ALU**KAP**®-XR

Superior Roof Glazing System
Installation Guide

ALU**KAP**®-XR

clearamber
roofing systems: designed • manufactured • delivered **direct**

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 **clearambershop.com** and get in contact with our teams via live chat, phone or email, who will be on hand to assist with any queries you may have.

Shop our Alukap®-XR product range here ...

## Contents:

ALUKAP®-XR

Part 1 : Alukap®-XR Products

Below is a list of the main types of Alukap®-XR profiles available and the items that can be supplied with each profile, most of which you will need for your project, depending on its design.

Alukap®-XR 45mm Glazing Bar

Alukap®-XR 60mm Wall Bar

Alukap®-XR 60mm Glazing Bar

Alukap®-XR 60mm Gable Bar

Alukap® Glazing Bar End Cap
(One included per bar)
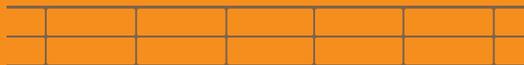
Rafter gasket options available for each bar type:

45mm Rafter Gasket

45mm Slot-Fit Rafter Gasket

55mm Rafter Gasket

55mm Slot-Fit Rafter Gasket

Alukap®-XR Top Wall Flashing
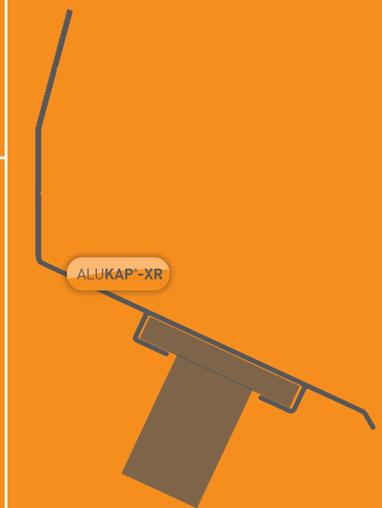
Glazing Sheets:

Axiome® Multiwall Polycarbonate Sheets
(Available in 10mm, 16mm, 25mm and 35mm)

Axgard® Solid Glazing Sheets
(Available in 4mm, 5mm, 6mm, 8mm, 10mm and 12mm)

Glass (all thicknesses)

Anti-Dust Breather Tape

*Optional item

Securbond® Flashing Tape

Securbond® Silicone LMN Sealant

Alukap®-XR End Stop Bar
(Available in: 6.4mm, 10mm, 16mm, 25mm, 28mm and 35mm)

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.

ALUKAP®-XR

Alukap®-XR : Glazing and Bars Installation

1 Planning Stage : Measure the Roof, Glazing Bars and Axiome glazing sheets required.
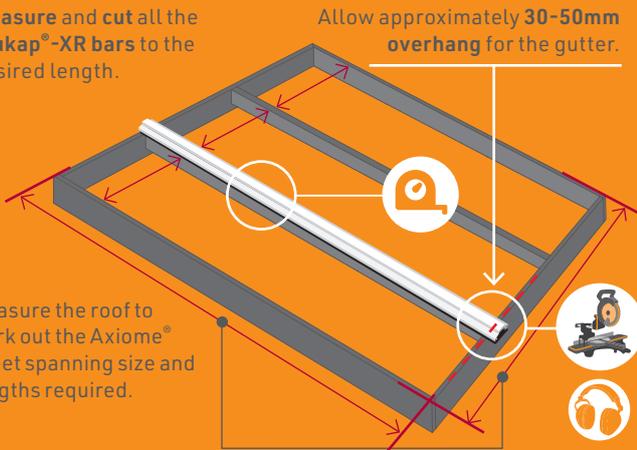
IMPORTANT:
- **Wear protective clothing.**
- Refer to: Axiome® Technical Guide - **Spanning Guide** - Page 7
- Refer to: Alukap®-XR Technical Guide - **Glazing Deductions** - Page 10

Measure and **cut** all the **Alukap®-XR bars** to the desired length.

Allow approximately **30-50mm overhang** for the gutter.

Measure the roof to work out the Axiome® sheet spanning size and lengths required.

Cut lengths of the **45/55mm Rafter Gaskets** to the **same length** as the **Alukap®-XR base bars** (one for per bar).

Cut **two lengths** of the **thin glazing bar gasket** to the **same length** as the **Alukap®-XR base bars**.

2 Prepare the Axiome® Glazing Sheets before installation

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

There is a **protective film on both sides** of the Axiome® sheet. The Axiome® branded tape side is **UV protected**.
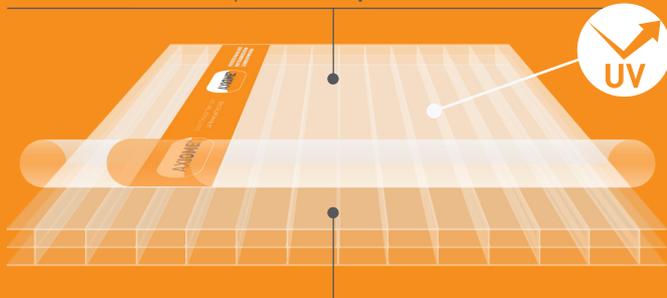
Ensure that you are working in a **clean dry area, pull the protective film back approximately 100mm from the open edge on both sides**, taking care not to scratch the surface.

3 Apply the Anti-Dust Breather 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** appropriate for the glazing sheet depth onto the **top surface** of the glazing sheet 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 End Stop Bar to the glazing sheets

The Alukap®-XR End Stop Bar seals the glazing sheet and reduces the risk of slippage.

Cut the End Stop Bars to the width of each **Axiome® sheet**, and **push-fit partway ONLY** so that the **open end** just covers the glazing sheet by about **10-15mm**.
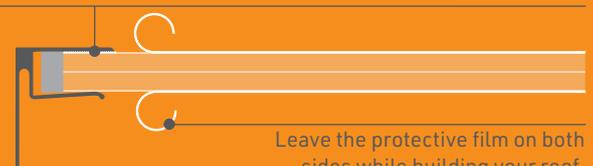
Protective film

Anti-dust breather tape
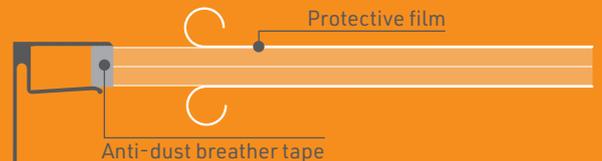
5 Apply the Securbond® Sealant

Run a thin, consistant bead of **Securbond® Sealant** along the edge of the **end stop bar** and **anti-dust breather tape**.
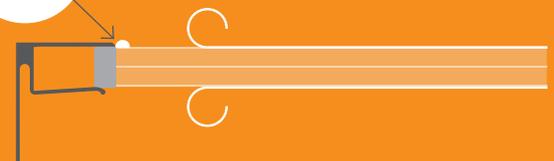
6 Final stage, fit the Alukap®-XR End Stop Bar

PUSH the Alukap®-XR End Stop 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.

▶ **Video : How 2 Cut Axiome Polycarbonate Roofing Sheets**

▶ **Video : How 2 Tape Polycarbonate Roofing Sheets**

7 Fit the **bar gaskets** to the Alukap®-XR base bars

Carefully **insert** the thin glazing **bar gaskets** into the small grooves either side of the base of the bar **ensuring that the gasket matches the contours of the Alukap®-XR base bar.**

Alukap®-XR base bar

Glazing bar gaskets
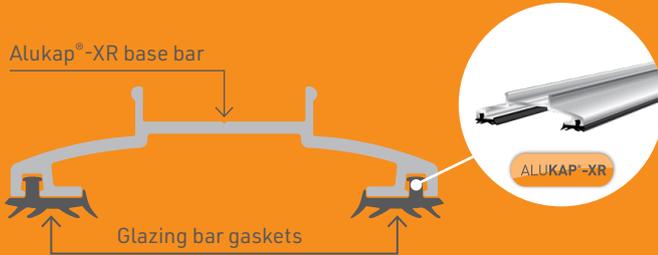
ALU**KAP**®-XR

# 8 Install the **rafter gaskets** onto the rafters

Place the **Alukap®-XR rafter gasket** on the rafter.
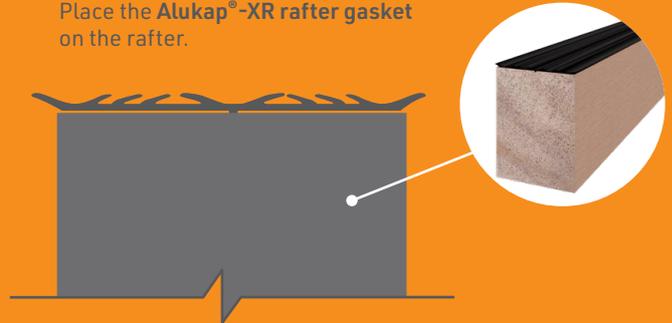
▶ **Video : How 2 Install Glazing Bars**

9 Position the **prepared glazing sheets** onto the **rafters**

Place the glazing sheets on the **rafters,** leaving sufficient space in between the panels for the fixing screws and thermal expansion appropriate to the chosen glazing material.

AX**IOME**®

38mm

12mm

ALU**KAP**®-XR

42mm

12mm
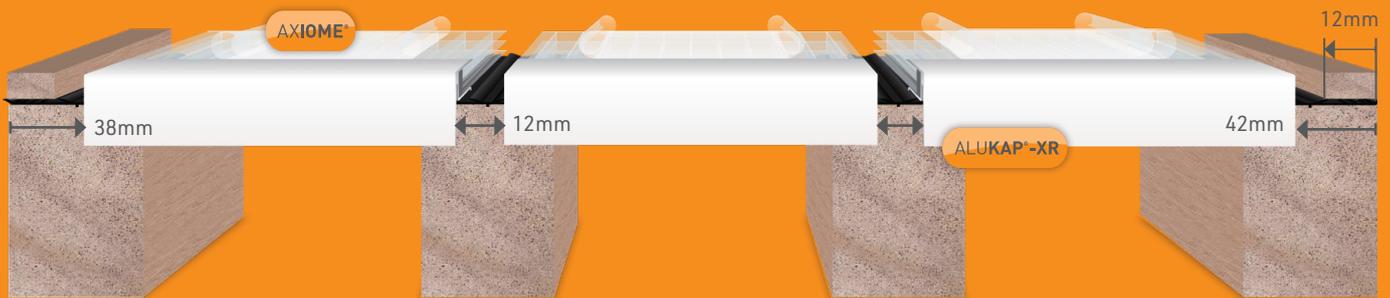
NOTE – Alukap®-XR Gable and Wall Bars only

- Polycarbonate glazing sheets can be **extended right across the rafter under the outermost bar gasket**. Or, you can add a timber packers under the outer edge gasket.

- Where **glass** is chosen, you **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 gasket should run under the timber packers.

10 Fit the **Alukap®-XR base bars**

1. Place the Alukap®-XR base bars **directly above each rafter** and **glazing panel**.

2. **Drill pilot holes** through the pre-drilled holes on the Alukap®-XR base bars, **into the rafters below**.

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

AX**IOME**®
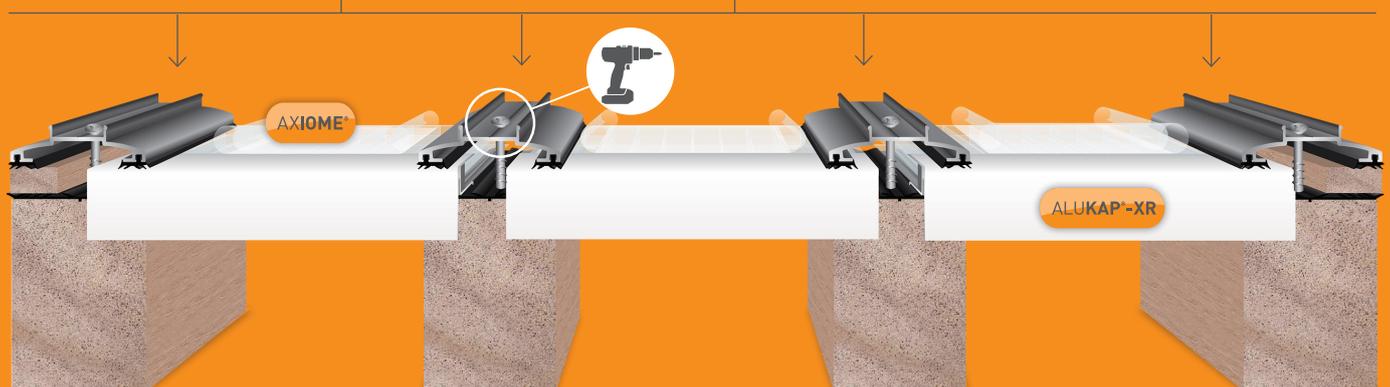
ALU**KAP**®-XR

11 Fit the **Alukap® Glazing Bar End Cap** to each bar front

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

2. **Make a mark on the base bar** for the position of the screw fixing, remove the end cap and **drill a 2.5mm hole** through the Alukap®-XR base bar.

3. Place the Alukap® Glazing Bar End Cap back into place and use the short screw provided to secure in place.

ALU**KAP®-XR**

Allow approximately **30-50mm overhang** for the gutter.

Front detail
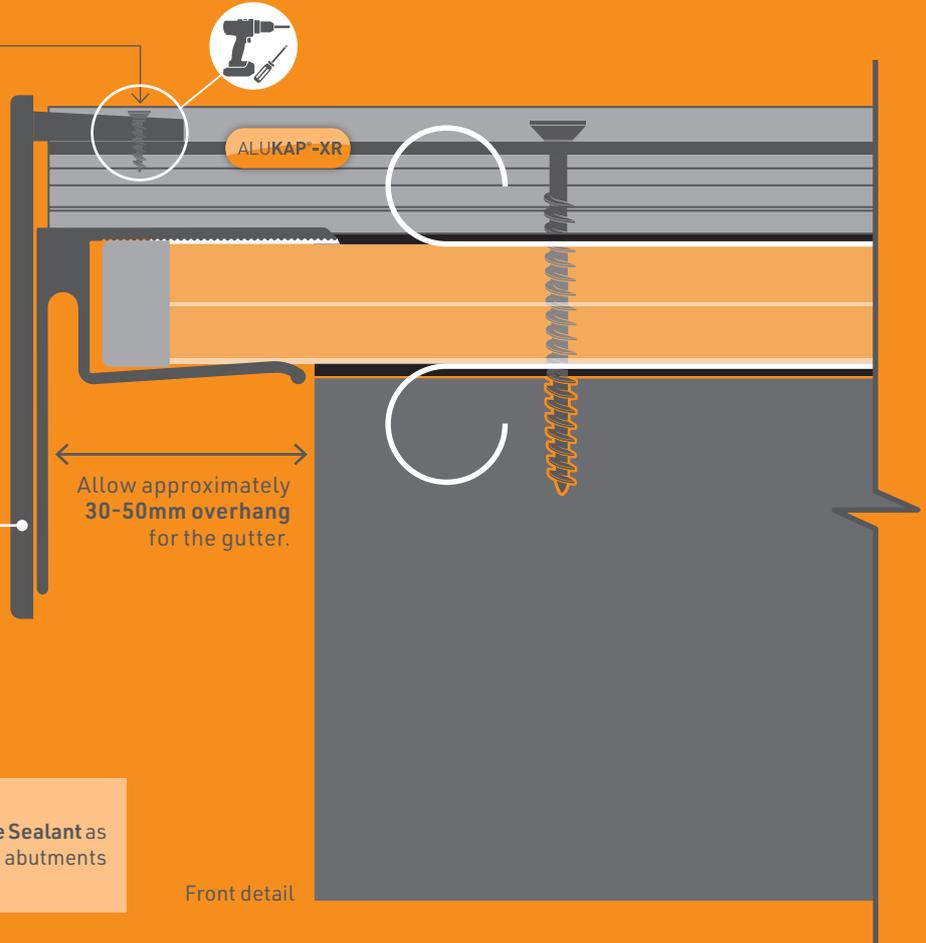
NOTE:
Make **additional seals** with **Securbond® LMN Silicone Sealant** as required where the Alukap®-XR base bar makes any abutments or connections to Wall, Hip or Ridge bars.

12 Place the **Alukap®-XR Top Clip Bars** for each bar prepared from **Stage 1**

1. Place in order the Alukap®-XR Wall, Glazing Bar and Gable Bar Top Clip bars on top of the mill base bars.

2. Apply **Securbond® Sealant to the back ribbed edge of the Alukap®-XR Wall bar** to create an abutment to the adjacent wall.

AX**IOME®**

ALU**KAP®-XR**

13 Fit the **Alukap®-XR Top Clips** to each aluminium base bar

Using a **suitable rubber/plastic headed hammer** and carefully **snap down** the **Alukap®-XR top clips** onto the mill base bars working along the whole length of the roof concealing the fixings and giving a pleasing finish to the roof.
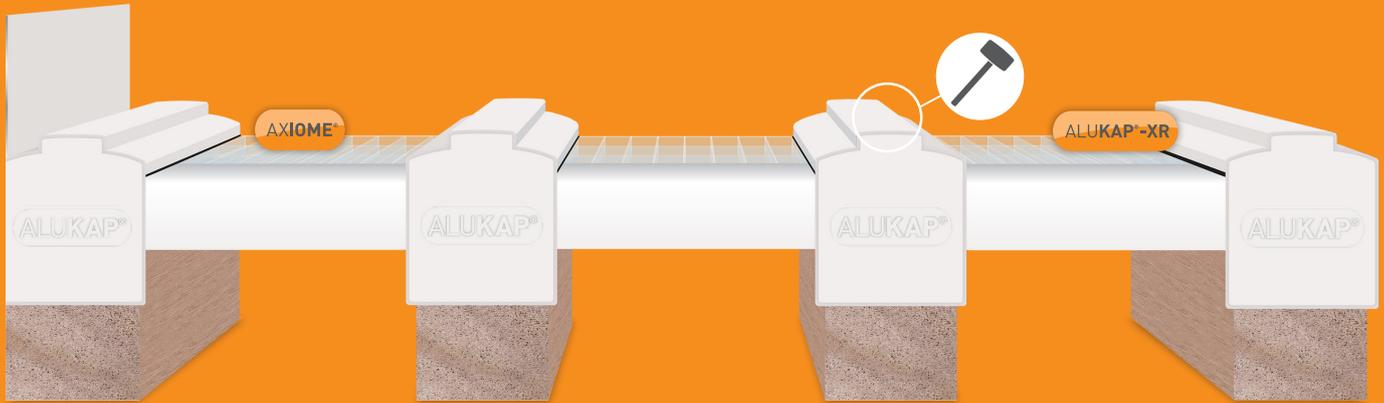
14 Finish the back of the lean-to roof: Fit the **Alukap®-XR Top Wall Flashing**

Place, **measure** and **cut** the aluminium **Alukap®-XR Top Wall Flashing** to match the full width of the roof. Place the **top wall flashing and foam gasket** onto your roof and mark on the foam gasket the position of each glazing bar.

Cut a notch out of the foam gasket the size of the top clip bar at each marked point 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.

Securbond® LMN Silicone Sealant or **flashing tape** can be used to **seal the back** of the **Alukap®-XR Top Wall Flashing** to the wall.

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

Postition the prepared **Alukap®-XR Top Wall Flashing and foam gasket**, push down and fix to the wall using suitable stainless steel screws.

< Axiome® Glazing Sheet >

▶ **Video : How 2 Install Top Wall Flashing**

IMPORTANT – Once the **Axiome® panels have 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® sheets.

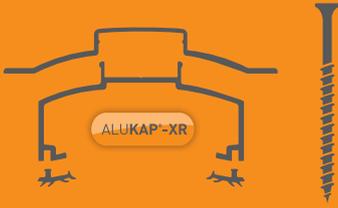**Any cleaning requires** the use of plenty of clean, soapy water and a soft, abrasive-free cloth.

ALUKAP®-XR

Part 2 : Alukap®-XR Additional Products

Alukap®-XR Hip Bar

Glazing Bar End Cap
(included with the Hip Bar)

ALUKAP®

Alukap®-XR Ridge Bar

Alukap®-XR Ridge Snap Channel Cover
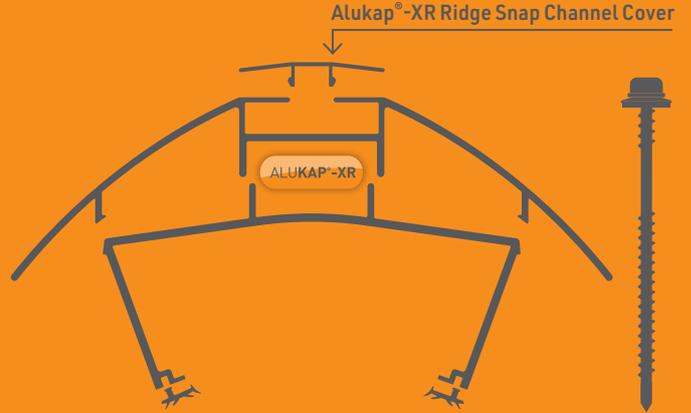
Rafter gasket options for both Alukap®-XR Hip and Ridge Bars:

45mm Rafter Gasket
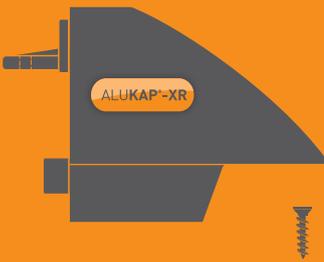
55mm Rafter Gasket

45mm Slot-Fit Rafter Gasket

55mm Slot-Fit Rafter Gasket

Alukap®-XR Ridge Radius End Cap

Alukap®-XR Ridge Gable End Plate

Alukap®-XR Lantern Pinnacle Cap

Section detail
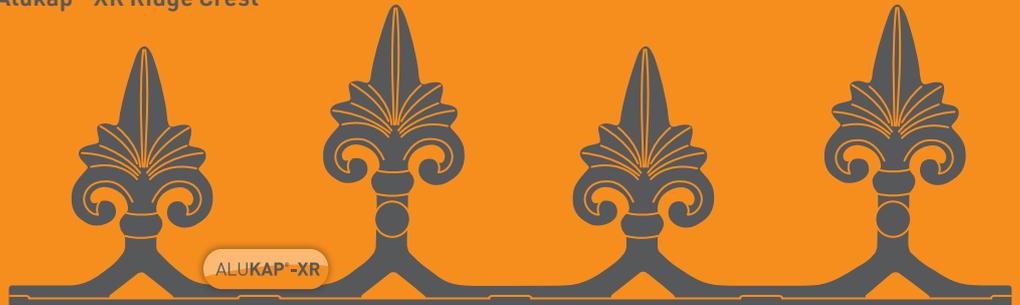
Alukap®-XR Ridge Crest
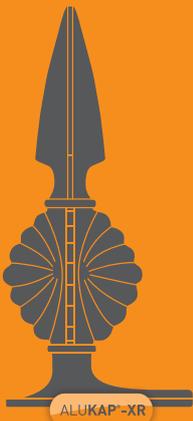
Alukap®-XR Lantern Radius End Cap

Side view

Alukap®-XR Ridge Finial

Alukap®-XR Ridge Ball Finial

Alukap®-XR Valley Bar

Alukap®-XR Horizontal Glazing Bars

24/25mm bar

28mm bar

32mm bar
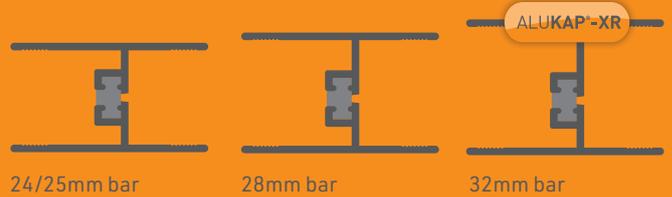
Alukap®-XR : Hip Bar

15 The Alukap®-XR Hip Bar

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

5. **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
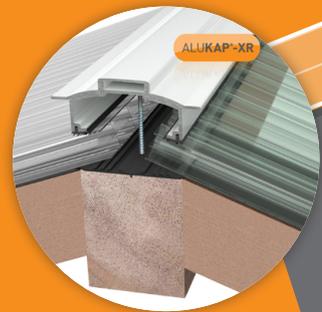
You can use Alukap®-XR Hip bars on:
• Edwardian Roofs
• Apex Roof Lanterns
• Pinnacle Square Roof Lanterns

2. Cut the Alukap®-XR 60mm Base and **Top Clip bars** to be the same angle where they abut the **Alukap®-XR Hip Bar upstand**. Fix the mill base bars in place to secure the prepared glazing panels as shown on Page 4. Work along the length of the roof so all the glazing bars and panels are installed.

4. Install all the **Alukap®-XR Top Clip bars** over the **base bars** and run a line of **Securbond® Sealant** around the edge of the fitted top clip bars where they sit on the upstand of the **Alukap®-XR Hip** bar.

3. Fit the Alukap®-XR End Caps to the **Alukap®-XR Base Bars** (shown in Page 6).
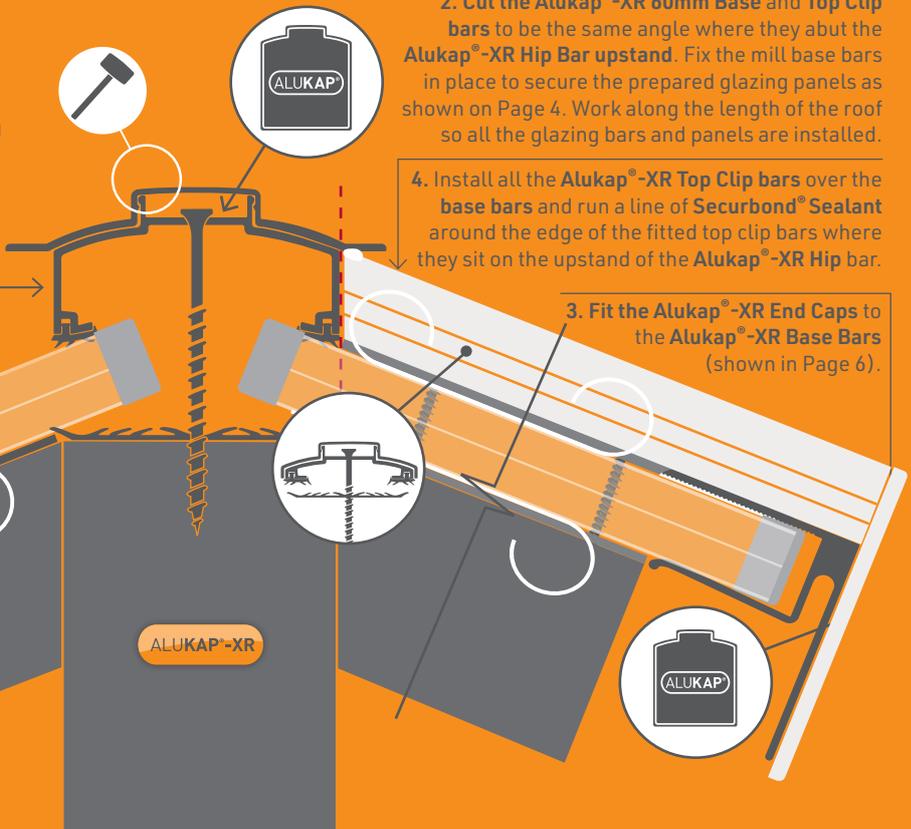
ALU**KAP**®-**XR**

Section detail

Alukap®-XR : Roof Lantern Radius End Caps

16 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.

Attach 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. Next, apply **Securbond® Sealant** to make a water tight finish.

Alukap®-XR Radius End Cap
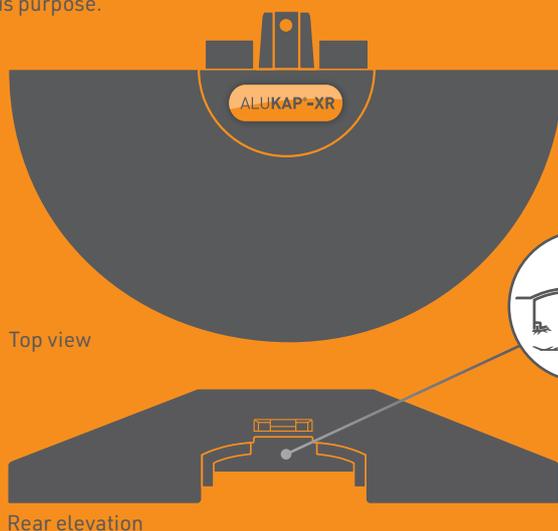
ALU**KAP**®-**XR**

ALU**KAP**®-**XR**

Top view

Rear elevation
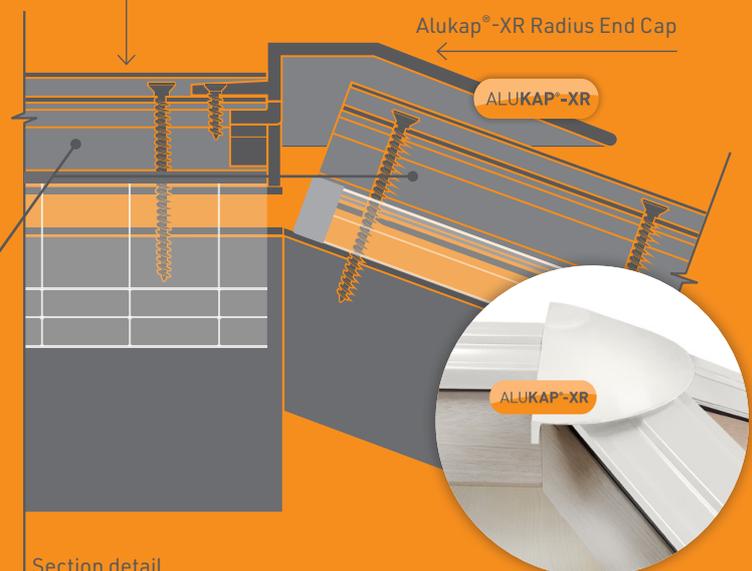
Section detail

ALUKAP®-XR

17 The Alukap®-XR Lantern Pinnacle Cap

Place the **Alukap®-XR Lantern Pinnacle Cap** over all the Alukap®-XR Hip Bars where they meet together to provide an umbrella style cover to the pinnacle area of the roof lantern. Secure in place to the frame.

(**Note**: The fixing bolt needs to be provided by the installer that is suitable for the roof.)
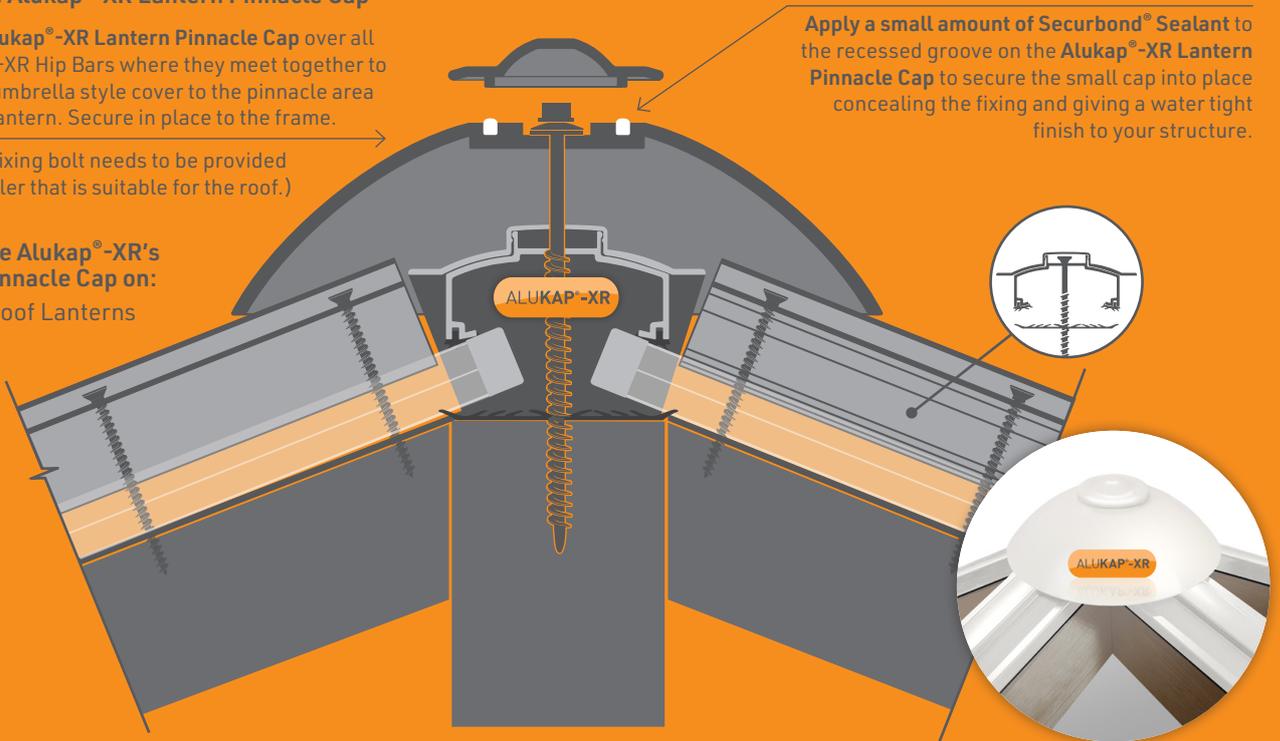
You can use Alukap®-XR's Lantern Pinnacle Cap on:
• Square Roof Lanterns

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

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, whether you prefer to add Crests, Finials or have a plain flat finish.

18 The Alukap®-XR Ridge Base Bar

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

Fit the bar gasket to **both feet** of the ridge base bar.

3. Place the **Alukap®-XR Ridge base bar directly above the glazing panels and rafters.**

Base bar

2. Drill holes of the appropiate size for the fixings provided through the Alukap®-XR Ridge base bar.

NOTE: The **FIRST** and **LAST holes** must be located no more than **100mm from the ends** and then **300mm apart**.

4. **Screw the Alukap®-XR Ridge Base bar into the rafter below, taking care not to overtighten the screws,** but ensuring that they are tight enough that the gaskets create a uniform seal with the glazing panels.
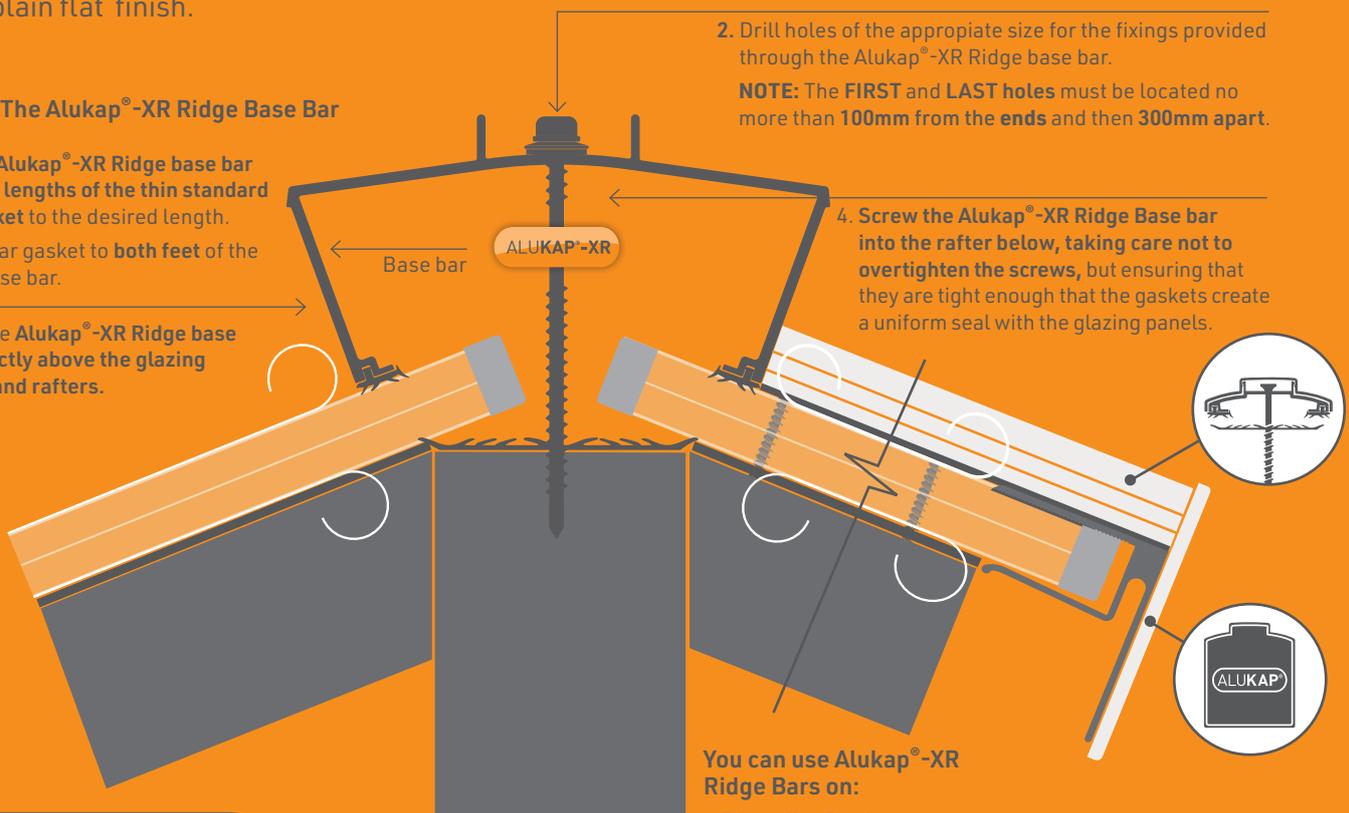
You can use Alukap®-XR Ridge Bars on:
• Edwardian Roofs
• Apex Roofs

19 Install the **Alukap®-XR Ridge Crest** to the **Ridge Top Clip Bar**

1. Cut the **Alukap®-XR Ridge Top Clip bar** to the same length as the **Alukap®-XR Ridge Base bar**.

2. Run a line of **sealant** the **full length of the Ridge Crest** along the **top fixing slot** of the **Ridge Top Clip bar**.

3. Slide the **Ridge Crest** along the **top fixing slot** and **press down** onto the sealant to secure it in place.
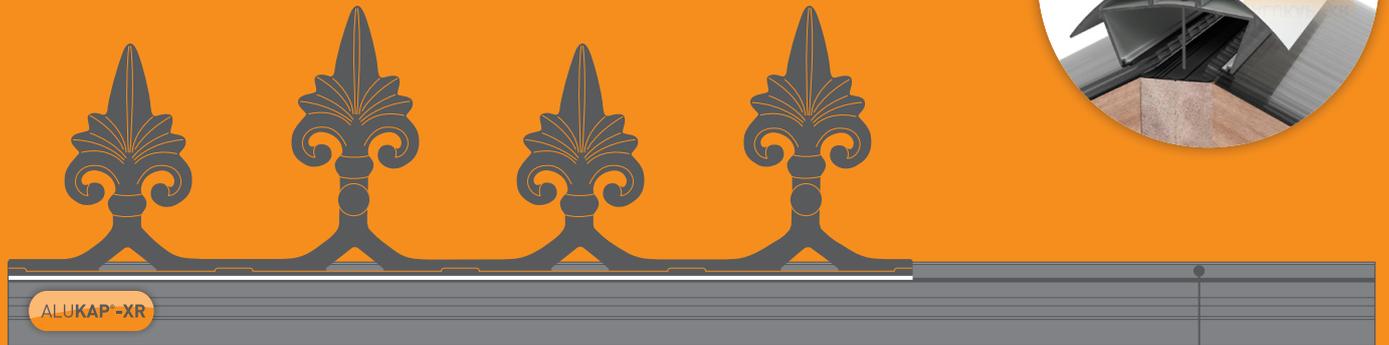
ALU**KAP®**-XR

Section detail showing the Alukap®-XR Ridge Crest
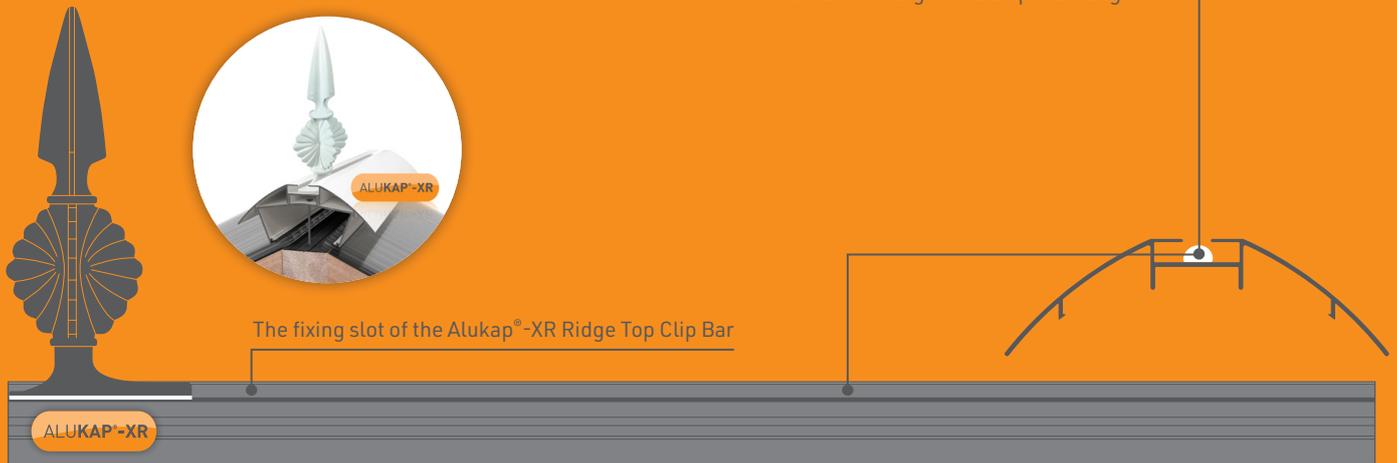
ALU**KAP®**-XR

The fixing slot of the Alukap®-XR Ridge Top Clip Bar

ALU**KAP®**-XR

Section detail showing the Alukap®-XR Ridge Finial

20 Install the **Alukap®-XR Ridge Radius End Cap** or **Gable End Plate** to the Alukap®-XR Base Bar

Alukap®-XR
Ridge Base Bar
fixing plate.

Attach the **Alukap®-XR Radius End Cap** or **Gable End Plate** by placing the **tab onto the Alukap®-XR Ridge Base Bar.**

Alukap®-XR
Radius End Cap

ALU**KAP®**-XR

Alukap®-XR
Ridge Base Bar

Section detail

Alukap®-XR Gable End Plate
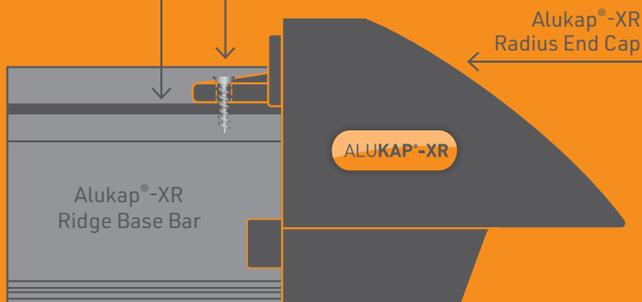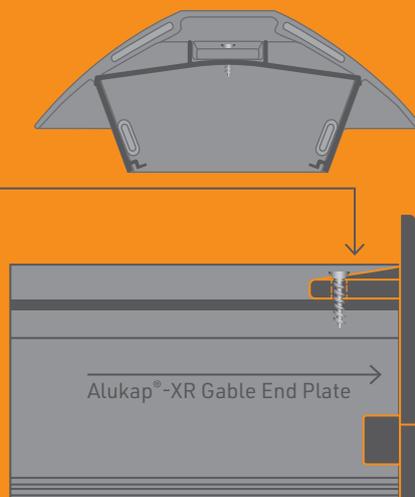
Section detail

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

ALU**KAP**®-XR

21 Install the **Alukap®-XR Ridge Top Clip** to the **Alukap®-XR Ridge Base Bar**

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

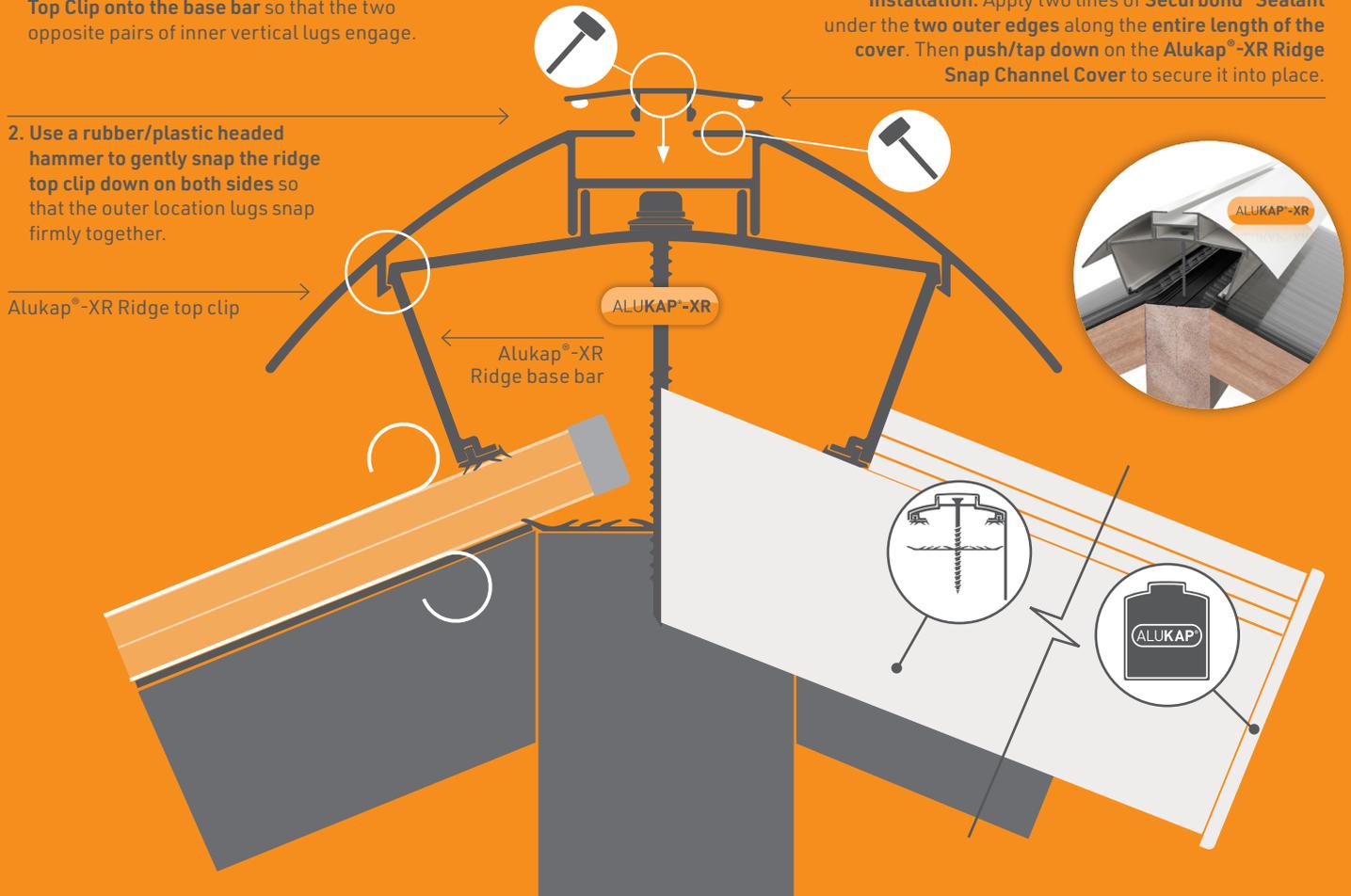**2. Use a rubber/plastic headed hammer to gently snap the ridge top clip down on both sides** so that the outer location lugs snap firmly together.

Alukap®-XR Ridge top clip

The **Alukap®-XR Ridge Snap Channel Cover** has been designed to fit perfectly into the open slot of the **Alukap®-XR Ridge Top Clip**.

Installation: Apply two lines of **Securbond® Sealant** under the **two outer edges** along the **entire length of the cover**. Then **push/tap down** on the **Alukap®-XR Ridge Snap Channel Cover** to secure it into place.

ALU**KAP**®-XR

Alukap®-XR Ridge base bar

ALU**KAP**®-XR

ALU**KAP**®

IMPORTANT: It is **ESSENTIAL** that the **two the external snap-on fasteners** are **fully engaged** along the **entire length** of the **Alukap®-XR Ridge base bar**.

NOTE: Apply **additional sealant** where necessary at joints or connections formed around the Alukap®-XR Ridge Top Clip.

WARNING: for **security reasons**, the **Alukap®-XR Ridge Cap and Ridge Snap Channel Cover are designed to be permanently fixed**; they cannot be easily removed once the final snap-fix has been completed!!

Alukap®-XR : Valley Bar

22 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.
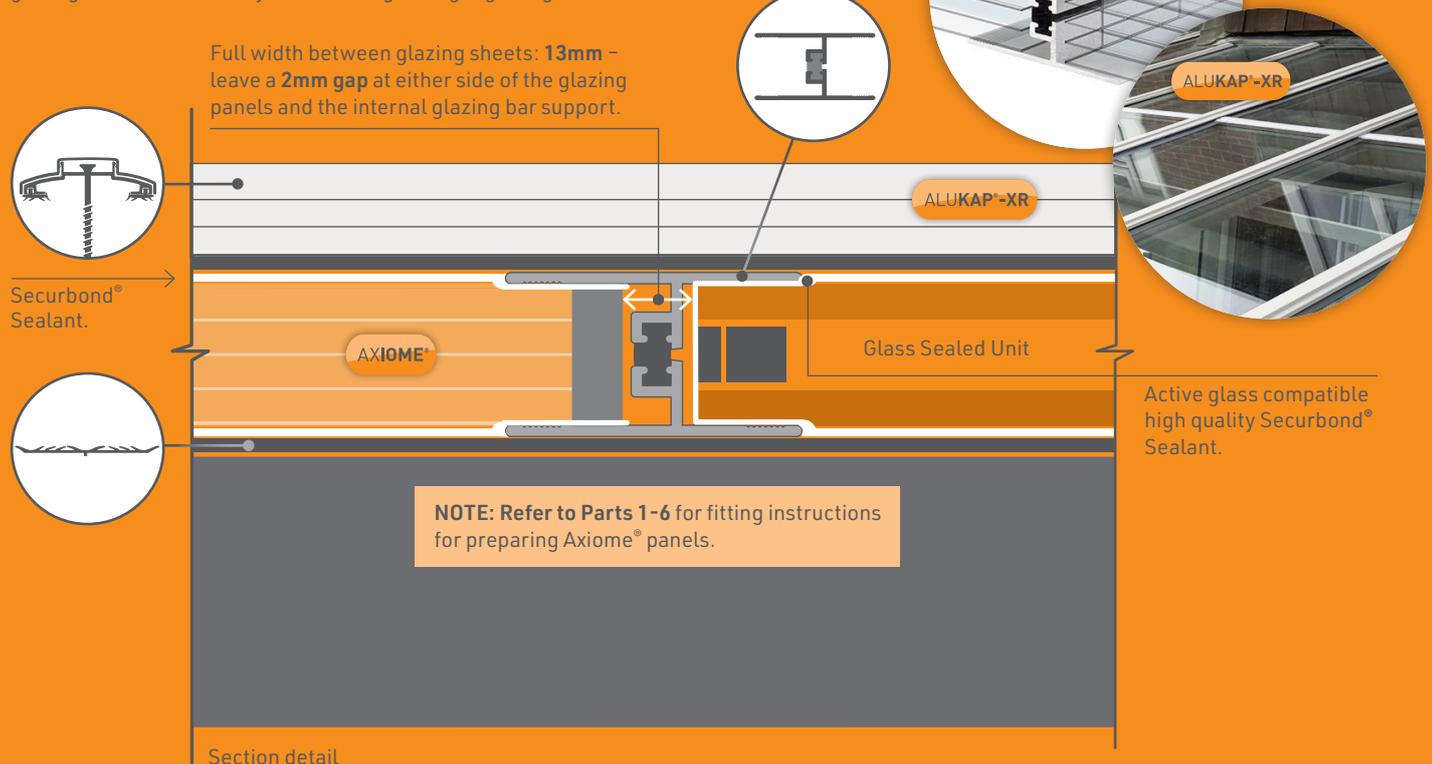
The high-capacity channels ensure a fast rainwater flow. The Alukap®-XR Valley Bar suits almost any angle of glazing. For extreme angles the Alukap®-XR Valley Bar can be simply tilted within the valley timber if required.

Example with Axgard® or glass.

Example with a Glass Sealed Unit

Works for any angle

15°

20°

ALU**KAP®-XR**

ALU**KAP®-XR**

Alukap®-XR : Horizontal Glazing Bar

23 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.

ALU**KAP®-XR**

ALU**KAP®-XR**

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**

Securbond® Sealant.

AX**IOME®**

Glass Sealed Unit

Active glass compatible high quality Securbond® Sealant.

NOTE: Refer to Parts 1-6 for fitting instructions for preparing Axiome® panels.

Section detail

WARNING : REGISTERED DESIGNS & PATENTS

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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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