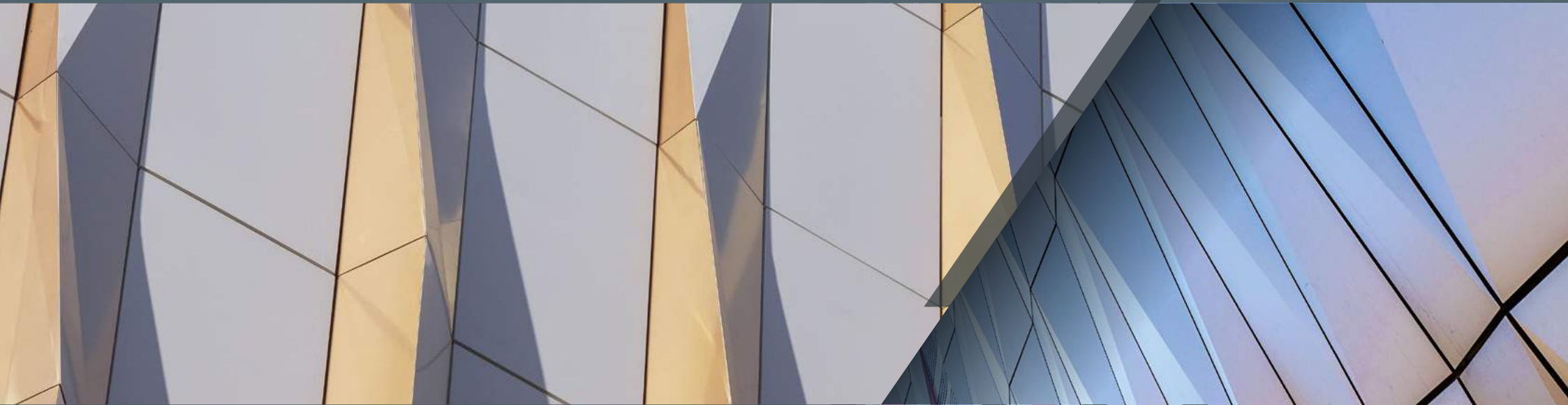


FAÇADE

METAL RAINSCREEN



SYSTEM GUIDE

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VARIAL LINEAL

INTRODUCTION

The Ash & Lacy range of rainscreen cladding systems outperform other types of wall construction at an economic whole life cost. With low maintenance requirements and sustainable material options, these systems are backed by our renowned technical and fabrication expertise.

Our VariAL and LineAL façade system ranges are engineered and designed to offer specifiers and contractors the ideal balance between precision and flexibility, incorporating a wide array of metal base materials and aesthetic finishes.





VariAL-H

A fully secret fix baffle jointed cassette rainscreen, with fully adjustable vertical aluminium mullion support system. Best suited to vertical applications.

> SEE PAGE 18-19



VariAL-SF

A secret fix baffle jointed cassette rainscreen system, with a range of fully adjustable aluminium support systems. Best suited to horizontal applications.

> SEE PAGE 20-21



VariAL-CF1

A concealed fix baffle jointed cassette rainscreen system, with a range of fully adjustable aluminium support systems. Best suited to horizontal applications.

> SEE PAGE 22-23



VariAL-CF2

A concealed fix baffle jointed cassette rainscreen system, with a range of fully adjustable aluminium support systems. Suited to vertical, horizontal & soffit applications.

> SEE PAGE 24-25

VARIAL AXIAL

WHAT IS VARIAL?



VariAL-CF3

A concealed fix baffle jointed cassette rainscreen system, with a range of fully adjustable aluminium support systems. Only available in solid aluminium.

> SEE PAGE 26-27



VariAL-TF

A versatile flat plate rainscreen system that can be rivet fixed or structurally bonded to a vertical adjustable support system.

> SEE PAGE 28-29



VariAL-MF

A cost-effective system for the application of expanded metal mesh sheets, with a range of fully adjustable support systems.

> SEE PAGE 30-31



The VariAL range of rainscreen systems offers ultimate flexibility; panels can be fabricated from a wide spectrum of different materials, including: A1 & A2 ACM, solid aluminium, Cor-Ten steel, perforated & expanded metals, copper & zinc, fixed to our AxiAL range of adjustable aluminium and stainless-steel carrier systems. Specifiers can choose from a wide selection of vertical and horizontal joint configurations, with options for through fix, concealed and secret fixings to suit both budget and aesthetic requirements.



LINEAL AXIAL

WHAT IS LINEAL?



LineAL-X

A ventilated secret-fix system, featuring extruded aluminium planks, suitable for horizontal & vertical panel arrangements.

> [SEE PAGE 32-33](#)



LineAL-F

A ventilated, secret-fix system, featuring folded aluminium plank suitable for horizontal & vertical panel arrangements.

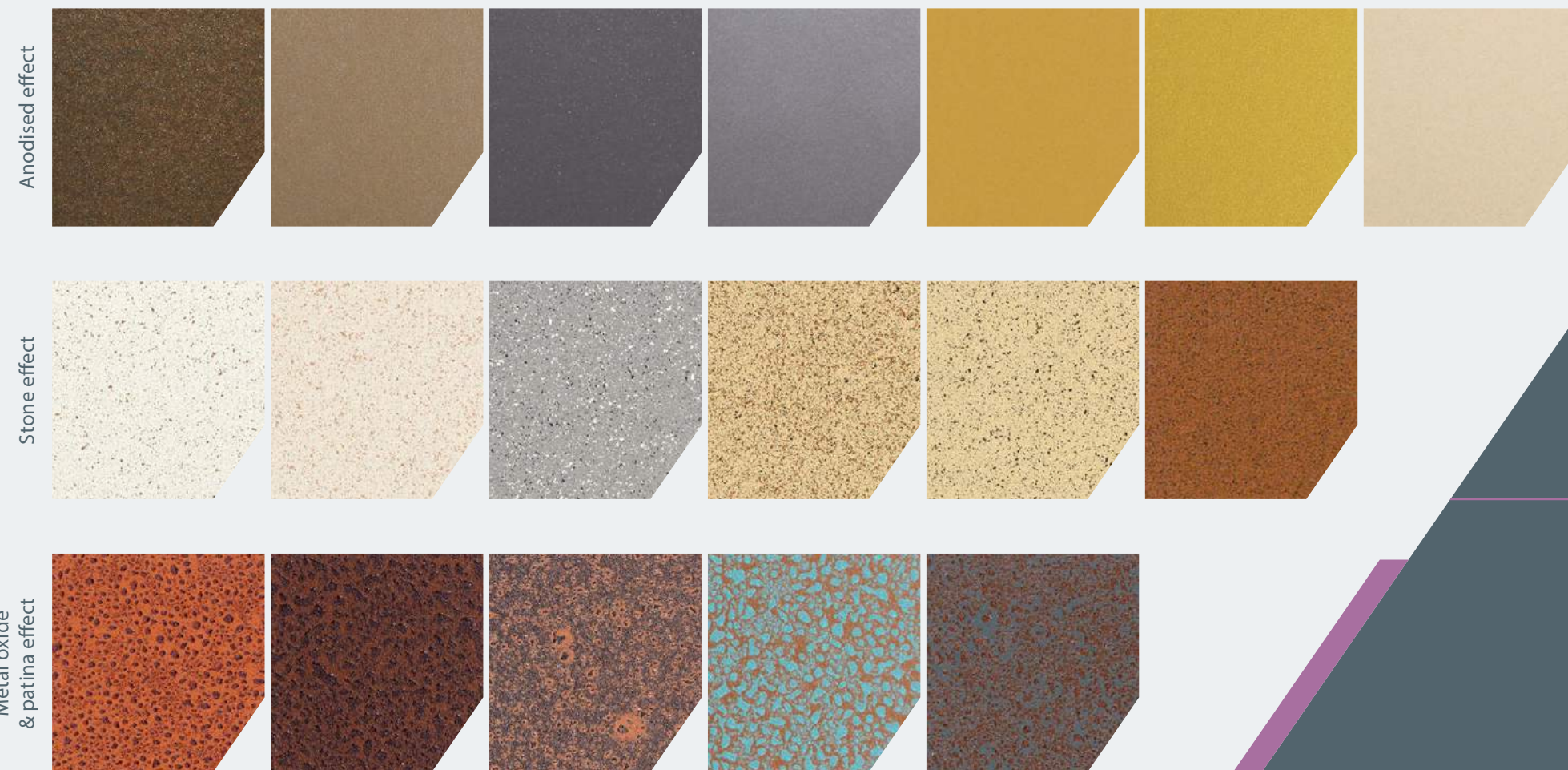
> [SEE PAGE 34-35](#)



The LineAL range of aluminium plank façade systems offers specifiers a choice between the sharp precision of extruded aluminium, and the versatility of expertly fabricated folded aluminium. Both systems employ a robust mechanical secret-fix, suitable for vertical or horizontal linear applications, fixed to our AxiAL range of adjustable aluminium or stainless-steel carrier systems. LineAL planks are available in solid and perforated aluminium with a choice of thicknesses to suit budget requirements, with varying module heights and standard panel lengths up to 6m.



Ash & Lacy Palette - A selection of specialist powder coatings



> Ask your Ash & Lacy representative for details of our full range of specialist finishes.



Our equipment, processes and quality standards have been recognised and approved by all major powder manufacturers and most recently by QUALICOAT, the world's leading quality label for the coating of aluminium.

Ash & Lacy façade systems are available in an extensive palette of decorative finishes, with the introduction of an in-house powder coating facility, we have the ability, tools and knowledge to create bespoke high-quality finishes deserving of high-profile projects.

STANDARD OPTIONS INCLUDE:

- PVDF
- Anodised
- NCS/RAL PPC
- Anodised effect PPC
- Patina effect PPC
- Stone effect PPC
- Textured PPC
- Timber Effect PPC

FAÇADE

FINISHES



TECHNICAL SUPPORT

Our technical team are on hand to offer a complete through-wall design and support package which includes our light-weight steel framing, rainscreen cladding and interfacing with window design; in fact, everything involved with the secondary elements of a building façade.

System CAD details are available to suit specific requirements. Details include options for support systems, as well as alternative arrangements for cappings, windows and other openings, corners and cill or base conditions.



Our services include:

STEEL FRAMING SYSTEM DESIGN AND ENGINEERING
Infill, oversail and load-bearing cold formed steel design.

ABUTMENT DESIGN
Details, interfaces, co-ordination and fabrication technical services.

PROJECT SPECIFIC CALCULATIONS
Engineering calculations services including: thermal, static and structural performance.

QUALITY & ACCREDITATIONS

warringtonfire



QUALITY

Ash & Lacy products are manufactured to the highest quality standards including BS EN ISO 9001:2015v. All products are designed to fulfil specific applications and have been engineered to precise standards and tolerances. Ash & Lacy have adopted a strict Environmental Policy for all products.

FIRE CLASSIFICATIONS

Our rainscreen facade systems and rainscreen support systems have been tested and classified by Warringtonfire to EN 13501-1 standard.

CWCT

Ash & Lacy are members of the renowned CWCT (Centre for Window and Cladding Technology), and the design of all our Facade products adhere to CWCT design principles and have been tested to CWCT standards.

BBA

A selection of VariAL systems carry BBA accreditation and certification.. All AxiAL aluminium and stainless steel support systems carry independant BBA certification

For full details and to access BBA certificates, visit www.ashandlacy.com/testing-certifications/



Ash & Lacy Fire Reaction Classification Test Results to BS EN 13501-1 May 2019. Classified by [warringtonfire](#)

Rainscreen Cladding System	Product Name	Product Material	Supporting System	Classification
Metal Façades with PPC Coating	VariAL, VariAL-SF VariAL-CF1, CF2, CF3 VariAL-TF, VariAL-X LineAL-F	2-3mm Aluminium	AxiAL AX Series 6063T6 Aluminium AxiAL AXR Series 316 Stainless Steel	A2-sI, d0 to BS EN 13501-1
Metal Façades with anodised coating or no coating	VariAL, VariAL-SF VariAL-CF1, CF2, CF3 VariAL-TF, VariAL-X LineAL-F	2-3mm Aluminium, 1.5mm Stainless Steel Cor-Ten Steel, Copper or Zinc	AxiAL AX Series 6063T6 Aluminium AxiAL AXR Series 316 Stainless Steel	A1 to BS EN 13501-1
Metal Façades 4mm Alucobond A2 ACM	VariAL-H VariAL-SF VariAL-CF1, CF2, CF3 VariAL-TF	4mm Alucobond A2 ACM	AxiAL AX Series 6063T6 Aluminium AxiAL AXR Series 316 Stainless Steel	A2-sI, d0 to BS EN 13501-1

Rainscreen Support System	Product Name	Product Material	Classification
AxiAL AX Aluminium Rainscreen Support Systems	AxiAL AX1, AxiAL AX2 AxiAL AX3, AxiAL AX4 AxiAL AXH	6063T6 Aluminium	A1 to BS EN 13501-1
AxiAL AXR Stainless Steel Rainscreen Support Systems	AxiAL AX1, AxiAL AX2 AxiAL AX3, AxiAL AX4	316 Stainless Steel	A1 to BS EN 13501-1

PLEASE NOTE:

- Mineral wool insulation (<340mm thickness) with classification A1 to BS EN 13501-1 was applied on all above systems.
- The cavity applied on all the above systems was 25-100mm.



Ash & Lacy's rainscreen façade systems and rainscreen support systems have been classified to standard EN 13501-1 by the independent organisation Warringtonfire. When provided with an anodised finish or no finish, Ash & Lacy's rainscreen façade systems achieve Euroclass A1 to EN 13501-1. When provided with a PPC finish or with 4mm Alucobond A2 ACM, they achieve Euroclass A2-sI, d0 to EN 13501-1.



FIRE CLASSIFICATION

This means all Ash & Lacy rainscreen façade systems and rainscreen support systems are fully compliant with the latest UK Building Regulations for components which form part of an external wall on a residential building 18m in height.

For full details and to access our classification reports, visit www.ashandlacy.com/testing-certifications/

Key Features

Optimal Applications

- Vertical orientated wall panels
- Secret-fix applications
- Easy access and maintenance requirements, individually demountable panels
- 3D / Geometric panels & bespoke panel designs
- Framed perforated metal or expanded mesh panels
- Projects requiring floor to floor spanning capability
- Refurbishment projects where overcladding of an existing structure is required

Material Palette

- 4mm A1/A2 ACM
- 3mm Solid Aluminium
- 3mm Perforated Aluminium
- 3mm Cor-Ten Steel
- 2mm Cor-Ten Steel
- Expanded Mesh

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-H with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-H with PPC coating	Euroclass A2-s1, d0	EN 13501-1
VariAL-H with 4mm Alucobond A2 ACM	Euroclass A2-s1, d0	EN 13501-1

Technical Data

Panel Sizes	Max
4mm A1/A2 ACM	5840H x 1350W
3mm Aluminium	5840H x 1850W
3mm Cor-Ten Steel	3840H x 1850W
2mm Cor-Ten Steel	3840H x 1850W

Adjustable Support Systems

Mullion range = 50mm – 150mm
AxiAL bracket range = 75mm – 280mm
(Larger zones can be engineered)

Panel Joint Options

	Standard	Max	Min
Vertical	20mm	20mm	12mm
Horizontal	20mm	100mm	12mm



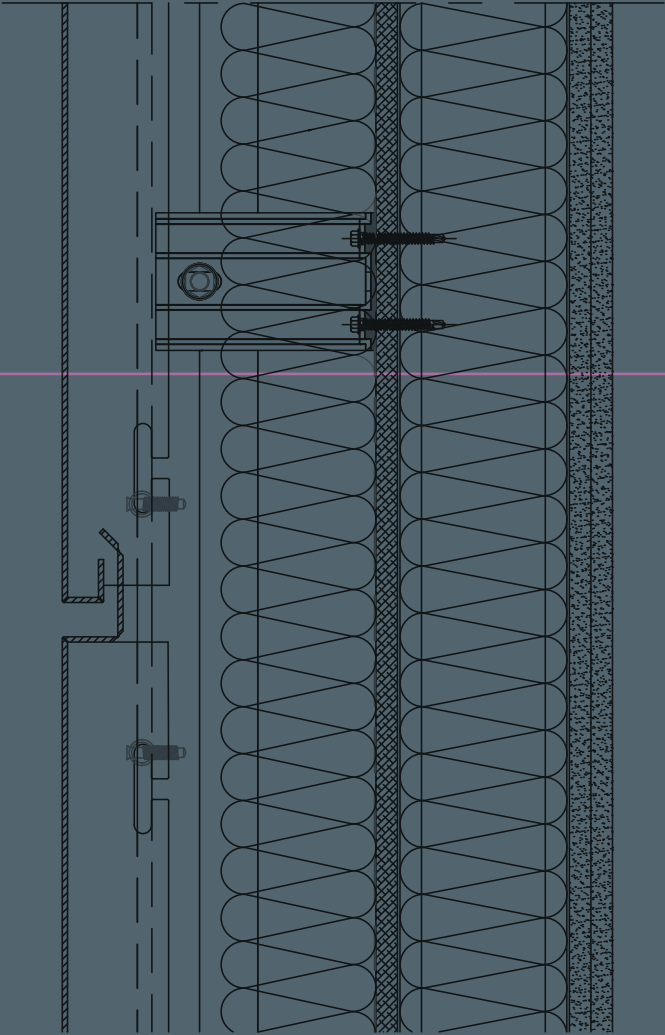
VARIAL-H

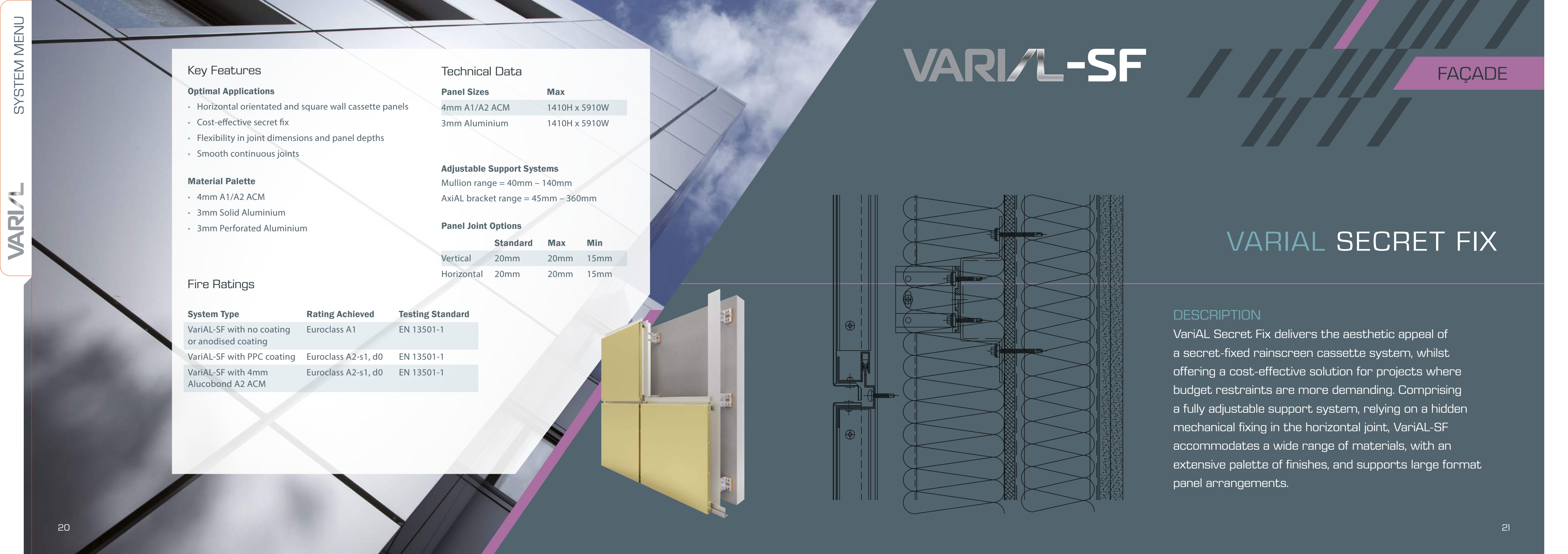
FAÇADE

VARIAL HOOK ON

DESCRIPTION

VariAL 'Hook On' is a fully secret-fixed system, delivering aesthetically flat, precise panels with no visible fixings. The system accommodates a multitude of panel shapes and configurations, offering ultimate flexibility in aesthetic design techniques.





VARIAL-SF

VARIAL SECRET FIX

Key Features

Optimal Applications

- Horizontal orientated and square wall cassette panels
- Cost-effective secret fix
- Flexibility in joint dimensions and panel depths
- Smooth continuous joints

Material Palette

- 4mm A1/A2 ACM
- 3mm Solid Aluminium
- 3mm Perforated Aluminium

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-SF with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-SF with PPC coating	Euroclass A2-s1, d0	EN 13501-1
VariAL-SF with 4mm Alucobond A2 ACM	Euroclass A2-s1, d0	EN 13501-1

Technical Data

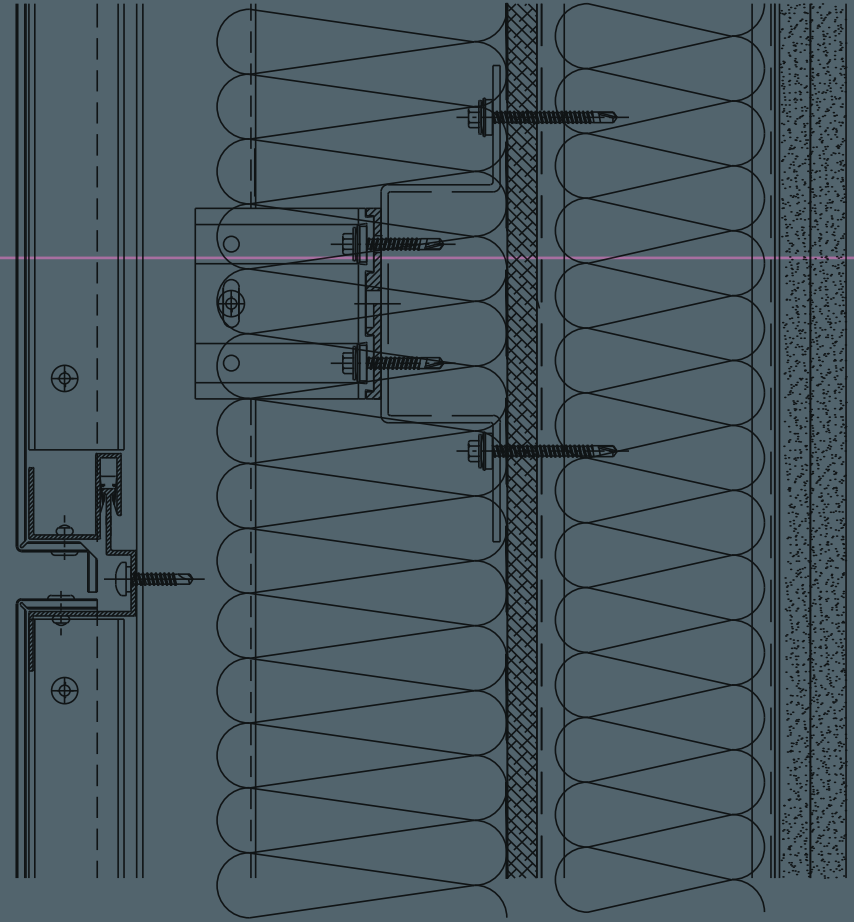
Panel Sizes	Max
4mm A1/A2 ACM	1410H x 5910W
3mm Aluminium	1410H x 5910W

Adjustable Support Systems

Mullion range = 40mm – 140mm
AxiAL bracket range = 45mm – 360mm

Panel Joint Options

	Standard	Max	Min
Vertical	20mm	20mm	15mm
Horizontal	20mm	20mm	15mm



DESCRIPTION

VariAL Secret Fix delivers the aesthetic appeal of a secret-fixed rainscreen cassette system, whilst offering a cost-effective solution for projects where budget restraints are more demanding. Comprising a fully adjustable support system, relying on a hidden mechanical fixing in the horizontal joint, VariAL-SF accommodates a wide range of materials, with an extensive palette of finishes, and supports large format panel arrangements.

VARIAL-CF1

FAÇADE

Key Features

Optimal Applications

- Horizontal orientated and square wall cassette panels
- Cost-effective concealed fix
- Curved and radial panel designs
- Flexibility in joint dimensions and panel depths

Material Palette

- 4mm A1/A2 ACM
- 3mm Solid Aluminium
- 3mm Perforated Aluminium

Technical Data

Panel Sizes

	Max
4mm A1/A2 ACM	1410H x 5910W
3mm Aluminium	1410H x 5910W

Adjustable Support Systems

Mullion range = 40mm – 140mm
AxiAL bracket range = 45 - 360mm

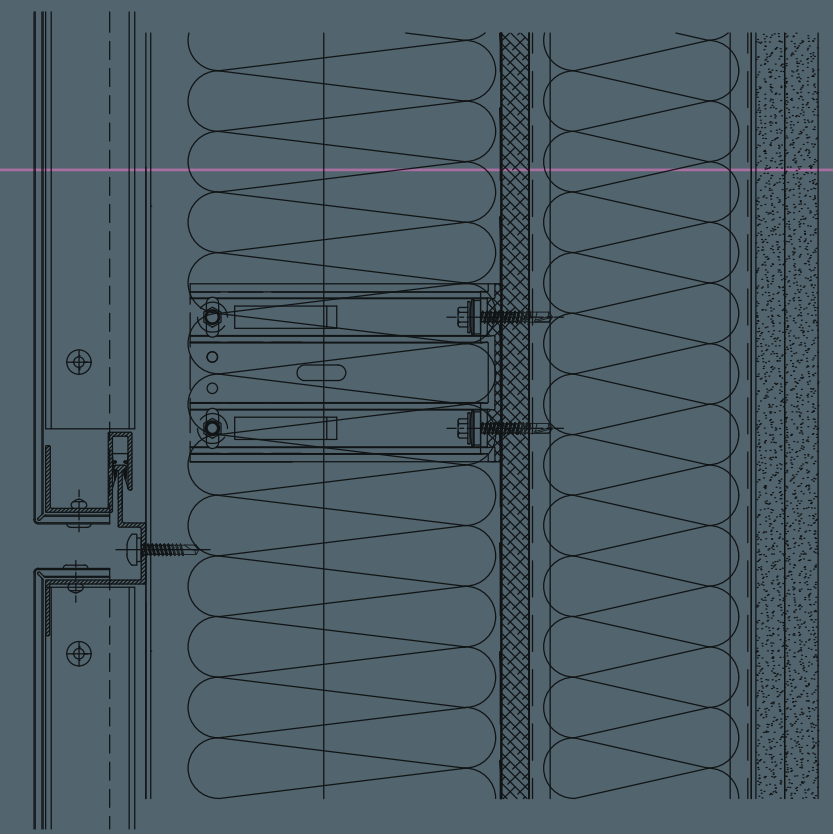
Panel Joint Options

	Standard	Max	Min
Vertical	20mm	25mm	10mm
Horizontal	20mm	20mm	10mm

NOTE: Min joint 20mm for individually demountable panel requirements.

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-CF1 with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-CF1 with PPC coating	Euroclass A2-s1, d0	EN 13501-1
VariAL-CF1 with 4mm Alucobond A2 ACM	Euroclass A2-s1, d0	EN 13501-1



VARIAL CONCEALED FIX 1

DESCRIPTION

VariAL-CF1 offers a cost-effective rainscreen cassette solution where secret-fixed panels are not a project design requirement. Comprising a fully adjustable support system, relying on a colour coated discrete mechanical fixing in the horizontal shadow joint, VariAL-CF1 accommodates a wide range of materials, with an extensive palette of finishes, and supports large format panel arrangements.

VARIAL-CF2

FAÇADE

Key Features

Optimal Applications

- Large format wall cassette panels
- Cost-effective concealed fix
- Soffit & fascia applications
- Goalpost and verge details
- Flexibility in joint profiles and panel depths

Material Palette

- 4mm A1/A2 ACM
- 3mm Solid Aluminium
- 3mm Perforated Aluminium

Technical Data

Panel Sizes

	Max
ACM	5910H x 1410W
3mm Aluminium	5910H x 1410W

Adjustable Support Systems

Mullion range = 40mm – 140mm
AxiAL bracket range = 45 – 360mm

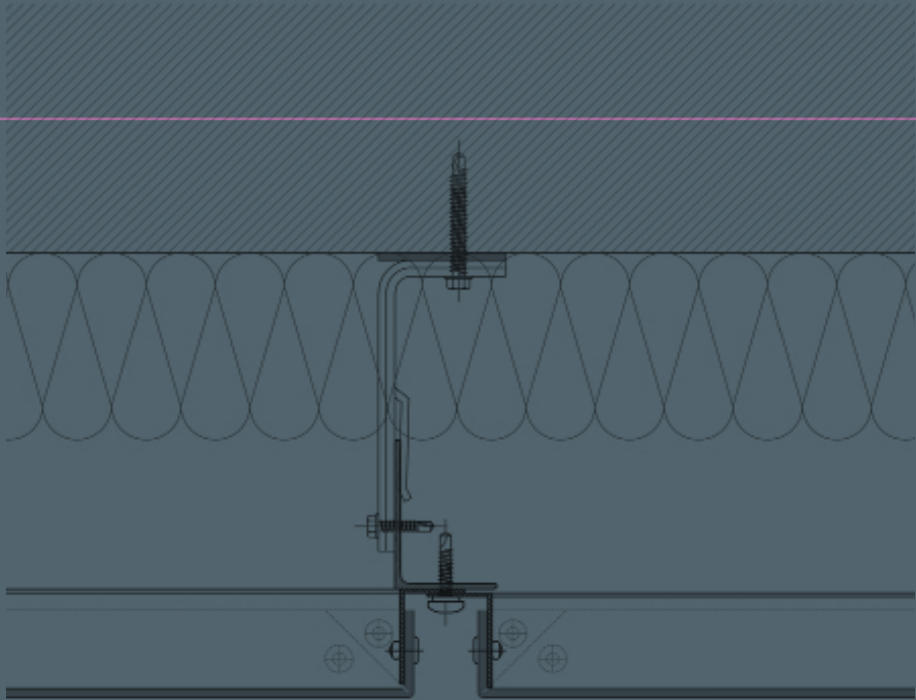
Panel Joint Options

	Standard	Max	Min
Vertical	20mm	25mm	20mm
Horizontal	20mm	20mm	20mm

NOTE: Min joint 20mm for individually demountable panel requirements.

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-CF2 with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-CF2 with PPC coating	Euroclass A2-s1, d0	EN 13501-1
VariAL-CF2 with 4mm Alucobond A2 ACM	Euroclass A2-s1, d0	EN 13501-1



VARIAL CONCEALED FIX 2

DESCRIPTION

VariAL-CF2 offers a cost-effective rainscreen cassette solution where secret-fixed panels are not a project design requirement. Comprising a fully adjustable support system, relying on a colour coated discrete mechanical fixing both in the vertical and horizontal shadow joint. VariAL-CF2 accommodates a wide range of materials, with an extensive palette of finishes, and supports large format panel arrangements.



Key Features

Optimal Applications

- Horizontal or vertical orientated and square wall cassette panels
- Softened panel bend radius
- Cost-effective concealed fix
- Flexibility in joint dimensions and panel depths

Material Palette

- 3mm Solid Aluminium
- 3mm Perforated Aluminium

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-CF3 with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-CF3 with PPC coating	Euroclass A2-s1, d0	EN 13501-1

Technical Data

Panel Sizes	Max
3mm Aluminium Portrait	5840H x 1340W
3mm Aluminium Landscape	1340W x 5840H
NOTE: Larger panels may require intermediate stiffeners to be fitted.	

Panel Depth
48mm (standard)

Adjustable Support Systems
Mullion range = 40mm – 140mm
AxiAL bracket range = 45 – 360mm

Panel Joint Options	Standard	Max	Min
Vertical	25mm	25mm	20mm
Horizontal	25mm	25mm	20mm



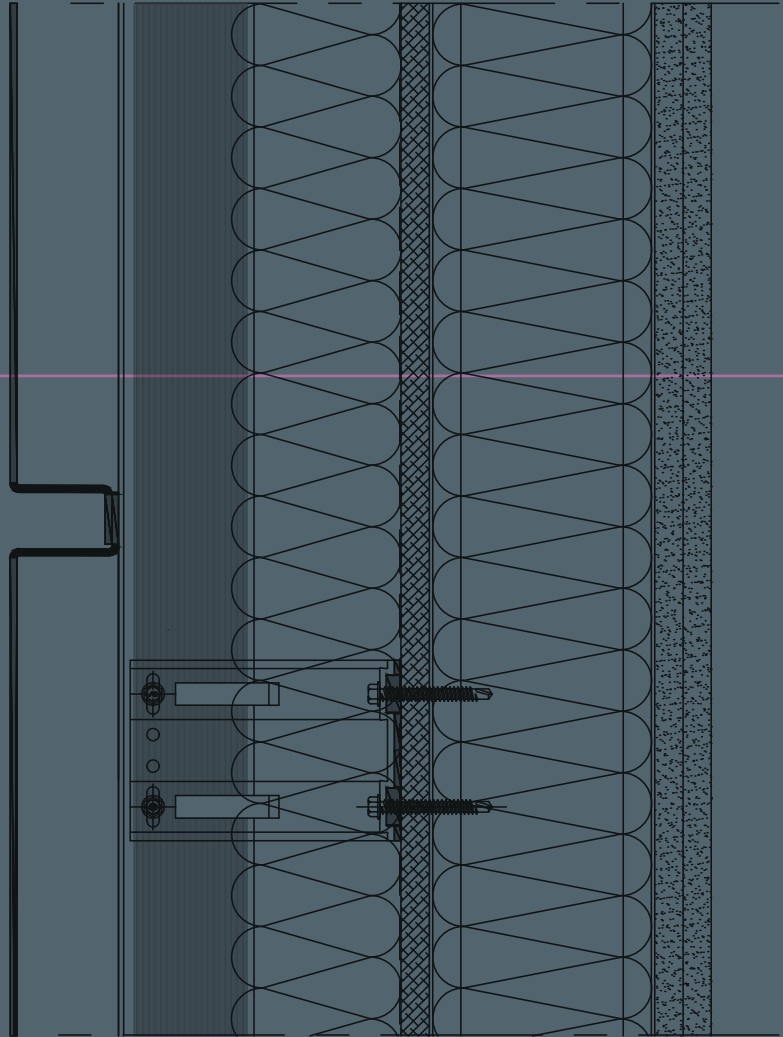
VARIAL-CF3

FAÇADE

VARIAL CONCEALED FIX 3

DESCRIPTION

VariAL-CF3 offers a cost-effective rainscreen cassette solution where secret-fixed panels are not a project design requirement. Comprising a fully adjustable support system, relying on a colour coated discrete mechanical fixing in the horizontal shadow joint, VariAL-CF3 is designed specifically for solid aluminium facades, which can be finished using a range of coating technologies to stunning effect.



Key Features

Optimal Applications

- Cost-effective flat panel cladding
- Minimal joint widths
- Fully mechanically fixed panels
- Versatile panel arrangement
- Soffit applications

Material Palette

- 4mm A1/A2 ACM
- 2mm Solid Aluminium
- 3mm Solid Aluminium
- 2mm Perforated Aluminium
- 3mm Perforated Aluminium
- 2mm Cor-Ten Steel
- 3mm Cor-Ten Steel

Fire Ratings

System Type	Rating Achieved	Testing Standard
VariAL-TF with no coating or anodised coating	Euroclass A1	EN 13501-1
VariAL-TF with PPC coating	Euroclass A2-s1, d0	EN 13501-1
VariAL-TF with 4mm Alucobond A2 ACM	Euroclass A2-s1, d0	EN 13501-1

Technical Data

Panel Sizes	Max
4mm A1/A2 ACM	5970H x 1470W
2mm Aluminium	5970H x 1970W
3mm Aluminium	5970H x 1970W
3mm Cor-Ten Steel	3970H x 1970W
2mm Cor-Ten Steel	3970H x 1970W

Adjustable Support Systems

Mullion range = 40mm – 140mm
AxiAL bracket range = 45 – 360mm

Panel Joint Options

	Standard	Max	Min
Vertical	20mm	25mm	10mm
Horizontal	20mm	25mm	10mm

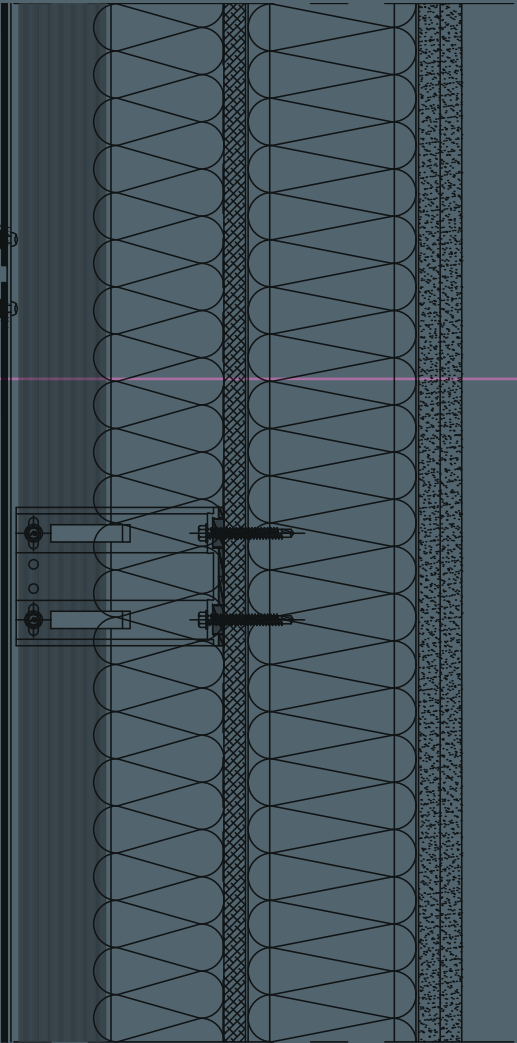
NOTE: Minimum joint sizes should take account of panel sizes and material expansion.



VARIAL-TF

FAÇADE

VARIAL THROUGH FIX



DESCRIPTION

VariAL-TF offers a functional and robust solution for flat panel rainscreen cladding applications, which is simple and cost effective to design, detail and install. Fixed by a colour matched rivet through the face of the panel to allow minimal disruption of aesthetics, designers can achieve the effect of a smooth façade by specifying minimal shadow gaps when compared with cassette systems.



Key Features

Optimal Applications

- Expanded Mesh panels
- Car park/general screening
- Cost-effective solution
- Projects with specific air flow requirements
- Control of solar gain

Material Palette

- 1.5mm - 5mm Aluminium
- 1.5 mm - 3mm Mild Steel
- 1.5mm - 3.0mm Cor-Ten Steel

Technical Data

Panel Sizes

All materials 3500H x 1500W

Max

Adjustable Support Systems

Mullion range = 62mm & 82mm

AxiAL bracket range = 60mm – 180mm

Panel Joint Options

	Standard	Max	Min
Horizontal	15mm	40mm	10mm

NOTE: Joint width variations are non-standard and can only be provided with a specially produced mesh bracket.

VARIAL-MF

FAÇADE

VARIAL MESH FIX

DESCRIPTION

VariAL-MF is available in a range of materials and an extensive selection of expanded mesh patterns offering exponential airflow ventilation options. The cost effective support system comprises a fully adjustable bracket and mullion system which is extremely robust.



Key Features

Optimal Applications

- Long, narrow, linear planks
- Interchangeable vertical and horizontal applications
- Repeatable modules
- High impact, low zone wall cladding
- Variety of face profiles & shapes achievable
- Fast installation method

Material Palette

- 2mm – 3mm Aluminium

Technical Data

Adjustable Support Systems

Mullion range = 40mm – 140mm

AxiAL bracket range = 45 – 360mm

Panel Joint Options

	Standard	Max	Min
Panel Interlock	10mm	20mm	3mm
Vertical Joint	10mm	25mm	3mm

NOTE: 3mm minimum vertical joint is not achievable with end caps

Fire Ratings

System Type	Rating Achieved	Testing Standard
LineAL-X with no coating or anodised coating	Euroclass A1	EN 13501-1
LineAL-X with PPC coating	Euroclass A2-s1, d0	EN 13501-1

Technical Data

Panel Sizes

Modules (H)	Max Length	Min Length
65mm (75)	6000mm	300mm
140mm (150)	6000mm	300mm
190mm (200)	6000mm	300mm
240mm (250)	6000mm	300mm
290mm (300)	6000mm	300mm

NOTE: Panels up to 12m length may be considered upon request.



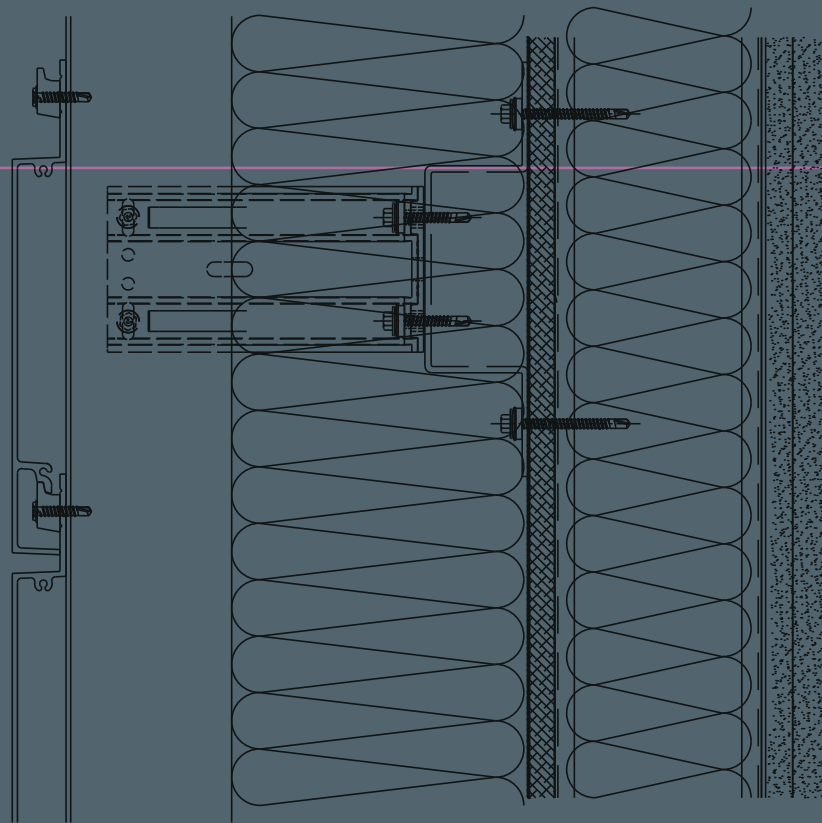
LINEAL-X

FAÇADE

LINEAL EXTRUDED PLANK

DESCRIPTION

LineAL-X offers designers the ultimate in flatness and precision, delivering a rainscreen plank system with the impressive accuracy inherent with extruded aluminium, combined with a unique fast-track installation method. LineAL-X comprises a flat faced interlocking linear plank, mechanically fixed to an adjustable support system for both horizontal and vertical applications. Available in a spectrum of finishes including Terracotta lookalike PPC, panels can also be fitted with end caps to provide an option of a cassette aesthetic.



Key Features

Optimal Applications

- Cost-effective solution for linear designs
- Open ended secret fixed linear planks
- Versatility in module heights and widths
- Interchangeable vertical and horizontally orientated plank modules
- Optional preformed or trimmed corner treatments

Material Palette

- 3mm Solid Aluminium
- 2mm Solid Aluminium
- 3mm Perforated Aluminium
- 2mm Perforated Aluminium

Technical Data

Panel Sizes	Max	Min
3mm Aluminium	400H x 3000W	50H x 300W
2mm Aluminium	200H x 3000W	50H x 300W

Fire Ratings

Rainscreen Cladding	Rating Achieved	Testing Standard
LineAL-F with no coating or anodised coating	Euroclass A1	EN 13501-1
LineAL-F with PPC coating	Euroclass A2-s1, d0	EN 13501-1

Adjustable Support Systems

T Rails

Length: 3000 – 6000mm
Leg: 40 – 80mm
Face: 80 – 140mm

L Rails

Length: 3000 – 6000mm
Leg: 60mm
Face: 40mm

Bracket Range

45mm - 360mm

Panel Joint Options

	Standard	Max	Min
Panel Interlock	20mm	100mm	10mm
Vertical Joint	10mm	20mm	10mm



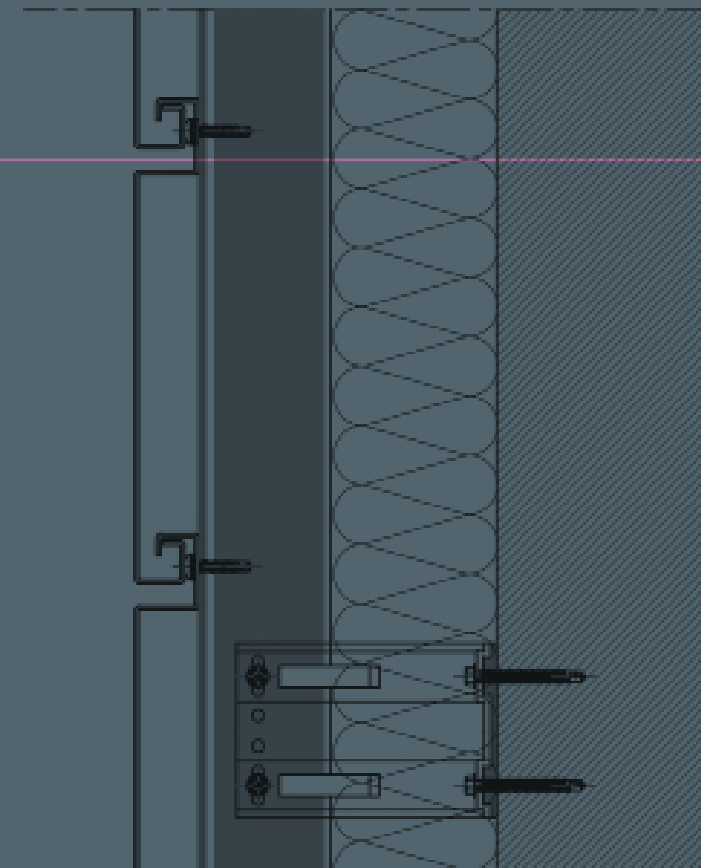
LINEAL-F

FAÇADE

LINEAL FOLDED PLANK

DESCRIPTION

LineAL-F is a versatile cost effective lightweight aluminium plank rainscreen system, offering the appeal of secret-fix aesthetics, and fixed to a fully adjustable helping hand secondary support system allowing vertical or horizontal applications. Folded planks can be manufactured to specific module heights, and offered in an array of powder coated or anodised finishes, with options for solid and perforated aluminium.



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