# ALU**KAP**®-XR

**Superior Roof** Glazing System
**Installation Guide**

ALU**KAP**®-XR

ALUKAP®

# ALU**KAP**®-XR

## Your Alukap®-XR System

Whether you are planning your next project using Alukap®-XR, or have just purchased your Alukap®-XR system, this *Installation Guide* provides the information you may require to make the installation of your Alukap®-XR system straightforward. The system is inherently intuitive, however these guidelines will provide an additional layer of support, no matter how complex your project is.

## We Are Here To Support You

We understand that even with comprehensive Installation Guidelines, there can sometimes be a question that you can't find the answer to, so we're here to help you all the way. Visit **www.clearamber.com** and get in contact with our Help Teams via live chat, phone or email, who will be on hand to assist with any queries you may have.

## Index:

# Part 1 : Alukap®-XR Bar Parts Available

Below is a list of the core Alukap®-XR Glazing Bar types available and items that could be supplied with each bar, most of which you will need for your project, depending on the design of your project.

| Alukap®-XR Wall Bar | Alukap®-XR 60mm Bar | Alukap®-XR Gable Bar | Alukap®-XR 45mm Bar | Standard Bar Gaskets and Screws (included) |
|---|---|---|---|---|
| ALUKAP®-XR | ALUKAP®-XR | ALUKAP®-XR | ALUKAP®-XR | One Standard Bar End Cap (included) ALUKAP® |

**Rafter Gasket options available for each bar type:**

| 45mm Rafter Gasket | 45mm Slot-fit Rafter Gasket | 55mm Rafter Gasket | 55mm Slot-fit Rafter Gasket |
|---|---|---|---|

## Glazing Sheets and Accessories:

**Axiome® 16mm Triplewall Sheets**
(also in 4mm, 6mm, 10mm, 25mm and 35mm)

**Axgard® Polycarbonate Sheets**
(also in 4mm, 5mm, 6mm, 8mm, 10mm and 12mm)

**Double Glazed Units**

**Glass**

**Alukap®-XR Top Wall Flashing**
ALUKAP®-XR

**16mm Endstop bar**
(also in: 6.4mm, 10mm, 25mm, 28mm and 35mm)
ALUKAP®-XR

**Anti-dust tape**
ALUKAP®-XR

*Optional item

**Securbond® Flashing Tape**
SECURBOND®

**Timber Rafters and Battens**

**Securbond® Sealant**
SECURBOND®

## Tools Required

Wear protective gloves, glasses and ear protectors when required.

Tape measure and fine toothed bladed chop saw

Cordless screwdriver/drill, Philips headed screwdriver, soft rubber mallet, a straight edge tool and Securbond® Sealant plus a sealant gun.

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# ALU**KAP**®-XR

# Alukap®-XR : Bars and Glazing Installation Guide

## 1 Take all **measurements** of the roof rafters

**IMPORTANT:** Wear sufficient protective clothing

Measure and cut all Alukap®-XR bars to the desired length. Allowing approx. 30-50mm overhang into the gutter.

Measure the roof to work out how many Axiome® / glazing sheets are required.
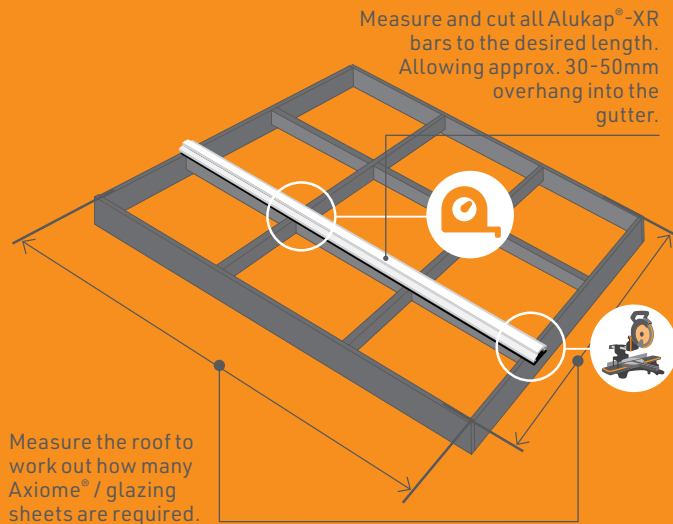
Cut lengths of the **wider Rafter Gaskets** to the **same dimensions as the Alukap®-XR base bars** (one for each bar).

Cut **two lengths** of the **thin standard bar gasket** to the same length as the Alukap®-XR base bar **>**

## 2 Prepare the **Axiome® SHEETS** before installation

Where applicable, fit the **Alukap®-XR End Stop Bar** to the edge of the glazing material which works with Alukap®-XR glazing bars creating a frame to seal the glazing material and reduce any risk of slippage.

**IMPORTANT** – Store the Axiome® sheets in **a clean, dry area** to prevent moisture getting into the flutes.

There is **protective film on both sides** of the Axiome® sheet. The Axiome® branded tape side is **UV protected**.

AXIOME®

UV
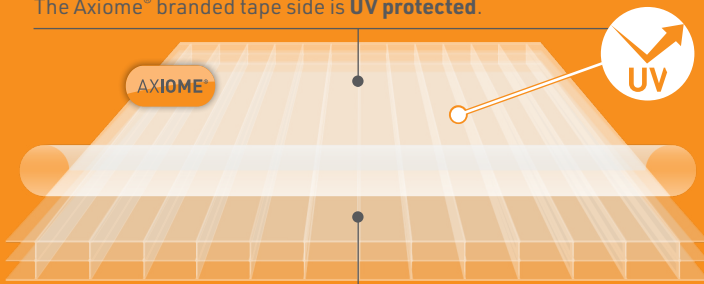
Ensure that you are working in a **clean dry area, pull the protective film back approximately 100mm from the open edge on both sides**, taking care not to scratch the surface.

▶ **View Our How 2 Cut Axiome Polycarbonate Roofing Sheets** Video

## 3 Apply the **ANTI-DUST TAPE** to the Axiome® sheets

**IMPORTANT –** All adhesives suffer reduced initial bonding strength in cold conditions – **avoid applying tape below 5°C.**
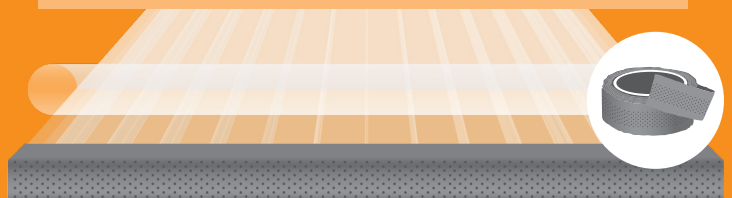
Stick the **Axiome® Anti-dust Breather Tape** onto the top surface in a straight line from one side to the other, allowing enough to wrap around and bond to the underside. **If it is necessary to join the tape mid-panel, ensure that there is a minimum 25mm overlap**.

## 4 Apply the **Alukap®-XR Endstop bar** to the Axiome® sheets

Cut the Endstop Bar to the width of each Axiome® Sheet, and **push-fit partway ONLY** so that the open edge of the Endstop Bar just covers about **10-15mm of the glazing material**.

Protective film

Anti-dust breather tape
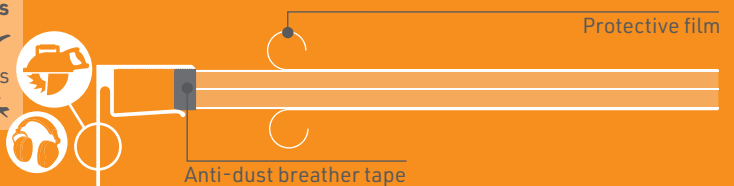
## 5 Apply the **Securbond® Sealant**

Run a thin, consistant bead of Securbond® Sealant along the edge of the **Endstop bar** and **Anti-dust Breather Tape**.

## 6 **Final stage** of fitting the Alukap®-XR Endstop Bar

**PUSH** the **Alukap®-XR Endstop bar FULLY into place**, so that the leading edge slides over the bead of Securbond® Sealant, creating a seal that eliminates capillary action.

Leave the protective film on both sides while building your roof.

▶ **View Our How 2 Tape Polycarbonate Roofing Sheets** Video

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# 7 Fit the Standard Bar Gaskets to the Alukap®-XR base bar

Carefully **INSERT** the thin Standard Bar Gaskets **into the grooves** on the base of the bar **ensuring that the gasket matches the contours of the Alukap®-XR Base Bar.**

Alukap®-XR base bar

Standard bar gaskets
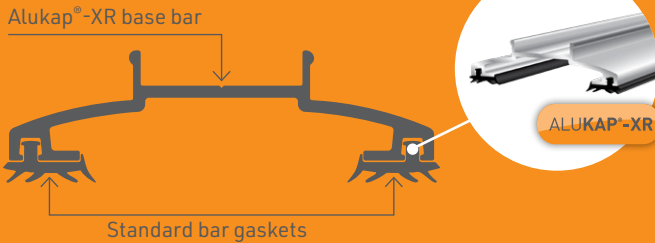
ALU**KAP**®-XR

# 8 Fit the Rafter Gaskets to the existing rafters

**Position the Alukap®-XR rafter gasket over** the existing rafters.

Rafter gasket

▶ **View Our How 2 Install Glazing Bars** Video
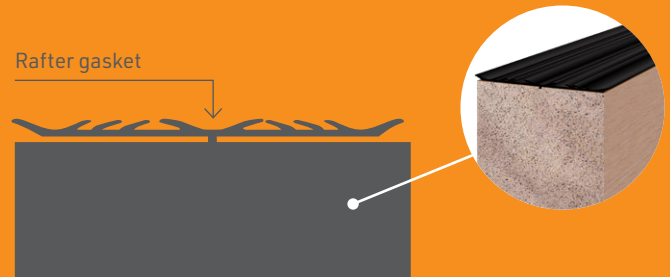
# 9 Position the prepared glazing sheets onto the rafters

**Lay your glazing materials on top** of the rafter gasket and rafters, allowing enough space in between the sheets for the fixing screws and thermal expansion appropriate to the chosen glazing material.

AX**IOME**®

12mm

ALU**KAP**®-XR

**Wall bars: Deduct 38mm**          **Deduct 12mm**          **Deduct 12mm**          **Gable bars: Deduct 42mm**

**NOTE – Alukap®-XR Gable and Wall Bars ONLY**

- When using Axiome® or Axgard® the material can be extended right across the rafter under the outermost Alukap®-XR bar gasket.

- Where **glass** is chosen for the glazing material rather than Axiome® or Axgard®, the Alukap®-XR Wall and Gable bars will require **a timber packer** under the outer edge gasket. **The battens width is [12mm] and height (x) equates to the glazing thickness plus 2mm.** The Alukap®-XR rafter gasket should run under the timber packer.

# 10 Fitting the Alukap®-XR base bars

1. Lay the Alukap®-XR base bars **directly above the each rafter**, on top of the glazing material.

2. **Drill pilot holes through the pre-drilled holes** in the Alukap®-XR base bar, into the rafter as required.

3. **Screw the Alukap®-XR base bar into place**, taking care not to over-tighten the screw, **but ensuring they are tight enough that the gaskets create a uniform seal with the glazing material.**

AX**IOME**®

ALU**KAP**®-XR

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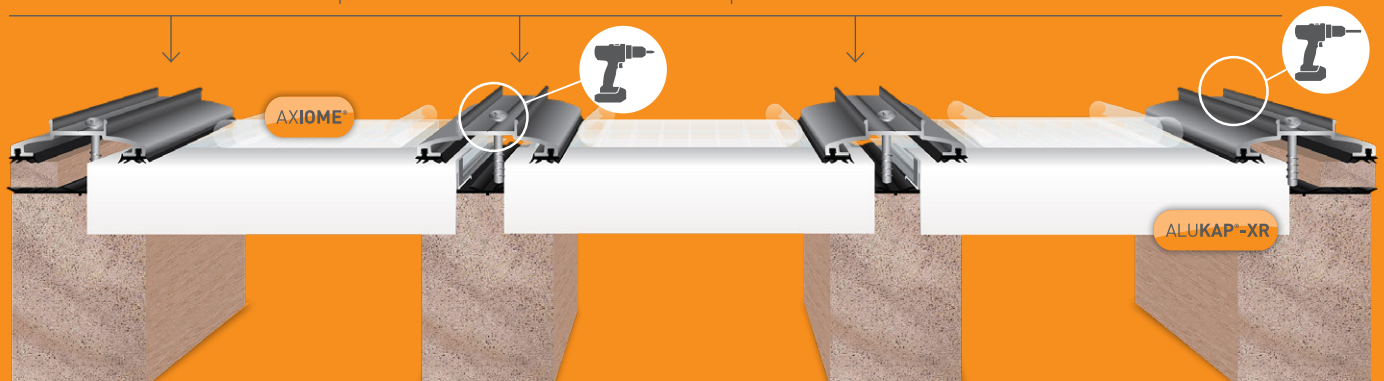
# ALU**KAP**®-XR

## 11 **Fit the Alukap® End Cap** to the front of each bar

1. Place the Alukap® End Cap into place at the end of the base bar butting up against the Alukap®-XR End Stop Bar / glazing material.

2. Make a marking on the base bar to position the screw fixing, remove the End Cap and drill a 2.5mm hole into the Alukap®-XR base bar to suit the screw for the Alukap®-XR End Cap.

3. Place the Alukap® End Cap back into place and use the short screw provided to secure in place.
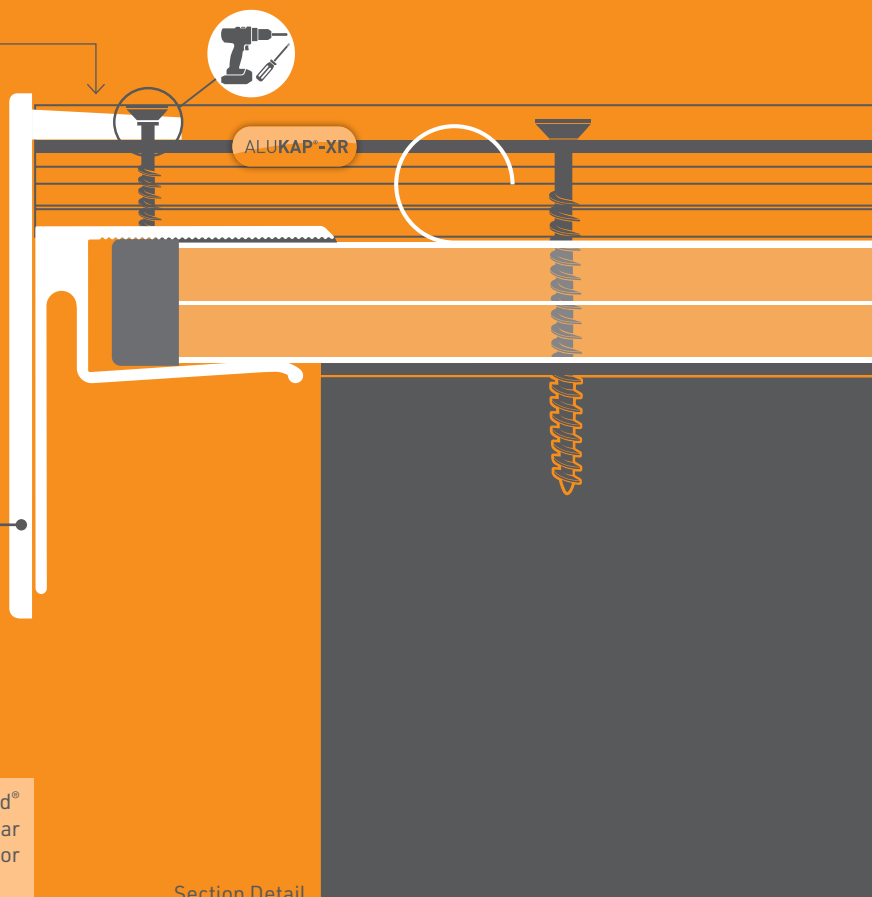
ALU**KAP**®-XR

**NOTE:** Make any ADDITIONAL SEALS with Securbond® Sealant as required where the Alukap®-XR base bar makes any abutments or connections to Walls, Hip or Ridge bars.

Section Detail

## 12 **Measure and cut the Alukap®-XR Top Clips** for each bar

1. **Carefully cut the Alukap®-XR Wall, Standard Bar and Gable Bar Top Clips to the accurate length required** including any mitre or angled cuts for a perfect aesthetically pleasing finish.

2. **For sealing the Alukap®-XR Wall Bars to the wall,** administer a **Securbond® Sealant to the ribbed backing** of the Alukap®-XR Wall Bar to create an abutment to the adjacent wall. Then dress a lead flashing or flashing tape over the upstand of the Alukap®-XR Wall Bar.

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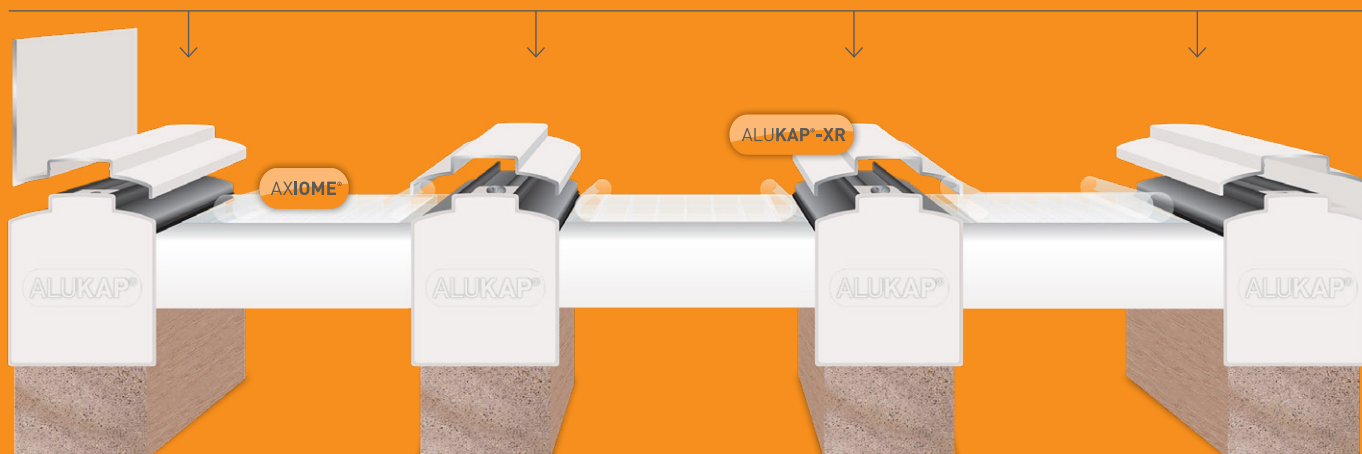
# 13 Fit the Alukap®-XR Top Clips to each bar

1. Using a **suitable rubber/plastic headed hammer**, carefully snap the Alukap®-XR top clips onto the base bar along the whole length concealing the fixings.

2. **For sealing the completed roof structure at the back,** administer **Securbond® Sealant** or fit **lead flashing or flashing tape** across the back wall, dressing it down over the glazing by approximately 150mm-200mm depending on your pitch.

3. **Remove the protective film on both sided** when the roof is fully installed.

AXIOME®

ALUKAP®-XR

ALUKAP®
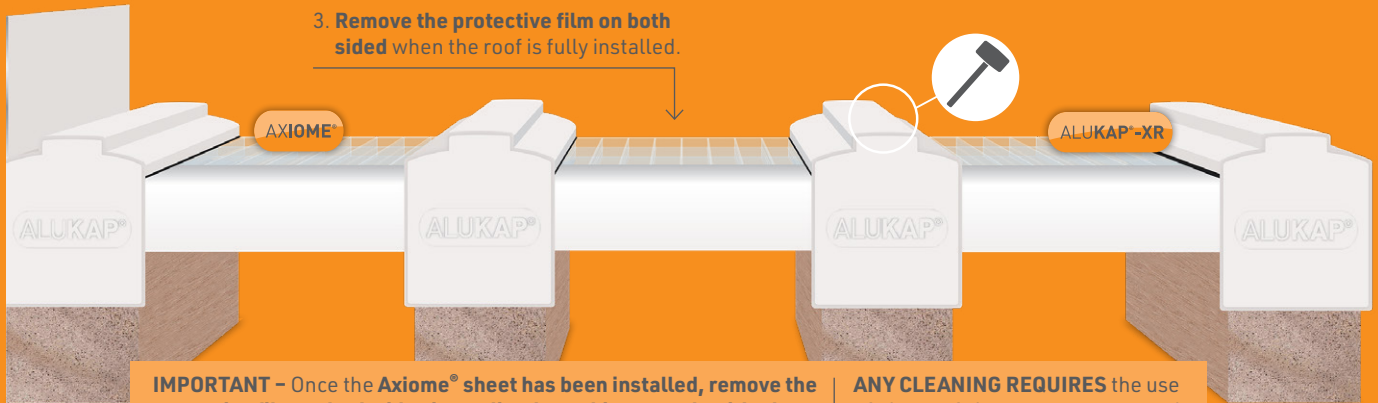
**IMPORTANT –** Once the **Axiome® sheet has been installed, remove the protective film on both sides immediately**, **making sure that it's clean before removal**, so that dirt or dust particles are not transferred to the surface of the Axiome® sheet.

**ANY CLEANING REQUIRES** the use of plenty of clean, soapy water and a soft, abrasive-free cloth.

# 14 Finish of the back of the lean-to roof — fit the **Alukap®-XR Top Wall Flashing**

**Place**, **measure** and **cut** the aluminium **Alukap®-XR Top Wall Flashing** and **foam gasket** to match the full width of the roof. Place the Top Wall Flashing onto your roof and mark on the foam gasket where each glazing bar meets Top Wall Flashing. Then cut out a notch at each mark so that the Foam Gasket sits flat on the Axiome® Sheets and over each Glazing Bar. Alternatively, you can simply apply downward pressure to compress the foam gasket at each glazing bar to ensure the Foam Gasket Seals against the Axiome® sheets properly.

Push down the prepared **Alukap®-XR Top Wall Flashing** with the prepared gasket in place and fix to the wall using suitable stainless steel screws.

Pull the protective film back from the back of the glazing sheets enough to clear the foam gasket.

ALUKAP®-XR

< Axiome® Glazing Sheet >

ALUKAP®-XR
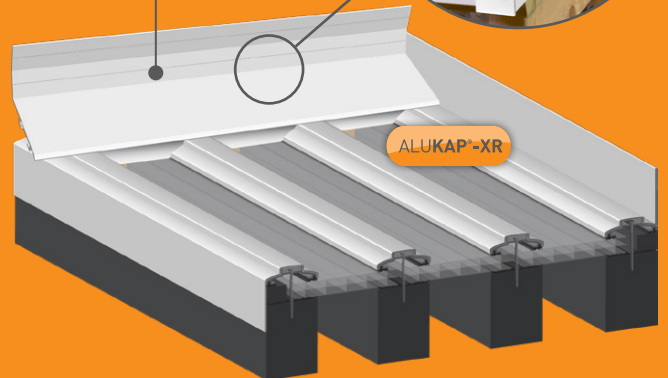
ALUKAP®-XR

Illustration of the Alukap®-XR Top Wall Flashing

▶ **View Our How 2 Install Top Wall Flashing** Video

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# Part 2 : Alukap®-XR Additional Parts Available

**Alukap®-XR Hip Bar, Standard Bar Gaskets and Screw fitting (included)**

**One Standard Bar End Cap (included)**

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**Alukap®-XR Ridge Bar, Standard Bar Gaskets and Screw fitting**
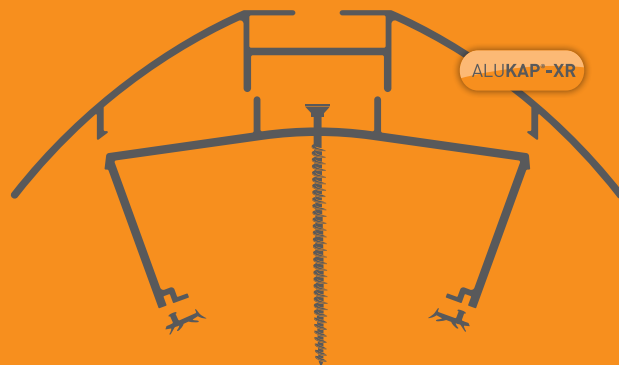
**Rafter Gasket options available for both bar types:**

45mm Rafter Gasket

55mm Rafter Gasket

45mm Slot-fit Rafter Gasket

55mm Slot-fit Rafter Gasket

Alukap®-XR Ridge Top Clip

**Alukap®-XR Ridge Bar Radius Endcap**
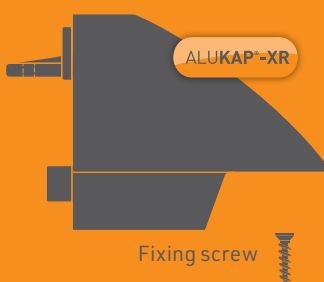
Fixing screw

**Alukap®-XR Ridge Bar End Plate - back view**

Fixing screw

**Alukap®-XR Pinnacle Top Cap, incl. blot fixing**

Internal elevation

**Alukap®-XR Crest Finial**
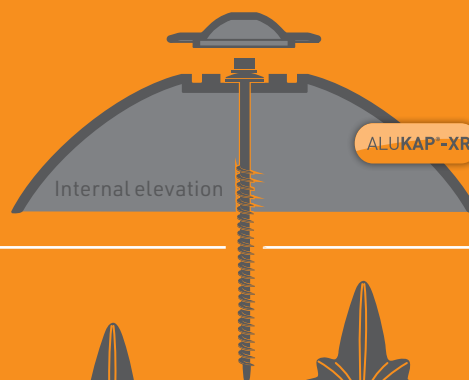
**Alukap®-XR Radius Lantern Top Cap, including screw fitting**

Side elevation

**Alukap®-XR Standard Finial**

**Alukap®-XR Ball Finial, fixing bolt (included).**

**Alukap®-XR Valley Bar, plus Standard Bar Gaskets incl:**

**Alukap®-XR Horizontal H-section Bars:**

24/25mm bar (most common)

28mm bar

32mm bar

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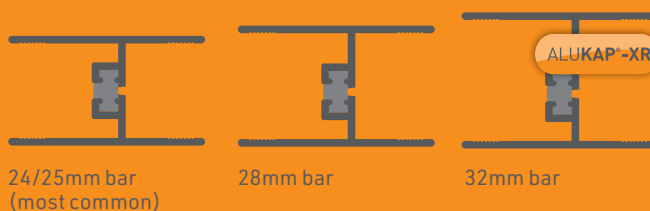
# Alukap®-XR : Hip Bar

## 15 The Alukap®-XR Hip Bar

1. The Alukap®-XR Hip Base Bar should be installed using the same method as the standard Alukap®-XR glazing bars as shown in Part 1.

4. **Finally** the **Alukap®-XR Hip Bar top cap can be snapped into position** providing an umbrella like cover over the abutments protecting them from the elements.

Glazing sheet and protective film

2. **Seal the Alukap®-XR Standard 60mm Base Bars** where they abut the Alukap®-XR Hip Bar upstand, with **Securbond® Sealant**. Then snap on the Alukap®-XR Standard 60mm Top Clips **which should also be mitred** to abut the face of the Alukap®-XR Hip Bar.

3. Once the final sealing of the adjoining bars is complete. **Fix the Alukap®-XR Endcap to the Alukap®-XR Hip Base Bar** (the same method as used for Standard Alukap®-XR Glazing Bars shown in Part 1).

ALU**KAP**®-XR

Section Detail
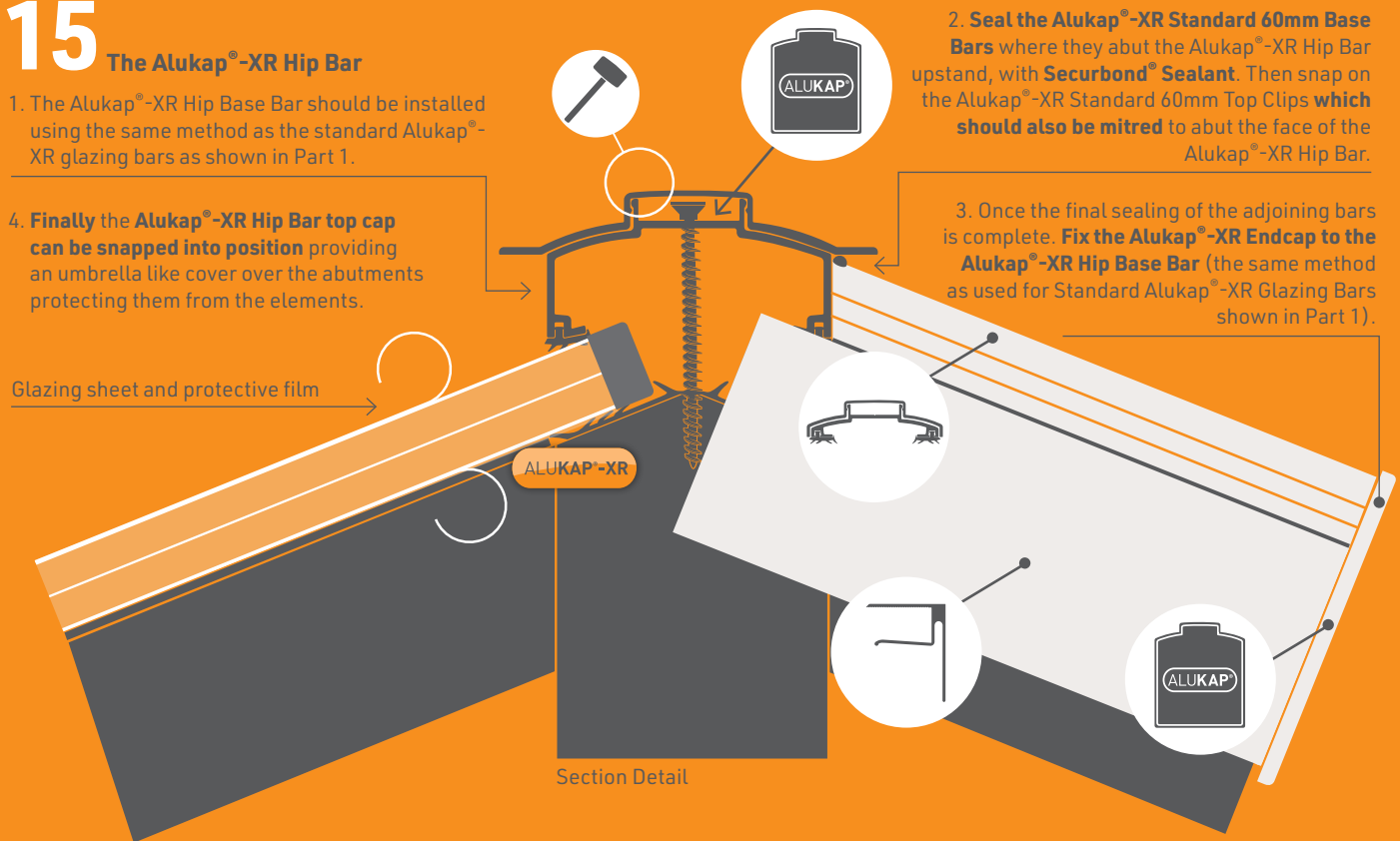
# Alukap®-XR : Roof Lantern End and Lantern Caps

## 16a The Alukap®-XR Radius End Cap

The Alukap®-XR Hip Bar can also be used to **create a roof lantern**. The Alukap®-XR Roof Lantern Pinnacle Top Cap and Radius End Cap are designed to work in conjunction with the Alukap®-XR Hip Bar for this purpose.

**Fix the Alukap®-XR Radius End Cap to the end of the Alukap®-XR Hip Base Bar,** once secured snap the umbrella-type top cap to the base bar, administer **Securbond® Sealant** to make a water tight finish.

Alukap®-XR Radius End Cap

ALU**KAP**®-XR

ALU**KAP**®-XR

Plan View

ALU**KAP**®-XR

Back Elevation

ALU**KAP**®-XR

Internal Section Detail
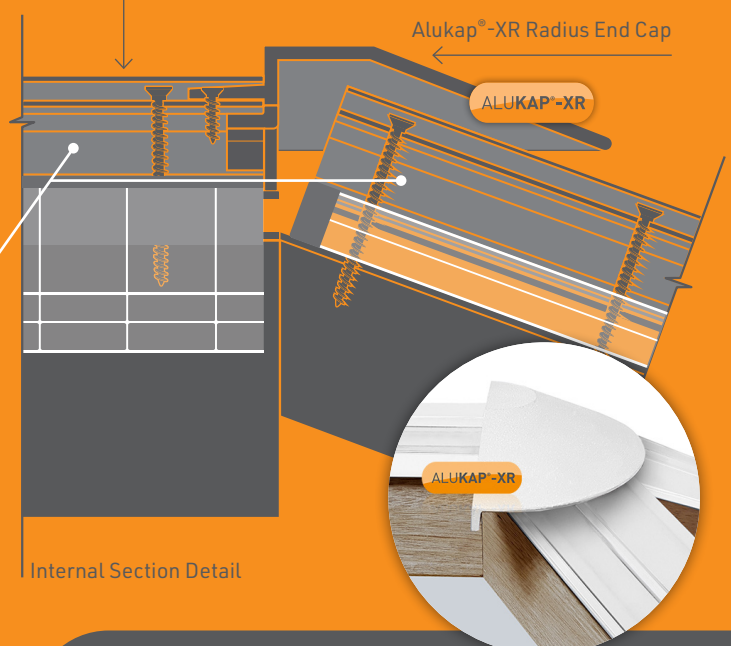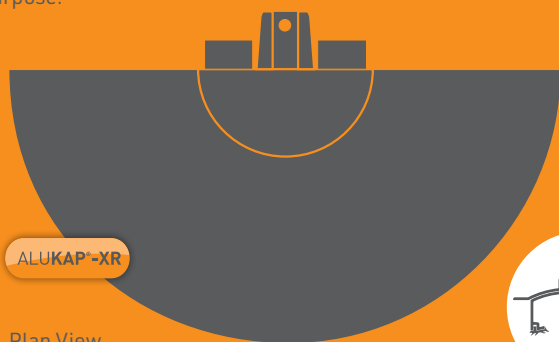
# 16b The Alukap®-XR Roof Lantern Pinnacle Top Cap

Apply the **Alukap®-XR Pinnacle Top Cap** where all the Alukap®-XR Hip Bars meet together to provide an umbrella style cover to the Pinnacle area of the Roof Lantern.

**Apply a small amount of Securbond® Sealant** to the recessed groove on the Alukap®-XR Pinnacle Top Cap to secure the small top cap into place concealing the fixing and giving a water tight finish to your structure.

Fixing bolt
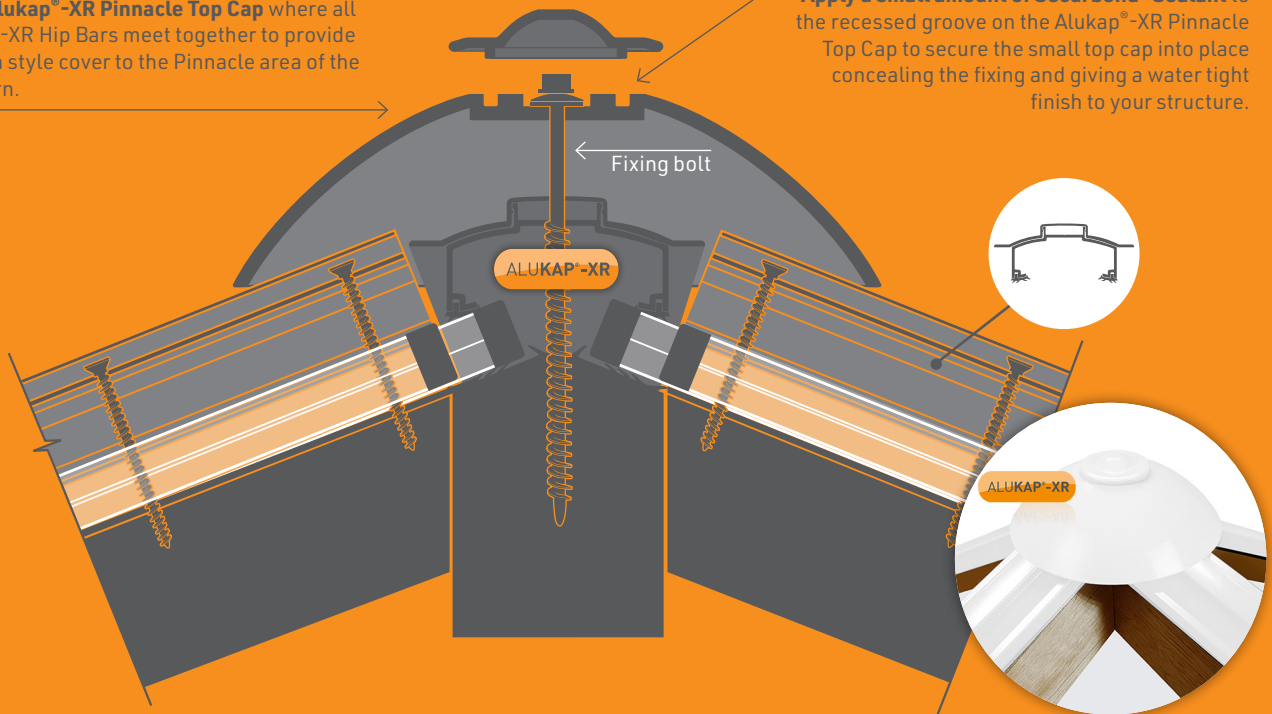
ALU**KAP**®-XR

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# Alukap®-XR : Ridge Bar

The **Alukap®-XR Ridge System** is designed for larger full ridge applications. The following information shows various options whilst installing the Alukap®-XR Ridge system, whether you prefer to add Crests, Finials or have a plain finish.

# 17a Alukap®-XR Ridge Base Bar

1. Cut the **Alukap®-XR Ridge base** and **two lengths of the thin standard bar gasket** to the desired length.

2. Lay the cut-size A**lukap®-XR Ridge Base Bar directly above the ridge rafter, on top of the glazing materials.**

3. **Drill appropriately sized holes through the Alukap®-XR Ridge base bar** into the rafter as required.
**NOTE:** The first and last holes should be a maximum of 100mm from the ends and then at 300mm centres in between.

4. **Screw the Alukap®-XR Ridge Base into place taking care not to over-tighten the screws** but ensuring that they are tight enough that the gaskets are creating a uniform seal with the glazing materials.

Base bar

ALU**KAP**®-XR

ALU**KAP**

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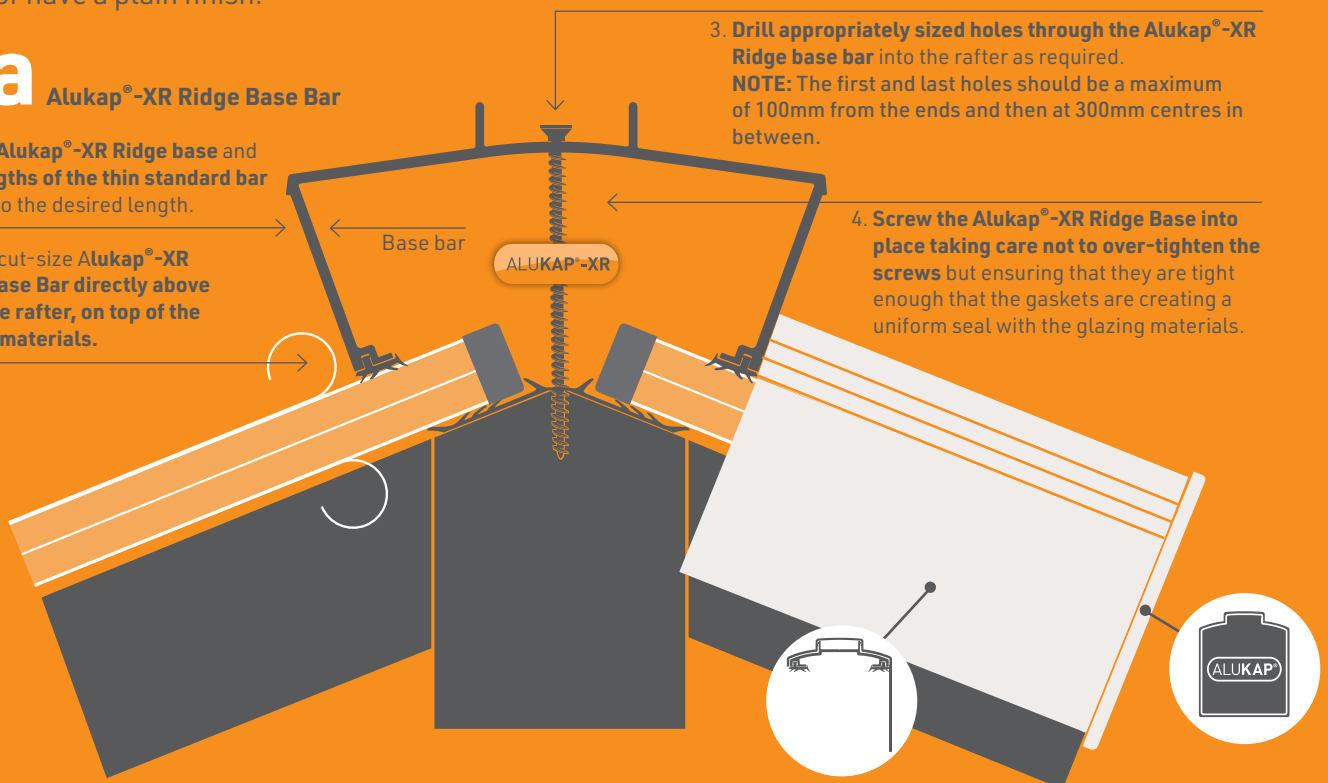
# 17b Fit the Alukap®-XR Crest Finial (optional)

1. **CAREFULLY cut the Alukap®-XR Ridge Top Clip** to the **Alukap®-XR Ridge Base Bar**.

2. **Run a bead of Securbond® Sealant down the channel** of the Alukap®-XR Ridge Top Clip.

3. **Slide the Alukap®-XR Finial into position along the top slot** of the Alukap®-XR Ridge Top Clip.

> **WARNING:** The Finail should be fitted PRIOR to attaching the Alukap®-XR Ridge Top Clip to the Alukap®-XR Ridge Base bar.

Alukap®-XR Ridge Top Clip base plate

Section Detail – Crest Finial

# 17c Fit the Alukap®-XR Standard Finial (optional)

1. Follow steps 1 and 2 of Section 16b.

2. **Slide the Alukap®-XR Finial into position along the top slot** of the Alukap®-XR Ridge Top Clip.

Alukap®-XR Ridge Base Bar

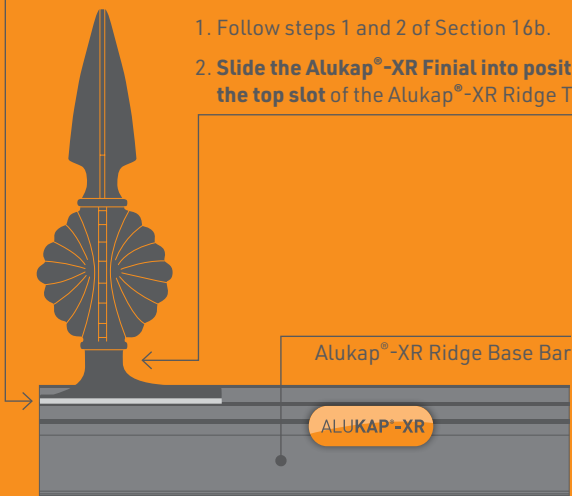Section Detail – Standard Finial

# 17d Fit the Alukap®-XR Ball Finial (optional)

1. **Drill a 14-15mm diametre hole through the top of the Alukap®-XR Ridge Radius End Cap** half way through the top cap and the lower fixing plate.
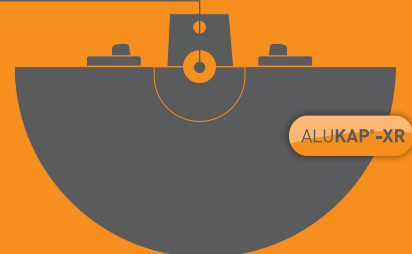
2. **Apply Securbond® Sealant** to the upper surface of the Alukap®-XR Radius End Cap where the Alukap®-XR Ball Finial will connect and also to the underside matching area of the Alukap®-XR Ball Finial.

3. **Fix the Alukap®-XR Ridge Radius End Cap and Alukap®-XR Ball Finial to the Alukap®-XR Ridge Base Bar** and secure with the supplied fixing screw. Seal any abutments and connections with **Securbond® Sealant**.
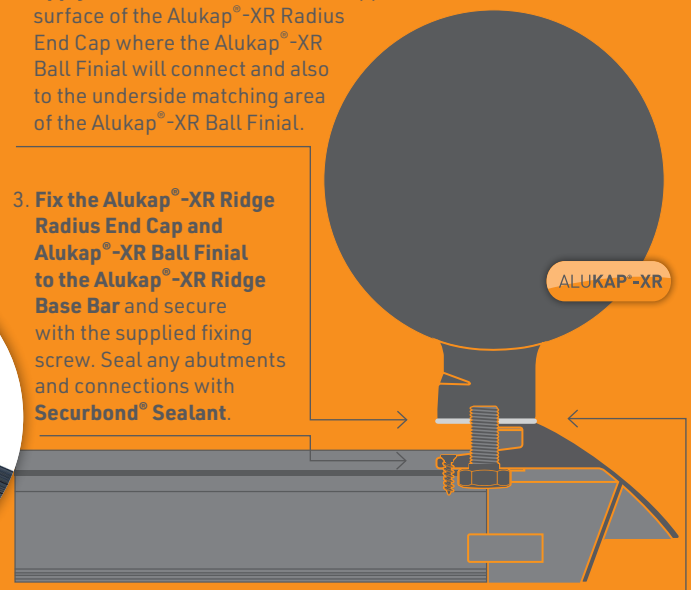
Section Detail – Ball Finial

4. **Place the Alukap®-XR Ball Finial on top of the Alukap®-XR Ridge Radius End Cap** resting on the flat part of the End Cap and **fix the bolt throught the underside of the Alukap®-XR Ridge Radius End Cap making sure the Ball Finial is tightly secured.**

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# ALU**KAP**®-XR

## 17e Fitting the Alukap®-XR Ridge Radius and Gable End Caps to the Alukap®-XR Base Bar

Alukap®-XR Ridge Bar base fixing plate

**Screw the Alukap®-XR Radius or Gable End Cap, with the top tongue resting on top of the Alukap®-XR Ridge Base Bar.**

Alukap®-XR Radius End Cap

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Alukap®-XR Gable End Plate

Section Detail

Section Detail

**NOTE: Make any additional seals with Securbond® Sealant** as required where the Alukap®-XR Ridge Base Bar make any abutments or connections.

## 17f Fit the Alukap®-XR Ridge Top Cap to the Alukap®-XR Base Bar

**1. Lower your pre-cut Alukap®-XR Ridge Bar Top Cap onto the base bar** so that the two opposite pairs of inner vertical lugs engage.

**2. Use a suitable rubber/plastic headed hammer to gently snap the top cap down on both sides** so that the outer location lugs snap firmly together.

Alukap®-XR Top Cap

The **Alukap®-XR Ridge Top Clip** has been manufactured for applications where no crests are required and fits exactly on top of the open slot area on the top cap open slot.

**FITTING INSTRUCTIONS:** Seal under the two flanges with **Securbond® Sealant** the full length of the clip. Then push the **Alukap®-XR Ridge Top Clip** into position.

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Alukap®-XR Base Bar

**IMPORTANT:** It is vital that both these outer snap-fix engagements are fully made all along the ENTIRE LENGTH of the Alukap®-XR Ridge Bar.

**NOTE: Make any additional seals with Securbond® Sealant** as required where the Alukap®-XR Ridge Top Clip make any abutments or connections.

ALU**KAP**®-XR
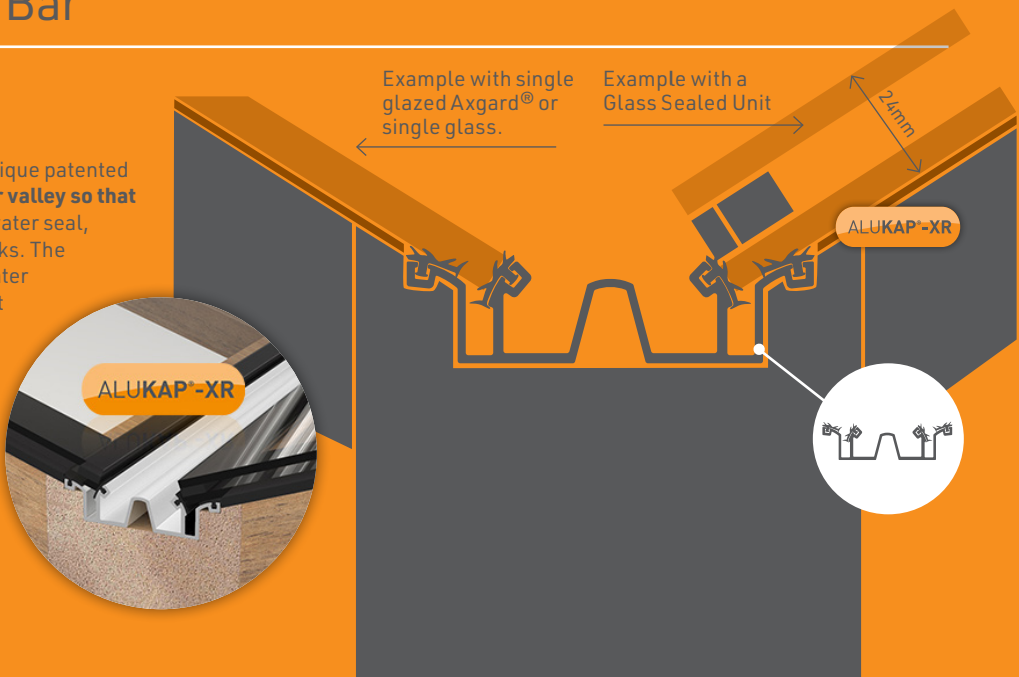
**WARNING:** As a security feature the **Alukap®-XR Ridge Top Cap and Alukap®-XR Ridge Top Clip are designed to be fixed permanently**; it will not be easy to remove once the final snap-fix has been completed!!

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# Alukap®-XR : Valley Bar
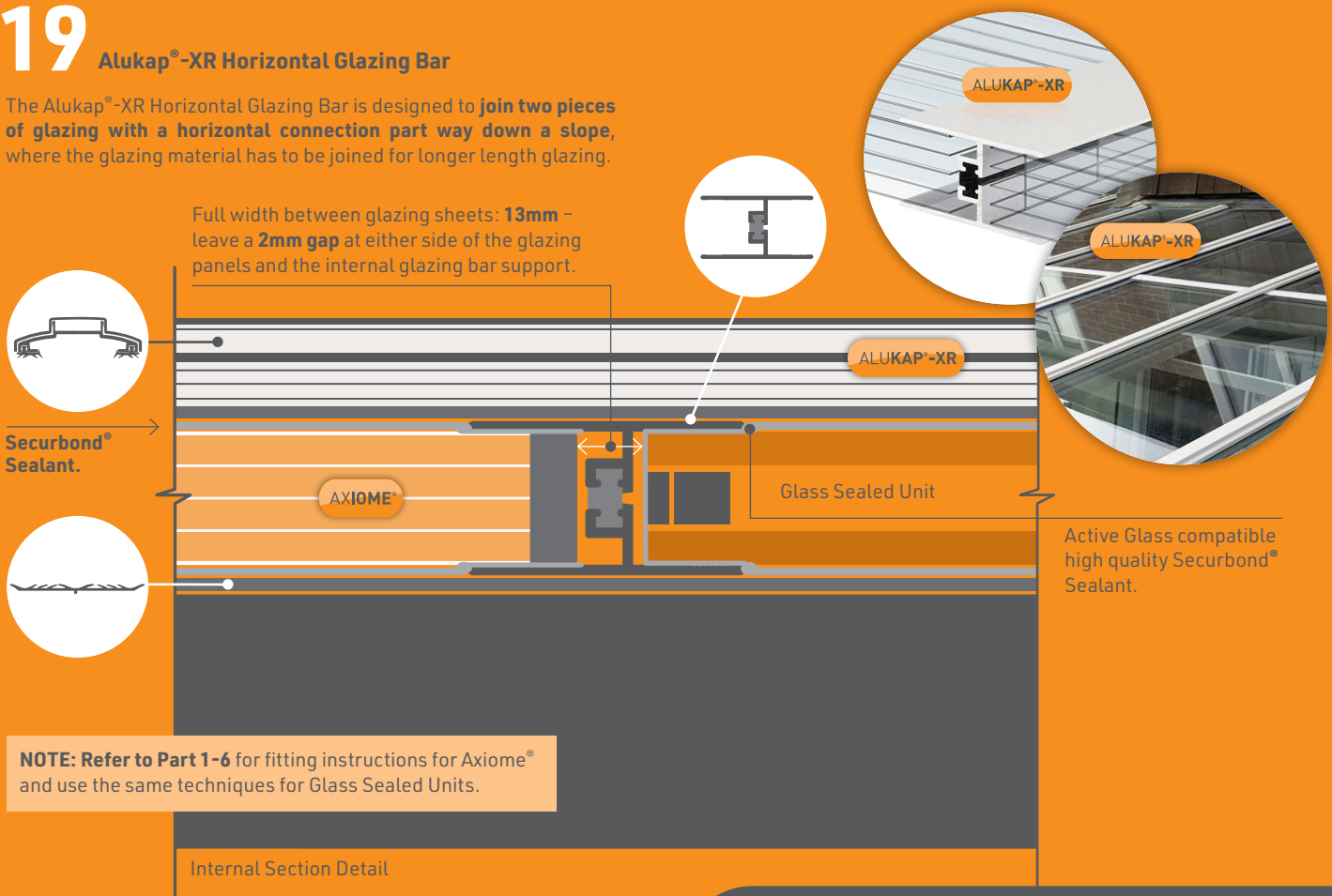
## 18 Alukap®-XR Valley Bar

The Alukap®-XR Valley Bar is one entirely unique patented design. It is designed to **recess into a timber valley so that it is entirely concealed**. It's double gasket water seal, ensures that there are no possibilities of leaks. The high-capacity channels ensure a fast rainwater flow. The Alukap®-XR Valley Bar suits almost any angle of glazing. For extreme angles the Alukap®-XR Valley Bar can be simply tilted within the Valley timber if required.

Example with single glazed Axgard® or single glass.

Example with a Glass Sealed Unit

24mm

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ALU**KAP**®-XR

# Alukap®-XR : Horizontal Glazing Bar

## 19 Alukap®-XR Horizontal Glazing Bar

The Alukap®-XR Horizontal Glazing Bar is designed to **join two pieces of glazing with a horizontal connection part way down a slope**, where the glazing material has to be joined for longer length glazing.

Full width between glazing sheets: **13mm** – leave a **2mm gap** at either side of the glazing panels and the internal glazing bar support.

ALU**KAP**®-XR

ALU**KAP**®-XR

ALU**KAP**®-XR

**Securbond® Sealant.**

AX**IOME**®

Glass Sealed Unit

Active Glass compatible high quality Securbond® Sealant.

**NOTE: Refer to Part 1-6** for fitting instructions for Axiome® and use the same techniques for Glass Sealed Units.

Internal Section Detail

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## WARNING : REGISTERED DESIGNS & PATENTS

The IP of the designs in this brochure are protected by internationally registered design rights. Many products are also protected with active or pending Patents. Clear Amber will not hesitate to take appropriate legal action if its rights in this respect are infringed.

Inasmuch as Clear Amber have no control over the circumstances in which our material may be used, or site specific parameters, we cannot guarantee that any particular results will be achieved. Users should carry out their own tests to determine the suitability of the material for their application. Installers should satisfy themselves that published permissible loadings and bar spacings for Alukap®-XR structures, together with any supporting posts, frames, or walls and fixings, are sufficient to provide adequate strength for the intended use and to meet regional loading requirements. Installers should also obtain their own job-specific structural engineer's report for their individual site. Samples are readily available to users to test and verify the exact sizes according to their site requirements.

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