

AXIAL

RAINSCREEN SUPPORT SYSTEMS



SYSTEM GUIDE

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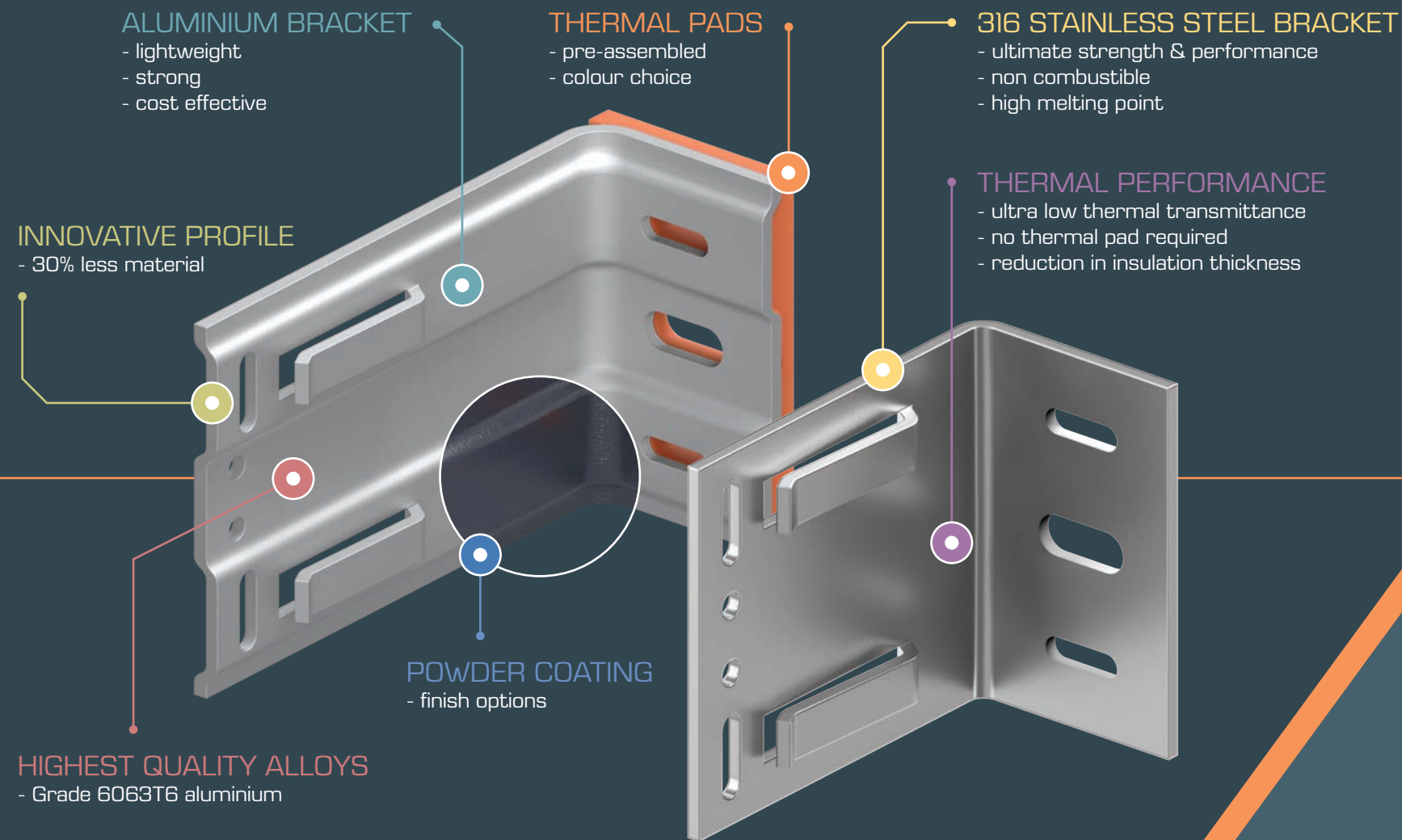


A byword for innovation and engineering excellence for over 140 years, Ash & Lacy products are in demand all over the world. We manufacture a diverse range of engineered facade and roofing systems tailored to the architectural sector – complemented by a comprehensive range of fasteners, load bearing components and accessories.

Our products are manufactured to the highest quality standards, keenly enforced by a quality management system certified to BS EN ISO 9001:2015. Designed and constructed to ensure complete peace of mind for our customers, all our products are strenuously tested by our own in-house facilities and by independent bodies to ensure they easily meet, and exceed, industry standards.

BUILT ON
INTEGRITY





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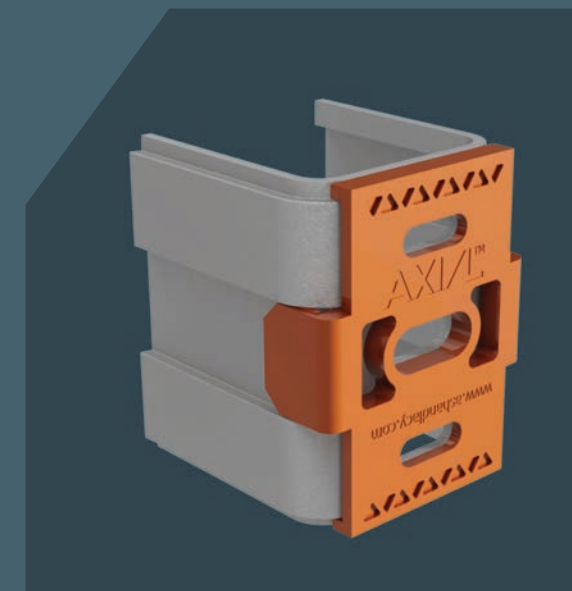
The AxiAL range of rainscreen support systems and lightweight framing components has been developed by industry experts to deliver new performance standards.

From the unique castellated strength of our aluminium components, to the superior thermal properties of stainless steel,

FIT AND FORGET

AxiAL systems ensure optimum structural integrity and longevity – allowing you to fit and forget.

Comprising an extensive standard range of pre-assembled brackets and rails, AxiAL Rainscreen Support Systems are versatile enough to accommodate a wide spectrum of materials and design requirements – allowing architects a broad palette from which to choose. However, at the same time they are reassuringly robust enough to meet and exceed the evolving performance requirements of the cladding and façade industry.



SAFER

Non-combustible parts ensure absolute integrity and longevity. Non-combustible parts classified A1 to EN 13501-1 ensure absolute peace of mind.

STRONGER

Stainless steel option designed to deliver superior load strength.

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AxiAL Rainscreen Support Systems are designed to deliver exceptional standards for both new-build and refurbishment projects. Specially engineered to provide a superior level of thermal performance, designers have the reassurance of knowing they meet the highest environmental requirements, while ease of installation and reduced build time help to significantly lower costs.

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CONFIDENCE TO CREATE

FASTER

Pre-installed thermal isolator pads mean brackets are easy to install, minimising time on site and the associated labour costs.

SPACE

Thermal conductivity resistance of stainless steel brackets allows reduction of insulation thickness without compromising thermal performance.

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GUARANTEED

Reassurance of a 10 year warranty, or 25 year warranty when used with an Ash & Lacy rainscreen panel system.

INTEGRAL
10 YEAR WARRANTY ASH & LACY

TESTED

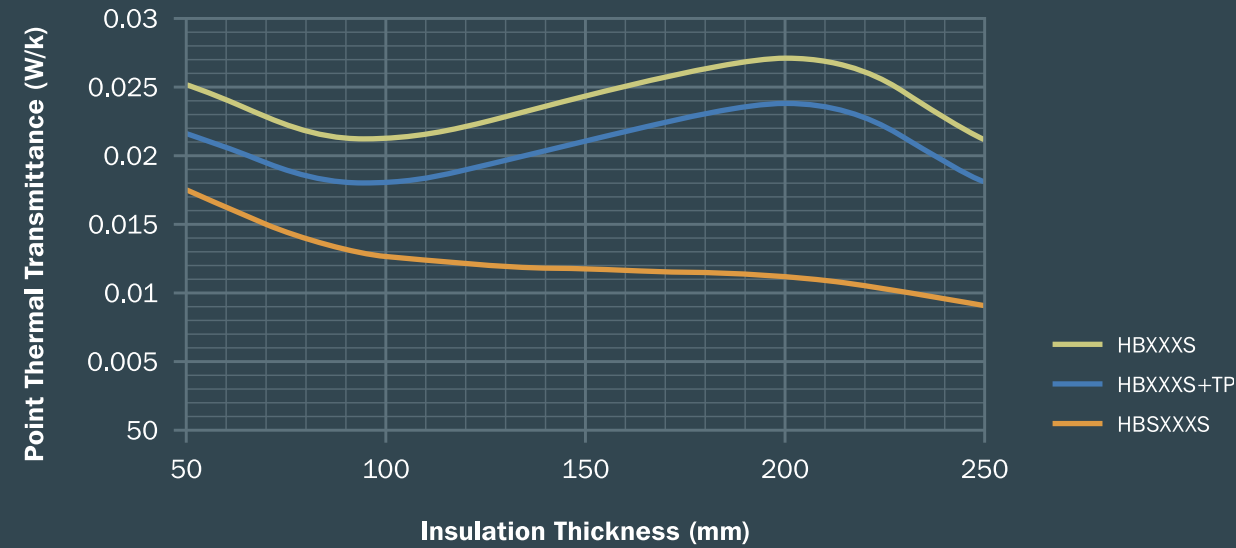
AxiAL Rainscreen Support Systems are classified A1 to EN 13501-1 and are tested in conjunction with a wide range of facade materials to EN 13823 and EN 1716 standards, so you can specify AxiAL with complete confidence in its performance against fire.

COST EFFECTIVE

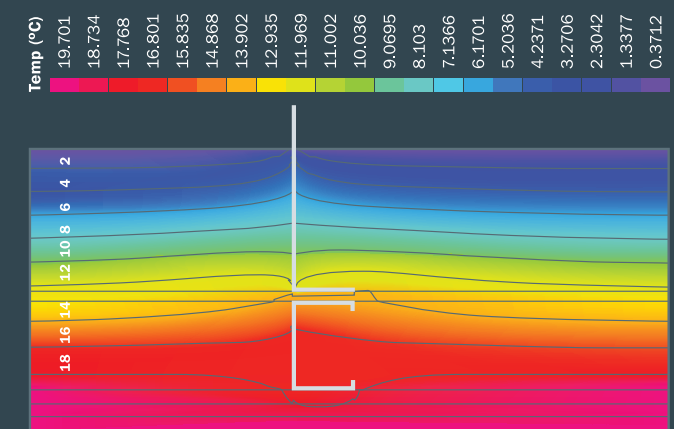
All alloys exceed performance test requirements, yet deliver significant savings (with aluminium brackets using 30% less raw material compared with flat extrusions).

THERMAL PERFORMANCE

Thermal Bridging Comparison



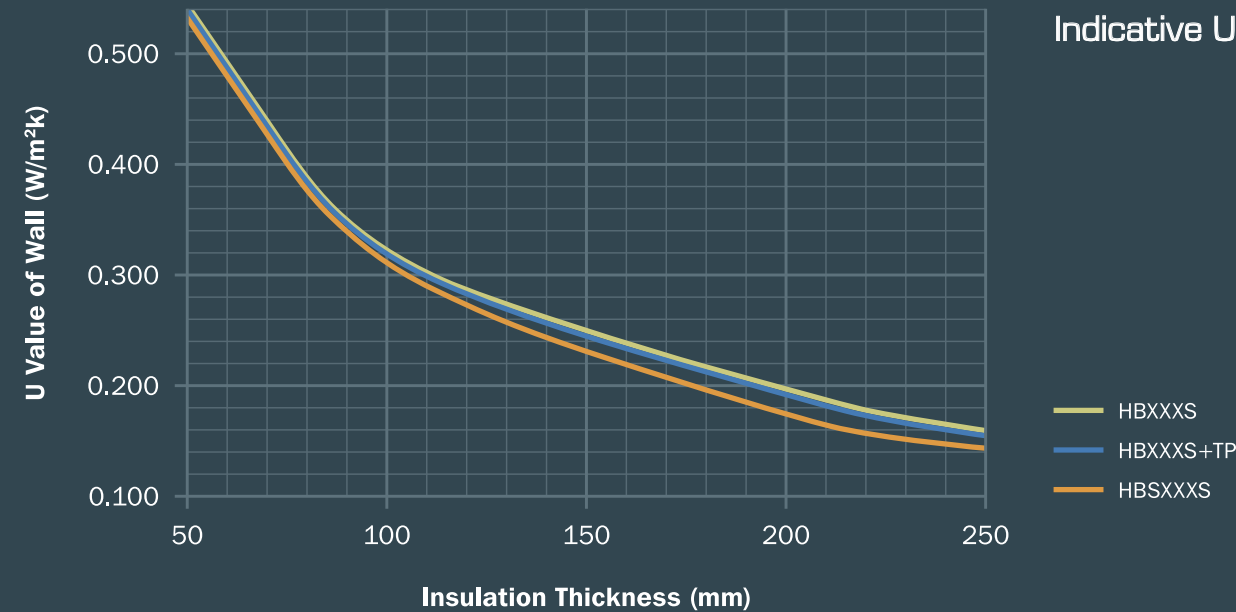
Thermal Modelling



When fitting any rainscreen system, thermal performance is critical. Both AxiAL aluminium and stainless steel systems offer considerable thermal protection.

Our aluminium system, for instance, restricts thermal bridging by including isolation pads between the bracket

Indicative U value Comparison



and the structure – limiting the effect of heat loss through the warm zone. These isolation pads are pre-fitted into all AxiAL aluminium brackets to make installation quick and easy.

Choose our stainless steel brackets and you also benefit from low thermal conductivity. This inherent property prevents cold bridging without the need for isolation pads. Our technical team can calculate the thermal value of all our brackets and isolators to ensure that your installation minimises the overall impact of heat loss.

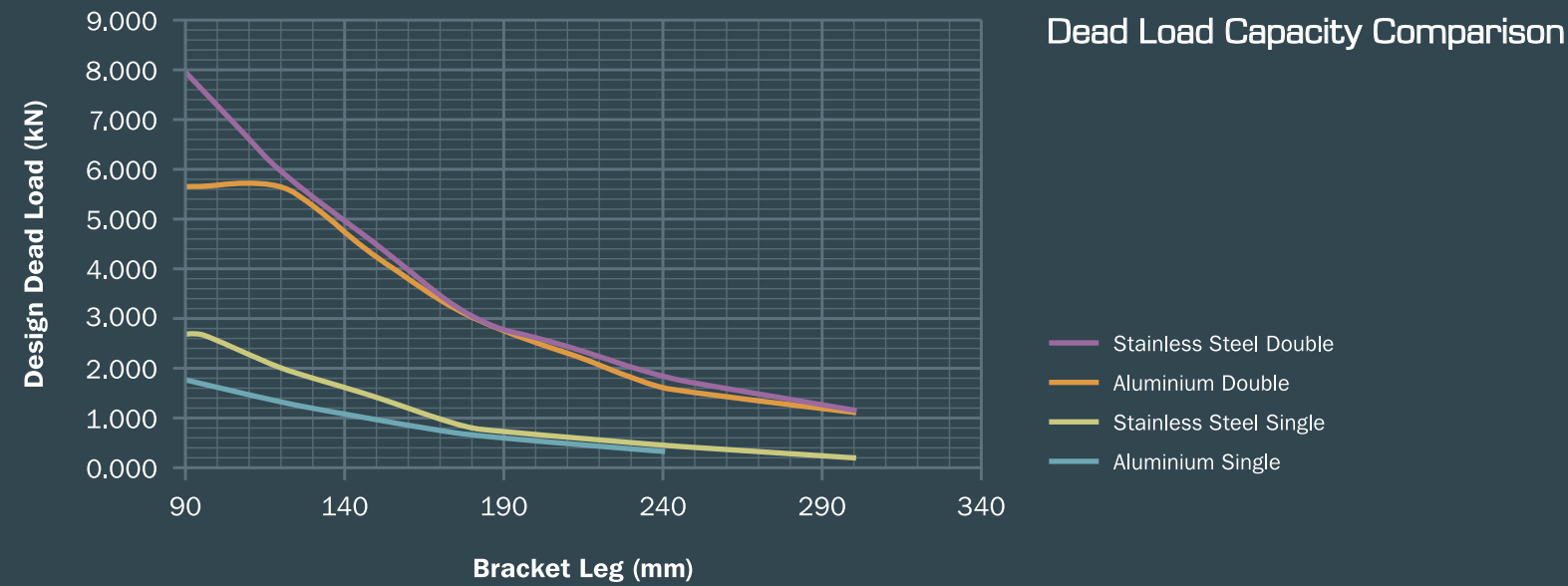
KEY FEATURES

Higher melting point (stainless steel)

Space saving low thermal bridging

Designed to meet energy efficiency requirements





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SUPERIOR STRENGTH

Rainscreen facades are exposed to wind loads, impacts or even additional external fittings. Therefore, it's important to know at an early stage what stresses will be placed upon them. AxiAL systems allow you to prepare for any eventuality. Our flexible point brackets are designed to absorb the stress of

SUPERIOR PERFORMANCE

- Aluminium brackets – unique castellated profile significantly increases strength compared to competitors.
- Stainless steel brackets – deliver greater load/span capacity, allowing designer to consider more ambitious options.
- Increased load capacity can mean fewer brackets required per area to carry the same load providing a material cost saving.

dynamic wind loads as well as accommodate the seasonal expansion and contraction of materials throughout the year.

Uniquely profiled to add strength, our aluminium fixed point brackets carry dead loads with minimal deflection and form a robust fixed point resistant to impact.

Our technical team has the expertise to help you calculate and deliver a robust, solid framework – ideally suited to your requirements.

KEY FEATURES

Grade 6063T6 aluminium

316 stainless steel

Inherently strong castellated bracket profile

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In addition to our existing range, we can tailor anything to your exact needs. Whether you're looking to cut profiles to bespoke lengths, powdercoat components or mould thermal pads to specific colours, we can bring your vision to life.

UNIQUELY VERSATILE

EXTENSIVE SUITE OF COMPONENTS

Including:

- Aluminium T, L, Zed, Omega Rails and top hats to suit most methods of construction
- Bracket depths ranging from 45mm - 300mm to accommodate varying build-ups
- Brackets include 30mm adjustment (see above)

CLADDING MATERIALS

To ensure full structural integrity, AxiAL components support a comprehensive range of cladding materials, including:

- Fibre Cement
- Aluminium
- Stone Cladding
- Terracotta
- Rockpanel
- ACM
- Stainless Steel
- Brick Slip
- Render
- Metals: Zinc / Copper

KEY FEATURES

Adjustable brackets

Choice of steel and aluminium

Powder coated finishes

Adaptable to horizontal and vertical applications



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TECHNICAL
SUPPORT

Ash & Lacy understand that every project brings a new set of challenges. That is why our technical support team is set up to provide advice and design support throughout the entire development process – from architectural specification to on-site installation on completion of a product checklist.

AxiAL technical support services include:

- Thermal Calculations
- Static Calculations
- Full Structural Calculations*
- On-site pull out tests
- General technical advice
- Indicative layout drawings

Contact our support team
0121 525 1444 / Opt 1
axial@ashandlacy.com

For more information
www.ashandlacy.com/axial

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PROJECT CHECKLIST

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Ash & Lacy will use the information contained in this form to calculate the maximum bracket centres and achievable spans for this project. Project drawings must be included with checklist submission.

SECTION 1

Contact Details:

Your name: Telephone number:

Company name: Email Address:

Office Address: Relationship (Customer/Distributor):

Project Details:

Project name: Building height & storey height:

Project address: Building substructure:

Project postcode: Project start date:

Cladding Details:

Panel material: Panel fixing method:

Panel thickness (mm): Cladding area (m²):

Panel size (width x height): Insulation material & thickness:

Please complete the additional information in Section 2 as accurately as possible and where applicable. Unless full detail is provided, this data will be estimated and therefore must be verified by the customer prior to installation. Highlighted red fields are mandatory.

SECTION 2

Additional information:

Panel weight (kg/m²): AxiAL System Required:

Cladding zone (mm):

Maximum wind pressure (kN/m²): Substructure material:

Maximum wind suction (kN/m²): Strength/Gauge (Steel only):

Maximum deflection ratio: L/ Size/Grade (Timber only):

Maximum allowable fixing centres (mm): Strength/Grade (Concrete only):

Maximum desired vertical rail centres (mm): Max vertical spacing (Steel/Timber):

Point thermal transmittance of bracket required (U/N)? Max horizontal spacing (Steel/Timber):


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SP: 24113

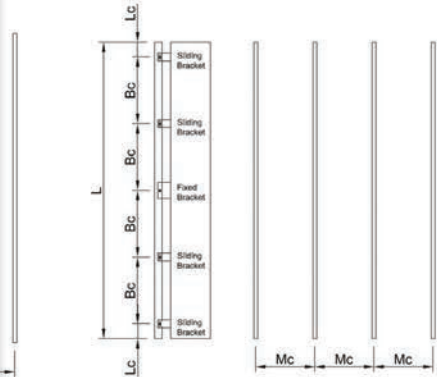
Made by: YT

Date: 12/01/2018

Revised Version: R1.0



Corner Areas



For email technical@ashandlacy.com

www.ashandlacy.com

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Calculation with 250 Concrete Slab

Made by: AM

Checked by: YT

Issued Date: 14/02/2018

Revised Version: A

less Steel)

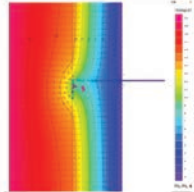
conductivity and boundary condition

Thermal resistance (m ² K/W)	Thermal conductivity (W/mK)
0.13	
0.00	
0.00	
	0.035
	2.3
0.13	

ance X

Numerical U-Value (W/m ² K)	Model U-Value (W/m ² K)	Point thermal transmittance X (W/K)
0.13	0.17	0.030

ated by using Heat 3 Version 8.02 with model size 1200 mmX600 mm
lue + 1.38 x point thermal transmittance X



Temperature of Wall with 250 mm insulation



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British designed and manufactured, you can be sure that the components you need are easily accessible – no matter where your site is located. We maintain comprehensive stock levels of standard components and have the agility to deal with large orders – ready to deliver to one of five UK depots, or direct to site in phased deliveries.

BUILT IN THE HEART OF THE UK



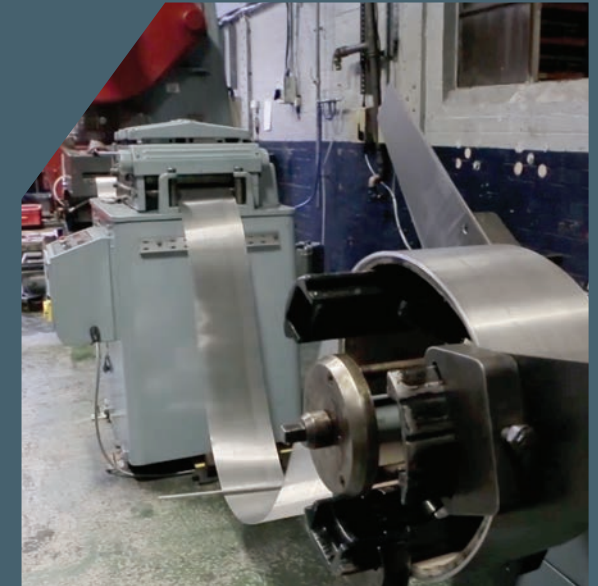
Using the best materials and state-of-the-art solutions, we put our products through some of the most rigorous testing – both at our internal test facility and externally through organisations such as the SCI and CWCT.

ASH & LACY

CENTRE FOR
**WINDOW AND
CLADDING**
TECHNOLOGY

SCI
Steel Knowledge

warringtonfire



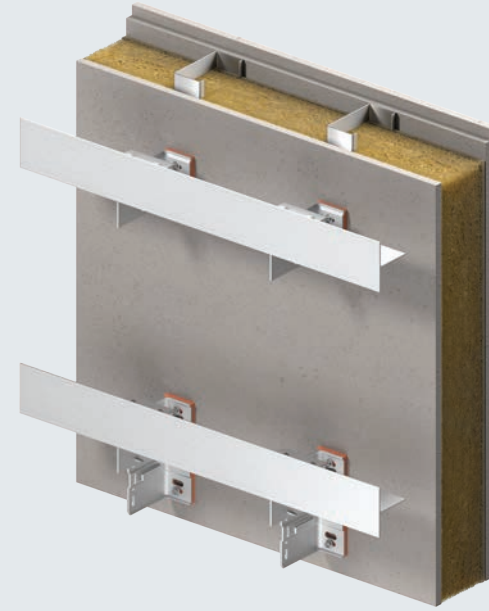
> AX1

Aluminium support system suitable for mechanical fixing of cladding elements by means of rivet or screw, with rails used in vertical application



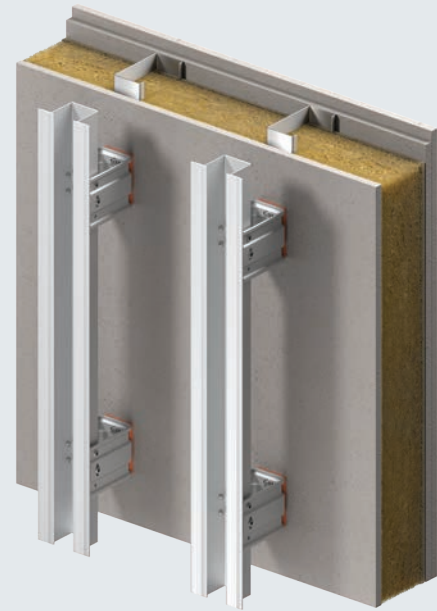
> AX2

Aluminium support system suitable for mechanical fixing of cladding elements by means of rivet or screw, with rails used in horizontal application.



< AX3

Aluminium support system suitable for mechanical fixing of horizontal and vertical application cassette panels.



< AX4

Aluminium support system suitable for rainscreen with a shallow cladding zone and no adjustability requirement.



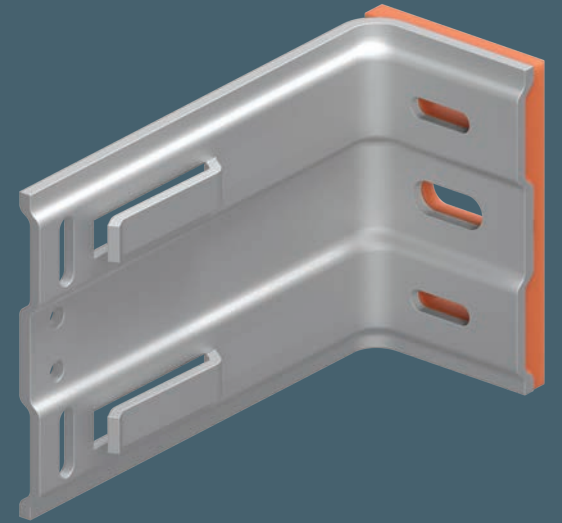
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AX SERIES

Aluminium is a low-weight, high-strength metal. At 2.7kg/m³, its density is about one-third that of steel. Yet thanks to the unique castellated profile of our AxiAL aluminium brackets, we have managed to boost that strength even higher, yet reduce the use of raw materials by 30% compared to flat systems of equal performance.


PROFILED FOR PERFORMANCE


What's more, while we have managed to reduce the weight of components, you can be sure there is no loss in quality. AxiAL brackets and rails are manufactured from 6063 architectural alloy to guarantee high corrosion resistance and a quality surface finish. And, of course, all our aluminium cladding brackets are designed in accordance with BS EN 1999, also known as Eurocode 9, governing the design of aluminium structures.





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ALUMINIUM BRACKETS


Vertical Single Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HB090S-TP	90	95 - 125
	AXL-HB120S-TP	120	125 - 155
	AXL-HB150S-TP	150	155 - 185
	AXL-HB180S-TP	180	185 - 215
	AXL-HB210S-TP	210	215 - 245
	AXL-HB240S-TP	240	245 - 275
	AXL-HB270S-TP	270	275 - 305
	AXL-HB300S-TP	300	305 - 335

Vertical Double Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HB090D-TP	90	95 - 125
	AXL-HB120D-TP	120	125 - 155
	AXL-HB150D-TP	150	155 - 185
	AXL-HB180D-TP	180	185 - 215
	AXL-HB210D-TP	210	215 - 245
	AXL-HB240D-TP	240	245 - 275
	AXL-HB270D-TP	270	275 - 305
	AXL-HB300D-TP	300	305 - 335

Horizontal Adapter Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HDB80	80	Corresponding vertical bracket + 30mm

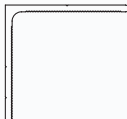
ALUMINIUM BRACKETS / FIXINGS

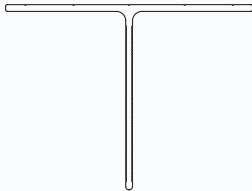
Vertical U Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-UB050-TP	50	53 - 75
	AXL-UB075-TP	75	78 - 100
	AXL-UB100-TP	100	103 - 125
	AXL-UB125-TP	125	128 - 150
	AXL-UB150-TP	150	153 - 175
	AXL-UB175-TP	175	178 - 200
	AXL-UB200-TP	200	203 - 225

Fixings	Product Reference	Size: Diameter x Length (mm)
	BM-LS25	5.5 x 25
	BM-LS55	5.5 x 55

Fixings	Product Reference	Size: Diameter x Length (mm)
	BM-LSHF38	6.5 x 38
	BM-LSHF50	6.5 x 50

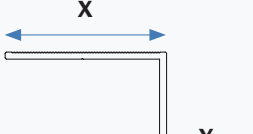
ALUMINIUM RAILS

L Profile	Product Reference	Size (mm)	Thickness (mm)	Length (mm)
	AXL-L60X40x2.2-3000	60 x 40	2.2	3000
	AXL-L60X40x2.2-4850	60 x 40	2.2	4850
	AXL-L60X40x2.2-6000	60 x 40	2.2	6000
	AXL-L60X40x2.5-3000	60 x 40	2.5	3000

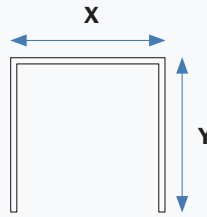
T Profile	Product Reference	Size (mm)	Thickness (mm)	Length (mm)
	AXL-T40X100x2.2-3000	40 x 100	2.2	3000
	AXL-T40X100x2.2-6000	40 x 100	2.2	6000
	AXL-T60X80x2.2-3000	60 x 80	2.2	3000
	AXL-T60X80x2.2-4850	60 x 80	2.2	4850
	AXL-T60X80x2.2-6000	60 x 80	2.2	6000
	AXL-T60X100x2.2-3000	60 x 100	2.2	3000
	AXL-T60X100x2.2-4850	60 x 100	2.2	4850
	AXL-T60X100x2.2-6000	60 x 100	2.2	6000
	AXL-T60X120x2.2-3000	60 x 120	2.2	3000
	AXL-T60X120x2.2-4850	60 x 120	2.2	4850
	AXL-T60X120x2.2-6000	60 x 120	2.2	6000
	AXL-T60X140x2.2-3000	60 x 140	2.2	3000
	AXL-T60X140x2.2-4850	60 x 140	2.2	4850
	AAXL-T60X140x2.2-6000	60 x 140	2.2	6000
	AXL-T80X80x2.2-6000	80 x 80	2.2	6000



ALUMINIUM RAILS

Z Profile	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-Z25X75x2.4-3000	45	32.4	3000
	AXL-Z25X75x2.4-6000	45	32.4	6000
	AXL-Z40X85x2.4-3000	55	32.4	3000
	AXL-Z40X85x2.4-6000	55	32.5	6000

Omega Profile	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-TH25X120x2.4-3000	35	120	3000
	AXL-TH25X120x2.4-6000	35	120	6000
	AXL-TH40X140x2.5-3000	35	140	3000
	AXL-TH40X140x2.5-6000	35	140	6000

U Mullion	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-50X50x2.0-6000	50	50	6000

Open Mullion	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-40-OPEN-6000	50	40	6000
	AXL-50-OPEN-6000	50	50	6000

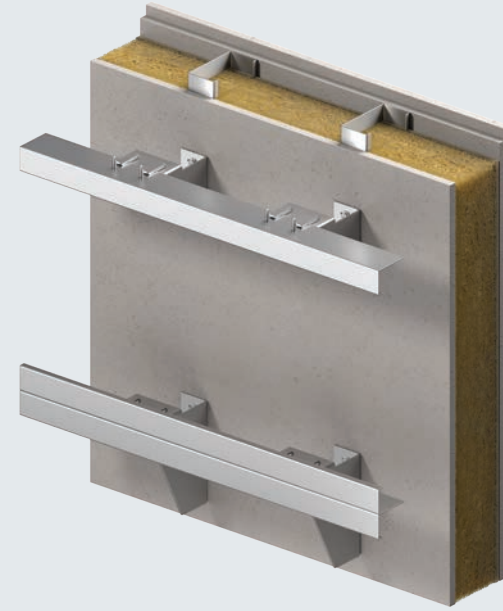
> AXR1

Stainless steel support system suitable for mechanical fixing of cladding elements by means of rivet or screw, with rails used in vertical application.



> AXR2

Stainless steel support system suitable for mechanical fixing of cladding elements by means of rivet or screw, with rails used in vertical application.



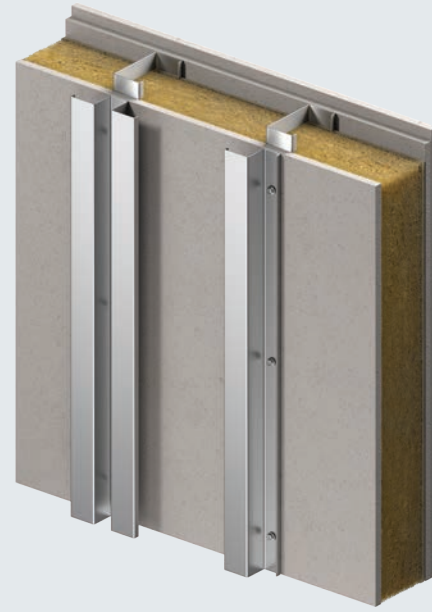
< AXR3

Stainless steel support system suitable for mechanical fixing of horizontal and vertical application cassette panels.



< AXR4

Stainless steel support system suitable for rainscreen with a shallow cladding zone and no adjustability requirement in the cladding zone.



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AXR SERIES

ULTIMATE PERFORMANCE

Our AxiAL stainless steel Reference Series delivers the ultimate in technical performance. Complementing our range of aluminium systems, the AXR has a melting point twice that of aluminium, 10% of the thermal conductivity and twice the tensile strength.

All 4 systems in the range offer structurally superior load support and, thanks to their enhanced thermal performance, allow you to reduce the thickness of insulation, even without a thermal isolation pad. Compatible with a wide variety of external cladding materials, AXR allows designers the freedom to tackle more ambitious projects while still providing exceptional rainscreen integrity.




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STAINLESS STEEL BRACKETS

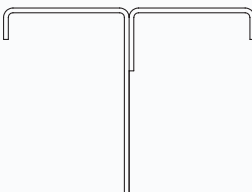
Vertical Single Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HBS045S	45	50 - 65
	AXL-HBS060S	60	65 - 80
	AXL-HBS075S	75	80 - 95
	AXL-HBS090S	90	93 - 123
	AXL-HBS120S	120	123 - 153
	AXL-HBS150S	150	153 - 183
	AXL-HBS180S	180	183 - 213
	AXL-HBS210S	210	213 - 243
	AXL-HBS240S	240	243 - 273
	AXL-HBS270S	270	273 - 303
	AXL-HBS300S	300	303 - 333
Vertical Double Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HBS090D	90	93 - 123
	AXL-HBS120D	120	123 - 153
	AXL-HBS150D	150	153 - 183
	AXL-HBS180D	180	183 - 213
	AXL-HBS210D	210	213 - 243
	AXL-HBS240D	240	243 - 273
	AXL-HBS270D	270	273 - 303
	AXL-HBS300D	300	303 - 333
Single Horizontal Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HBS090SH	90	93 - 123
	AXL-HBS120SH	120	123 - 153
	AXL-HBS150SH	150	153 - 183
	AXL-HBS180SH	180	183 - 213
	AXL-HBS210SH	210	213 - 243
	AXL-HBS240SH	240	243 - 273
	AXL-HBS270SH	270	273 - 303
	AXL-HBS300SH	300	303 - 333

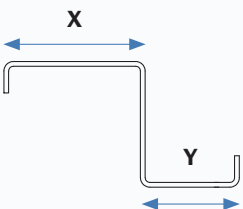
STAINLESS STEEL BRACKETS / FIXINGS

Double Horizontal Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-HBS090DH	90	93 - 123
	AXL-HBS120DH	120	123 - 153
	AXL-HBS150DH	150	153 - 183
	AXL-HBS180DH	180	183 - 213
	AXL-HBS210DH	210	213 - 243
	AXL-HBS240DH	240	243 - 273
	AXL-HBS270DH	270	273 - 303
	AXL-HBS300DH	300	303 - 333
U Bracket	Product Reference	Size (mm)	Adjustment Range (mm)
	AXL-UBS050	50	53 - 75
	AXL-UBS075	75	78 - 100
	AXL-UBS100	100	103 - 125
	AXL-UBS125	125	128 - 150
	AXL-UBS150	150	153 - 175
	AXL-UBS175	175	178 - 200
	AXL-UBS200	200	203 - 225
Fixings	Product Reference	Size: Diameter x Length (mm)	
	BM-SS-LS27	5.5 x 27	
	BM-SS-LS40	5.5 x 40	
Fixings	Product Reference	Size: Diameter x Length (mm)	
	BM-SS-LSHF38	6.5 x 38	

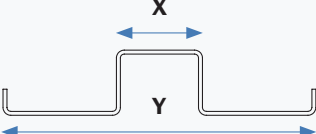
STAINLESS STEEL RAILS

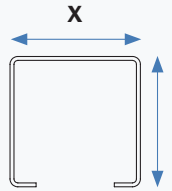
L Profile	Product Reference	Size (mm)	Thickness (mm)	Length (mm)
	AXL-LS60X40X1.5-3000	60 x 40	1.5	3000
	AXL-LS60X40X1.5-6000	60 x 40	1.5	6000
	AXL-LS60X50X1.5-3000	60 x 50	1.5	3000
	AXL-LS60X50X1.5-6000	60 x 50	1.5	6000
	AXL-LS60X60X1.5-3000	60 x 60	1.5	3000

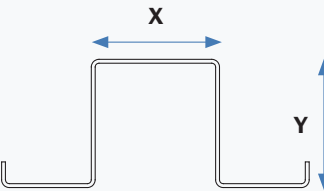
T Profile	Product Reference	Size (mm)	Thickness (mm)	Length (mm)
	AXL-TS60X80X1.5-3000	60 x 80	1.5	3000
	AXL-TS60X80X1.5-6000	60 x 80	1.5	6000
	AXL-TS60X100X1.5-3000	60 x 100	1.5	3000
	AXL-TS60X100X1.5-6000	60 x 100	1.5	6000
	AXL-TS60X120X1.5-3000	60 x 120	1.5	3000

Z Profile	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-ZS25X75X1.5-3000	45	30	3000
	AXL-ZS25X75X1.5-6000	45	30	6000
	AXL-ZS40X75X1.5-3000	45	31.5	3000
	AXL-ZS40X75X1.5-6000	45	31.5	6000

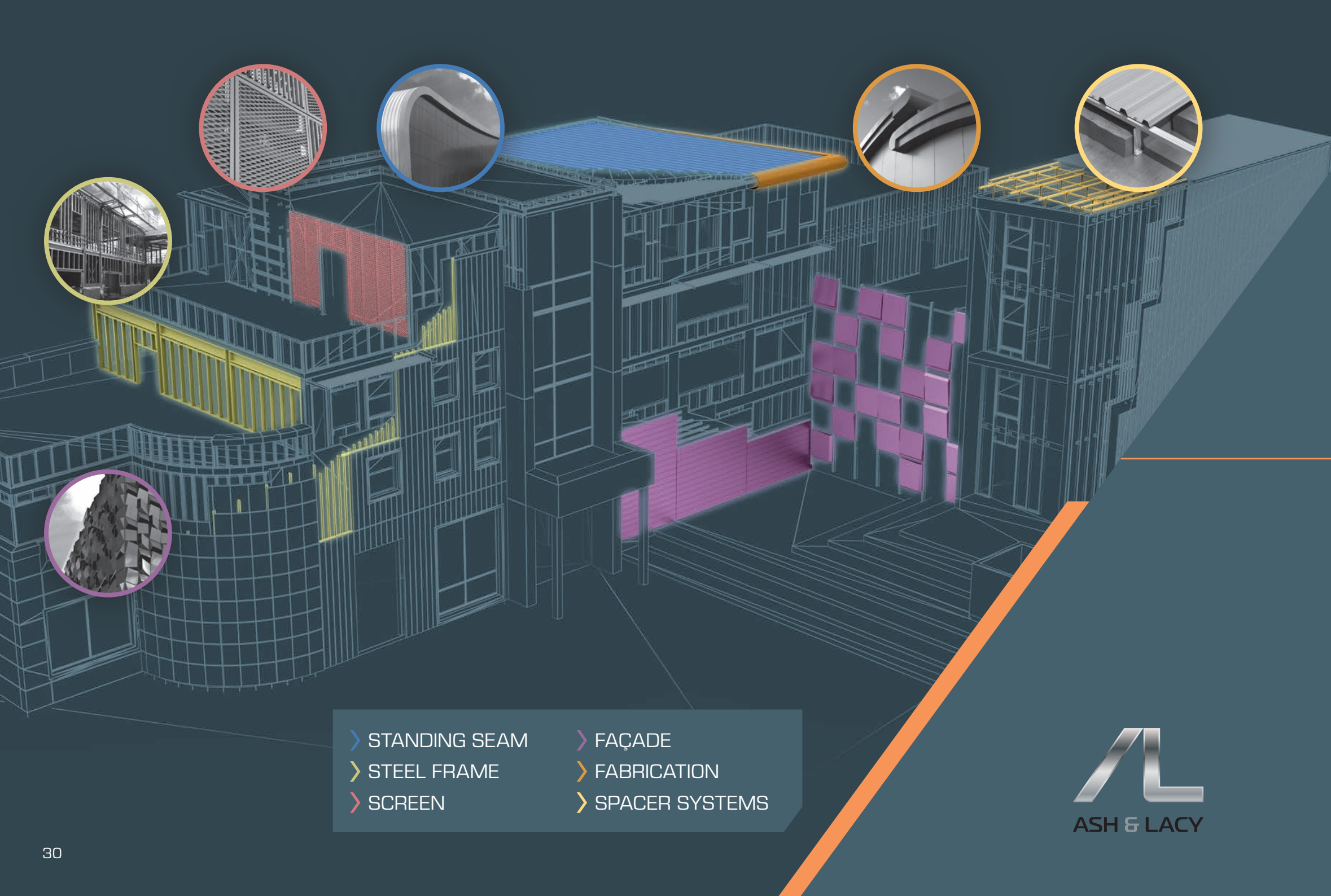
STAINLESS STEEL RAILS

Omega Profile	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-THS25X120X1.5-3000	30	120	3000
	AXL-THS25X120X1.5-6000	30	120	6000
	AXL-THS40X120X1.5-3000	30	120	3000
	AXL-THS40X120X1.5-6000	30	10	6000

U Mullion	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-US50X50X2.0-6000	50	50	6000

Open Mullion	Product Reference	Dim X (mm)	Dim Y (mm)	Length (mm)
	AXL-40SOPEN-6000	50	40	6000
	AXL-50SOPEN-6000	50	50	6000





- › STANDING SEAM
- › STEEL FRAME
- › SCREEN
- › FAÇADE
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