ConservatoryLand® More light. More space. More living.



Victorian roof installation guide

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Precautions

It is recommended that protective gloves are worn.

We recommend using the following Personal Protective Equipment where required:

Safety glasses and hearing protection when drilling.

Dust mask if dust is likely to be generated.

Under no circumstances should you venture onto the roof panels of a conservatory. If access above a conservatory is required, special precautions in line with current health and safety regulations need to be taken.

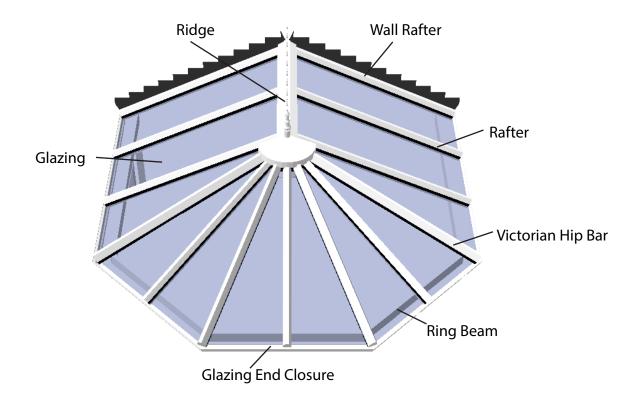
Recommended materials and accessories

All fixing bolts, screws, glazing packers, brick slip adhesive, brick slip mortar and SMX Roof Glass Silicone is provided. (If the conservatory has self cleaning roof glass we supply a specialised silicone that does not damage the self cleaning coating on the glass units).

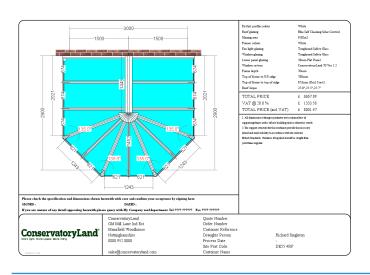
	Base	Frame	Roof
Sealants			
Silicone (Clear for sealing between & under wall boxes - colour of choice for required frame finish).	√	√	✓
Lead Sealant - (Sand and cement if pointing the lead work).			\checkmark
Building Materials & Accessories.			
Foundation Blocks - 440mm x 215mm x 355mm.	√		
Post crete - 2 x Bags per pad.	\checkmark		
Code 4 Lead (Size & Length to suit the job)			✓
Rubble bags to remove waste.	\checkmark	√	✓
Roll of visqueen - To protect the finished floor.	\checkmark		
Timber (Lean To Only) 50mm x 50mm to be used.			√

	e	mes) JC
Recommended tools and equipment	Base	Fram	Roof
Power Tools			
SDS Drill	√	\checkmark	\checkmark
Impact Driver or Cordless Drill.	\checkmark	\checkmark	\checkmark
Circular Saw. (For cutting the chipboard flooring).	✓		
4" Angle Grinder. (Mortar cuts for lead work).			√
Breaker/ Kango. (Only required if you are breaking through concrete for required pads)	√		
Hand Tools			
Spanner Set.	\checkmark		
Socket Set.	\checkmark		\checkmark
1800mm Spirit Level.	\checkmark	\checkmark	\checkmark
600mm Spirit Level.	\checkmark	\checkmark	\checkmark
Hand Saw. (To cut insulation sheets - long craft knives can also be used).	\checkmark		
Marker Pen. (To mark out the insulation cuts).	\checkmark		
Tape Measure.	\checkmark	\checkmark	\checkmark
Glazing Mallet.		\checkmark	
Glazing Paddle.		\checkmark	
Silicone Gun.	\checkmark	\checkmark	\checkmark
Sharp putty knife or similar. (For removing frame glazing beads).		\checkmark	
Lead Beater.			\checkmark
Small trowel and pointing tool. (For pointing brick slips).	\checkmark		
Spade.	\checkmark		
Wheelbarrow.	\checkmark		
Pick. (If you need to break up any difficult terrain).	✓		
G-Clamps. (To secure frames / ring beams / corner posts etc. when fixing.)		\checkmark	\checkmark
Accessories			
8mm SDS Drill Bit. (For securing base sections to the house wall).	\checkmark		
6.5mm SDS Drill Bit. (For securing wall boxes / windows / wall plates to the house wall).	\checkmark	\checkmark	\checkmark
4mm HSS Drill bits. (For securing wall boxes and flooring - Multiple required).	\checkmark		
T30 Torx Bits. (For direct to brick fixings).	\checkmark	\checkmark	\checkmark
Pozi Drive Bits.	\checkmark	\checkmark	\checkmark
53mm hole cutter. (For downpipe spigot drill & fix adaptor.			√
PVA Glue. (Gorilla Glue or similar for floor joints).	\checkmark		
Solvent Cleaner. (NOT to be used on foiled frames or any self cleaning glass).		\checkmark	\checkmark
Glass Cleaner & Paper Tissue Roll.		\checkmark	\checkmark
Super Glue & Activator		$\sqrt{}$	$\sqrt{}$

Victorian Roof overview



Instruction drawings you will need



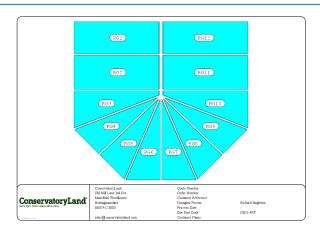
Ext/int profile colour Roof glazing Blue Self Cleaning Solar Control Glazing area 6.72m2 Frames colour Fan light glazing Toughened Safety Glass Window glazing Toughened Safety Glass 28mm Flat Panel Lower panel glazing ConservatoryLand 70 Ver 1.2 Window system Frame depth Wall type Brick Brick type Rustic Red Charcoal Multi 685 Mortar type Charcoal Skirt type 628mm (Excl Crest)

Your roof layout plan shows component positions, along with the Ridge height in the top right corner as shown in the red box above.

Along with your roof layout plan you will also have been emailed a roof glazing plan as part of your instructions, as shown in the example on the right.

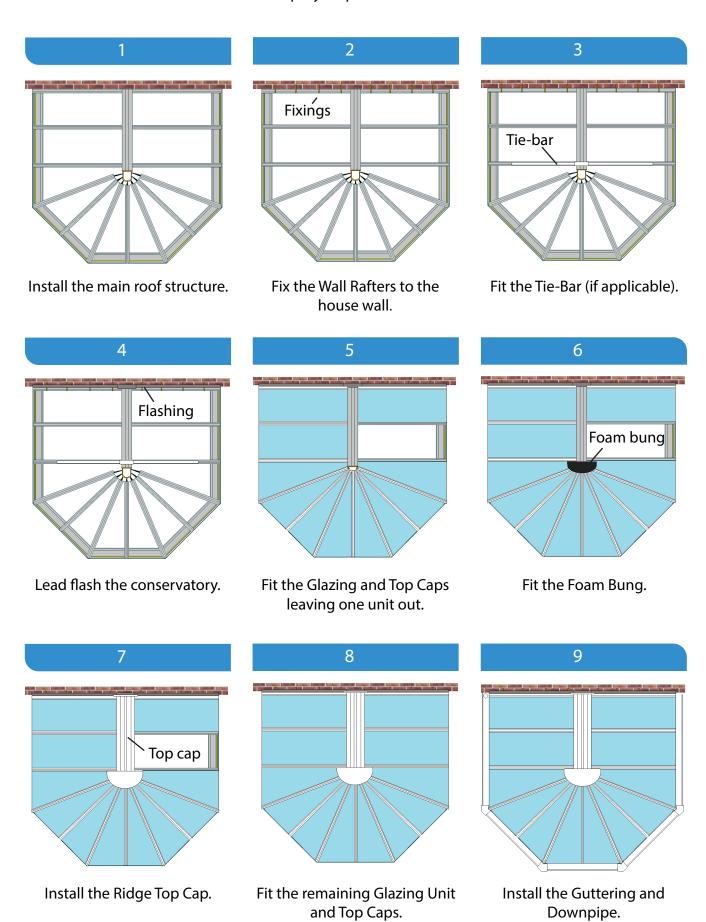
Your roof glass or polycarbonate will show the corresponding 'RG' number as shown in the layout plan.

All roof components including your box of ancillary, gutter & fixings will have blue tape on them.



Summarised order of fitting overview

Below is a summarised order of the general stages of your installation. You will find detailed information in the step-by-step instructions that follow.



YouTube video example

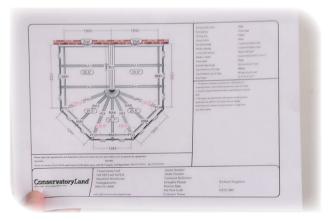
We have a range of useful videos on our YouTube channel. We are always adding new installation videos as we create them. If you are viewing this instruction digitally, on your PC, phone or tablet etc., you can click the links to the right. One shows an Edwardian roof being installed, and one takes you to our main page. Or go to:



www.youtube.com/c/ConservatoryLandDIYConservatories

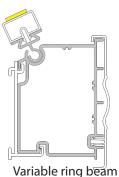
Click above for all our installation videos.

Fixing the ring beams



Using your roof layout plan, identify the first ring beam you intend to fit. Start with one of the side ring beams.

Ring beam components are usually labelled with a 'BM' number.





Fixed 25° pitch ring beam

The above images are cross section drawings of ring beams. Depending on the pitch & design of your roof, the ring beams will be either a fixed 25° ring beam (above right), or a variable ring beam (above left). Each are fixed in place in the same way. .



Before fixing the ring beam in place run a bead of silicone along the back edge of the ring beam. (You can test fit the ring beam to check its position first if required).



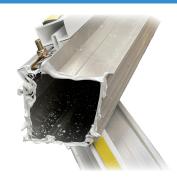
Position the ring beam in place, with the aluminium lip at the back of the ring beam fitting up to the inside of the frames (You may need to trim this lip if sat on a cill). The ring beam should finish level with the edge of the corner posts. If sat on a high wall with a cill on top, the ring beam should be sat 70mm over the inside corner of the cill. Do not remove the yellow protective tape at this stage.

Fixing the ring beams - Continued

Position the next Ring Beams in place following the previous instruction.

Before joining the Ring Beams at the corners add a line of silicone to the edge of one of the ring beams as shown in the photo on the far right. Once you have done this sit the Ring Beam in position ready to join at the corners and the frames or walls underneath.







With your Ring Beams now in position it is time to fix them in place. Locate the 70mm & 19mm self-drilling screws as shown on the left. The 70mm screws are used to fix up through the frames into the Ring Beams, and the 19mm screws to fix the Cleats.



135° top Cleat. This is for the top of the Ring Beam corners.



135° inside Cleat. This is for the inside of the Ring Beam corners.



Straight Cleat - only used to join ring beams split in 2.

You will also need the steel cleats (shown on the right) from your box of additional roof parts. The two 90° cleats are used to fix the ring beams together at the corners. The straight cleats are **only used** if your ring beam has been split in 2 due to its length.



We recommend clamping your ring beam and frames before fixing the ring beam.



Using the 70mm self drilling fixings, fix up through the frame into the ring beam. Use 2 per frame or 2 per door sash, 150mm away from any weld.



If you have opening windows, make sure the windows are open before fixing up into the ring beam.

Before fitting the cleats it is important to silicone seal along the top and inside of the ring beams where they meet at the corner.



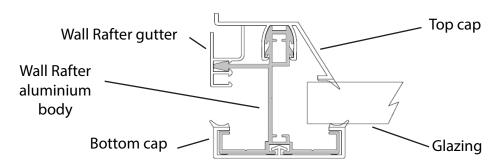
Fix the Ring Beams together at the corners.
Use the 19mm self drilling screws for both the top and inside cleats.

Make sure the ring beams are at 135° fitting tight up to each other, and silicone sealed, and then fit both cleats using the 19mm self drilling screws. Do this for each corner of your conservatory.

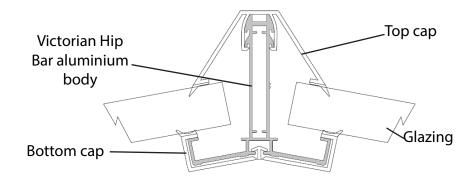


Identifying the main roof bars

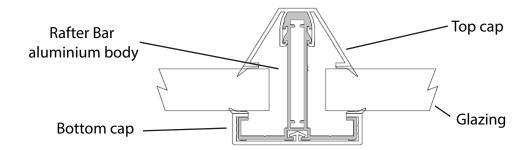
With the Ring Beams fixed in position it is time to build the remainder of the main roof structure. Familiarise yourself with the different types of rafters first. There are three main roof bar types as shown below, along with the aluminium ridge body they connect to.



The wall rafter bars are the bars that sit against the house wall and bolt to the ring beams and ridge. The PVC Wall Rafter Gutter allows you to sit your flashing into the gutter and leave a neat finish to your conservatory. There are two grooves on the wall rafter to suit either 25mm or 32mm glazing. The example above suits 25mm glazing.



The Victorian hip bars sit on the 135° corners of your roof and bolt to the ring beam and connect to the steel ring on the front of the ridge body, also called the 'Radius End'.

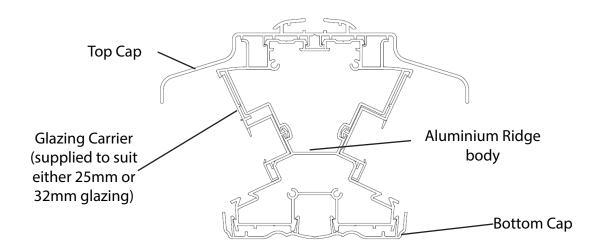


The main rafter bar can be used in three different ways on your roof:

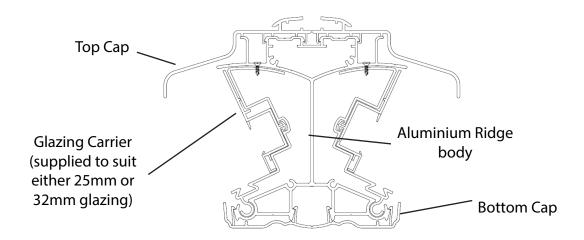
- 1) The bar is square at each end and bolts to both the ring beam and ridge.
- 2) The bar is square one end and has a black bracket the other end similar to the Victorian hip bars. This bolts to the ring beam and connects to the Radius End at the front of the ridge.
- 3) A 'Jack' Rafter. This is square one end to connect to the ring beam, and angled at the other end with a black fixing bar. These bars always bolt to the Victorian Hip bars.

Identifying and fitting the Ridge body

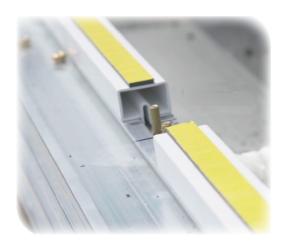
The first components of the roof structure to install are the Ridge and bars that connect to it. There are two types of ridge body, depending on the size and style of your conservatory. Please see below:



The Fixed Ridge body are used for pitches around 25°.



The Variable Ridge body is used for pitches other than around 25°.



Refer to your roof plan and identify the two Wall Rafter bars (These are labelled with a BM number), The next set of rafters that connect to the Ridge (There are labelled with an RA number) and your Ridge. There is only one Ridge (Normally labelled with an RI number).

Remove, but keep safe the two nuts from the Ring Beam and ridge in the spaces where the bars will fit.

Fitting the Ridge body - Continued

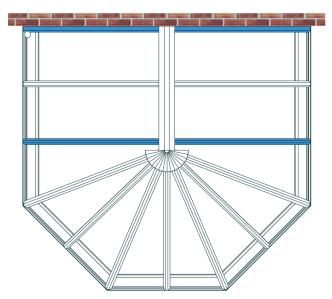
It is now time to fit the main Ridge body and connect it to the Rafters and Wall Rafter bars.



Place the first Wall Rafter into the gap provided on the Ring Beam. Fit in place over the bolts and secure in place with the nuts you removed and kept safe, but do not fully tighten them yet. Do this for the opposite Wall Rafter and rest the two bars against each other.



Repeat this process for the next set of Rafter bars, remembering to secure the bars in place with the nuts, but not fully tightening them.



The above diagram shows the two sets of Rafters that should be installed first highlighted in blue.

You should always fit the Rafters closest to each end of the Ridge first, for longer ridges it may be necessary to add a further set of Rafters to support the Ridge.



Lift the Ridge up and place it between both sets of the Rafters, checking it is at the correct height, and the Rafters fit into place.

Once you are happy with the height and positions tighten all the fixings that you left loose earlier. If there are any other standard square ended rafters to fit to the Ridge and Ring Beams, they can be installed now.

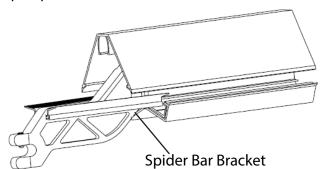




Fitting the Victorian Hip Bars



(Top Cap sits 55mm above aluminium bar)



The next bars to fit are the Victorian Hip Bars which fit on the corners of your conservatory. These bolt to the Ring Beam in the same ways as the Rafter bars. The top of the Victorian Hip Bar fits to the Radius End of the Ridge.

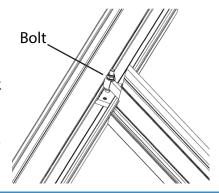
Line the centre line of the Hip bar to the centre of the hole on the Radius End. Connect onto the Radius End steel ring and tighten the grub screw with a 3mm Allen key. Fit any Rafter bars with Spider Brackets in the same way.



Fitting the Jack Rafters



Fit the Jack Rafters next (if applicable). These bolt to the Ring beam in the same way as the other Rafter bars. At the top of the bar fit the black bracket over the nut on the fixing on the Victorian hip bar. Make sure the Jack rafter is tight and flush to the hip before tightening the bolt.

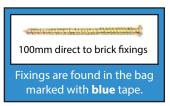


Ensure the whole roof structure is complete before moving to the next stage.

Fixing the Wall Rafters to the house wall



T30 Torx bit (not supplied)



To fix the Wall Rafters to the house wall, you will first need to drill a 6mm pilot hole through the rafter.





Fix every 500mm, or a minimum of 3 100mm direct to brick fixings. You will need a T30 Torx driver bit for these fixings.

Lead Flashing



Before you start your lead flashing it is important to seal the Wall Rafters to the house wall.

Run a bead of silicone along the top of each Wall Rafter where it meets the house wall. Please see image to the left.

Where possible we would always recommend using lead for your flashing (**Code 4 lead**).

Each length of flashing should be no longer than 1500mm.

Where you need to overlap the flashing, each overlap should be a minimum of 100mm wide.

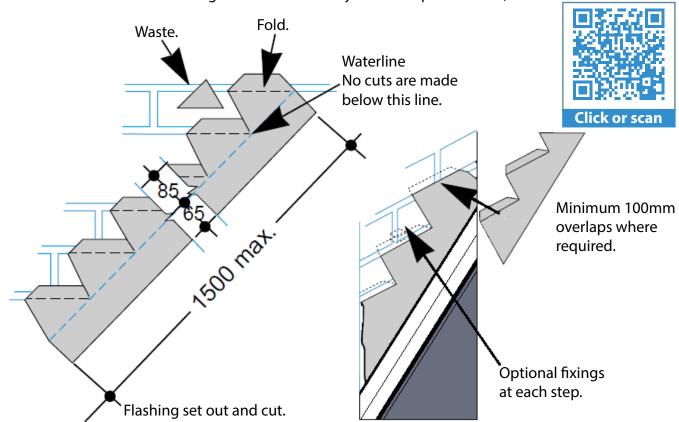
Read the next two pages thoroughly before you start your lead flashing.



To firmly hold the flashing in place prior to sealing, it is good practice to use Flashing Clips (also known as Hall Clips). These are ready available from most DIY stores, builders merchants, or your local Eurocell branch. These push into the chase line in the mortar and are easily installed. Nylon flashing clips are also available at DIY stores.

Step Lead

Below is a diagram to show how to mark out and cut step lead flashing. See further images on the next page or view our installation video on our YouTube channel (click the link on page 5 if you are viewing this instruction on your tablet phone or PC)



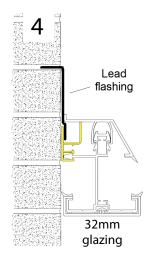
Lead Flashing - Continued

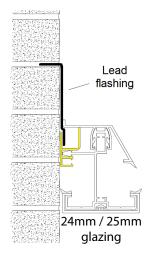






1 & 2 - Mark out the step lead flashing (please refer to the diagram on the previous page .3 - Chase out the mortar line where you intend to fit the lead flashing to your brickwork. You will also need to chase out a mortar line above the Ridge and flash over the Ridge top cap (please see the images below).







4 - The Wall Rafters have a Wall Rafter Gutter designed to hide the lead flashing under the bars top cap. Please see images to the left.

There are two positions for the gutter depending if you have 25mm glazing or 32mm polycarbonate glazing.





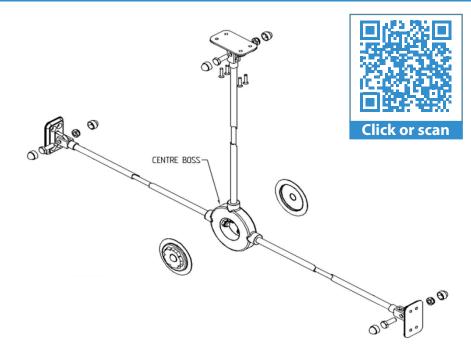
5 - Once the lead flashing is installed, and you have fit the optional lead flashing clips if you are using them, you need to seal the lead work to your property wall with a lead flashing sealant.

Installing Tie Bars

Install the tie bar next if you have them. **Not all roofs will have a tie bar**. This is dependant on the size and structural requirements of your conservatory which will have been checked by our technical team.

If your roof has Tie Bars you will have noticed that brackets have already been fitted to the Rafters for you. You will just need to fit the remaining bracket to the Ridge.

Please see the instructions on the next page or view the installation video. The diagram on the right is a cross-section of how the Tie Bars fit together.







First, fit the Tie Bar rod fitting to the bracket on each of the rafters. Use the supplied bolts and PVC bolt covers which can be fit once the Tie Bar is fully constructed.





You will have three Tie Bar rods housed inside PVC covers. Two of the rods are bigger than the other. Screw the longer rods into the Tie Bar rod brackets. Then fit the rods through the Centre Boss and tightly screw the bolts to the Tie Bar rods.





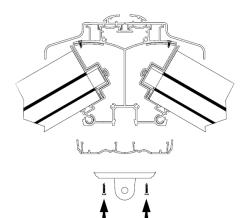
Fit the remaining Tie Bar rod to the Centre Boss in the same way as the first two. Once the bars are fitted you can fit the decorative Centre Boss cover which simply screws in place.

Installing Tie Bars - Continued





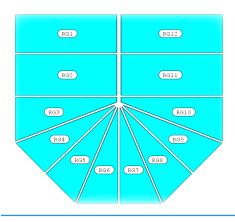




Before fitting the final bracket to the ridge body you need to fit the Ridge bottom cap. This simply clicks into place on the underside of the Ridge.

Screw the remaining bracket to the ridge body through the PVC bottom cap with the supplied fixings and finish with the PVC caps supplied.

Roof Glazing - End Closures

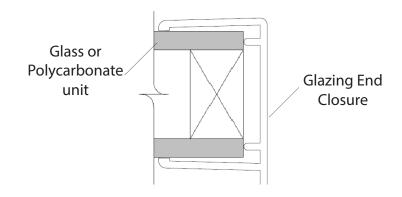


Before you start glazing, you will need to refer to your Roof Glazing Plan, which will have been sent as part of your instructions.

Each glazing panel will be labelled with an 'RG' number in the instruction, which will correspond with the sticker on each of the glazing units.

Glazing unit stickers will also be labelled telling you which side should face to the inside or outside. PLEASE NOTE: if you have self cleaning glass, the stickers will always be on the inside.

Before installation, each glazing panel should be fitted with a Glazing End Closure, for both polycarbonate and glass roofs.
Each though are fitted in a slightly different way, please see the instruction below.



If your glazing is polycarbonate remember to remove the protective film before fitting the End Closure

Roof Glazing - End Closures continued

Glazing End Closures - glass units







For self cleaning glass units only a specialised SMX sealant can be used. Run a bead of sealant along the top of the glass unit.

Then position the end closure onto the end of the glass unit.

Glazing End Closures - Polycarbonate

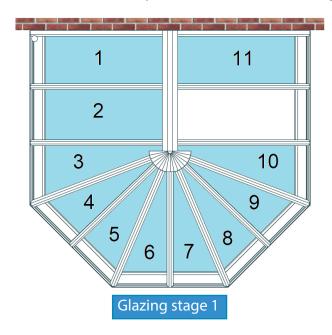


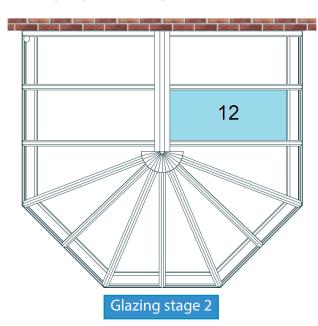


The breather tape at the end of the sheet must not be covered or blocked in anyway. Run a continuous bead of low modulus silicone to the top of the polycarbonate sheet, then position the glazing end closure onto the end of the polycarbonate sheet.

Roof Glazing -Start fitting your glass or polycarbonate

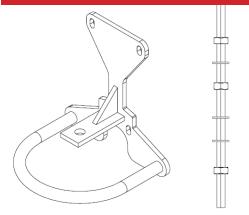
The order of the glazing should be done in a certain way. You should always leave out a glass unit to allow you access to the foam bung and the top cap. See example below.



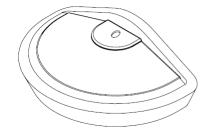


Threaded Nylon Bar & Foam Bungs

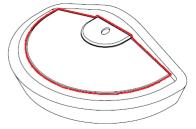
IMPORTANT: Although the fitting of the foam bung is described in this section, it should **only be installed once stage 1 of the glazing is complete** (Please see diagram on the previous page).



First, fit the Nylon Threaded Bar through the hole in the Radius End Spider Bracket.



Foam Bung



Sealing detail

Next prep the Foam Bung that fits onto the Nylon Threaded Bar over the Spider Bars. Silicone seal the foam outer to the inner moulding, as per the image shown above. **Do not fit this yet,** this can be fit once you have installed the

glazing around the Hip Bars.

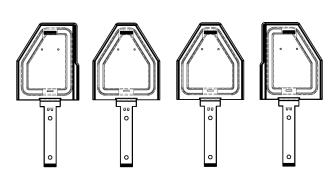
Roof Glazing - Continued



Slide the glazing panel on to the Rafters (remember to remove the protective film if your glazing is polycarbonate). On side units that meet the Ridge, the glazing units push into the PVC carrier.



Pull back a small amount of the yellow protective tape back and fold it over. Do not remove it all at this stage.







Fit a Rafter End Cap and Glazing Stop to the Rafter. For the end Rafters, you will notice the End Caps are a different shape. The flat edge of the End Cap sits to the outside, on each side of the conservatory. Pull the glazing sheet back until it sits against the glazing end stops. Once in position peel away the yellow protective tape and gently pat the glazing down onto the Ring Beam seal adhesive tape.

Roof glazing continued - Jack Rafter & Radius end bars

The Top Caps for bars that attach to the Radius End (bars with a black Spider Brackets that connect to the steel ring on the front of the Ridge), are cut 55mm longer than the aluminium bars themselves. This is to make sure the Spider Brackets are fully covered under the Radius End Top Cap - Do not cut these down.

The PVC Top Caps for Jack Rafter bars are deliberately cut 100mm long. The is to allow you to get the Jack Rafter top cap tight up to the Edwardian Hip Bar Top Cap. Any excess can then be cut off level with the end of the bar





As you glaze, you can install the rafter tops. Use a rubber mallet to firmly knock these down on to the aluminium rafters.



You must seal the Rafter Top Cap to the Ridge Carrier as shown above. You must also seal the Jack Rafter top caps to the Hip bar Top Caps.





Rafter End Caps can now also be fully fitted. Simply fold the End Cap up and locate it onto the hook just above the Glazing Stop until they click into place.

Roof glazing Continued - Ridge top cap





Slide the Top Cap onto the Ridge body and push it up against the property wall. Knock the end against the wall down using a nylon hammer (Knock along the channels either side of the crestings until it clips in place). Leave the front end so you have access for glazing later.

Install the lead flashing over the top of the UPVC flashing trim on the top cap and seal using a lead flashing sealant.

Guttering & Downpipe

Gutter Brackets



To fit the gutter brackets, twist into the Ring Beam external trim as shown above. These should be no more than 200mm from each corner, and a maximum of 600mm centres.





Gutter Stop Ends & corners

Gutter Stop End (Code RWKE1 / RWKE2



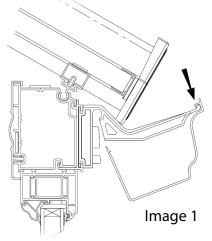
90° Corner (Code RWKA2)

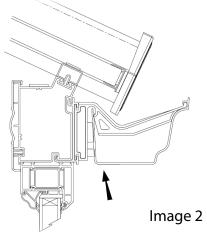


To fit the Stop Ends or 135° Gutter Corners, there is no need to remove the clips. Clip one side of the Gutter into the Stop End / Corner and then push the other end up to the stop under the clip. You will need to use some force to do this.

Guttering







To fit the Gutter, clip the front part of the Gutter Bracket into the Gutter section (image 1)

Then rotate the rear section of the Gutter up and clip into position. (Image 2).

Universal Gutter Downpipe Adaptor (Spigot)





Universal Gutter Downpipe Gutter Adaptor (Spigot)

To install the Downpipe you need to first fit the Universal Gutter Downpipe Adaptor also known as a Spigot. We use this rather than a running outlet to give greater flexibility on the Downpipe position. The downpipe position will have been discussed with the Technical team to avoid positioning the Downpipe in front of an opening window for example.





To fit the Spigot, first determine where the Universal Downpipe Adaptor is to go, and then drill a 53mm diameter hole in the Gutter using a hole saw.



Unscrew the two parts of the Gutter Adaptor and fit into the hole you have drilled, before screwing back together.

To fit the Universal Gutter
Downpipe Adaptor to the
Gutter that sits on a cill, you
will also notch a section of the
cill underneath the hole you
are drilling for the adaptor. This
will need to be at least 70mm
wide to allow the Downpipe to
pass through the cill. Please see
images on the right.





Fitting the downpipe

Parts shown on the right are used when assembling the Downpipe. (Black downpipe parts shown for illustration purposes only, Not supplied). Depending on the style of your conservatory you may need some or all of these parts.



Downpipe



112° offset bend



Downpipe bracket



Downpipe shoe

Fitting the Downpipe - Continued

There are a number of different ways to install the Downpipe, each depending on the style of your conservatory and the Downpipe position and requirements. Your Downpipe will be supplied oversized, and will need to be cut to size. You may require the offcut if you are using the supplied 112° offset bends. This instruction shows two different downpipe installations.



Measure the length of Downpipe required and cut to size. Take into account the shoe, that fits to the bottom of the pipe, and any offset bends if you are using them.



If you are running the Downpipe straight down from the Gutter, fit the Shoe to the Downpipe, then fit the downpipe to the Universal Downpipe Adaptor (Spigot).



Fit the Downpipe Brackets to the wall or corner post for example, and the Downpipe installation is complete for this down pipe configuration.



If the Downpipe is to be positioned away from the Gutter you may need to use the 112° offset bends and your offcut of Downpipe as shown in the example above.

The images on the right show how a Downpipe or Offset Bend fits to the Universal Gutter Downpipe Adaptor / Spigot.

Each conservatory Downpipe position and requirements are unique, but should be achievable with the parts supplied.



If you are attaching the Downpipe to your property wall you will need to pre drill any fixings that you choose to use, before fixing the Downpipe Brackets.



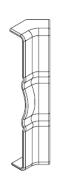


Fix the Downpipe Brackets to the wall. Four Downpipe Brackets are supplied with each Downpipe to use where required. Remember to fit the Shoe to the bottom of the pipe.



Ring Beam internal trims

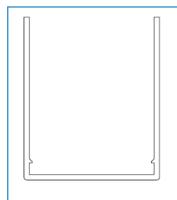




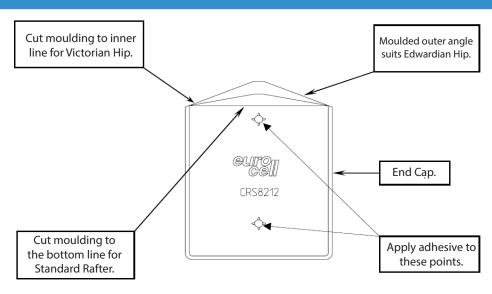


To fit the Ring Beam Internal Trim you will notice two clips on the inside of the trim shown in the image above, that clip into the inside of the aluminium, the top of the trim also clips over the top of the aluminium Ring Beam, and cab be simply push fit into place. Internal Ring beam corner trims are simply glued in place over the internal trim

Bolster bar internal trims (If applicable)



Bolster bar capping as shown above, simply clips in place to the aluminium bolster bar.



Bolster Bar End Caps are pre-moulded to suit an Victorian Hip Bar (for example, square ended Hipped Lean-to). In this instance, no trimming is required. If a Victorian Hip Bar, or standard roof rafter bar is bolstered on your conservatory, you will need to trim to suit. On the inside of the end cap there are pre-moulded lines to use as a cutting guide. Please refer to the image above.

Once trimmed (if required), super glue into place, on the adhesive points also shown in the image above.

Radius end bottom caps



Fit the Radius End Bottom Cap over the Nylon Threaded Bar, and add the decorative M10 boss to complete the internal finish. Simply screw in place.

The decorative Boss is shown in the image on the right, and in place over the bottom cap in the photo on the left.

