



INSTALLATION GUIDE

Ultrasky[®]
LANTERN by Ultraframe

ULTRASKY LANTERN

JULY 2022 | V11

Thank you for choosing the Ultrasky Lantern product. This guide is designed to make fitting as straightforward as possible.

Before you commence installation of the lantern, please take a moment to read the rest of this guide.

This guide is written on the basis that the surveyor has undertaken correct checks for the capability / structural performance of any existing flatroof to verify it is fit for purpose. A timber kerb and weatherproofing materials for the deck/kerb interface are not provided.

Any feedback - positive or negative - is welcomed so we can make our systems even better.

Please contact the Ultraframe Tech Support Team on 01200 452 918 or email techsupport@ultraframe.co.uk

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Building regulations

You will need to follow the below specification in regards to glass U-value in order to pass building regulations. Please refer to the Thermal Design Guide in for a confirmed U-value of each product.

- If your lantern is less than 750mm (w) – 0.9 U-value or less glass is required.
- If your lantern is between 750mm to 1000mm (w) – At least 1.0 U-value glass is required.
- If your lantern is larger than 1000mm (w) – At least 1.2 U-value glass is required.
- The above U-values does not include the eaves.

General points

Care should be taken when handling components that are seen by the homeowner, as surfaces may be scratched if not handled with care. Choose a suitable area for unpacking the components and always check them before fitting. Any claims for missing or damaged parts are only accepted in line with our standard terms and conditions of sale.

Health & safety

Site safety is paramount. The Construction (Design & Management) Regulations 2015 apply to the whole construction process, on all construction projects from concept through to completion. Compliance is required to ensure construction projects are carried out in a way that secures health and safety. The installation company shall be responsible for the safety of all of the fitting team, the customer and members of the public.

The Surveyor should have carried out a risk assessment to reduce risk on site and this should have been discussed with you prior to starting.

Please use safe working platforms and ladders that comply with BS EN 131. Always use equipment in line with manufacturers recommendations. Personal Protective Equipment –such as goggles, mask and ear defenders – should be used when, for example, grinding out for the flashing.

Careful consideration should be given to the safe disposal of all packaging which can be readily recycled.

Product

The lantern kit is supplied with a location plan. The location plan is used to match individual components to their respective position on the roof.

The majority of aluminium and PVCu components contain identification codes, usually by inkjetting or labelling – should you need to re-order a part this should help. (See component list on p6-7)

Sealing

It is important to use the correct sealant when sealing the roof. Always use MS Polymer sealant such as Rotabond 2000 on self cleaning glass.

The flat roof structure

Check the existing structure is sound and structurally fit for purpose. Check the opening is 'square' and the flat roof deck is level. A timber kerb of 150 x 70mm width should be used onto which is attached the lantern. The lantern is manufactured to suit external kerb sizes.

Technical Support

Tel: 01200 452 918
Email: techsupport@ultraframe.co.uk

TOOLS REQUIRED



8, 10, 13mm Socket Spanner



Deadblow Hammer or White Rubber Mallet



No. 2 Pozidrive Bit



Drill/Screwdriver



Gasket Shears/Snips



4.5mm Drill Bit
10mm Drill Bit



Spirit Level (magnetic useful for internals)



Tape Measure



Box cutter or Stanley knife



Sealant Gun



Support Prop

THERE ARE SOME MATERIALS YOU NEED TO SUPPLY: EG. PLASTERBOARD, 150 X 70MM TIMBER KERB, FIXINGS TO HOLD ALUMINIUM EAVES BEAM TO TIMBER KERB



HANDLING ALUMINIUM PRODUCTS

PAINTED ALUMINIUM PRODUCTS - PLEASE NOTE

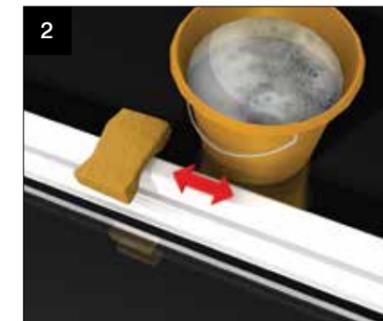
All paints will 'chalk' to some extent and there will be a reduction in gloss level over time. (See Cleaning and Maintenance guidelines see p13)

QUALITY EXPECTATIONS ON INSTALLATION.

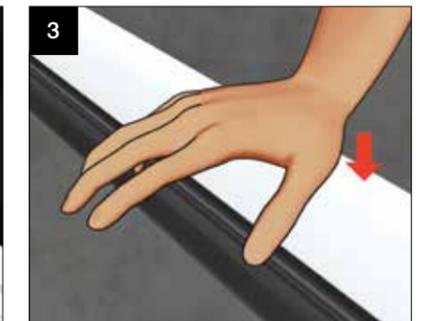
Appearance: This is assessed based on the selection of the 'significant' (primary) surface. From a distance of 3m, stand at an oblique angle of 60degree and then defects such as blisters, runs, pin holes etc should NOT be seen.
Colour and gloss: Viewed from 5m, the coating must be of even colour and gloss with good coverage.



If storing in warehouse racking or on rails/roof racks, take care to support the products and do not over tension straps and ropes. When opening sealed packs, use a special box knife opener.



Grease marks, dirt and mastic spillage may be removed using soapy water.



Take care when fitting aluminium products to not use excessive force.

SYSTEM OVERVIEW



ULTRASKY LANTERN

- 1 High performance thermal break
- 2 Patented thermally insulated aluminium rafter
- 3 Super strong ridge for fewer bars and more light
- 4 Thermally isolating top cap clip
- 5 'Secure-fit' end caps are a further thermal barrier
- 6 Thermally broken eaves rail
- 7 Superior 25° pitch for elegance and light
- 8 Adjustable reinforced stopper to prevent glass slipping
- 9 Choice of aluminium or PVCu internal and externals

STRENGTH, WARMTH AND MAXIMUM LIGHT, PERFORMANCE ENGINEERING

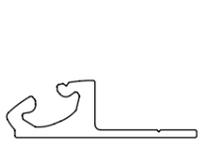
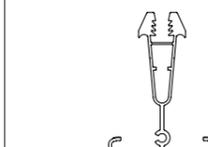
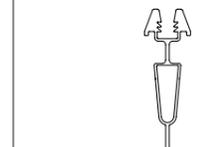
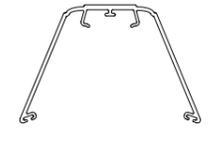
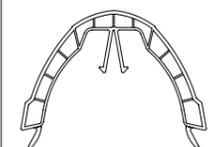
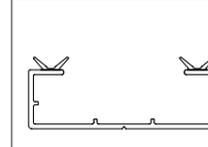
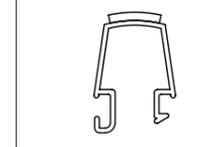
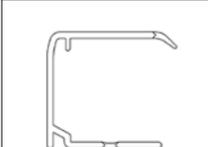
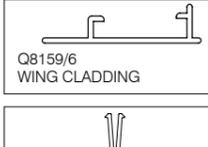
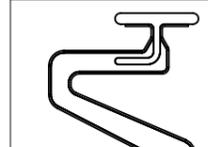
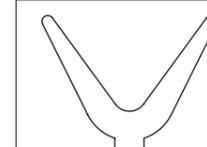
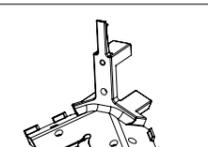
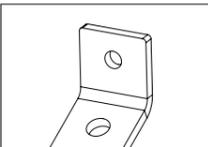
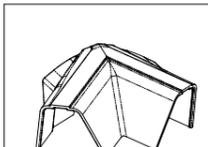
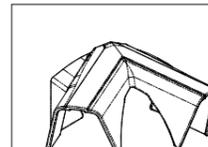
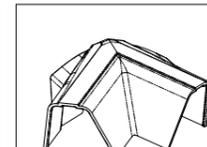
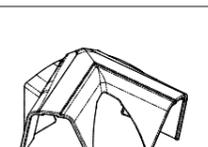
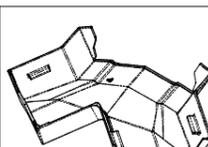
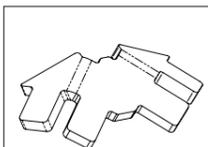
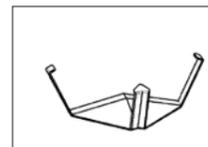
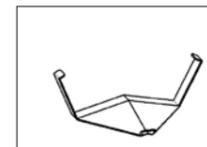
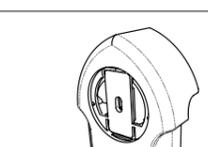
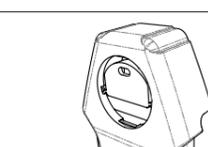
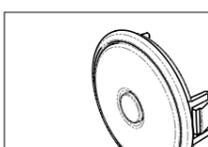
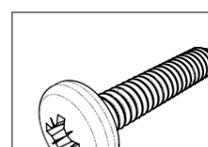
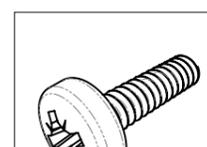
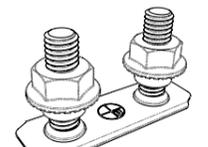
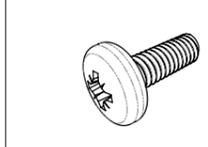
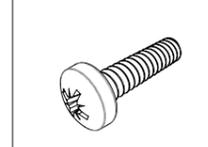
Ultrasky's Stormshield Protection System includes:

- 1 Waterproof glazing compression trims
- 2 Ridge end weathering shields
- 3 Secure fit radius end covers

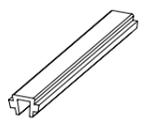
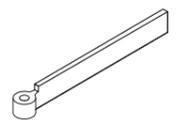
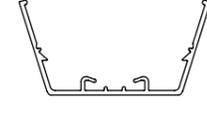
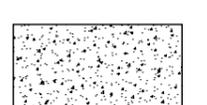
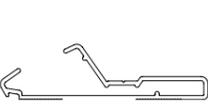
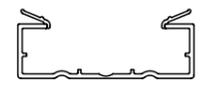


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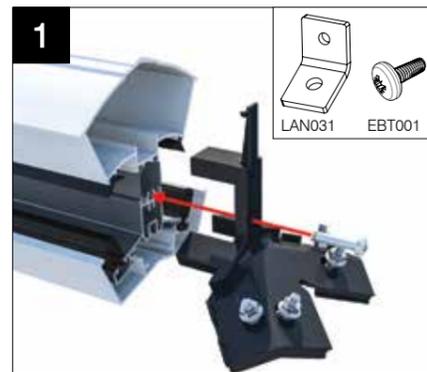
COMPONENT IDENTITY LIST

 QORER600M ORANGERY EAVES RAIL 6M MILL	 LAN/6 THERMALLY BROKEN RIDGE	 SPGC/1 TRANSOM/VIC GLAZING BAR (78MM)	 SPTA/1 GEOR HIP GLAZING BAR (HEAVY)	 ATC/25 ALI CLIP FIT BAR CAP TRAN STD 25MM
 LAN/4 ALUMINIUM CLIP FIT BAR CAP GEOR 25MM	 CCA/25 CHAMBERED DOME TRANSOM CAPPING 25MM	 CCG/25 CHAMBERED GEORGIAN CAPPING 25MM	 GBCB600C GLAZING BAR CLADDING 6M WHITE	 PSUB600BL SUPPORT TRIM - BLACK SEALED UNITS
 AGP/25 25MM ALUMINIUM GLAZED END PROFILE	 PCFD400W/24 PVCU END COVER (24MM)	 Q8159/6 WING CLADDING	 AGS305 Q-LON GASKET SEAL T SLOT QEZ376	 Q8201 RETAIN BEAD GASKET 150M
 LAN032BL LANTERN FAB END	 LAN031 LANTERN TRANSOM BRACKET	 LAN035/1 LANTERN EXTERNAL COVER PVCU 2 BAR	 LAN035/2 LANTERN EXTERNAL COVER PVCU 3 BAR	 LAN028/1 EXTERNAL RAD END COVER ALI 2 BAR
 LAN028/2 EXTERNAL RAD END COVER ALI 3 BAR	 LAN030/1 INTERNAL RAD END COVER 2 & 3 WAY	 LAN029 FOAM WEATHERING SHIELD - GLAZING	 LAN036 PRESSED INTERNAL COVER - 2 WAY (OPTIONAL)	 LAN036/2 PRESSED INTERNAL COVER - 3 WAY (OPTIONAL)
 CCTA001 CHAMB DOME ENDCAP	 CCG001 CHAMB GEORG ENDCAP	 DCM001/WV ENDCAP MOTIF (CONCENTRIC)	 KDS001 4.8X25 PZ PAN SLF TAP BS 4174 Z&C	 JRKA004/1 M4 X 12 PZ PAN TRI-LOBAL Z&C
 SHBC001T TWIN BOLT & NUT	 SHBC001S M6 SINGLE BOLT AND NUT	 EBT001 M5 x 12 PZ PAN TRI-LOBAL SCR Z&C	 LANRF001 R/END M6 X 40 POZI PAN HEAD TAPTITESCREW	 LVCC001 ALI TOP CAP/ CLIP

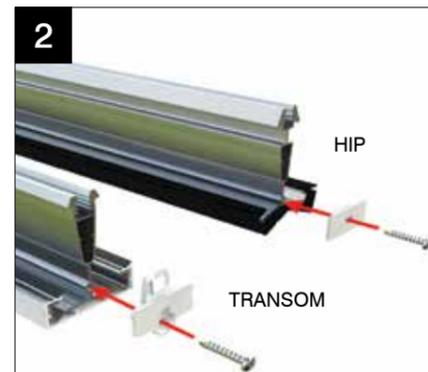
COMPONENT IDENTITY LIST

 JRKA002 JACK RAFTER TENON KIT 15MM	 JRT027 CENTRAL TRANSOM TENON 27MM	 JRKA001/4 CHANNEL INFILL 27MM	 LAN014 BAR UNDERCLADDING CLIP	 LAN/3 ALUMINIUM INTERNAL UNDERCLADDING - HIP
 LAN/2 ALUMINIUM INTERNAL UNDERCLADDING - TRANSOM	 LAN/1 ALUMINIUM INTERNAL RIDGE UNDERCLADDING	 LAN100 FOAM INSULATION (FACTORY INSERTED INTO BAR UNDERCLADDING)	 LANCE600BL ULTRASKY EAVES SLEEVE PVCu	 DSBC600CBL BLACK GLAZING BAR UNDERCLADDING THERMAL SLEEVE
 SHBCB001SL/1	 FLN001	 Q8170 H SECTION USED WITH ALUMINIUM INTERNAL CLADDING		

PRE INSTALLATION



LANRF001 is supplied pre-installed into the bar. Remove and fix radius end (LAN032BL) then replace the screw. If using 3 bar attach LAN031 using EBT001.

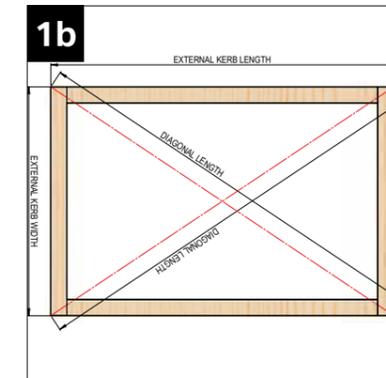


Attach the glazing bar end cap fixing blocks - as access restrictions may prevent easy fixing later. NOTE: These 'snap out' of the end caps when despatched from the factory.

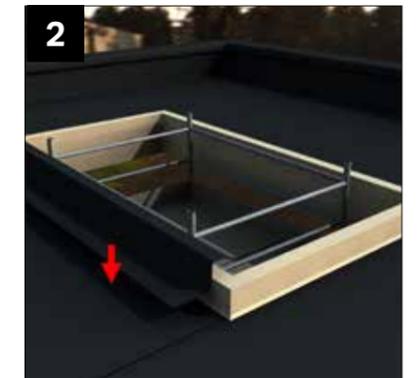
GENERAL INSTALLATION



Construct the upstand to the flat roof with minimum of 150mm tall kerb (minimum of 70mm wide). Check that kerb is square by measuring diagonals. Apply membrane as per manufacturers guidelines. The customer must ensure that the kerb and surrounding roof can adequately resist the horizontal spread of the lantern.

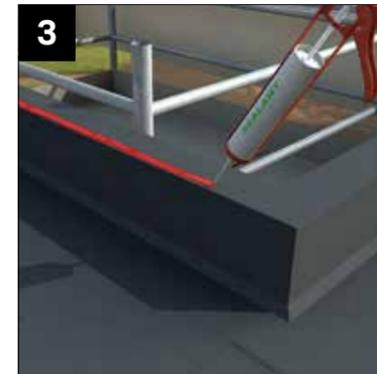


Check diagonal measurements.



Wrap the membrane up the kerb and lap over the top of the kerb ensuring that a watertight finish is achieved.

This is general guidance only - depends upon proprietary system being used.

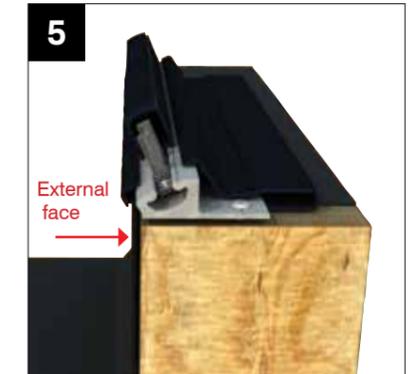


Apply a generous, continuous bead of silicone to the outer perimeter of the top surface of the kerb.

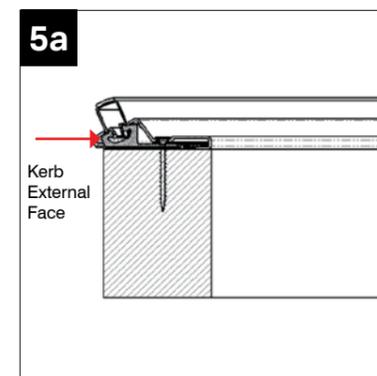


Pre drill 100mm from each end and drill a minimum of 4 holes at a max of 400mm centres using appropriate clearance drill. Now take the eaves beam/rail and ensure correct number of bolts are slotted into eaves beam/rail.

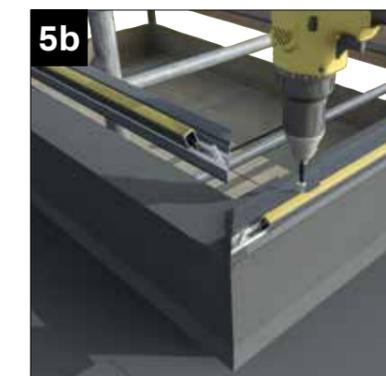
Minimum of at least 4 screws per eaves beam/rail length.



Cross section of timber kerb with eaves beam / rail in position - note flush with outer edge of kerb.

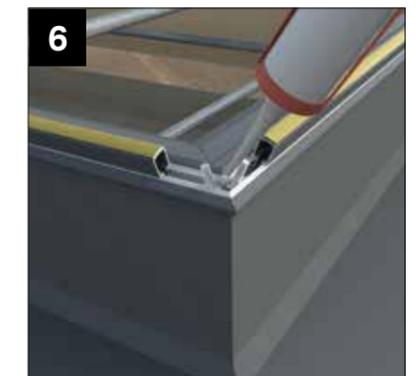


Aluminium eaves beam/rail (not the PVCu sleeve) flush with external face of kerb.



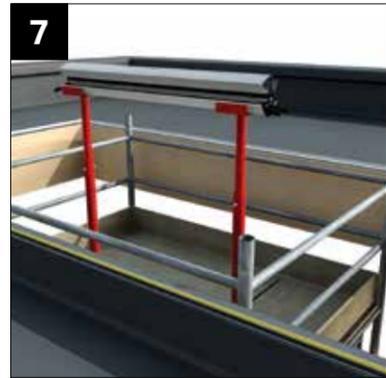
Check the required number of bolts are in the eaves beam/rail. Seal cut ends of eaves. Line up eaves along outer edge of kerb* and screw down using appropriate 5mm x 50mm fixings (not supplied) ensuring good engagement.

*As shown in previous image.



Once eaves beam/rail is fitted, silicone corner joints.

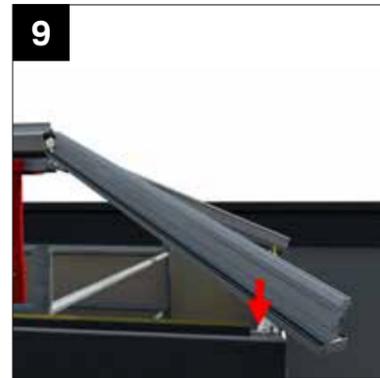
GENERAL INSTALLATION



7 Prop ridge in position using suitable supports, centralising between eaves beam sections. (When the ridge features aluminium painted internal finish it will need to be protected whilst supporting).



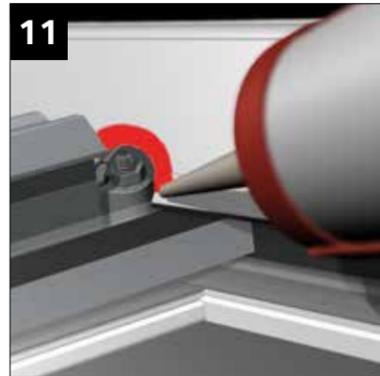
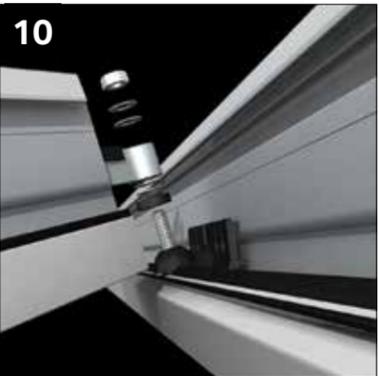
8 Using nuts and bolts (SHBC001S - found in BURBOX), locate each hip bar and secure to radius end by hand tightening nuts.



9 Remove nuts on eaves beam. Fit hip bars onto bolts at eaves end and hand tighten nuts.



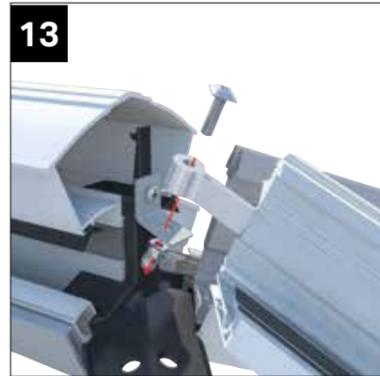
Now fit the jack rafters. The 2 part jack rafter kit is already fitted to the hip and jack rafter. Ease back the jack rafter undercladding. Each jack rafter kit is supplied with a number of washers. Trial fit the jack rafter and check that the glazing platforms are level. Adjust if necessary by adding or removing washers between the two part connecting kit, then tighten the nut. **NOTE: If aluminium internal claddings are being used, fit hip internal cladding prior to fitting jack rafters.**



11 Seal around the notched hip bar top cap ready to receive the jack rafter capping.



Depending upon the lantern size and options requested, fit hub end transom bar and / or side transom bars. If specified on the job, remove nuts from bolts in transom position and fit transom bar over bolts. Re fit nuts and hand tighten. Check that ridge is level and fully tighten nuts on all bars.



13 When a transom is fitted between hips, lift transom bar sleeved spigot over bolt, then tighten nut.

FITTING ALUMINIUM INTERNAL CLADDING (IF SPECIFIED)

NOTE: ENSURE RIDGE UNDERCLADDING IS CENTRED ON RIDGE BODY

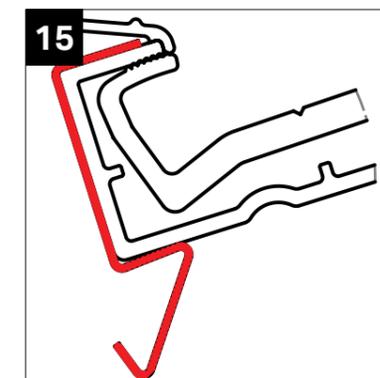


14 Attach the spring clips (LAN014) to side of the glazing bars.

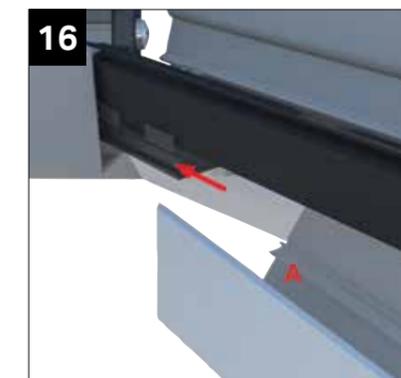
TRANSOM - 2 clips 50mm from the top of the bar. 2 clips 100mm from the eaves.

HIP - 2 clips 100mm from the eaves.* top of bar locates on ridge end (see step 16).

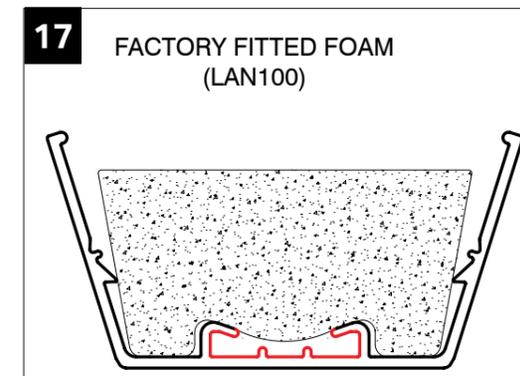
Push the leg in under the gasket and spring around the underside as shown. Ensure the clips are fully pushed on.



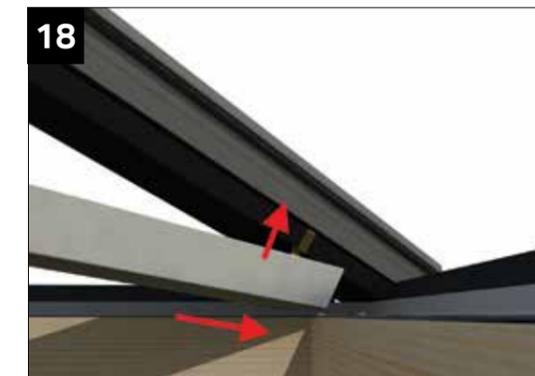
15 Spring clips in position.



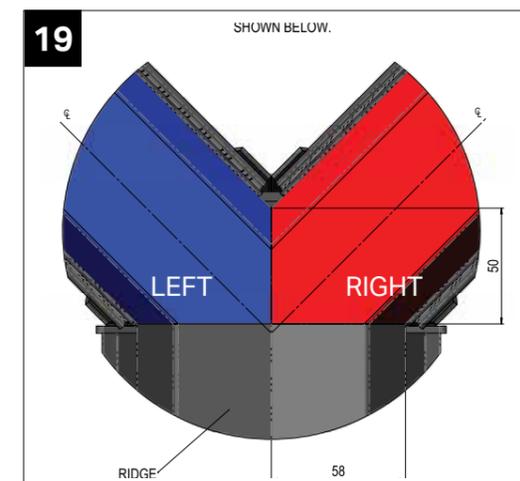
16 Position top of hips into ridge end ensuring they butt up against it. Locate on the lip as shown above.



17 Ensure the foam does not interfere with the clips by pinching it towards the centre of the bar.



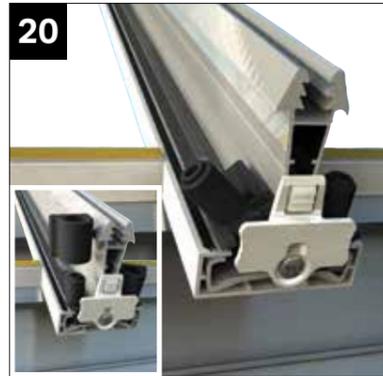
18 At eaves, slide undercladding down towards eaves as far as you can and push onto clips. Hip claddings are asymmetric. Fit with short cut between hips as shown, claddings have red and blue coloured dots attached to indicate position - always use a red and blue dot at each ridge end.



19 Look up with a 'worms eye view' down the central bar to distinguish left and right.



GENERAL INSTALLATION CONTINUED



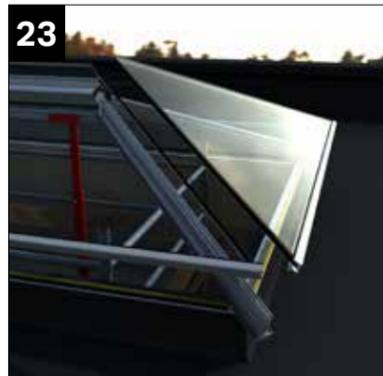
Now move to the glazing stage. Snap off appropriate handed glazing stop (LH shown). Handing marked at base of glazing stop. Line up the rounded edge on base plate next to central web of glazing bar and tuck under gasket side of bar. Rotate glazing stop into position. Push the grommet over the post. Slide assembly down to end of bar.



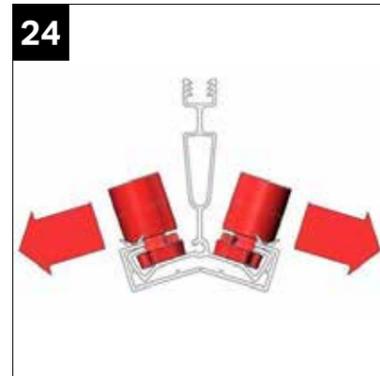
Seal underside of top face of glazing end profile as shown (PVCu version of end profile is shown - if aluminium glazing bar top caps, this end profile is also aluminium).



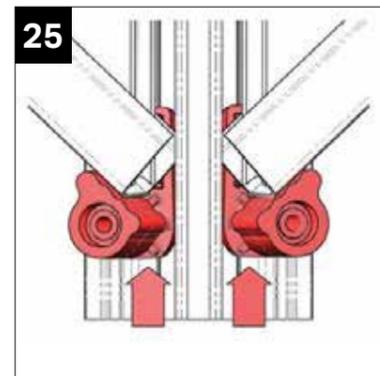
Peel back a small tab of the protective film on the glazing support from the eaves and the ridge. (ready to be pulled away when the sealed units are finally in position). **DO NOT FULLY REMOVE TAPE YET.**



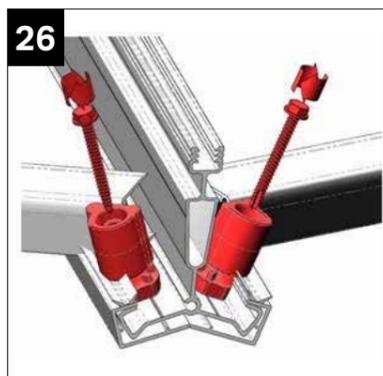
Lift glass units into place onto the glazing bars. When fitting units along the ridge, lift the unit slightly and push into the ridge, then lower onto the eaves glazing support. Centralise the glazing between the glazing bars. If necessary, pack out on each side.



The glazing end stops fitted earlier should be pushed away from the centre of the bar and tucked under the gasket side of the glazing bar as shown. These are handed components, ensure they are positioned on the correct sides of the glazing bar.



Ensure that glazing stops are pushed up the glazing bar and are firmly located against the glazing end profile. Please note the glazing end profile may be mitred in some cases.



Ensure that the glazing end stops have been positioned correctly then screw down into the glazing bar, using the fixings provided. Now fully peel away protective film from glazing support at eaves and ridge and press glazing down firmly.

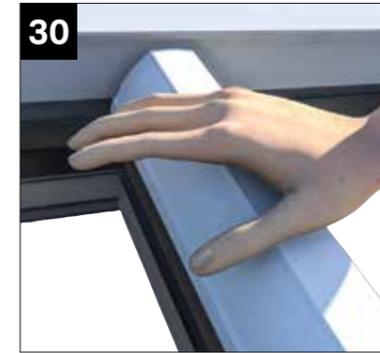


Work your way around the roof and fit PVCu glazing bar topcaps.

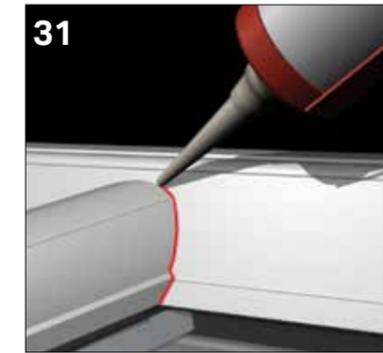


This stage should have been prepped in the factory. If not take the aluminium top caps and lay them onto a protected surface. Slide clips into each bar - position down from ridge / eaves at a max centre of 100mm and then at 500mm centres (max) inbetween.

GENERAL INSTALLATION CONTINUED



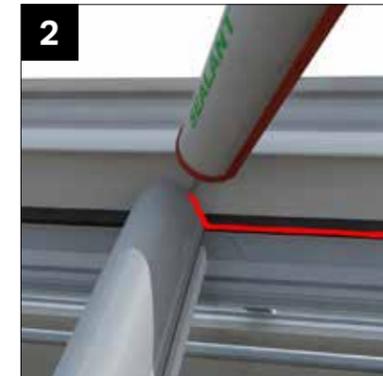
Using the heel of your hand, push down on the top cap to engage the clips, working from ridge to eaves. Ensure the rubber gaskets are fully compressed for a watertight seal. NOTE: on longer bars it may be necessary to use a soft mallet and timber block.



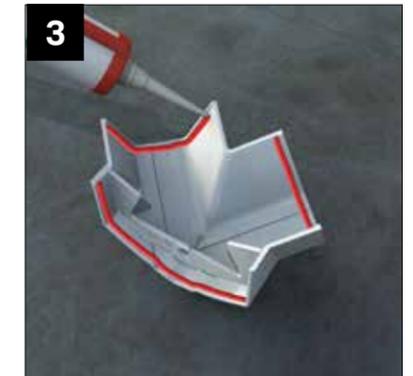
Seal around the joint on the jack rafter capping when complete.



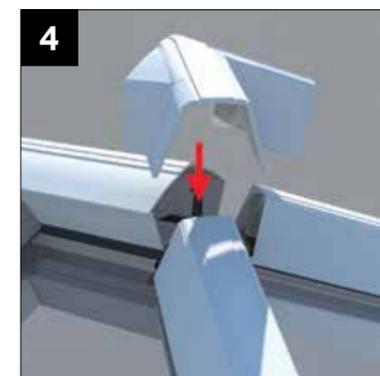
ENSURE THE GLASS IS CLEAN AND DRY BEFORE FITTING. Peel back protective film from weathering shield and position (adhesive face down) on glass, locating around the ridge and the hip bars. Press down firmly.



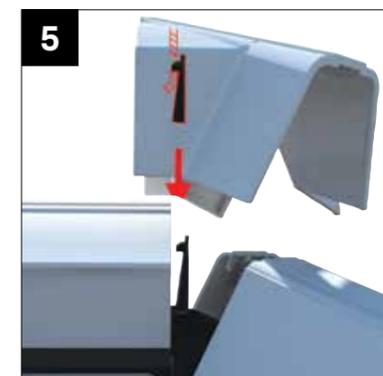
Seal along the ridge baffle where it meets the glazing and over any bar where it meets the ridge.



Apply 2 generous beads of sealant to the underside of the external cover.

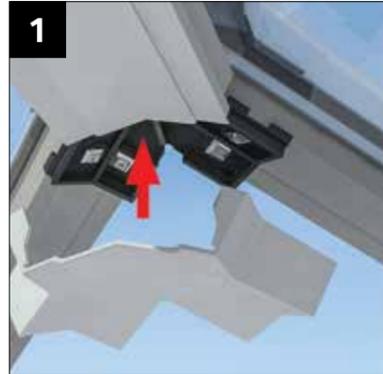


Press firmly down on the ridge end top cap until it clicks into position on the ridge end.

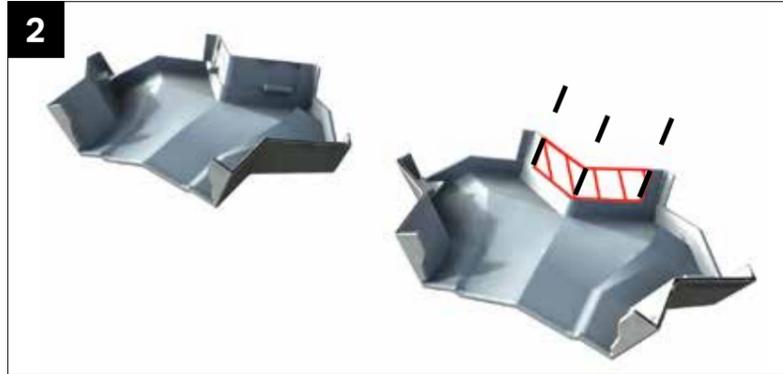


Fit end caps to bars and push in circular cover disk to finish.

INSTALLATION - PLASTIC INTERNAL COVER

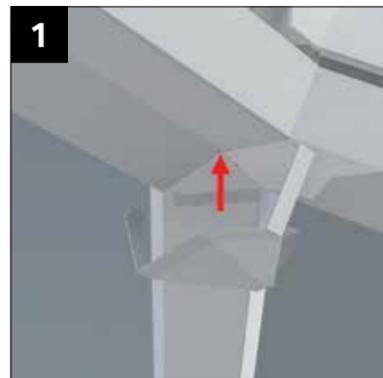


Fit the internal plastic cover by pushing up into position over the ridge and ridge end.

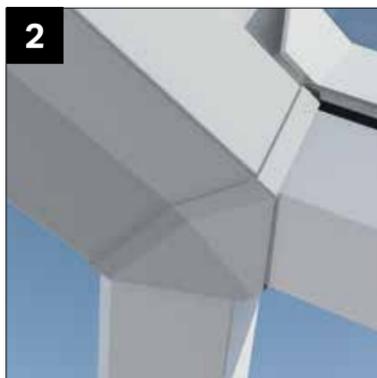


When a central transom between the hips is specified, the internal cover will need the highlighted section above removing. Using a hacksaw cut down the three dotted lines up to the lip. Then using pliers remove the section by bending back and forth. Tidy ends using a small file.

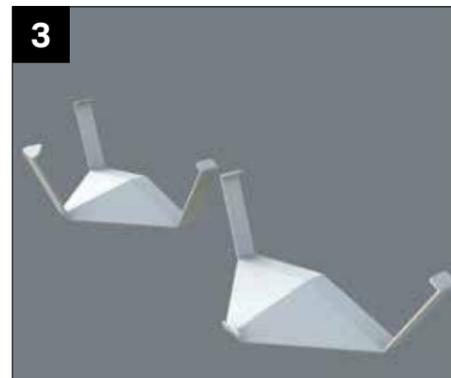
INSTALLATION - ALUMINIUM INTERNAL COVER



Clip fit into position the aluminium internal radius end cover trim.



Clipped into final position.



No central leg when roof has central transom between hip bars fitted.

IMPORTANT

The roof vent opening sash must be glazed prior to fitting the vent to the conservatory roof. Leaving the recommended time (dependent on outside air temperature) for the sealant to cure.

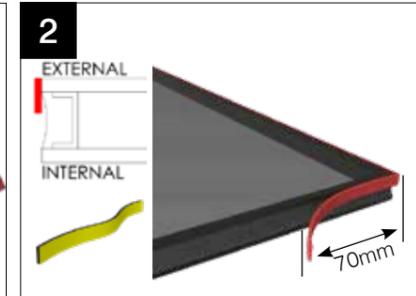
Sealant curing time will vary depending upon the time of year and outside temperature prevailing, This could take up to 8 hours in cold conditions. This is critical when the sash is to be glazed with a sealed unit.

INSTALLATION - ROOF VENT

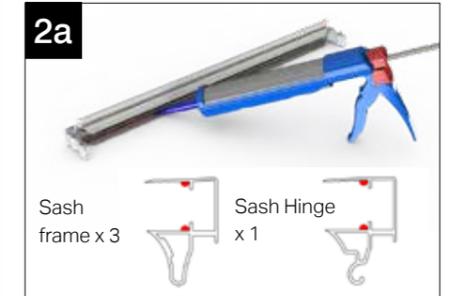


Unwrap the sash and pull two side sections out as shown above.

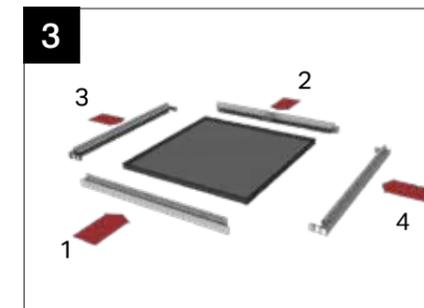
Remove any protective handling tape around the perimeter of the unit prior to installation.



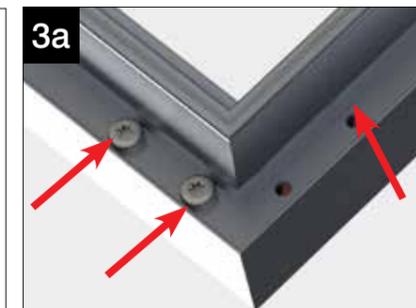
Apply length of foam tape directly to the lower edge of the outer pane of the glass unit as shown. Start by applying the tape 70mm up the side of the glass unit and continuing to wrap around the lower edge of the glass unit, finishing 70mm up the opposite side.



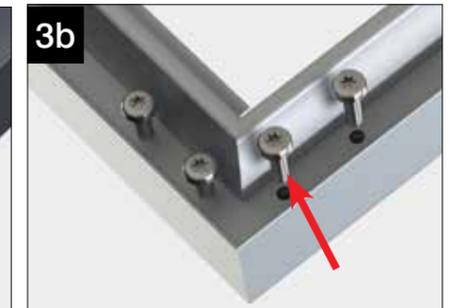
For pitches below 10° it is recommended that the glass is sealed in by running a bead of silicone along the length of each sash section as shown above. For pitches above 10° it is advisable to do the same.



Once tape has been applied, assemble the sash in the sequence shown above and ensure the tape is directed against section 2.



If the pre-drilled holes appear out of alignment as shown above in red simply slacken off the factory fitted screws.



The two sections can then be readjusted so they are in line and square. Then the non factory fitted screws can be fixed down.



Finally re-fasten the factory fitted screws.



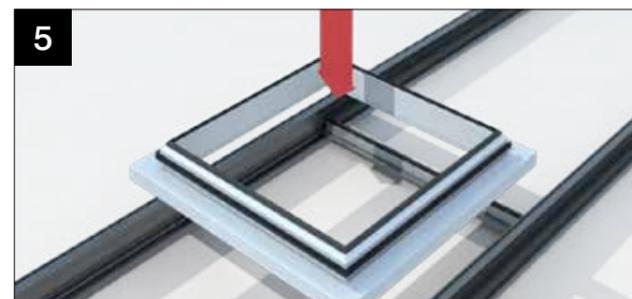
On the hinge side of the sash fill the hole shown above at either end with a blob of silicone.

NOTE: If the roof vent is being fitted at 10° or under, run a continuous bead of appropriate silicone around the full perimeter of the glass unit.

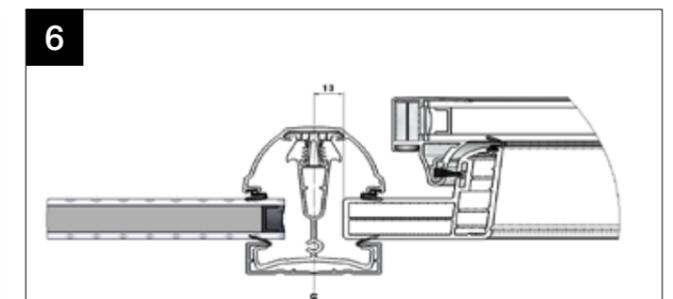
NOTE The roof vent has been successfully tested by the BBA at 25° up to 1200Pa without sealant.

VENT MAIN FRAME INTO ROOF

SECTION 3



Peel back any protective film prior to fitting. Fit upper glazed unit and internal muntin bar. Carefully lower the vent frame into position onto the internal upper muntin bar.



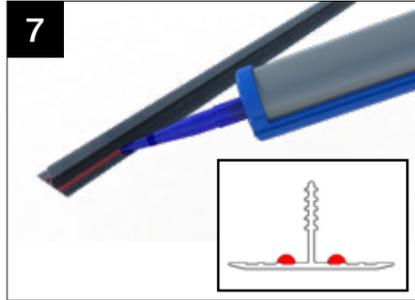
Ensure the vent is central between the transoms. As shown above there should be a 13mm gap between the bar centre and the frame. Use glazing packers if necessary.

INSTALLATION - ROOF VENT

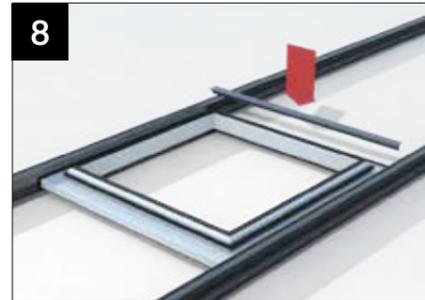
IF ALUMINIUM INTERNAL CLADDINGS HAVE BEEN SPECIFIED REFER TO DETAIL 13 FOR MUNTIN FITTING



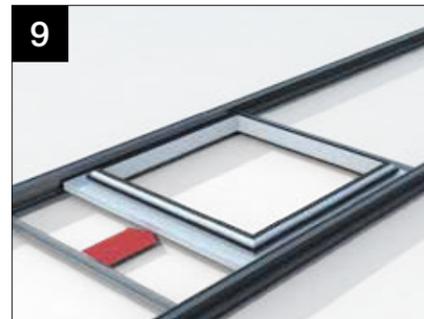
6a If existing glazing is 32/35mm a packer will have been pre-fitted to the frame.



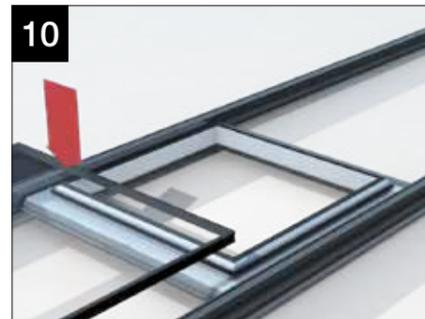
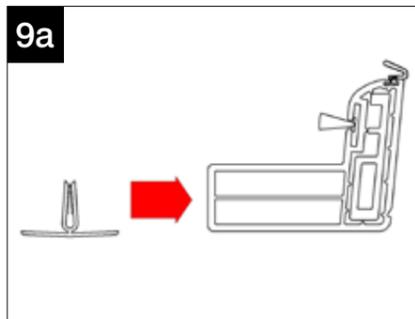
7 Run a bead of appropriate sealant ensuring a continuous run along the external upper muntin bar. Please see section view for bead positioning.



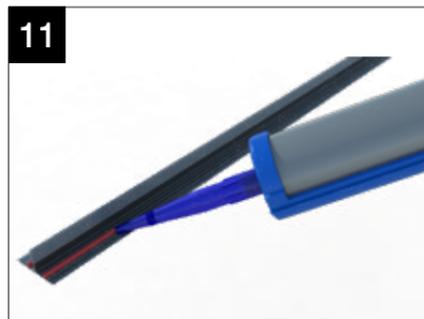
8 Locate the external upper muntin bar with the internal muntin bar, knock into place. The lower muntin may need to be supported from underneath whilst secure into final position.



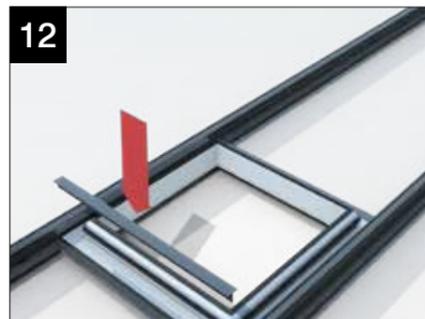
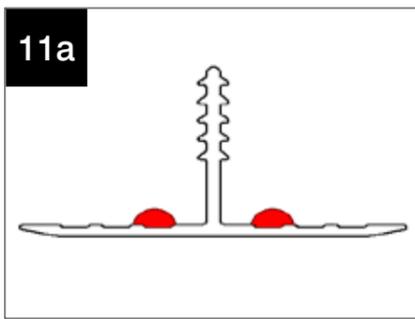
9 Slide the internal lower muntin bar into place under the vent frame. See cross section 9a for further detail.



10 Remove any handling tape around the perimeter of the unit. Take care lowering the glazed unit into position on the internal lower muntin bar.

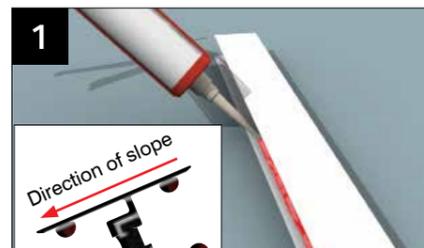


11 Run a bead of appropriate sealant ensuring a continuous run along the external lower muntin bar. Please see cross section for bead positioning.

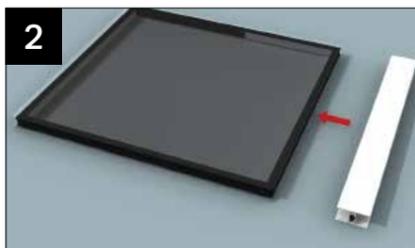


12 Locate the external lower muntin bar with the internal lower muntin bar, knock into place. The lower muntin may need supporting from underneath whilst secured into final position.

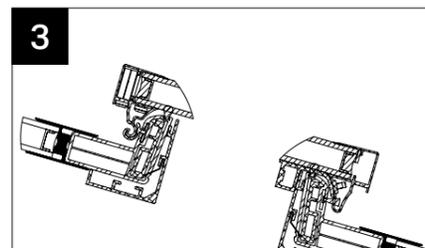
MUNTIN (GLASS JOINTER) FOR ALUMINIUM INTERNAL CLADDINGS



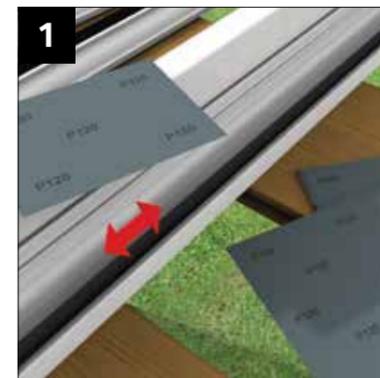
1 Prepare the glass jointer using the appropriate sealant in the four positions shown. This cavity to be upslope.



2 **IMPORTANT NOTE - APPLIES TO STEPS 7-12. 'H' SECTION GLASS JOINTER TO BE POSITIONED AS INSET ILLUSTRATION ON INSET 1.** Slide the glass jointer onto the upper glass unit. Fit assembled unit into the roof.



CLEANING AND MAINTENANCE - ALUMINIUM EXTERNAL



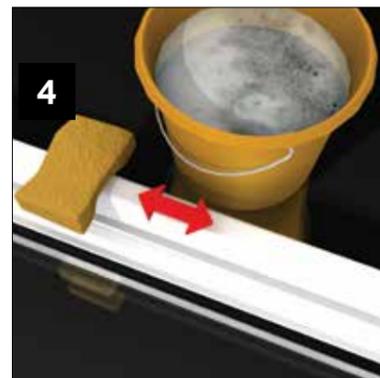
1 If surface damage is encountered, use 120-360 grit paper to prepare the surface. Wipe clean with white spirit.



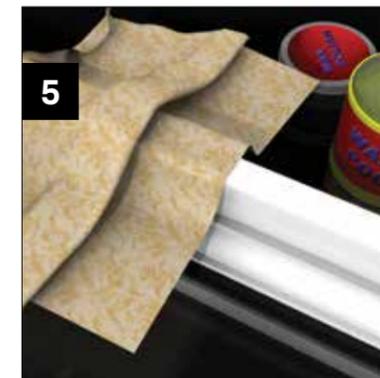
2 Ensure the surface is dry – apply a thin primer coat using a fine brush.



3 Finally, apply an air drying top coat with a fine brush.



4 General cleaning can be undertaken by a wash with warm soapy water.



5 For added protection, a wax polish can be applied up to twice per year – follow the polish manufacturer's instructions carefully.

PLEASE PASS TO HOMEOWNER

It should be noted that polyester powder coatings are not maintenance free – the extent of cleaning depends upon the local environment and on the attitude of the building owner. Think cars here...if the building owner wants a finish like that, more regular cleaning is needed. All paints will 'chalk' to some extent and there will be a reduction in gloss level over time – this can be restored.

Only access roofs safely and using appropriate access equipment

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