



INSTALLATION GUIDE

Ultrasky[®]
ROOF by Ultraframe

ULTRASKY ROOF

MARCH 2021 | V6



WEATHER TESTED

Watertight in winds up to 130mph

- **Triple layer storm shield** at radius end.
- **Less bars**, less potential points of failure.
- Sturdiest, most **durable** gaskets and glazing stops.



WARMEST

Unrivalled thermal performance

- Thermally broken inside and out.
- Thermally insulated internal pelmet as standard.
- Designed to work with super-insulated columns.
- Fully insulated aluminium undercladding.



FASTEST

Fitted twice as fast as a traditional Orangery roof

- No need for a flat roof
- Save 1 to 2 days versus traditional build.
- Eliminate brickwork required by integrating super-insulated columns.
- No structural support required.



MINIMALIST

Least bars for better views

- **Integrated structural goalpost** for large spans of bi-fold or sliding doors.
- **No bulky radius ends.**
- **25% less bars** than conventional glazed roofs.
- Superior bar and ridge strength for larger panes of glass.



STRONGEST

Strongest glazed roof on the market

- NASA satellite data used to **precision engineer every roof** for wind AND snow loads.
- Can be used for builds up to 8mx5.6m.
- UK's strongest ridge with an IXX value of 2,226k for fewer bars and integrated structural goalposts to support spans up to 6.5m.
- **Super strong eaves beam**, ridge, and jack rafter.



CUSTOMISABLE

Unbeatable range of design options

- Add shape and elegance externally with a choice of 4 unique Cornices.
- Create **thermally efficient**, cosy and stylish rooms with super-insulated columns.
- Insulated internal pelmet available in any size up to 1200mm wide.
- Available in **PVCu and Aluminium** to suit any budget and **bespoke colours** to match doors windows and decor.

Thank you for choosing the Ultrasky Roof product.

This guide is designed to make fitting as straightforward as possible.

Before you commence installation of the roof, please;

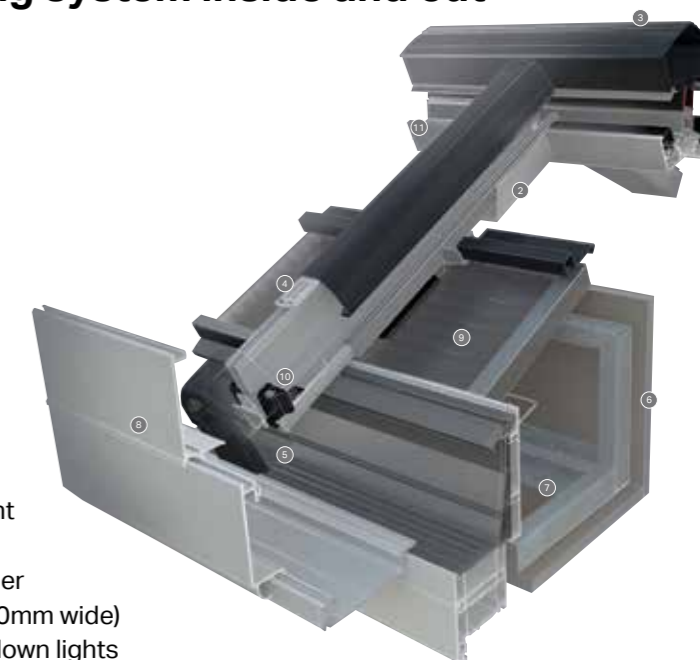
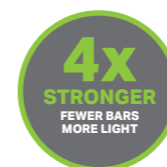
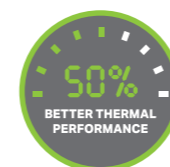
- 1) Take a moment to read these two introductory pages before reading the rest of this guide.
- 2) Do not fix the frames down at this stage – only temporarily 'pin' the frames to the house wall (one fixing each side) to allow the conservatory to 'float'.

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

ULTRASKY ROOF COMBINES FRESH MODERN STYLING WITH NATURAL LIGHT TO CREATE A BEAUTIFUL WARM GLAZED EXTENSION WITH THE STYLE AND GRANDEUR OF A TRADITIONAL ORANGERY

"Fully thermally broken roofing system inside and out"



ULTRASKY ROOF

- 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 Patented insulated perimeter ceiling (max. 1200mm wide)
- 7 Housing for additional insulation, speakers or down lights
- 8 Decorative cornice to hide gutters and add shape to the roofline
- 9 'Heat guard' modesty shield
- 10 Adjustable reinforced stopper to prevent glass slipping
- 11 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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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 – our packaging is predominantly made from recycled materials and can be readily recycled.

Product

The roof kit is supplied with a location plan, a quality control check list for the box in which this guide arrives and, of course, this installation guide. The location plan is used to match individual components to their respective position on the roof. Our numbering convention always

starts at the top left, against the house wall as you look from outside the conservatory back at the host wall.

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. Please ask for a copy of our Classic product guide to keep in the van, which will give you further assistance with future identification.

Sealing

It is important to use the correct sealant when sealing the roof.

1. For roofs glazed with Polycarbonate (or standard sealed units) a low modulus neutral cure brand of silicone must be used.
2. For roofs glazed with Conservaglass or other true 'self cleaning' glass, then MS Polymer sealant such as Rotabond 2000 must be used.

Sealed Units

All protective handling tape must be removed prior to installation. For the correct selection of sealant please see above

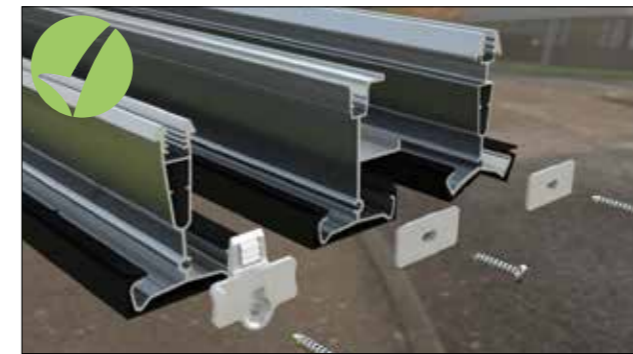
The Superstructure

Check the dwarf wall or plinth for being level all round. Ensure that all frames which abut the host wall are vertically plumb, which will then allow perfect alignment with our Classic eavesbeam. Before starting to install the roof, please check the condition of the host wall and whether it's plumb – depending upon what you find, these conditions can seriously affect the final integrity of the roof, particularly when a Tie Bar Replacement Kit (TBRK) is fitted.

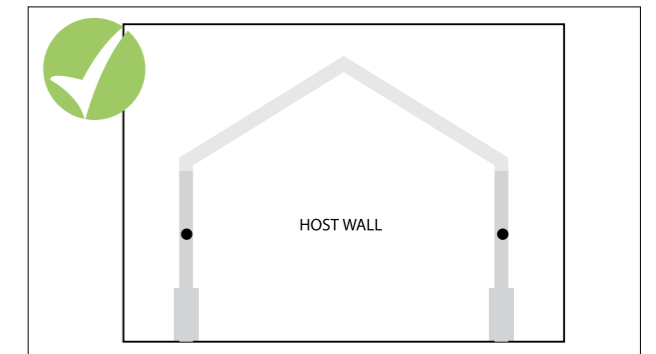
Technical Support

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

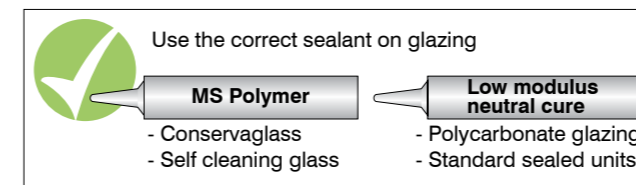
PRE INSTALLATION CHECKS



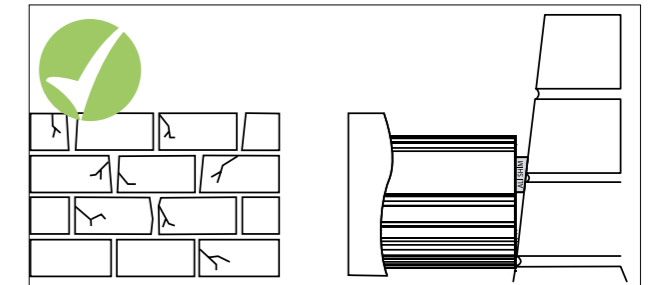
Attach the glazing bar end cap fixing blocks - as access restrictions (box gutter situations) may prevent easy attachment later. NOTE: These are attached to the end caps when despatched from the factory.



At this stage do not fix the frames down - pin only to the house wall (one fix per side) to allow the conservatory to 'float'.



Unpack the roof vent sash and assemble. If possible, do this in the factory the day before.



Check the condition of the host wall as this may affect the quality of the final installation. Check the host wall is plumb - any running in/or out should have been accounted for by the surveyor. If not, the ridge and starter bars may require packing out with aluminium shims. Correct alignment in this area is critical to a successful installation - Plumb frames/level ridge.

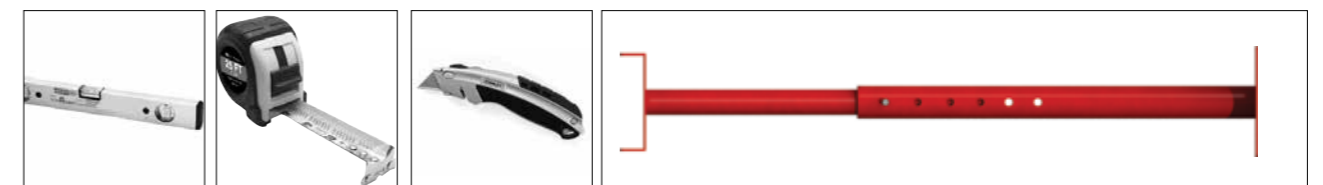
Only use the specified fixings - never be tempted to substitute alternative sizes/gauges.

IF YOUR INSTALLATION INCLUDES A BOX GUTTER: REFER TO BOX GUTTER SECTION ON PAGES 23-25

TOOLS REQUIRED



8, 10, 13mm Socket Spanner Deadblow Hammer or White Rubber Mallet No. 2 Pozzi-drive Bit Drill/Screwdriver Gasket Shears/Snips 4.5mm Drill Bit 10mm Drill Bit Sealant Gun



Spirit Level (magnetic useful for internals) Tape Measure Box cutter or Stanley knife Support Prop

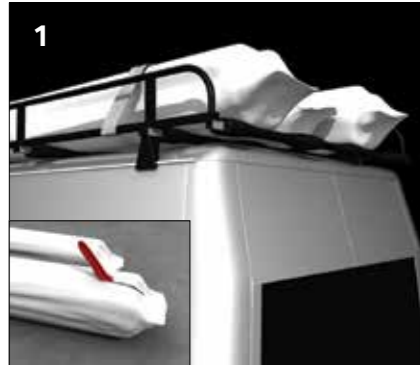
THERE ARE SOME MATERIALS YOU NEED TO SUPPLY: EG. PLASTERBOARD

HANDLING ALUMINIUM PRODUCTS

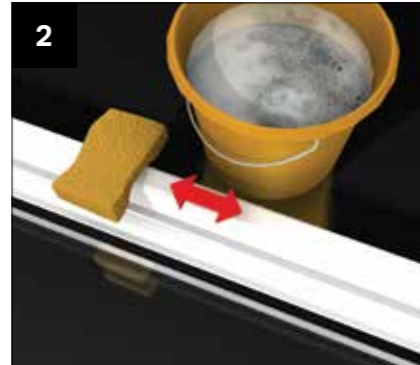
PAINTED ALUMINIUM PRODUCTS - PLEASE NOTE
All paints will 'chalk' to some extent and there will be a reduction in gloss level over time. (See Cleaning and Maintenance guidelines on the back cover)

QUALITY EXPECTATIONS ON INSTALLATION.

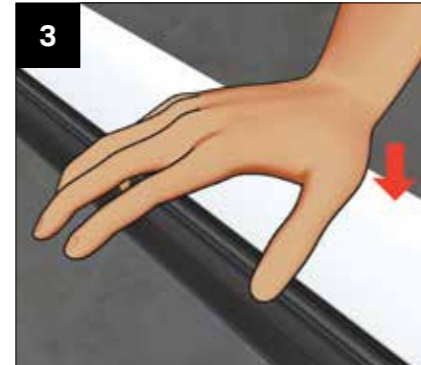
Appearance: This is assessed based on the selection of the 'significant' (primary) surface. From a distance of 3m, stand at an oblique angle of 60degree and then defects such as blisters, runs, pin holes etc should NOT be seen. **Colour and gloss:** Viewed from 5m, the coating must be of even colour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



If storing in warehouse racking or on frails/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.



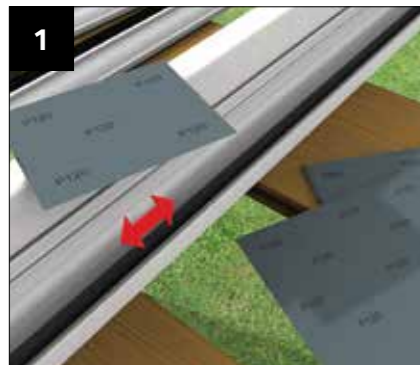
Grease marks, dirt and mastic spillage may be removed using soapy water.



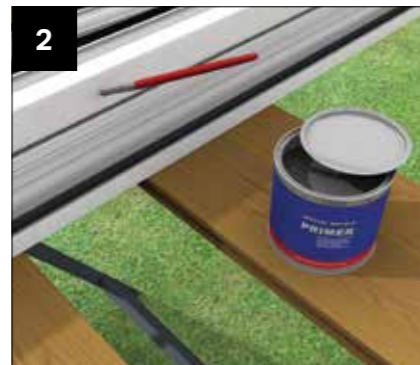
Take care when fitting aluminium products to not use excessive force.

CAUTION- WHEN HANDLING ALUMINIUM PRODUCTS - USE PROTECTIVE HAND WEAR.

CLEANING AND MAINTENANCE - ALUMINIUM EXTERNAL



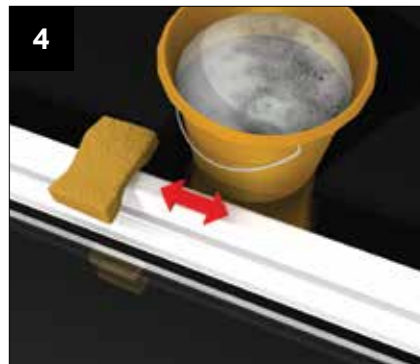
If surface damage is encountered, use 120-360 grit paper to prepare the surface. Wipe clean with white spirit.



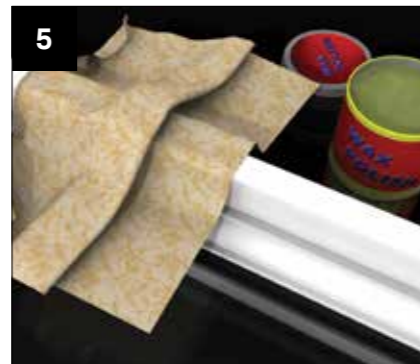
Ensure the surface is dry – apply a thin primer coat using a fine brush.



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



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



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

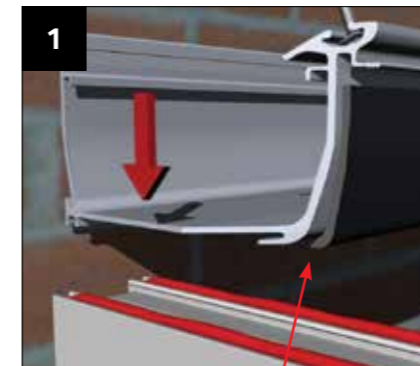
PLEASE PASS TO HOMEOWNER

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.

GENERAL INSTALLATION

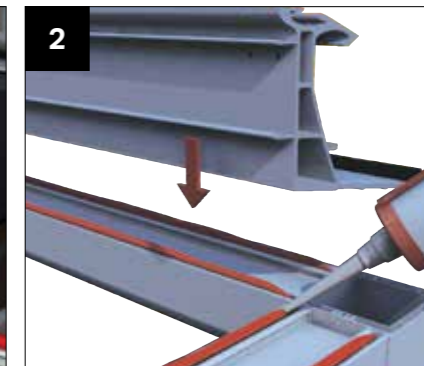
ALL SHAPES DOUBLE GEORGIAN SHAPES SINGLE GEORGIAN SHAPES

IF YOUR INSTALLATION INCLUDES BOXGUTTER START AT STEP 1, OTHERWISE START AT STEP 2



Box gutter foam to be cut back 70mm to enable the box gutter to sit flush on the frames.

Apply a continuous bead of appropriate sealant to the front and inner legs of the window frames. Lift insulated box gutter into position – ensure it has adequate support whilst fitting.



Apply a continuous bead of silicone to the front and rear inner legs of the window frames. Fit the initial piece of eaves beam ensuring that the inside face of the eaves beam is flush with the inside face of the window frame.

For more box gutter information see page 23 onwards.



Place eaves beam section – onto the side frames. Seal the joint between the eaves beam and box gutter.



Place the next section of eaves beam into position, by slotting the corner cleat on the adjacent piece of eaves beam into the first piece.



Using the pre-drilled pilot holes, drill two 4.5mm holes through the corner cleats.



Securely fit the two M5 x 12mm tap screws.



Securely fit the eaves beam to the frames using for example, 38mm x 4.8mm screws in the position shown. Fix down at 450 centres and within 200mm of each corner. For 60mm frames use the inner eaves extrusion line and outer line for 70mm frames. Always screw down. (Not supplied)



Once the eaves beam is secure, run a bead of silicone down the joint where the eaves beam sections meet and where the eaves abuts the host wall.

If installing a single end Georgian proceed to page 8 image 15.

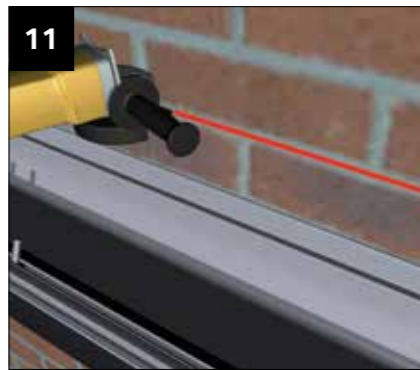


Whilst ensuring that its level, drill through the back edge of the aluminium at 600mm centres. Bolt to the house wall using masonry anchors that are suitable for the substrate.

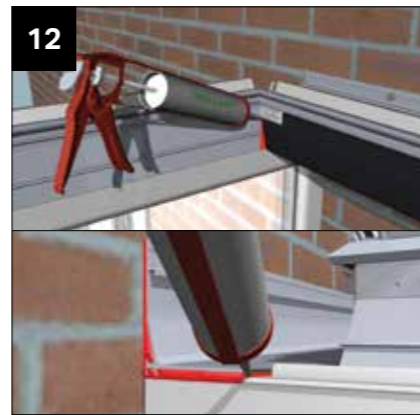
GENERAL INSTALLATION



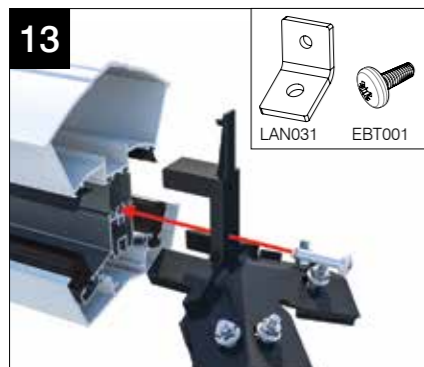
10
Either peel back or knife off a small amount of the insulation where the cleat is to be fixed. Drill a 4.5mm pilot hole and then fix the cleats with the two M5 12mm tapite screws provided. The protruding tapite screws will need trimming back prior to fixing the adaptor (alternatively, when its time to insert the adaptor, undo the tapites, drill a pilot hole through the adaptor and then re-screw the tapites and fully seal).



11
Mark out and grind a channel in the masonry for the flashing – blow out any dust in the channel.



12
Now seal the internal joint between the eaves beam and box gutter and back point the leading edge of the box gutter where it sits on the side frames.



13
LANRF001 is supplied pre-installed into the ridge. Remove and fix radius end (LAN032BL) then replace the screw. If using 3 bar attach LAN031 using EBT001. (M5x12 P021 pan screw).



14
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).



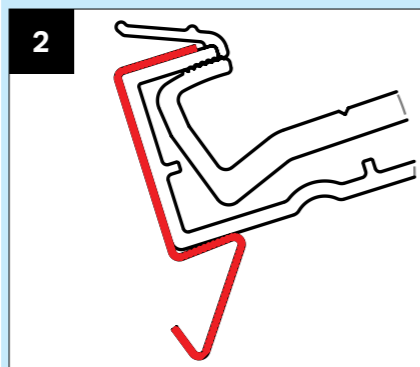
15
Using the roof rise height supplied set the ridge and fix the bracket to the host wall using the appropriate fixings.

FITTING STARTER BARS WITH ALUMINIUM INTERNAL CLADDING

(IF SPECIFIED) **NOTE: IF FITTING STARTER BARS ENSURE CLIPS ARE INSTALLED FIRST (LAN014)**



1
Attach spring clips (LAN014) to side of glazing bar - to each side of bar - 50mm from top of transom bar - 100 mm from eaves (both hip and transom). Push the leg in under the gasket and spring around the underside as shown. Ensure the clips are fully pushed on.



2
Spring clips in position.



3
Fit the pre formed soaker trim to each starter bar, tighten the bars at the ridge and then at the eaves. Ensure the bar caps have been fitted.

GENERAL INSTALLATION - HIPS



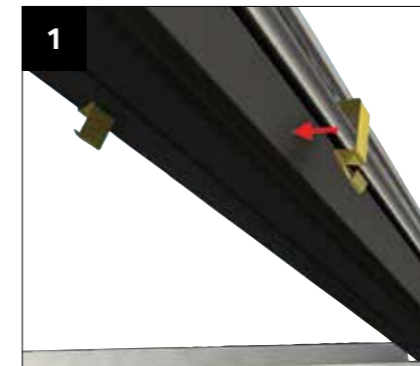
1
Offer up the bars to the ridge and attach loosely using the roofing nuts and bolts supplied. SHBC001S



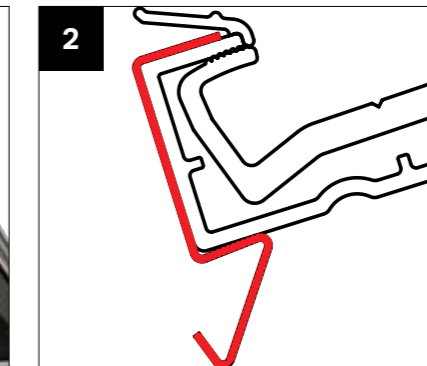
2
If not already attached, attach the glazing bar end cap fixing blocks - as access restrictions may prevent easy fixing later. **NOTE:** These 'snap out' of the end caps when dispatched from the factory. remove nuts on eaves beam. Fit hip bars onto bolt sat eaves end and hand tighten nuts.

FITTING ALUMINIUM INTERNAL CLADDING - HIPS (IF SPECIFIED)

NOTE: ENSURE RIDGE UNDERCLADDING IS CENTRED ON RIDGE BODY



1
For aluminium undercladdings proceed to attach spring clips on all bars.

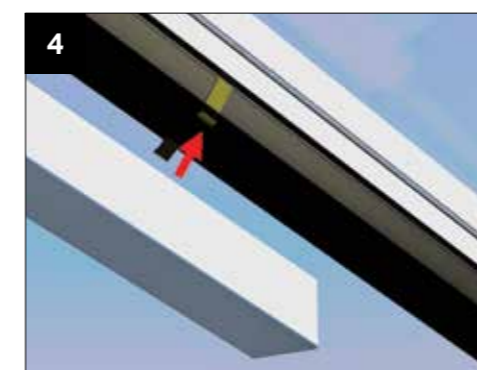


2
Spring clips in position

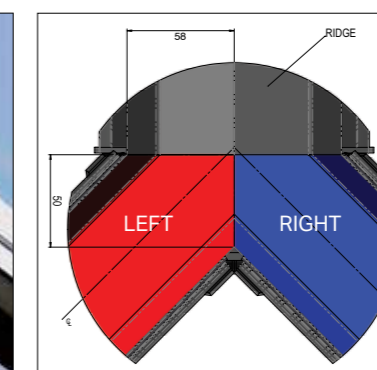
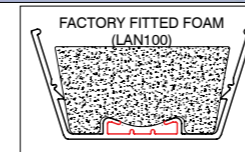


3
Position top of hips into ridge end ensuring they are butt up against it. Locate on the lip as shown above.

2 ON HIPS LOCATED AT EAVES END.



4
At the eaves push the ali undercladding on to the clips whilst ensuring they remain tight in the eaves.

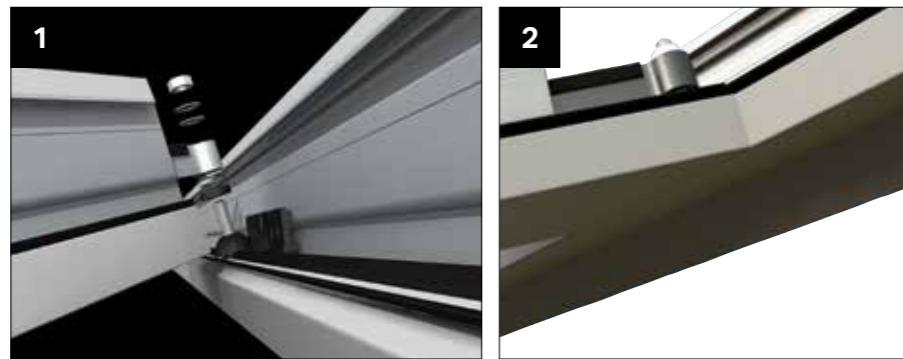


Look up with a 'worms eye view' down the central bar to distinguish left and right.



5
Take the corner bracket CHA090 and attach using 4.2x19mm self drill pan head screws (supplied). The back edge of the bracket should butt up to the under claddings.

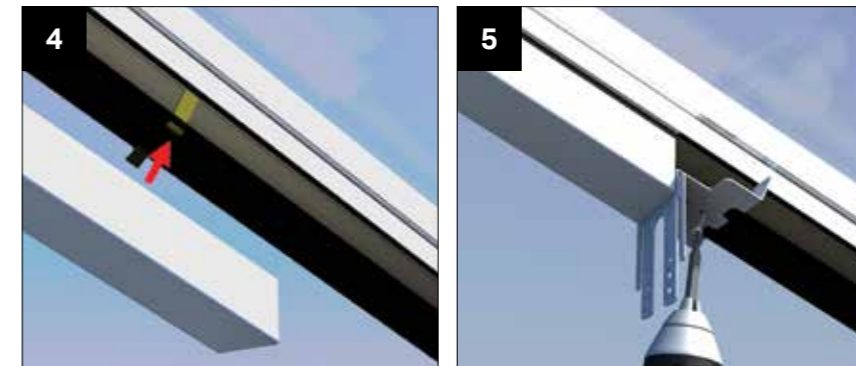
JACK RAFTERS
- If your project has them



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.**

Slide back the glazing bar undercladding to ensure the gasket lines through as shown above.

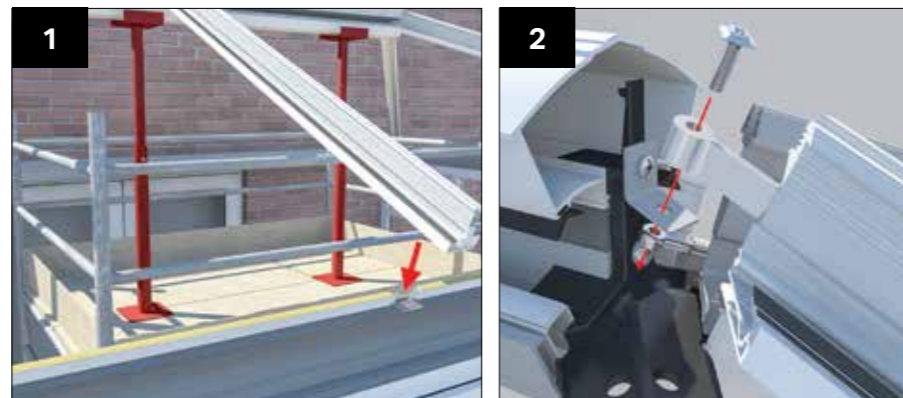
FITTING ALUMINIUM INTERNAL CLADDING
- TRANSOMS AND STARTER BARS (IF SPECIFIED)



Locate the transom aluminium undercladdings on the bar, ensure they are tight up against the ridge.

Take the transom bracket (CHA001) and attach using two 4.2 X19mm self-drill pan head screws (supplied). The back edge of the bracket should butt up to the undercladding.

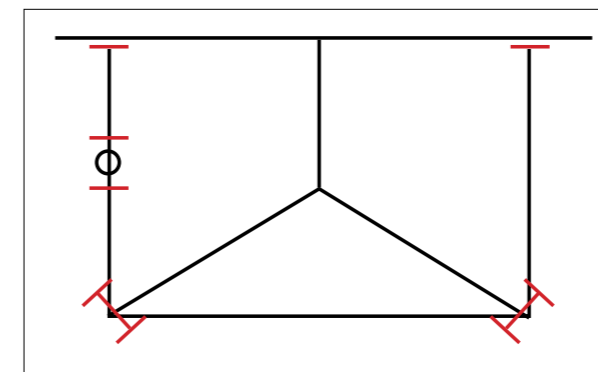
TRANSOM BARS
- If your project has them



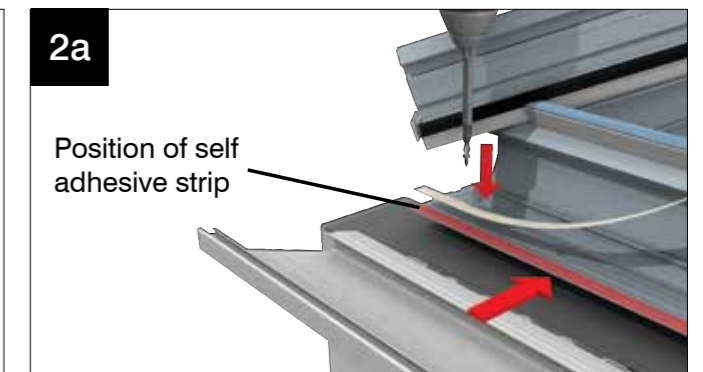
Depending upon the roof size and options requested, fit hub end transom bar and / or side transom bars. If specified on the job, remove nuts from bolts in transom position and fit transom bar over bolts. Re fit nuts and hand tighten. Check that ridge is level and fully tighten nuts on all bars.

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

ADDITIONAL STEPS WHEN CORNICE IS USED WITH LOGGIA COLUMNS



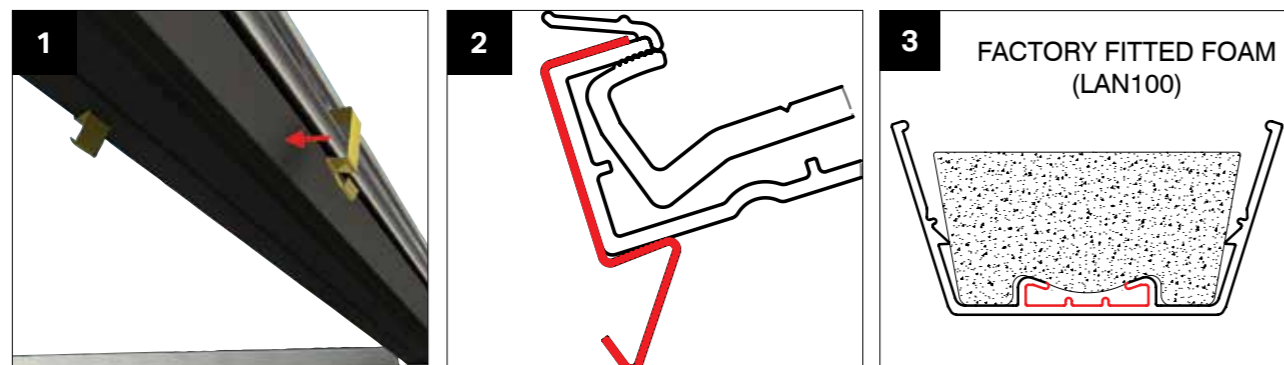
'H' or '-' shows position of DAMS



Attach self adhesive strip to 'toe' of eaves beam.

FITTING ALUMINIUM INTERNAL CLADDING - TRANSOMS (IF SPECIFIED)

NOTE: ENSURE RIDGE UNDERCLADDING IS CENTRED ON RIDGE BODY



For aluminium undercladdings proceed to attach spring clips on all bars.

Spring clips in position

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

4 ON TRANSOMS,



Silicone seal front and back edge of lower Cornice sections (be generous). Similarly butter 'DAM' sealer - position within 50mm of any stop end or outlet.

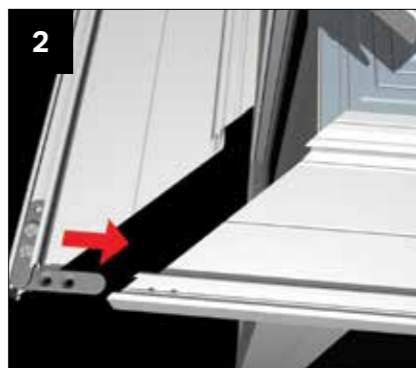
Take 'rubberized' sealer strips and generously butter with silicone.

At 90° corner insert 'H' section and press down. Similarly apply at stop end or outlet positions.

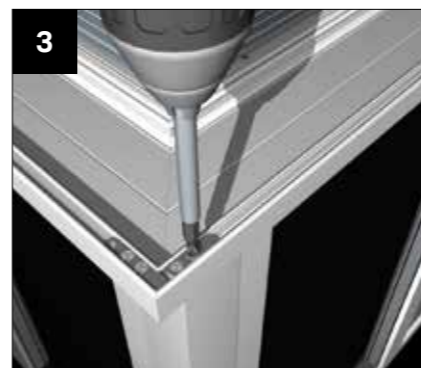
GENERAL INSTALLATION - CORNICE AND GUTTER



1 Decide the position of the gutter outlet by lining the extrusion 'v' groove up with the centre of the hole for the down pipe. Using a 73mm dia hole saw, cut the hole for the down pipe in the lower section.



2 Fit the cleats (CRN001) to the desired side using the fixings provided (CRN006) as shown and assemble the remaining lower sections.

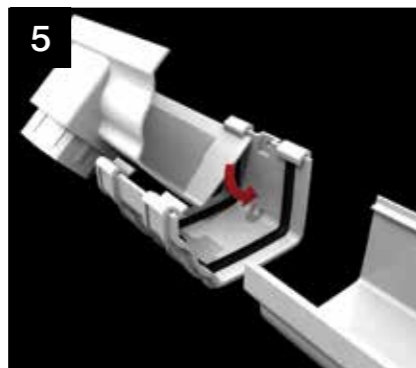


3 Secure each corner using the cleats (CRN001) and fixings provided (CRN006).

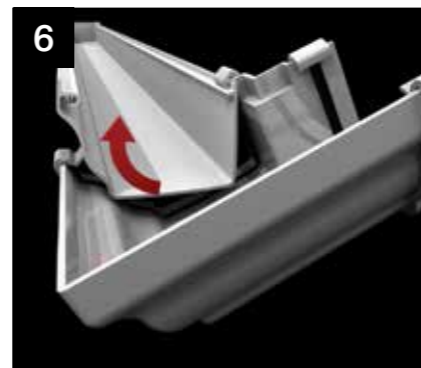
The gutter should now be fitted check integrity of all gutter joints before proceeding further.



4 Fit all the gutter brackets supplied with the kit at maximum 750mm centres and maximum 200mm from each corner.



5 Next, build on the ground the gutter runs, by rolling items like a stop end under the back edge of a gutter jointer. Push up to the insertion line. DO NOT silicone seal, this would prevent natural expansion contraction.



6 Snap the integral clips on the adaptors over the gutter. IMPORTANT: ensure all lengths of gutter fit to the market insertion line seen in all unions and box gutter adaptors.

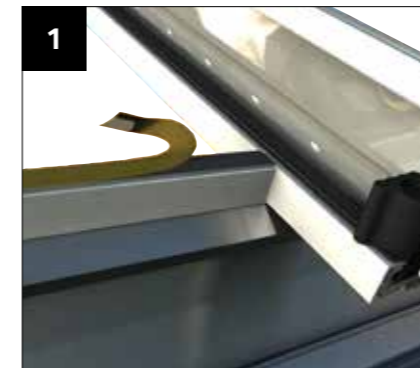


7 Locate the back edge of each section of gutter into the slot in the gutter bracket.



8 Gutter bracket shown fully engaged.

GLASS INSTALLATION



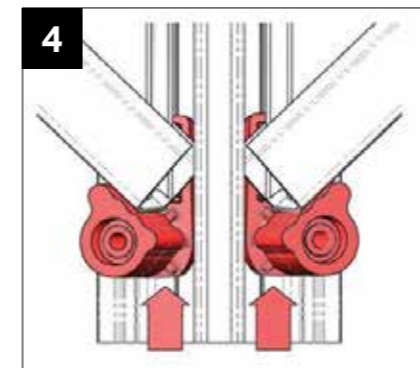
1 Peel back a small tab of the protective film on the glazing support (ready to be pulled away fully when units are in final position).



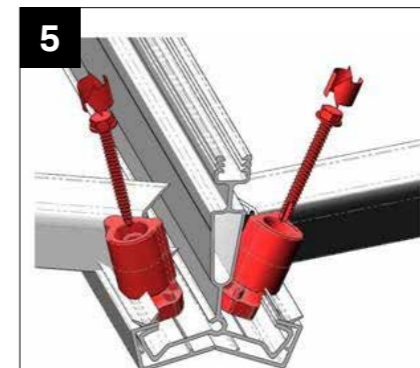
2 Seal underside of top face of glazing end profile as shown (PVCu version of end profile is shown - if aluminium glazing bar top caps, this end profile is also aluminium).



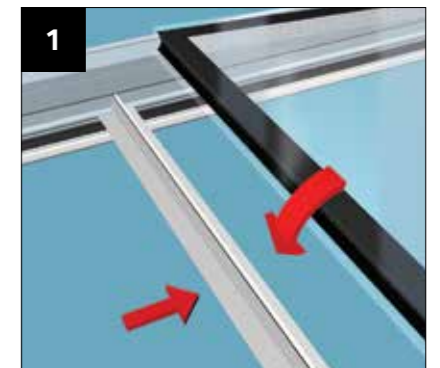
3 The glazing end stops fitted earlier should be pushed away from the centre of the bar and tucked under the gasket side of the glazing bar as shown. These are handed components, ensure they are positioned on the correct sides of the glazing bar.



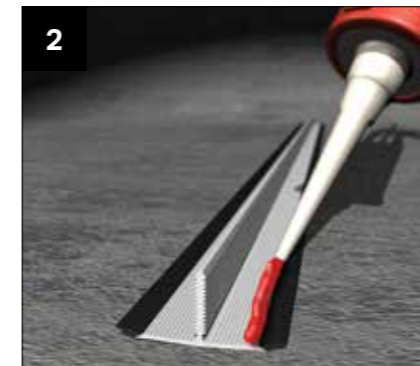
4 Ensure that glazing stops are pushed up the glazing bar and are firmly located against the glazing end profile. Please note the glazing end profile may be mitred in some cases.



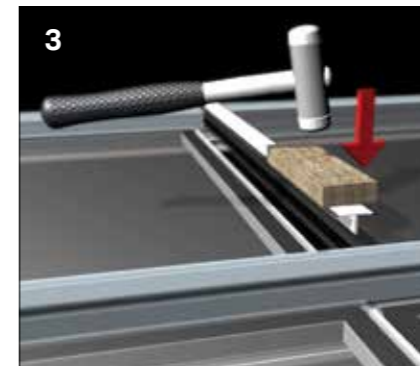
5 Ensure that the glazing end stops have been positioned correctly then screw down into the glazing bar, using the fixings provided. Now fully peel away protective film from glazing support at eaves and ridge and press glazing down firmly.



1 IF YOUR SEALED UNITS HAVE BEEN SUPPLIED WITH TAPED EDGES, ALWAYS REMOVE THE TAPE PRIOR TO INSTALLATION. Take the muntin bar profile (top and bottom section) that matches its corresponding sealed unit. Take the lower section and allow it to span between the two adjacent glazing bars. Lower into position the up slope sealed unit. NOTE: MUNTIN SHOULD BE SAME WIDTH AS UNIT.



2 Now take the upper section and lay it face down onto a smooth clean surface. Using the relevant sealant (MS Polymer sealant such as Rotabond 2000 apply a generous bead to each side, immediately behind the gasket.



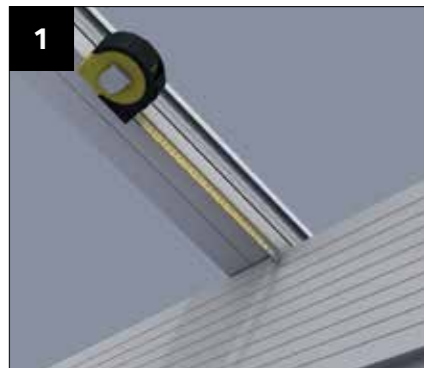
3 Now lift the sealed unit that goes on the lower slope into position, turn the upper profile over, place it into position and tap down the profile using a non marking plastic mallet. Wipe clean any sealant from the unit face. NOTE: WE RECOMMEND A SECOND PERSON TO SUPPORT THE MUNTIN FROM THE UNDERSIDE WHEN TAPPING DOWN.



4 Now, tap the top cap into position, which will 'trap' the muntin profiles.

MUNTIN BAR INSTALLATION

PVC ONLY INTERNALS / GENERAL INTERNAL PELMET INSTALLATION



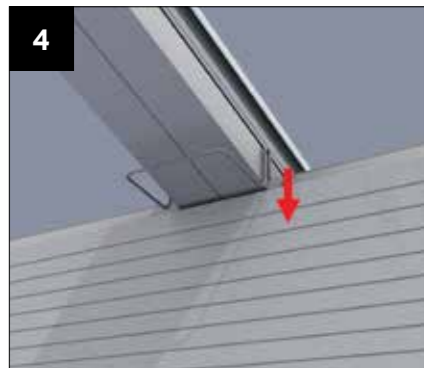
1 Using the location plan find the dimension for setting the bracket position. Measure up the bar from the top edge of the fascia board and mark.



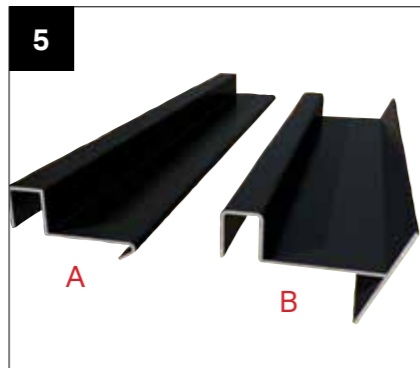
2 As above and ensure back edge of bracket butts up to pencil line.



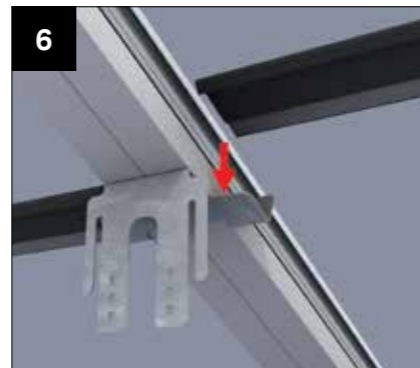
3 Use the location plan again for the hip positions. There will be a left and right. Mark these positions and then line up bracket and attach as before.



4 At the eaves hook a cloaking panel support clip over the fascia board at each transom.



5 For PVCu internals, cloaking trim option A should be used. For aluminium internals, option B should be used.



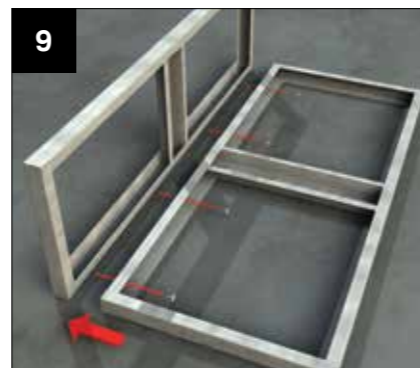
6 Locate the correct cloaking trim on to the bracket as shown above. Positioned either side of the hip and transom bars.



7 Refer to the location plan and take the appropriate piece of polycarbonate panel and sit it onto the cloaking panel support clip.



8 Push the polycarbonate up to the roof and bend the long legged tabs to hold the panel in its final position.



9 Assemble matching vertical and horizontal frames using the pre punched holes. *See location plan for ladder layouts*

INTERNAL PELMET CONTINUED

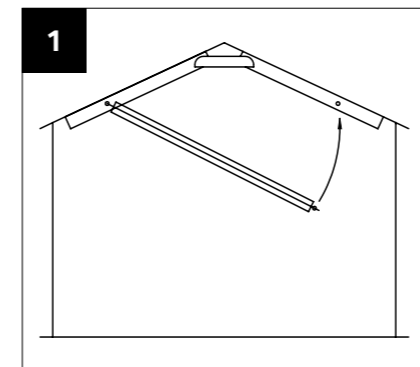


10 Attach L-Shaped frame using one of the three positions on the bracket, use 4 x 13 self-drill screws provided.

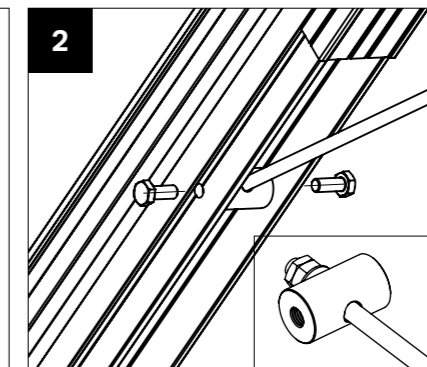


11 Check the frame is level and fix either on or below fascia using 4.8 x 32 self-drill screws provided.

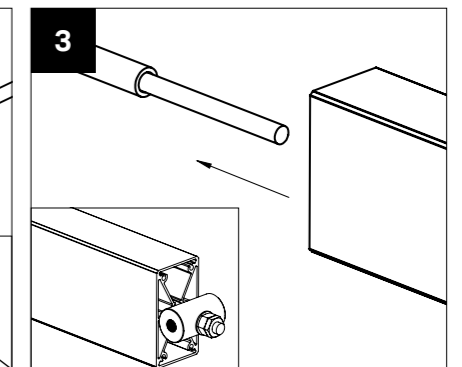
TIE BAR STRUT / BEAM



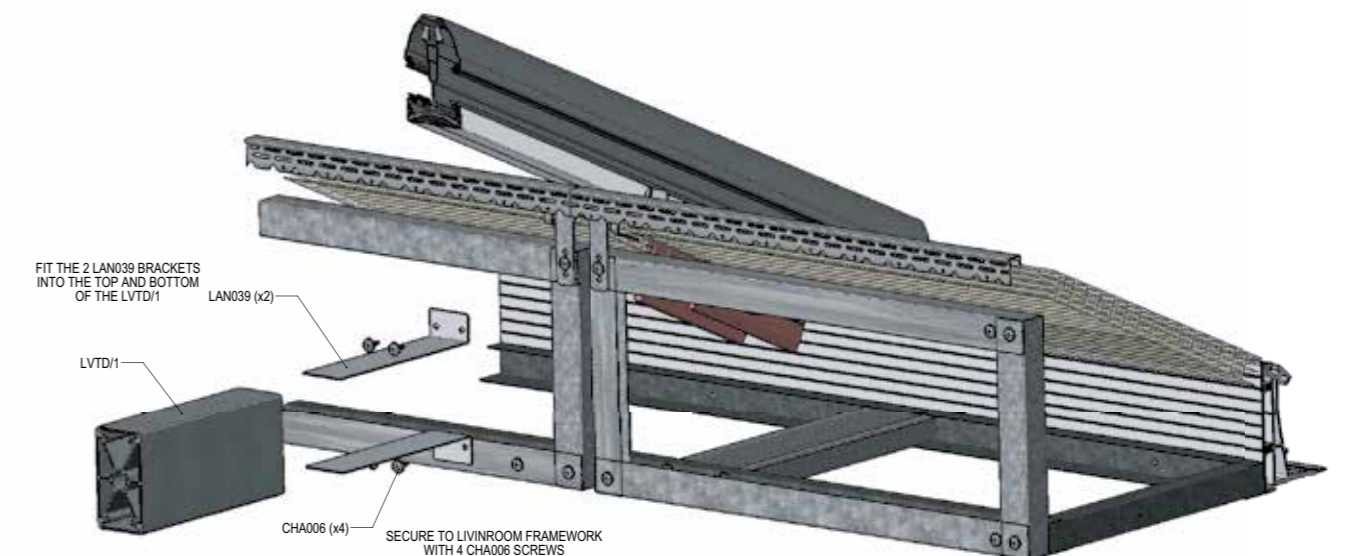
Overview



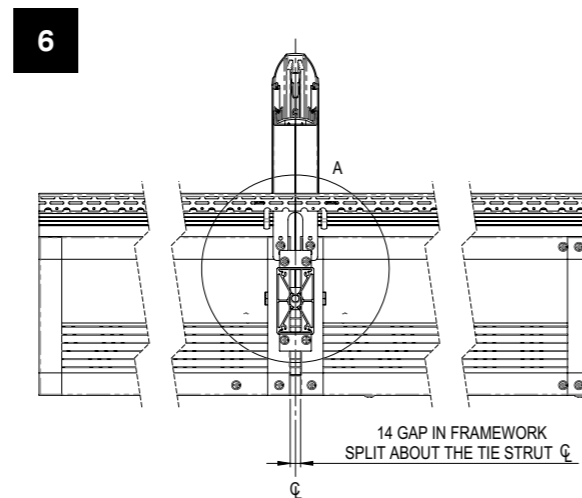
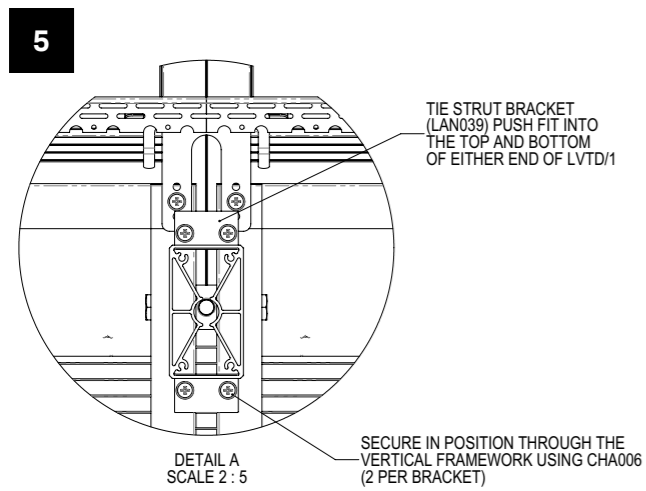
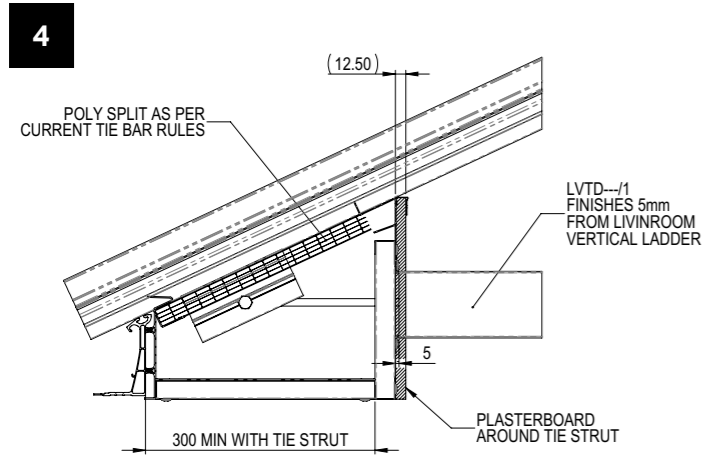
2 Attach the threaded bar through the barrel and then fit washer and two M10 nuts. Next insert the barrel assembly into the slot in the underside of the glazing bar and secure with a further two M10 nuts.



3 Now insert the PVCU tube (this acts as a damper) in place with double sided tape or silicone. Now insert the box section beam over the threaded bar/tube assembly.



TIE BAR STRUT / BEAM

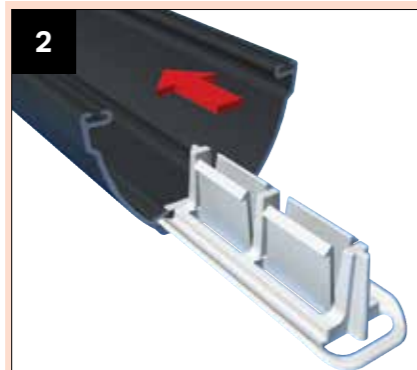


GENERAL INSTALLATION

ALUMINIUM CAPS ONLY



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.

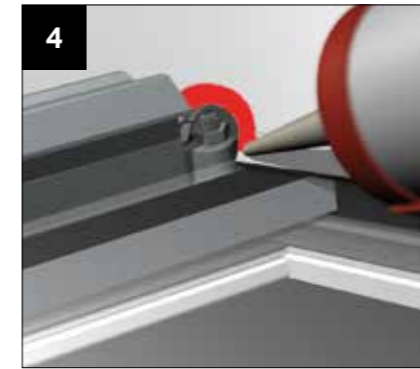


This stage should have been prepped in the factory. If not take the aluminium top caps and lay them onto a protected surface. Slide clips into each bar - position down from ridge / eaves at a max centre of 100mm and then at 500 centres (max) inbetween.

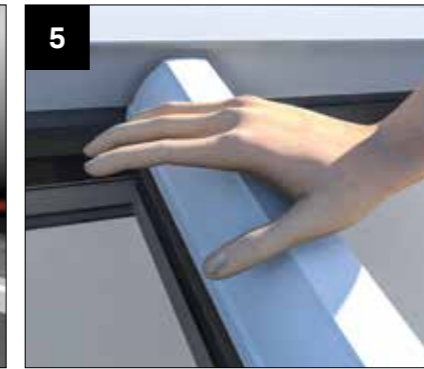


Work your way around the roof and fit glazing bar top caps.

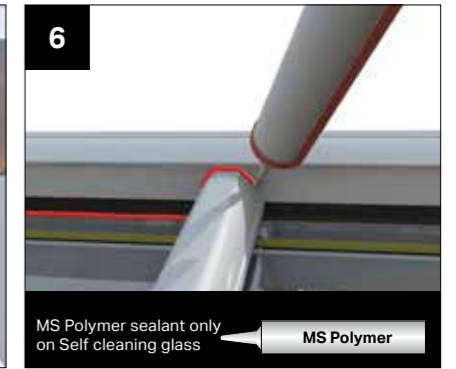
GENERAL INSTALLATION



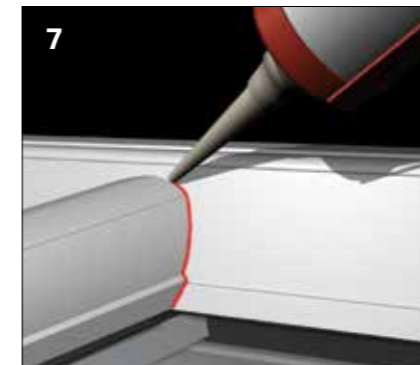
If using jack rafters, seal around the notched hip bar top cap ready to receive the jack rafter capping.



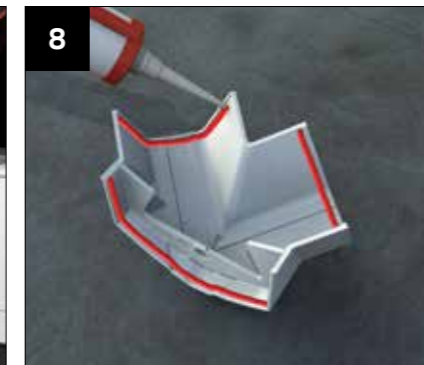
Using the heel of your hand, push down on the top cap to engage the clips, working from ridge to eaves. Ensure the rubber gaskets are full compressed for a watertight seal. NOTE: on longer bars it may be necessary to use a soft mallet and timber block



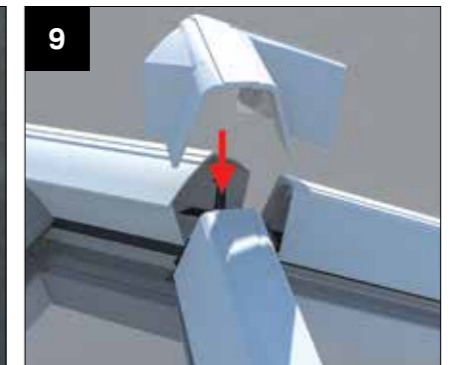
Seal along the ridge baffle where it meets the glazing and over any bar where it meets the ridge.



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

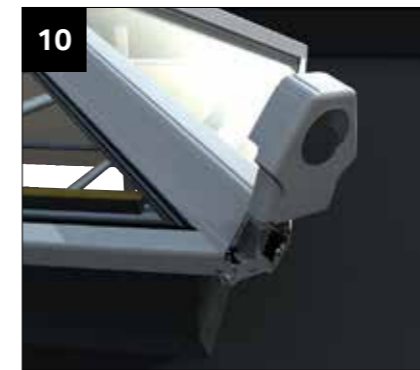


Apply generous beads of sealant to the underside of the external cover.

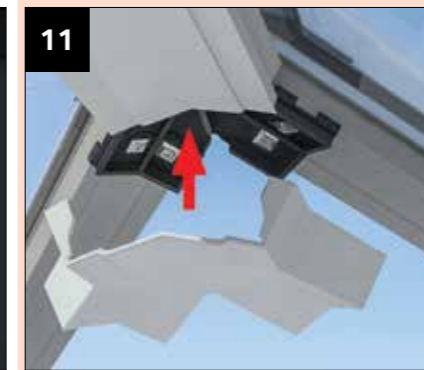


Press firmly down on the ridge end top cap until it clicks into position on the ridge end.

PVCU ONLY

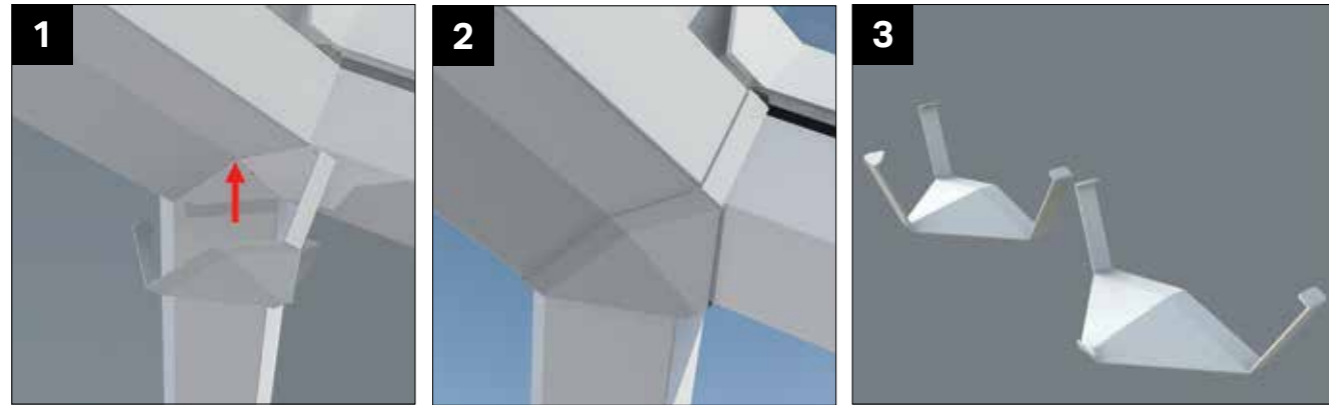


Fit end caps to bars and push in circular cover disk to finish.



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

INSTALLATION - ALUMINIUM INTERNAL COVER (OPTIONAL ITEM)



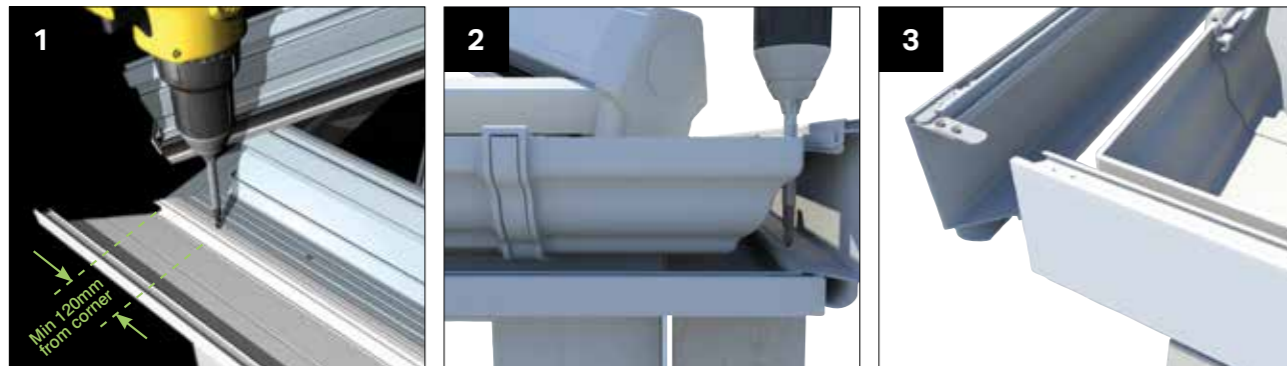
1 Clip fit into position the aluminium internal cover trim.

2 Clipped into final position.

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

CORNICE INSTALLATION - CONTINUED FROM PAGE 12

Ensure the eaves beam, glazing bars, ridge/wallplate are already installed



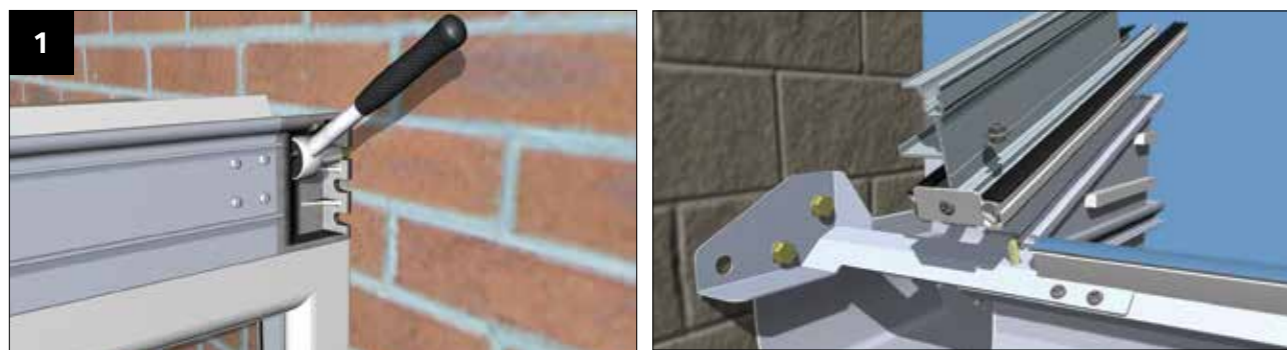
1 Prior to fitting gutter offer up the lower Cornice section then secure into position using the fixings provided (CRN007). Please note: Always start with the front facet!

2 Offer up the middle Cornice section into position, (it may be advisable to temporarily support the lower Cornice section whilst fixing) secure using fixings provided (CRN007). (Long reach driver required).

3 Fit cleats as shown.

REFER TO THE CORNICE INSTALLATION GUIDE TO COMPLETE CURVED, 1, 2 AND 3 TIER VARIANTS

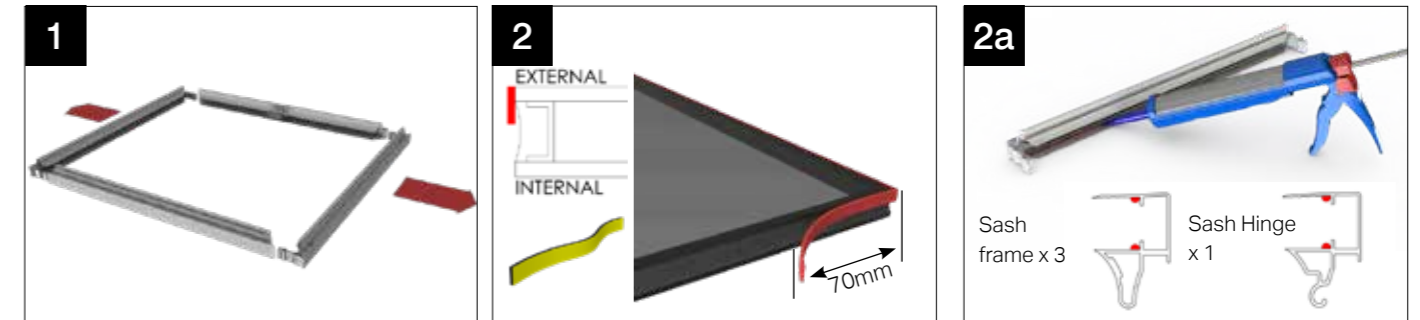
TIE BAR REPLACEMENT KIT (TBRK)



1 Where the eaves beam sits against the host masonry wall, it has a structural moulding attached to the eaves beam. This has three fixing positions cast into it to allow attachment into masonry – choose the hole that directly lines up with solid masonry and drill a 10mm hole into the host wall. Attach the structural moulding using the M8x80mm anchor supplied. Silicone seal the gap where the moulding attaches to the eaves beam.

90° EAVES AND RAISED BACK BOX GUTTER ASSEMBLY
Place the inline strap (SES005, 165mm / SES006, 265mm) over the single roofing bolt on the sloped gutter. Temporarily fix the bracket to the host wall using three M8 sleeve anchor bolts (SAB001) supplied. Fit the starter bar. Secure the strap to the eaves with the two fixings supplied (UZBGF001-D). Finally, fix anchor bolts.

INSTALLATION - ROOF VENT SASH

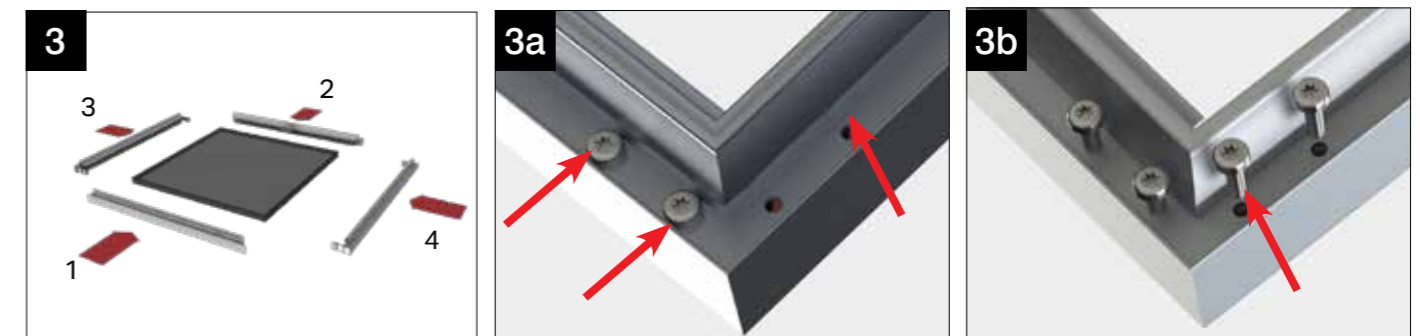


1 Unwrap the sash and pull two side sections out as shown above.

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

2 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.

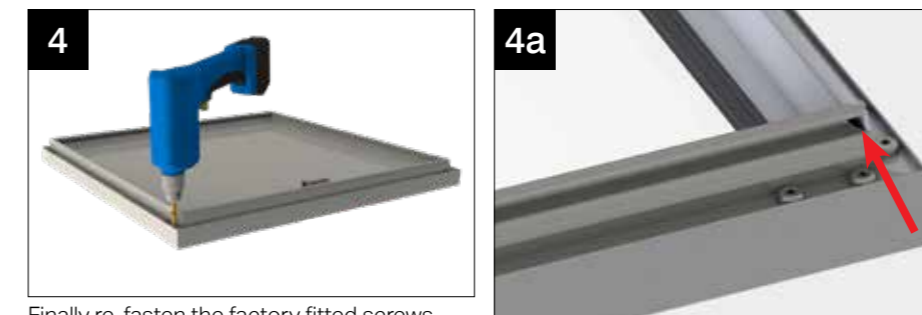
2a For pitches below 10° it is recommended that the glass is sealed in by running a bead of silicone along the length of each sash section as shown above. For pitches above 10° it is advisable to do the same.



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

3a If the pre-drilled holes appear out of alignment as shown above in red simply slacken off the factory fitted screws.

3b The two sections can then be readjusted so they are in line and square. Then the non factory fitted screws can be fixed down.



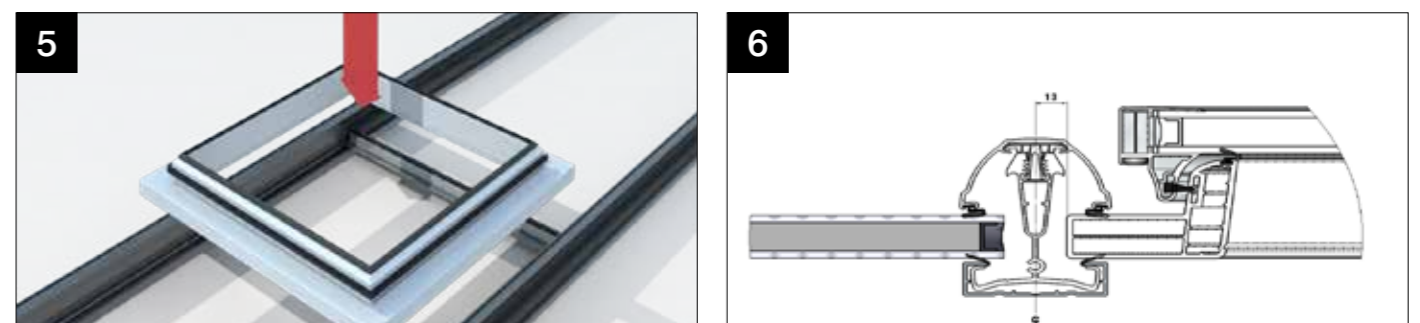
4 Finally re-fasten the factory fitted screws.

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.

4a On the hinge side of the sash fill the hole shown above at either end with a blob of silicone.

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

VENT MAIN FRAME INTO ROOF



5 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.

6 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.

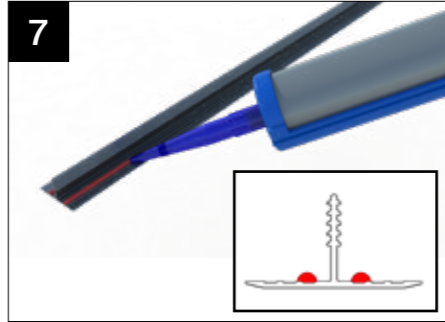
SECTION 3

INSTALLATION - VENT MAIN FRAME INTO ROOF

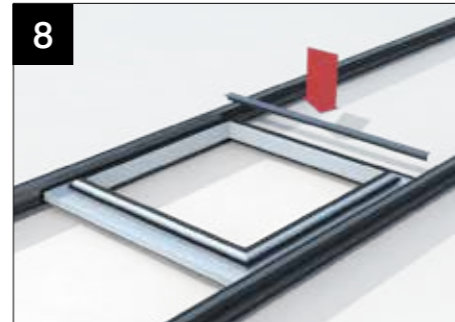
IF ALUMINIUM INTERNAL CLADDINGS HAVE BEEN SPECIFIED REFER TO DETAIL 13 FOR MUNTIN FITTING



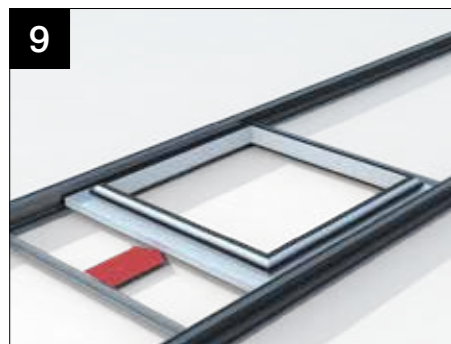
6a If existing glazing is 32/35mm a packer will have been pre-fitted to the frame.



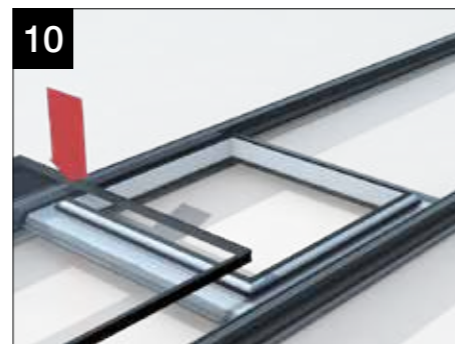
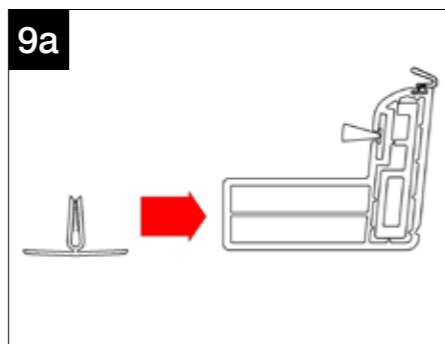
7 Run a bead of appropriate sealant ensuring a continuous run along the external upper muntin bar. Please see section view for bead positioning.



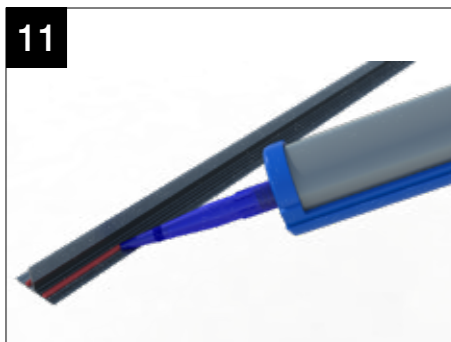
8 Locate the external upper muntin bar with the internal muntin bar, knock into place. The lower muntin may need to be supported from underneath whilst secure into final position.



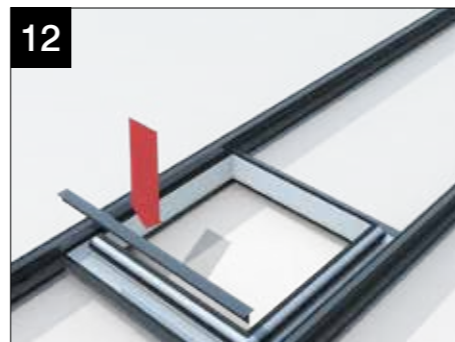
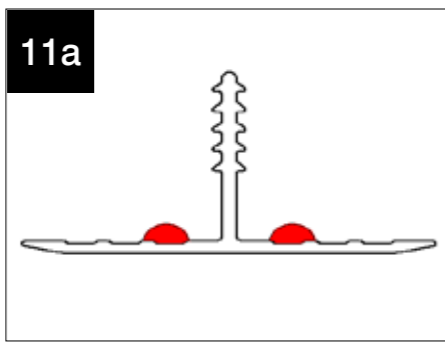
9 Slide the internal lower muntin bar into place under the vent frame. See cross section 9a for further detail.



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.

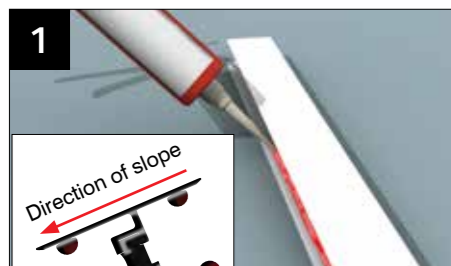


11 Run a bead of appropriate sealant ensuring a continuous run along the external lower muntin bar. Please see cross section for bead positioning.

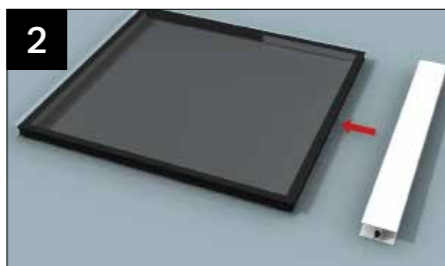


12 Locate the external lower muntin bar with the internal lower muntin bar, knock into place. The lower muntin may need supporting from underneath whilst secured into final position.

MUNTIN (GLASS JOINTER) FOR ALUMINIUM INTERNAL CLADDINGS

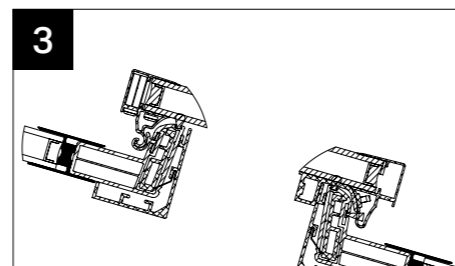


Prepare the glass jointer using the appropriate sealant in the four positions shown.



IMPORTANT NOTE - APPLIES TO STEPS 7-12. 'H' SECTION GLASS JOINTER TO BE POSITIONED AS INSET ILLUSTRATION ON INSET 1.

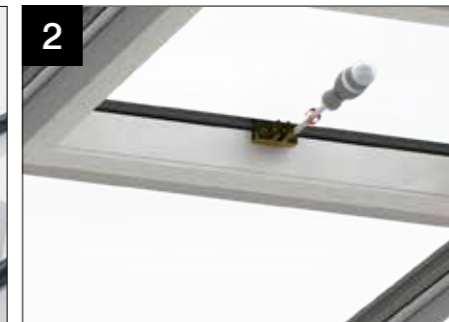
Slide the glass jointer onto the upper glass unit. Fit assembled unit into the roof.



INSTALLATION - FITMENT OF MECHANICAL WINDER



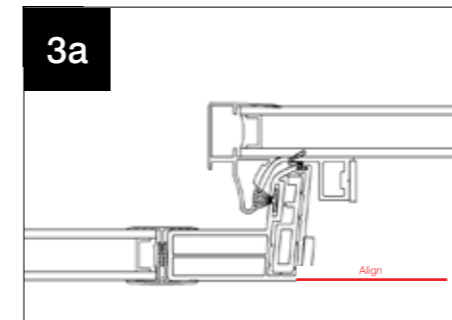
1 When the sealant on the mainframe has cured, re-fit the outer sash by holding vertically and re-engage on to the hinge, before lowering into position.



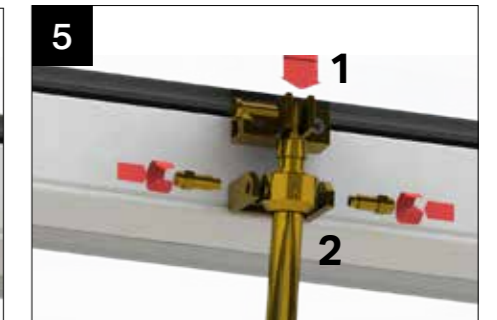
2 Using the screws provided attach the spindle bracket to the sash bracket (already attached to vent sash) taking care not to damage the glazed unit.



3 Align the winder bracket with bottom of vent frame (see section detail 15a for further information). Centrally align the winder bracket with the sash bracket. Once in position securely fit bracket in place using screws provided.



4 Attach the winder head to the sash bracket, using the plunger pin. Hold the winder at the relevant angle. Turn the winder body clockwise until it locks with the sash bracket.

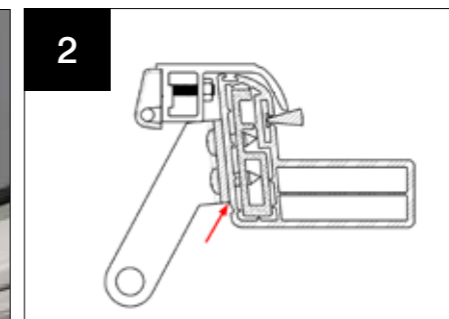


5 Apply downward force to the sash bracket (see 1). Turn the connection collar until the holes on the collar are approximately 3mm above the holes in the winder bracket (see 2). Holding the connection collar in place, turn the winder body anti-clockwise to loosen the sash bracket. This will enable you to fit the holding bolts without affecting the winder set-up.

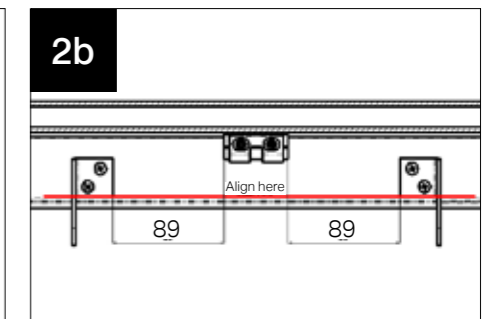
FITMENT OF ELECTRIC MOTOR (IF SELECTED)



1 Using the nuts and bolts provided attach the motor bracket to the sash bracket taking care not to damage the glazed unit.



2 Align motor brackets vertically using the extrusions details as shown.



2b Mark out as shown 89mm from edge of sash bracket to edge of motor bracket. Then mark the holes using the motor bracket as a template. Use a 2.5mm drill bit to pilot drill through the frame.



2c Secure the brackets to the frame using screws provided.



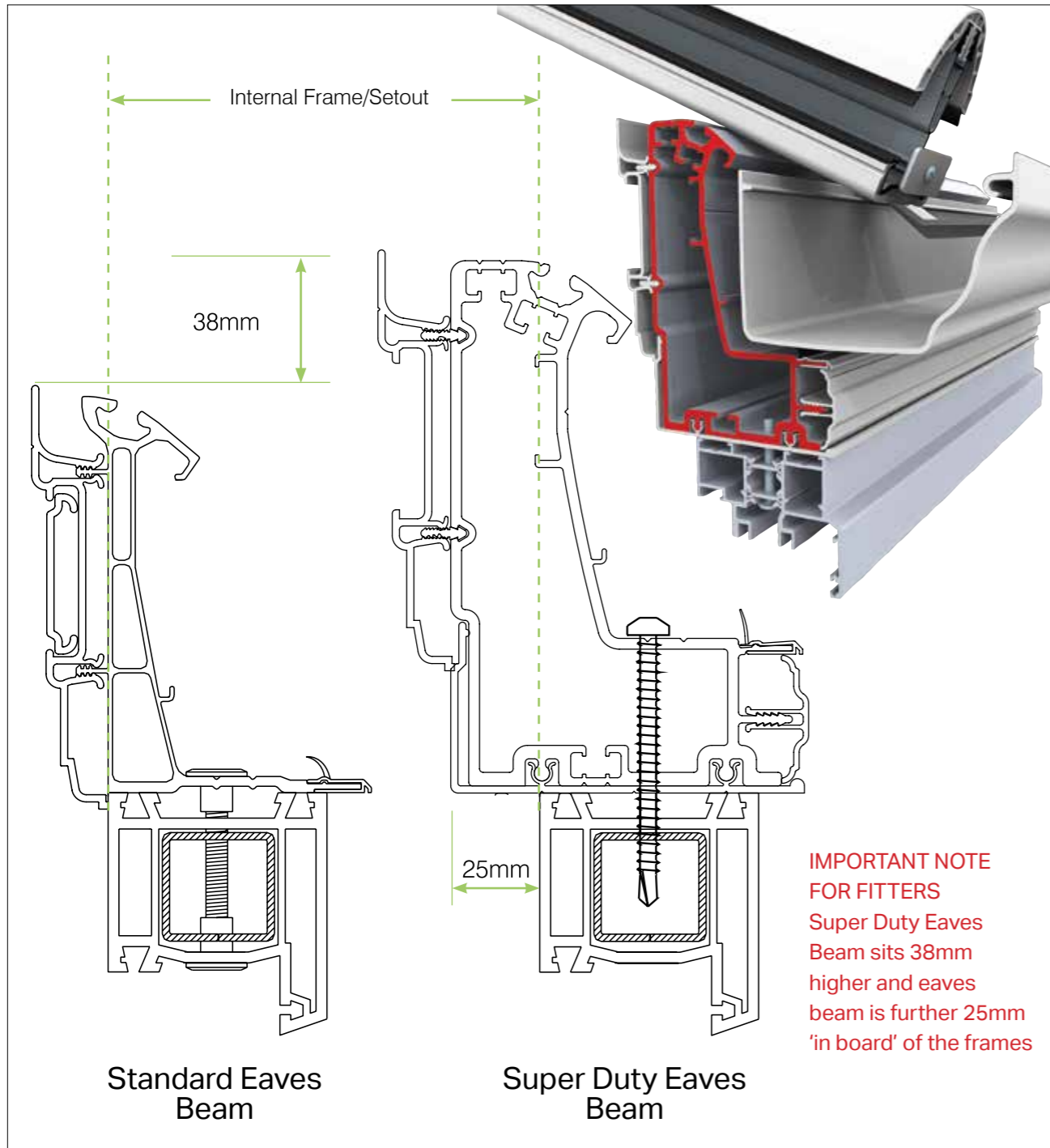
3 Fit provided securing bolts into the motor body through the location holes in the brackets.



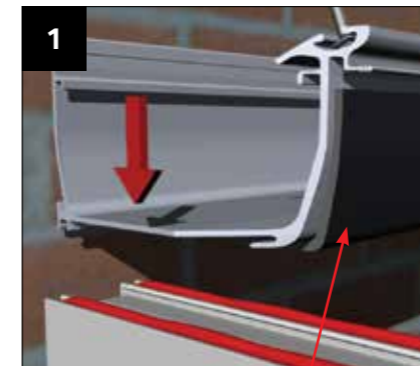
4 Finished mounted motor in situ. **Note:** For further details, refer to motor instruction guide which can be located in the motor box.

SECTION 4

SUPER DUTY EAVES BEAM



INSTALLATION - BOX GUTTER

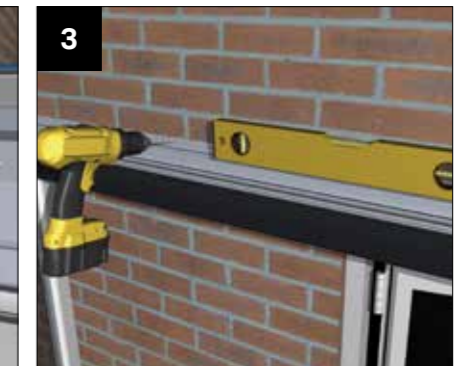


Box gutter foam to be cut back 70mm to enable the box gutter to sit flush on the frames.

Apply a continuous bead of appropriate sealant to the front and inner legs of the window frames. Lift insulated box gutter into position – ensure it has adequate support whilst fitting.



Place eaves beam section – with undergutter trim attached – onto the side frames. Seal the joint between the eaves beam and box gutter.



Whilst ensuring that its level, drill through the back edge of the aluminium at 600mm centres. Bolt to the house wall using masonry anchors that are suitable for the substrate.



Either peel back or knife off a small amount of the insulation where the cleat is to be fixed. Drill a 4.5mm pilot hole and then fix the cleats with the two M5 12mm tapite screws provided. The protruding tapite screws will need trimming back prior to fixing the adaptor (alternatively, when its time to insert the adaptor, undo the tapites, drill a pilot hole through the adaptor and then re-screw the tapites and fully seal).



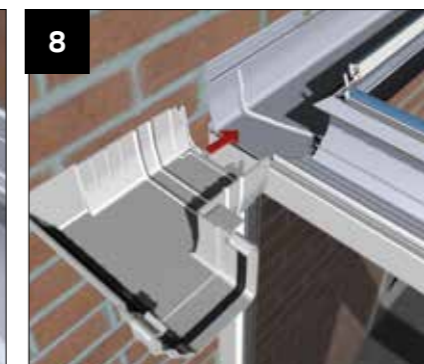
Mark out and grind a channel in the masonry for the flashing – blow out any dust in the channel.



Now seal the internal joint between the eaves beam and box gutter and back point the leading edge of the box gutter where it sits on the side frames. Knife off a small section of the undergutter trim in preparation for the insertion of the adaptor.



Now, from the bag in which the adaptor is supplied, take the special tube of sealant, Gutterbond. Apply a generous bead of it evenly across the mouth of the box gutter, 20mm back from the front edge.



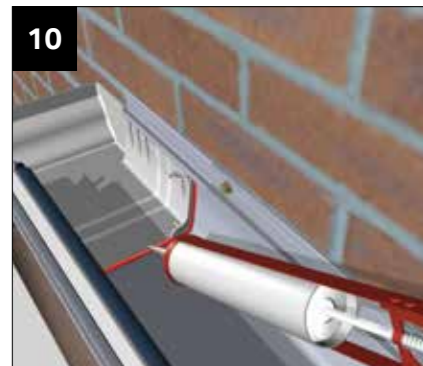
Slide the adaptor into the aluminium box gutter, raising up its front edge to utilise the unique 'snow plough' effect. This spreads the Gutterbond evenly under the adaptor. Push the adaptor firmly up to its end stop, so that it will line through with the Classic gutter attached to the eaves beam.



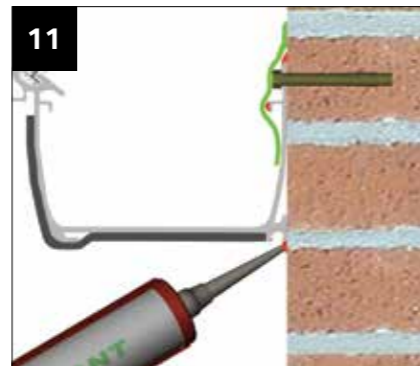
With the adaptor tight to the end stop, turn the toggles upwards to firmly press the adaptor into the Gutterbond.

IN ADVERSE WEATHER CONDITIONS FIT THE ADAPTOR TO THE BOX GUTTER PRIOR TO LIFTING THE BOX GUTTER INTO POSITION

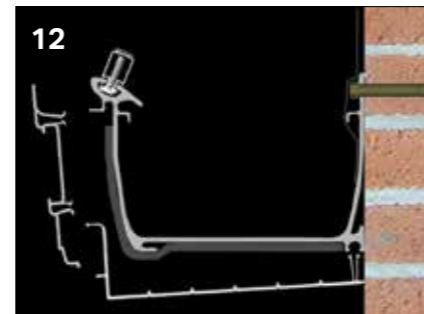
INSTALLATION - BOX GUTTER



Use the balance of the Gutterbond to back point any gaps at the front edge.



Seal the top and bottom edges of the aluminium box gutter, where it abuts the house wall.

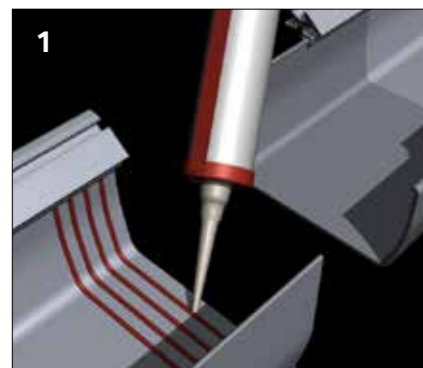


Before lifting into position, assemble the fascia board and undercladding. Offer up the undercladding rear legs, and knock up into position.

Lastly locate the upper legs of the fascia board on to the box gutter. Finally seal the undercladding against the house wall.



BOX GUTTER JOINTING



Thoroughly clean the mating parts using wire wool. Surfaces must be clean and grease free. Apply a generous bead of low modulus neutral cure to the pre-fixed internal sleeve along the entire face of the sleeve.



Drill through the top edge of the aluminium box gutter at 600mm centres. A fixing must be positioned within 50mm each side of the joint.

Offer second half of the box gutter up to the internal sleeve and push firmly on. Fasten this second box gutter run to the host wall with masonry anchors suitable to the substrate. Ensure both sections are level and flush.



Drill 6.5mm holes through the box gutter and sleeve (at positions shown, ensuring both halves of the box gutter are flush together) and fix using the bolts, nuts and washers provided and in the order shown. Trim any excess off the bolt head before fitting the internal cladding as it may foul.



Check surfaces are dry, clean and grease free. De-grease if necessary. Heat both the sealing tape and the box gutter with a heat gun and position the tape over the joint. Press the tape firmly across the joint of the sleeve and the box gutter ensuring there are no air pockets.

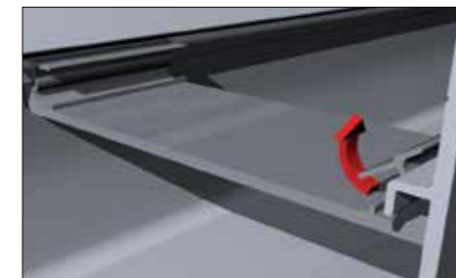


Now seal over all the exposed bolt heads, on the inside and outside of the box gutter.

ALL box gutters (especially those with tie bars or joints) MUST be supported.

We recommend several types of support for box gutters including brick piers. Fitting a conservatory box gutter without adequate support will lead to structural failure. Please take the correct steps BEFORE installation.

BOX GUTTER SUPPORT



BOX GUTTER STRAP

165mm box gutters

These are supplied loose and **MUST BE FITTED** – they are a structural requirement of the roof. The straps must be installed within 75mm of glazing bar centres (when measured from centre of the strap to the centre of the bar). To install these straps, simply 'nip up' as shown.

265mm/special box gutters

Straps are factory welded into position.



GALLOWS BRACKET

These are available for 165/265mm box gutters.

To install, notch out the insulation to ensure metal to metal contact between the extruded box gutter and gallows bracket. Offer up the gallows bracket and mark it ready to drill – always try to line up with the centre of a brick rather than a mortar joint. Drill the gallows bracket (the positions should be similar to the ones shown). Three masonry anchors should be used that are appropriate to the substrate.

Finally, notch out the undercladding, offer it into position and clip in.

Maximum centres are 2300mm. If the roof has a tie bar installed or a joint within the box gutter, then a gallows a gallows bracket should be installed directly underneath it.



BOX GUTTER HANGER

165mm box gutters

If these have been specified by your company at the time of order they are supplied loose and must be fitted.

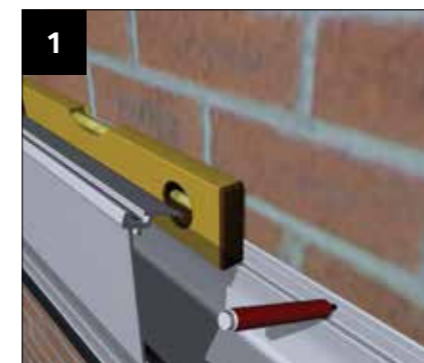
The structural requirement for the hanging brackets are 2 x hanging brackets (sat side by side) at a maximum span of 2300mm unless the roof has a tie bar or joint on the box gutter which should then be positioned in the same area.

Drill through the head of the hanger into the centre of the masonry, avoiding the mortar joint if possible. Use a masonry anchor suitable for the substrate. Lead flashing should be dressed down over the hanger, and snipped around the sloped leg. To attach it to the box gutter, simply 'nip up' as shown.

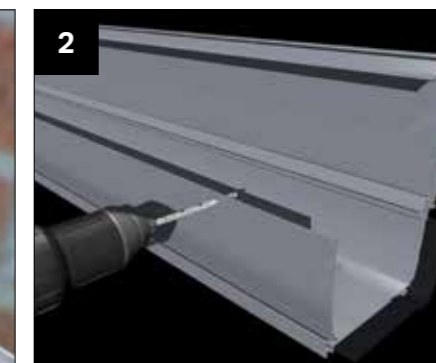
265mm box gutters

Hanger not available.

RAISED BACK BOX GUTTERS



Offer the raised back or special box gutter into position. Carefully mark onto the aluminium leg against the host wall the position of each fixing – use 600mm maximum centres.

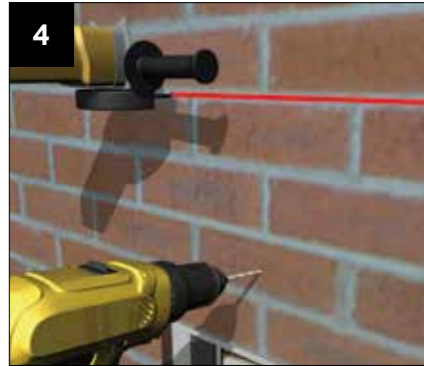


Lift the box gutter down to the ground and turn it around. Drill through the aluminium leg (that abuts the host wall) at the pre-marked positions. Whilst the box gutter is on the ground, seal along the front/rear face where the deep skirt sits inside the head of the extruded box gutter.



Lift the box gutter back into position, check levels, and then mark the wall (through the pre-drilled holes) ready to drill the host wall and grind out for the flashing.

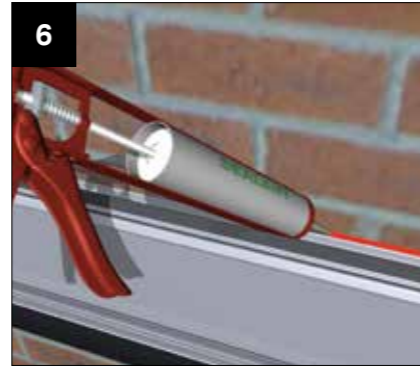
RAISED BACK BOX GUTTERS



Remove the box gutter and drill the host wall where marked. Grind out the course which is at least one course higher than the raised back height.



Offer the box gutter into position and insert the anchor fixings that are appropriate for the substrate and tighten up.



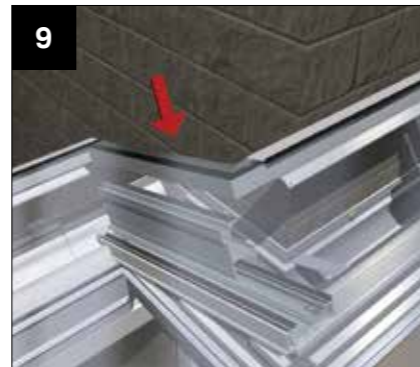
Seal the top and bottom edges of the box gutter and follow all other steps as per standard box gutters on page 23-24. When installing the lead flashing, ensure that the top of the flashing is higher than the point of rain water discharge from the glazing bars. Clad off the deep skirt of the raised back box gutter using multi-board (not supplied).



Following steps for the installation of box gutters on pages 23-24, check that the roofing bolts are in position (i.e top and bottom of the slope)



Place the short lengths of furring top cap and modified starter bar on to the two bolts. Please note that the bolts should be staggered, one each side of the bar.



Lift the `L` shaped sealed unit into position and carefully position. Your office may have not ordered an `L` shaped unit but may have split the unit into two, use a muntin bar to joint them (see page 13).



Knock down the glazing bar top cap so it finished flush with the bottom of the bar.



Two end caps are provided, one left hand and one right hand. Cut the appropriate end cap across its width (right hand shown) so that it fits snugly to the face of the glass, remove it and then using the correct sealant, refit.



Internally, cloak off the open end of the glazing bar by fabricating a small end closure – seal into place. Fit the lower fascia and box gutter claddings in the usual way. Scribe and secure the upper claddings to the factory applied horizontal sticky tape strips. (For raised back box gutters beyond 300mm in height, vertical claddings must be fabricated from your own supplied multi board).

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