



## GV Standard Three Wall Box

Installation Instruction Manual

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*"Technical experts in the design, manufacture and supply of precision engineered, architectural rooflights for residential and commercial buildings."*



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## Three Wall Box Installation Instructions

### Points to note prior to commencing installation:

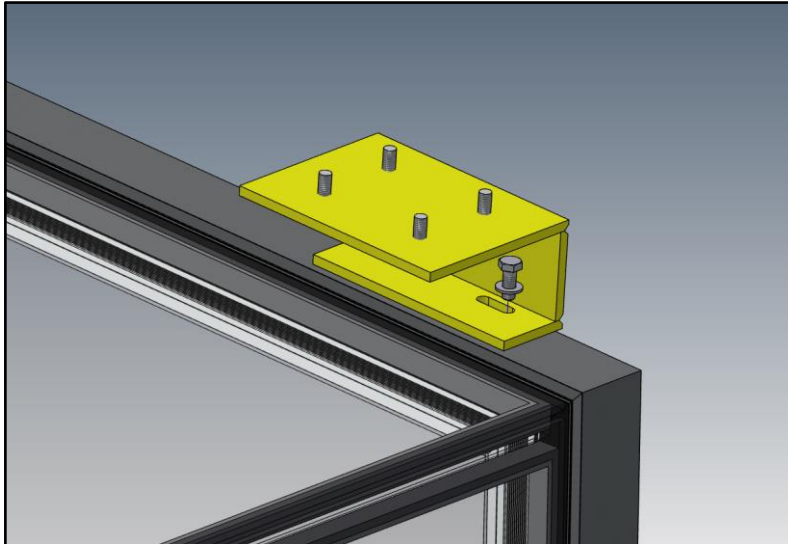
1. The Three Wall Box should arrive on site in undamaged packaging, which includes cardboard side and glass protection and low-tack tape base protection. Please inspect for damage to packaging and/or Three Wall Box and advise Glazing Vision upon receipt.
2. Enclosed within the box containing this manual is a roll of butyl tape, the required number of fixing woodscrews and a number of horseshoe packers. The installation kit supplied with electrical units contains a transformer, two switches and any additional optional items selected at time of order.
3. There are two standard coiled cables emerging from the motor housing. This includes two- and six-core cables both of which have red identification labels (labels should not be removed until final installation). Refer to Glazing Vision standard drawing 607-ASS-013 for details of wiring requirements.
4. The switch used to control the operation of the Three Wall Box is a single-pole double-throw (SPDT) type. This switch will allow you to operate and stop at any position between the fully open and closed positions. This switch also contains a tri-colour LED to display rooflight status to the user. The correct control switch is supplied in the installation kit and must be installed to avoid invalidating the warranty. This switch can be installed in a maintenance area if required and another switch parallel wired for regular use. Using a SPDT switch that only latches 'on-on' can seize the controller and therefore should not be used.



5. The other switch supplied in the installation kit is of double-pole single-throw (DPST) type. Installing this switch as per drawing 607-ASS-013 will allow the Three Wall Box control board to be reset in the event of a fault (for more on faults see the Operation & Maintenance manual).
6. The kerb should already be in place for the product. The dimensioning of the Three Wall Box will have taken into consideration the external dimensions of the front of the upstand, including all weathering, and the wall-to-wall dimensions. A guide for the kerbs is given in standard drawings S0009/10. The construction of the Three Wall Box kerb is detailed more specifically on standard drawing 607-ASS-202.
7. Before starting installation, Glazing Vision advises that the physical kerb dimensions are cross-checked with those given for the order, to ensure the rooflight will fit (refer to drawings S0009/10). The kerb will need to be within  $\pm 10\text{mm}$  of the ordered size. Check the top surface of the kerb is flat without undulations greater than  $\pm 2\text{mm}$ . Do the same for the inside faces of the walls, with no undulations greater than  $\pm 5\text{mm}$ . Check the cable exit hole has been included in the kerb. Also check the diagonals to ensure the kerb has been constructed square. The kerb must be weathered as per the sales drawings. **Note: if using any metallic waterproofing material, this cannot be applied across the top surface of the kerb as this will cause a thermal bridge which can lead to internal condensation and invalidate the rooflight warranty.**

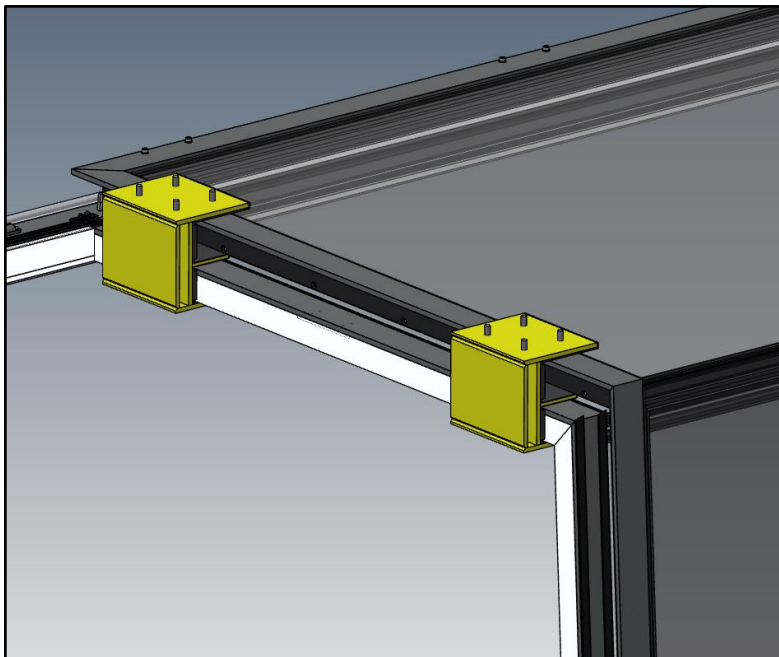
## Attaching the lifting frame

1. Fix the smaller brackets (M0758) into place on the fixed side (as opposed to the door side) with the washers (F0331) and screws as shown.



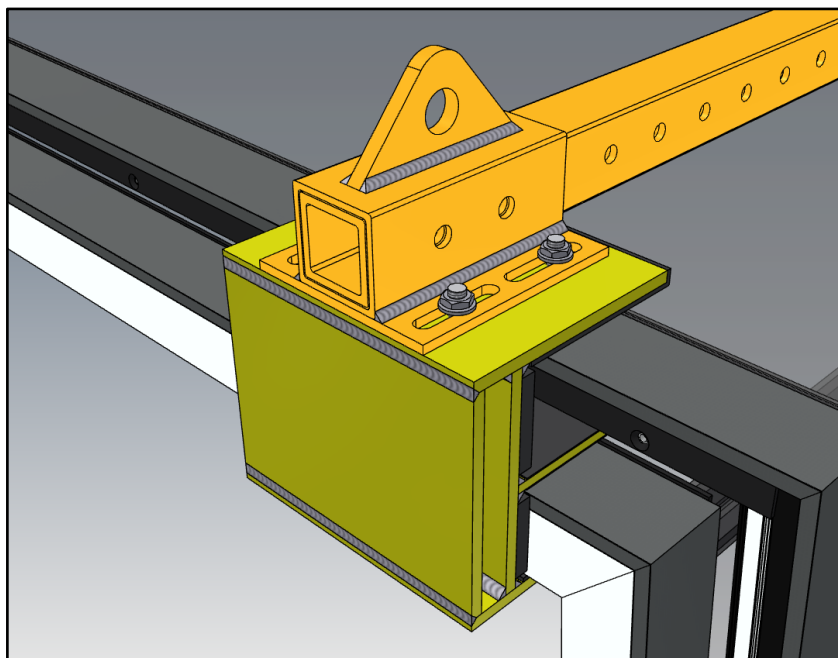
*Figure 1 – small lifting brackets*

2. With the door in the open position, slide the larger brackets (M0757) into place on the horizontal centre beam.



*Figure 2 – large lifting brackets*

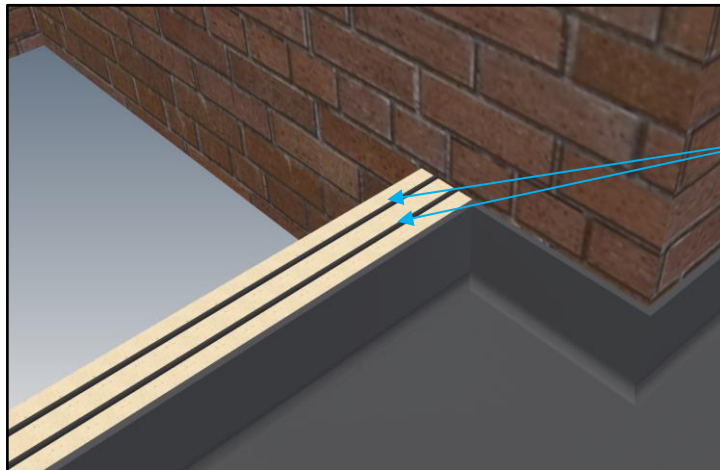
3. Attach the rest of the lifting frame (MA0065) with nuts (F0158) and washers as shown.



*Figure 3 – lifting frame attachment*

## Installation procedure

1. Apply two continuous beads of silicone along the top face of the front of the kerb (roughly in positions shown in *Figure 4*).



*Figure 4 – Silicone bead positioning*

2. Move the support frame into position so that the front support plate sits on the front of the kerb. Fix the support assembly to the walls using the No10 x 2½" woodscrews (F0314) and horseshoe packers (F0016-18) supplied.



*Figure 5 – Support frame*

3. Apply two silicone seals between the support frame and the walls.

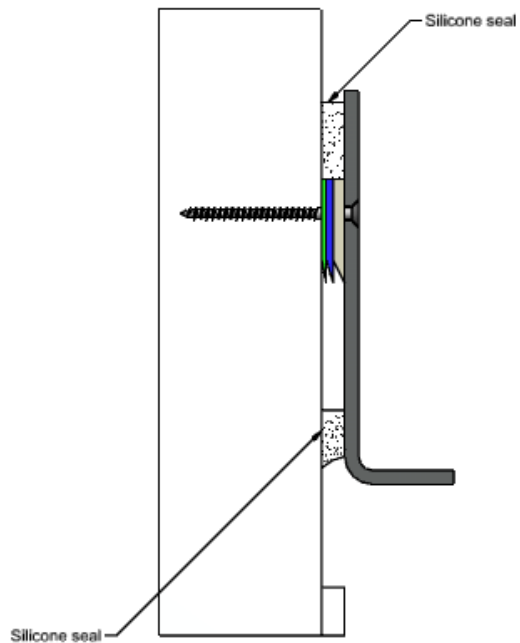


Figure 6 – Silicone seals

4. Apply 3mm double-sided structural tape along the 'ledges' of the support frame, so that the tape sits near the edge of the ledge. Then fill the gap with silicone.

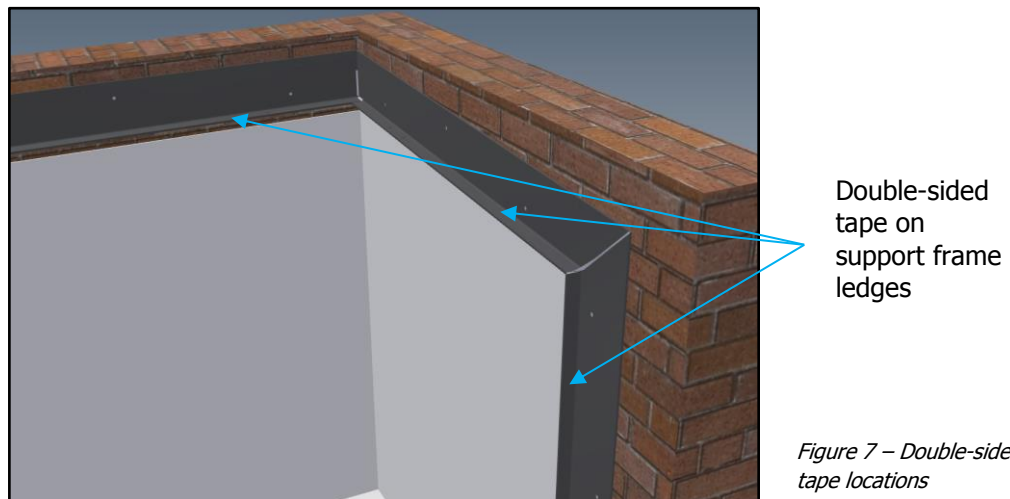
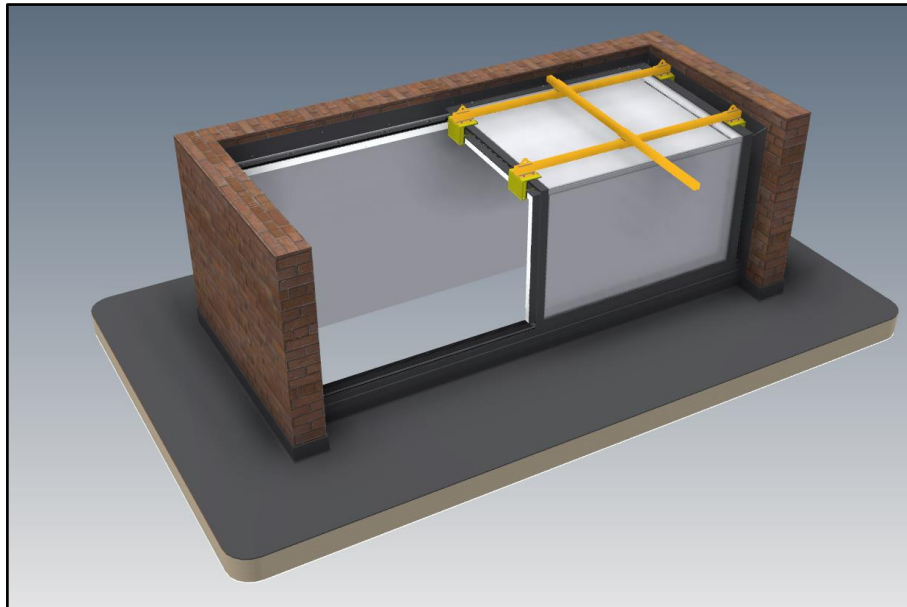


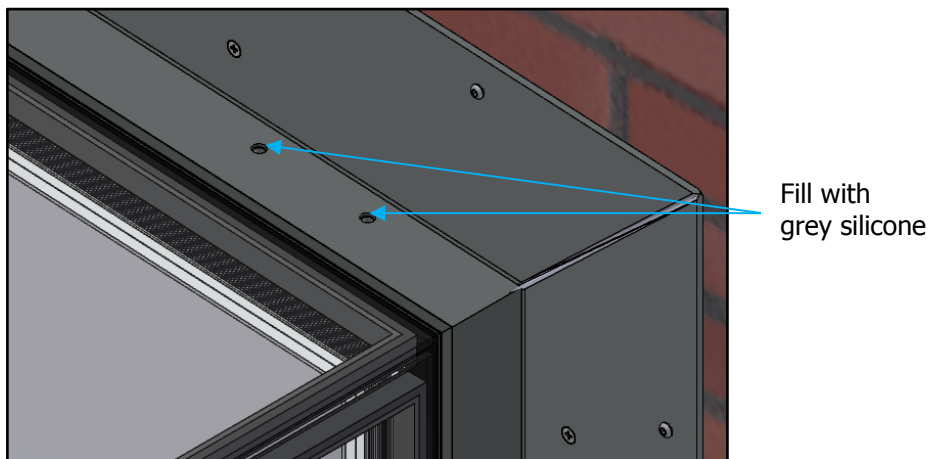
Figure 7 – Double-sided tape locations

5. With the silicone still wet, carefully lower the rooflight into place and feed the cables through the hole in the kerb, ensuring that they are not trapped under the frame. Check that the gap between the rooflight frame and the support frame is equal all the way round. Clean away any excess silicone once the rooflight is in place, and finish with a bead of silicone at the joins between the rooflight frame and the support frame.



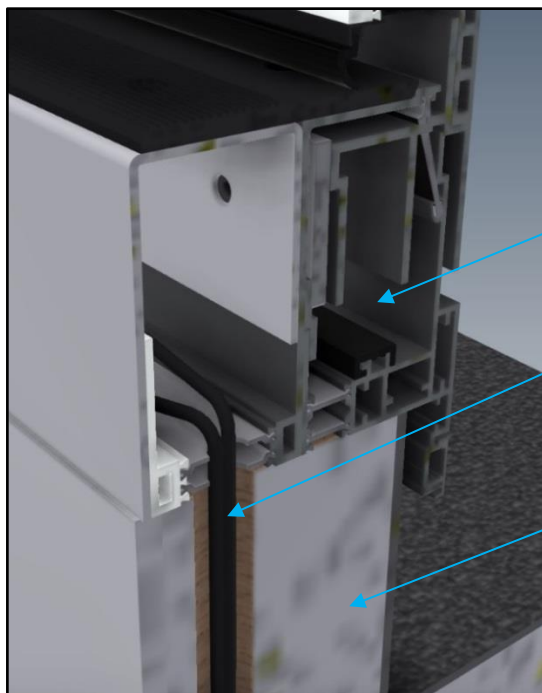
*Figure 8 – Rooflight in position*

6. Once the lifting frame has been removed, fill the holes with grey silicone.



*Figure 9 – Lifting frame holes*

7. Ensure that provision for the cabling in the upstand is of suitable dimensions and positioned correctly as shown on drawing 607-ASS-202. *Figure 10* depicts the cables exiting through the bottom of the rooflight into the kerb structure:



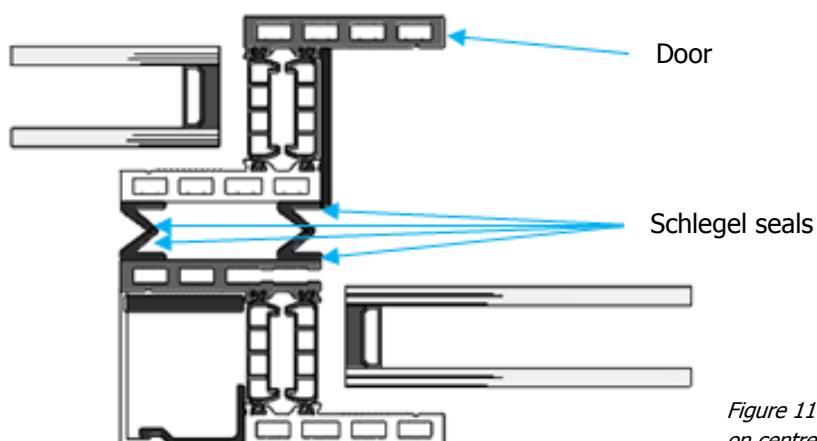
Rooflight framework

Cable exiting bottom of rooflight to be fed into kerb during installation.

Kerb structure with cable exit hole – refer to drawing 607-ASS-202 for dimensioning details.  
(Kerb not supplied by Glazing Vision)

*Figure 10 - Position of power and control cables in motor housing*

8. Apply two V-shaped seals (S0122) to the centre beams of the frame. *Figure 11* is a cross-section through the horizontal centre beam, and shows the correct orientation and position of the seals – they should form an E shape with the seals on the door as shown.



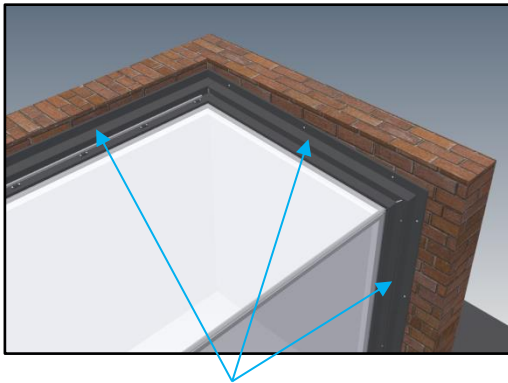
Door

Schlegel seals

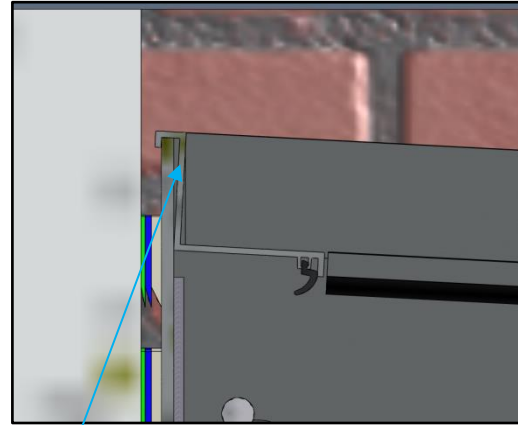
*Figure 11 - Position of seals on centre beam section*

9. Fix the drip flashings into place, starting with the back (607-MAN-270), then the horizontals (607-MAN-271/2) and finally the verticals (607-MAN-270). The back flashing should sit so that it is leaning forward at an angle of 3° - use packing if necessary to achieve this. Once in place, apply grey glue at the joints between the flashings to provide a weather seal.

*Figure 12 - Position of drip flashings*



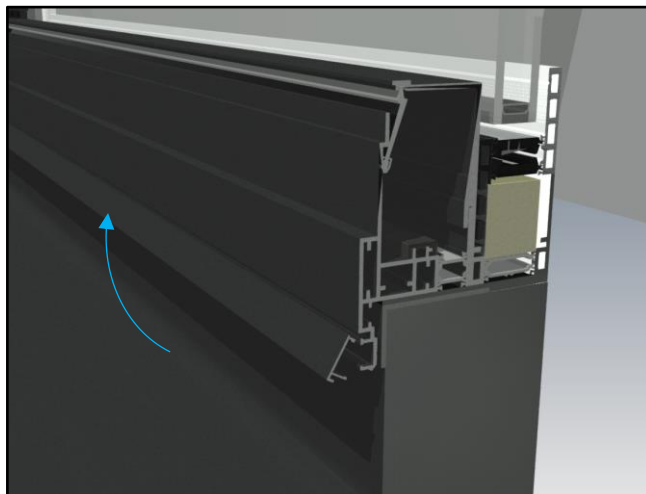
Drip flashings



Cross-section through rear drip flashing at 3° - insert packer into gap to maintain 3° angle

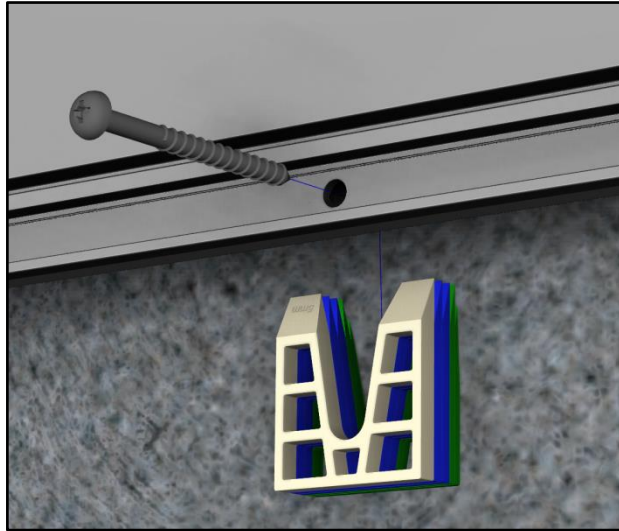
*Figure 13- Rear drip flashing angle*

10. Remove the clip-on cover at the front of the base. This is done by first pulling the bottom to release as shown in *Figure 14*.



*Figure 14 - Front base clip-on cover*

11. Fix the front base to the kerb using the No10 x 2½" woodscrews and horseshoe packers supplied as per *Figure 15*. Holes will need to be drilled through the support frame for the fixings to pass through and fix into the kerb. Fixings should be predrilled 3mm to a depth of 50mm. Use the packers to fill the space between the external kerb and inside of the front base. Care should be taken when tightening the fixings to ensure the frame does not distort.



*Figure 15 – Fixing and packers*

12. After securing all fixings, replace the clip-on cover.

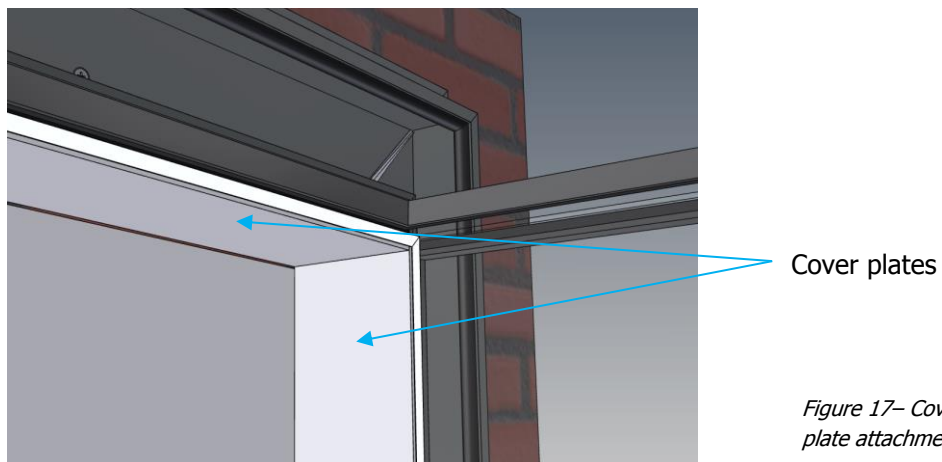
13. To complete the installation, the flying connections from the Three Wall Box must be terminated as per drawing 607-ASS-013. It is recommended the transformer is placed within 10 metres of the Three Wall Box unit. Any extension to the power and switch lead should be 1.5mm<sup>2</sup> cable to avoid significant voltage drop. Please note **NO** power must be placed onto the six-core switch cable. Once all cables are in place, attach the low-voltage power warning sticker (P0049) to the 2-core cable coming out of the rooflight.
  
14. For ease of access, an extension has been fitted to the ECT port on the PCB. The extension runs up the vertical leg on the closing-edge side, and is accessed by removing the white clip-on cover on the horizontal leg as shown:



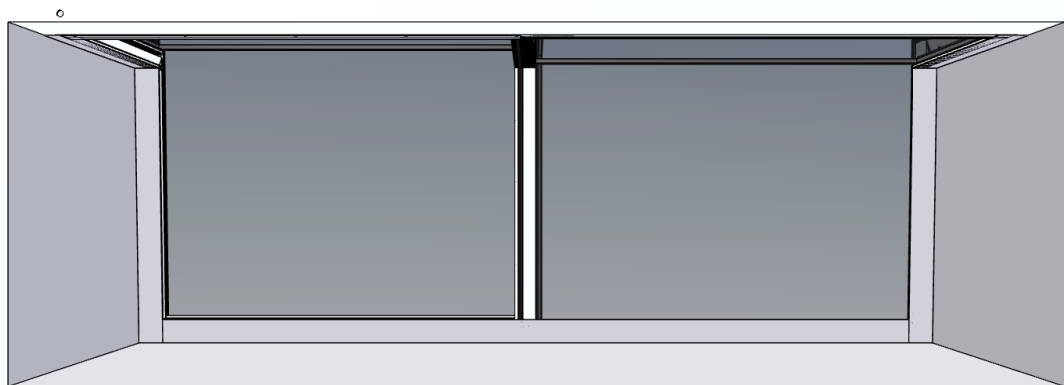
*Figure 16 – ECT port extension*

This allows the ECT to be connected and used without removing the step.

15. Bond the cover plates to the underside of the frame to cover the gaps between the rooflight frame and the walls. The plates should be flush with the inside faces of the rooflight frame.



*Figure 17– Cover plate attachment*



*Figure 18 – Cover plates from below*

16. To commission the Three Wall Box, first check there are no obstructions preventing the door from moving freely e.g. scaffolding or loads placed on the door. Check on the rear of the door that any transportation collars have been removed from the sliding rail. Switch on the mains to the 24V supply. When you are ready to run the Three Wall Box press and hold the operating switch in the open direction. If the mechanisms do not function as expected within a few seconds, release the switch and contact Glazing Vision for assistance.

17. Complete site QC documents.