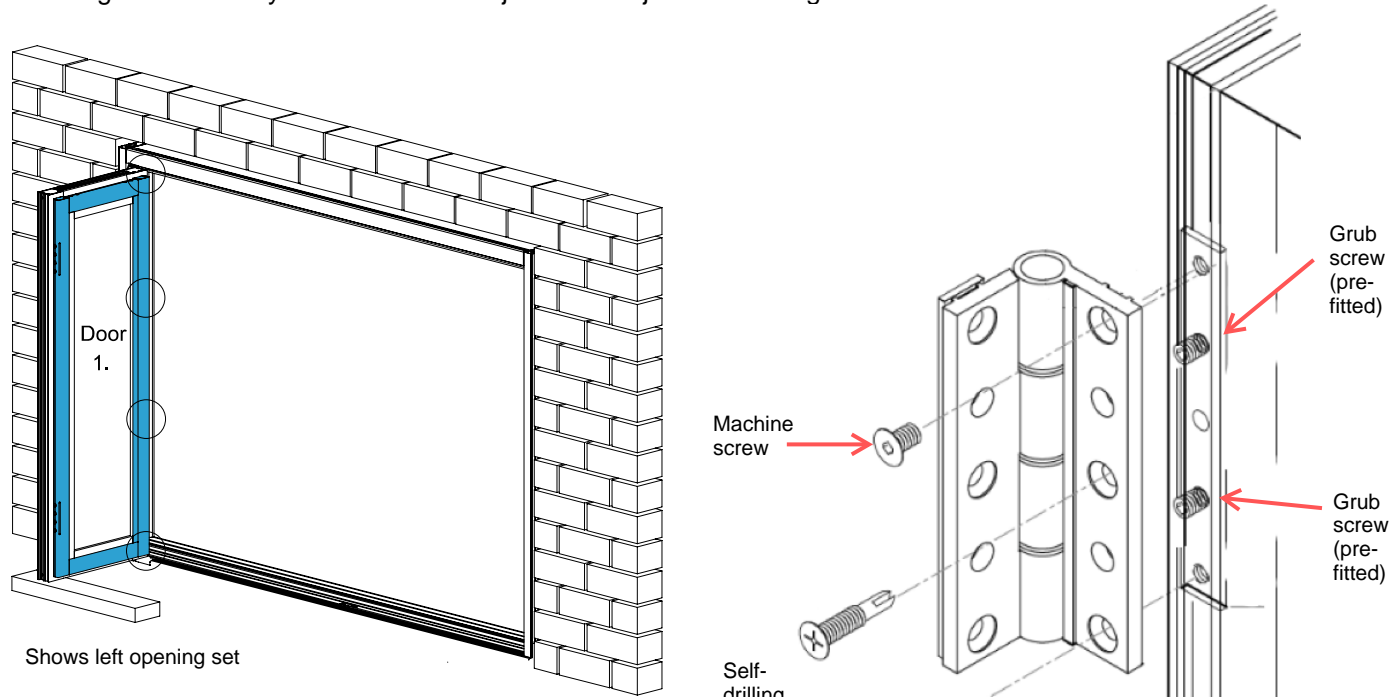


## Fitting Door 1 to the frame jamb

- 5 a)** Locate Door 1, which fixes to the jamb of the frame. Look for the panel glass beads to determine the interior side, and panel drainage holes to determine the bottom of the door.

Ensure the integrated cill and door are protected by using the discarded foam packaging or cardboard, and that you have a suitable support block to rest the door on.

Door 1 fixes to the frame jamb which is at the opposite side of the frame to the lock keep jamb. The hinges are already fixed to the frame jamb which just need fixing to Door 1.



Shows left opening set

- b)** With the door at right angles and supported on blocks (being careful not to damage the seal on the bottom of the door), use the 3mm Allen key (F) and M5 x 10mm machine screws to fix the door in the top and bottom countersunk hinge hole positions.

DO NOT FIT THE 4.2 x 25MM SELF-DRILLING SCREWS AT THIS POINT.

### IMPORTANT NOTE

The seal gasket is fitted under the door outside edge.

Please take care to ensure when the door rests on the block, it rests on the - ALUMINIUM PART ONLY AND NOT THE SEAL - This will prevent damage to the seal.

## Fitting Door 2

- 6 a)** Locate Door 2, paying attention to the panel glass beads and drainage holes. Door 2 has its hinges and rollers already attached.

Slightly lean the door to locate the bottom roller into the middle channel of the integrated cill (Fig 1) page 10.

# Fitting Door 2

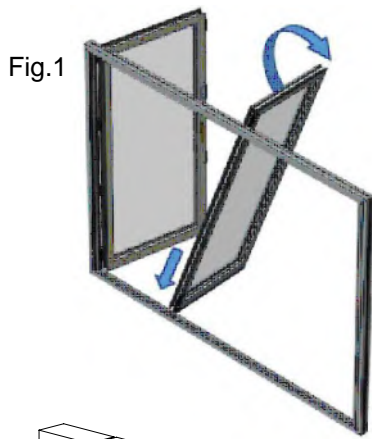


Fig.1

**6**

**b)** Align the top guide of Door 2 and locate it in the middle channel of the top track (Fig 2).

**c)** Move the door to the right-angle position and support on blocks, ensuring the weight is not on the door seal. (Fig 3).

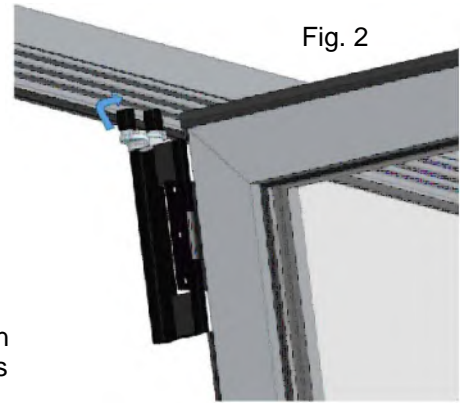


Fig. 2

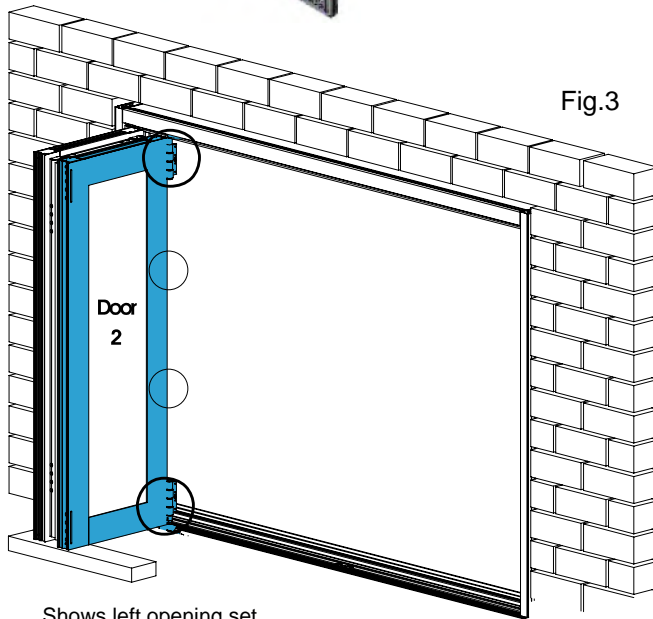


Fig.3

Shows left opening set

**d)** Fit Door 1 to Door 2 with the 4 hinges which are already fitted to Door 2 using the M5x10mm machine screws and the 3mm Allen key (F) in to each hinge leaf. Align the clamping plates with the hinges to do so. Keeping both doors on an angle (Fig 4) will allow for better access.

The hinge with the pull handle will be second down from the top.

**DO NOT FIT THE 4.2 x 25MM SELF-DRILLING SCREWS AT THIS POINT.**

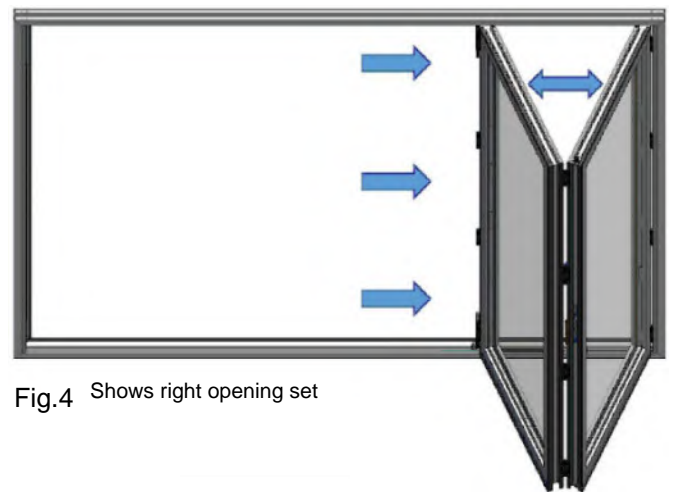
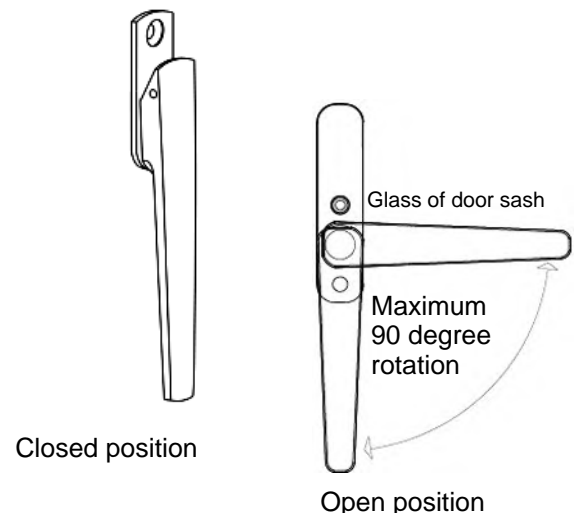
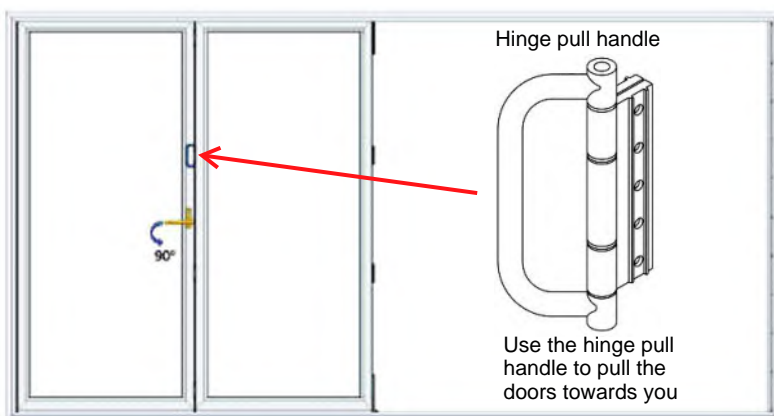


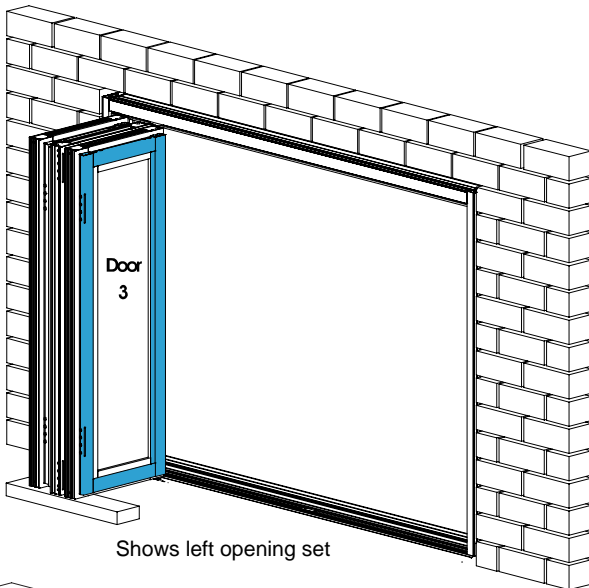
Fig.4 Shows right opening set

**e)** Close the doors from the inside using the HINGE pull handle, then rotate the intermediate twin point lock handle 90 degrees to lock the doors closed.

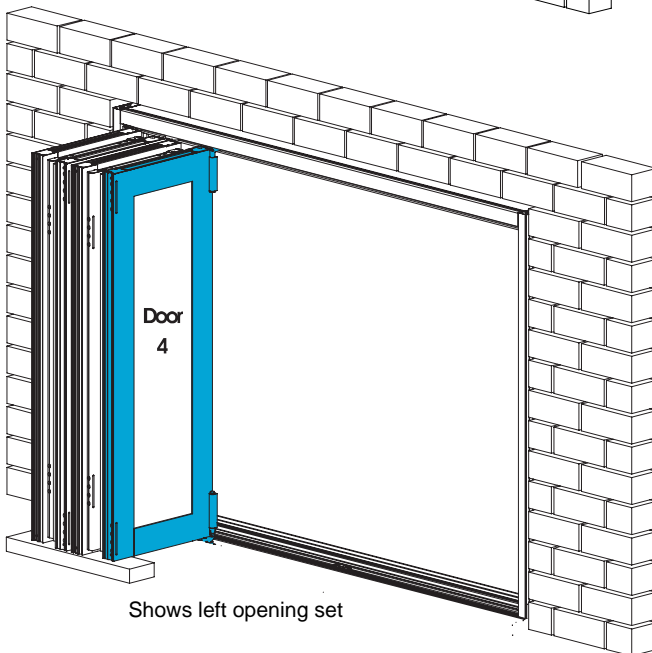


**DO NOT USE THIS HANDLE TO PUSH/PULL THE DOOR**

## Fitting Doors 3 & 4

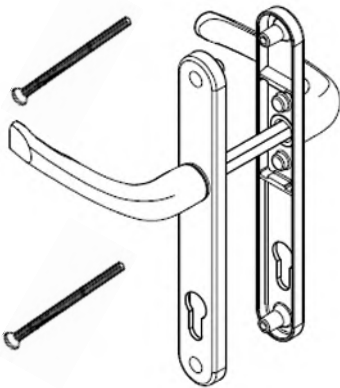


- 7 a)** With doors 1 & 2 locked in place, support Door 3 on blocks adjacent to Door 2. Align the clamping plates with the hinges and attach the hinge leaves onto Door 3.



- b)** For the installation of Door 4, follow the same installation procedure as Door number 2, pages 9-10

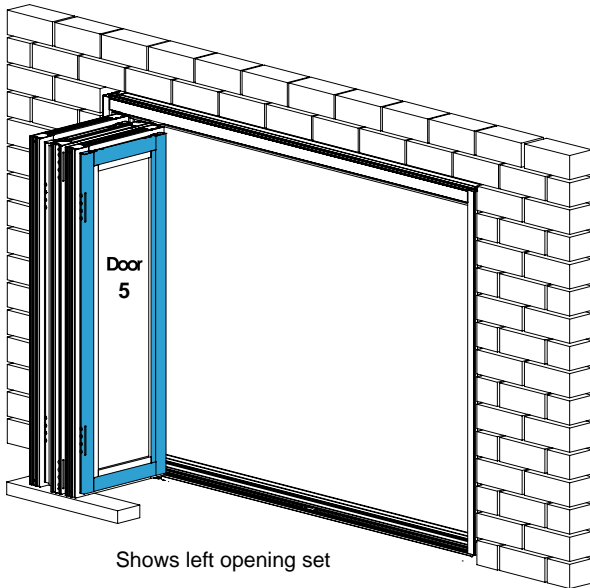
## Fitting the access door (Door 5)



- 8** Fit the handles to Door 5 using the long threaded bolts provided. The handle with the screw holes should be fitted to the inside, and the handle without screw holes should be fitted to the outside.

## Fitting the access door (Door 5 cont)

- 9 a)** With Doors 1, 2, 3 and 4 in the open position and at 90 degrees to the frame, support Door 5, the access door on blocks, adjacent to Door 4 and then screw the 4 hinges onto Door 5.  
Alternatively you can keep Doors 1,2,3 and 4 closed, then support Door 5 at 90 degrees to the closed doors to screw the hinges onto the access door.



- b)** Close Doors 1 & 2 (if opened) using the HINGE pull handle and from the inside rotate the intermediate twin point lock 90 degrees to secure them in place.

Close Doors 3 & 4 (if opened) using the HINGE pull handle and from the inside rotate the intermediate twin point lock 90 degrees to secure them in place.

Close the access door, Door 5 and lift the handle to ensure the lock engages. Turn the key to fully lock the access door.

To unlock the access door use the key to unlock, then depress the handle to open the door.

IF YOU ARE HAPPY WITH THE OPERATION OF THE DOORS AT THIS STAGE AND THEY CLOSE SMOOTHLY WITHOUT CATCHING ON THE FRAMES OR LOCK KEEPS, YOU CAN NOW FIT THE SELF-DRILLING SCREWS TO EACH HINGE LEAF. IF NOT, PLEASE SEE OUR TROUBLE SHOOTING GUIDE ON PAGE 12 TO ADJUST THE DOORS TO THEIR OPTIMUM POSITION.

## Fitting the magnetic catches

Threaded inner

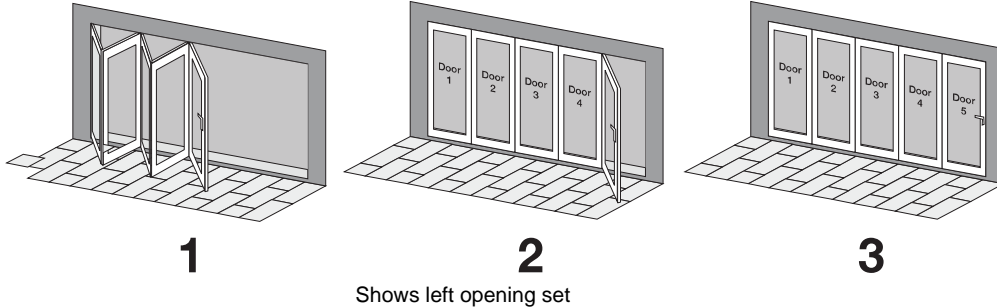


Extended  
magnetic catches

- 10** Screw the extended magnetic catches onto the threaded inner's which are located on the outside of Door 2 and 3.

# Operation of bifold doors

- 11** When closing the door set, first close Doors 1 and 2 by pulling them towards you using the HINGE handle. Secure them in place with the twin point lock, by turning the handle 90 degrees. Next close Doors 3 and 4 by pulling the HINGE handle towards you, securing them in place with the twin point lock, by turning the handle 90 degrees. Finally close and lock Door 5 by closing, then lifting the handle and turning the key. Use Door 5 independently as a daily access door.

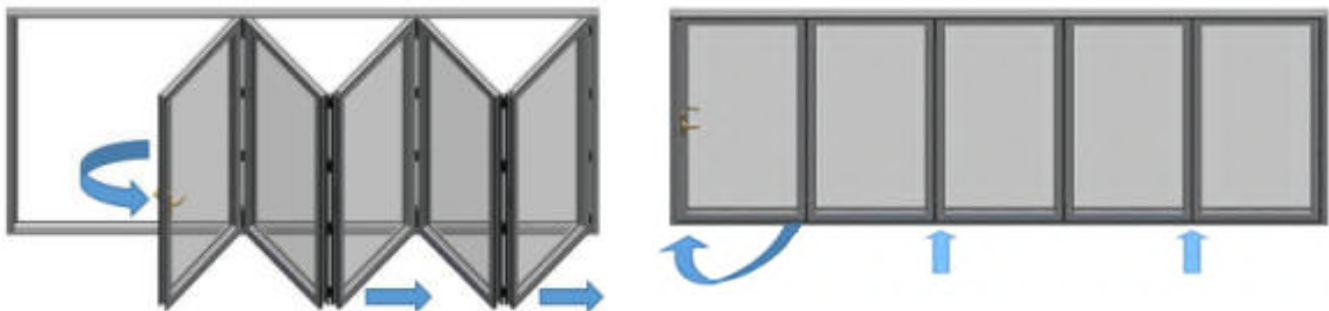


To open the doors, first unlock the door using the key and fully depress the handle on Door 5. Next open Door 5 fully until the magnetic catch engages. Then turn the twin point lock handle between Doors 3 and 4 90 degrees, and push the doors away from you. Next, turn the twin point lock handle between Doors 1 and 2 90 degrees, and finally side and fold all 5 doors to open.

Please note, failure to operate the doors as outlined above could result in damage to the roller system and frame. You must never close the doors by dragging the lead / access door first. The twin point intermediate lock handle must never be used to push / pull the doors.

## Trouble Shooting Guide

Check the operation and basic running of the doors to make sure the mechanisms are working properly by opening and close the doors as shown below.



Shows right opening set

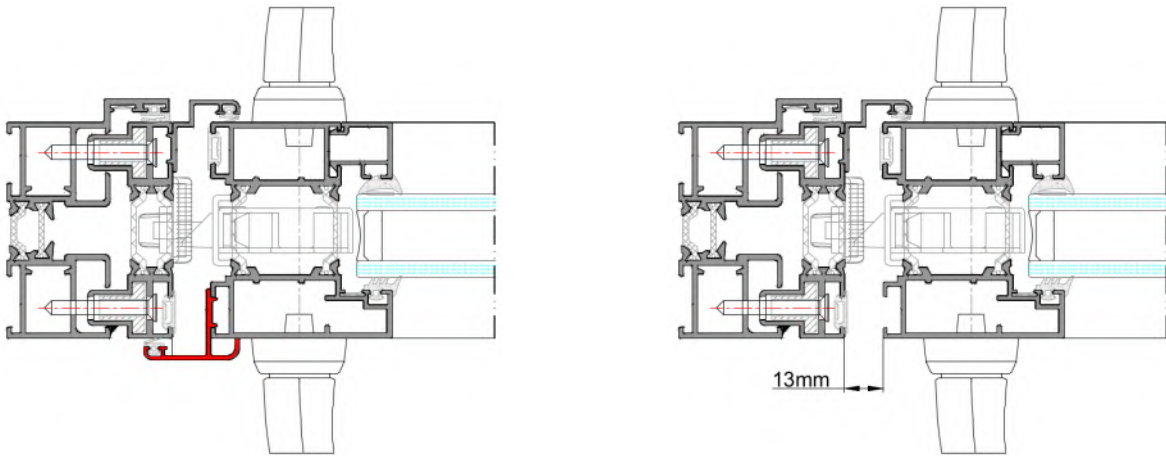
If you are experiencing any locking or operational issues it is vital to check all levels of the outer frame, importantly that there is no dips or rises in the frame head and/or cill.

Assess the horizontal and vertical gaps between the outer frame and the top, bottom and sides of the door panels ensuring they are even and equal.

# Trouble Shooting Guide

## 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.



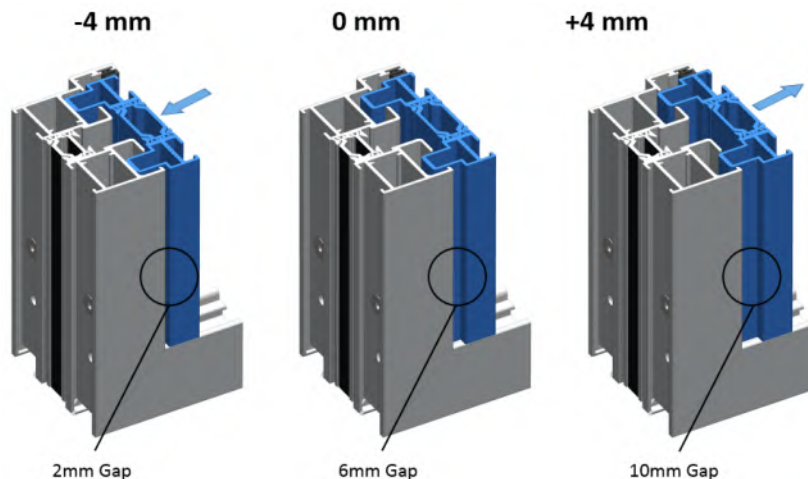
- If the lock and keep are clashing regulate the distance by adjusting adjustable jambs as shown below.
- Once the correct gap is achieved and the lock is locking perfectly fix the rebate profile back on the master door panel.
- Double check if the lock is latching properly.

## 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.





Brighthouse HD6 1HA

## DECLARATION OF CONFORMANCE

DoC N°: HEP/FSDALICORD

<b>Product Type:</b>	Aluminium Bifold Double Glazed Door
<b>Intended Use:</b>	For use in domestic and commercial premises Not intended for use on escape route
<b>Declared System of Assessment Performance:</b>	3
<b>Provisions to which the Product Conforms:</b>	Annex ZA of EN 14351-1:2006+A2:2016
<b>Reference to Supporting Product Certification and/or Test Reports</b> <i>(supportive of compliance)</i> :	BFRC Thermal Report – S158/20221018/001

### Declared Performance:

#### Essential Characteristics

	Performance
Resistance to Wind Load:	Class A3 (1200Pa)
Watertightness:	Class 9A (600Pa)
Dangerous Substance:	No emissions of dangerous substances emitted
Load Bearing Capacity of Safety Device:	Npd
Acoustic Performance	Npd
Energy Rating:	C
Radiation Properties:	Npd
Air Permeability:	Class 4 (600Pa)

This declaration of performance is issued under the sole responsibility of Hepworth Framework Limited.

Signed for and on behalf of the Company by

**Name of Representative:** Richard Steckles

**Job Title:** Managing Director

**Representative Signature:**

**Date of Issue:** 24<sup>th</sup> February 2023

**Product UKCA Marking Detail:**

