

**Altegra**  
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DOOR SYSTEMS



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# DOOR INSTALLATION GUIDE

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# FOLDING SLIDING DOOR – INSTALLATION

## IMPORTANT

The Folding Sliding Doors of which Senior Architectural Systems Ltd offer should be installed by qualified and experienced technicians. Before beginning installation, please read through this guide carefully. Follow the instructions detailed otherwise the system may fail to function to its purpose and any warranty implied upon the system may become void.

It is the responsibility of the building owner, architect, installer or contactor to ensure the installed products conform to relevant building regulations.

NOTE: Sectional drawings detailed throughout this guide are of the Ali FOLD system but apply equally to the PRe® FOLD system.

## SURVEYING

### GENERAL

Good surveying is the basis for ensuring a good installation. In order for the survey to be sufficient, it is advised that the guidelines within this document are followed and viewed in conjunction with the relevant product manuals. All surveyors must be fully trained in the installation methods & techniques used on site as well as having an understanding of the Senior's Folding Sliding Door system being installed.

### SUITABILITY OF THE APERTURE

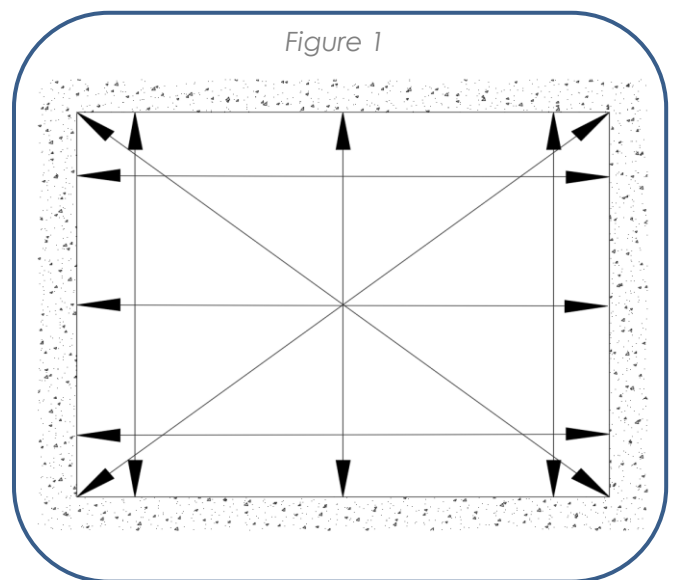
The aperture must be checked for suitability. The aperture needs to be free of defects in order for the installation to be done to a good standard. All doors need to be fixed into a suitable structure & the doors need to be sufficiently supported by the structure. During the survey, the appropriate fixing method to use must be established, along with the suitable fixings and the points to fix them. Load bearing capacity of the structure must also be considered when surveying the apertures. If defects are found or the structure is found to be insufficient, this must be pointed out to the relevant parties and rectified before installation of the doors commences.

### DOOR DESIGN

Consideration of the door type needs to be considered when the survey is being carried out, in particular any obstacles which may hinder the movement or operation of the doors.

### MEASUREMENT OF APERTURE

Several measurements of width and height must be taken. This is done by taking diagonal measurements of the aperture. The smallest measurements must be used to determine the manufacturing sizes of the doors, to ensure that the manufactured frame is not too tight upon installation. Figure 1 below shows the generic measurements which should be taken.



## MANUFACTURING

### MANUFACTURING SIZES

When it comes to manufacturing sizes, several aspects should be considered to ensure that there are no clashes upon installation and to ensure a neat finish and fit.

Information gained from the survey should be set out to establish the manufacturing sizes, taking into account the required sealing details.

Expansion and contraction of the frames needs to be considered, as temperature fluctuates the frames will expand and contract within the aperture. Aluminium roughly expands by 1mm for every metre of frame.

### CILLS

Where cills are required on an installation it is important to consider several other points. Please note, this sub section mainly refers to extruded cills available from Senior Architectural Systems Ltd.

If it is intended for the cill to be drained through (refer to relevant technical manual) it is important that the following steps are followed.

1. Cill end caps must be fitted and sealed as per the relevant manual.
2. Cills must be bedded onto sealant behind the line of drainage.
3. Cills must be packed and fixed to structure.
4. Frames sitting on the cill must be bedded on sealant ensuring drainage is not blocked.
5. Frames must be fixed to cill in same manner it would be fixed to a structure, using suitable fixings.

### DRAINAGE PATHS

Before machining drainage paths into the door frame, the aperture and installation type need to be considered. In some cases, due to the location the doors are being fixed within the aperture, it may not be suitable to drain the doors in a certain way.

### COUPLING

The SPW251659 (Outward) or SPW659251 (Inward) Coupler available on Senior's Folding Sliding Doors allows for coupling to a Casement, Tilt & Turn or an Overswing window. It is a clip in type coupler that requires sealing to both frames they are connected to, using a suitable low modulus sealant, at the front face of the coupler, between all connecting frames.

The couplers also require fixing to both frames which they are connected to. Please see relevant manual for more details.

## INSTALLATION

### OPTION A: FITTING FRAME WITH DOOR LEAFS IN POSITION

When using this method, it is extremely important to ensure that there is no movement of the door leaves, otherwise there is a risk that the door set may slide open and cause significant damage.

1. Insert the outer frame into the brickwork aperture.
2. Pack into position.
3. Ensure that the head, cill and jambs are all square.
4. Temporarily secure the outer frame.
5. Perform a trial opening and closing of the doors to ensure they function accordingly.
6. Permanently fix the outer frame.

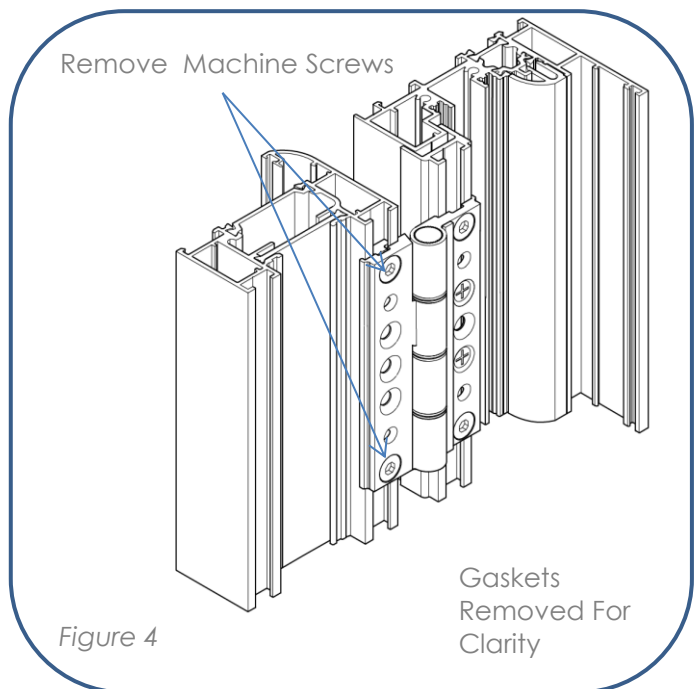
### NOTES

The following notes apply to both Option A & Option B:

- Fixing details can be found on Page 5 & 6.
- We highly recommend to fit the door leaves unglazed.

### OPTION B: FITTING FRAME WITHOUT DOOR LEAFS IN POSITION

1. Remove machine screws on the hinges to release the door leaf (See Figure 4).
2. Carefully remove the door leaf and place in a safe location. This may require more than one person.
3. Take great care to ensure that the hinge packers located behind the hinge are not misplaced.
4. Use an identification method to label the door leaves to ensure that they are re-fitted in the correct position.
5. Now the door leaves have been removed, insert the outer frame into the brickwork aperture.
6. Pack into position.
7. Ensure that the head, cill and jambs are all square.
8. Re-fit the previously removed door leaves into their original positions.
9. Perform a trial opening and closing of the doors to ensure they function accordingly.
10. Permanently fix the outer frame.



# FOLDING SLIDING DOOR – INSTALLATION

## FIXING

Once doors are found to be level and correctly located within the aperture the door must be fixed to the structure using the method highlighted from the survey.

There are two fixing methods available when installing Senior Architectural System Ltd Doors:

1. Direct Fixing
2. Fixing Lugs

For details on which fixing lugs are used with which frames - please refer to the relevant technical manuals. The below information applies to both fixing methods mentioned above.

See 'Figure 4' below for packing locations.

See 'Figure 5a, 5b, 5c, 5d' on Page 5 for fixing and sealing details for cills and couplers.

See 'Figure 6a' on Page 6 for lug fixing methods on both Inward Opening & Outward Opening.

See 'Figure 6b' on Page 6 for direct fixing methods on both Inward Opening & Outward Opening.

Fixings used will depend on the structure being fixed to.

All fixings should be:

- A suitable material to resist corrosion – i.e. stainless steel.
- Packing should be provided local to fixings to ensure frame is not deformed when fixings are tightened (see Figure 5 below).
- Fixings should not be tightened to a degree where framework is deformed.
- Fixings need to be positioned so that they do not hinder the operation of any gearing.
- Direct Fixing screws should be countersunk to prevent obstructing the operation of any gearing
- Silicone dipped to ensure water cannot penetrate the fixing hole.

Fixing locations need to be:

- 150mm from external corners.
- No greater than 600mm centres.

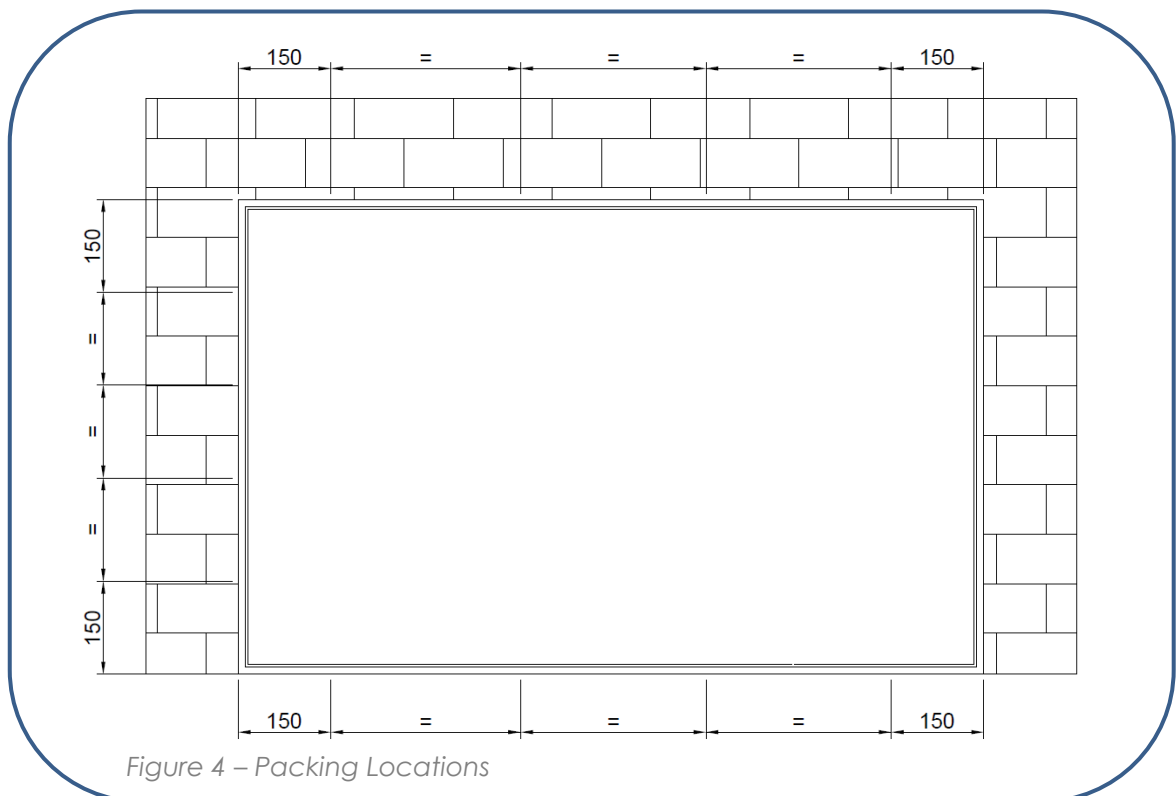


Figure 4 – Packing Locations

# FOLDING SLIDING DOOR – INSTALLATION

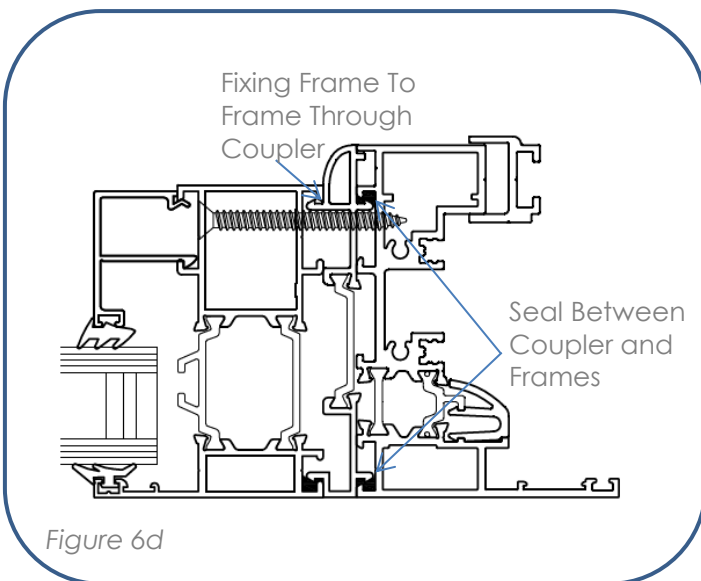
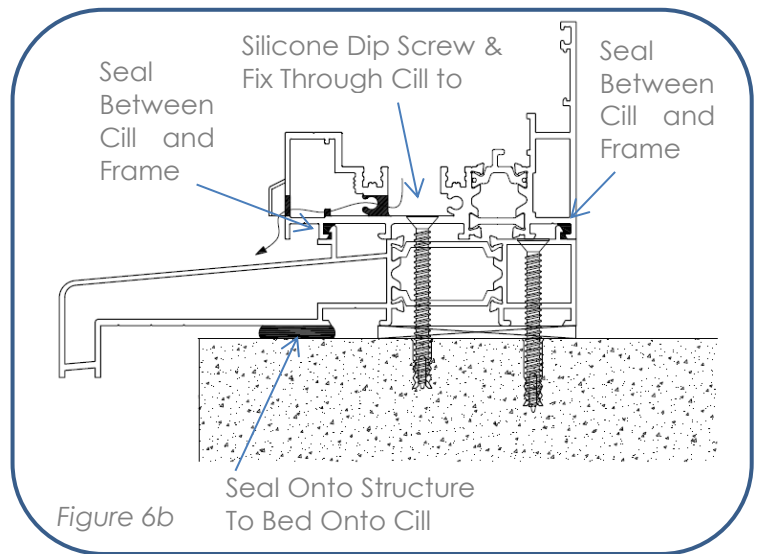
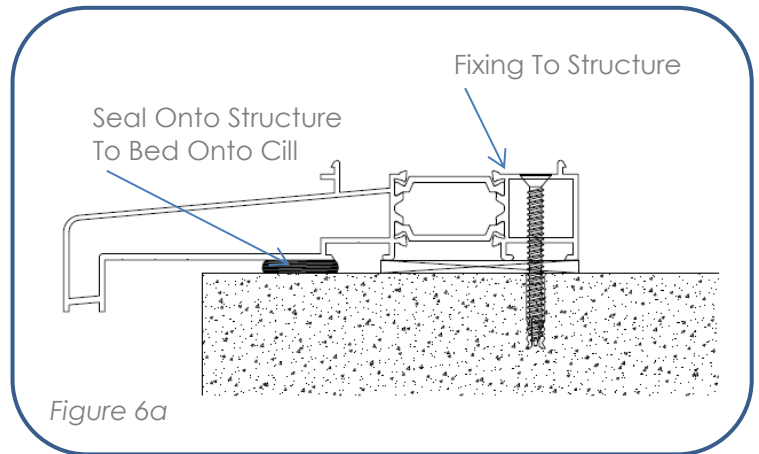
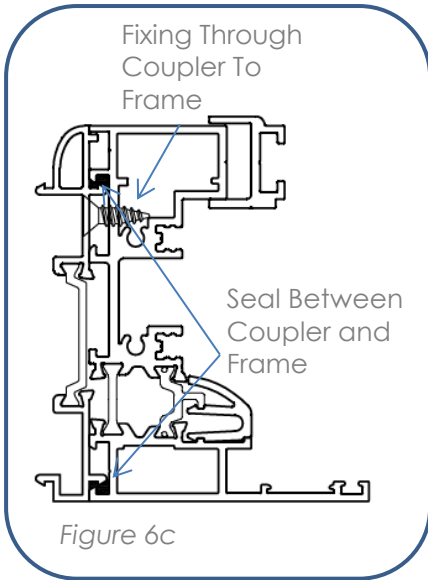
## FIXING – CILLS & COUPLERS

Figure 6c Fixing Screw

SFSCS03 – No 8 x 12mm Csk S/tap Screw

Figure 6d Fixing Screw

SFSCS850 – No 8 x 50mm Csk S/tap Screw



# FOLDING SLIDING DOOR – INSTALLATION

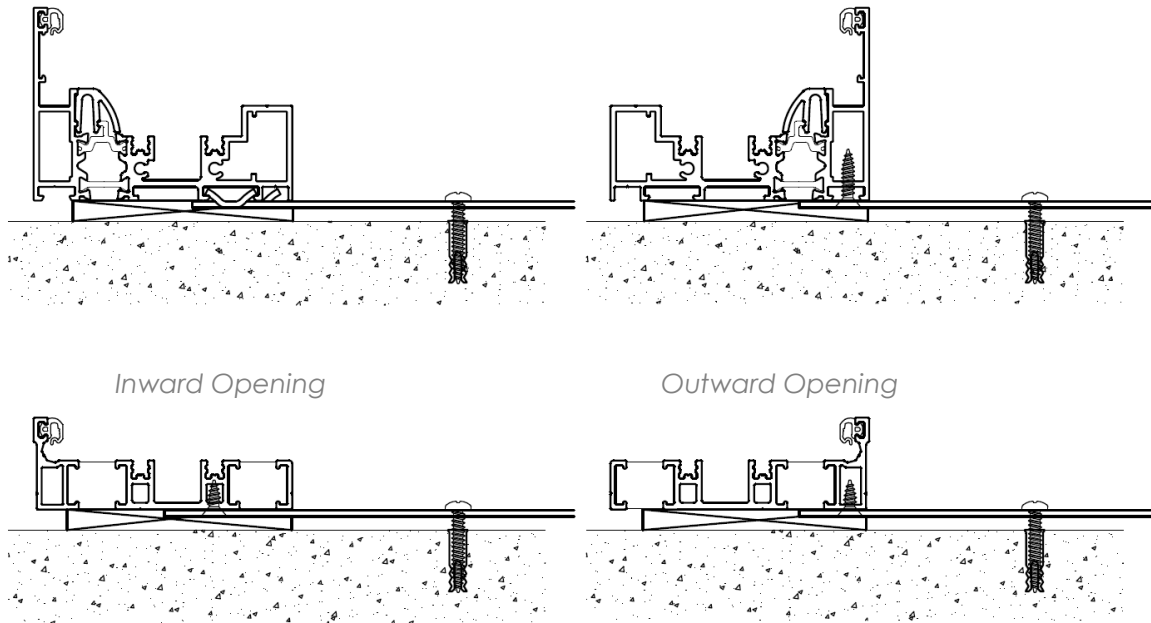


Figure 6a – Lug Fixing

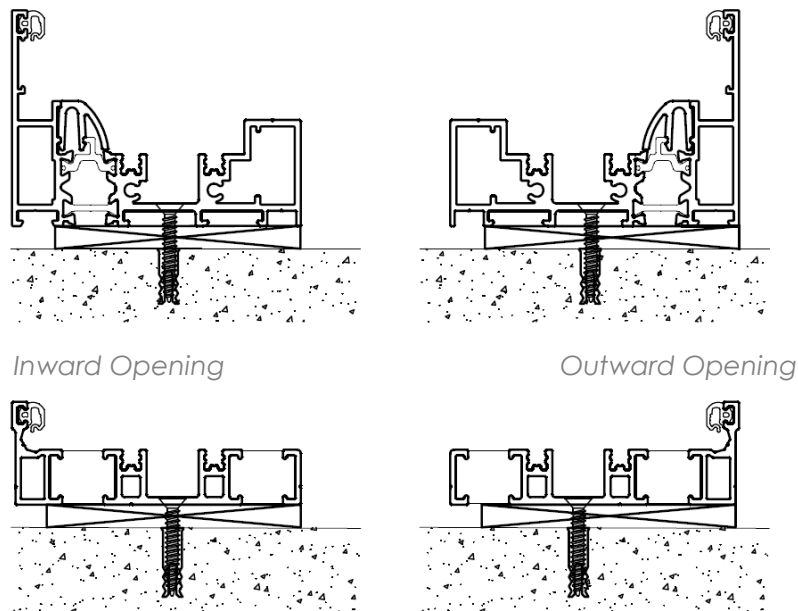
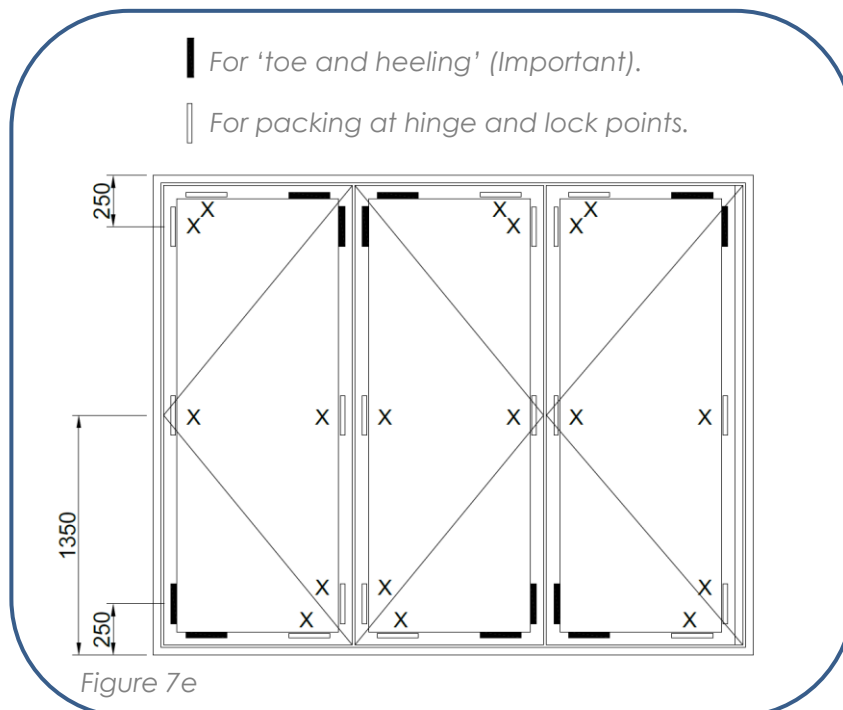
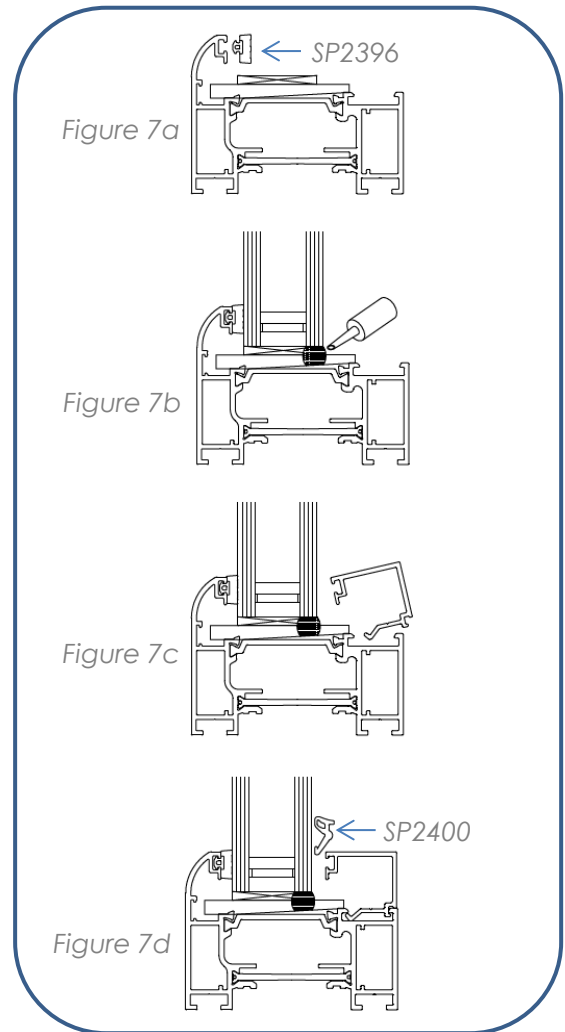


Figure 6b – Direct Fixing

# FOLDING SLIDING DOOR – INSTALLATION

## GLAZING

1. Push in SP2396 glazing gasket. The joint should be the centre of the top rail, insert the corners first and ensure at least 1% - 2% over length.
2. Fit PURGS04 glass supports as shown in 'Figure 7a' for positioning and 'Figure 7e' for locations. When establishing the correct depth of the glazing location packer, a minimum 1mm clearance is achieved. To meet PAS24:2012, all locations must be packed as shown on 'Figure 7e'.
3. Place the glass unit into the door and silicone seal along the bottom of the glazed unit and 150mm up either side. Ensure silicone used is compatible with butyl on glazed units as shown in 'Figure 7b'.
4. Locate horizontal internal glazing beads first, then followed by the verticals as shown in 'Figure 7c'.
5. Insert SP2400 (28mm Glazing) internal wedge gasket to secure, as shown in 'Figure 7d'. The joint should be the centre of the top rail, insert the corners first and ensure at least 1% - 2% over length.
6. Perform a trial run of the doorset to ensure smooth operation. If problems occur, adjustments may be required. See Page 8.



NOTE: Please refer to section 'H' of the PRe® FOLD/ Ali FOLD manual if more information is required.



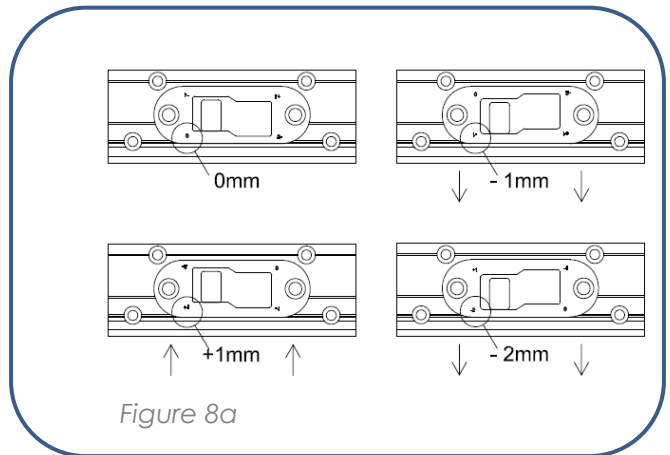
# FOLDING SLIDING DOOR – INSTALLATION

## ADJUSTMENTS

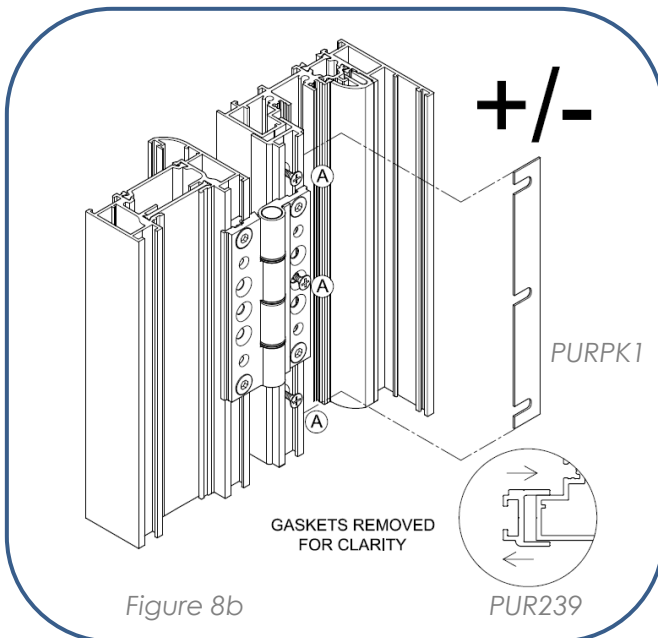
If the doorset doesn't operate as required, an adjustment may be necessary.

There are three adjustments which can be carried out on the PURE® FOLD and Ali FOLD.

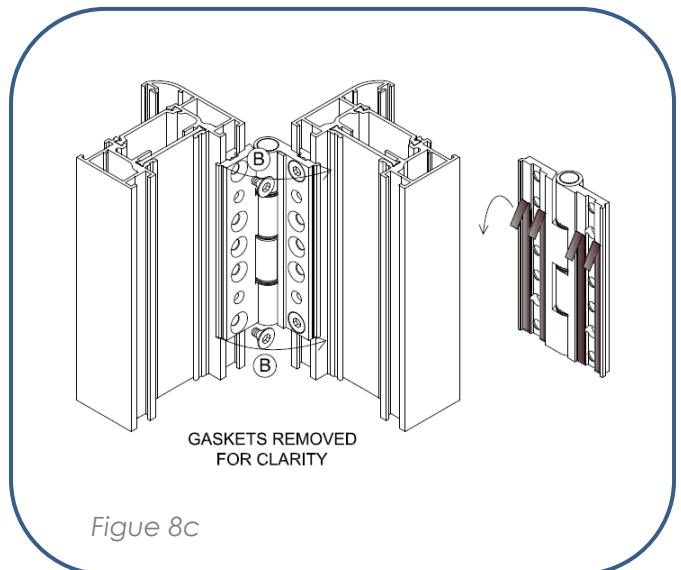
1. If the door needs to be adjusted to ensure the correct compression against the Outerframe, a -2mm/+1mm adjustment can be achieved by rotating the PURD03SBK Shootbolt keep. See 'Figure 8a'.



2. If the door requires any lateral adjustment, this can be done by simply slackening the 3No SFSCM0425 machine screws as shown in 'Figure 8b' labelled as 'A'. Once slackened, add or remove the PURPK1 Hinge Packs as required. Once the adjustment has been complete, ensure that the 3No SFSCM0425 machine screws are secured again. Depending on the door configuration, a further PUR239 adjustment can be done on the opposite jamb by repeating the above process.



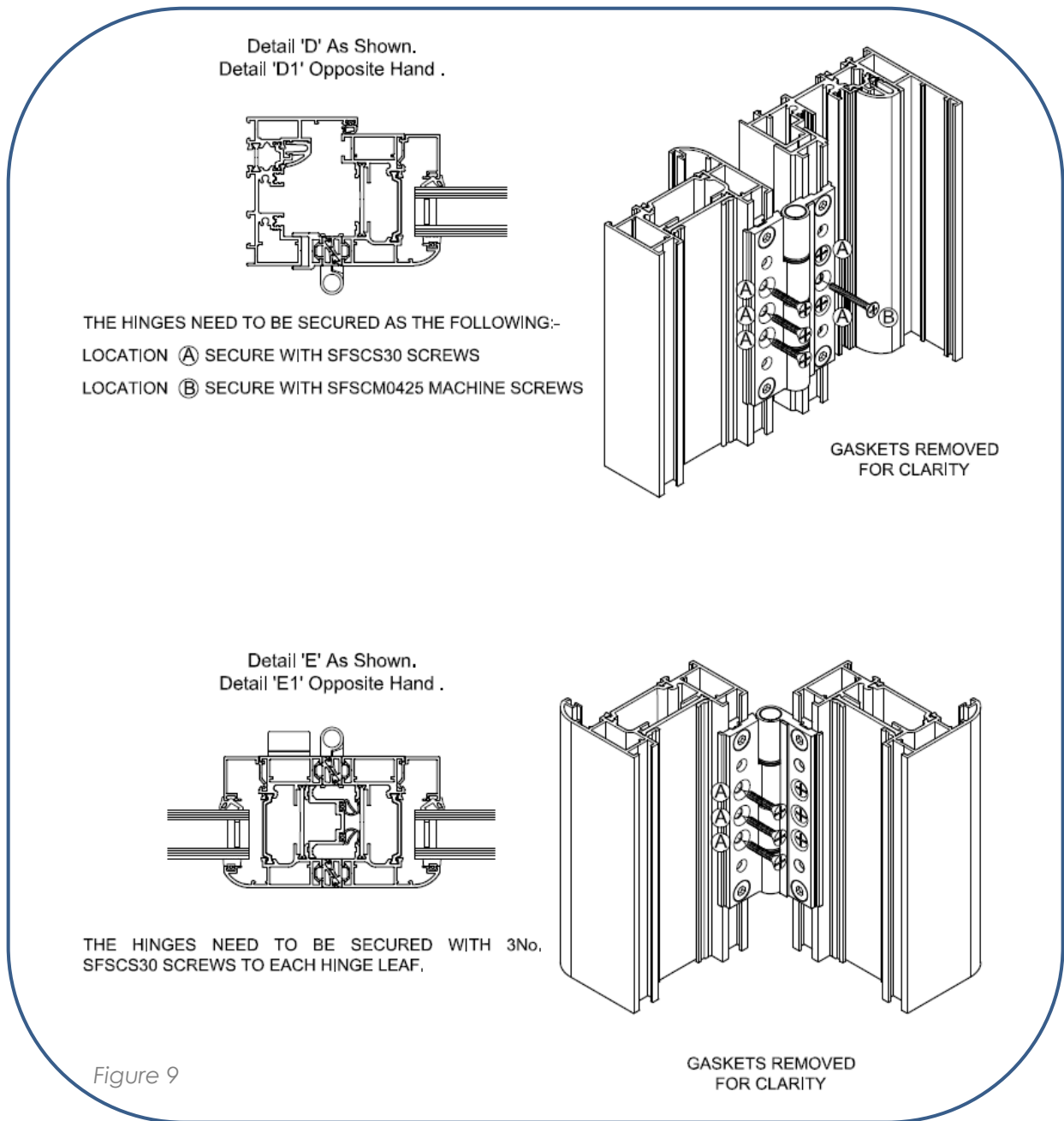
2. A 1mm reduction can be achieved on the hinges by removing the hinge adjustment strips. Unfasten the 2No machine screws labelled 'B', open the hinge and remove the 2No. 0.5mm Adjustment Strips as shown in 'Figure 8c'. When removed, close the hinge back into position and secure the machine screws. Ensure adjustments are carried out on only one side of the hinge at a time. Repeat the process for the opposite side of hinge, and then other hinges on the door leaf to achieve the 1mm reduction.



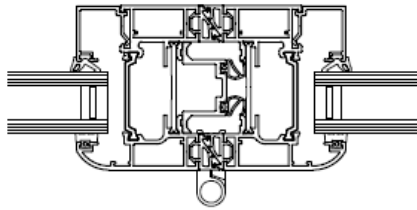
# FOLDING SLIDING DOOR – INSTALLATION

## FINAL FIXINGS

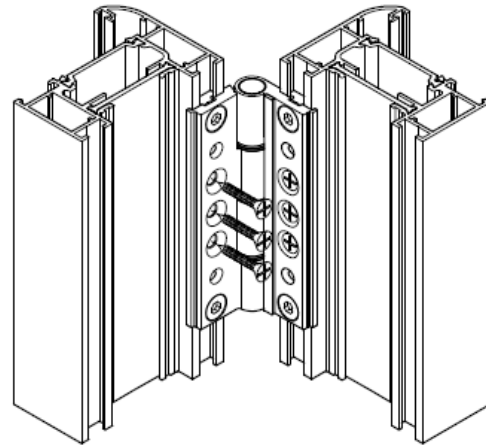
Once all the doors are correctly aligned and fully glazed, final hinge fixings are required to secure the hinges. Please refer to the relevant hinge detail as shown below (Figure 9, 10 & 11). It is recommended to view this in conjunction with the relevant Senior Architectural Systems Ltd technical manual.



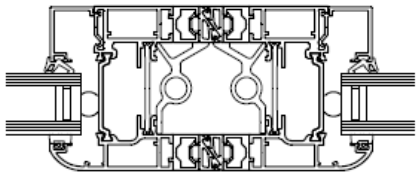
# FOLDING SLIDING DOOR – INSTALLATION



THE HINGES NEED TO BE SECURED WITH 3No. SFSCS30 SCREWS TO EACH HINGE LEAF.



Detail 'I' As Shown.  
Detail 'I' Opposite Hand .



THE HINGES NEED TO BE SECURED AS THE FOLLOWING:-  
LOCATION (A) SECURE WITH SFSCS30 SCREWS  
LOCATION (B) SECURE WITH SFSPS28 SCREWS  
ONCE THE HINGES ARE SECURED, LOCATE THE FOAM SEALING PADS AS SHOWN.

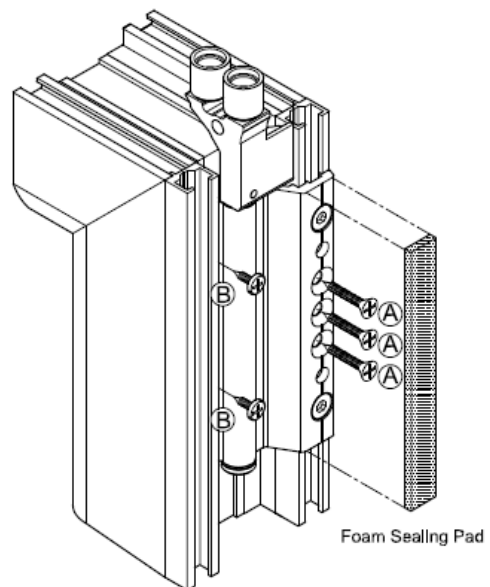
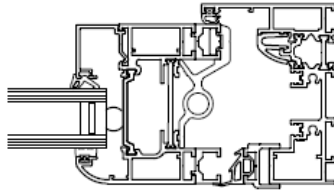


Figure 10

# FOLDING SLIDING DOOR – INSTALLATION

Detail 'J' As Shown.  
Detail 'J1' Opposite Hand .



THE HINGES NEED TO BE SECURED AS THE FOLLOWING:-

LOCATION (A) SECURE WITH SFSCS30 SCREWS

LOCATION (B) SECURE WITH SFSPS28 SCREWS

ONCE THE HINGES ARE SECURED, LOCATE THE FOAM SEALING PADS AS SHOWN.

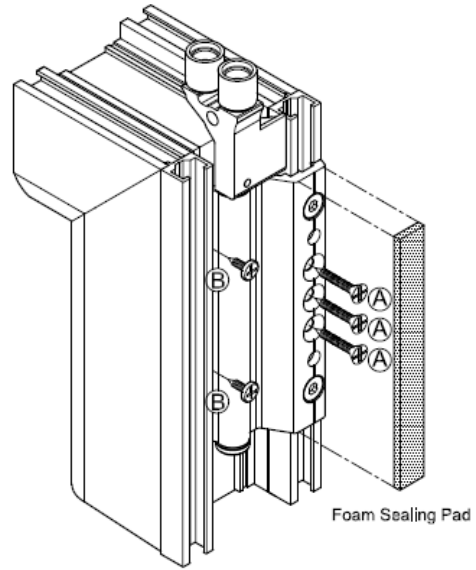


Figure 11

## CHECKING

### OPERATION

When all frames are fixed and glazing is installed the operation of the doors should be checked.

It is good practice to ensure that all door gearing is not too tight/loose when locking the door. Gaskets should also be checked to ensure there isn't any catching. Please refer to the relevant Senior Architectural Ltd technical manuals for any adjustments which can be made on site, to ease any of these issues.

End User Guidance manuals for PURE® FOLD and Ali FOLD systems can be obtained from the Senior Architectural Systems Ltd website.

### GENERAL CHECKS

General checks should be carried out to ensure the following is sufficient:

- Drainage is adequate and is not blocked (see Senior Architectural Ltd technical manual)
- All mitres are still tight and sufficiently sealed
  - Mitres which have opened could be as a result of the fixing of the doors. Fixing too close to the mitres or over tightened fixings can open mitres.
- Operation of all doors (handles and hinges) must be as required.
- Ensure all beads are fitted correctly and square.
- Check all faces are free from damage and debris and that protective tape is removed from frames.
- Check compression of gaskets when window is in locked position.
- Check all seals are smooth and continuous.
- Sub cill end caps fitted and sealed (if required).

# FOLDING SLIDING DOOR – INSTALLATION

## PERIMETER SEALING

Sealing between the door frame and structure to the external will be required in order to create a weather proof seal at the perimeter of the doors.

Perimeter seals must be sealed from the external using an appropriate sealant to suit:

- The framing surface/finish/material
- The structure surface/finish/material
- Joint size
- Anticipated movement of frames and structure
- Anticipated exposure to weather

Seals should be provided against a backer rod or similar where possible and should be applied to a clean dry surface as outlined within the sealant manufacturer's guidelines. It is important to ensure that the protective tape on the framing is peeled back so that the applied seal is applied to the framing and not the tape.

Any DPM's used on the door must be sealed sufficiently to both the frame and structure in the correct locations. This should be agreed with the contractor & client prior to fitting.

