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AQUARIAN
CLADDING SYSTEMS

Stainless Steel vs Aluminium Brackets: Comparative Summary

AxiAL+ is our exciting new range of mounting brackets, developed in response to today's challenges within the industry.

Three years of development and research have produced an elegant and simple solution that promises significantly improved safety, sustainability and system cost improvements.

Using the superior properties of stainless steel, AxiAL+ offers significant advantages over traditional aluminium brackets while maintaining cost parity.

MADE IN BRITAIN

cool, temperate climate
phB
CERTIFIED COMPONENT
Passive House Institute

Why choose AxiAL+?

AxiAL+ delivers enhanced fire safety and thermal performance using less material,
zero polymeric or combustible material,
lower embodied carbon and all at an affordable price.

Key Benefits of AxiAL+

- Meet U-value targets with ease
- Reduce insulation cost by up to 40%
- Maximise thermal performance in limited cladding zones
- Increase usable internal space by up to 120mm
- Zero combustible material
- Zero plastic/oil-derived material
- The same cost as aluminium + pad for a given U-value
- Superior resilience and fire performance
- Uniquely marked for traceability
- Easy to recycle
- Lower foundation costs and concrete use
- Simple to understand, easy to design with and requires little skill to install
- 33% less material = less CO_2e
- Produced using renewable energy
- Made in the UK
- Can be used with any cladding
- Transforms most rainscreens to Passivhaus specification

To find out more contact our team
on 0808 223 9080 or email info@aquariancladding.co.uk

How AxiAL+ can solve your U-value challenge

The NEW AxiAL+ stainless steel system offers an improved, structurally efficient profile with low thermal conductivity to help achieve U-Value targets whilst minimising wall build up depth.

AxiAL Vs AxiAL+ U-values

This chart compares the U-values achieved in a built-up external wall using our standard aluminium bracket with nylon pad (orange line) and AxiAL+ (black line).

From this chart you can either:

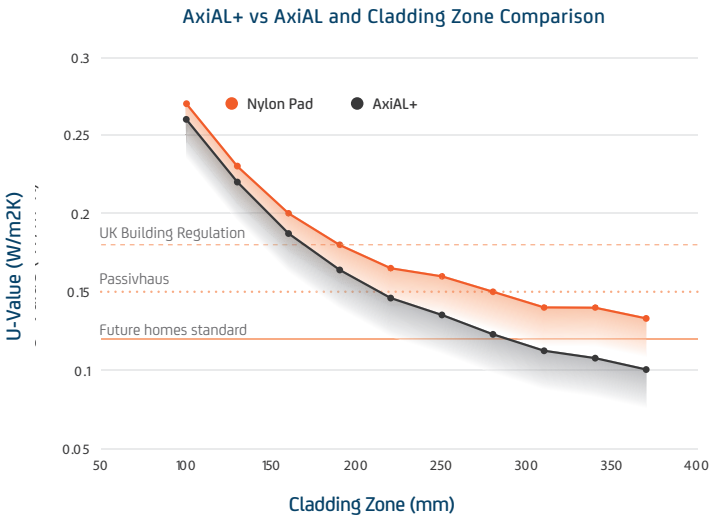
a. calculate the improvement in U-value for a fixed cladding zone (as when remediating) or

b. calculate the reduction in external wall thickness possible for a target U-value.

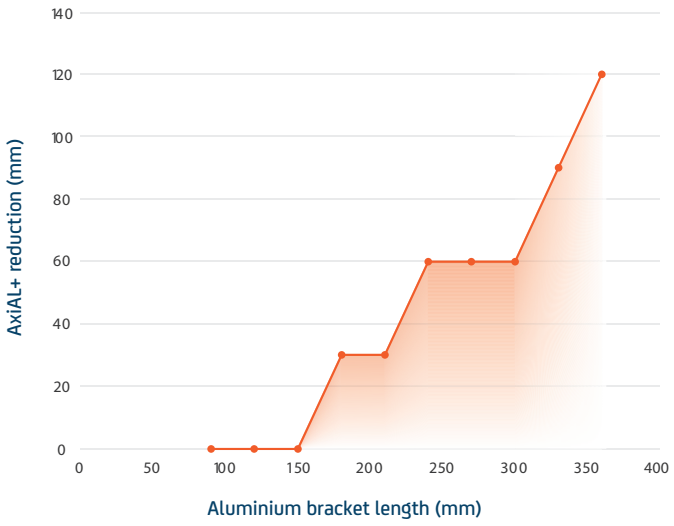
U-Value Targets

UK Building Regulation: 0.18 W/m²K

Passivhaus: <0.15 W/m²K



Reduction in Build Up Using AxiAL+

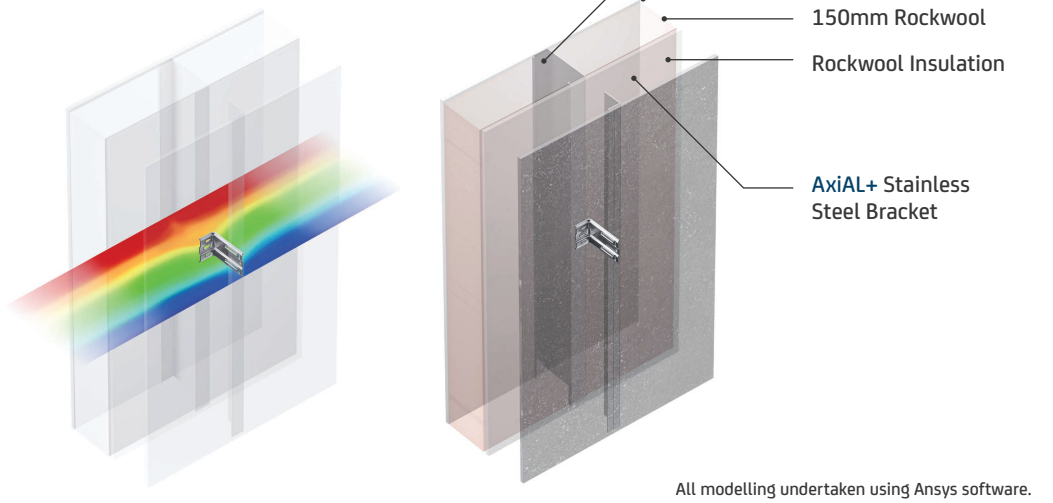


Equivalent Brackets Lengths (mm)

NEW AxiAL+	AxiAL	NEW AxiAL+	AxiAL
90	90	240	300, 330, 360
120	120	270	NA
150	150, 180	300	NA
180	210, 240	330	NA
210	270	360	NA

AxiAL+
Thermal Performance

- AxiAL+ Bracket (Actual Profile Modelled)
- 60mm External Cavity



This document is for illustrative purposes only and should not be used as a design guide. All figures and calculations presented are based on a 60mm cavity and 600x900mm bracket spacing. Other configurations may produce different results.

All modelling undertaken using Ansys software.

AxiAL+
Features

The AxiAL+ stainless steel system offers an improved slender profile with low thermal conductivity to help achieve U-Value targets whilst minimising wall build up depth.

- Low Thermal Conductivity: Stainless steel has a significantly lower thermal conductivity compared to other aluminium alloys
- Reduced Thermal Bridge: Low thermal conductivity combined with an improved slender profile helps reduce thermal bridging across the insulation and improve U-values without the need of polymeric isolation pads
- Reduced Cladding Zone: The reduction in thermal bridge means that equivalent or improved u-values can be achieved with reduced insulation depths. This also reduces material consumption, cost, and end-of-life waste
- Increase Internal Floor Space: The reduced cladding zone increases the internal floor area, critical for projects and retrofits where space saving is critical
- Non-Combustible
- Passivhaus Certified
- Higher Fire resistance
- Excellent Corrosion Resistance Stainless Steel is applicable for most environments without further surface protection

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AxiAL+ Manufactured by ASH & LACY

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