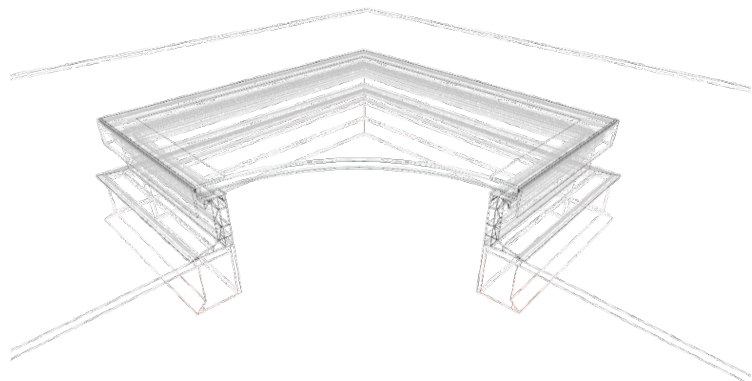


**Rainclear Systems Flat Glass Rooflight installation instructions should be used for:**

## **Contents**

- 2 Tools Required & Installation Pack
- 2 Handling & Storage
- 2 Maintenance
- 3 Constructing & Waterproofing a Timber Upstand Curb
- 3 Installing & Waterproofing a Proprietary Curb
- 4 Timber Sloping Upstand Instructions
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- 7 Assembling & Installing Fixed Unit onto uPVC upstand
- 7 Factory Installed PVC Opening Frame
- 8 Assembling & Installing Electric Opening Unit
- 9 Wiring & Commissioning Electric Opening Unit
- 10 Glass Thermal Stress Fracture



Product may vary

## Tools Required

- Torque Adjustable Drill
- No.25 TX Torx Drive Bit
- Knife
- 3mm Drill Bit

## Installation Pack

- Compriband Tape
- Fixing Screws

**Please read this installation guide carefully before beginning your installation.**

**Contact your supplier if you are unsure about anything involved.**

## Handling & Storage

While all flat glass rooflights and associated products are suitably packaged to avoid damage, you should take care when handling them. Always ensure you there's an appropriate number of people available to move larger items.

All rooflights, curbs and accessories must be stored on a flat, dry surface under cover if they aren't going to be installed immediately. Please also ensure that heavy items are not stored on top of the units.

Flat glass rooflights should not be stored on edge at any time. This could cause detrimental damage to the silicone seal and create latent stresses within the glass.

Flat glass components should not at any time be left in direct sunlight until installation is complete. Heavy items should not be placed on top of them as this can lead to damage or distortion.

The HSE publication Safety in Roofwork HSG33 gives good advice on the necessary precautions, safe working practices and procedures that need to be adopted when working on roofs.

## Maintenance

While flat glass rooflights are deemed non-fragile, rooflights should still be treated as fragile surfaces and should not be walked upon under any circumstances, unless the unit has been designed as a walk-on rooflight. A warranty condition is that after installation a competent person should check fixings, ventilation operation and sealing tape where applicable once a year and record results in maintenance records. Avoid all contact with: silicone, wood preservative, adhesives and sealing tapes.

Remove tar stains with turpentine and rinse thoroughly with water. Clean with mild soapy water (no abrasives) and always rinse with plenty of fresh water. In normal weather and site conditions, regular cleaning is recommended to maintain their present condition. Apart from cleaning and annual check no other regular maintenance should be necessary.

**NB: Installation must comply with all applicable local building regulations.**

## Constructing & Waterproofing a Timber Upstand Curb

### Constructing:

Construct the upstand using relevant timber and insulation materials to achieve U value, slope angle and strength required. The top of the curb should be a minimum 50mm wide and maximum 120mm wide (including waterproofing membrane) and lowest point of curb 150mm above the finished roof level.

Upstand must be flat-topped (we recommend a 5° slope angle for water run-off. See Fig. 1). Apply the waterproofing (in accordance with Manufacturers Recommendations) up and right across top of upstand to give a flat even surface.

Construct the upstand according to the external size required. Note that the thickness of curb material will affect the daylight size.

- A Overall upstand size including waterproof membrane
- B Internal upstand size dependant on width of curb
- C Minimum height: 150mm
- D Waterproofing membrane
- E Builders curb

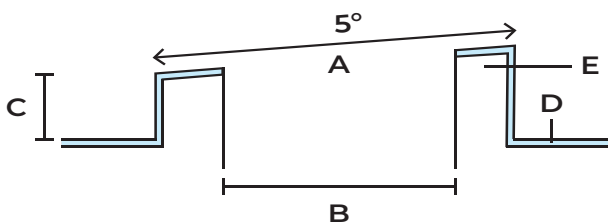


Fig. 1

### Waterproofing:

Follow the waterproofing membranes manufacturer's recommendations for applying to timber ensuring the membrane is applied up side of curb and across top to inside edge of curb

**Note: for asphalt or applications in excess of 13mm thick, we recommend contacting the The manufacturer technical team to ensure rooflight can still be securely fixed on curb.**

## Installing & Waterproofing a Proprietary Curb

### Installing:

We recommend installing all PVC curbs on a 5° slope. If this isn't achieved via the roof slope, then you will need to add timber furring pieces under the base of the curb.

Drill and securely fix the curb to the roof aperture through the bottom flange, 100mm from each corner and at maximum 300mm centred.

Use very large-headed fixings (not supplied), with type and size dictated by site conditions. Upstand curbs should be fixed to a structural component (i.e. not fixed through insulation).

The 150mm-high curb should not be fitted below roof insulation. The 300mm high curb can be used with roof insulation up to 150mm thick if unvented, or up to 60mm thick if vented. If fitted with insulation in excess of these recommendations, a timber ground cut to 75mm wide x the required thickness should be provided around the roof aperture.

### Waterproofing:

Apply the waterproofing (in accordance with the manufacturer's recommendations) up to the underside of the top flange (see Fig. 2). On vented 300mm-high curbs the waterproofing must be neatly dressed around the ventilators and up to the underside of the top flange.

**Bitumen felt and torch-on systems:** The uPVC upstand should be primed and standard application techniques used. When using torch-on, the torch should be directed at the waterproofing and not directly at the uPVC upstand (see Fig. 3).



Fig. 2

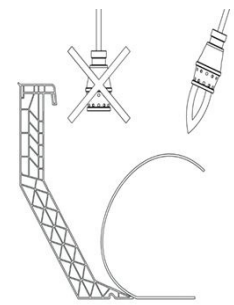


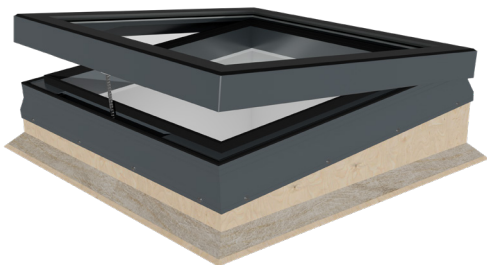
Fig. 3

## Timber Sloping Upstand Instructions

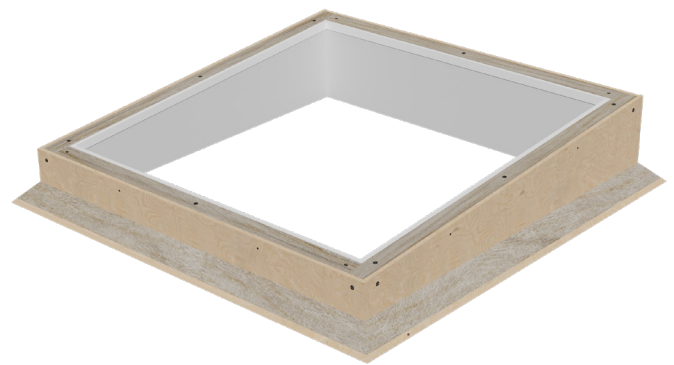
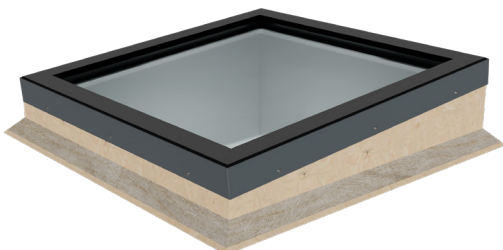
**Before installing your Whitesales Timber Sloping Upstand [TSU]:** Please make sure you comply with all H&S regulations, and are working in a safe environment, with the correct safety measures' and equipment in place.

Now you are in possession of your product, please remove from packaging, near the roof opening, for ease of installation. Note: larger iterations of the Timber Sloping Upstand have a substantial weight (see accompanying reference table). To comply with Health & Safety regulations, please consider the use of additional lifting equipment where necessary. Then...

1. Place your Timber Sloping Upstand into position over the roof opening, double checking the internal upstand dimensions align correctly with the specification.
2. Check that the upstand is square and sloped to the correct orientation with respect to the fall of the roof to minimize water pooling and



TSU FITTED WITH FLAT GLASS ROOFLIGHT & CONCEALED ACTUATOR



potential staining or aesthetic issues. The manufacturer cannot be held responsible for any excessive pooling of water to the surface of the rooflight post installation, if installed without an adequate fall.

3. Pre-drill perpendicular into the tilt fillet of the Timber Sloping Upstand, connecting it to the roof, with a 6mm drill bit at minimum of 300mm centres. Affix into place using a minimum of 5mm dia x 70 mm woodscrews through the predrilled holes. Work around the perimeter of the upstand fillet, ensuring the Timber Sloping Upstand is securely in place. Ensure all fixing screws are flush with the surface of the tilt fillet.
4. If the rooflight is of size which requires straps (sizes in excess of 2100mm x 2100mm), remove the pre-affixed plasterboard on the internal face. The metal straps provided will need to be attached to the timber uprights, from the top rail to the primary curb. Two fixings to the top rail and four fixings into the primary curb. Fixings should be 3.75mm dia. X 40mm long square twist nails. Upon completion of the affixing of the metal straps, the plasterboard on the internal face must be re-affixed.

## Timber Sloping Upstand Instructions

5. Appropriate waterproofing membrane can now be affixed into position from the roof surface, over the tilt fillet and up the external face of the Timber Sloping Upstand, and across the top of the upstand.
6. Position and apply compriband tape supplied with the em.glaze rooflight, to the underside of the em.glaze unit on the aluminium frame (not the glass), so that it provides continuous seal with tight butt joints wherever tape meets or joins.
7. Place the em.glaze rooflight to the top of the now weathered, Timber Sloping Upstand and use fixing screws to secure the em.glaze rooflight into place via the side faces.
8. Please note: Once the rooflight has been installed, all the protective film should be removed on the day of installation. The protective film, which has no UV protection, will become brittle and difficult to remove over time and may damage the paint if left for a prolonged period.
9. Clean and snag any details. Dispose of any excess materials, packaging and other waste in line with local environmental regulations.

Size Code	Approx. Weight [KG] (unit only)
R5	28.8
R6	34.0
R6m	55.6
R7	32.7
R16	40.9
R17a	48.9
R19	58.8
R22z	77.3
R30a	91.8
S2	19.8
S4	23.5
S5	27.5
S7	31.6
S8	35.6
S9	39.6
S11	47.9
S13	57.3
S17	86.3

L \ W	524	624	724	824	924	1024	1124	1224	1324	1424	1524	1624	1724	1824	1924	2024	2124
624	17.9	19.8	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
724	19.6	21.5	23.5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
824	21.4	23.4	25.5	27.5	x	x	x	x	x	x	x	x	x	x	x	x	x
924	23.1	25.1	27.2	29.3	31.7	x	x	x	x	x	x	x	x	x	x	x	x
1024	24.8	26.8	28.9	31.0	33.4	35.6	x	x	x	x	x	x	x	x	x	x	x
1124	26.4	28.5	30.6	32.7	35.2	37.4	39.6	x	x	x	x	x	x	x	x	x	x
1224	28.1	30.2	32.3	34.5	36.9	39.2	41.4	43.8	x	x	x	x	x	x	x	x	x
1324	29.8	31.9	34.0	36.2	38.7	40.9	43.2	45.6	48.0	x	x	x	x	x	x	x	x
1424	31.4	33.6	35.7	37.9	40.4	42.7	45.0	47.4	49.8	52.3	x	x	x	x	x	x	x
1524	33.3	35.5	37.7	39.9	42.5	44.8	47.1	49.5	52.0	54.5	57.4	x	x	x	x	x	x
1624	35.0	37.2	39.4	41.6	44.2	46.5	48.9	51.4	53.8	56.3	59.2	61.8	x	x	x	x	x
1724	36.7	38.9	41.1	43.4	45.9	48.3	50.7	53.2	55.6	58.2	61.1	63.7	66.4	x	x	x	x
1824	38.3	40.6	42.8	45.1	47.7	50.1	52.5	55.0	57.5	60.0	63.0	65.6	68.3	71.0	x	x	x
1924	40.0	42.2	44.5	46.8	49.4	51.8	54.3	56.8	59.3	61.9	64.8	67.5	70.2	73.0	75.8	x	x
2024	41.7	43.9	46.2	48.5	51.2	53.6	56.1	58.6	61.1	63.7	66.7	69.4	72.1	74.9	77.7	80.6	x
2124	44.1	46.4	48.7	51.2	53.9	56.3	58.8	61.4	63.9	66.6	69.6	72.3	75.1	77.9	80.7	83.6	86.3
2224	45.8	48.1	50.4	52.9	55.6	58.1	60.6	63.2	65.8	68.4	71.5	74.2	77.0	79.8	82.7	85.6	x
2324	47.5	49.8	52.2	54.7	57.4	59.9	62.4	65.0	67.6	70.3	73.4	76.1	78.9	81.8	84.6	x	x
2424	49.1	51.5	53.9	56.4	59.1	61.6	64.2	66.8	69.5	72.1	75.2	78.0	80.8	83.7	x	x	x
2524	50.8	53.2	55.6	58.2	60.9	63.4	66.0	68.7	71.3	74.0	77.1	79.9	82.8	85.7	x	x	x
2624	52.5	54.9	57.3	59.9	62.7	65.2	67.8	70.5	73.2	75.9	79.0	81.8	84.7	x	x	x	x
2724	54.1	56.6	59.0	61.6	64.4	67.0	69.6	72.3	75.0	77.7	80.9	83.7	x	x	x	x	x
2824	56.3	58.7	61.2	63.9	66.7	69.3	71.9	74.7	77.4	80.2	83.3	86.2	x	x	x	x	x
2924	57.9	60.4	62.9	65.6	68.4	71.1	73.7	76.5	79.2	82.0	85.2	88.1	x	x	x	x	x
3024	59.6	62.1	64.6	67.3	70.2	72.8	75.5	78.3	81.0	83.9	87.1	90.0	x	x	x	x	x
3124	61.2	63.7	66.3	69.0	71.9	74.6	77.3	80.1	82.9	85.7	89.0	91.9	x	x	x	x	x
3224	62.9	65.4	68.0	70.7	73.7	76.3	79.1	81.9	84.7	87.6	90.8	93.8	x	x	x	x	x

**Single ply systems:** These may be solvent or heat-welded and mechanically fixed to the uPVC upstand, depending on the type of membrane. Refer to the supplier for further information.

**Asphalt:** The uPVC upstand should be primed and expanded metal lathe (EML) metal should be affixed using staples with a maximum length of 10mm. The first coat of asphalt should be applied cooler than usual – approximately 180°. This layer should be as thin as is practically possible. Because of the upstand’s insulating properties, the heat cannot dissipate quickly and it is vital that you leave the first coat to cool completely before applying successive coats. These subsequent coats can be at normal temperature and thickness.

### Assembling & Installing a fixed, non-opening flat glass rooflight onto Waterproofed Builder’s Upstand

1. Double check the external curb dimensions to ensure the upstand has been constructed to the correct sizing specification.

**Note:** Care should be taken to avoid damaging or scratching components.

2. Check size of rooflight and compare with the size of the external curb to make sure the rooflight will fit down over the curb (see sketch below).

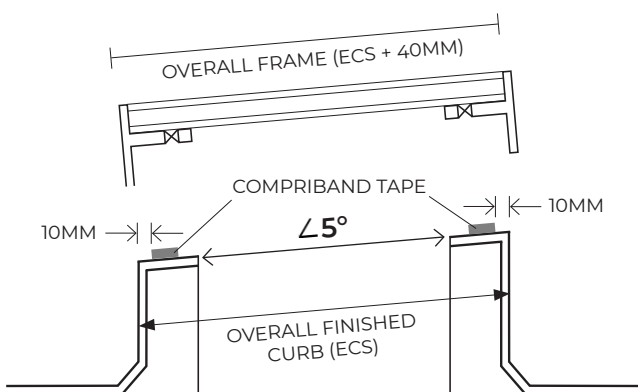
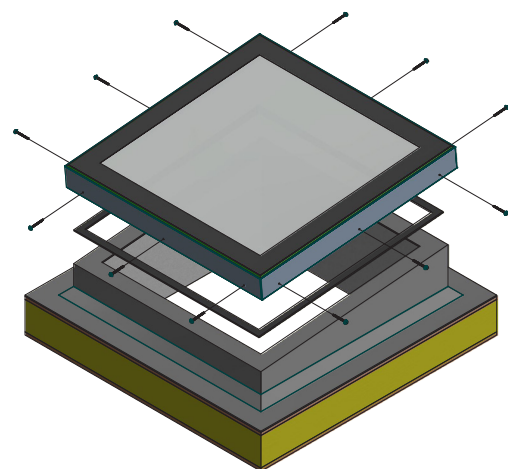


Fig. 4

3. Check that the curb is flat and in one continuous plane (maximum 5mm variation from extremities will be accommodated by compriband tape). We advise a minimum of 5° slope on the curb to minimize water pooling and potential staining

or aesthetic issues. Whilst the product can be installed flat without detriment to the warranties, the manufacturer cannot be held responsible for any excessive pooling of water to the surface of the rooflight post installation, if installed without an adequate fall.

4. Position and apply compriband tape to the top of the curb, so that it provides continuous seal with tight butt joints wherever tape meets or joins. See Fig. 4.
5. Position the rooflight onto the top of the curb ensuring the compriband tape is in continuous contact with the flat glass rooflight unit around the full perimeter of the curb ensure that the unit is positioned centrally on curb with equal gap (minimum 10mm) between outside of curb and internal face of unit drip flange.
6. Using the fixing screws supplied, fix the frame to the curb horizontally through the fixing holes pre-drilled in the lower part of the perimeter frame. Depending on substrate pre-drill with 3mm drill bit if required to prevent splitting. Take care not to overtighten to avoid stripping fixing or distorting or damaging flat glass rooflight frame.
7. **Please note:** Once the rooflight has been installed, all the protective film should be removed on the day of installation. The protective film, which has no UV protection, will become brittle and difficult to remove over time and may damage the paint if left for a prolonged period.



## Assembling & Installing a fixed, non-opening flat glass rooflight onto a uPVC Upstand

1. Double check the external curb dimensions to ensure the upstand has been constructed to the correct sizing specification.

**Note:** Care should be taken to avoid damaging or scratching components.

2. Check size of rooflight and compare with the size of the external curb to make sure the rooflight will fit down over the curb.

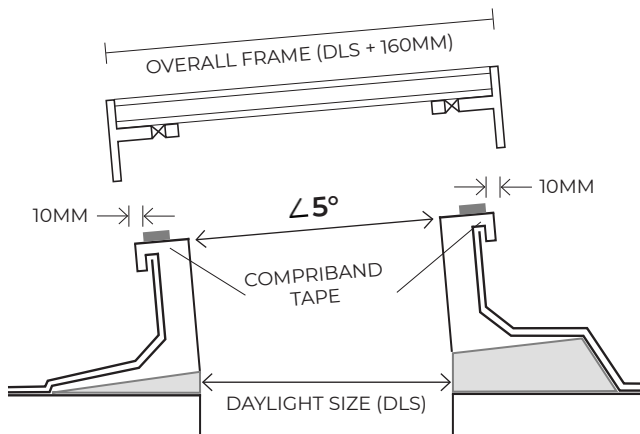
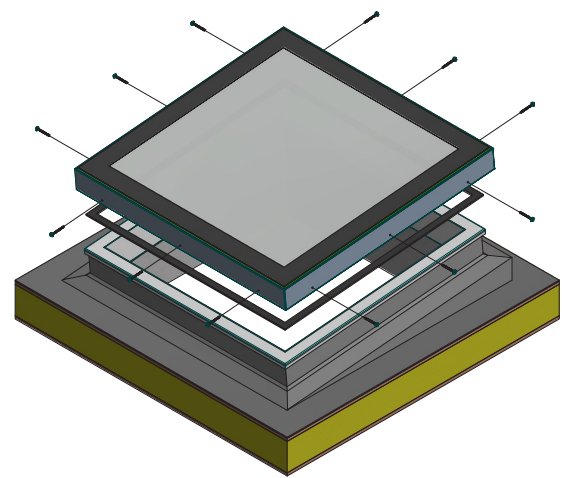


Fig. 5

3. Check that the uPVC pstand is installed correctly and in one continuous plane. We advise a minimum of 5° slope on the curb to minimize water pooling and potential staining or aesthetic issues. Whilst the product can be installed without detriment to the warranties, the manufacturer cannot be held responsible for any excessive pooling of water to the surface of the rooflight post installation, if installed without an adequate fall.
4. Position and apply compriband tape to the top of the uPVC upstand, so that it provides continuous seal with tight butt joints wherever tape meets or joins. See Fig. 6.
5. Position the rooflight onto the top of the curb ensuring the compriband tape is in contact with the metal frame around the full perimeter of the curb. Ensure that the unit is positioned centrally on curb with equal gap (minimum 10mm) between outside of uPVC upstand and internal face of flat glass rooflight unit drip flange.
6. Using the fixing screws supplied, fix the frame to the curb horizontally through the fixing holes

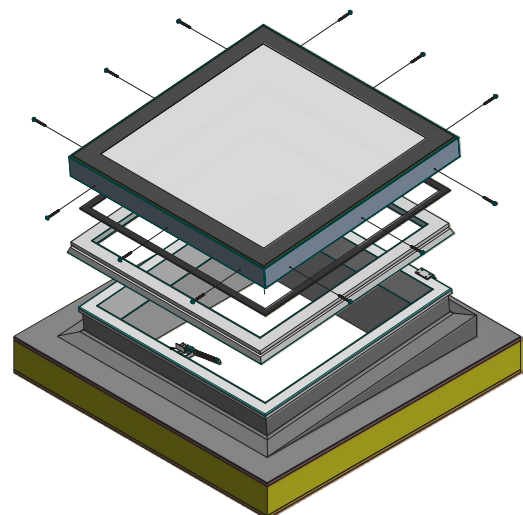
pre-drilled in the lower part of the perimeter frame. Take care not to overtighten to avoid stripping PVC or distorting or damaging flat glass rooflight frame.

7. **Please note:** Once the rooflight has been installed, all the protective film should be removed on the day of installation. The protective film, which has no UV protection, will become brittle and difficult to remove over time and may damage the paint if left for a prolonged period.
8. Clean and snag any details.



## Factory Installed PVC Opening Frames

For manually opening ventilation, clip the opening spindle into the mounting brackets. Adjust as necessary using the inner spindle to give the correct closed position (see instructions on spindle packaging). Ensure spindle is aligned vertically before fixing unit.







## Wiring & Commissioning an electric opening flat glass rooflight

**Note: Electrical wiring and commissioning should only be carried out by a qualified and competent person.**

Every flat glass rooflight electric unit is bench tested during production and leaves the factory fully operational.

Due to the size and weight differences between units there are combination of single and multiple motor combinations and different capacity (Nm) motors that are used.

Every unit should have a specific motor guide attached to the motor cable – if you require electronic versions or are missing this guide please contact The manufacturer customer services team.

PLEASE PASS ONTO BUILDING OWNER/OCCUPIER.

## Glass Thermal Fracture

Your flat glass rooflight is generally supplied with the internal pane as laminated glass to give maximum safety and security to personnel internally and externally.

Annealed laminated glass could be subject to thermal fracture and care should be taken to avoid uneven heat build-up under the glass.

Any installation of blinds, film or alterations to roof light-well, or other heat sources must consider the above and be installed/used in such a way to prevent risk of thermal fracture.

Further guidance can be obtained by contacting our Technical Team using the details below.