QUAD

ALUMINIUM BIFOLD, FRENCH & SINGLE DOORS

INSTALLATION GUIDE

This guide will walk you through the process of installing your doors. Please read it carefully and thoroughly, as it contains important information.

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Note:
There are some more useful help and guides available on our website. Visit **www.quadgroup.co.uk** or scan the QR code to view more.

RECOMMENDED TOOLS

- Appropriate fixings into structural opening
- Mixed selection of frame packers
- Mixed selection of glazing packers
- Rubber mallet or plastic mallet
- Set of HSS drill bits
- Drill / SDS hammer drill
- Long spirit level
- String line
- Tape measure
- No.2 Pozi drive
- 2.5mm; 3mm; 4mm Allen keys
- Level or Laser Level
- Gloves
- Vacuum Cups
- Caulk Gun and Low modulus Silicone
- Paper Towels
- Utility Knife
- Silicone and gun
- Set Square
- Superglue

ASSEMBLY INSTRUCTIONS

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

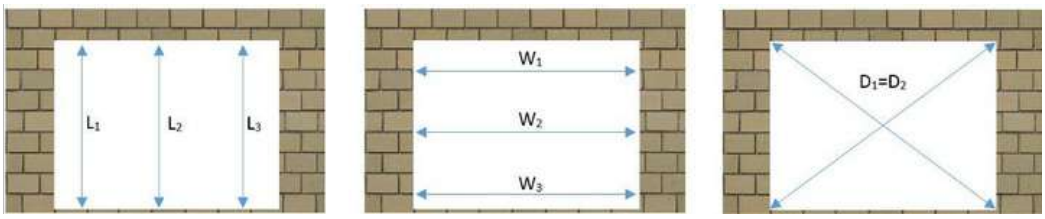
The assembly instructions are only for the attention of qualified installers who are trained and qualified in window and doors installation techniques, and are aware of the manufacturer's recommendations for the system used.

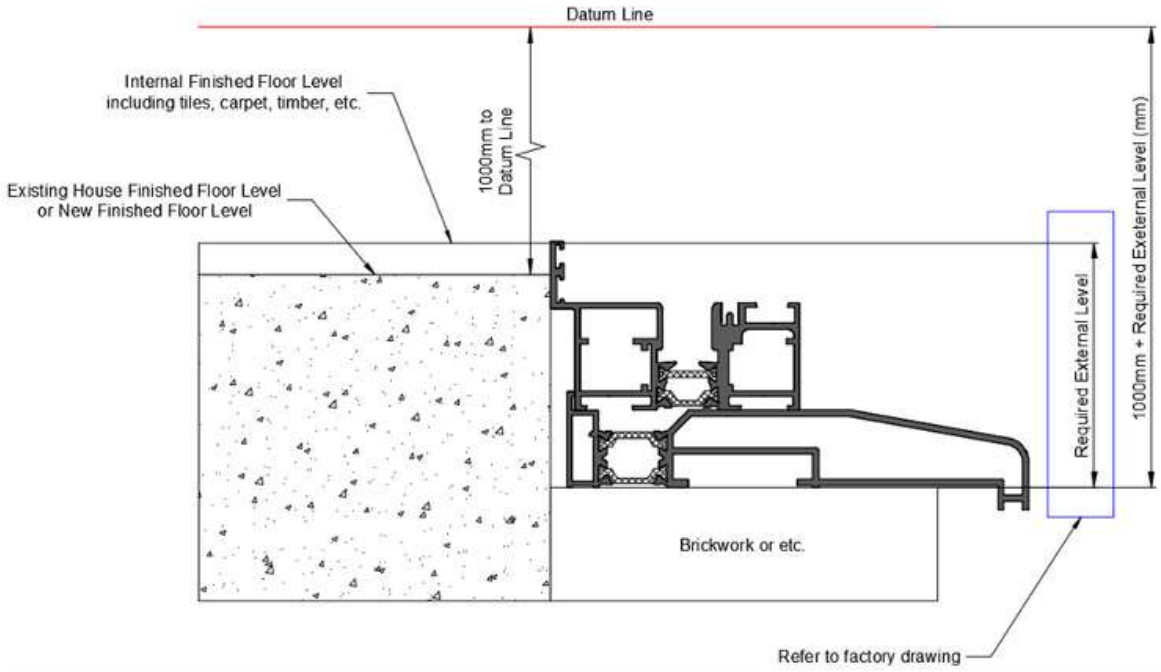
SITE SURVEY

Opening inspection

- The aperture for the new doors must be flat, level, straight, plumb and square at every single side. There should be a solid structure to fix the frame.
- The aperture load bearings must not be transferred to any part of the frame when fitted.
- Prepare the aperture by making sure it is clean.
- Remove any old silicone and brush down the threshold.
- The internal and external reveal sizes should be checked and any variations must be determined to ensure enough opening light for the area where doors will fold and will not be obstructed by plaster, tiles, etc.
- Check the aperture's height, width and diagonals to ensure the opening is equal on all sides and square.
- Generally three measurements should be taken.
- By measuring the diagonals, verify the aperture is square, internal finished floor level and datum line position.
- Select a point within the agreed/existing structure finished floor level, from where the builder can determine the internal floor level i.e. tiles, carpet, timber.

> ⚠ **NOTE:** Overall height of new unit is measured from the bottom of the cill and not from the finished floor.

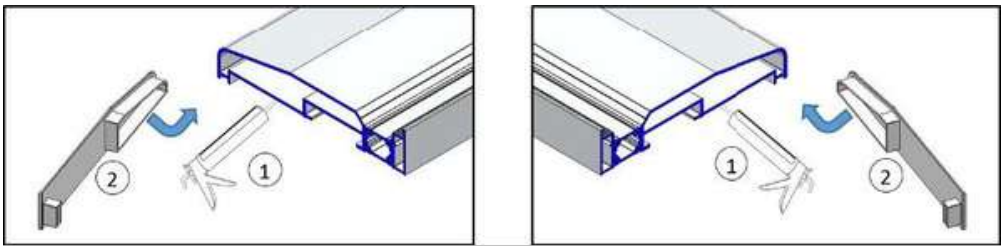




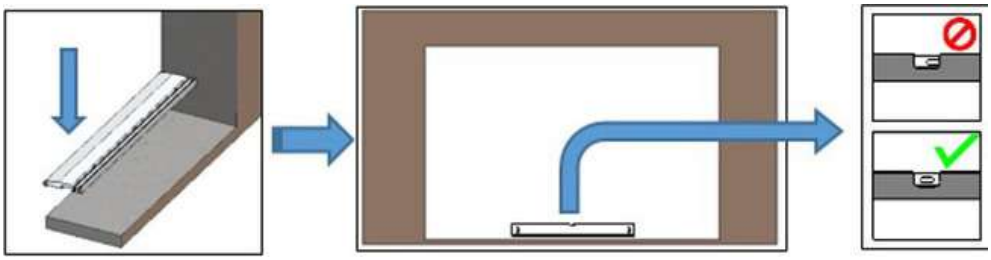
CILL INSTALLATION

The following instructions are only applicable to separate cills. It will not apply to the integrated cill threshold option.

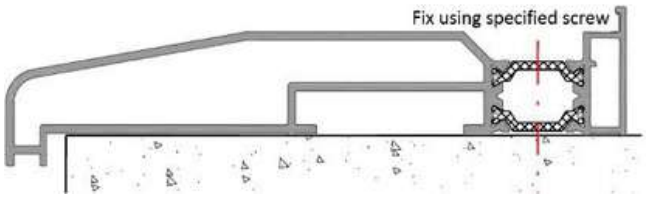
- The need for any sub-cill should be determined at the beginning of the project.
- The size of the sub-cill should be as such that there is an overhang of at least 25 mm from the face of the building.
- The installer should determine how the sub-cill should be fitted, taking into account features such as horns.
- Using low modulus silicone, seal the ends of the cill section.
- Install the end caps as shown below.

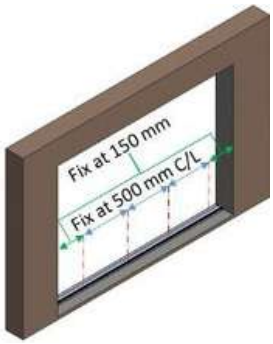


- Place the sub-cill on to the aperture.
- Use a spirit/laser level or a string line to assess the level of the sub-cill.
- Temporarily place the required packers under the cill, check the level and adjust if necessary.



- Use specified fixings to fix the sill through the thermal break at minimum 150mm from each end, and spacing every 500mm centres.
- Fill each fixing hole with low modulus silicone before inserting the fixing.
- Double check for level and adjust if necessary.

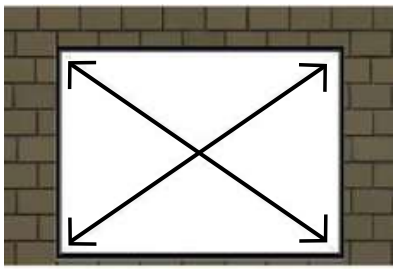


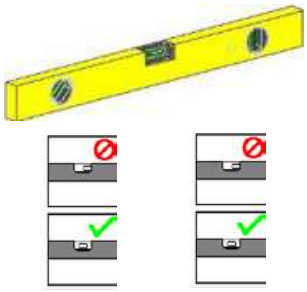


DOOR FRAME INSTALLATION

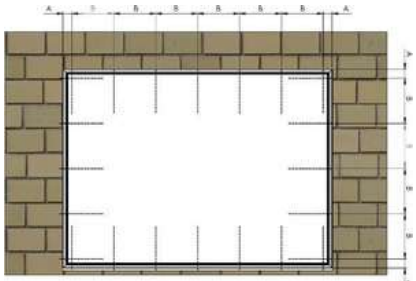
- Insert the doors into the prepared structural opening and pack as necessary to ensure that the frame is held plumb and square inside the opening.
- Unless your doors were ordered flatpack, each sash will already be on the frame - these just need to be opened and stacked to one side to give space to secure the frame into place.

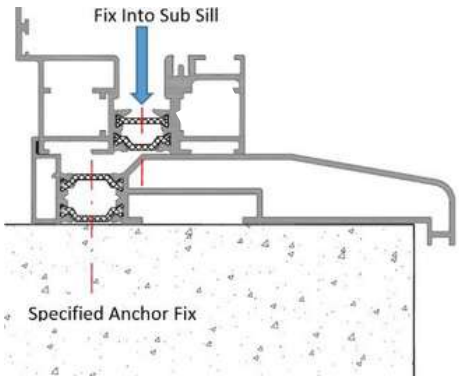
> **NOTE:** If cill is installed, run a silicone bead along the cill rebate to ensure weather tight joint and seal the ends.



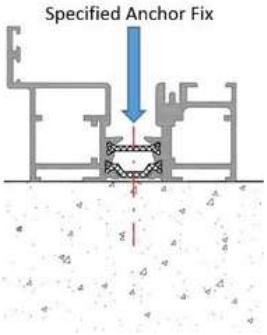


- Pack out all fixing points to ensure tight and supported fixings.
- Secure frame using suitable fixing screws and plugs.
- A = Anchor distance from corner of frame approximately 150mm. B = Anchor spacing generally at maximum 500 mm.
- Ensure the top and bottom frame remain plumb and square over the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





Typical outer frame installation with sub-cill



Typical outer frame installation

- Check the level and make sure that the frame is set plumb and square.
- Using low modulus silicone, ensure that the perimeter is sealed against water penetration at both inside and outside of the opening. If you have ordered a low threshold with rebate, the rebate needs to be bonded to the low threshold with silicone to seal and appropriate screws to hold in place.
- Clean away all debris from bottom rail, especially guide channel.

Before glazing, we recommend testing the drainage channel by pouring a small amount (around a glass or bottle, at a slow pace) of water in the bottom of the door sashes and frame, ensuring it empties via the drainage holes and caps.

GLAZING INSTRUCTIONS

- Before glazing, lock all doors panels and fully engage the locks.
- Starting from the first panel hinged to the frame, remove all beads, taking care to note where the beads are removed.
- Check each sash has drainage holes and that these are at the bottom of the pane.

TOE & HEELING THE GLASS

Toe and heeling a bifold door is essential to ensure that it operates properly.

Toe and heeling refers to the process in which glazing panels are used to distribute weight into the correct areas of the door. This way, the glass within the bifold is able to support its own weight without causing the door panels to drop or catch on the bottom track when in use.

The principles of toe and heeling a bifold door are the same as that of a single or French door and involves using packers to brace the glazing in the necessary corners of the panel. This always starts with the bottom corner that is fixed to the wall, and then the opposite top corner. Keep reading for a step by step guide on how to toe and heel your bifold doors.

What you'll need: Packers, a glazing paddle, gasket snips, and a glazing mallet.

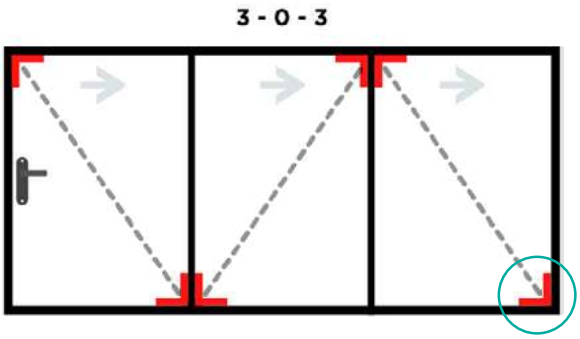
STEP-BY-STEP GUIDE

Your door should have some red corner packers screwed into the frame. These are to give a guide on where to place your packers, you do not need to remove these unless adjustment to position is needed, just place more on top as required. Scan the QR code to watch a helpful video of toe and heeling. Please also read all steps below first before starting on step one.

NOTE: Before installing the glazing, ensure that the gaskets on each sash are smoothed out as these can become bunched during transportation.

Step 1: Where to start

Begin by toe and heeling the first panel in your bifolding door at the wall end, and work along the bifold to the traffic door in a zigzag formation. Start with the bottom corner and then the top corner that is diagonally opposite (in this example, the first corner has been circled).



(Viewed from the inside & internally glazed)

Step 2: Place your first packers

(You can skip this step if you have pre-installed corner packers in place)

Begin by placing one 5mm packer horizontally and another one vertically in the correct bottom corner of the first panel. Please note, corner packers may already be factory fitted.

Step 3: Repeat in top corner

(You can skip this step if you have pre-installed corner packers in place)

Repeat step 2, this time in the top corner diagonal to where your first packers were placed before installing the glazing unit.

Step 4: Pack out the top corner

Use your glazing paddle to create a gap between the glass and the top of the frame. Apply pressure on your glazing paddle to lift the frame back into its level position. Place additional packers into the gap until the space is full and the glass sits tightly within the frame. Repeat this at the side where your vertical packer was placed.

Step 5: Pack out the bottom corner

Repeat the previous step in the bottom corner where you placed the first packers, again making sure that the glass sits tightly within the frame.

To hold the glass in place when you move to the next pane, you can put the top and bottoms of the beads in before final checks.

Step 6: Finish toe and heeling

Repeat all steps with the rest of the panes in the bifold, making sure to follow the same pattern all the way along. As a guide, you want all the sashes to be level once the glass is toe and heeled correctly. The gasket on the external side of your doors should be in a straight line and your main traffic door should clear the threshold track when opening and closing. All doors should glide smoothly along the track, with no dragging or sticking. The measurement between the top of the doors and the bottom of the top frame should be 11mm

Step 7: Apply the beads and gasket

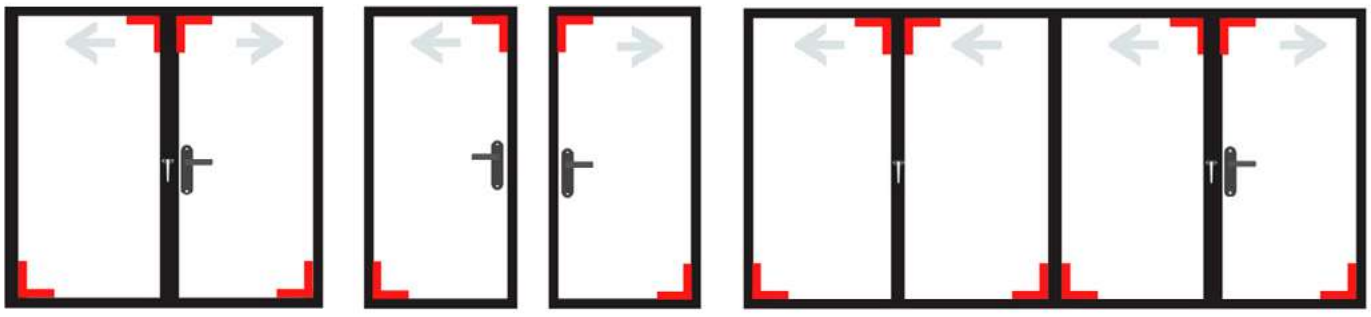
Now that you have toe and heeled each panel, you can complete the bifold by fitting the beading and then wedging the gasket between the glass and bead on all four sides (applicable when installing a 28mm glazed unit). Make sure you put the correct beads back where they came from, each is cut to size for that specific space.

If your order has a 44mm glazed unit, you will be provided with wedge gasket, in this case you will need to inseert beads then install wedge gasket once they are in place.

There is a knack to getting the beads in, they do just clip in at an angle but a rubber mallet at the edge and working your way down the bead (softly) can be very helpful! Do not use a hammer or anything hard or you can cause damage to the doors.

> ⚠ **NOTE:** Toe and heeling follows the same principles whether you're glazing a single door, French doors, or a bifold door.

The examples below illustrate where packers should be placed for each type of door.



French Doors

Single Doors

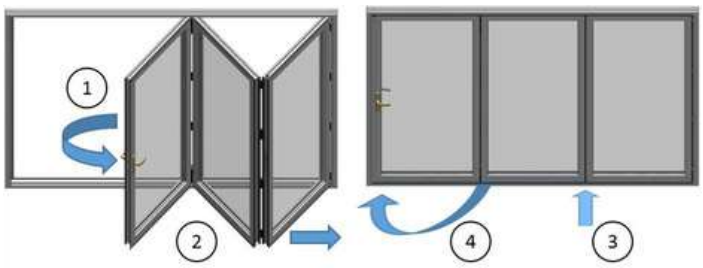
4 Pane Bifold

OPERATION CHECKING

Door unit operation inspection

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

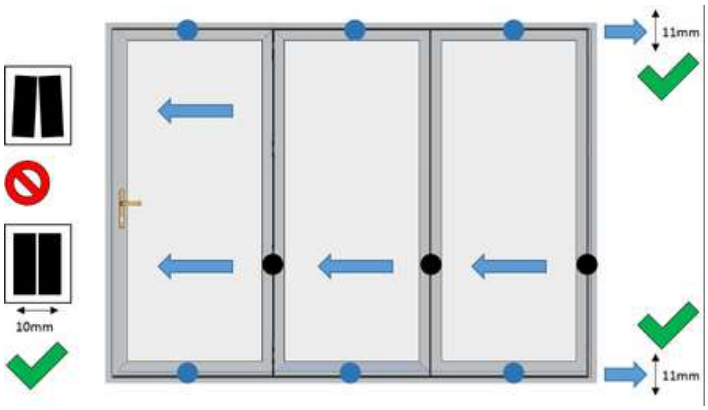
> ⚠ **NOTE:** The traffic door should always be folded completely back on the 2nd door, held by the magnets before operating the other panes



Overall gap size inspection

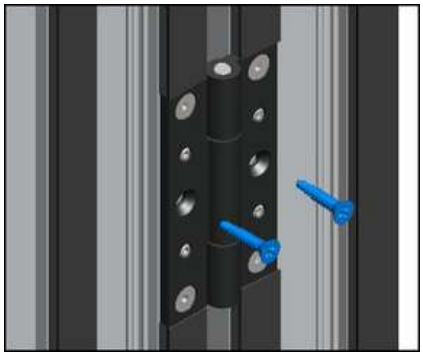
Assess the horizontal gaps between the outer frame and sash at the top and bottom, ensuring they are even and equal to 11mm.

Assess the vertical gaps between the panel frames, ensuring they are even and equal to 10mm.



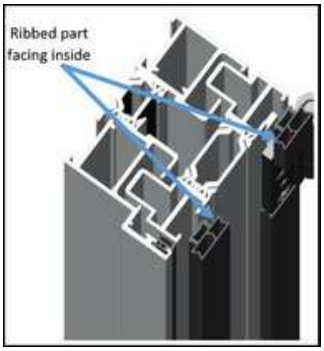
Checking final fixing screws

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



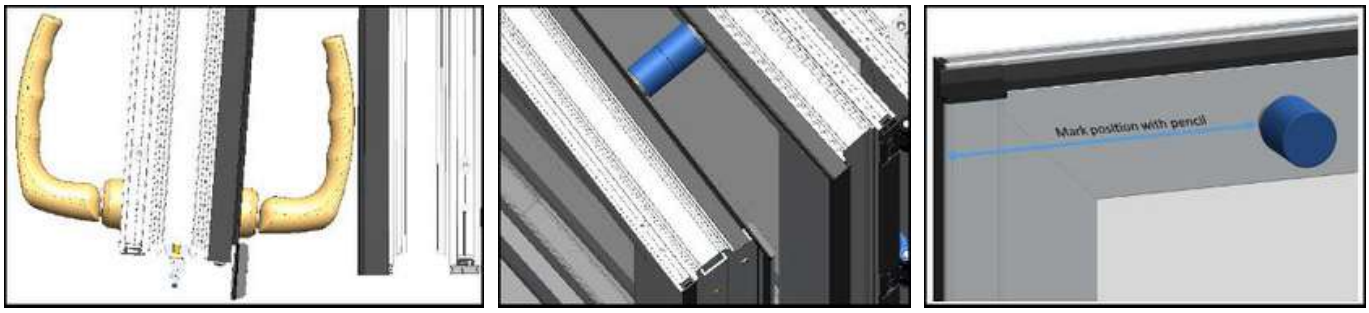
Weather seal application

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



Magnet Installation (configurations of bifold doors with traffic doors only)

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



- Unscrew panel catch back plate and fix it with a choice of fixings provided in the box.
- Ensure the position for anti-rotation screw is pointed towards the hinge side.
- Secure the 3mm pointed anti-rotation grub screw.
- Screw the outer sleeve.
- Mark the perfect position for panel catch on the opposite panel.
- Ensure anti-rotation screw is pointed to the nearest swinging door hinges.

FINISHING TOUCHES

- Check that the handles & locking mechanisms operate smoothly on each door.
- Check the bi-fold action is smooth and free running.
- Check that the locks operate correctly when closed.
  The lock keep is adjustable with an allen key to pull in or give more slack.
  They are positioned centralised but may need minor adjustments to pull the door sash in tight.
- Check the door magnets are fully engaged when the doors are open.
- Check the hinges and ensure that there are no screws missing.
- Check the weather seal and ensure that the doors are fully sealed.
- Check the perimeter and ensure that the door unit is weather tight.
- Clean the bottom track and ensure it is free of any debris.
- Ensure that the homeowner is instructed and knows exactly how to use and look after bi-fold doors.

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