



APEX CF68 BIFOLD DOOR INSTALLATION GUIDE



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BEFORE YOU START

IMPORTANT

Installation of these doors should only be undertaken by fully experienced and trained bifold door installers, who are aware of the manufacturers recommendations for this system. Please read through these instructions carefully before you start work and follow each step during the installation process. Failure to install the doors as instructed may impair the functionality of the doors and may invalidate the guarantee.

It is the responsibility of the owner of the building, the architect, the contractor or the installer to ensure that the door complies with the necessary regulations and legal requirements.

TOOLS

The following tools will be required for the correct installation of this door set:

- Laser level - *A spirit level no matter what size should not be used as it does not give the required level of accuracy*
- Tape measure
- Cordless drill/driver
- Phillips screwdriver (PH2)
- Power hammer drill
- A selection of drill bits (HSS and SDS)
- A selection of Allen keys
- Glazingpaddle
- Assortment of glazing packers and packing shims
- Glass cleaner (to assist in wedge gasket installation)
- Suitable fixings for securing the frame to the opening
- Hammer
- Rubber mallet
- Quick release soft face clamps
- Glass suction pad lifter
- Work bench or trestles
- Proprietary silicone sealant

COMPONENT PARTS

A standard door set will come with the following components. Please check that you have all these parts before you start:

- Outer frame comprising 2 side jambs, 1 head-rail and 1 threshold
- The required number of door panels
- The required number of glass sealed units
- One projecting sill (and two sill ends caps) if required
- Magnetic catches as required for the particular design
- Internal glazing/wedge gasket
- Master door handle if required for the particular design
- Master door lock keys if required for the particular design



PREPARATION

CHECKING THE OPENING

The opening into which the door is to be fitted will often not be completely plumb and level. However, it is imperative that the outer frame is fitted plumb and level in the opening at all points. There should be no bowing or twisting at any point.

There should be a 10mm gap between the outer frame and the wall at the tightest part of the opening.

The lintel above the opening must be structurally sound.

The four internal faces of the aperture including the lintel and the floor should be flat and even and in line with each other. Please use a laser or other suitable tool to confirm that this is the case and to locate the fixing points.

Before installing the outer frame, please consider whether a sub-sill is required for drainage and whether any preparation is necessary to achieve the correct threshold height.

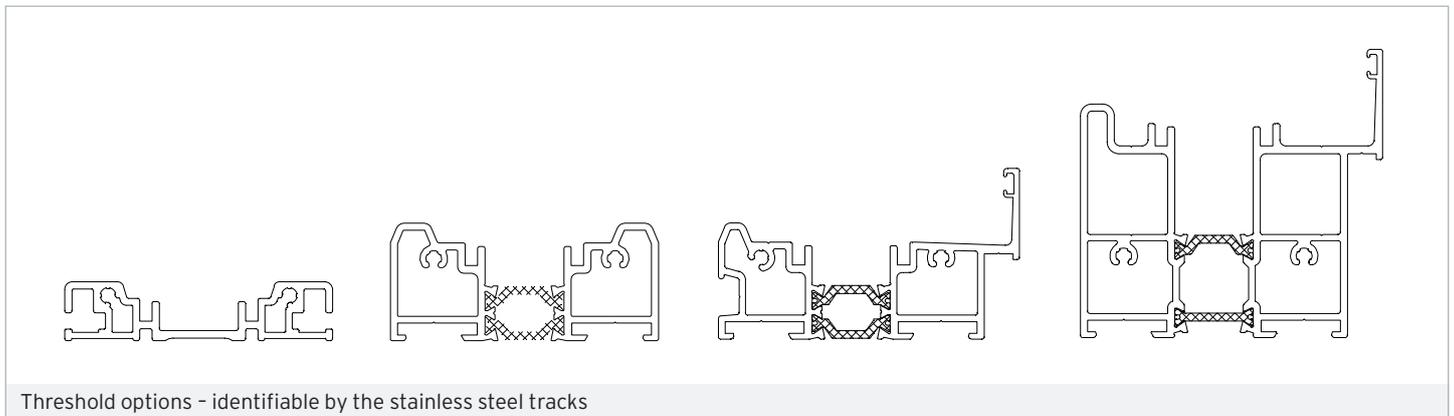
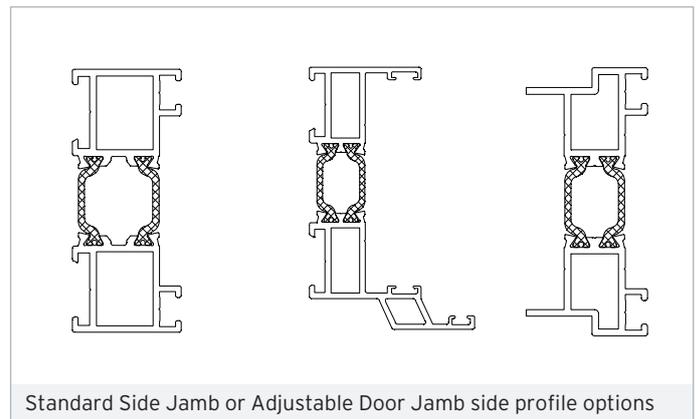
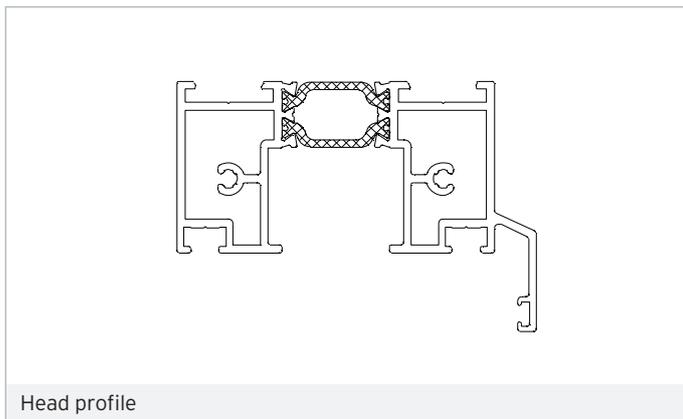
The door should be installed approximately 30mm inwards from the outer face of the brickwork to the outer face of the door profile



ASSEMBLING THE OUTER FRAME

STEP 1

Unpack the outer frame taking care not to damage the painted finish (particularly if using a knife). It may come pre-assembled or in four pieces which need to be assembled on site. The four pieces can be identified using the following diagrams



ASSEMBLY OF THE OUTER FRAME FOR DOORS WITH 5 SASH OR MORE, or WHERE ACCESS PROHIBITS FACTORY ASSEMBLY

Use Reynaprotect to coat the exposed cut edges of the head-rail section as in figure 1. (This may be done in the factory or on site). If Reynaprotect is not available a proprietary silicone may be used.

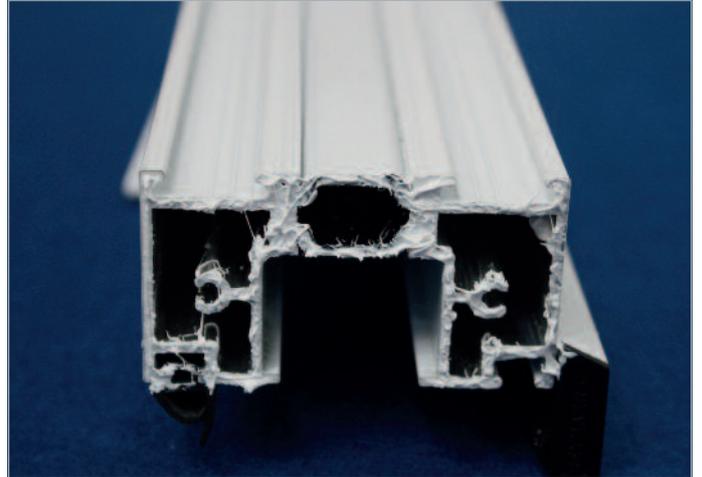


Fig. 1

STEP 3

Place an end pad between the end of the head-rail profile and the side jamb - see figure 2.

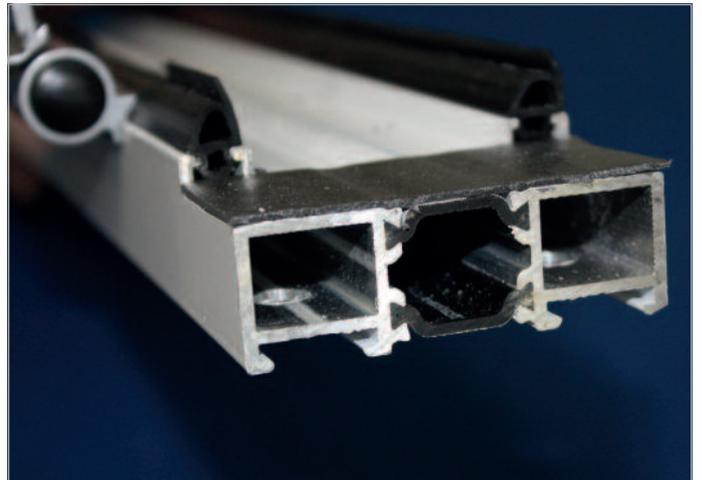


Fig. 2

STEP 4

Make sure the head-rail and side profiles are correctly aligned, then use the screws provided to secure and tighten the joint as shown in figure 3.



Fig. 3

ASSEMBLING THE OUTER FRAME

STEP 5

When preparing to fix the threshold section to the bottom of the side profiles, first make sure the drainage holes are to the outside.

STEP 6

Use Reynaproduct to coat the exposed cut edges of the threshold section as in figure 4. (This may be done in the factory or on site). If Reynaproduct is not available a proprietary silicone may be used.



Fig. 4

STEP 7

Place an end pad between the end of the threshold profile and the side jamb - see figure 5.

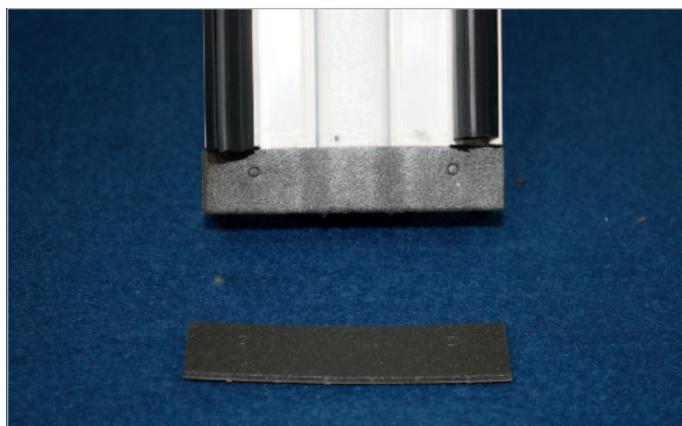


Fig. 5

STEP 8

Make sure the threshold and side profiles are correctly aligned, then use the screws provided to secure and tighten the joint as shown in figure 6.

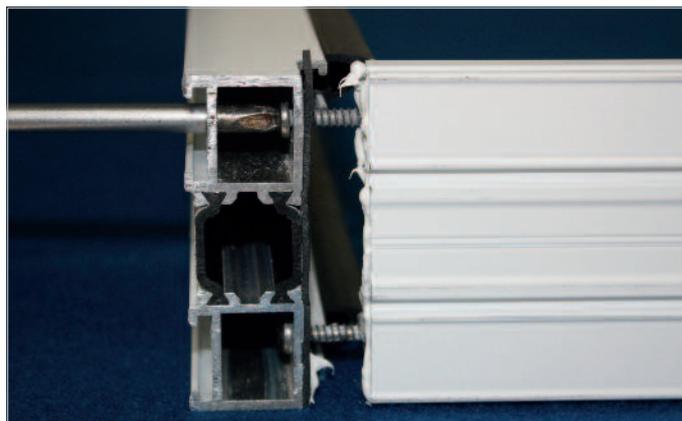


Fig. 6

INSTALLING THE OUTER FRAME

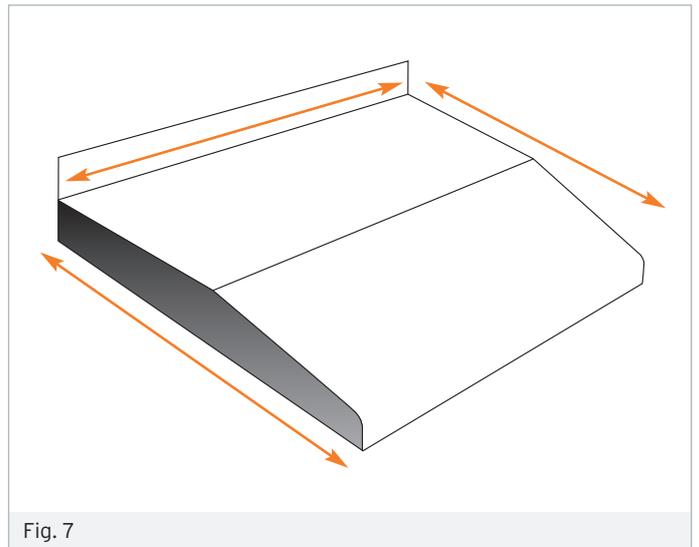
STEP 9

Measure the actual size of the outer frame and compare it to the size of the aperture.

STEP 10

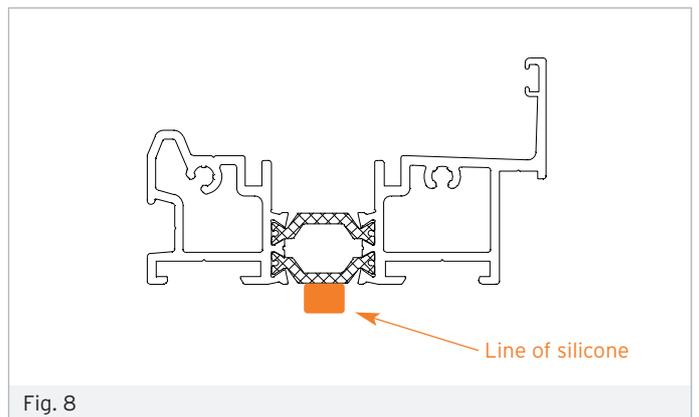
Consider the required threshold height and floor height and calculate the amount of packing that will be required to make the threshold perfectly level. If a projecting sill is required, apply silicone to the cut ends and along the back edge as shown in figure 7.

NOTE: It is vital to ensure that the sill is level and secure in the aperture using a laser level, to give a level base upon which to install the outer frame.



STEP 11

Position the outer frame in the aperture, making sure that the drainage holes are to the outside. If a projection sill is required, run a line of silicone along the length of the thermal break on the underside of the threshold as shown in figure 8, ensuring that no gap exists between the outer frame and the sill.



STEP 12

Position and pack the outer frame in the aperture, ensuring that it is plumb and square using the laser level.

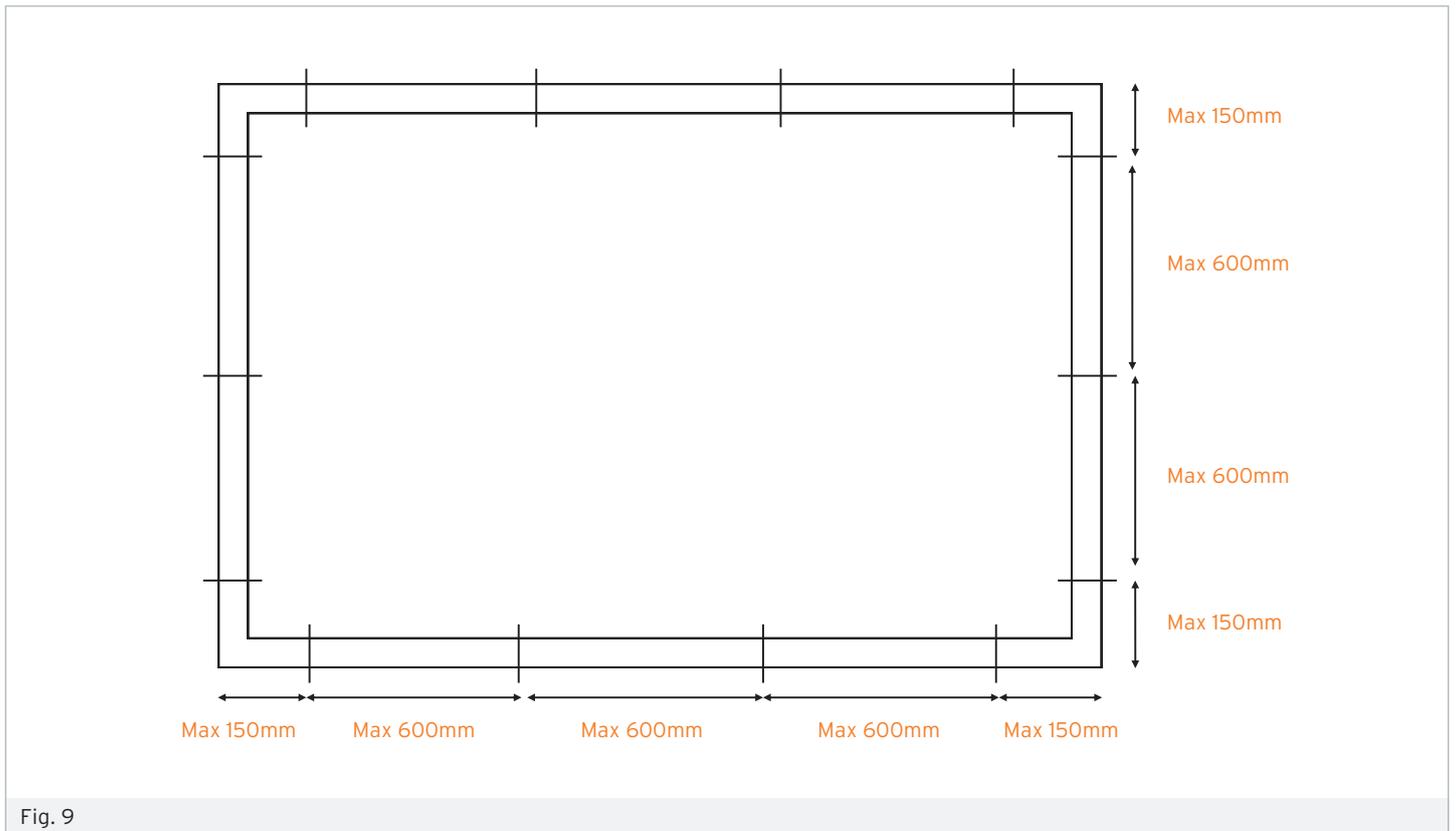
INSTALLING THE OUTER FRAME

STEP 13

Secure the frame to the wall through the aluminium profile (*not through the thermal break*).

NOTE: It is recommended that lug fixings are NOT used for a bi-fold door.

Fixings should be no more than 150mm in from each corner and at centres of no more than 600mm. See figure 9 below.



STEP 14

Use suitable packers around the frame and check that the screws are tight.

STEP 15

Additional fixings on the side(s) should be used where the doors stack to allow for the additional weight that the frame must carry.

STEP 16

Once all the screws are in place, go back and check that the frame is completely plumb, level and square using the laser level. Check the diagonal measurements too to ensure they are equal.

INSTALLING THE OUTER FRAME

STEP 17

The door frame can be fitted with an optional adjustable vertical profile, which must be specified at the point of order, that allows 9mm adjustment (+6mm and -3mm) as shown in figure 10. The adjustable jamb should be fitted before hanging the door leaves. At the point of order you may want to fit an adjustable jamb on both sides of the frame to keep an even appearance.

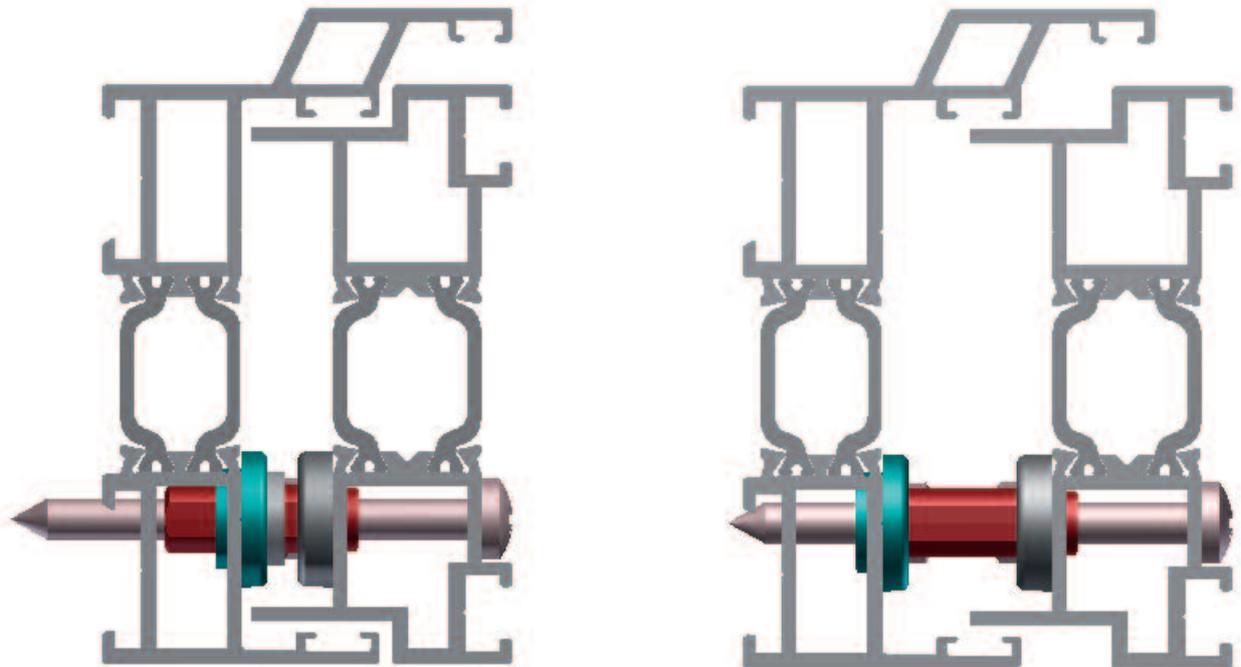


Fig.10

IT IS ESSENTIAL THAT THE WHOLE OUTER FRAME IS ABSOLUTELY PLUMB, LEVEL AND SQUARE BEFORE CONTINUING.

INSTALLING THE DOOR LEAFS

STEP 18

The door leaves should be labelled to show which goes where. Always fit the hinge side panels first as shown in figure 11.

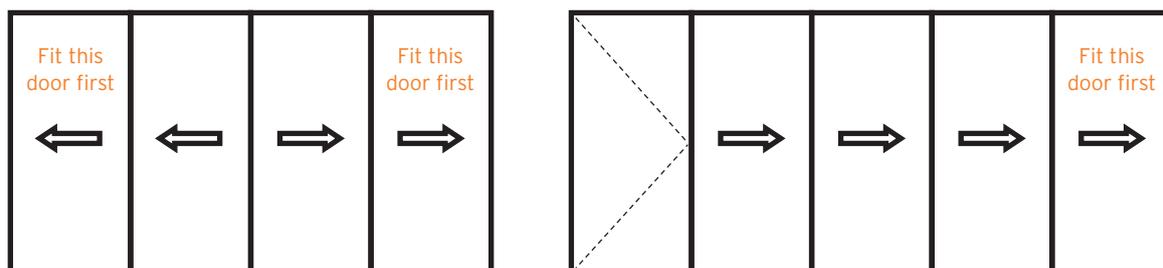


Fig. 11

STEP 19

Offer the first door leaf up to the outer frame and line the hinges with the tapping plates which are already positioned in the outer frame groove. See figure 12.



Fig. 12

STEP 20

Check that the gap between the door leaf and frame is an even 12mm at the top and the side and is 9mm at the sill. Note that if a level 1 (flush) threshold is used the gap will be 10mm and not 9mm.

INSTALLING THE DOOR LEAFS

STEP 21

Now insert the top guide(s) in the correct position in the headrail as shown in figure 13.



Fig. 13

STEP 22

Install the rest of panels in the same way as the first.

STEP 23

Check that there is an even gap between door leaves and the outer frame. Further adjustment can be made if using the floating jamb - see figure 14. Please ensure that equal adjustment is applied to the inner and outer screws.



Fig. 14

INSTALLATION GUIDE: Apex CF68 Bifold Door

GLAZING

STEP 24

NOTE: It is essential that the doors are glazed following the procedure detailed in this guide. Incorrect glazing may adversely affect the operation of the door.

Firstly, close all the door leaves and lock them into position. Then start glazing the doors in the same order that they were installed in the frame - the first door leaf being the one that is hinged to the outer frame.

Measure the height of the glass sealed unit and the length of the vertical glazing bead. The difference between the two measurements will be a good indication of the thickness of packers required. Until the glazing is packed correctly the glass weight will cause the door leaf's to drop on one side (the side opposite the hinge side) therefore all door leaves must be properly 'Toe and Heeled' with appropriate packers to ensure they are plumb and level, and to maintain equal and parallel gaps between the outer frame and the door leaves top and bottom. **Incorrect 'toe and healing' is one of the main causes of incorrect operation and appearance of the doors.**

STEP 25

Place the first packer on the hinge side of the first door leaf, located 100mm in from the corner. Make sure this packer is wide enough to support the full width of the sealed unit. Silicone the packer in place taking care not to get any silicone anywhere where it may come in contact with the edge of the sealed unit.

Silicone a second packer on the adjacent vertical section, also 100mm in from the corner. See figure 15.



Fig. 15

STEP 26

Now insert the glazed sealed unit into the frame, taking care to ensure that it is standing properly on the packer. It is recommended that the sealed unit is held in place temporarily using the top glazing bead on the right and the bottom glazing bead on the left leaving the corners free. Use temporary packers to help hold the glass in place as shown in figure 16. This will allow access to insert the rest of the packers and to make the necessary adjustments before securing the glass in place with all four beads.



Fig. 16

GLAZING TOE & HEELING

STEP 27

Now insert packers in the same way in the diagonally opposite corner, inserting the vertical packer first and then the horizontal one. Each packer should be 100mm in from the corner.

STEP 28

Using the glazing paddle, toe and heel the door leafs using additional packers to adjust the door where necessary to square the door sash up. Once completed double check that the door leaf is completely plumb and square and that the diagonals are the same.

STEP 29

Now insert spacer packers as shown in the diagrams in figure 17, to prevent movement and provide rigidity to the door leaf. Ensure that all packers are siliconed into place to prevent them moving over time.

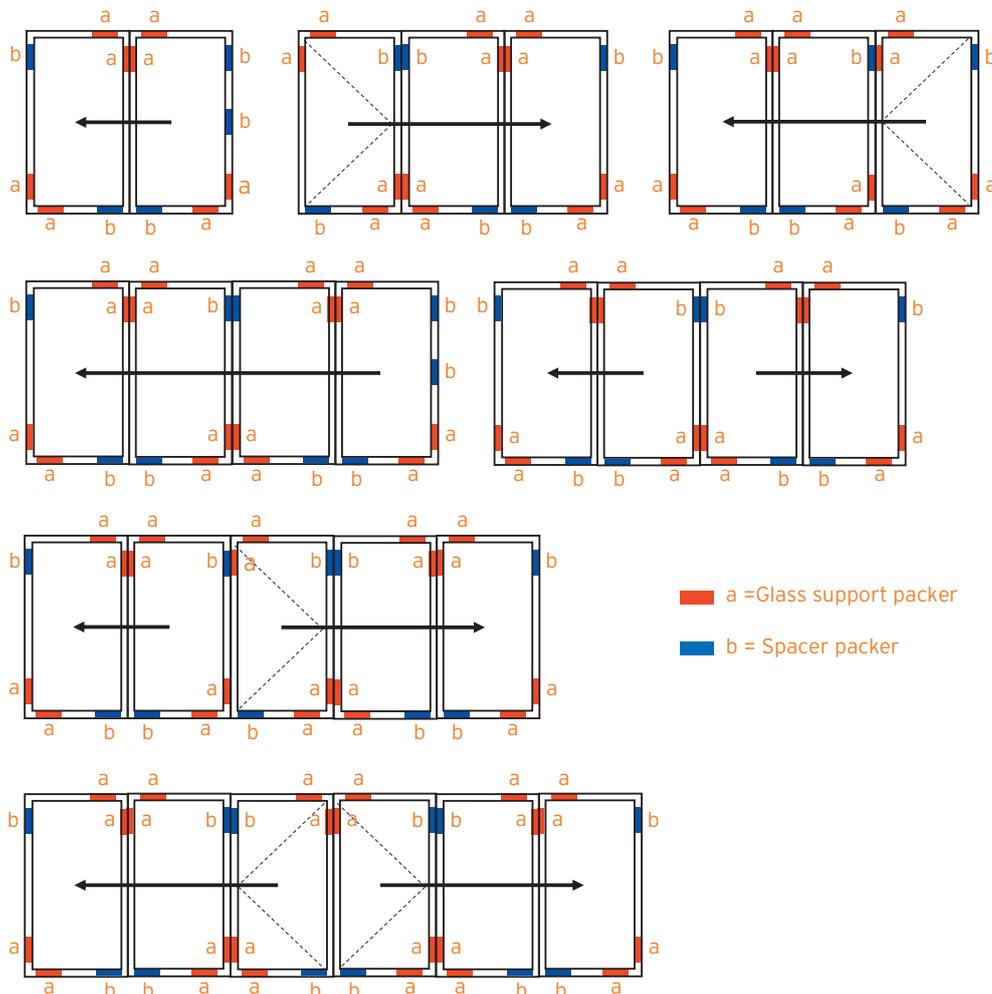


Fig.17

INSTALLATION GUIDE: Apex CF68 Bifold Door

GLAZING

STEP 30

After a final check that the door leaf is square and plumb, clip the four glazing beads in place and insert temporary packers behind the bead to hold the glass firmly in place. See figure 18 below.



Fig. 18

STEP 31

Insert the wedge gasket as shown in figure 19, allowing approximately 1% over length in the corners to ensure a good seal.



Fig. 19

STEP 32

Push the gasket into the gap using thumb pressure and working towards the corner. **DO NOT STRETCH THE GASKETS TO MEET AT THE CORNERS.** If the gasket is short, it must be replaced.

Push the end of the gasket tight into the corner for a neat finish as shown in figure 20.

TIP: Use a little glass cleaner if some additional lubrication is required.



Fig. 20

MAGNETIC CATCH

STEP 33

The magnetic catch should be positioned as shown in figure 21.

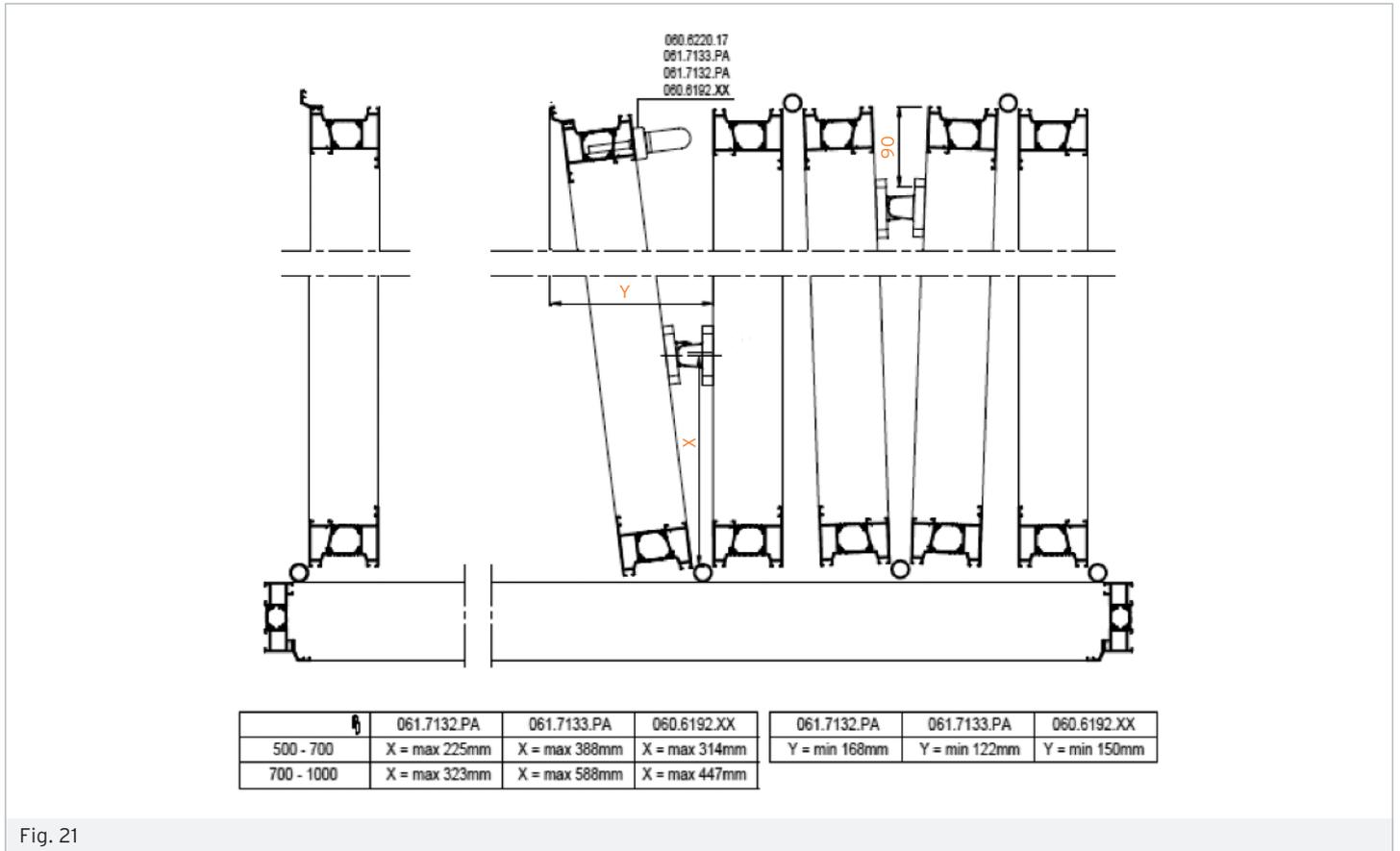


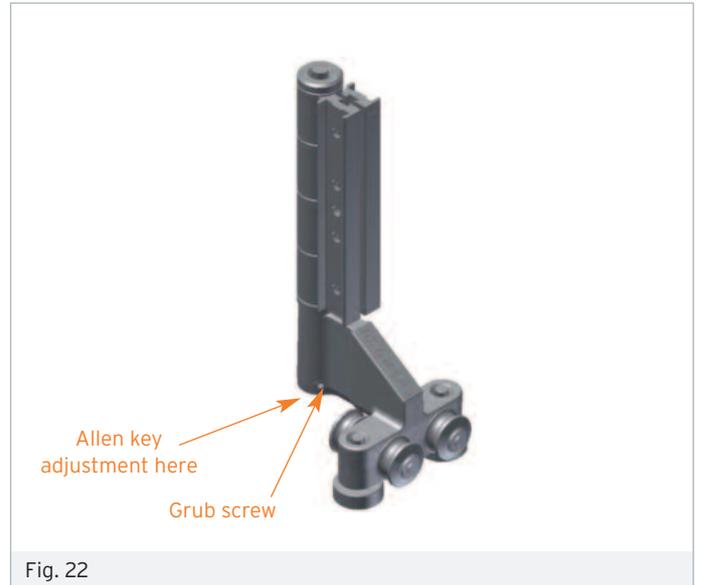
Fig. 21

ADJUSTMENT

STEP 34

Some minimal adjustment of the height is also possible on the top guides and the bottom wheel carriages, though this should not be necessary. If adjustment is required, loosen the grub screw then use the Allen key to adjust the height. (See figure 22 below). Retighten the grub screw when finished. This can be done with the door leafs in situ. Please note that there is no adjustment on the hinges.

NOTE : Adjustment of the rollers should not be used in place of correct glazing 'Toe and Heeling'



FINAL CHECK

STEP 35

- Check all the door leafs are plumb and level, and there are equal and parallel gaps between the outer frame and the door leafs top and bottom
- Check that the handles and locking mechanisms operate smoothly
- Check the bifold action is smooth and free running
- Check that the door magnets locate together when the master door is opened
- Check all the hinges and rollers to ensure no screws are missing
- Check all the weather seals and glazing gaskets to ensure none are short and the doors are fully sealed
- Check the perimeter and ensure the door is fully weather tight
- Check the bottom track and ensure it is free of any debris or building dust

TROUBLE SHOOTING

PROBLEM	POSSIBLE SOLUTIONS
The locks don't engage	<ul style="list-style-type: none">• Check that the door frame is plumb and level.• Check that the glass is correctly toe and heeled• Check that the adjustable jamb is aligned
There is a gap between the panels	<ul style="list-style-type: none">• Check that all gaskets are present• Check that all gaskets have been fitted properly
The door rattles	<ul style="list-style-type: none">• Remove the shoot-bolt cap and adjust the shoot-bolt by turning it anti-clockwise to extend it or clockwise to retract it
The glazing bead does not fit	<ul style="list-style-type: none">• The wrong thickness of sealed unit has been supplied - check the thickness of the sealed unit and compare it with the specification
The door does not slide smoothly	<ul style="list-style-type: none">• Clear the track of any dirt and debris and clean the track before operating the door
Water collects in the track	<ul style="list-style-type: none">• Clear any blockages from the drainage holes
The doors lean when open	<ul style="list-style-type: none">• Check that the panel catches have been fitted in accordance with the instructions in this guide• The door leafs have not been 'Toe and heeled' correctly
Door leaf is dropped or looks out of square	<ul style="list-style-type: none">• The door leaf and glazing requires 'Toe and heeling'
Door leaf catches at the bottom	<ul style="list-style-type: none">• The door leaf and glazing has not been 'Toe and heeled' correctly• The bottom roller has not been set correctly• The outer frame is not installed plumb and square