

Liniar Roof Installation Guide (Duo-Pitch)



1.00 - Introduction

This installation guide has been created to assist in constructing a Liniar conservatory roof from a kit format.

Please note, each roof has been individually designed to meet specific criteria and to suit the shape and dimensions specified. There may be variants in assembly depending on the roof criteria, but the manual should cover all eventualities.

The roof will be provided with a roof layout plan. Ensure that all dimensions and details are correct to the survey supplied before the installation can proceed. Also check that all packages and boxes are present. These will be labelled in accordance to paperwork provided upon delivery.

TO ENSURE THE CORRECT FUNCTIONING OF LINIAR ROOFS, IT IS IMPERATIVE THAT THE INSTRUCTIONS IN THIS GUIDE ARE FOLLOWED, IN THE CORRECT ORDER.

Care of Products

When storing, handling or erecting your Liniar roof, please keep the following in mind:

- · When unwrapping, take care not to damage products with a knife.
- Always check the components before installing
- PVCu components should not be left out in freezing conditions.
- Do not leave coloured foiled components in their wrapping in direct heat or sunlight.
- Store polycarbonate roof panels in a dry safe area.
- · Take care when fitting caps/trims with any type of force

Sealing

It is imperative that the correct sealant is used when sealing the roof. The diagrams below show the sealants required dependant on glazing material.





· Self cleaning glass

Polycarbonate glazingStandard sealed units

LOW MODULUS

For a perfect colour match, use the Liniar approved range. See www.liniar.co.uk/supplies for details.

Further Assistance

Your roof kit should include all the information you need – but if you do need to get in touch with any queries, please use the contact details on the back cover.

Videos

To watch videos about the Liniar roof, please visit www.liniar.co.uk/videos and filter by 'Conservatories'.

1.01-Tools Required



Tools & Consumables Required



Angle Grinder Chasing out masonry for flashing



Cordless Drill
With Pozi bits and suitable
drills for pilot holes in PVCu
and aluminium.



SDS / Hammer Dill With appropriately sized masonry bits for proprietary fixings.



Hand Saw Notching frames



Utility Knife General use



Clamps Secure eaves beams in place when drilling and fixing



Glazing Hammer Fitting trims and caps



Angle Finder
General measuring
and checking of
angles/pitches



Spirit Level General level checking



Tape Measure General measuring and checking



10mm and 17mm Spanners Securing jack raffers (10mm) and fitting internal radius covers (17mm)



10mm Socket Wrench Secure all roof bars



60mm diameter drill bit / hale saw Multi-Positional outlet in guttering



2.5mm Allen Key
Tighten the grub
screws in the D-Ring
connectors

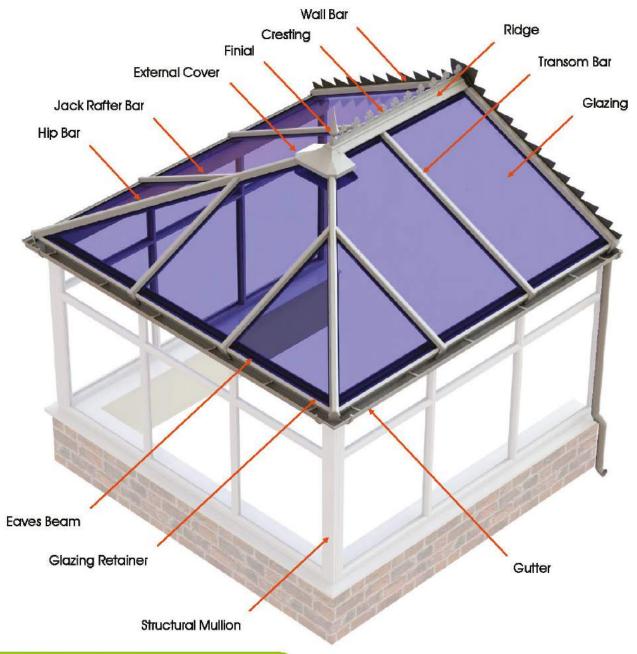


Low modulus neutral cure sealant With silicone gun



Sultable uPVC Adhesive Securing trims and mouldings in place

2.00 – Edwardian / Victorian Roof Assembly Overview



Installation Steps...



Preparation Section 3.00, pages 6-7



Eaves Beam Assembly Section 3.01, pages 8-9



Glazing Retainer Assembly Section 3.02, pages 10-11



Wall Bar and Ridge Assembly Section 3.03, pages 12-13





Transom Bar Assembly Section 3.04, pages 14-15



Hip Bar Assembly Section 3.05, pages 16-17



Jack Rafter Assembly Section 3.06, pages 18-19



Wall Bar Fixing/Flashing Section 3.07, pages 20-21



Internal Trims Section 3.08, pages 22-23



Tie Bar Assembly Section 3.09, pages 24-25



Glazing Assembly 1 Section 3.10, pages 26-27



Hip and Jack Rafter Top Cap Assembly Section 3.11, pages 28-29



Weather Seal Assembly Section 3.12, pages 30-31



Ridge Cover Assembly Section 3.13, pages 32-33



Glazing Assembly 2 Section 3.14, pages 34-35



Roof Bar End Caps Section 3.15, pages 36-37



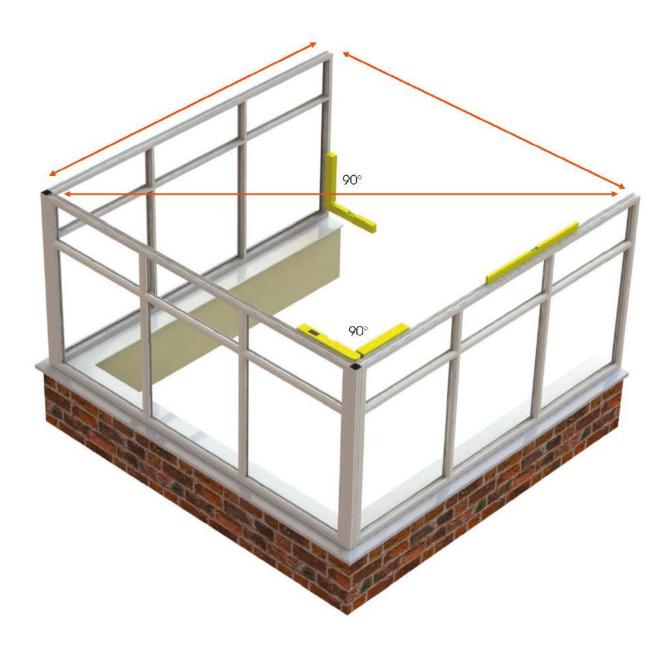
Internal Cover Assembly Section 3.16, pages 38-39



Guttering Assembly Section 6.00, pages 50-51

3.00 – Preparation

Before the roof is installed, ensure the framework below is fully assessed and all roof components are available. All relevant sizes are shown on the roof kit paperwork.



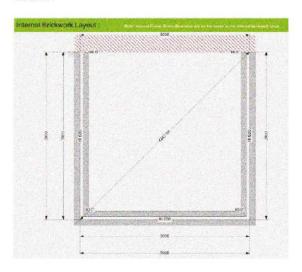


Brickwork layout paper work



Measure Length, Width and Diagonals of Frame

Measure the roof area you will be working on and check that all the frames have been installed square and are the correct size. The internal frame dimensions will be provided within the paperwork shown below.



Internal Fronts

Check level

Use a spirit level and level up if necessary before the eaves beams are fitted.

Check Bill of Materials

Use the paperwork that came with your roof kit to make sure you have received all the components that are listed before you start.

Remove Dummy Sashes and Glazing

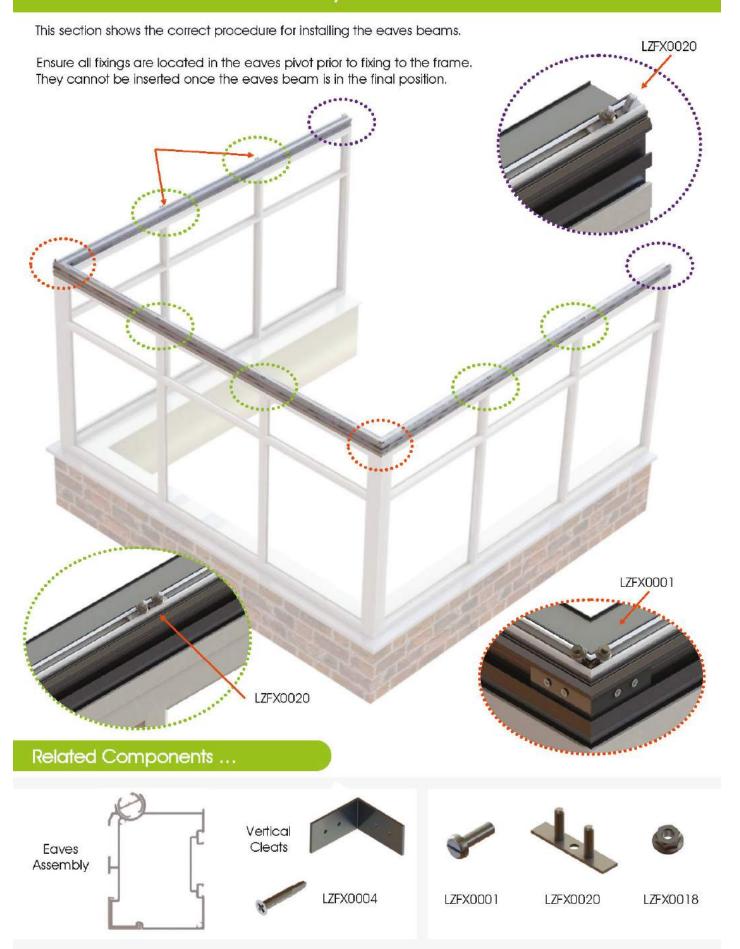
Remove dummy sashes and any glazing from frames to allow ease of eaves installation. This is because the eaves is fixed from the underneath so dummy sashes/glazing prevent access.





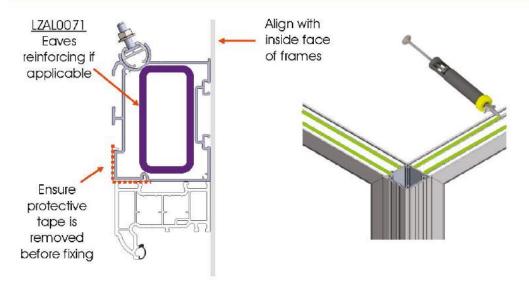
^{*} The installer must ensure suitable lateral and vertical support is provided. Liniar accepts no responsibility for the overall structural stability of the conservatory or for the failures of its fixings, members or existing structures *

3.01 – Eaves Beam Assembly











A continuous bead of appropriate sealant should be applied to the two inner legs on top of frames before positioning the eaves beams to create a weathertight seal.

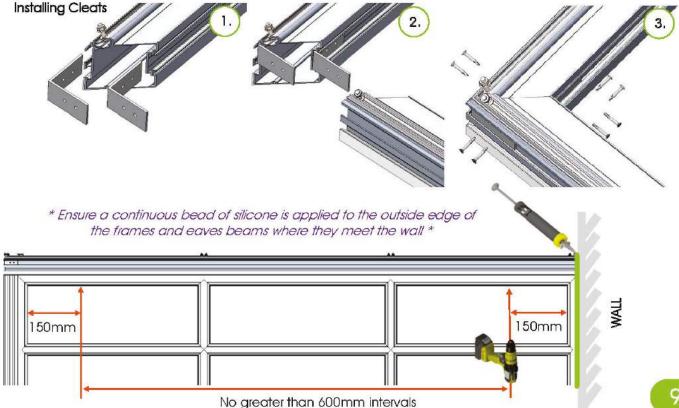
The eaves beams can then be positioned as instructed in the paperwork for the roof kit. Connect the eaves beams with the cleats provided as shown below. The roof kit will include the correct cleats. The angle of these will be determined by whether the roof is an Edwardian, 3 Facet Victorian or 5 Facet Victorian.

Once the eaves beams are positioned on the frames (aligning the inside edges) they can be fixed to the frames with appropriate fixings at no greater than 600mm intervals, leaving 150mm from corners of frames, as shown below.



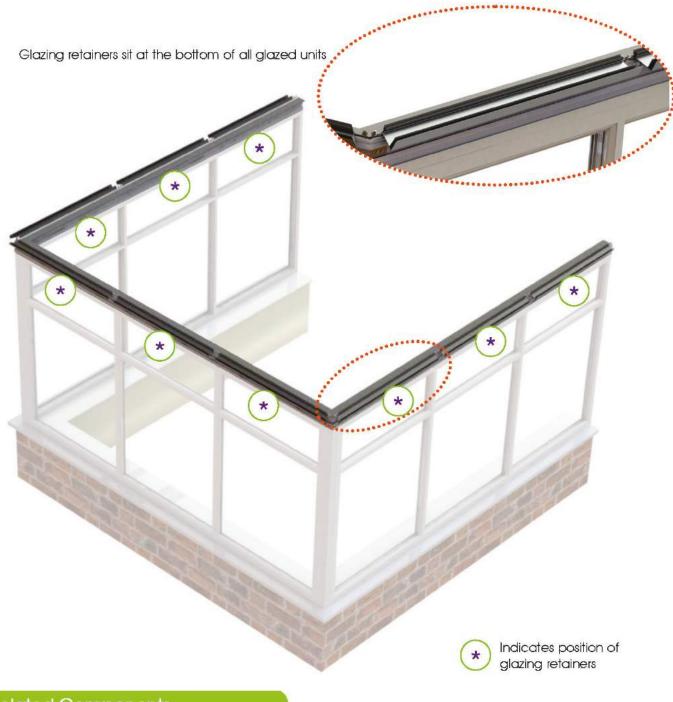






3.02 – Glazing Retainer Assembly

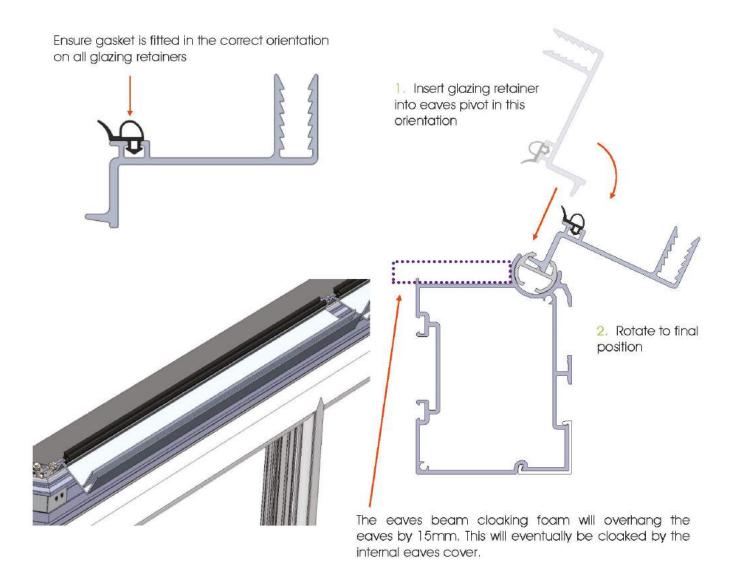
Ensure the glazing retainers are installed prior to fitting the bars.











Eaves beam cloaking foam (LZSU0087)

The eaves beam cloaking foam adds extra insulation, minimises condensation on glass and improves the overall aesthetics of the eaves beams.

The foam will be supplied in rolls and requires cutting to length to fit the eaves beams.

Look for adhesive backed foam 6mm x 60mm. Remove backing tape and apply to the full length of the eaves beam.



3.03 – Wall Bar and Ridge Assembly

The wall bars can be installed to set the ridge at the correct height.



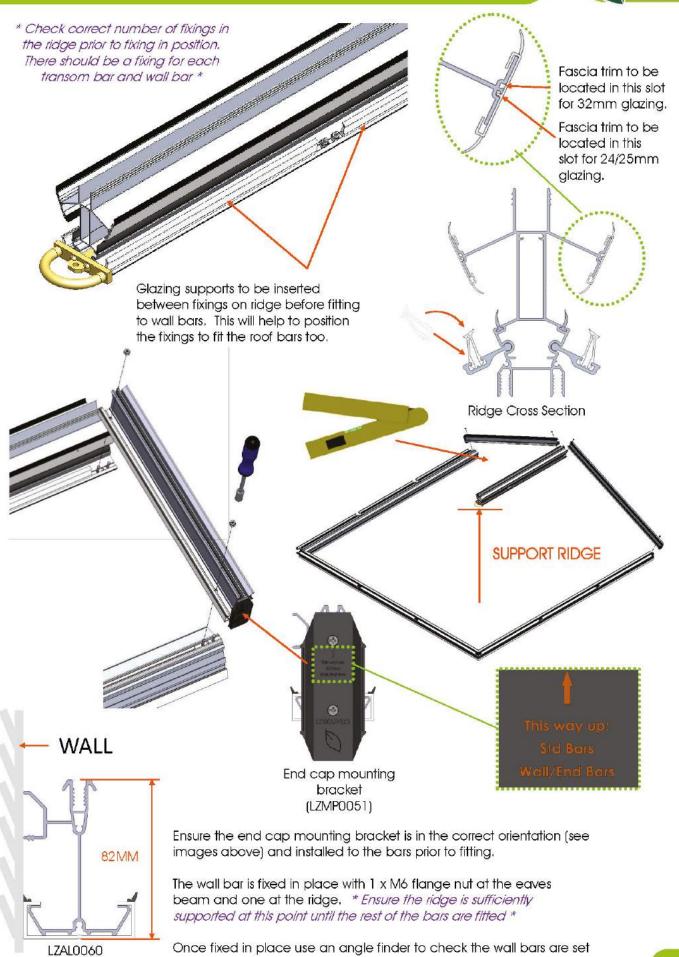












at the correct angle.

3.04 – Transom Bar Assembly

The transom bars can now be fitted to support the ridge.



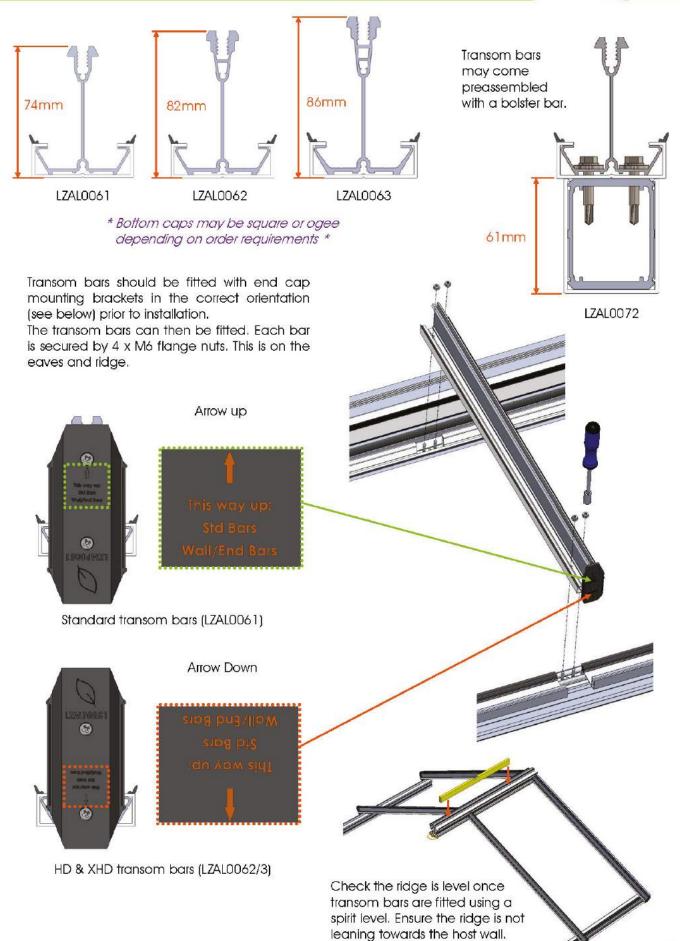












3.05 – Hip Bar Assembly



Related Components ...







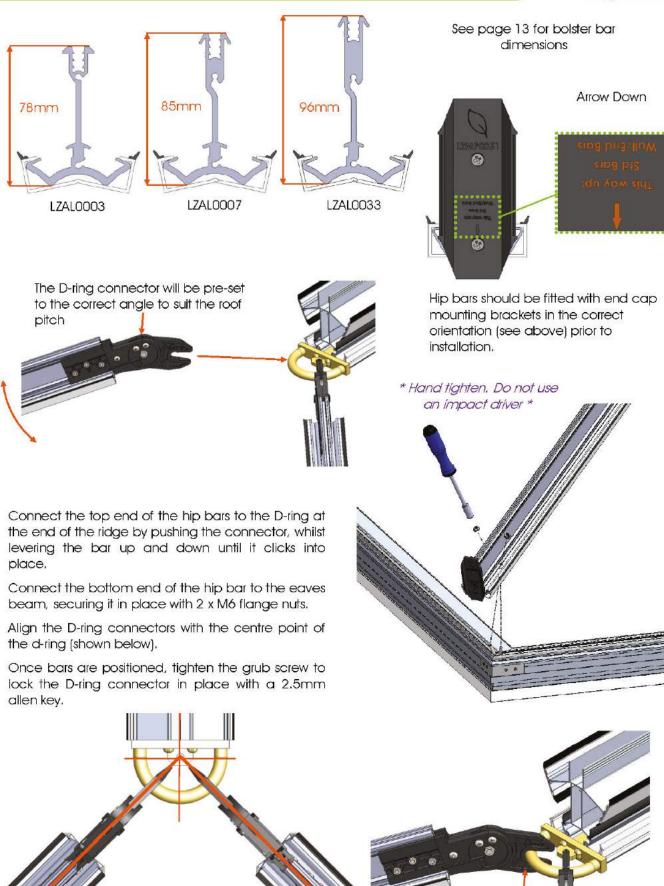
LZFX0001

LZFX0018









3.06 – Jack Rafter Assembly



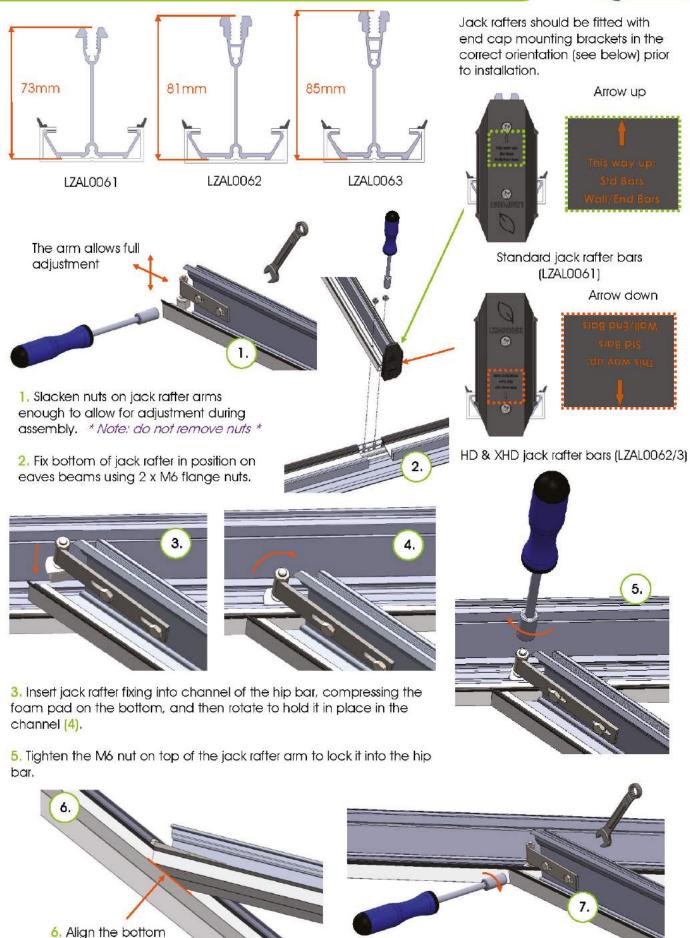












caps of the hip bar

and jack rafter.

7. Lock off fixings on jack rafter

3.07 - Wall Bar Fixing/Flashing

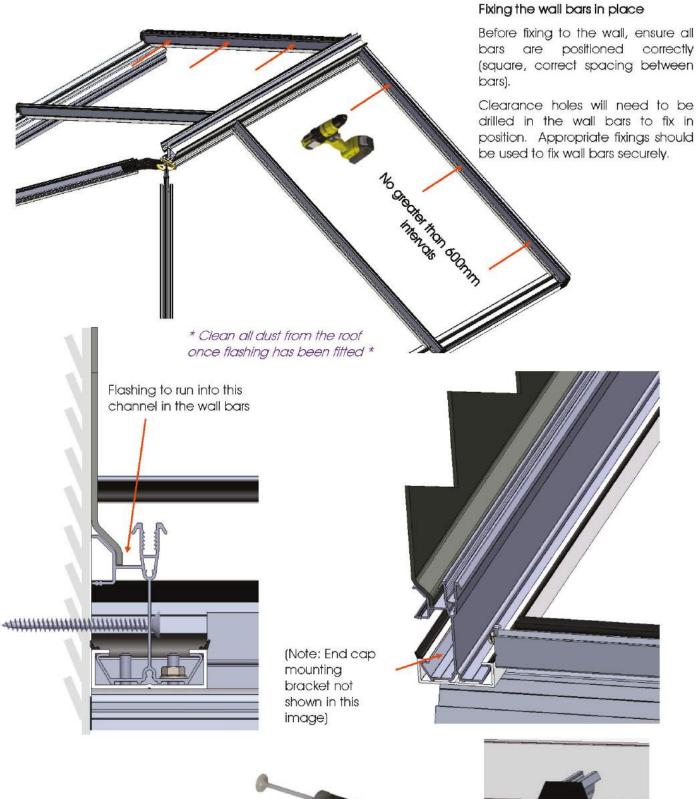
This section details securing the wall bars to the wall and flashing along the length of wall bars.











Seal using an appropriate sealant between all roof bars and glazing retainers.

3.08 – Internal Trims

Internal covers are fitted to the eaves and the underside of the ridge.









Internal Cover Trims

LZMP0072

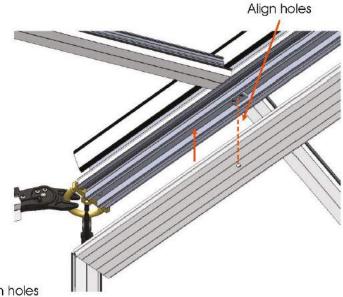






Fit the internal cover to the underside of the ridge.

If a tie bar is to be fitted, align the hole in the internal ridge cover with the threaded hole in the tie bar ridge block (LZSU0076).



Align holes

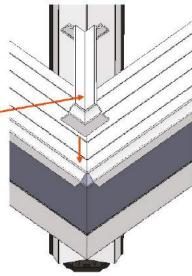
Fit the internal covers to the eaves.

If an eaves mounted tie bar is to be fitted, align the holes in the internal eaves covers with the threaded holes in the tie bar eaves blocks (LZSU8532).





LZMP0018 - 150°



LZMP0003 - 135°

LZMP0004 - Inline



LZMP0072

3.09 – Tie Bar Assembly



LZSU8522

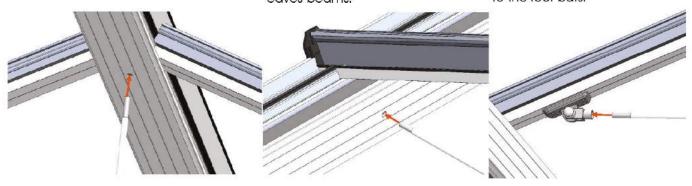




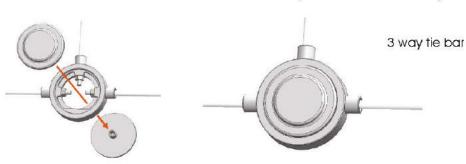


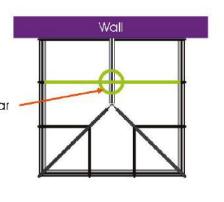
Vertical Ties – The vertical tie bars are always threaded into the blocks which are prefixed into the ridge.

Horizontal Ties (Eaves Mounted) -Horizontal bars are threaded into the blocks which are prefixed into eaves beams. Horizontal Ties (Bar Mounted) – Horizontal bars are screwed into fixing lugs that will be prefixed to the roof bars.

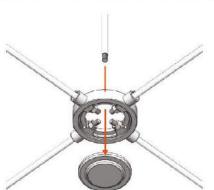


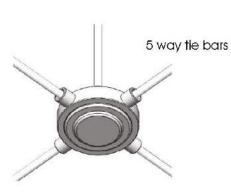
3 Way Tie Bars - Insert the horizontal and vertical studs into the three way tie bar boss and tighten the M10 nuts until the correct dimensions are achieved across the eaves beams. Then fit the tie bar boss caps to finish the assembly.

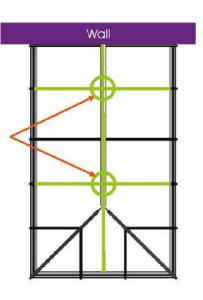




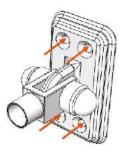
5 Way Tie Bars - On larger roofs, one or even multiple 5 way tie bar bosses may be necessary. These are secured additionally to the wall and the eaves beam across the front of the roof.







If using the 5 way tie bar system, a fixing lug (LZSU0006) should be secured to the wall using appropriate propriety fixings.



* If a tie wire has been specified for the roof it should be fitted at this point, Refer to the manufacturers instruction supplied with the tie wire *

3.10 - Glazing Assembly 1

The roof is only partially glazed at this point as you will need access to the ridge. Glazing should be installed up to the closest transom bars to the D-ring. This is to allow access to the D-ring area for sealing.

* Tie bars should always be installed prior to glazing * Only glaze up to the closest transom bars to the D-ring

Related Components ...



32mm Glazing (Typically polycarbonate)

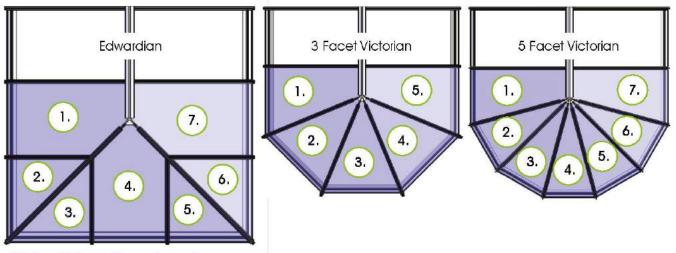


LZPE0028



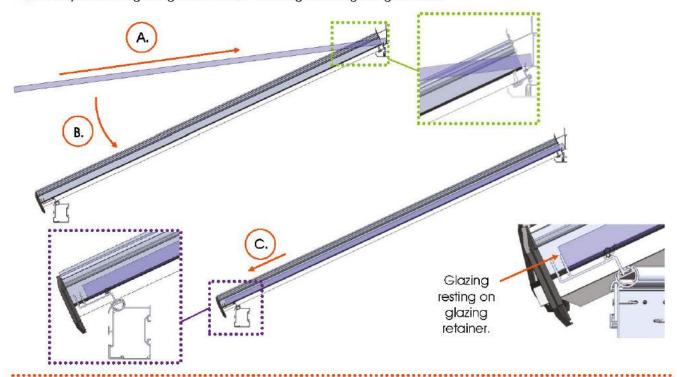




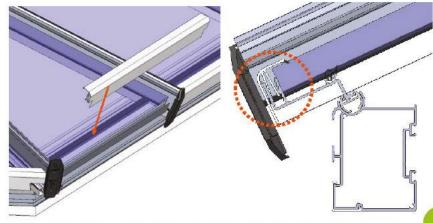


Fit the glazing in the order as shown.

- A. To install the glazing, push the top end of the glazing panel into the gap between the two black gaskets along the ridge with the bottom end elevated.
- B. Then lower the bottom end of the glazing panel to rest on the roof bars.
- C. Finally slide the glazing down until it is resting on the glazing retainer.



Once the glazing is in position, the glazing retainer trims should then be inserted into the aluminium glazing retainers.



^{*} Glazing retainer trims must be fitted before the transom/hip/wall/jack rafter top caps are installed *

3.11 – Hip and Jack Rafter Top Cap Assembly

Top caps for hip bars and jack rafters can be installed at this point. The end of the jack rafter top caps will be compound cut to align with the hip bar top caps.

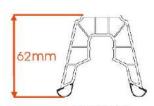


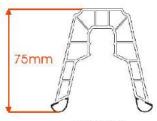












LZPE0043 LZPE0044

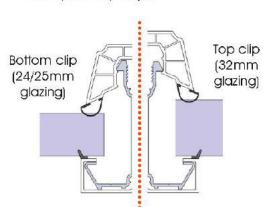


Ensure glazing retainer trims are fitted before top caps

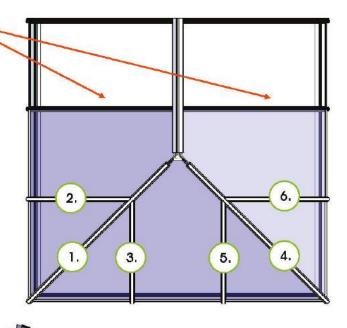
* Do not install any transom top caps at this point *

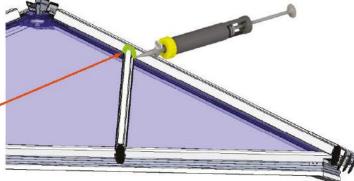
Top caps should be fitted to the hip bars prior to the jack rafters. This is due to the jack rafter top caps butting up to the hip cap once in position. (See top cap assembly to the right).

The top end of the jack rafter top caps have compound cuts which match the angle of the hip bar top caps.



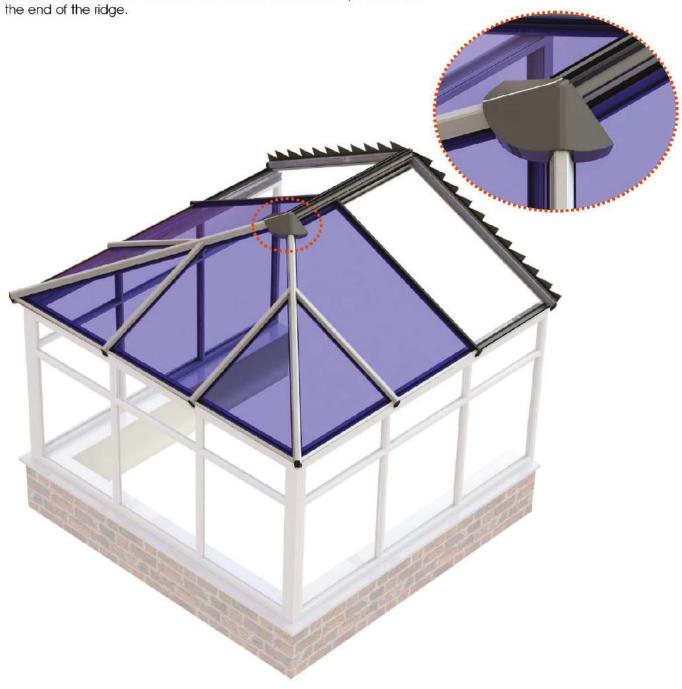
Apply an appropriate sealant o the joint between the jack rafter and hip top caps.





3.12 – Weather Seal Assembly

This section shows how to install the weather seal which is positioned at the end of the ridae.







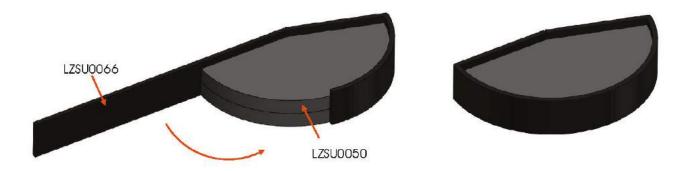




The foam weather seal is made up from two foam weather seal bungs (LZSU0050) and two foam weather seal masks (LZSU0066).

First remove the adhesive backing from one of the foam weather seal bungs and stick it to the second bung.

Then remove the backing from both pieces of the weather seal mask and adhere around the edges of the assembled bungs, aligning the bottom edges, as shown below. You will need to trim one of the weather seal masks down to cloak the perimeter of the bung assembly.



Remove the backing tape from the bottom foam bung and stick over the exposed D-ring area to create a weather tight joint. The weather seal will conform to the pitch of the roof and adhere to the glazing. The edges should be pushed up tight to the end of the hip bar top caps and the end of the ridge.

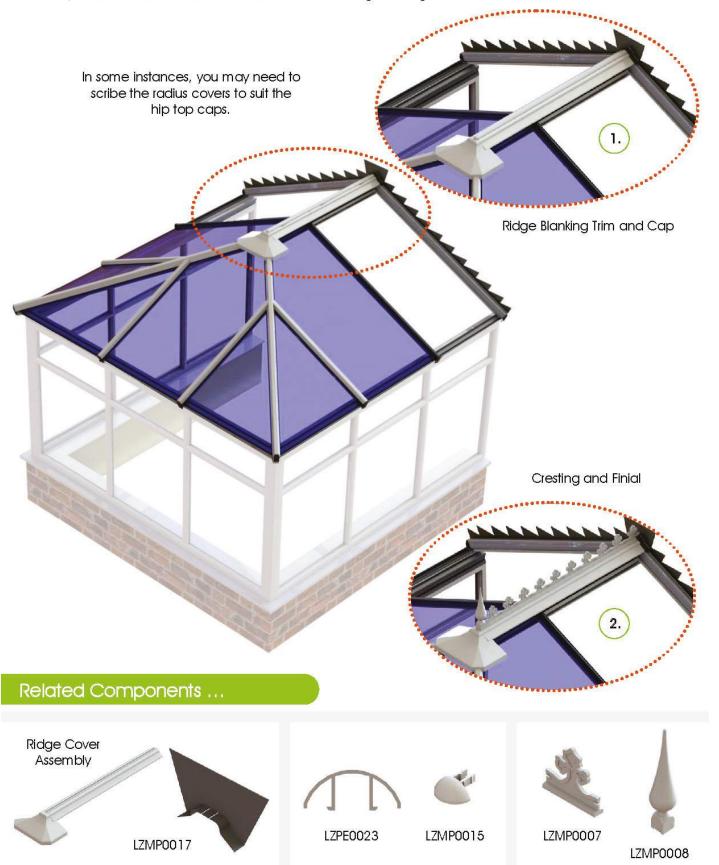
Once in position, seal along the ends of the hip bar top caps and the edge of the fascia trims on the ridge. Seal using an appropriate sealant.





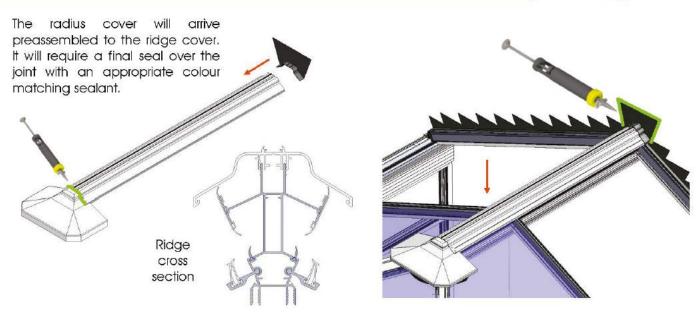
3.13 - Ridge Cover Assembly

This section shows how to fit the ridge cover assembly. The ridge cover and square/round external cover will come pre-assembled with roof kits. The finial and cresting/blanking trim will then be attached to this.

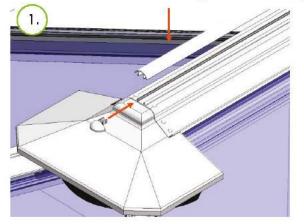


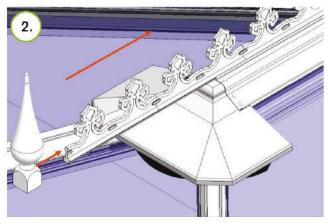


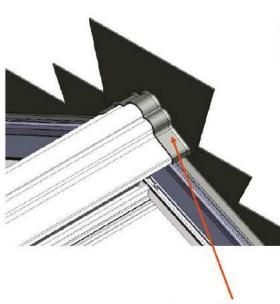




Use an appropriate sealant to secure the ridge flashing trim to the end of the ridge cover. This is then fitted to the top of the ridge with the flashing trim pushed up to the wall. Once in position use an appropriate sealant to seal around the edges of the flashing trim.







- 1. If fitting the blanking trim and end boss, the blanking trim will need to be notched to fit over the ridge flashing trim. Secure in place then glue the end boss in place using an appropriate adhesive.
- 2. If fitting the cresting and finial, first measure the length of crestings required and ensure that the wall end cresting is cut to allow for flashing. Slide the crestings into the channel in the ridge cover and repeat until ready to fit the finial. Apply a suitable adhesive to the finial and slide this into the end of the ridge cover channel.

When blanking trims/cresting and finial have been fitted, the final piece of flashing can be secured over the ridge flashing trim and ridge cover.

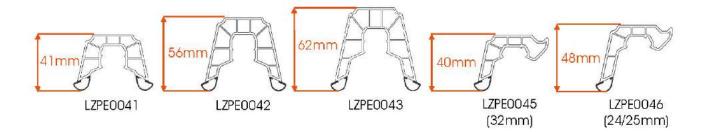
3.14 - Glazing Assembly 2

Install the remaining glazing panels, glazing retainer trims and top caps.







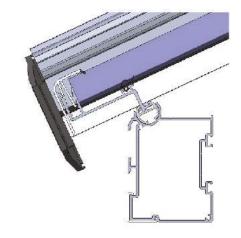


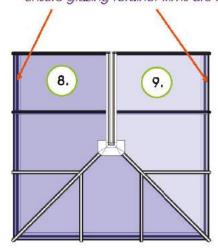
Install remaining glazing panels as shown below (see pages 26-27 for glazing technique). Ensure glazing is resting on the glazing retainer at the bottom of each glazing unit. Once positioned, insert the glazing retainer trims for all remaining glazed units.

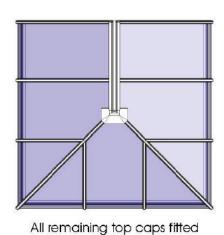
Fit remaining top caps for transoms (LZPE0041/42/43) and for the wall bars (LZPE0045/46).

Liniar top caps are twin-walled for extra strength, durability and energy efficiency.

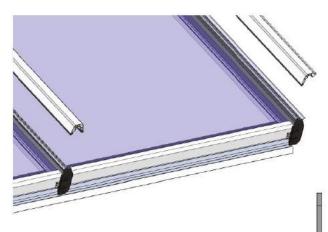
* Ensure glazing retainer trims are fitted before bar top caps *

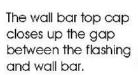


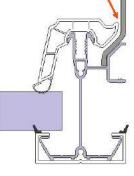












3.15 - Roof Bar End Caps

The roof bar end caps are installed to the ends of all bars. Ensure the end cap mounting brackets are present as the caps slide onto them.



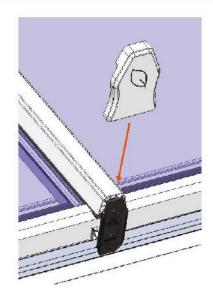


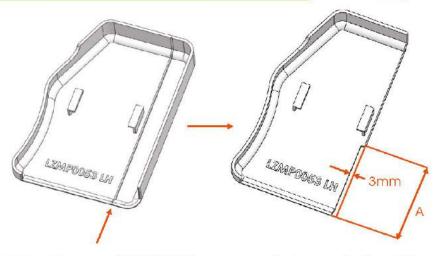






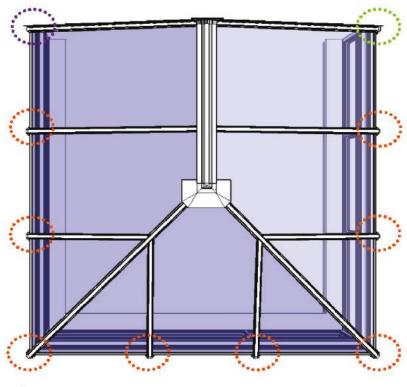
60.0 62.0 64.0 66.0 67.5 70.0 71.5 76.5 78.5 81.0 83.0





Wall/end bar caps (LZMP0053/4) can be used in two applications. Either capping the wall bar or capping an end bar on a gable / lean to. If being used for the wall end side they must be cut down along the guideline indicated above and then notched as per the table below.

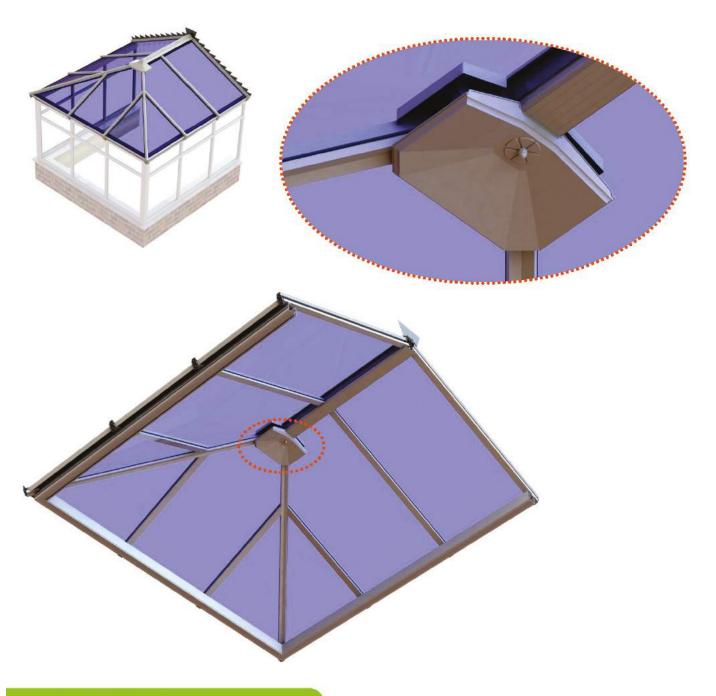
All other bars use the roof bar end caps (LZMP0052). The diagram below shows the correct positioning.



Dim A (mm)	Roof Pitch °
39.5	28
41.0	29
42.5	30
44.0	31
45.5	32
47.0	33
48.5	34
50.0	35
52.0	36
53.5	37
55.0	38
57.0	39
58.5	40
	(mm) 39.5 41.0 42.5 44.0 45.5 47.0 48.5 50.0 52.0 53.5 55.0 57.0



3.16 – Internal Cover Assembly



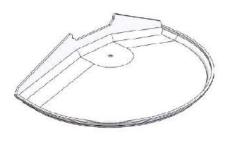
Related Components ...

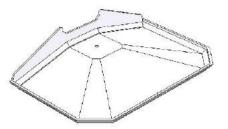


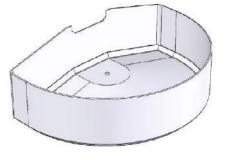










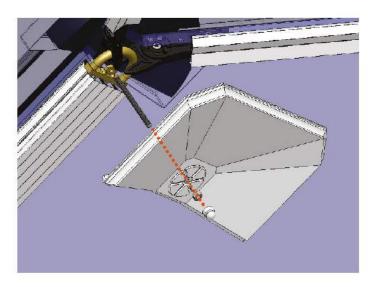


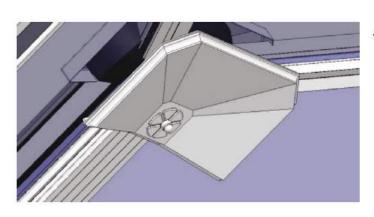
LZMP0023

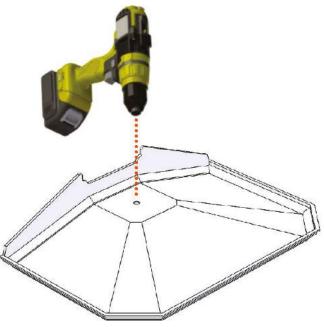
LZMP0025

LZMP0048

- 1. Insert the 130mm stud (LZSU0055) into the D-ring.
- 2. You will need to prep the internal cover by drilling a 10mm pilot hole through the centre.
- 3. Then push the internal cover onto the studding and fit an M10 nut to secure in place.
- 4. Finally, cap the M10 nut with a nut cap.

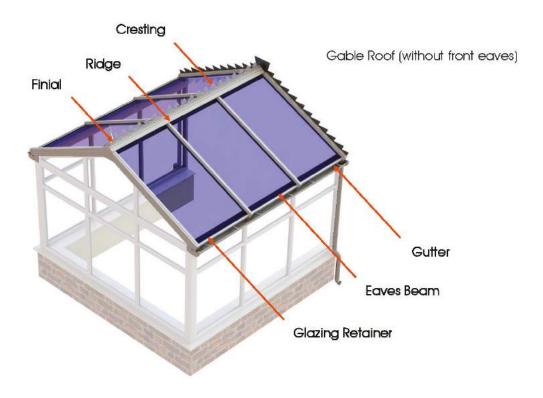


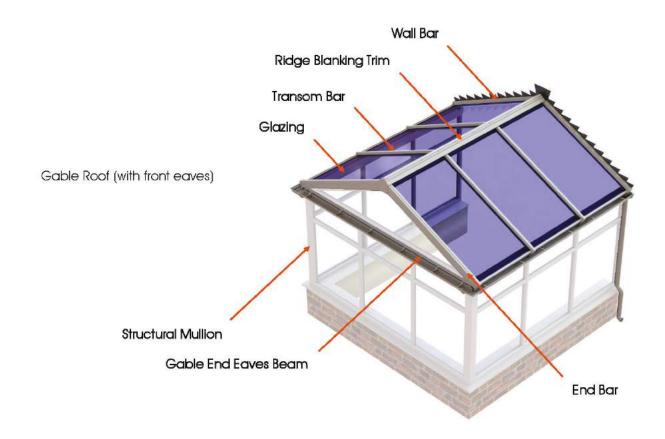




4.00 - Gable End Roof Assembly Overview

This section details the assembly steps required for gable roofs. Many of the assembly steps are common to other duo pitch roofs and may have already been covered previously in this guide.







Installation Steps...



Preparation Section 3.00, pages 6-7



Eaves Beam Assembly Section 5.00, pages 42-43 Section 3.01, pages 8-9



Glazing Retainer Assembly Section 3.02, pages 10-11



Wall Bar and Ridge Assembly Section 5.01, pages 44-45 Section 3.03, pages 12-13



Transom Bar Assembly Section 3.04, pages 14-15



Wall Bar Fixing / Flashing Section 3.07, pages 20-21



Internal Trims Section 3.08, pages 22-23



Tie Bar Assembly Section 3.09, pages 24-25



Glazing Assembly 1 Section 5.02, pages 46-47 Section 3.10, pages 26-27



Ridge Cover / End Plate Assembly Section 5.03, pages 48-49



Glazing Assembly 2 Section 3.14, pages 34-35

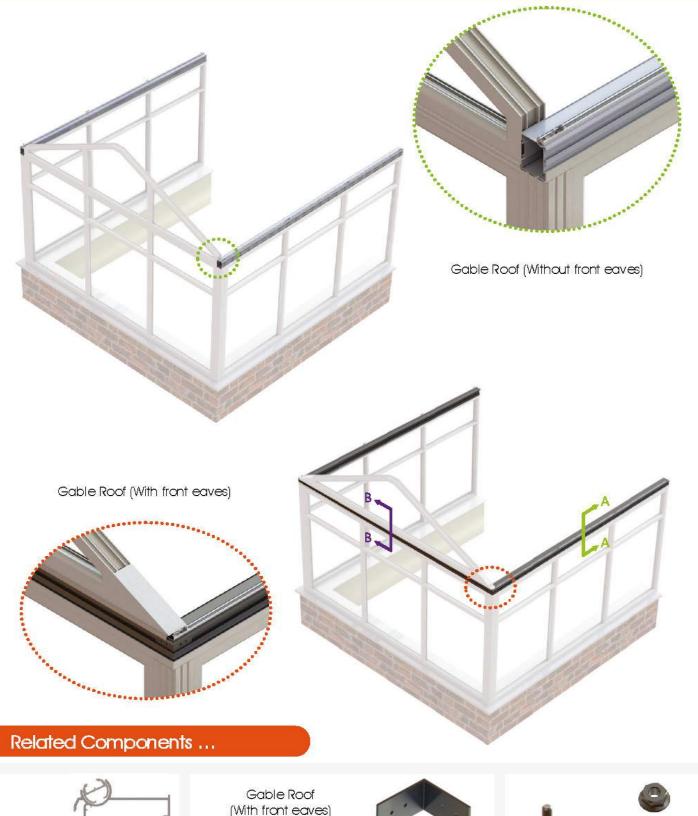


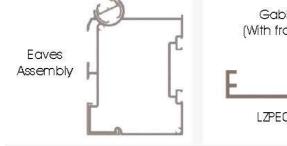
Roof Bar End Caps Section 3.15, pages 36-37



Guttering Assembly Section 6.00, pages 50-51

5.00 - Gable End - Eaves Beam Assembly





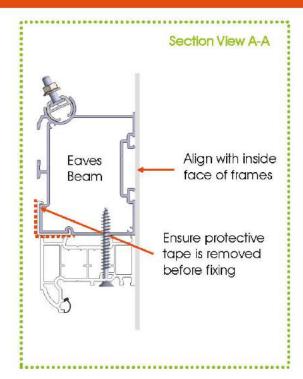


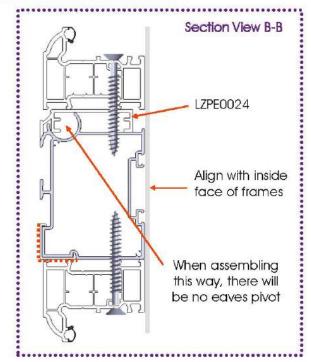


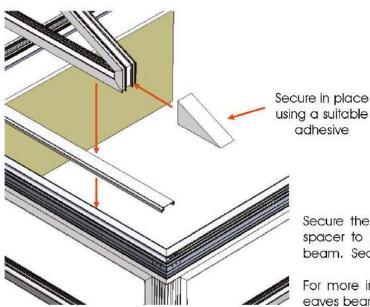


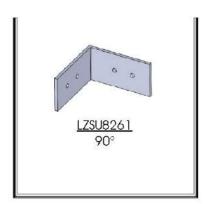






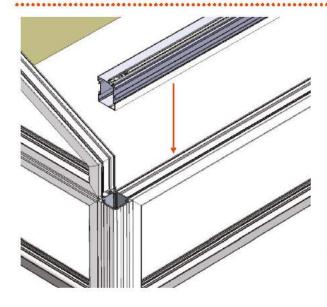






Secure the eaves to frames and then use LZPE0024 as a spacer to position the gable frame on top of the eaves beam. Secure in place, aligning the inside face of frames.

For more information, see section 3.01, pages 8-9 for the eaves beam assembly.



No cleats required

Position the left and right eaves beams, aligning the inside face with the frames. Secure in place with appropriate frame fixings.

5.01 – Gable End – Wall Bar and Ridge Assembly



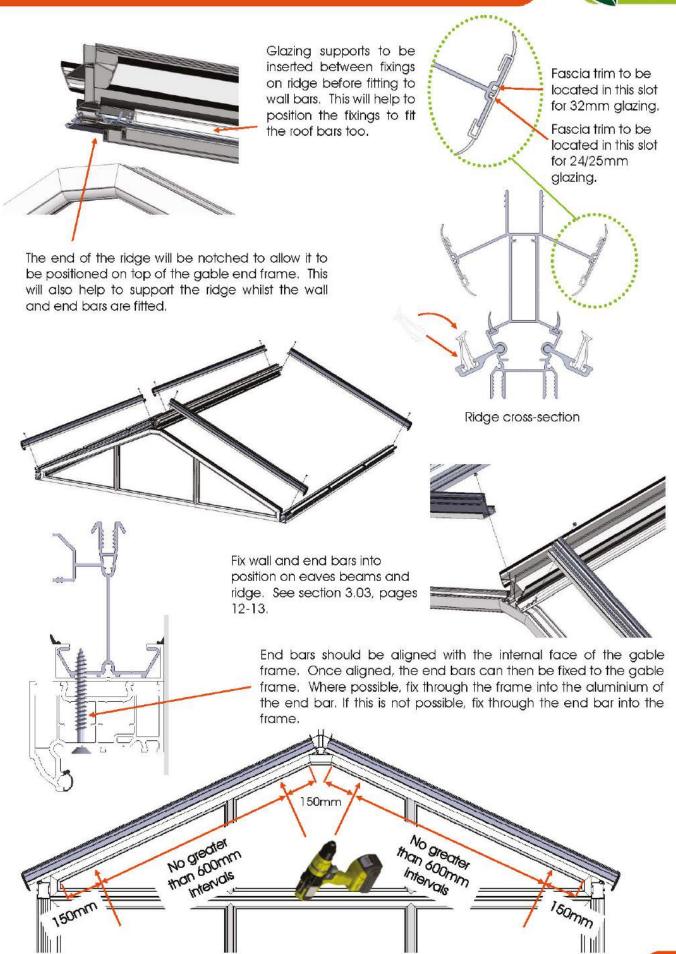






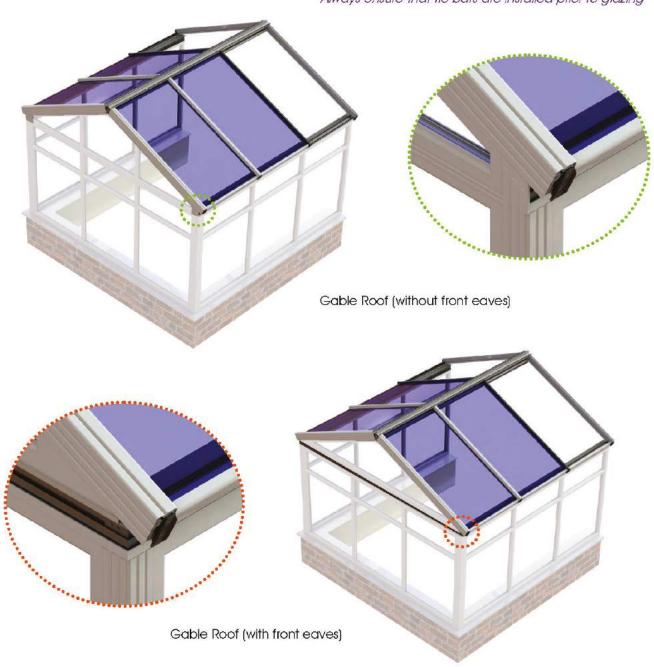




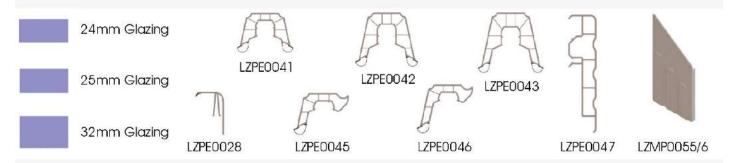


5.02 - Gable End - Glazing Assembly 1 & Top Cap Assembly

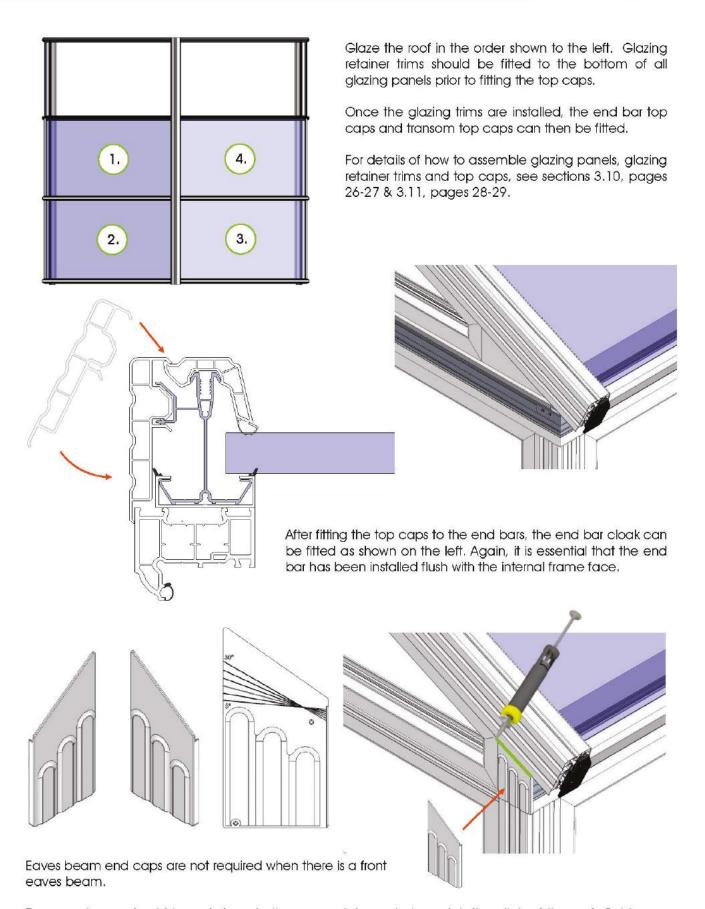
* Always ensure that tie bars are installed prior to glazing *



Related Components ...

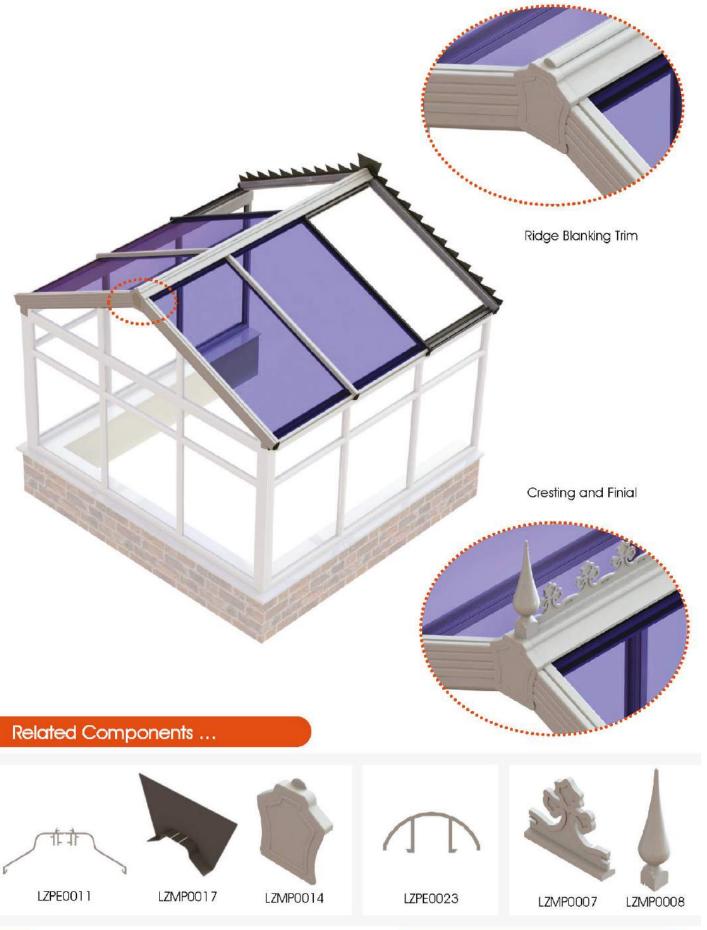






Eaves end caps should be cut down to the appropriate angle to match the pitch of the roof. Guide markers on the back of the cap indicate what part needs cutting. The caps can then be inserted into the end of the eaves beam and a bead of appropriate sealant should be run along the top edge of the cap.

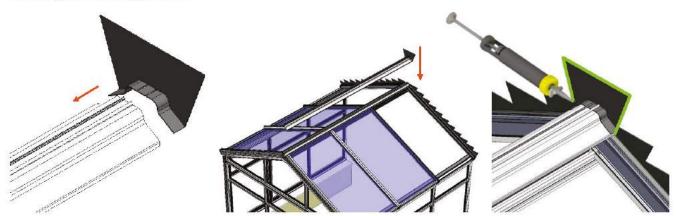
5.03 – Gable End - Ridge Cover / End Plate Assembly



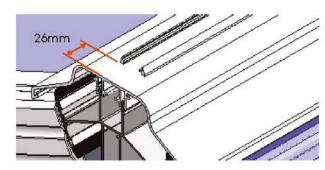




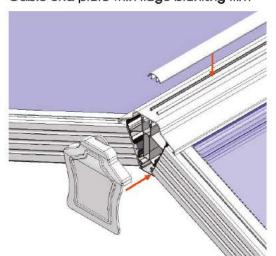
Flashing frim and ridge cover

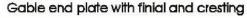


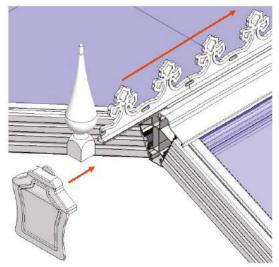
Use an appropriate sealant to secure the ridge flashing trim to the end of your ridge cover. This is then fitted to the top of the ridge with the flashing trim pushed up to the wall. Once in position, seal around the edge of the flashing trim. Again, ensure an appropriate sealant is used.



Gable end plate with ridge blanking trim

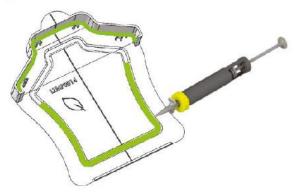






Before the ridge cover is installed you will need to trim away the two legs on top of the ridge cover, flush with the top face. This is to allow the gable end plate to slide into position.

Ensure that the full length of ridge blanking trim is installed. Then apply an appropriate sealant around the top inside face of the gable end plate (see below). Also apply a sealant in the groove run on the back of the gable end plate as shown below. This can then be pushed into position on the end of the ridge. Wipe away any excess sealant.



Cut the cresting to suit the ridge (see pages 32-33). Once cut to the correct length, slide the crestings into the slot in the ridge cover. Fit the finial and secure in place with a suitable adhesive.

Now prepare the gable end plate. Apply sealant around the top inside face of the gable end plate (see above). Also apply a seal in the groove run on the back of the gable end plate as shown above. This can then be pushed into position on the end of the ridge. Wipe away any excess sealant.

6.00 – Guttering Assembly

This section details the installation of the guttering.



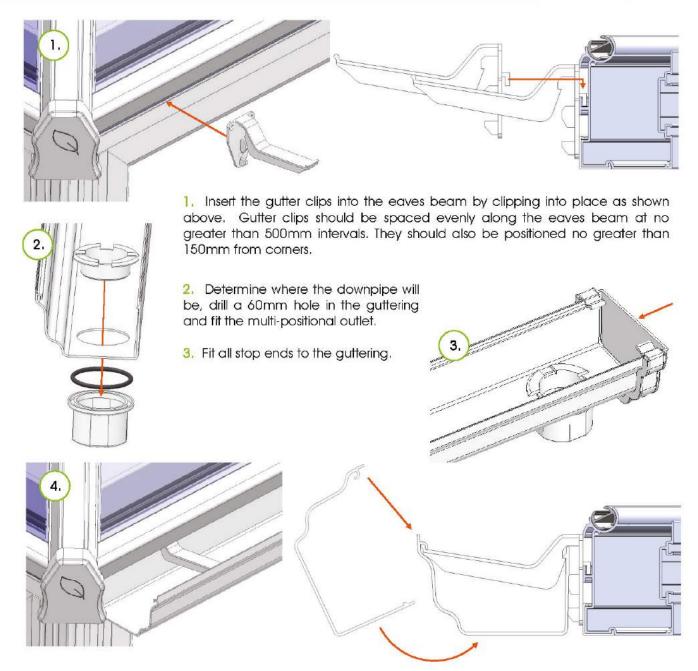
Related Components ...

than 500mm apart.

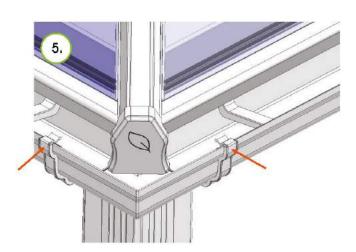




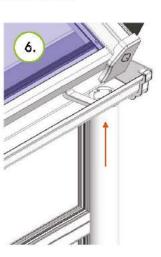




4. Install the guttering to the gutter clips by firstly hooking the outside edge on to the end of all the clips. Once attached to all clips, rotate the guttering towards the eaves until it locks into place.

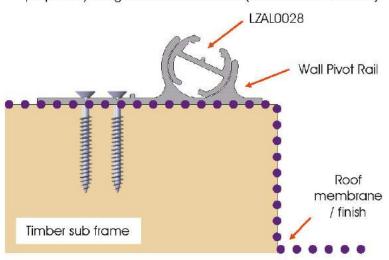


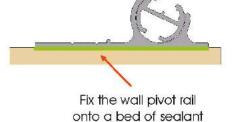
- 5. Now fit both the gutter angle joints, ensuring all seals are in correct position and all clips are in place.
- Connect the downpipe to the multi-positional outlet.

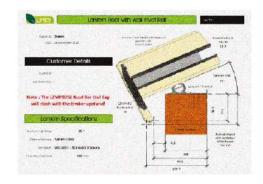


7.00 - Wall Pivot Rail

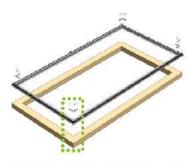
The wall pivot rail assembly eliminates the need for the use of rainwater goods. It is ideal for use in lantern roof applications. We suggest that the timber sub-frame is dressed with the roof membrane/finish before the roof is installed. Run two lines of appropriate sealant around the perimeter and apply a line of sealant to mitre cuts. Bed the wall pivot rail into the sealant. The wall pivot rail should then be secured with appropriate proprietary fixings at 600mm centres (150mm from corners).



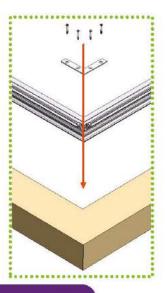




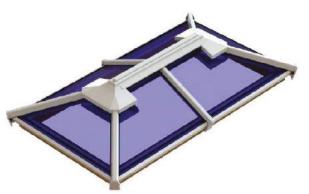




Mitred corner joints are joined with flat cleats and sealed at the mitred joint.



Ensure suitable clearance around the subframe for the roof bar end caps (LZMP0052). Liniar provides a report detailing the height required whenever a wall pivot rail is used.



Lantern roofs are built up as a double hipped duo pitch roof assembly.

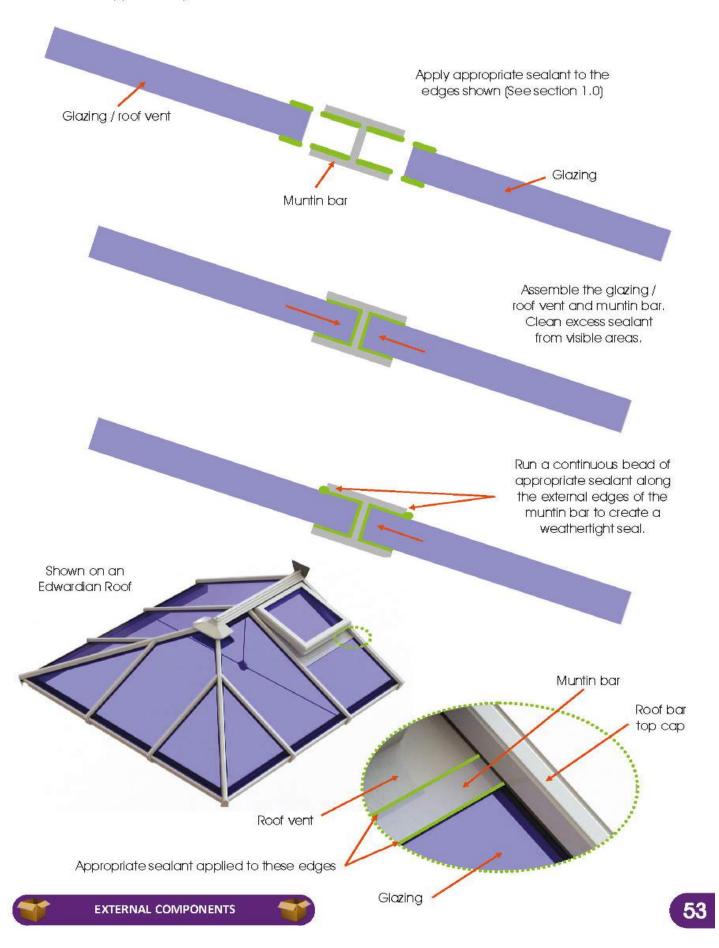
Related Components ...



8.00 - Muntin Bar and Roof Vent Assembly



This section details the installation of muntin bars and roof vents. For further details see the manufacturer's instructions supplied with your roof vent and muntin bar.



9.00 - Notes



Installation supplies

Ensure a fully matching conservatory with Liniar's range of approved installation supplies. From the highest quality foam trims to coloured silicone sealants, you can be sure of a perfect match –

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A video library is also to hand on the Liniar website, featuring a range of sales and installation videos for you to use and show to customers.

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