The Edwardian Installation Guide

The Edwardian

For Technical Assistance Please Call: 0800 908890       Product Code: K2Ev6 / June 2008
HOW TO USE THIS GUIDE, TOOL & TIPS

Using this Installation Manual – READ THIS SECTION CAREFULLY

Contained within this Installation Manual are step-by-step instructions to guide you through the installation of your conservatory to successful completion. Each build stage has been broken down into sections and you will see an overview of these build stages immediately following this section.

IMPORTANT
Read ALL the instructions completely BEFORE commencing any work, more than one reading may be necessary. Understanding these instructions and familiarity with procedures will make the build process much easier and an enjoyable project to undertake.

Cross Referencing

Your conservatory is supplied as several items of packaging, some of which will be immediately apparent (such as panels and doors) other items will be labelled as a particular package reference. For example, ‘Pack B’ will contain your sills. Contained within ‘Pack A’ (along with these instructions) is a set of component checklists which you will use to identify the items contained within each pack. Also as part of the checklists is a ‘Roof Plan’. This diagram is very important as it contains information specific to your conservatory, such as, width, projection, height, etc. Throughout this manual will be references to your ‘Roof Plan’, please ensure that you refer to this plan whenever requested to ensure all dimensions, etc. correspond.

Working through the sections

The first part of the manual is an ‘Order of Assembly’ chart, outlining the build stages for your conservatory and the ‘Packs’ which you will be using (for each section). Each diagram gives an indication of what your conservatory will look like at the end of each stage. Each section in this manual is numbered to correspond with the build stages and is structured as follows:

• Component reference page –
Here you will see a diagram showing details of the parts required to complete the section. The table shows an item number, description, the pack it is contained within and any specific comments if necessary. The descriptions and item numbers are shown on your checklists (along with another graphic for identification) so you may sort out these parts prior to commencing each section. You will not need to collate any other parts from your packaging until it is outlined in a ‘component reference page’. The only exception is silicone sealant, (as this is needed continually as you work through the build process) which will be outlined in the text as required.

• Section instructions pages –
Following the component reference page will be the detailed step-by-step instructions to complete the section. Once each section is complete the format is re-produced again for the next section, and so on. If at any point you feel you require any assistance, the telephone number for our technical helpline is shown at the bottom of each page.

INSTALLATION TIPS

• All panels are a two person lift.
• Treat PVCu in much the same way as timber; however, use a finer saw when cutting.
• When fitting your door outer frame, it should be considered as a window panel and fitted in the same manner.
• Ensure when fitting the door outer frame that it is plumb and square. To check this, the width must be constant all the way up and the height constant all the way across. In addition a diagonal measurement across the corners must be the same. If this is not addressed correctly, it will most probably cause problems when it comes to fitting your doors.
• Try to avoid fitting opening window panels against the property wall. This will avoid any conflicts with the openers and gutter down pipes, etc.
• Ensure all drainage slots on panels are at the bottom and facing outward when positioning panels.
**RECOMMENDED TOOLS**

- Tape measure (5m min.)
- 2.5m (8') step ladder.
- 3.7m (12') ladder – 2 sections.
- Electric drill (hammer action).
- Steel drill bits: 3.0mm, 5.0mm (min. 80mm reach), 8.0mm.
- Masonry drill bits (min 200mm reach): 8.0mm.
- Cordless screwdriver (12v min.).
- 3 Clamps (G-Clamp or similar, one-handed operation if possible).
- 1.2m (4') spirit level.
- Silicone sealant gun.
- Plastic mallet.
- Work bench.
- Gasket pliers/cutters.
- Hacksaw
- Extension lead.
- Screwdrivers.
- Superglue.
- Cleaning materials.
- Cleaning equipment.
- Paper Towels.

**HEALTH, SAFETY AND ENVIRONMENTAL ISSUES**

As with any type of construction work, there are inherent dangers when assembling a conservatory. The following supplement is designed to supply the installer with general health, safety and environmental information that may be required during the assembly of a conservatory. The appendix offers a guide to “best practice” but cannot be considered as comprehensive. You are advised to work safely at all times.

1. **General Site Safety**

All sites are different and have different hazards. Have a general regard to what potentially can cause harm. The construction site itself should be made a restricted area. Particularly at risk are children and animals. You also need to consider the security issue. Organise your space. Don’t open boxes haphazardly and leave components lying around that can get damaged, lost or pose a trip hazard. Be aware of the weather forecast. Wet and hot conditions cause specific hazards. Put controls in place to manage any possible vehicular movement on site. Protect the environment by avoiding fugitive waste. Dispose of your rubbish appropriately.

2. **Personal Protective Equipment**

The following PPE should be worn throughout the construction:

- A hard hat.
- Safety foot wear.

The following PPE should be worn under certain conditions:
- (follow machinery guidelines where applicable)

- Anti slip gloves (when handling glass roof glazing units)
- Wrist guards (when handling glass roof glazing units)
- Glass suction cups (when handling glass roof glazing units)
- Safety glasses (when handling glass roof glazing units)
- Hearing protection when drilling.
- Dust mask if dust is likely to be generated.
- Disposable or rigger gloves as applicable.
- Advisable to keep arms and legs covered.
- Fall arrest equipment if working above 2 metres in height.

It is advisable to have a first aid kit handy – just in case.

3. **Working at Height**

Be aware that Health and Safety legislation states that fall protection measures must be put in place by the employer of any person working at a height of 2 metres or more where a fall hazard exists. If it isn’t feasible to eliminate the hazard using a collective system then a personal protective equipment system must be selected and used, be it for restraint, work positioning or fall arrest purposes.

For further information, a useful specialist company to contact for fall arrest guidance is Bacou-Dalloz on 01256 693200

*Some height work is inevitable during construction. The majority of this work will probably be done from a ladder.*

**USE OF LADDERS**

You are advised to adopt the following rules at all times:

- Assess whether an alternative means of access is more suitable. Take into account the nature of the work, duration, height being worked at, movements required, equipment and materials being used, type of ladder available etc.
- Ladders ideally should be of the “Class 1” type.
• Place them on a firm, stable and level surface which is capable of supporting the ladders and any intended load. They must be erected so as to ensure they won't become displaced.
• Prior to use always check visually whether the ladder is in good condition and free of slippery substances such as oil or mud.
• Check facilities for securing against slipping – tied at top, secured at bottom, or footed by a second person if no more than 3m-height access is required. IF ABOVE 3 METRES IN HEIGHT, THEY MUST BE SECURED.
• The correct angle of rest is 75 degrees. E.g. for every 4 metres in height, move the base of the ladder out 1 metre.
• Metal ladders (and wooden ones when wet) conduct electricity and should not be used or carried near overhead power lines.
• Ladders must be positioned the correct way up – metal ladders often have rungs with both flat and curved surfaces – the flat surface is the one on which the user’s feet should rest.
• The use of ad hoc and “botched” safety devices must be avoided. For example plywood base plates are not to be used. If you require plant, equipment or devices to do the job safely you are to hire/buy the m and not manufacture them. This is a short cut to having an accident.
• Never feel pressured to go up a ladder if you are unhappy about its safety.
• Only use the ladders for the purpose for which they were intended.
• Anyone below you? They could be injured if you drop something.

3. Tools

The tools you use are your responsibility. We advise:
• Check the condition of your tools prior to use, for obvious damage. Get them checked out if you are in doubt. Arrange for your tools to have a portable appliance test.
• Any electric hand tools are 110 volt or used in conjunction with a residual circuit breaker.
• Don’t use tools other than for their intended purpose.
• Follow manufacturer’s guidelines as applicable.

FORMAL PROCEDURE FOR THE USE OF KNIVES AND CHISELS
i. Ensure when using a knife / chisel you always keep your hand that isn’t in use BEHIND the blade. Ensure that you cut away from your body - NEVER towards yourself.
ii. Ensure the position of others is away from the cutting direction.
iii. Keep the tooling in a sharp condition so you don’t have to exert excessive force to cut / slice.
iv. Always pick up the tool by the handle.
v. Always ensure the tool is stored safely where a sharp edge cannot cause injury.
i. Only use the tooling for its intended purpose where possible.

5. Manual Handling

As a general guideline, follow the “2 man lift” stickers on the boxes. Lift correctly.

STOP AND THINK. Plan the lift.

Where is the load going to be placed?

Use appropriate handling aids if possible.

Do you need help with the load?

Remove obstructions such as discarded wrapping materials. For a long lift – such as floor to shoulder height – consider resting the load mid-way on a table or bench in order to change grip.

• PLACE THE FEET.
Feet apart, giving balanced and stable base for lifting. Leading leg as far forward as is comfortable.
• ADOPT A GOOD POSTURE.
Bend the knees so that the hands when grasping the load are as nearly level with the waist as
possible. Don’t kneel or over-flex the knees. Keep the back straight and lean forward slightly over the load if necessary to get a good grip. Keep the shoulders level and facing in the same direction as the hips.

- **GET A FIRM GRIP**
  Try to keep the arms within the boundary formed by the legs. The optimum position and nature of the grip depends on the circumstances and individual’s preference, but it must be secure. A hook grip is less fatiguing than keeping the fingers straight. If it is necessary to vary the grip as the lift proceeds, do this as smoothly as possible.

- **DON’T JERK**

- **MOVE THE FEET**

- **KEEP CLOSE TO THE LOAD**

- **PUT DOWN, THEN ADJUST**
  If precise positioning of the load is necessary, put it down first, and then slide it into the desired position.

- **TEAM LIFTING**
  It is important team members are physically evenly matched. One person should take responsibility and co-ordinate their actions.

- **ADEQUATE VISION**
  Clear vision may mean multiple trips with smaller loads, but it is safer.

6. **Control of substances harmful to health**

The chemicals supplied by us for use when assembling your conservatory are:

- **SILICONE**: Safety data sheet provided.

- **CREAM CLEANER CLEANING FLUID**: Safety data sheet provided

- **FLASHING TAPE**
  * You are advised to follow the guidance on the packaging.
Using your check list
It is recommended that all boxes are opened on delivery to ensure that all components listed on your Customer Check List are present. This should be done before the 14 day F.O.C. buffer period expires. Your check list can be found in A. The check list consists of quantities and component pictures to aid the identification of parts. Use the check list to cross reference, examine and quantify your components.

Missing and damaged components will have a cost implication 14 days after delivery.

If any components are missing, please contact the store where the conservatory was purchased and provide the following;

- Your 6 digit order number – e.g. 432000
- The part reference code from your installation manual – e.g. C101
- The part description from your installation manual – e.g. 150mm Sill End Caps
- The page where the part is described in the installation manual – e.g. Page 9

Delivery damage
It is also recommended that all components are checked for delivery damage. On receipt of delivery please check the packaging carefully prior to signing the delivery note. It is also good practice to check your components prior to assembly to avoid your installation being halted. This should also be done before the 14 day F.O.C. buffer period expires.

If any components are damaged, please contact the store where the conservatory was purchased and provide the following;

- Your 6 digit order number – e.g. 432000
- The part reference code from your installation manual – e.g. C101
- The part description from your installation manual – e.g. 150mm Sill End Caps
- The page where the part is described in the installation manual – e.g. Page 9

If during your installation you are puzzled on any aspect of how components may fit together or be positioned, you may call our Technical Assistance phone line which is highlighted at the foot of every page.
STAGE 1
BASE SILL INSTALLATION
Pack selection; Pack A & Pack B

STAGE 2
FITTING FIRST PANELS
Pack selection; Pack A & Pack C

STAGE 3
FITTING PANELS IN A STRAIGHT RUN
Pack selection; Pack A & Pack C

STAGE 4
FITTING 90° CORNER POSTS
Pack selection; Pack A & Pack C

STAGE 5
EAVES BEAM
Pack selection; Pack A, Pack Di & Pack Dii

STAGE 6
RIDGE INSTALLATION
Pack selection; Pack A, Pack Di & Pack E
STAGE 7

MAIN SPARS INSTALLATION
Pack selection; Pack A & Pack E

STAGE 8

JACK RAFTER INSTALLATION
Pack selection; Pack A, Pack F & PACK G

STAGE 9

GLAZING INSTALLATION
Pack selection; Pack A & Pack G

STAGE 10

SPAR CAPS INSTALLATION
Pack selection; Pack A

STAGE 11

RIDGE CAPS INSTALLATION
Pack selection; Pack A & Pack G

STAGE 12

FRENCH DOORS INSTALLATION
Pack selection; Pack A & Pack G
STAGE 13

TRIMS AND FINISHING
Pack selection; Pack A & Pack G

STAGE 14

GUTTERING INSTALLATION
Pack selection; Pack A & Pack G
1 - BASE SILL COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P106</td>
<td>150mm Sill</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>C101</td>
<td>150mm Sill End Caps</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>C108</td>
<td>External 90° Sill Connector</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>C110</td>
<td>In-line Sill Connector</td>
<td>A</td>
<td>Specific models</td>
</tr>
<tr>
<td>PA5</td>
<td>3.9 x 16mm Reinforcing Screws</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>PA6</td>
<td>100mm Fixing Bolts</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Having already inspected the base for LEVEL AND DIMENSIONAL ACCURACY (against base plan), lay out the 150mm sill pieces (P106) as per the conservatory plan.

Using Sealants

Wherever PVC-U is joined to PVC-U, ensure that all jointing faces are silicone sealed using a low-modulus, neutral cure silicone sealant. The following sealants are recommended:

Low-modulus silicone (brown): for sealing woodgrain finish PVC-U conservatories to dark brick or stone walls.

Low-modulus silicone (white): for sealing white PVC-U to PVC-U.

Acrylic: for internal use where paint is to be used. All recommended sealants remain soft for 15-20 minutes (sufficient time for repositioning if necessary). If excess sealant is not removed immediately, wait until the sealant is fully cured (about 24 hours) before peeling the excess away cleanly.

When using sealant as a filler bead, mask both sides of the bead area with masking tape. Run a bead of sealant along the bead area, exerting an even pressure on the sealing gun.

Always refer to the manufacturers’ instructions for removing excess sealant.

Fitting the Sill

Referring to your base plan diagram lay all 150mm sill pieces (P106) onto the base. Approximate positioning is adequate at this stage.

On dwarf wall models you will have to measure the gap left for the French doors and cut your 150mm sill (P106) by use of a hacksaw, to fit. The 150mm sill (P106) should be cut 4mm shorter than the gap in the dwarf wall.
Position the inside face of the 150mm sill (P106) against this line and onto the base.

Ensure that every run of 150mm sill (P106) has two 70mm sections on one end of the sill milled out as shown in the image below (with the exception of a cut sill for a French door opening which is described in the next paragraph). This will allow the panels to be slid into the groove of the 150mm sill (P106) throughout installation.

This is to compensate for the 150mm sill end caps (C101) which when fitted will create an overall overhang of 5mm over the faces of the brick work.

A separate length of 150mm sill (P106) is supplied to fit between the dwarf walls. This piece of 150mm sill (P106) is cut 4mm shorter than the gap in the dwarf wall.

The 150mm sill end caps (C101) should be attached at the same time as the 150mm sill (P106) is fitted. This process is described at the end of this section.

Do not fit the 150mm sill end caps (C101) to the open ends of the 150mm sill either side of the dwarf wall opening until all panels are fitted (with the exception of the French door outer frame which should be positioned last).

Sill Connectors

Progressively join the 150mm sill sections (P106) together with the external 90° sill connector (C108).

Preparing the 150mm Sill for French Doors in Dwarf Wall Models.

On dwarf wall models you will have to cut the run of 150mm sill (P106) with a hacksaw where the French door is positioned. The pieces of 150mm sill (P106) which sit on the dwarf wall are cut so they overhang into the space for the French door by 2mm on each side.
Note: Some sections may require joining by using in-line sill connector (C110).

Ensure that the external 90° sill connector (C108) is silicone sealed on all contact areas: top, bottom and sides. Fix all sill connectors (C108/C110) to 150mm sill (PA1) with 3.9 x 16mm reinforcing screws (PA5) as shown below.

IMPORTANT: Time spent getting the base sill layout correct will save time later in the installation, as paying attention to the base sill dimensions, positioning, and making sure it is level will ensure the correct fitting of the rest of the conservatory.

Lay the 150mm sill (P106) in position and by use of your roof plan (located with your check list images on box A) ensure that dimension A (front and rear) is equal. Dimension B (both sides) are equal. Dimensions C (two diagonal measurements) are equal.

Once level and in the correct position, using the relevant drill bits, drill through the 150mm sill (P106) and into the base to at least 100mm deep.
Now permanently fix through the 150mm sill (P106) to the base using the 100mm fixing bolts (PA6).

The 100mm fixing bolts (PA6) should be positioned 100mm from each end of the 150mm sill (P106) and equally spaced between.

Two 100mm fixing bolts (PA6) are used to fix the 150mm sill (P106) to the base between the French door opening in dwarf wall models. This however is done at the same time as the French door outer frame is positioned as described in the next section.

**Check your sill layout again for square.**

**Sill End Caps**

On dwarf wall models, the 150mm sill (P106) between the gap in the Dwarf wall should finish 4mm inset from the external faces of the dwarf wall to allow for the 150mm sill end cap (C101).

This first set of 150mm sill end caps (C101) are attached to both ends of the 150mm sill (P106) which is positioned underneath the French door outer frame (as described earlier).

The final set of 150mm sill end caps (C101) are attached when all the panels have been fitted (with the exception of the French door outer frame which will be the last panel to be fitted after the 150mm sill end caps (C101) have been attached).

The 150mm sill end caps (C101) are attached to the open ends of the 150mm sill (P106) positioned on top of the dwarf wall and either side of the opening for the French door.

Apply a bead of low modulus neutral cure silicone to the end face of the 150mm sill (P106) and push fit the 150mm sill end caps (C101) to seal wiping off excess silicone.
2 - FIRST PANELS COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A112</td>
<td>Two-Part Connector</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>A105</td>
<td>26mm Wall Connector</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>C105</td>
<td>Quarter Turn Button</td>
<td>A</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>C106</td>
<td>Sill Support Block</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PD5</td>
<td>60mm Fixing Bolts</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>6AK</td>
<td>6mm Allen Key</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Setting Position for Wall Connectors

Select the 26mm wall connector (A105) and lay out on a work bench or the conservatory base. Use a marker pen or similar tool to mark out the position of the 60mm fixing bolts (PD5).

The first and last 60mm fixing bolt (PD5) should be positioned 50mm from the top and bottom faces of the 26mm wall connector (A105) and the rest should be equally spaced between. A total of five 60mm fixing bolts (PD5) are used on full height models and 3 for a dwarf wall model per 26mm wall connector (A105).

Again, using the scribed vertical line drawn on the wall earlier, position the 26mm wall connector (A105) so that the internal edge is in line with the scribed line on the wall. You will notice that the inside edge of the 26mm wall connector (A105) is in line with the internal face of the 150mm sill (P106). Use a spirit level to check for plumb.

If any marked positions for the 60mm fixing bolts (PD5) land on mortar joints adjust accordingly so that they locate over solid brick. Holding the 26mm wall connector (A105) in position and ensuring that it rests onto the 150mm sill (P106), pre drill through the 26mm wall connector (A105) and into the masonry using an 8mm masonry drill.

Please note that in dwarf wall models the 26mm wall connector (A105) should be cut to size unless a set of French doors are to be positioned against the wall in which case they are left full height. The French door outer frame is then fitted in the same way as any other panel.

Important: Ensure that the 26mm wall connector (A105) is at 90° to the base by packing if required (this should have been accounted for when setting out the base).

Fix the 26mm wall connector (A105) with 60mm fixing bolts (PD5).

Repeat for the connector on the opposite side of the conservatory.
Fitting the First Panel.

Prior to the positioning of the panels and to prevent water ingress, a bead of silicone should be run along the full length of the 150mm sill (P106). The position is shown below.

NB: The 150mm sill (P106) should however, be wiped free of dust or dirt before application of the silicone.

Before installation commences check each panel for any defects such as scratches or bowing. If you find any defects please follow the complaints procedure highlighted at the front of this manual.

You will notice that each panel corner has the inner legs on the panel detail notched away. It is imperative that this detail is present to ensure that all 18mm inline couplings (A104) can slide into position. The notch detail is highlighted below.

IMPORTANT – When fitting your French door frame it must be positioned the right way. To ensure this, check that the drainage slots in the bottom of frame are to the outside of your conservatory.

Select the panel to fit against the property wall. It is imperative that the drain slots in every panel are located at the bottom of the panel and facing front as shown on the next column.

Please also note that two sill support blocks (C106) are attached to the bottom of every panel also shown on the next column, with the exception of the French door outer frame.
Fitting First Panel

Check that the 150mm sill (P106) is clear of dust or dirt then line up the sill support blocks (C106) with the milled out sections at the end of the 150mm sill (P106).

Position the panel onto the 150mm sill (P106) and slide into position.

The sill support block (C106) will sit in the 150mm sill (P106) as shown at the top of the next column.

Fitting the Two-Part Connectors

The first panel is connected to the 26mm wall connector (A105) by use of the two-part connectors (A112). Two are used per 26mm wall connector (A105).

Select a two-part connector (A112) and slide it downwards and over the legs on the 26mm wall connector (A105) ensuring that the legs inter lock.
If there is an obstruction above the 26mm wall connector (A105) which prevents the two-part connectors (A112) from being slid onto the 26mm wall connector (A105), slide the two-part connector onto the panel instead and in the same manner – from above and ensuring that the legs interlock with those of the panel.

When the two-part connectors are in position, slide the panel towards the 26mm wall connector (A105). The leg detail of the two-part connectors (A112) will automatically mate with the leg detail of the forthcoming component.

Select a quarter turn button (C105) and the 6mm Allen key (6AK). The quarter turn buttons (C105) are positioned longitudinally into the gap between the panel and the 26mm wall connector (A105) approximately 50mm from the top and bottom faces of the panel.

When the quarter turn button (C105) is in position and resting against the two-part connector (A112), turn the 6mm Allen key (6AK) 90° clockwise. The quarter turn button (C105) will ‘click’ into position.
Continue to fit the rest of the quarter turn buttons (C105) into the two-part connector (A112) as described.

Six quarter turn buttons (C105) per face of the two-part connector (A112) should be attached on dwarf wall models inside and out, and eight quarter turn buttons (C105) per full height model conservatory, again eight inside and eight on the outside.

A quick check between the back face of the 26mm wall connector (A105) and the wall face of the panel should show 26mm.

An application of silicone should be made to the 150mm sill (P106) where the two-part connector (A112) has made contact.

This should be a bead at the back of the two-part connector (A112) positioned as shown below.

Repeat the entire process for the opposite panel.
### 3 - STRAIGHT RUN PANELS COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A104</td>
<td>18mm Inline Coupling</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>C105</td>
<td>Quarter Turn Button</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>C106</td>
<td>Sill Support Block</td>
<td>-</td>
<td>Pre Assembled</td>
</tr>
<tr>
<td>6AK</td>
<td>6mm Allen Key</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>A107</td>
<td>Adjustable Inline Coupling</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>70fix</td>
<td>70mm Fixing Screw</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram](image-url)
Select the panel to fit against the previously installed panel. **It is imperative that the drain slots in every panel are located at the bottom of the panel and facing front as shown below.**

Please also note that two sill support blocks (C106) are attached to the bottom of every panel also shown below.

Before installation commences check each panel for any defects such as scratches or bowing. If you find any defects please follow the complaints procedure highlighted at the front of this manual.

You will notice that each panel corner has the inner legs on the panel detail notched away. **It is imperative that this detail is present to ensure that all 18mm inline couplings (A104) can slide into position. The notch detail is highlighted below.**

**Fitting the Intermediate Panel**

Check that the 150mm sill (P106) is clear of dust or dirt then line up the sill support blocks (C106) with the milled out sections at the end of the 150mm sill (P106).

Position the panel onto the 150mm sill (P106) and slide into position.

If you have a dwarf wall model conservatory and you have had to cut the 150mm sill (P106) for a French door opening, the first panel, and any subsequent ones between the host wall and the French door opening, are slid on through the open face of the 150mm sill (P106) as shown on the next page.
The panel is slid along the 150mm sill (P106) until it is approximately 18mm away from the last panel to be installed.

Select the 18mm inline coupling (A104) sliding downwards and through the gap between the two panels until it rests on the 150mm sill (P106) at the foot of the panel.

IMPORTANT: As the 18mm inline coupling (A104) is being positioned check that the legs on the 18mm inline coupling (A104) interlock with the leg detail on the panels as shown below.

Remember to silicone seal around the bottom of the 18mm inline coupling (A104) when in position.

Select a quarter turn button (C105) and the 6mm Allen key (6AK).

The quarter turn buttons (C105) are positioned longitudinally into the gap between the panels and approximately 50mm from the top and bottom faces of the panel.
When the quarter turn button (C105) is in position and resting against the 18mm inline coupling (A104), turn the 6mm Allen key (6AK) 90° clockwise. The quarter turn button (C105) will ‘click’ into position.

Continue to fit the rest of the quarter turn buttons (C105) into the 18mm inline coupling (A104) as described.

Six quarter turn buttons (C105) per face of the 18mm inline coupling (A104) should be attached on dwarf wall models inside and out, and eight quarter turn buttons (C105) per full height model conservatory, again eight inside and eight on the outside.

A quick check between the two panels should show 18mm.

An application of silicone should be made to the 150mm sill (P106) where the 18mm inline coupling (A104) has made contact.

This should be a bead at the back of the 18mm inline coupling (A104) positioned as shown below.

Continue the entire process for all panels and 18mm inline couplings (A104).

**Adjustable Connectors**

After every third 18mm inline coupler (A104) along a run of connected panels, an *adjustable* inline coupling (A107) is supplied. These adjustable inline couplings (A107) allow for adjustment to ensure that the panels will finish in the correct position at the end of a run of panels when connecting to a corner post or wall connector.

Due to the way that the panels are manufactured any adjustments you may need to undertake will be to *increase* the 18mm gap between two adjacent panels.
After the third panel has been assembled along a straight run of panels, it is recommended to check the dimension from the start of the 26mm wall connector (A105) to the centre line of the previous 18mm inline coupler (A104).

Check this dimension by referring to your roof plan. This will tell you whether your panels are still set at the correct increments or require adjustment.

The two halves of the adjustable inline couplings (A107) slide together in 3 variant positions as shown below and should be interlocked prior to assembly.

18mm Adjustment (if no further adjustment is necessary)

When the adjustable inline couplings (A107) are interlocked to the required setting they are slid between the two adjacent panels in the same way as the 18mm inline couplings (A104).
Remember to silicone seal around the bottom of the adjustable inline couplings (A107) when in position.

The quarter turn buttons (C105) are again used to lock the panels together in the same positions and quantities as the 18mm inline coupling (A104). A dimensional check is then performed to ensure that the required setting has been achieved.

Fitting French Door Outer Frames for Dwarf Wall Models.

The French door outer frame is the last panel to be fitted.

It is recommended to remove the French doors from the French door outer frame prior to installation.

Ensure that the outer frame is positioned correctly by checking the following;

*The drain holes are at the bottom of the panel and facing outward. You will also notice that the sill support blocks (C106) will be absent from the bottom face of the French door outer frame.*
The French door outer frame is positioned like all other panels with the exception that the French door outer frame is not slid onto the 150mm sill (P106) but simply placed into position.

Again, check that the inner legs on the outer frame panel detail are notched to allow the 18mm inline couplings (A104) to interlock with the panels as indicated below.

On dwarf wall models, the 18mm inline couplings (A104) which attach the French door outer frame to the adjacent panels are to be cut to size as they must rest on top of the 150mm sill (P106) as shown below.

Locate the French door outer frame position by ensuring that the internal face of the French door outer frame is in line with the internal face of the 150mm sill (P106).
Remember to silicone seal around the bottom of the 18mm inline coupling (A104) when in position.

Select a quarter turn button (C105) and the 6mm Allen key (6AK).

The quarter turn buttons (C105) are positioned longitudinally into the gap between the panels and approximately 50mm from the top and bottom faces of the panel.

When the quarter turn button (C105) is in position and resting against the 18mm inline coupling (A104), turn the 6mm Allen key (6AK) 90° clockwise. The quarter turn button (C105) will 'click' into position.

Continue to fit the rest of the quarter turn buttons (C105) into the 18mm inline coupling (A104) as described.

Six quarter turn buttons (C105) per face of the 18mm inline coupling (A104) should be attached on dwarf wall models inside and out, and eight quarter turn buttons (C105) per full height model conservatory, again eight inside and eight on the outside.

A quick check between the two panels should show 18mm.
Once level and in the correct position, fix the French door outer frame to the 150mm sill (P106) by use of four 70mm fixing screws (70fix), two positioned on each side of the shoot bolt keeps at the foot of the French door.

Now permanently fix the French door outer frame to the sides of the dwarf wall with two 100mm fixing bolts (PA6).

In dwarf wall models use the relevant drill bits to pre-drill two holes through the French door outer frame, as indicated below and then into sound masonry positioned 50mm in from the top and bottom of the dwarf wall.
### 4 - 90° CORNER POST COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A109</td>
<td>90° Corner Post</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>C105</td>
<td>Quarter Turn Buttons</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>6AK</td>
<td>6mm Allen Key</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of 90° Corner Post](image)
The panels which sit either side of the 90° corner post (A109) should be positioned at the approximate position as shown below so that the internal corners of the panels touch.

Select the first 90° corner post (A109) and from above, slide between the two adjacent panels. The angled corner section of the 90° corner post (A109) is positioned to the outer corner of the 150mm sill (P106) as shown below. **Bed onto a bead of silicone positioned onto the 150mm sill (P106).**

Ensure that the leg detail on the 90° corner post (A109) interlocks with the leg detail on the panels as shown below.

Select a quarter turn button (C105) and the 6mm Allen Key (6AK).

The quarter turn buttons (C105) are positioned longitudinally into the gap between the panels and 90° corner post (A109) at approximately 50mm from the top and bottom faces of the panels.
When the quarter turn button (C105) is in position and resting against the 90° corner post (A109), turn the 6mm Allen key (6AK) 90° clockwise. The quarter turn button (C105) will ‘click’ into position.

The 90° corner post (A109) also requires a quarter turn button in the adjacent outer corner. This is positioned in the same way as described previous.

If positioned correctly, the quarter turn buttons (C105) should lock the 90° corner post and panels as shown below.

Continue to fit the rest of the quarter turn buttons (C105) into the 90° corner post (A109) as described.

Six quarter turn buttons (C105) per face of the 90° corner post (A109) should be attached on dwarf wall models inside and out, and eight quarter turn buttons (C105) per full height model conservatory, again eight inside and eight on the outside.

A quick check along the horizontal between the two panels should show 70mm.
It is recommended to run a thin bead of silicone where the panels meet on the inside of the conservatory.
### 5 - EAVES BEAM COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA1</td>
<td>Eaves Beam</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>RA2</td>
<td>Double Bolt Retainer, consisting;</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA3</td>
<td>M5 x 25mm Bolt</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA4</td>
<td>Eaves Beam Joiner</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA5</td>
<td>6.35 x 38mm Silver Screw</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA6</td>
<td>4.8 x 120mm Yellow Screw</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>A105</td>
<td>Eaves Beam Inline Joiner</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td>3.9 x 25 Silver Screw</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
It is recommended at this point to re-check the internal dimensions (width and projection) and check the measurements across the internal corners (these should be the same).

**If your roof has a box gutter (BG1), please refer to the box gutter section at the back of this manual.**

Attach the eaves beam external trim (RA1a) onto the front of the eaves beam (RA1) as shown at the top of next column remembering to remove the protective film.

Position the eaves beam (RA1) centrally on top of the panels. When positioned correctly the front face of the eaves beam (RA1) will sit flush with the front face of the panels below and the eaves beam (RA1).

Slide the eaves beam bolt retainers (RA2) complete with M5 x 25mm bolt (RA3) into the eaves beam (RA1). To calculate how many bolt retainers (RA2) are required refer to your roof plan.

Please note: One double bolt retainer is required per spar however a single bolt retainer (RA2) is required for each 25mm starter spar (RD5) and either side of the eaves beam (RA1) corners. Do not throw any spares away.

The eaves beam (RA1) pieces will also require joining at the corners. These are joined using two eaves beam joiners (RA4) which slot together as shown below and slide into the channels on the inside of the eaves beam (RA1).

Prior to joining the eaves beam (RA1), apply a bead of silicone to the cut faces of the eaves beam (RA1) as shown below.
The eaves beam joiners (RA4) are fixed into position by use of the 6.35 x 38mm silver screws (RA5) through the pre-drilled holes.

When the eaves beam (RA1) is assembled on top of the panels, drill through the eaves beam (RA1) only with a long reach 5mm drill at positions which are 100mm from the edge of each panel (i.e. two holes per panel position).

Please note: The first holes in from each end of the eaves beam (RA1) should be positioned at 200mm to ensure that the 4.8 x 120mm yellow screw is fastened into panel rather than 90° corner post (A109).

Do not use the 4.8 x 120mm yellow screws to fix the eaves beam (RA1) to the French door outer frame. Instead use four 70mm fixing screws (70fix) as you used to fix the French door outer frame to the 150mm sill (P106), pre drilling upwards from inside the French door outer frame and up into the eaves beam (RA1).

Power drill the 4.8 x 120mm yellow screws (RA6) down through the holes in the eaves beam (RA1).

Silicone seal the gaps between the front of the eaves beam external trim (RA1a) and the front of the panels to create a water-tight seal.
6 – RIDGE COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Ridge Assembly, consisting;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RD1</td>
<td>25° Ridge</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>RD1b</td>
<td>Bottom Cloaking Trim</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>WP3</td>
<td>Top Cloaking Trim</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RD3</td>
<td>Edwardian Boss End</td>
<td>A</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA2</td>
<td>Double Bolt Retainer, consisting;</td>
<td>A</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA3</td>
<td>M5 x 25mm Bolt</td>
<td>A</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>PD5</td>
<td>60mm Fixing Bolts</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RD5</td>
<td>Starter Spar, including;</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RD5a</td>
<td>Under Cladding</td>
<td>E</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RD5b</td>
<td>Spar Glazing Stop</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>PA5</td>
<td>3.9 x 16mm Reinforcing Screw</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA7</td>
<td>M5 Locking Nut</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RD9</td>
<td>Flashing Tape</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

**Diagram:**
- **RA3**: M5 x 25mm Bolt
- **RD5**: Starter Spar, including Under Cladding
- **RD1**: 25° Ridge
- **RA2**: Double Bolt Retainer, consisting
- **RA7**: M5 Locking Nut
- **WP3**: Top Cloaking Trim
- **RD5a**: Under Cladding
- **RD5b**: Spar Glazing Stop
- **PA5**: 3.9 x 16mm Reinforcing Screw
- **RD1b**: Bottom Cloaking Trim
Referring to your roof plan, select the correct number of bolt retainers (RA2) complete with M5 x 25mm bolts (RA3) and slide into the channels of the 25° fixed pitch ridge (RD1).

The double bolt retainers (RA2) required for intermediate (RD6) and hip spars (RK1) have an equal sized bolt inside them as shown below.

The starter spars (RD5) and any spars (RD6) which connect directly onto the end of the ridge (RD1) use a different double bolt retainer (RA2) as described later.

It will be easier to assemble the spars (RD5/6) if all the pre-assembled M5 locking nuts (RA7) are removed from the double bolt retainers (RA2) in the eaves beam (RA1) and the 25° fixed pitch ridge (RD1), and kept about your person for use as and when you require them.

Please note: all spars (RD5/6) must be counted in sequence. These will then correspond to the numbering on the physical spar (RD5/6) assemblies.

Prior to the erection of the 25° fixed pitch ridge (RD1) locate the Edwardian boss end (RD3) over the double bolt retainers in the 25° fixed pitch ridge (RD1) and loosely thread on the M5 locking nuts (RA7). This will help keep the Edwardian boss end (RD3) in place whilst the 25° fixed pitch ridge (RD1) is hoisted into position.

Temporarily supporting the 25° fixed pitch ridge (RD1) in the correct position, locate the holes in the top of the starter spar (RD5) over the M5 x 25mm bolt (RA3) in the 25° fixed pitch ridge (RD1).

To identify the spar (RD5/6) numbers for your conservatory, when referring to your roof plan the first starter spar (RD5) (marked as P1) is always located at the top left of the diagram. The spars (RD5/6) can then be counted anti-clockwise around the layout.

Now attach the same starter spar (RD5) over the single bolt retainer (RA2) in the
The end which has the holes drilled furthest up the spar (RD5/6) is the end which is positioned over the eaves beam (RA1).

Loosely screw on the M5 locking nuts (RA7) but do not tighten at this stage. Repeat for the starter spar (RD5) on the opposite side of the 25° fixed pitch ridge (RD1).

When both starter spars (RD5) are in position remove the M5 locking nuts (RA7) from the Edwardian boss end (RD3) located at the front end of the 25° fixed pitch ridge (RD1).

Select a spar (RD6) and position its holes over the double bolt retainers (RA2) in the eaves beam (RA1).

If you do not have a set of spars (RD6) which attach to the end of the 25° fixed pitch ridge (RD1) attach the Edwardian hip spars (RK1) instead to hold the 25° fixed pitch ridge (RD1) in place. This detail can be found in the next section - Assembling the Main Spars.

Locate the holes in the top of the spar (RD6) over the M5 x 25mm bolts (RA3) in the 25° fixed pitch ridge (RD1). Replace the M5 locking nuts (RA7) over the spar (RD6) and the Edwardian boss end (RD3) but do not tighten at this stage.

Repeat for the spar (RD6) on the opposite side of the 25° fixed pitch ridge (RD1).

When positioned correctly the Edwardian boss end (RD3) should sit on the 25° fixed pitch ridge (RD1) by 61mm.

The outer face of the spar under cladding (RD5a) should be flush with the front face of the ridge (RD1).
Once completed, the 25° fixed pitch ridge (RD1) is self supporting and additional roof checks to ensure the build is plumb and level should be carried out.

If your first set of spars (RD6) do not fit at the end of the ridge (RD1) simply fix in place by use of a M5 locking nut (RA7).

If all checks have been performed it is now possible to permanently fix the starter spar (RD5) to the host wall. Using the relevant 8mm drill bits, drill through the starter spars (RD5) and subsequently into the host wall (to a minimum 90mm depth). The position of the drilling should be approximately 150mm from each end and then at 500mm centres (these dimensions may vary to ensure that is into sound masonry and not mortar joints). Fix into place using the 80mm fixing bolts (PD5).
### 7 – MAIN SPARS COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA2</td>
<td>Double Bolt Retainer, including;</td>
<td>A</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA3</td>
<td>M5 x 25mm Bolt</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RK1</td>
<td>Edwardian Hip Spar, including;</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>RD5a</td>
<td>Under Cladding</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RD5b</td>
<td>Spar Glazing Stop</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>PA5</td>
<td>3.9 x 16mm reinforcing Screw</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RD1</td>
<td>25° Fixed Pitch Ridge</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>RD3</td>
<td>Edwardian Boss End</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RD6</td>
<td>Spar</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA7</td>
<td>M5 Locking Nut</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram showing the components RA2, RA3, RK1, RD5a, RD5b, PA5, RD1, RD3, RD6, RA7 and their relationships.](image-url)
The term ‘main spars’ refers to the remaining spars (RD6) which attach to the 25° fixed pitch ridge (RD1), any spars (RD6) which run from the eaves beam (RA1) to the Edwardian boss end (RD3) and lastly the Edwardian hip spars (RK1). The Edwardian hip spars (RK1) are the diagonal positioned spars which run from the corner of the eaves beam (RA1) to the Edwardian boss end (RD3).

If your roof has a tie bar, please refer to the tie-bar section at the back of this manual.

When fitting the main spars (RD6) it is advised to start at the left hand rear side of the roof working around anti-clockwise. This is so that the spars follow in label sequence. After removing the protective film from the spar under cladding (RD5a) labelled ‘P2’, slot the spar (RD6) holes over the M5 x 25mm bolts (RA3) in the double bolt retainers (RA2) located in the 25° fixed pitch ridge (RD1).

Do the same for the holes at the bottom of the spar (RD6) which connect to the M5 x 25mm bolts (RA3) in the double bolt retainers (RA2) located in the eaves beam (RA1). Loosely thread on the M5 locking nuts (RA7). Repeat for any more spars (RD6) which connect to the same side of the 25° fixed pitch ridge (RD1).
Next, slot a double bolt retainer (RA2) through the pre-drilled holes in the Edwardian boss end (RD3) from underneath so that the double bolt retainer (RA2) is actually positioned on the inside of the Edwardian boss end (RD3). Locate the holes at the top of the Edwardian hip spar (RK1) over the M5 x 25mm bolts (RA3) which poke through the pre-drilled holes in the Edwardian boss end (RD3). Loosely thread on the M5 locking nuts (RA7).

If you have an intermediate spar (RD6) which runs from the middle of the eaves beam (RA1) to the Edwardian boss end (RD3) fit this next. This spar (RD6) is attached to the eaves beam (RA1) and the Edwardian boss end (RD3) as previously described.

Work around the roof until all ‘main spars’ have been fitted.

Prior to tightening any M5 locking nuts (RA7) it is recommended that you perform some spar position checks. The first check is the distance from the plumb line where you positioned the first panel connector – 25mm connector A (PD4) against the host wall/packing on the far left to the centre line of the next spar (RD6) labelled as ‘P2’. Refer to your roof plan for this dimension. If the distance is correct tighten the M5 locking nut (RA7) fully.
If all checks have been performed it is now possible to permanently fix the starter spar (RD5) to the host wall.

Using the relevant 8mm drill bits, drill through the starter spars (RD5) and subsequently into the host wall (to a minimum 90mm depth). The position of the drilling should be approximately 150mm from each end and then at 500mm centres (these dimensions may vary to ensure that is into sound masonry and not mortar joints). Fix into place using the 60mm fixing bolts (PD5).
**O – JACK RAFTERS INSTALLATION**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RK1</td>
<td>Hip Spar</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>JR1</td>
<td>Jack Rafter Assembly</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RD5a</td>
<td>Under Cladding</td>
<td>-</td>
<td>Pre-assembled</td>
</tr>
<tr>
<td>JR2</td>
<td>Jack Rafter Arm</td>
<td>-</td>
<td>Pre-assembled</td>
</tr>
<tr>
<td>JR3</td>
<td>Heavy Duty Jack Rafter Packer</td>
<td>A</td>
<td>Pre-assembled</td>
</tr>
<tr>
<td>JR4</td>
<td>Pivot Bolt</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RD7</td>
<td>M6 Locking Nut</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

[Diagram of jack rafters installation with labels for RK1, JR1, JR3, JR2, RD7, RD5a, JR4]
Jack rafters are the spars (JR1) whose tops are cut at an angle and when in position will run perpendicular from the eaves beam (RA1) till they meet, and attach to the hip spar (RK1).

Before attaching the jack rafter (JR1), slide the spar under cladding (RD5a) down and away from the top end of the jack rafter (JR1). REMEMBER to remove the protective film.

Slide the pivot bolt (JR4) up the channel in the hip spar (RK1) until it meets the eye in the jack rafter arm (JR2) and hook over the top of the pivot bolt (JR4).

Slide the under cladding (RD5a) back to the top of the jack rafter (JR1) and tight up to the hip spar (RK1) under cladding (RD5a).

Locate the holes at the bottom of the jack rafter (JR1) onto the M5 x 25mm bolts (RA3) situated in the double bolt retainers (RA2) in the eaves beam (RA1).

Push the jack rafter (JR1) fully onto the M5 x 25mm bolts (RA3) in the eaves beam (RA1) and the pivot bolt (JR4). Thread on the M5 locking nuts (RD5) over the M5 x 25mm bolts (RA3) in the eaves beam (RA1) and the M56 locking nut (RD7) over the pivot bolt (JR6).

Repeat this process for all jack rafters (JR1). It is recommended that before all locking nuts (RA7/RD7) are tightened, some dimensional checks are performed to ensure that all spars (RD6) and jack rafters (JR1) are perpendicular to the eaves beam (RA1) and correctly spaced.

The dimensional checks to perform are the ones between the jack rafters (JR1). These dimensions shown on your roof plan are taken from spar centre line to spar centre line. If all spars (RD6) are correctly positioned, tighten the M5 locking nuts (RA7).
From the inside silicone seal the areas between the jack rafter under cladding (RD5a) and the hip spar under cladding (RD5a).
### BOLSTER BAR COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB1</td>
<td>Bolster Assembly, comprising:</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>BB1a</td>
<td>Bolster Bar</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>BB1b</td>
<td>Bolster Bar Cover</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>BB1c</td>
<td>Bolster Bar End Cap</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>BB1d</td>
<td>Bolster Bar Screw Cover Cap</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>SC4</td>
<td>3.9 x 25mm Silver Screws</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>SRD8</td>
<td>M5 x 20mm Bolt</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RA7</td>
<td>M5 Locking Nut</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
</tbody>
</table>
Some large roofs require extra strength in the spars (RD6). This extra strength is given by use of the bolster bar assemblies (BB1).

**Not all roofs require bolster bar assemblies (BB1) nor require a bolster bar assembly (BB1) on every spar (RD8).**

The bolster bar (BB1a) will be pre assembled to the relevant spars (RD6). Generally the bolster bar (BB1a) is around 600mm smaller than the spar (RD6) it is connected to.

Offer the bolster bar cover (BB1b) up to the preassembled bolster bar (BB1a) and with a glazing mallet or similar plastic surfaced mallet, knock the bolster bar cover (BB1b) on, starting at the top and working down the cover towards the eaves beam (RA1) as you did with the spar top caps (RN1).

The ends of the bolster bar cover (BB1b) will finish flush with ends of the bolster bar (BB1a).

The bolster bar end cap (BB1c) slides on to the end of the bolster bar (BB1a) and over the end of the bolster bar cover (BB1b).

The bolster bar end cap (BB1c) is connected to the bolster bar (BB1a) by use of a single 3.9 x 25mm silver screw (SC4) which fixes through both screw ports of the bolster bar (BB1a) and the bolster bar cover (BB1b).

It is recommended that the bolster bar end cap (BB1c) is fitted before the spars (RD6) are attached to the eaves beam (RA1).

The 3.9 x 25mm silver screw (SC4) is then covered by the bolster bar screw cover cap BB1d).
## 9 – ROOF GLAZING COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM1</td>
<td>Roof Glazing Sheet</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>RM1a</td>
<td>End Closure</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RM2</td>
<td>Glazing Support Trim</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>RM3</td>
<td>Glazing Support Tape</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
<tr>
<td>RM3a</td>
<td>Glazing Tape Protective Film</td>
<td>-</td>
<td>Pre-Assembled</td>
</tr>
</tbody>
</table>

![Diagram of roof glazing components](image)
Unpack the roof glazing sheets (RM1). If your glazing material is polycarbonate, it is important at this stage to note that the surface which is protected by the **printed** polythene film is the surface which is on the outside of the conservatory.

**If your roof has glass roof sheets please refer to the Muntin Bar section at the back of this manual.**

The print on the outer film gives details on how to correctly store your polycarbonate until it is installed. Each roof glazing sheet (RM1) is labelled with the corresponding number on your roof plan.

Fit all the glazing support trim (RM2) into eaves beam (RA1). This trim will snap fit into the channels of the eaves beam (RA1) between the spars (RD6). Do not remove the glazing tape protective film (RM3a) at this point.

Once the glazing support trim (RM2) is in place, apply a bead of silicone to the gap between the glazing support trim (RM2) and the side of the spars (RD6).

The end closure (RM1a) may be pre-assembled on polycarbonate roof glazing sheets (RM1) however you will need to remove and apply a line of silicone along the top face of the breather tape where it will come into contact with the end closure (RM1a) once application complete.

The end closure (RM1a) push fits over the bottom edge of the roof glazing sheet (RM1) with the flange facing down.
The polycarbonate end closure (RM1a) should also be pre-notched at either end to allow the polycarbonate roof glazing sheet (RM1) to rest fully onto the spar (RD6) as shown below.

Select the first roof glazing sheet (RM1) and remove its protective outer film (polycarbonate only). It is recommended that only a 100mm perimeter of the inner protective film is removed at this stage of conservatory installation as this will help protect the roof glazing sheet (RM1) from any unwanted marks. The inner protective film can then be completely removed once all plaster work is complete.

Start with the roof glazing sheets (RM1) against the wall and to the left with the face which had the printed film facing outwards.

Prior to fitting the roof glazing sheets (RM1) it is recommended to peel back around 50mm to 100mm of the glazing tape protective film (RM3a). This enables adjustments to be made to the position of the roof glazing sheet (RM1) without permanently sticking the entire roof glazing sheet (RM1) to the glazing support trim (RM2).

Ensure that the glazing tape protective film (RM3a) rests on the inside of the conservatory.

Push the roof glazing sheet (RM1) up into the wallplate (RE1) then slowly allow it to slide back down away from the wallplate (RE1) until it rests 5mm from the end of the spar (RD6). Gently allow the roof glazing sheet (RM1) to rest on to the glazing support trim (RM2).
Once the roof glazing sheet (RM1) is in place, pull on the glazing tape protective film (RM3a) on the glazing support trim (RM2) from the inside of the conservatory in a downwards motion to remove.

Recommended Method of Glazing

When you are glazing your conservatory roof it is recommended that you place the roof glazing sheet (RM1) labelled ‘G1’ into position first. Then by use of a step ladder through the empty ‘G2’ roof glazing sheet (RM1) position you will have good access to put on the spar top cap (RN1) labelled ‘P1’ first. Then place ‘G2’ roof glazing sheet (RM1) into position whilst getting good access to put on ‘P2’ spar top cap (RN1) by use of your stepladder in the empty ‘G3’ roof glazing sheet (RM1) position. If you choose to install the roof glazing sheets (RM1) and spar top caps (RN1) in this way it is imperative that you read both the glazing installation and the spar cappings installation sections prior to glazing your conservatory roof.

When satisfied that the roof glazing sheet (RM1) is in place, gently pull on the glazing tape protective film (RM3a) on the eaves beam glazing support trim (RM2) in a downwards motion while pressing firmly down on the roof glazing sheet (RM1) to make sure that it remains in position afterwards. When satisfied that the roof glazing sheet (RM1) is in place, gently pull on the glazing tape protective film (RM3a) on the glazing support trim (RM2) located in the eaves beam (RA1) in a downwards motion while pressing down on the roof glazing sheet (RM1) to make sure that it remains in the same position. Continue to fit all others as previously described.

PLEASE NOTE IT IS NOT UNCOMMON FOR CONDENSATION TO APPEAR IN THE FLUTES OF THE POLYCARBONATE ROOF GLAZING SHEETS (RM1) FROM TIME TO TIME.

THE ‘BREATHER’ TAPE PRE-FITTED TO THE BOTTOM OF THE POLYCARBONATE ROOF GLAZING SHEETS (RM1) IS DESIGNED TO ALLOW THE MOISTURE TO EVAPORATE NATURALLY.

DO NOT BREAK THE SEAL ON THE BREATHER TAPE IN ATTEMPT TO INCREASE THE VENTILATION INTO THE FLUTES OF THE POLYCARBONATE ROOF GLAZING SHEETS (RM1).
9 – SPAR CAPPING COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN1</td>
<td>Spar Top Cap</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>RN1a</td>
<td>Spar Top Cap Gasket</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RN2</td>
<td>Spar End Cap</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>PD2</td>
<td>3.9 x 19mm Yellow Screw</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SC5</td>
<td>Screw Cover Cap</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of Spar Capping Components](image_url)
Once all roof glazing sheets (RM1) are in position and stuck to the glazing support trim (RM2), it is time to attach the spar top caps (RN1) to the spars. This is for two reasons; firstly to permanently keep the roof glazing sheets (RM1) in place and secondly to create a water-tight seal.

**Fitting Starter Spar Caps**

Select the appropriate spar (RD5) top cap (RN1) by matching its number with the corresponding spar number.

Start with the top cap (RN1) which fits on the intermediate spars (RD6).

Prior to installing the spar top cap (RN1), the spar top cap rubber gasket (RN1a) must be lubricated with a solution of mild soapy water (this will help to slide the spar top cap (RN1) along the spar (RD6) if adjustments are necessary).

Position the top face of the spar top cap (RN1) underneath the overhang on the ridge (RD1).

Use a glazing mallet or similar plastic surfaced mallet to knock on the spar top cap (RN1) starting at the top and working down the spar top cap (RN1) towards the eaves beam (RA1).

When the spar top cap (RN1) is attached, make sure that the bottom face of the spar top cap (RN1) is flush with the bottom face of the spar (RD6). Remove the protective film from the spar top cap (RN1). Repeat for the starter spar top caps (RN1).
Locate the spar end cap (RN2) to the end of the starter spar (RD5) by using two 3.9 x 19mm yellow screws (PD2).

Locate the large screw cover cap (SC5) over the elongated slot detail.
### 11 – RIDGE CAPS

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD1</td>
<td>25° Fixed Pitch Ridge</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>RP1</td>
<td>Edwardian Boss End Cover External</td>
<td>A</td>
<td>Style may vary</td>
</tr>
<tr>
<td>SRP1</td>
<td>Ridge Cover External</td>
<td>E</td>
<td>Style may vary</td>
</tr>
<tr>
<td>SRP2</td>
<td>Cresting</td>
<td>A</td>
<td>Style may vary</td>
</tr>
<tr>
<td>SRP3</td>
<td>Finial</td>
<td>A</td>
<td>Style may vary</td>
</tr>
<tr>
<td>R5</td>
<td>Foam Bung</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of Ridge Caps](image-url)
Now that all the edges of the polycarbonate roof sheets (RM1) are sealed by use of the spar top caps (RN1) and the spar end caps (RN2), the tops of the spars (RD6) need to be sealed from water ingress and dirt.

After folding into a semi circle ensuring the ends are tucked into the centre, place the foam bung (R5) into the void on the Edwardian boss end (RD3) so that the outer face rests against the back of the spars (RD6).

Using the silicone provided, run a bead around the join of the foam bung (R5) and around the end of each spar top cap (RN1), being careful to avoid gaps in the sealant.

**Fitting the Ridge Covers**

When fitting the ridge covers, you must firstly connect the ridge cover external (SRP1) to the Edwardian boss cover external (RP1) prior to assembly on the 25° fixed pitch ridge (RD1).

Select the Edwardian boss end cover external (RP1), wipe the internal surfaces clean of dirt and run a bead of silicone around the edges of the connecting legs and the end connecting surface of the ridge cover external (SRP1).

Slide the Edwardian boss end cover external (RP1) onto the ridge cover external (SRP1). Push till the end surface of the ridge cover external (SRP1) is tight against the face of the Edwardian boss end cover external (RP1). Wipe off all excess silicone.

Select the finial (SRP2) and slide onto the Edwardian boss end cover external (RP1) from the front.
When the finial (SRP2) is in position, seal the back joint with silicon.

Slide the pieces of cresting (SRP3) onto the ridge cover external (SRP1) through the moulded grooves from the open end of the ridge cover external (SRP1). The last piece of cresting (SRP3) may have to be trimmed so that it finishes flush with the end of the ridge cover external (SRP1).

To do this temporarily position the cresting (SRP3) on to the ridge cover external (SRP1), mark the where the overhang begins, remove, trim and re-position.
Lift the assembly onto the top of the 25° fixed pitch ridge (RD1) and push fit so that it locates onto the top prongs of the 25° fixed pitch ridge (RD1). Support when assembling the ridge cover external (SRP1) on to the 25° fixed pitch ridge (RD1) can be gained by use of conservatory ladders or by spreading your leaning weight on boards positioned across the spars (RD6). **Do not put your weight directly on to the roof glazing sheets (RM1).**
### 12 - FRENCH DOORS COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR1</td>
<td>Door Handles</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RR2</td>
<td>Cylinder</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RR3</td>
<td>5mm Allen key</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RR5</td>
<td>4mm Allen Key</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RR6</td>
<td>2mm Allen Key</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1</td>
<td>3-Way Flag Hinge Assembly, consisting</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1a</td>
<td>Flag Hinge</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1b</td>
<td>Flag Hinge Cylinder</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1c</td>
<td>Flag Hinge Cylinder Cap</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1d</td>
<td>Flag Hinge Socket</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1e</td>
<td>Flag Hinge Socket Packer</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1f</td>
<td>Spindle</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>FH1g</td>
<td>Flag Hinge Socket Cap</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of French Doors Components](image-url)
Double-check the French door outer frame for square, plumb and twist (check measurement from corner to corner).

The 3-way flag hinge assembly (FH1) has some components already fitted. There are three 3-way flag hinge assemblies (FH1) per door. The flag hinge (FH1a) is already fitted to the door leaf with all the components assembled inside.

Likewise, the flag hinge socket (FH1d) is pre fitted to the French door outer frame, again with all the components assembled except for the spindle (FH1f) and the flag hinge socket cover (FH1g).

Drop the spindle (FH1f) into the flag hinge socket (FH1d) ensuring that the moulded leg slots into the matching notch detail in the flag hinge socket (FH1d) with the longer section of the spindle (FH1f) pointing upwards.

Locate the French door so that the spindle (FH1f) locates into the cylindrical recess in the flag hinge cylinder (FH1b).
The Edwardian Installation Guide

Adjusting the 3-Way Flag Hinge

If the 3-way flag hinge assembly (FH1) needs adjusting to bring the door tighter or further away from the French door outer frame you have to firstly remove the flag hinge cylinder cap (FH1c), this will allow you access to the adjuster on the top of the flag hinge cylinder (FH1b).

Fit the door handles (RR1) and cylinder (RR2) NB: To operate the locking mechanism the handle must be lifted to allow the key to turn the cylinder (RR2).

Ensure that the gap between the doors is parallel. When set correctly the gap between the doors will be 14mm.

The datum point, indicated by the moulded triangular up stand, will be pre-positioned pointing towards the flag hinge (FH1a). For descriptive purposes as you look towards the French door, call this position 9 o’clock.
If the datum point is turned to 6 o’clock (counter clock wise) away from the French door outer frame, the door will be adjusted 2mm away from the French door outer frame. Likewise, if turned to 12 o’clock (clockwise) towards the French door outer frame, the French door will be adjusted so that it is 2mm closer. The flag hinge cylinder (FH1b) can be adjusted using an Allen key, but preferably a flat bladed screw driver.

Replace the flag hinge cylinder cap (FH1c) immediately after adjustment and prior to trialling the French door adjustment.

If the 3-way flag hinge assembly (FH1) needs adjusting vertically to lift the door further up the French door outer frame, or closer to the shoot bolt keeps at the foot of the French door outer frame, the adjustment can be found on the bottom face of the flag hinge socket (FH1d).

Remove the flag hinge socket cap (FH1f) to reveal the adjuster.

Insert the Allen key into the adjuster and turn clockwise a quarter of a turn to lift the French door 2mm and counter clockwise to lower the French door.
When content that the French door is correctly positioned, replace the flag hinge socket cap (FH1f).

Insert the Allen key and turn clock wise to adjust the door right and counter clockwise to adjust the door left along the horizontal plane. Revolve as many times as required for this adjustment.

If the French door needs adjusting horizontally the adjuster for this motion is located on the end face of the flag hinge (FH1a).

Shoot Bolt Keeps

The shoot bolt keeps have an adjustable top section. On the slave door adjust the top section so that this door is pulled into the frame as tight as possible. Adjust the master door keep as required to ensure that the door latching and locking is a smooth operation.
Connecting Restrictor Arm

When the French Doors are in place you need to connect the restrictor arm assembly. This is found in two parts and already connected to the top of your French door and the top inside corner of your French door outer frame.

You will notice that the sliding restrictor arm assembly is attached to the French door with the restrictor arm itself already attached as shown below. The restrictor arm is taped into position for transit and the tape is to be removed prior to installation.

Locate the fixed restrictor arm assembly on the top inside corner of your French door outer frame and push fit the button on the restrictor arm into the receptor on the fixed restrictor arm assembly as shown below.

When the restrictor arm has been located, tighten the restrictor arm lock by use of a 2mm Allen key (RR6) in the adjustor as shown below.

Height Adjustment

Please note that the panel glazing beads must be removed before attempting any height adjustments. These can be removed by use of pallet knife or thin chisel. Care must be taken to avoid damage to French door outer frame. Check the tops of the two doors for level, at the centre. If they are not level, determine which door, or doors, require adjustment. Remove the glazing beads, open the doors and on top of the rebate approx. 150mm from the opening edge there is an Allen screw.

With a 4mm Allen key (RR5) turn the screw clockwise to lift the door, anti-clockwise to lower the door. Please ensure that during adjustments the glass unit does not touch the door sash at any point except upon the packers. If this happens then re-adjust after adding/removing packers as required.
13 – TRIMS AND FINISHING COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRS2</td>
<td>Eaves Beam Cover</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>P114</td>
<td>90° Corner Post Cover</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>RS4</td>
<td>Ridge Cover Internal</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>P111</td>
<td>18mm Coupling Cover</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>RS7</td>
<td>Edwardian Boss End Cover Internal</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RS5</td>
<td>Eaves Beam 90° Cover Trim</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RS8</td>
<td>100mm Fixing Screw</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Check that you have sealed the joints in between the glazing support trims (RM2) and the spar (RD6) under cladding (RD5a) on each panel, and that the glazing tape protective film (RM3a) has been removed.

Select the eaves beam cover (SRS2), position onto the barbs on the eaves beam (RA1) and press home.

Select the eaves beam 90° cover trim (RS5), and push home into the corner gaps between the eaves beam cover (SRS2).

Offer the Edwardian boss end cover internal (RS7) up to the Edwardian boss end (RD3). The Edwardian boss end cover internal (RS7) is positioned so it’s up stand fits tight against the rear face of the spars (RD6) which are connected to the 25° fixed pitch ridge (RD1).

Ensure that the Edwardian boss end (RD3) is completely covered and fix in place to the 25° fixed pitch ridge (RD1) centrally, by use of the 80mm fixing screw (RS8) at a position of 45mm from the back of the Edwardian boss end cover internal (RS7). Use the large screw cover cap (R7a) to hide the 100mm fixing screw (RS8).

Select the ridge cover internal (RS4) and position over the ‘feet’ of the 25° fixed pitch ridge (RD1). Push fit to hold secure.
Position the 90° corner post cover (P114) over the barbs at the bottom of the 90° corner post (A109) and by working upwards press home.

The 18mm coupling connectors (P111) will require trimming to fit underneath the external eaves beam trim (RA1a) and the eaves beam cover (SRS2).

Select the 18mm coupling covers (P111) and position onto the recesses on the sides of each quarter turn button (C105) positioned on the 18mm inline couplings (A104) and press home.

Repeat for each set of 18mm inline couplings including the ones on the inside.

Fit the handles to all opening sashes using the 5 x 20mm handle screw (RS11).
### 14 - GUTTER COMPONENTS REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RV1</td>
<td>Ogee Gutter</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>RV2</td>
<td>Ogee Gutter Support Brackets</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV3</td>
<td>4.0 x 38mm Yellow Screws</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV4</td>
<td>Ogee Stop End Outlet R/H</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV5</td>
<td>Ogee Stop End Outlet L/H</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV6</td>
<td>Ogee Stop End R/H</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV7</td>
<td>Ogee Stop End L/H</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV8</td>
<td>Square to Round Downpipe Adapter</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV9</td>
<td>Downpipe Bend</td>
<td>A</td>
<td>Dwarf Wall Model</td>
</tr>
<tr>
<td>RV10</td>
<td>Round Downpipe</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV11</td>
<td>Downpipe Fixing Bracket</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV12</td>
<td>Downpipe Shoe</td>
<td>A</td>
<td>Specific Models</td>
</tr>
<tr>
<td>RV14</td>
<td>Ogee Gutter Inline Connector</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV13</td>
<td>Ogee 90°External Gutter Corner</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Fitting Ogee Gutter Support Brackets

Locate the ‘hook’ at the back of the Ogee gutter support brackets (RV2) onto the upstand on the front face of the eaves beam (RA1).

Swing the Ogee gutter support bracket (RV2) downwards until the back detail clips into the recess of the eaves beam.

Ogee gutter support brackets (RV2) should be positioned 150mm from each corner and the remainder equally spaced and between spars (RD6).

Hang the front edge of the Ogee gutter (RV1) into the clip arrangement on the Ogee gutter support bracket (RV2).
Rotate the open end of the Ogee gutter (RV1) into the rear leg detail of the Ogee gutter support bracket (RV2) until it ‘clicks’ into place.

Push fit the Ogee stop end outlet (RV4/5) to the relevant end of the Ogee gutter (RV1) and the Ogee gutter stop end to the opposite end.

Slide the downpipe fixing brackets (RV11) on to the round downpipe (RV10) and connect the downpipe shoe (RV12) to the bottom of the round downpipe (RV10) as shown opposite.

On dwarf wall models, you will need to cut the round downpipe (RV10) into two lengths and join them together by use of the downpipe bends (RV9). This is to allow the round downpipe (RV10) to sweep over the 150mm sill (PA1) and down the dwarf wall to the ground. The cut in the round downpipe (RV10) is to produce two lengths which suit the depth of the window panels and the depth of the dwarf wall.
15 - BOX GUTTER COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG1</td>
<td>Box Gutter</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>BG2</td>
<td>Box Gutter Braces</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>BG4</td>
<td>Box Gutter Sealing Tape</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>BG7</td>
<td>Box Gutter Internal Cladding</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>BG8</td>
<td>135° Box Gutter Adapter</td>
<td>A</td>
<td>135° Corners</td>
</tr>
<tr>
<td>PD5</td>
<td>60mm Fixing Bolts</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV14</td>
<td>Ogee Gutter Inline Connector</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td>3.9 x 25mm Silver Screws</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA1</td>
<td>Eaves Beam</td>
<td>D</td>
<td>90° Corners</td>
</tr>
<tr>
<td>BG3</td>
<td>90° Box Gutter Adapter</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

Please note: The conservatory style is indicative only.
The box gutter (BG1) should always be clipped onto the eaves beam (RA1) at the time that the eaves beam (RA1) is being installed. Please read these instructions carefully and prior to starting the roof installation.

Attaching Box Gutter to Eaves Beam

Select the eaves beam (RA1) and the box gutter (BG1) and mate. The deep side of the box gutter (BG1) is attached to the wall while the inside face has a lip into which the eaves beam (RA1) sits.

Fasten the eaves beam (RA1) and the box gutter (BG1) together with the 3.8 x 25mm silver screws (SC4). Slide the box gutter braces (BG2) into the box gutter (BG1), and the correct number of double bolt retainers (RA2) into the eaves beam (RA1) and place the assembly on top of the frames.

Fixing the Box Gutter Braces

Connect the eaves beam (RA1) complete with box gutter (BG1) to the rest of the eaves beam (RA1) using the method as previously described by use of the eaves beam corner joiners (SRA4). Ensure that the box gutter (BG1) is level and set the box gutter braces (BG2) at 600mm centres along the length of the box gutter (BG1).

Using the relevant 8mm drill bits, pre-drill holes through the box gutter braces (BG2) and into sound masonry to a minimum depth of 10mm deeper than the fixing and permanently fix with the 80mm fixing bolts (RD8).

Primary Seal to Host Wall.

Self adhesive flashing tape is included in your conservatory kit. This product is suitable for use where the host wall is flat and even, e.g. face brickwork. The tape is provided as a means of temporarily sealing the conservatory from water ingress.
Although the flashing tape, if applied in accordance with the manufacturers instructions, can function for many years, it is not a long term substitute for traditional lead flashing. We would recommend that you employ an experienced builder to carry out lead flashing works during the construction of your conservatory, or at some time in the near future.

When all eaves beams (RA1) are fixed in position cut out for and apply the flashing tape (RD9) to the host wall. The flashing tape should run down at least two courses of brick and over the flat rear face of the box gutter (BG1).

Apply a continuous bead of silicone to the sides and bottom face of the box gutter (BG1) and insert the box gutter adaptor (BG3/BG8). Ensure all excess silicone has been removed and once again clean the aluminium with wire wool, ensuring the surface is clean and dry.

Fitting Trims and Adaptors

Regardless to whichever conservatory style you have, the box gutter adapters (BG3/BG8) are always fitted in the same manner. Though the images show the 90° box gutter adapter (BG3) follow the same procedure even if your roof has a different box gutter adapter.

Remove the backing of the special box gutter sealing tape (BG4). Gently heat the box gutter sealing tape (BG4) and aluminium of the box gutter (BG1). Position the box gutter sealing tape (BG4) centrally over the joint, pressing firmly across the box gutter adaptor (BG3/BG8) and box gutter (BG1). Ensure no air pockets are present, working well into the corners and sides.
The box gutter adapters (BG3/8) are joined to the Ogee Gutter (RV1) by use of the Ogee gutter inline connector (RV14).
### 16 - ADDITIONAL SIDE BOX GUTTER COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG1</td>
<td>Box Gutter</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>BG2</td>
<td>Box Gutter Braces</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>BG4</td>
<td>Box Gutter Sealing Tape</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>PD5</td>
<td>60mm Fixing Bolts</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RV14</td>
<td>Ogee Gutter Inline Connector</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td>3.9 x 25mm Silver Screws</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>RA1</td>
<td>Eaves Beam</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

Please note:- The conservatory style is indicative only.
Attaching Box Gutter to Eaves Beam

You will notice that you have two pieces of box gutter (BG1). These have to be joined together prior to installation.

The open ended section will run along the back of the roof.

The welded jointed section will run down the roof projection.

Select the eaves beams (RA1) and the box gutters (BG1) and mate. The deep side of the box gutter (BG1) is attached to the wall (as shown below) while the inside face has a lip into which the eaves beam (RA1) sits.

Fasten the eaves beam (RA1) and the box gutter (BG1) together with the 3.8 x 25mm silver screws (SC4). Slide the box gutter braces (BG2) into the box gutter (BG1).

Once the two sections of box gutter (BG1) are together, slide in the box gutter braces (BG2) set at 600mm centres along the length of the box gutter (BG1). This should be done before the box gutter pieces are mated.

Set the box gutter braces (BG2) at 600mm centres along the length of the box gutter (BG1).

Now slide the two sections of box gutter (BG1) together ensuring that the jointing sleeve in the welded corner section slides into the open ended section of the box gutter (BG1).

Remember to slide the eaves beam jointers in to the eaves beam (RA1) as described in the Eaves Beam Installation Section of this manual and screw to fix.

Next, thoroughly clean the inside of the box gutter (BG1) at the position of the un-welded end of the box gutter jointing sleeve. Using a heat gun warm the aluminium to remove any moisture that may prevent good adhesion.

Remove the backing of the special box gutter sealing tape (BG4). Gently heat the box gutter sealing tape (BG4) and aluminium of the box gutter (BG1). Position the box gutter sealing tape (BG4) centrally over the joint, pressing firmly across the box gutter (BG1). Ensure no air pockets are present, working well into the corners and sides.

Slide the correct number of double bolt retainers (RA2) in to the eaves beams (RA1) and place the assembly on top of the frames.

Fixing the Box Gutter Braces

Ensure that the box gutter (BG1) is level and the box gutter braces (BG2) set at 600mm centres along the length of the box gutter (BG1).

Using the relevant 8mm drill bits, pre-drill holes through the box gutter braces (BG2) and into sound masonry to a minimum depth of 10mm deeper than the fixing and permanently fix with the 80mm fixing bolts (RD8).
Part End-Out Box Gutter Adapters

If your additional box gutter (BG1) only runs part way along the side of the conservatory roof, the box gutter adapter which is used is the Ogee inline box gutter adapter (BG12).

As previously described, this adapter is fitted in the same way as any other box gutter adapter - bedded on silicone and inserted into the box gutter (BG1) as shown below.

Please note that the rippled shaped face of the inline box gutter adapter (BG15) points towards the side wall and the plain face against the eaves beam.

Now the Ogee gutter inline connector (RV14) is in position the box gutter sealing tape (BG4) can be installed as described previously.

The Ogee gutter (RV1) can now be fitted as any other.

When the Ogee inline box gutter adapter (BG12) is in position an Ogee gutter inline connector (RV14) is fitted to allow the regular Ogee gutter (RV1) to be connected to the box gutter (BG1) assembly.

Primary Seal to Host Wall.

Self adhesive flashing tape is included in your conservatory kit. This product is suitable for use where the host wall is flat and even, e.g. face brickwork. The tape is
provided as a means of temporarily sealing the conservatory from water ingress.

Although the flashing tape, if applied in accordance with the manufacturers instructions, can function for many years, it is not a long term substitute for traditional lead flashing. We would recommend that you employ an experienced builder to carry out lead flashing works during the construction of your conservatory, or at some time in the near future.

When all eaves beams (RA1) are fixed in position, cut out for and apply the flashing tape (RD9) to the host wall. The flashing tape should run down at least two courses of brick and over the flat rear face of the box gutter (BG1).

**Fitting the Box Gutter Under Cladding**

Remove the protective film on the box gutter insulation and attach to the underside of the box gutter (BG1).

Select the box gutter soffit trim and attach to the foot on the underside of the box gutter (BG1). Do not push fully but allow a gap of around 10-12mm.

Now locate the box gutter internal cladding (BG7) into the gap between the box gutter soffit trim and the box gutter insulation.

Now push the box gutter soffit trim firmly in place.
When in position, push fit the eaves beam internal cover (SRS2) firmly into position.
### 17 - TIE BAR COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB1</td>
<td>Tie Bar Kit, consisting of</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>TB1a</td>
<td>Spar Bracket</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1b</td>
<td>M5 x 25mm Spar Bracket Bolt</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1c</td>
<td>M5 Spar Bracket Flange Bolt</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>TB1d</td>
<td>Tie Bar Centre Boss</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>TB1e</td>
<td>M8 Tie Bar Centre Boss Locking Nut</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>TB1f</td>
<td>Pole Connector</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1g</td>
<td>M8 x 30mm Pole Connector Bolt</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>TB1h</td>
<td>Pole Connector Bolt Cap</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>TB1j</td>
<td>M8 Pole Connector Nut</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1k</td>
<td>Ridge Bracket</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1l</td>
<td>M5 x 25mm Ridge Bracket Fixing Screw</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1m</td>
<td>Tie Bar Centre Boss Adhesive Strips</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>TB1n</td>
<td>Tie Bar Boss Cover</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB1o</td>
<td>Screw Cover Caps</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>TB2</td>
<td>Tie Bar Poles</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Locate the spars (RD6) with the four pre-drilled holes which will support the tie bar kit (TB1).

Some models may also have a tie bar kit (TB1) fitted on a set of spars (RD6) halfway along the 25° fixed pitch ridge (RD1).

Position the spar bracket (TB1a) over the pre-drilled holes in the spars (RD6) and fix in place with the M5 x 25mm spar bracket bolts (TB1b) and the M5 spar bracket flange nuts (TB1c) as shown below. **Installation is made easier if the brackets are fixed to the spars (RD6) prior to attaching the spars (RD6) to the 25° fixed pitch ridge (RD1).**

If the spar bracket (TB1a) is positioned correctly, the bottom face of the spar bracket (TB1a) will be 200mm from the bottom face of the spar (RD6).

size and loosely assemble onto the tie bar centre boss (TB1d) with the M8 tie bar centre boss locking nuts (TB1e). Do not tighten at this stage but leave enough thread to allow for movement during installation. Replace the tie bar pole (TB2) covers and cut to size.

While tie bar poles (TB2) are cut to size and loosely attached to the tie bar centre boss (TB1d), locate the pole connector (TB1f) and screw onto the opposite end of the tie bar pole (TB2) as the tie bar centre boss (TB1d).

Lift the tie bar assembly up to the roof and attach the pole connectors (TB1f) to the spar bracket (TB1a) using the M8 x 30mm pole connector bolts (TB1g) and M8 pole connector nuts (TB1j).

Remove all tie bar poles (TB2) from their packaging and remove their covers. Cut to
Connect the ridge bracket (TB1k) to the ridge cover internal (RS4) by use of the 5 x 50mm ridge bracket fixing screws (TB1l).

The 5 x 50mm ridge bracket fixing screws (TB1l) will also screw into the aluminium of the 25° fixed pitch ridge (RD1) as shown below.

The position of the ridge bracket (TB1k) is central to the ridge cover internal (RS4) with the bolt hole in line with the centre line of the spars (RD6) which hold the spar bracket (TB1a).

Attach the pole connectors (TB1f) to the spar bracket (TB1a) using the M8 x 30mm pole connector bolts (TB1g) and M8 pole connector nuts (TB1j).

When all tie bar poles (TB2) are in position and connected to all pole connectors (TB1f), spar brackets (TB1a) and the ridge bracket (TB1k), you can now tighten the M8 tie bar centre boss locking nuts (TB1e) fully.

Now that all components are permanently fixed, push fit the screw cover caps (TB1o) over the M5 x 25mm spar bracket bolts (TB1b) ....
Complete installation by peeling the tie bar centre boss adhesive strips (TB1m) from their backing and stick to the tie bar centre boss (TB1d). Remove second side of protective film on the tie bar centre boss adhesive strip (TB1m). Two tie bar centre boss adhesive strips (TB1m) are to be attached to the tie bar centre boss (TB1d) per side.

Push fit the tie bar centre boss covers (TB1n) centrally onto the tie bar centre boss adhesive strips (TB1m) to secure.

…. and the M5 x 25mm ridge bracket fixing screws (TB1l) to finish.
# 18 - ROOF VENT COMPONENT REFERENCE

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item Description</th>
<th>Pack</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFV1</td>
<td>Roof Vent Assembly, consisting of:</td>
<td>Own Box</td>
<td></td>
</tr>
<tr>
<td>RFV1a</td>
<td>Main Frame</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV1b</td>
<td>Glazing Bead</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV1c</td>
<td>Opening Sash</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV1d</td>
<td>Foil Tape</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV1e</td>
<td>Breather Tape</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV2</td>
<td>Roof Vent Glazing Sheet</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV3</td>
<td>Roof Vent Opening Mechanism consisting</td>
<td>-</td>
<td>Dwarf Wall Model</td>
</tr>
<tr>
<td>RFV3a</td>
<td>Opening Sash Bracket</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV3b</td>
<td>Worm Gear Bracket</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV3c</td>
<td>Roof Vent Worm Gear</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RFV4</td>
<td>Roof Vent Pole</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Roof vent assemblies (RFV1) are installed slightly differently depending on whether the roof glazing sheets are glass or polycarbonate.

Roof vent assemblies (RFV1) for polycarbonate roofs are positioned ‘floating’ which means they are cut into the single polycarbonate roof glazing sheet (RM1). Roof vent assemblies (RFV1) for glass roofs are positioned ‘between bars’. This means that the glass roof vent assembly (RFV1) rests on the spars (RD6) therefore splitting the ‘would-be’ single sheet into a top and bottom half situated above and below the roof vent assembly.

**Removal of the Opening Sash (RV1c)**

Prior to installation, the opening sash (RFV1c) must be removed from the main frame (RFV1a) for glazing. The opening sash (RFV1c) can be dismounted from the main frame (RFV1a) by opening it at an angle of 45° to the main frame (RFV1a) and disconnecting the hinge.

**Creating Roof Vent Glazing Sheet (RFV2) for Polycarbonate Roofs**

To calculate the size of the vent hole required for the roof vent assembly (RFV1) to fit, a quick calculation is necessary. Measure the width and depth of the roof vent assembly (RFV1) from the positions shown on the top of the next column and deduct 24mm.

The vent hole to accommodate the roof vent assembly (RFV1) should be positioned no closer to the ridge assembly (R1) than 150mm. To start the cut in the polycarbonate roof glazing sheet (RM1), firstly pierce the polycarbonate roof glazing sheet (RM1) by use of a pointed tipped drill approximately where the corner of the vent hole will be.

When you have drilled the start hole in the polycarbonate roof glazing sheet (RM1), use a jigsaw or similar power tool to cut the vent hole. While cutting, it is recommended that the top edge of the polycarbonate roof glazing sheet (RM1) is elevated slightly and the breather tape (RFV1e) along the bottom edge of the polycarbonate roof glazing sheet (RM1) is removed to help the unwanted swarf fall out. If available, it is good practice to use an airline or industrial vacuum cleaner to remove the swarf from the polycarbonate roof glazing sheet (RM1).

The roof vent glazing sheet (RFV2) is calculated by deducting 183mm from the overall width and depth of the roof vent assembly (RFV1). The measurements are taken from the same positions as shown previously.

When the swarf has been removed from inside the polycarbonate roof glazing sheet (RM1) and the roof vent glazing sheet (RFV2), new breather tape (RFV1e) should be fitted along the bottom of both polycarbonate roof glazing sheets (RM1/RFV2). Foil tape (RFV1d) should be fitted along the top of the roof vent glazing sheet (RFV2) and the polycarbonate roof glazing sheet (RM1) (if removed to eject swarf).
Glazing the Opening Sash (RV1c)

A continuous bead of low modulus neutral cure silicone sealant should be applied to all sides of the opening sash (RFV1c) in the position shown below.

The roof vent glazing sheet (RFV2) should then be inserted, ensuring that in the case of polycarbonate, the breather tape (RFV1e) is to the bottom edge. You will find that there are 3 sets of glazing bead (RFV1b) which accommodate 16mm, 25mm and 35mm roof vent glazing sheets (RFV2) included in your roof vent box. Choose the correct sized glazing bead (RFV1b) and position over the roof vent glazing sheet (RFV2) and locate into the barbed recess. Care must be taken to position the drainage glazing bead (RFV1b) along the bottom of the opening sash (RFV1c). This is easily identified by the pre-drilled drain holes in one of the glazing beads (RFV1b).

Attaching the Opening Mechanisms (RFV3)

Prior to installing the main frames (RV1a), it will be necessary to mount the roof vent opening mechanisms (RFV3) to both the opening sash (RFV1c) and the main frames (RFV1a). Connect the opening sash bracket (RFV3a) to the opening sash (RFV1c) using the 25mm screws provided as shown at the top of the next column.

Fitting the Mainframe (RFV1a)

The glazing beads (RFV1b) must be removed prior to the application of a continuous bead of low modulus neutral cure silicone sealant to all four sides of the main frame (RFV1a). A ‘v’ groove on the main frame (RFV1a) shows the correct position of the silicone bead.
Installing the Main Frame (RFV1a) in Polycarbonate Roofs

Ensure that the aluminium hinge is positioned to the top of the roof vent assembly (RFV1). The vertical glazing beads (RFV1b) can now be inserted. To insert the horizontals it may be necessary to bend the glazing beads (RFV1b). The glazed opening sash (RFV1c) can now be remounted by reversal of the removal instructions as detailed in paragraph three. Connect the roof vent opening mechanism (RFV3).
Your conservatory is made to the highest technical standards using the finest materials. However as with all precision items, where metal parts move on metal, regular lubrication will increase service life and removal of surface dirt will maintain good looks.

**Lubrication**

We recommend that once every 3-6 months parts should be oiled or greased. Any acid-free light machine oil will provide reasonable protection for metal fittings. Penetrating oil and similar spray-on lubricants are not recommended.

**Locking System – Windows**

Move the operating handle to open the window. Locate and lubricate all locking points with oil. Lubricate the moving strip showing through the slot.

**Friction Hinges**

While the window is open, lubricate all moving parts of the hinges with oil.

**Doors**

Move the operating handle to open the door, locate and lubricate all locking points with oil. Lightly Oil all Hinges.

**Cleaning**

The need for cleaning your PVC-U conservatory will vary in frequency depending on where you live. Some areas have a higher level of industrial pollution or natural corrosive air content, eg: salty atmosphere in coastal regions.

We recommend that when the glass needs cleaning, the PVC-U parts are also quickly wiped over with warm soapy water.

Persistent marks can be moved by using a hard circular motion with a wet cloth and neat washing-up liquid.

When decorating, it is wise to wipe away splashes of paint where they have been caught by masking/cover material before they dry. Do not scrape with anything hard, metal or sharp.

Your conservatory in PVC-U will never rot, need painting or discolour BUT it will need cleaning.